

## **Digital-Based Business Development Strategy with a Pentahelix Approach (Case Study of Bolen Bunda Ibra Rantau Prapat)**

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### **Abstrak**

Tujuan dari penelitian ini adalah untuk mengetahui strategi pengembangan usaha berbasis digital dengan pendekatan pentahelix pada Bolen Bunda Ibra di Rantau Prapat. Latar belakang masalah yang diangkat adalah tantangan yang dihadapi oleh usaha mikro kecil dan menengah (UMKM) dalam memanfaatkan teknologi digital untuk meningkatkan daya saing di era industri 4.0. Kebaruan penelitian ini terletak pada penerapan model pentahelix yang melibatkan kolaborasi antara pemerintah, akademisi, pelaku usaha, masyarakat, dan media dalam pengembangan strategi digital yang efektif. Penelitian ini menggunakan metode analisis SOAR (*Strengths, Opportunities, Aspirations, Results*) yang merupakan pengembangan dari analisis SWOT dan matriks QSPM (*Quantitative, Strategic, Planning, Matrix*). Disarankan bahwa pentingnya kolaborasi antar pemangku kepentingan dalam mendorong transformasi digital UMKM, serta perlunya dukungan kebijakan dan pelatihan untuk meningkatkan literasi digital pelaku usaha bolen bunda ibra rantauprapat.

**Kata Kunci:** Strategi; SOAR; QSPM, Pentahelix, Kuliner

### **Abstract**

The purpose of this study was to determine the digital-based business development strategy with a pentahelix approach at Bolen Bunda Ibra in Rantau Prapat. The background of the problem raised is the challenges faced by micro, small and medium enterprises (MSMEs) in utilizing digital technology to increase competitiveness in the industrial era 4.0. The novelty of this research lies in the application of the pentahelix model which involves collaboration between government, academics, businesses, communities, and the media in developing effective digital strategies. This research uses the SOAR (*Strengths, Opportunities, Aspirations, Results*) analysis method which is a development of SWOT analysis and QSPM (*Quantitative, Strategic, Planning, Matrix*) matrix. It is suggested that the importance of collaboration between stakeholders in encouraging the digital transformation of MSMEs, as well as the need for policy support and training to improve the digital literacy of bolen bunda ibra rantauprapat business actors.

**Keywords:** Strategy; SOAR; QSPM, Pentahelix, Culinary.

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## INTRODUCTION

The development of digital technology has changed the business landscape globally, creating new opportunities and challenges for businesses, especially Micro, Small and Medium Enterprises (MSMEs). Micro, small and medium enterprises (MSMEs) have become one of the aspects that successfully support economic growth in Indonesia (Marliyah, Nawawi M Zuhrinal, 2022) and contribute significantly to GDP (Gross Domestic Product). In prioritizing MSMEs, economic development can generate more sustainable and inclusive growth, benefiting individuals, families, and the economy at large (Nurulita et al., 2024). More than 90% of the workforce in Indonesia works in the MSME sector, which contributes around 60% of the country's GDP. However, many MSMEs still face barriers in implementing digital technologies, including lack of funding, lack of knowledge on digital marketing, and limited access to larger markets. Therefore, a comprehensive strategy is needed to help MSMEs harness the potential of digital technology to improve competitiveness and business growth.

The world of technology and information, including the internet, has developed rapidly in this era of globalization (Syahira Azima et al., 2021). The development of existing technology proves that science and technology always develop and innovate quickly. Technology that continues to develop makes it easier for us to access various information and facilitate work in various aspects of life. Technological developments that can be felt, especially in Indonesia, are the development of information and communication technology such as smartphones and internet usage (Nurbaiti et al., 2023). International commercial opportunities are growing in the current digital era. Entrepreneurs have a great opportunity to build their business strategy in this regard (Avriyanti, 2020). Advancing technology determines the economic value of a product or service more than raw materials or manufacturing methods as was done in the industrial era (Harahap et al., 2022). In addition, technology and digitalization are important components to create work effectiveness and efficiency (Kamilah & Samri Juliati Nasution, 2024). The MSME sector is under a lot of pressure and influence of globalization, and to be able to compete effectively or develop new products, MSME players need to be able to use technology that is suitable for the type of business they run (Ariza & Aslami, 2021). The use of information and communication technology (ICT) in Indonesia has increased rapidly in the last five years starting from 2020 and 2024, the proportion of people who have an internet connection has increased from around 64.8% to 82%. The number of internet users in Indonesia reached 212 million in 2023, and it is estimated that this number will continue to increase in 2024 due to the expansion of 4G and 5G networks and the increasing use of smartphones.

