



## **Mentoring on PESTEL Strategy and SWOT Analysis for KADIN Kota Bandung's MSMEs to Enhance Digital Transformation**

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**Abstract:** This community service program aims to enhance the competitiveness of MSMEs through the implementation of digital transformation, PESTEL strategies, and SWOT analysis, as well as the development of digital marketing capabilities. Additionally, this program seeks to boost the confidence of MSME entrepreneurs under the guidance of KADIN Kota Bandung in achieving economic independence. The methods used include counseling and mentoring, focusing on increasing the participants' understanding of business strategies and their practical application. The evaluation instrument used is a questionnaire, and the data analysis technique involves quantitative analysis through descriptive statistics to assess the Likert scale-based responses, aimed at comparing pre-test and post-test results. As a result, participants' comprehension of PESTEL, SWOT strategies, and digital transformation improved significantly. MSMEs were able to identify both external and internal factors for strategic planning, and they became more prepared to adopt digital technologies to enhance business efficiency and innovation. This training provides a comprehensive strategic foundation for the growth of MSMEs in the digital era.

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## **Introduction**

In the Micro, Small, and Medium Enterprises (MSMEs) sector, digital transformation has become an urgent necessity in facing global dynamics (Priambodo & Suroso, 2022). Amid increasingly complex economic challenges, Kamar Dagang dan Industri (KADIN) Bandung City recognizes the importance of strengthening MSMEs as the backbone of the regional economy (Sadikin et al., 2023). During various crises, MSMEs have demonstrated remarkable resilience by remaining steadfast, despite previously receiving inadequate attention. They have managed to survive economic crises and contribute significantly to the economy through their inherent endurance (Surya, 2021).

Data from the Ministry of Cooperatives and MSMEs indicate that the current number of MSMEs reaches 64.2 million, contributing significantly to the Gross Domestic Product (GDP) at 61.07%, equivalent to 8,573.89 trillion rupiah. The role of MSMEs in the Indonesian economy includes their ability to absorb 97% of the available workforce and generate up to 60.4% of total investment (Suharlina, 2024). In contrast, large enterprises only account for 3% of the total (Augustin & Kosadi, 2024).



The community in Bandung City demonstrates high participation in entrepreneurship, with the MSME sector contributing 80% to the Regional Gross Domestic Product (PDRB), supported by approximately 140,000 operating MSMEs (Fatma & Ima, 2024). However, they are often hindered by a lack of knowledge and skills necessary for effective business management (Sumiyati et al., 2024). There is significant potential to enhance entrepreneurial capacity in the community through the provision of appropriate training and mentoring (Priambodo & Suroso, 2022).

KADIN Kota Bandung plays a crucial role in representing and developing the interests of entrepreneurs in Bandung City, particularly in empowering MSMEs. It provides support through specialized programs, training, and policy advocacy aimed at promoting growth and sustainability. As a communication and collaboration platform, KADIN Bandung also organizes business forums and networking events to offer local entrepreneurs opportunities to meet and establish partnerships with potential business collaborators. Through its various initiatives, KADIN Kota Bandung has become a key pillar in supporting local economic growth, advancing business interests, and enhancing competitiveness at both national and global levels. The urgency of Community Partnership Empowerment (PKM) is related to the challenges faced by MSMEs supported by KADIN Kota Bandung:

- 1) MSMEs tend to focus solely on product sales without developing comprehensive planning, particularly regarding creative product modifications, both new and existing. Most MSMEs create products based on current trends and viral phenomena, resulting in few MSMEs being able to survive in a competitive market (Isnir Budiarti, 2024).
- 2) There is limited access to capital and technology, along with a lack of knowledge about effective market and business management (Fajri et al., 2024).
- 3) There is insufficient understanding of external factors that can influence businesses, as well as weaknesses and opportunities that may arise in the context of digital transformation (Siti & Ramadhika, 2024).

These phenomena underscore the necessity for intervention through strategic training. One applicable approach is providing training and mentoring for MSMEs using PESTEL (Political, Economic, Social, Technological, Environmental, Legal) analysis (Yüksel, 2012) and SWOT (Strengths, Weaknesses, Opportunities, Threats) matrix, which has the potential to effectively assist MSMEs in understanding and addressing the various challenges they face (Sadiku, 2022). The application of PESTEL strategies enables entrepreneurs to identify various external factors affecting MSMEs and provides insights for MSME actors to comprehend the dynamics of environmental changes and formulate appropriate adaptation strategies (Sudibya, 2022). Meanwhile, SWOT analysis helps entrepreneurs recognize the internal strengths of MSMEs, such as resources, skills, and assets, while also providing an understanding of exploitable opportunities and threats that need to be addressed (Awaluddin, 2021).

