Vol. 18, No. 4, 2025 ISSN: 2655-7859 (Online) ISSN: 1830-7938 (Print)

# PENTAHELIX-BASED MSME DEVELOPMENT STRATEGY TO REDUCE THE UNEMPLOYMENT RATE IN TEBING TINGGI CITY

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#### Abstract

This study aims to formulate a development strategy for Micro, Small, and Medium Enterprises (MSMEs) based on the Pentahelix approach to reduce unemployment in Tebing Tinggi City. The Pentahelix approach involves five main elements: academics, businesses, communities, government, and mentors, who collaborate in the local economic development process. The methodology is a qualitative one, including statistical data, questionnaires, in-depth interviews, document analysis, and observation as data collecting methods. The strategy is analyzed using the SOAR (Strengths, Opportunities, Aspirations, Results) framework and the Triple Bottom Line (TBL) principle, which includes social (people), environmental (planet), and economic (profit) aspects. The analysis results show that the combination strategy of Opportunities + Aspirations (OA) is the most optimal approach, with the highest score in the IFAS and EFAS analyses. The OA strategy is considered capable of utilizing external opportunities such as technological innovation, strategic partnerships, community collaboration, and policy support, to realize the aspirations of sustainable community economic empowerment. These findings demonstrate the importance of cross-sector collaboration in encouraging MSME growth as a strategic solution to reduce unemployment in the region.

Keywords: MSMEs, Pentahelix, Unemployment, SOAR

**Vol. A, No. B, YYYY** ISSN: 2654-7856 (Online)

ISSN: 1829-7935 (Print)

### INTRODUCTION

Economic development plays a central role in achieving progress in various sectors, particularly in the context of regional autonomy in Indonesia. Local governments are largely responsible for improving the economy and the welfare of the people within their territories. To achieve this goal, optimizing various local potentials, including human resources (HR), is crucial. One key strategy for maximizing HR potential is through the development of MSMEs as drivers of economic activity (Beatrice & Hertati, 2023).

MSMEs make a significant contribution to the national economy and constitute a crucial business sector (Arifqi, 2021). In addition to driving economic expansion, MSMEs efficiently create numerous jobs, ultimately reducing unemployment (Yuwanto, 2022). Even at the national level, MSMEs hold tremendous promise for the revival of local economic systems due to their significant contribution to GDP, potential job creation, and role in promoting economic equality (Arifqi, 2021).

Law No. Law No. 20 of 2008 concerning MSMEs, with certain net worth and annual sales performance limitations, emphasizes the importance of this sector as a productive enterprise that meets consumer needs. The fact is that MSMEs are the backbone of the Indonesian economy, as evidenced by their contribution to reducing unemployment by absorbing over 97% of the national workforce (Beatrice & Hertati, 2023; Ministry of Cooperatives and SMEs, 2023).

While MSMEs are recognized for their vital role, actual conditions on the ground often present complex challenges. The unemployment rate in Tebing Tinggi City is a socio-economic issue that requires serious attention. Data from the Tebing Tinggi City Central Statistics Agency indicates that the open unemployment rate remains relatively high. The imbalance between new job creation and workforce growth may be a contributing factor to this high unemployment rate (Anggoro et al., 2014). This problem is exacerbated by the lack of job prospects in the formal sector and the gap between workforce skills and market demand (Beatrice & Hertati, 2023).

Recent data further confirms this phenomenon. Tebing Tinggi City itself has experienced significant growth in the number of MSMEs in the past five years. However, a paradox arises when this increase in the number of MSMEs is not positively correlated with a significant decrease in poverty or unemployment rates. Data from the Central Statistics Agency (BPS) and the Tebing Tinggi City Trade and Cooperatives Office (2024) shows an increase in the number of MSME units from 4,235 in 2020 to 5,227 in 2024. Ironically, during the same period, the unemployment rate in Tebing Tinggi City actually showed an upward trend, from 6.80% in 2020 to 8.55% in 2024 (see Table 1).