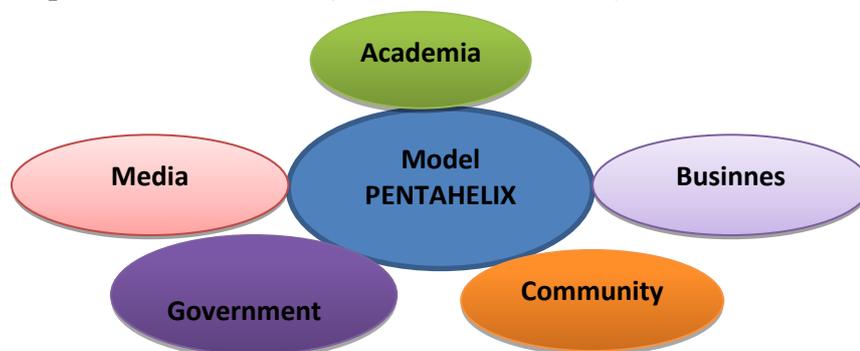
On November 24, 2019, the government issued Government Regulation No. 80/2019 on Trading Through Electronic Systems (PP PMSE). E-Commerce is also known as electronic commerce (e-commerce), defined by the regulation as commerce in which transactions are conducted using a number of electronic devices and processes. E-commerce sells a variety of goods including food, medicine, cosmetics, and clothing (Ardianto et al., 2020). In the evolving digital era, micro, small, and medium enterprises (MSMEs) in Indonesia face significant challenges and opportunities. Digital transformation is key for MSMEs to improve competitiveness and expand market reach as well as readiness to adopt and utilize new technologies. The adoption and utilization of digital tools and platforms can enable MSMEs to

improve their productivity, efficiency, and competitiveness, leading to increased sales, improved customer satisfaction, and expanded market reach (Adnyana & Iswanto, 2021). Indonesia's digital market is predicted to reach USD 125 billion by 2025, so digitization training such as Fast Track Digitalization (FTD) helps MSMEs understand the digital ecosystem and leverage digital tools for marketing and innovation (Ichsan et al., 2023).

One effective approach in the development of digital-based MSMEs is the pentahelix model, which involves collaboration between academics, business people, communities, government, and media. This approach emphasizes the importance of synergy between various stakeholders to create an ecosystem that supports the growth of MSMEs.

One approach that is considered effective in developing digital-based businesses is the Pentahelix approach. This approach is a development of the Triple Helix model that involves three main elements, namely the government, academics, and businesses. Pentahelix adds two other important elements, namely community and media, to create a stronger synergy in driving innovation and economic growth. Collaboration between these five elements is expected to create an ecosystem that supports sustainable business development, especially in the competitive digital era.

In line with research (Barus, 2020) shows that the implementation of the Pentahelix model is able to increase the digital capacity of MSMEs, expand market access, and encourage local economic growth. MSMEs involved in this ecosystem have experienced significant increases in productivity, innovation, and competitiveness. The parties that have an important role and need cooperation, ranging from academics, business, community, government, and media (ABCGM) known as the pentahelix method (Salsabila et al., 2024).



**Figure 1.** Pentahelix

This concept was originally a three-party collaboration introduced by Etzkowitz and Leydersdorff as an innovation-based policy method known as the Triple Helix Model with the ABG formula which stands for Academy, Business, and Government. Then, one more element, namely Civil Society, or Community in this research is added to the Triple Helix so that it becomes the Quadruple Helix. In addition, the Community component detaches the concept of "innovation" from purely economic concerns and goals and integrates creativity into the process of knowledge creation and discovery. This allows for networking and configuration across disciplines (Chamidah et al., 2020). To create innovation and economy, the penthelix concept serves as a guide for development through collaboration between academia, business, government, community, and media, or ABCGM. Penta Helix is defined as cooperation between stakeholders consisting of Academics, Businesses,

Government, Community, and Media (ABGCM) in order to develop innovation and economy. Through synergy in the Pentahelix model, it is expected to be able to present an innovation that is supported by various resources.