This allows MSMEs to conduct a comprehensive evaluation of their internal capabilities and external influences, enabling them to make strategic decisions aligned with market trends and consumer expectations (Trisna & Zulivia, 2024). Furthermore, by leveraging the information obtained from PESTEL and SWOT analyses, MSMEs can formulate relevant digital strategies, utilize technology to enhance operational efficiency, expand market access, and innovate in product and service development. This condition, in turn, encourages MSMEs to implement digital transformation more effectively (Nengyanti et al., 2023).



The primary objectives of this PKM are, first, to enhance the competitiveness of MSMEs through digital transformation, where the implementation of technology will enable MSMEs to respond more quickly and effectively to market changes (Pramesti et al., 2021). Therefore, training is needed to improve the skills and knowledge of MSME actors. Second, to sharpen MSMEs' capabilities in digital marketing, focusing on the utilization of digital platforms such as social media and marketplaces as efficient marketing tools (Sahrul & Nuringsih, 2023). Third, to strengthen the confidence of KADIN Kota Bandung-supported MSME members in entrepreneurship to achieve economic independence (Maria et al., 2022).

The novelty of this PKM lies in the integration of digital transformation with a strategic approach based on PESTEL and SWOT analysis applied to KADIN Bandung-supported MSMEs. This approach emphasizes an understanding of the external factors influencing businesses as well as a systematic internal analysis of enterprises. Another innovation is the focus on enhancing digital and marketing skills, as well as strengthening the confidence of MSME actors through structured training and mentoring. This program offers an innovative approach that combines the application of technology and strategic analysis to improve MSME competitiveness, with the hope of strengthening their position in local and national markets.

## Method

The execution of community service initiatives is methodically organized into several phases. Firstly, the preparatory phase involves creating a detailed schedule in collaboration with partners, assembling training resources, and assessing the requirements for effective program delivery. Secondly, the actual delivery of the community service activities is carried out. This PKM focuses on counseling and mentoring, consisting of the following stages: Counseling on PESTEL, SWOT, and Digital Transformation Concepts.

- 1) The aim is to provide participants with an in-depth understanding of PESTEL and SWOT analyses and the importance of digital transformation in the context of modern business.
  - a) Organizing counseling sessions that detail the PESTEL and SWOT concepts comprehensively.
  - b) Explaining how PESTEL analysis can assist in identifying external factors that affect businesses, while SWOT analysis focuses on internal evaluations.
  - c) Emphasizing the significance of digital transformation as a tool for enhancing competitiveness and innovation in business.
- 2) Mentoring in the Application of PESTEL and SWOT.
  - a) Conducting workshop sessions where participants can directly apply PESTEL analysis and SWOT matrices to their businesses.
  - b) Providing step-by-step guidance in identifying relevant external and internal factors.
  - c) Encouraging participants to discuss their findings and formulate strategies based on the results of the analyses conducted.
- 3) Integration of Digital Transformation into Business Strategies.
  - a) Educating participants about various digital tools and platforms that can be utilized to enhance operational efficiency, marketing, and product innovation.
  - b) Providing case studies of small and medium enterprises (SMEs) that successfully implemented digital transformation to improve competitiveness.



- c) Encouraging participants to formulate action plans that include concrete steps for applying digital transformation in their own businesses.

The PKM program involved 20 participants who are female MSME owners and part of the SMEs fostered by KADIN Kota Bandung. Participants ranged in age from 20 to 34 years and operated in the food and beverage sector. The PKM activities were conducted over three days, with the first day held at the KADIN Kota Bandung office and the second and third days at the Auditorium of 'Aisyiyah University Bandung. Activities were held throughout the day, starting from 09:00 to 15:30. The stages of PKM implementation are as follows:

- 1) The event began with remarks from the Head of the Study Program and representatives from KADIN Kota Bandung, who introduced the background and objectives of the program, highlighting the expected benefits for the participating SMEs. The agenda for the program activities was also outlined, enabling participants to grasp the flow of activities and the topics to be discussed in detail.
- 2) Participants were given a questionnaire to measure their initial understanding of the concepts to be taught. This pre-test is important for assessing the participants' baseline knowledge and helps tailor the outreach material to meet their needs.
- 3) The counseling session focused on presenting fundamental concepts regarding PESTEL analysis, SWOT analysis, and the importance of digital transformation in enhancing SME competitiveness. The material was delivered by experts with competencies in the relevant fields, utilizing lectures, visual aids, and interactive discussions as effective approaches.
- 4) Participants received mentoring in formulating business strategies that are relevant to their operational contexts. This mentoring was practical and included simulations of applying PESTEL and SWOT analyses within the food and beverage sector. Additionally, participants were taught how to optimize digital technology to enhance management efficiency and business development.
- 5) Participants were given a questionnaire to evaluate changes in their understanding acquired through the program. The results were used to measure the extent to which the outreach and mentoring provided impacted the participants' knowledge and readiness to apply the concepts taught.
- 6) Closure and Evaluation. The program concluded with an official closing session and a comprehensive evaluation presentation. Participants were given the opportunity to provide feedback regarding the program's implementation. Moreover, assistance was provided to meet the raw material needs of the businesses.

The evaluation in this PKM employs descriptive analysis techniques to process the data. The purpose of this analysis is to provide an overall understanding of the questionnaire results, which are based on a Likert scale. In this evaluation, descriptive analysis is used to:

- a) Compare pre-test and post-test results: For instance, the average understanding of participants before and after the mentoring is analyzed to assess the improvement in knowledge or skills.
- b) Measure participant engagement and satisfaction: Questionnaire data regarding engagement during the program and participant satisfaction are analyzed to identify patterns in the responses.
- c) Determine data distribution: By calculating the standard deviation or variance, this evaluation also reveals the extent of consistency or variability in participants' responses to each measured aspect.



## Result and Discussion

The event opened with remarks from Mr. Abdul Rozak, Head of the International Trade Undergraduate Program, and Mr. Ridwan Kurniawan, Executive Director of KADIN Kota Bandung. Mrs. Maisa Azizah Asmara, Chairperson of the Community Service Program (PKM), then discussed the program's objectives, benefits, and planned activities.



**Figure 1. Representatives by KADIN Kota Bandung and 'Aisyiyah Bandung University**

Afterward, the PKM participants were given the chance to complete a pre-test questionnaire aimed at assessing their initial understanding of PESTEL, SWOT, and digital transformation. The pre-test data was analyzed immediately to tailor the training approach to the participants' needs. The questionnaire measured participants' understanding of the basic concepts, the benefits of applying the three strategies, and the extent to which these strategies had been implemented in their business activities.

**Table 1. Participants Characteristic**

Age	n	%	Education Level	n	%
≤ 25 years	9	45,00	Senior High School	13	0,65
25 - 35 years	11	55,00	Diploma	1	0,05
			Bachelor	6	0,30
Total	20	100,0	Total	20	100,0

Table 1 shows that the majority of PKM participants are between 25 and 35 years old, with the most common educational attainment being high school, including participants who are still enrolled in higher education institutions.



**Figure 2. Pre-Test Session**

**Table 2. Pre-Test Result**

Description	PESTEL				SWOT				Digital Transformation			
	Yes	%	No	%	Yes	%	No	%	Yes	%	No	%
Basic Theory	8	40	12	60	16	80	4	20	18	90	2	10
Understanding of Benefits	3	15	17	85	8	40	12	60	12	60	8	40
Implementation	2	10	18	90	5	25	15	75	9	45	11	55



The results in Table 2 show that 40% of participants have knowledge of the basic concepts of PESTEL analysis, 80% for SWOT analysis, and 90% for digital transformation. However, their understanding of the benefits of implementing these strategies is relatively low, with scores of 15% for PESTEL, 40% for SWOT, and 60% for digital transformation. As a result, only 10% of participants successfully implemented PESTEL analysis, 25% for SWOT analysis, and 45% for digital transformation in their businesses.



**Figure 3. Sharing Session Day 1**

These findings indicate that, despite a sufficient level of understanding regarding the concepts of PESTEL, SWOT, and digital transformation, there is a significant gap between knowledge and practical application in the field. Therefore, it is crucial to conduct further training and mentoring so that participants can apply PESTEL and SWOT analyses as well as digital transformation in their business strategies. This is expected to contribute to enhancing the competitiveness and sustainability of SMEs.