Table 1. Data 2020 – 2024: Population, MSMEs, and Unemployment in Tebing Tinggi City

| Years | Population (People) | MSMEs (Units) | Unemployment |
|-------|---------------------|---------------|--------------|
| 2020  | 172.838             | 4.235         | 8.719        |
| 2021  | 174.969             | 4.360         | 7.204        |
| 2022  | 177.785             | 4.489         | 6.421        |
| 2023  | 178.914             | 5.112         | 5.450        |

ISSN: 1830-7938 (Print)

| 2024 | 180.977 | 5.227 | 5.798 |
|------|---------|-------|-------|
|------|---------|-------|-------|

Source: Central Statistics Agency and Tebing Tinggi City Cooperative Trade Service, 2024.

This phenomenon indicates that despite the increasing number of business units, the contribution of MSMEs to job creation and unemployment reduction is not yet optimal. Possible contributing factors include low MSME productivity, limited access to markets and technology, and minimal synergy among stakeholders (Susilawati et al., 2020). Sectoral and non-integrated approaches to MSME development are considered ineffective in addressing these complex employment challenges, thus necessitating a more comprehensive strategy.

Theoretically, and based on previous research, MSME development should not focus solely on economic aspects but also on social and environmental impacts to achieve desired outcomes. In the context of sustainable development, MSMEs must be able to make a real contribution to community welfare and environmental preservation, in line with the Triple Bottom Line (TBL) principle, which emphasizes a balance between social (People), environmental (Planet), and economic (Profit) aspects.

The weakness of conventional MSME empowerment approaches often lies in the lack of systematic multi-stakeholder involvement and collaboration. Development models that focus on a single actor (e.g., the government or the private sector) tend to overlook the significant potential of other actors, such as academics, local communities, and business mentors. In fact, the Pentahelix Model concept, which involves five essential elements: academia, business, community, government, and mentors, is widely recognized as a more inclusive and collaborative approach to regional development. The lack of integration between these pentahelix elements results in disparate, ineffective MSME development strategies that potentially fail to create significant long-term economic and social impacts.

Therefore, the ideal situation is strong synergy among stakeholders to develop an integrated and comprehensive strategy. This study proposes the use of the SOAR (Strengths, Opportunities, Aspirations, Results) approach integrated with the Triple Bottom Line (TBL) principle as a strategic framework for developing Pentahelix-based MSMEs in Tebing Tinggi City. The SOAR approach emphasizes the analysis of internal strengths, external opportunities, shared aspirations, and collaborative outcomes. Meanwhile, the TBL concept ensures that the developed plan takes into account long-term, inclusive, and sustainable impacts on society and the environment, in addition to economic development. The synergy between SOAR and TBL, within the Pentahelix framework, is expected to serve as a foundation for developing a comprehensive and effective MSME development strategy to address poverty in Tebing Tinggi City.

This research aims to formulate a development strategy for Micro, Small, and Medium Enterprises (MSMEs) based on the Pentahelix approach to reduce poverty in Tebing Tinggi City. The Pentahelix approach involves five main elements: academia, business, community, government, and Mentors who collaborate in the local economic development process.

In Indonesia, the definition of MSMEs is regulated by Article 1 of Law of the Republic of Indonesia Number 20 of 2008, which states that microenterprises are profitable companies owned by one or more individuals and fall into the category of micro-enterprises as defined by law. According to Utami & Syahbudi (2022), individual production companies or economic actors that meet legal requirements and are managed by individuals or organizations other than subsidiaries or branches of larger businesses are known as micro-enterprises.

**Vol. A, No. B, YYYY**ISSN: 2654-7856 (Online)
ISSN: 1829-7935 (Print)

Micro, small, and medium enterprises (MSMEs) that operate based on Sharia principles, that is, without violating Sharia law, are known as Sharia-based MSMEs. These MSMEs are then run commercially and meet certain standards (Sukman, 2020). Strictly speaking, to comply with Islamic sharia, they must distinguish between what is haram (forbidden) and what is halal (permissible), or what is right and what is wrong, in their application. This is in accordance with Allah's word in verse 42 of Surah Al-Baqarah:

Meaning: Do not mix truth with falsehood, and (nor) conceal the truth while you know it.