In the era of globalization and industrial revolution 4.0, technology is a key factor in improving business competitiveness, operational efficiency, and innovation in various sectors. However, not all organizations or countries have the same level of readiness in adopting and utilizing new technologies. Differences in infrastructure, human resources, policies and culture of innovation affect the extent to which an entity can effectively implement technology solutions. To measure the level of technological readiness, the Technology Readiness Index (TRI) was developed as an evaluation tool that helps stakeholders such as governments, companies and researchers assess their technological capabilities. TRI is a framework that explains the relationship between individuals and technology, namely the relationship between various characteristics of individuals and their beliefs about various aspects of technology. The relative strength of each characteristic indicates a person's openness to technology. Technology Readiness also known as Technology Readiness Index or TRI is the tendency of people to be open to the acceptance and utilization of new technologies to achieve their goals at home or at work. The purpose of the Technology Readiness Index (TAI) is to measure how the general public feels about technology (Astuti et al., 2023). This led to the emergence of four dimensions in technology readiness, namely optimism, innovativeness, discomfort and insecurity.

One definition of innovativeness is the tendency to be a leader or pioneer in the use of technology, to adopt the latest technology independently to continue using new technology, to like the search for the latest technological challenges and to have no problems using technology (Godoe & Johansen, 2012).

Rantau Prapat City, located in North Sumatra Province, has great economic potential, especially through creative economy development based on Pentahelix collaboration. One of the culinary cultural assets that can become a regional icon is Bolen, a typical Rantau Prapat food made from pastry dough with banana or cheese filling, and has a distinctive sweet and savory taste. Through Pentahelix collaboration involving academics, business, government, community and media, Bolen can be developed and promoted as a local culinary identity. Geographically, Rantau Prapat City has high economic potential so that the business world must be able to survive to quickly adapt to technological and scientific advances, because the business world is now driven by this development rather than the abundance of natural resources and low labor costs (Ahmad et al., 2020).

MSMEs are the largest group of economic actors in the Indonesian economy and play a very important role in the economy (R. S. P. Harahap et al., 2023). Micro, Small and Medium Enterprises that have been established from 2019 to date are Bolen Bunda Ibra MSMEs. Bolen Bunda Ibra, a typical Rantau Prapat culinary business, has become one of the favorite souvenirs in the area and is widely popular in North Sumatra. But despite its popularity and distinctive taste, as well as its huge market potential, the business still faces significant challenges, especially related to erratic sales fluctuations. There are times when sales are busy and the queue of buyers is booming, but on the other hand, sales are often quiet and there are no buyers. This inconsistency is a major problem that hinders business growth. One of

the reasons is the dependence on certain moments, such as holidays or local events. When those moments arrive, sales surge dramatically, but outside of that period, sales tend to decline.

This shows that Bolen Bunda Ibra does not yet have a sustainable development strategy to maintain sales stability throughout the year. A business needs a strategy to achieve goals related to the long term of the business (Imsar, 2021). Strategy is an overall approach related to the implementation of ideas, planning, and execution of an activity within a certain period of time. Strategy places a strong emphasis on both the goal itself and the activities or procedures needed to achieve it. (Marliyah, 2016). It can be seen in the figure below that the sales turnover of Bolen Bunda Ibra Culinary MSMEs by typical Rantauprapat souvenirs from January to December in 2024 has decreased.



**Figure 2.** Bolen Bunda Ibra Sales Data January-December 2024

Source: Processed by the author

Based on the data above, it can be seen that there was a drastic decrease in sales turnover from January to December in 2024. The initial revenue in January was IDR 130,000,000, while in December it decreased to IDR 90,000,000. This means that there was a decrease in turnover of Rp 40,000,000 until December 2024. Thus, a strategy is needed to face competition in today's advanced MSME world. To realize the progress of MSMEs, currently a pentahelix strategy is needed to develop MSMEs by including the involvement of various stakeholders. To advance MSMEs, stakeholders must work together (Poerwarini & Roesdianto, 2020).