The material delivery on the first day took place from 09:00 to 11:00, focusing on SWOT analysis and the SWOT matrix comprehensively. This material was presented by Maisa Azizah Asmara, S.E., M.M., who is both a lecturer and an experienced practitioner in the field of entrepreneurship. After the presentation, the activities continued with a discussion and Q&A session aimed at clarifying and aligning participants' understanding of the SWOT concepts that had been discussed. This session provided an opportunity for participants to ask questions and discuss the application of the material in relevant business practices.



**Figure 4. Community Services Team, Partner and PKM's Participants**

The final session ran from 13:00 to 15:30, involving direct mentoring in the preparation of SWOT analysis and the SWOT matrix using the provided media. This activity aimed to provide practical guidance to participants in implementing the theories taught, as well as assist in designing relevant and effective strategies in the business context. Through this mentoring, it is hoped that participants can enhance their practical application skills and ensure effective implementation of SWOT analysis in the developed business strategies.



**Figure 5. Sharing Session Day 2**

The activities on the second and third days followed a similar event structure; however, on the second day, the material presented focused on PESTEL strategies by the same speaker. Meanwhile, on the third day, the material discussed related to one strategy for achieving digital transformation, presented by Fahmi Reza Ferdiansyah, M.Kom., a lecturer in the field of informatics.



**Figure 6. Sharing Session Day 3**

As a conclusion, participants were asked to fill out a post-test questionnaire aimed at evaluating their level of understanding after attending the material presentation and mentoring sessions. This questionnaire was designed to measure the increase in participants' knowledge and skills, as well as evaluate the effectiveness of the training and mentoring provided. The results of the post-test are expected to give an overview of the extent to which participants mastered the material and its practical application.



**Figure 7. Discussion Session**

**Table 3. Post-test Result**

Description	Yes	PESTEL				SWOT				Digital Transformation			
		Yes	%	No	%	Yes	%	No	%	Yes	%	No	%
Basic Theory	19	95	1	5	19	95	1	5	20	100	0	0	
Understanding of Benefits	18	90	2	10	20	100	0	0	16	80	4	20	
Implementation	16	80	4	20	17	85	3	15	18	90	2	10	



**Figure 8. Mentoring Session**





Table 3 reveals that 95% of participants have a good understanding of the basic knowledge regarding PESTEL analysis, indicating their awareness of the factors influencing businesses. This suggests that participants recognize PESTEL analysis as a vital strategic tool for evaluating external factors affecting business operations and sustainability. Additionally, 90% understand the benefits of implementing PESTEL analysis, which enables them to formulate strategies to address challenges and seize market opportunities. However, only 80% of participants feel ready to implement PESTEL analysis in their businesses, indicating that 20% still encounter barriers to its application, likely due to resource limitations, lack of practical experience, or other challenges faced in business operations.

Table 3 indicates that 95% of participants have a good understanding of the basic concepts of SWOT analysis, enabling them to identify internal factors that affect business and strategy decisions. Furthermore, 100% of participants recognize the benefits of applying SWOT analysis, understanding its role in maximizing strengths, addressing weaknesses, and effectively responding to market opportunities and threats. However, only 85% are ready to implement SWOT analysis in their businesses, while 15% face barriers to implementation, likely due to resource limitations, lack of practical experience, or other challenges that hinder the integration of SWOT analysis into effective business strategies.

Table 3 shows that 100% of participants have a very good foundational knowledge of digital transformation concepts, indicating their understanding of key aspects such as using technology to enhance business efficiency, expand markets, and improve competitiveness. However, only 80% have a deep understanding of the specific benefits of digital transformation in a business context, such as improved operational efficiency and cost savings. While 90% of participants feel ready to adopt digital transformation in their businesses, 10% face challenges in implementation, potentially due to limitations in technological infrastructure, financial resources, or lack of support. This highlights the need for additional assistance to help those participants who are not fully prepared for implementation.