Sustainable development is now a central framework in global development efforts. This approach shifts the focus from mere economic growth to a more holistic and responsible one. This concept was initially formulated in depth in the Brundtland Report (World Commission on Environment and Development [WCED], 1987), which defined it as growth that meets the needs of the present without compromising the ability of future generations to meet their own needs. This definition clearly integrates three crucial, interrelated dimensions: economic, social, and environmental (Elkington, 1998; Purwanto et al., 2021). This shift reflects an awareness of the limitations of natural resources and the importance of maintaining a balance between economic progress, social welfare, and ecological sustainability. Recent studies also emphasize the need for more responsible and sustainable business strategies (Jamaludin et al., 2022).

Fundamentally, the Sustainable Development Theory provides a holistic framework for analyzing how MSMEs in Tebing Tinggi City can function as a vital instrument in achieving the goals of a resilient economy, social justice, and a sustainable environment.

## RESEARCH METHODS

This study used a qualitative approach. When a person's written or spoken words or observed behavior are used in this way, descriptive data is generated (Safrudin et al., 2023). Data were collected through observations, questionnaires, and interviews with five key actors: Academics (MS), Business (MB), Community (AP), Government (Z), and Mentors (MF), as well as analysis of related documents and reports. Data were analyzed using the Pentahelix, SOAR, and TBL approaches to design strategies that can reduce unemployment through sustainable MSME development.

SOAR is a strategic approach based on the capabilities and strengths of an organization or community. This approach focuses on: Strengths: The existing potential and advantages of MSMEs. Opportunities: The resources and opportunities that MSMEs can exploit. Aspirations: The vision or goals that MSMEs want to achieve. Results: The concrete results they want to achieve in the long term, including reducing unemployment and improving social welfare.

The research location is Tebing Tinggi City, a city in North Sumatra Province with significant MSME potential. The research subjects consisted of MSMEs operating in various sectors, such as food and beverages, crafts, and services.

Matrix The SOAR used to test internal and external variables that influence MSME growth in reducing unemployment rates is shown in the following table:

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Table 2. SOAR Matrix Analysis

| Internal Eksternal                                 | Strength List of Internal Strength Factors   | Opportunities List of External Opportunities  |
|--|--|---|
| Aspirations List of internal expectations          | SA Strategy Develop a plan that uses capabilities to achieve goals                 | OA Strategy It is anticipated that aspiration-oriented initiatives will capitalize on opportunities |
| Results List of measurable outcomes to be achieved | SR Strategy Develop tactics based on your strengths to achieve measurable results. | OR Strategy A strategy that focuses on opportunities to produce measurable results.                 |

Source: (Syahbudi, 2021)

This analysis aims to create strategic initiatives that leverage identified strengths to achieve aspirations (SA strategies) and capitalize on opportunities to meet aspirations (OA strategies). Furthermore, these strategies focus on using strengths to achieve measurable results (SR strategies) and capitalizing on opportunities to achieve desired results (OR strategies).

#### RESULT AND DISCUSSION

Identifying critical elements for MSME growth and reducing unemployment is the first step in SOAR analysis. To identify internal and external factors influencing development plans, researchers used questionnaires, interviews, and observations. External factors, including aspirations and outcomes, and internal factors, including strengths and opportunities, were determined through observations, questionnaires, and interviews:

## 1. Strengths

- a. Availability of relevant research and training to support capacity building for entrepreneurs.
- b. Financial support and market access from parties with broader economic connections.
- c. Active involvement of local social networks in assisting with the promotion and distribution of small business products.
- d. Availability of policies and incentive programs that support the development of the small business sector.
- e. Ongoing mentoring from parties experienced in business development.

#### 2. Opportunities

a. Availability of opportunities to apply technological innovation in the development of business products and services.