Sales turnover is one of the elements that affect the performance of a business. The total amount of money generated from the sale of goods or services within a certain period of time is called sales turnover. Companies want to increase sales turnover including Sales activities are always equated with sales turnover. Sales turnover will increase if there is a strong demand for the product. If there is high demand, there will also be high production growth which will inevitably increase sales turnover. The increase in company revenue will be influenced by high sales turnover (Fadlan et al., 2022).

The digital revolution makes marketing more effective, reduces wasteful spending, and improves the standards of advertising, marketing, and methods to make products marketable (Syahdiyah Sugiartia, 2023). Bolen Bunda Ibra is active on social media such as Instagram and Facebook, and utilizes online delivery applications to reach a wider range of customers. However, despite using digital platforms, the problem of fluctuating sales, which are sometimes busy and sometimes quiet, is still a challenge that has not been resolved.

One of the reasons is the lack of optimized digital content strategy. Despite having social media accounts, the content uploaded tends to be monotonous and uninteresting to customers. Promotions are often only informative, such as announcing prices or product availability, without any effort to build engagement or interaction with customers. As a result, despite the use of digital platforms, the impact on increasing sales has not been significant. This fluctuation in sales also impacts the difficulty in building customer loyalty. Without consistent interaction and the right marketing strategy, customers may not feel emotionally connected to the Bolen Bunda Ibra brand. This makes them likely to only buy at certain moments, and as loyal customers. Another problem is the lack of collaboration with stakeholders in the Pentahelix approach, such as the government, academics, businesses, communities and the media. This collaboration could be the key to creating a more effective and sustainable marketing strategy.

As previous research by (Saefulrahman et al., 2024), showed that triple helix collaboration between universities, village governments, and business actors succeeded in increasing understanding of digital marketing and the ability to create online shops for MSME players in Cimunuk Village through workshops.

As a result, MSMEs gained tools to expand their market digitally, potentially increasing their income and the village economy. This collaboration proves the effectiveness of multi-stakeholder synergy in empowering MSMEs in the digital era, with recommendations to expand the variety of business actors and involve mass media for greater impact. Research by (Aryuniasari et al., 2023) emphasizes the importance of triple helix synergy to strengthen the capacity of MSMEs, where academics act as knowledge and innovation providers, businesses as enablers in technology adoption, and government as policy coordinators and facilitators, in order to create a digital ecosystem that supports the sustainable growth of MSMEs.

Based on research conducted by shows that although both cooperatives have exported ant sugar to the international market, they still face challenges such as limited fostered farmers (only 14% of the total sub-district) and dependence on third parties that suppress prices. The Pentahelix model is designed to address these issues by improving competitiveness through mentoring, digitalization, and synergy between stakeholders, so that MSMEs can develop into sustainable and competitive technosociopreneurs in the global market. In a study by (Beatrice & Hertati, 2023) showed that this collaboration succeeded in increasing the capacity of MSMEs through administrative training, marketing digitization (WhatsApp Business, Instagram, e-commerce), and licensing facilitation. However, several obstacles were encountered, such as the dependence of MSME actors on academic assistance, limited access to capital, and not optimizing the role of the media and the private sector.

Research conducted by (Najmudin et al., 2023) showed that the implementation of the pentahelix collaboration model in the development of MSME human resources in Cibereum Village, Cimahi City, succeeded in forming a "Sahabat UMKM" group which acts as a facilitator and incubator. This collaboration involves five stakeholders, namely government, academia, media, community, and private sector, each of which contributes to the planning, implementation, and evaluation of MSME development. In research conducted by (Vani et al., 2020) shows that the development of tourism potential in Pekanbaru City can run optimally through the collaboration of the pentahelix model, which involves five main pillars with stronger synergy between the five pentahelix pillars, Pekanbaru City has great potential to realize the vision of Smart City Madani and increase the contribution of the tourism sector to the regional economy.

The main difference between previous research and this study lies in the collaboration model used and the focus of the research. Previous research by (Saefulrahman et al., 2024) and (Aryuniasari et al., 2023) used the triple helix model (academics, government, and business actors) with a focus on increasing digital marketing and capacity of MSMEs through workshops and simple synergies. Meanwhile, research by (Lestari et al., 2023), (Najmudin et al., 2023), and (Vani et al., 2020) adopted a more complex pentahelix model, involving five stakeholders (academics, government, private sector, media, and community) with a broader focus, such as export competitiveness, MSME human resource development, and smart city-based tourism development. The focus of previous research is more specifically on empowering MSMEs through digitalization, while the research on digital-based business development strategies with a pentahelix approach emphasizes a holistic approach to overcome more diverse challenges, including limited access to capital, optimizing the role of the media, and broader stakeholder integration and makes new contributions by combining the Pentahelix approach, SOAR-QSPM analysis, and digital solutions for traditional food MSMEs in developing regions.