**Figure 9. Appreciation to Participants**

**Table 4. Participants Improvement**

Description	PESTEL		SWOT		Digital Transformation	
	Increase	%	Increase	%	Increase	%
Basic Theory	11	55	3	15	2	10
Understanding of Benefits	15	75	12	60	4	20
Implementation	14	70	12	60	9	45





### Figure 2. Closing Ceremony

## Discussion

The pre-test results revealed that most MSME participants lacked understanding of PESTEL, SWOT, and digital transformation strategies due to limited access to formal education, the perceived complexity of these concepts, and resource constraints. However, following the training, participants showed a significant improvement in their understanding of these strategies. They began to identify external factors affecting their businesses using PESTEL analysis and evaluated their internal strengths and weaknesses through SWOT. Additionally, their knowledge of digital transformation increased, leading to a greater recognition of technology's role in enhancing operational efficiency and competitiveness. As a result, many MSMEs became better equipped to implement digital technologies and innovate for sustainable growth, demonstrating the training's effectiveness in providing a relevant strategic framework for their development.

Through this community service program (PKM), it is anticipated that MSMEs will understand the importance of comprehending business strategies and their implementation. With this foundational knowledge, MSMEs are expected to analyze their internal conditions and identify actions that can be taken to leverage or mitigate external factors that may impact their operations. Furthermore, MSMEs need to adapt to the digital era in order to remain competitive and sustain their presence in an increasingly challenging market.

In line with the findings of research conducted by (Dwi et al., 2024), (Dita et al., 2024), and (Shafa et al., 2024), the implementation of SWOT strategies enables MSMEs to thrive in a competitive environment by identifying internal strengths and weaknesses while leveraging external opportunities and managing threats. This approach allows for informed strategic decisions that adapt to market changes, making sustainable innovation more achievable. Ultimately, MSMEs can develop adaptive strategies that enhance their competitiveness and ensure long-term business sustainability.

Similarly, research by (Madureira et al., 2024), (Hysa & Mularczyk, 2024), and (Agyekum et al., 2024) states that The application of PESTEL analysis offers significant benefits for MSMEs by helping them develop more effective and sustainable business



strategies. By examining external factors, MSMEs gain insights into regulations, social trends, technological advancements, and economic fluctuations that may affect their operations. This analysis enables them to anticipate changes, identify new opportunities, and prepare for potential external threats. Overall, PESTEL analysis provides a comprehensive framework for MSMEs to make informed strategic decisions and enhance their competitiveness in a dynamic market.

Additionally, in accordance with the findings of (Ullagaddi, 2024), (Ortner et al., 2024), and (Sagala & Öri, 2024), Adopting digital technology allows MSMEs to automate processes, reducing costs and increasing productivity. It expands market reach through e-commerce and social media, attracting new customers regardless of location. Data analytics offers insights into consumer behavior for targeted marketing, while digital technology enhances innovation and flexibility in responding to market changes. Overall, digital transformation improves efficiency, accelerates business growth, and strengthens competitiveness in the digital era.

### **Conclusion**

The training has had a significant impact on strengthening the capacity of MSMEs to face increasingly competitive business environments. First, the training successfully enhanced the competitiveness of MSMEs by providing in-depth analytical tools related to both external and internal conditions, enabling them to be better prepared to respond to market changes and seize new opportunities. Second, the increased understanding of digital marketing allows MSMEs to more effectively utilize technology to expand their markets and enhance online consumer interactions. Third, this training has also bolstered the confidence of MSME actors in making strategic decisions and implementing business innovations. Thus, this training has successfully provided an essential foundation for the sustainable growth of MSMEs in an ever-evolving digital era.

### **Recommendation**

Participants are encouraged to apply the knowledge gained by developing clear action plans for implementing PESTEL, SWOT analysis, and digital transformation in their daily practices. Establishing networks among MSME actors, speakers, and facilitators is recommended to foster collaboration and experience-sharing, which can create new opportunities and strengthen the MSME community. Continued pursuit of information on market trends and digital technologies through seminars and literature is essential for business development. Regular self-evaluation of progress post-training will help participants identify areas for improvement and adjust their strategies accordingly.

KADIN, as a policymaker, should focus on developing comprehensive training programs that emphasize digital literacy and strategic management tools for MSMEs. Enhancing access to digital resources through partnerships with technology providers, strengthening networking opportunities, and advocating for supportive government policies are crucial. KADIN should also promote digital transformation initiatives, implement monitoring frameworks to evaluate program impacts, support research and development, facilitate market access, and foster collaboration with educational institutions. By adopting these recommendations, KADIN can empower MSMEs and contribute to regional economic development.



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