ISSN: 2654-7856 (Online) ISSN: 1829-7935 (Print)

- b. Possibility to form strategic partnerships that support business growth and distribution.
- c. Opportunities to create community collaborations to strengthen business networks and the local economy.
- d. Open government policy and budget support for empowering the small business sector.
- e. Increasing demand for training, consulting, and guidance in business development.

## 3. Aspirations

- a. Business development is expected to be an important part of the education, research, and innovation process.
- b. Small businesses are expected to become part of the distribution and production network within the larger economic system.
- c. Local businesses are expected to be able to achieve economic independence for the community as a whole.
- d. Business programs are expected to be a primary strategy for reducing unemployment and improving welfare.
- e. Business actors are expected to grow into competitive and sustainable entrepreneurs.

## 4. Results

- a. The creation of an effective business development model that can serve as a reference for other actors.
- b. The growth of small businesses has resulted in increased business scale and profitability.
- c. Business activities can have a positive impact on the welfare and empowerment of the surrounding community.
- d. The reduction in unemployment in the local area can be linked to the development of productive businesses.
- e. Business actors demonstrate continuous progress in managerial aspects and market orientation.

## Internal and External Factor Analysis Using IFAS and EFAS

After identifying the internal and external components, the External Strategic Factor Analysis Summary (EFAS) and Internal Strategic Factor Analysis Summary (IFAS) tables were used. Each component was then rated on a scale from 1 (below average) to 4 (excellent), and weighting was assigned on a scale from 0.0 (not important) to 1.0 (very important). The findings of the EFAS and IFAS analyses are shown in Table 3...

Tabel 3. Preparation of the IFAS Matrix

| No | Internal Factors Strengths  |      | Rating | Weight x Rating |
|----|---|------|--------|-----------------|
| S1 | Availability of relevant research and training to support increasing the capacity of business actors. | 0,05 | 3      | 0,14            |

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| O5 | empowering the small business sector.  The increasing need for training, consulting and guidance in business development.  Sub Total | 0,14<br><b>0,57</b> | 3 | 0,41<br><b>1,99</b> |
|----|--|---------------------|---|---------------------|
| O5 | The increasing need for training, consulting and   | 0,14                | 3 |                     |
|    | empowering the small business sector.  |                     |   | ,                   |
| O4 | Open government policy and budget support for  | 0,13                | 4 | 0,50                |
| О3 | Opportunities to create community collaborations to strengthen local business and economic networks.                                 | 0,09                | 4 | 0,35                |
| O2 | Possibility of forming strategic partnerships that support business growth and distribution.   | 0,15                | 3 | 0,44                |
| O1 | The availability of opportunities to apply technological innovation in the development of business products and services.            | 0,07                | 4 | 0,29                |
|    | Opportunities  |                     |   |                     |
|    | Sub Total  | 0,43                |   | 1,49                |
| S5 | There is ongoing support from parties who are experienced in business development  | 0,06                | 3 | 0,19                |
| S4 | Availability of policies and incentive programs that support the development of the small business sector.                           | 0,11                | 4 | 0,42                |
| S3 | Active involvement of local social networks in helping promote and distribute small business products.                               | 0,12                | 3 | 0,35                |
| S2 | There is financial support and market access from parties with broader economic connections.   | 0,10                | 4 | 0,38                |

The calculations were then completed, yielding the findings shown in Table 1, an overall score of 3.49. A power factor of 1.49 and a probability factor of 1.99 were used to arrive at this score. After the IFAS calculations were completed, the EFAS factors shown in Table 4 were calculated.