In this context, a holistic Pentahelix solution approach is needed. The government can provide support through policies and training programs, academics can contribute to research and innovation development, businesses can build networks and increase production capacity, communities can be partners in promotion and distribution, while the media can play an important role in building branding and increasing business visibility. By combining the strengths of these five elements, Bolen Bunda Ibra Rantau Prapat can optimize its potential and compete in an increasingly competitive market.

So that a strategy and cooperation in developing a creative economy that involves the participation of various parties is needed in order to realize the progress and development of the creative economy in Rantau Prapat and play an important role in creating jobs and increasing local income, in line with Indonesia's economic development goals towards 2045 (Panjaitan et al., 2024). One of the theories that can be used in the above problems is to use pentahelix and QSPM as a strategy for developing the creative economy, especially bolen bunda ibra in the city of Rantau Parapat.

## METHODOLOGY

The research method used in conducting research is qualitative. Qualitative research is a study intended to describe and analyze phenomena, events, social activities, perceptions, thoughts of people individually or in groups (Hasan et al., 2023). The data sources in this study used primary data and secondary data. SOAR and QSPM analysis are data analysis methods used in this research. SOAR stands for Strengths, Opportunities, Aspirations, Results. A highly constructive framework for strategic thinking and analysis that allows a person, group, or organization to develop a plan or strategy to build the future through cooperation, understanding, and dedication (Cynthia Imadiyar P, Muhandi & Amaliah, 2022). To determine what possibilities exist, the SOAR analysis starts with an examination of the industry, internal and external environment. It will then combine all the strengths and opportunities to produce aspirations and outcomes. A method to objectively assess various options, evaluate the relative attractiveness of alternative actions that can be implemented, and select the optimal strategy based on internal and external considerations is the QSPM (Quantitative Strategic Planning Matrix) Matrix method (Zamista & Hanafi, 2020).

The author uses SOAR and QSPM methodologies because the Appreciative Inquiry approach emphasizes finding and improving strengths rather than weaknesses, problems, and threats, as well as which solutions are practical to implement. The respondents of this research are pentahelix stakeholders, namely academics (FEBI UINSU lecturers), government (Rantauprapat sub-district head), business (Bolen Bunda Ibra), community (UMKM Cooperative Office), and media.

## RESULTS AND DISCUSSION

According to Riyanto, the pentahelix approach consists of academics, business, community, government and media. The author examines the application of this model in the development of the digital-based bolen bunda ibra business in Rantau Prapat. To find out the extent to which internal variables play a role in the organization, the IFAS matrix is used. The EFAS matrix uses ratings and weights to calculate strengths and weaknesses that represent the state of external forces affecting MSMEs (Fuadi, 2020). Based on the SOAR attachment below, the IFAS and EFAS results can be concluded as follows:

**Table 1.** Internal Factors Analysis Summary (IFAS)

No	Strenght	Final Score
1	Academics	0,387
2	Business	0,417
3	Community	0,407
4	Government	0,407
5	Media	0,268
	Sub Total	$\sum$ 1,886
No	Opportunity	Final Score
1	Academics	0,387
2	Business	0,397
3	Community	0,377
4	Government	0,367
5	Media	0,367

Sub Total

$$\sum 1,895$$

Source: Data processed, 2025

Based on table 1 in the IFAS section, strength there are five aspects assessed, namely Academics, Business, Community, Government, and Media, with final scores of 0.387; 0.417; 0.407; 0.407; and 0.268 respectively. The sub total of Strength is 1.886 Meanwhile, the Opportunity section also includes the same five aspects, with final scores of 0.387; 0.397; 0.377; 0.367; and 0.367 respectively, and a sub total of 1.895. Overall, this IFAS table in terms of internal aspects is dominant in the opportunity section.

**Table 2.** External Factors Analysis Summary (EFAS)

No	Aspiration	Final Score
1	Academics	0,341
2	Business	0,310
3	Community	0,243
4	Government	0,287
5	Media	0,204
	Sub Total	$\sum 1.385$

No	Result	Final Score
1	Academics	0,298
2	Business	0,370
3	Community	0,406
4	Government	0,442
5	Media	0,382
	Sub Total	$\sum 1,897$

Source: Data processed, 2025

Based on table 2 in the EFAS section, Aspiration has five aspects assessed, namely Academics, Business, Community, Government, and Media, with final scores of 0.341; 0.310; 0.243; 0.287; and 0.204 respectively. The sub total of Aspiration is 1.385 Meanwhile, the Result section also includes the same five aspects, with final scores of 0.298; ; 0.370; 0.406; 0.442 and 0.382 respectively, and a sub total of 1.897. Overall, this EFAS table in terms of the dominant external aspects is in the Result section.

So based on tables 1 and 2 for alternative strategies is the O-R strategy because of the order of scores with rounding based on the results of the internal and external factors mentioned above: Strength/S = 1.886, Opportunity/O = 1.895, Aspiration/A = 1.385 and Result/R = 1.897. The mathematical result used to determine the total amount of the IFAS matrix is 3,781, while the value in the EFAS matrix is 3,282. Based on the IFAS and EFAS results, it is concluded that OR is the dominant indicator. The use of SOAR Matrix Analysis on the development of the digital-based bolen bunda ibra business can be observed through the lens of current opportunities, strengths, and ambitions to the point where measurable results are developed as substitute solutions, namely:

**Tabel 3.** Matriks SOAR

	Strength	Opportunity
Aspiration	Create a strategy that uses strengths to achieve	Create aspiration-oriented strategies to capitalize on opportunities

	aspirations	
<b>Result</b>	Create an opportunity-based strategy to achieve measurable results	O5-R1 Collaborating with local influencers for promotion can increase consumer trust through endorsements. 1) O2-R2 Create a special online application/account for ordering Bolen so that customers can order more easily via cellphone. O2-R1 Create an online reseller program among young people so that resellers can help sell products more widely without the need to open branches. 2) O19-R1 Promotion on social media using unique stories to be better known through Instagram/TikTok with interesting content. O13-R19 Collaboration with local coffee shops to create "Ngopi Sambil Makan Bolen" package.

Source: Data processed, 2025

The different pentahelix approaches to the OR matrix generated from the SOAR analysis review of the internal and external elements of the business are as follows:

1. Collaborating with local influencers for promotion can increase consumer trust through endorsements (O5-R1).
2. Create a special online application/account for ordering Bolen so that customers can order more easily via cellphone (O2-R2).
3. Creating an online reseller program among young people so that resellers can help sell products more widely without the need to open branches (O2-R1).
4. Promotion on social media using unique stories to be better known through Instagram/TikTok with interesting content (O19-R1).
5. Collaboration with local coffee shops to create "Ngopi Sambil Makan Bolen" package (O13-R19).

**Table 4.** Alternative Strategy QSPM

No	Priority strategies	Total Tas	Priority
1	Promotion on social media using unique stories to be better known through Instagram/TikTok with interesting content.	18,931	I
2	Creating an online reseller program among young people so that resellers can help sell products more widely without the need to open branches.	18,803	II
3	Create a special online application/account to order Bolen so that customers can order more easily via cellphone.	18,798	III
4	Collaborating with local influencers for promotion can increase consumer confidence through endorsements.	18,297	IV
5	Collaboration with local coffee shops to create "Ngopi Sambil Makan Bolen" package.	18,285	V

Source: Data processed, 2025

The final stage of the strategy analysis is to find out which strategies the company can carry out. QSPM analysis is used to select feasible alternative actions and decide which strategy is the best. The SOAR matrix produces various alternative strategies contained in the internal and external characteristics of the company which are the source of strategic choices. According to this research, the Attractiveness Score (TAS) that can be done is to hold promotions on social media using unique stories to be better known through Instagram / TikTok with interesting content with a TAS value of 18.931 to ensure that the product can attract many customers.