Table 4. EFAS Matrix Construction

|    | External Factors  |      |        | Weight      |
|----|---|------|--------|-------------|
| No | No Aspirations  |      | Rating | x<br>Rating |
| A1 | Business development is expected to be an important part of the education, research and innovation process. | 0,11 | 3      | 0,34        |

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|    | Total   | 1,00 |   | 3,09 |
|----|---|------|---|------|
|    | Sub Total   | 0,49 |   | 1,40 |
| R5 | Business actors demonstrate progress in managerial aspects and market orientation on an ongoing basis           |      | 4 | 0,23 |
| R4 | The decline in unemployment rates in the local area can be linked to the development of productive businesses   | 0,10 | 3 | 0,29 |
| R3 | Business activities can have a positive impact on the welfare and empowerment of the surrounding community      | 0,12 | 3 | 0,36 |
| R2 | The growth of small businesses has an impact on increasing business scale and profitability                     | 0,09 | 2 | 0,17 |
| R1 | The creation of an effective business development model that can be used as a reference for other actors.       | 0,12 | 3 | 0,34 |
|    | Results   |      |   |      |
|    | Sub Total   | 0,51 |   | 1,69 |
| A5 | Business actors are expected to be able to grow into competitive and sustainable entrepreneurs                  | 0,14 | 3 | 0,43 |
| A4 | The business program is expected to be the main   |      | 4 | 0,48 |
| A3 | It is hoped that local businesses will be able to realize the economic independence of the community as a whole |      | 3 | 0,26 |
| A2 | Small businesses are expected to be part of the distribution and production network in a large economic system  | 0,06 | 3 | 0,17 |

**Source:** Author's Processing (2025)

# **SOAR Matrix**

The SOAR (Strengths, Opportunities, Aspirations, Results) matrix can be a helpful tool for regional leaders to understand and develop corporate strategies. The following is a SOAR analysis strategy.

ISSN: 1830-7938 (Print)

Tabel 5. SOAR Analysis Matrix Results

| Internal Factors | Strengths  1. Availability of relevant  | Opportunities  1. Opportunities to apply   |
|------------------|---|--|
| Internal Factors | 1. Availability of relevant   | 1 Opportunities to apply   |
|                  | research and training to support capacity building for entrepreneurs.  2. Financial support and market access from parties with broader economic connections.  3. Active involvement of local social networks in assisting with the promotion and distribution of small business products.  4. Availability of policies and incentive programs that support the development of the small business sector.  5. Ongoing mentoring from parties experienced in business development. | <ol> <li>Opportunities to apply technological innovation to the development of business products and services.</li> <li>Opportunities to form strategic partnerships that support business growth and distribution.</li> <li>Opportunities to create community collaborations to strengthen business networks and the local economy.</li> <li>Open government policy and budget support for empowering the small business sector.</li> <li>Increasing demand for training, consulting, and guidance in business development</li> </ol> |
| Aspirations      | SA Strategy   | OA Strategy  |

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| <ol> <li>3.</li> <li>4.</li> <li>5.</li> </ol> | Business development is expected to be an essential part of the education, research, and innovation process.  Small businesses are expected to be part of the distribution and production networks within the larger economic system.  Local businesses are expected to be able to achieve economic independence for the community as a whole.  Business programs are expected to be a primary strategy for reducing unemployment and improving welfare.  Business actors are expected to be able to grow into competitive and sustainable entrepreneurs. | SA Strategy Develop a plan that uses capabilities to achieve goals | <ol> <li>3.</li> <li>4.</li> </ol> | Implement technological innovation to support entrepreneurship education and innovation (O1, A1). Develop strategic partnerships to expand the distribution of small businesses (O2, A2). Encourage community collaboration to increase economic independence (O3, A3). Utilize government budget support for unemployment alleviation programs through MSMEs (O4, A4). Increase training and consulting to ensure MSMEs are competitive and sustainable (O5, A5). |
|--|---|--|------------------------------------|--|
|  | Result  |  |                                    |  |
|  | Creation of an effective business development model that can be used as a reference for other actors.   |  |                                    |  |