## **Business Development at Bolen Bunda Ibra Rantau Prapat**

Bolen Bunda Ibra is one of the typical culinary MSMEs in Rantau Prapat that faces the main challenge of unstable sales fluctuations. Sales tend to be high at certain moments such as holidays or local events, but drop dramatically outside these periods. This is due to dependence on specific moments, less than optimal utilization of digital technology for marketing, and monotonous and less interactive social media content. Although the business has utilized digital platforms such as Instagram and Facebook, its digital marketing strategy has not been able to create consistent engagement with customers.

This research proposes the Pentahelix approach as a holistic solution, which is a collaboration between five stakeholders: academia, business, government, community and media. The results of SOAR and QSPM analysis show that the best strategies to increase sales are creative promotions on Instagram and TikTok with unique story-based content, an online reseller program, development of a dedicated booking application, collaboration with local influencers, and cooperation with coffee shops to offer the "Ngopi Sambil Makan Bolen" package. Compared to previous studies that used the Triple Helix model, the Pentahelix approach in this study is more comprehensive because it involves the role of media and communities actively, thus providing a broader impact.

This research is in line with research (Lestari et al., 2023) which states that the pentahelix model is effective in increasing the competitiveness of MSMEs through mentoring and digitalization. And there are also studies that differ from the results of this study, namely in research (Beatrice & Hertati, 2023) which found obstacles such as the dependence of MSMEs on academic assistance and the less than optimal role of the media in the pentahelix model. This shows that multi-stakeholder collaboration does not always run smoothly and requires further evaluation.

The results of this study are supported by the Technology Readiness Index (TRI) theory, which also provides an additional perspective in analyzing the readiness of these MSMEs in adopting technology. The optimism and innovativeness dimensions state that Bolen Bunda Ibra has a foundation in the use of social media, but still needs improvement in terms of content creativity and adoption of new platforms such as TikTok. Meanwhile, the dimensions of discomfort and insecurity indicate that businesses still need training and assistance to increase confidence in managing digital marketing and ensuring the security of online transactions (Godoe & Johansen, 2012).

## **Bolen Bunda Ibra Rantau Prapat Business Development Strategy**

Based on SOAR (Strengths, Opportunities, Aspirations, Results) and QSPM (Quantitative Strategic Planning Matrix) analysis, the most effective development strategy is creative promotion on social media such as Instagram and TikTok with unique story-based content, which obtained the highest TAS score (18,931). Other strategies that are also considered feasible include an online reseller program to expand the market without opening physical branches, development of an online ordering application, collaboration with local influencers, and cooperation with coffee shops to offer the "Ngopi Sambil Makan Bolen" package.

This research is supported by several previous studies, such as (Saefulrahman et al., 2024) which proves that triple helix collaboration (academics, government, business) can improve the understanding of digital marketing of MSMEs. In addition, (Lestari et al., 2023) showed that the pentahelix model is effective in increasing the competitiveness of MSMEs through mentoring and digitalization. And there are also studies that differ from the results of this study, namely in research (Beatrice & Hertati, 2023) and the less than optimal role of the media, which is an important note for future improvement.

## CONCLUSION

Based on the SOAR and QSPM analysis of the digital-based business development strategy of dibolen bunda ibra, it is identified that the O-R strategy, which is a strategy obtained between Opportunity and Result. When associated with the pentahelix theory, it shows that collaboration between academics, business, government, community, and media in the Pentahelix model is able to create an ecosystem that supports the digital transformation of MSMEs. Through the SOAR and QSPM methods, this study identified that digital content optimization, collaboration with local influencers, and the development of online ordering applications are key strategies to improve business competitiveness. In accordance with the analysis of digital-based business development strategies on internal factors using the IFAS matrix at UMKM Bolen Bunda Ibra Rantauprapat, a score of 3,781 was obtained while EFAS had a score of 3,282. Creative promotion on social media is a top priority, followed by online reseller programs and collaboration with other business actors. Policy support from the government and the active role of the media in branding also accelerate the adoption of digital technology. Of the five available strategies, the strategy that ensures good and stable sales turnover is Promotion on social media using unique stories to be better known through Instagram / TikTok with interesting content with a TAS score of 18.931, which is a priority strategy that can be used in accordance with the analysis of alternative strategies using the QSPM matrix. And with the Pentahelix approach, Bolen Bunda Ibra MSMEs are not only able to increase sales stability but also create sustainable growth.

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