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| 2. | The growth of small businesses has   |  |  |
|----|--|--|--|
| 3. | resulted in increased business scale and profitability. Business activities have a positive impact on the welfare and empowerment of the | SR Strategy Develop tactics based on your strengths to achieve measurable results. | OR Strategy A strategy that focuses on opportunities to produce measurable results |
| 4. | surrounding community. The decline in unemployment in the local area can be  |  |  |
| 5. | attributed to the development of productive businesses. Business actors  |  |  |
|    | demonstrate<br>continuous progress in<br>managerial and<br>market orientation<br>aspects   |  |  |

Sumber: Author's Work (2025)

From the results above, it can be concluded that the strategy with the highest score is the OA Strategy (Opportunities + Aspirations) with a score of 3.68. This indicates that: Current opportunities (O1–O5), such as technological innovation, strategic partnerships, community collaboration, and government support, are very strong and relevant to the primary aspirations (A1–A5), namely making MSMEs a vital part of the education system, economic distribution, and a means of alleviating unemployment and achieving economic independence.

Therefore, the OA strategy is the primary choice, a strategy that maximizes external opportunities to realize the long-term aspirations of MSMEs, particularly in developing innovative, competitive entrepreneurs capable of addressing unemployment through Pentahelix synergy.

#### **Suggested strategies for implementation (OA Strategy):**

- 1. Implementing technological innovation to support education, training, and entrepreneurial innovation processes (O1, A1). According to Rogers (2003), the spread of innovation occurs through the process of technology adoption within society (Diffusion of Innovation Theory). This is relevant to technology-based MSME development strategies. Andriansyah (2023) also stated that digital transformation is crucial for the development of MSMEs after the pandemic. Therefore, the strategy for implementing technology in MSME training and education is supported by innovation theory and field practice.
- 2. Building strategic partnerships to make MSMEs part of the larger economic production and distribution network (O2, A2). This strategy aligns with Michael Porter's Strategic Alliance Theory (1985), which emphasizes that partnerships between small and large companies can create value synergies, expand market reach, and increase competitiveness. According to Barus (2022), his study also states that strengthening synergy between business actors, government, and educational institutions is essential for encouraging MSMEs to enter the larger distribution chain.

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- 3. Strengthening community collaboration to support community economic independence (O3, A3). The theory underlying this strategy is Community Empowerment Theory, popularized by Robert Chambers (1997), which states that sustainable development must rely on local strengths and active community participation. Research (M.A.A. Barus, 2024) explains that cross-sector collaboration using the Pentahelix approach can strengthen the role of communities in supporting green economic development based on local independence.
- 4. Optimizing government policies and budgets for MSME-based unemployment reduction programs (O4, A4). This strategy aligns with Douglass North's Institutional Development Theory (1990), which explains that the success of economic development is strongly influenced by the quality of institutions and public policies. This is reinforced by Ramdansyah Fitrah (2024), who states that local governments can play a key role in driving the local economy through optimizing development budgets and supporting policies that facilitate MSMEs.
- 5. Increasing training and consultation to ensure MSMEs are competitive and sustainable (O5, A5). This strategy refers to Gary Becker's Human Capital Theory (1964), which explains that education and training are investments in increasing productivity. In the MSME sector, capacity building through training is crucial to ensure sustainability and adaptation to market changes. According to (Amanda, 2024) in her journal, the capacity of business actors is greatly determined by training and mentoring based on local character through the Pentahelix approach.

## **CONCLUSION**

This research demonstrates that Pentahelix-based MSME development in Tebing Tinggi City has significant potential as a solution to reducing unemployment. Using the SOAR (Strengths, Opportunities, Aspirations, Results) and Triple Bottom Line (People, Planet, Profit) approaches, a collaborative and sustainable strategy map was developed.

The analysis revealed the Opportunities + Aspirations (OA) strategy as the most optimal, with the highest score (3.68). This indicates that opportunities such as technological innovation, strategic partnerships, government support, and community collaboration align closely with the community's aspirations to achieve economic independence and reduce unemployment.

Therefore, the success of MSME development in Tebing Tinggi City depends heavily on synergy across actors (academia, businesses, communities, government, and mentors) in establishing a business ecosystem oriented toward local empowerment and long-term social impact.

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