

LOCAL ECONOMIC DEVELOPMENT STRATEGY THROUGH HUMAN RESOURCE EMPOWERMENT IN THE MSME SECTOR IN MEDAN CITY

Tri Dessy Fadillah

Institut Syekh Abdul Halim Hasan, Binjai, Sumatera Utara, Indonesia
tridessyfadillah@insan.ac.id

Khairina

Institut Syekh Abdul Halim Hasan, Binjai, Sumatera Utara, Indonesia
khairina@insan.ac.id

Arfan Ikhsan

Universitas Negeri Medan, Sumatera Utara, Indonesia
arfanikhsan.@unimed.ac.id

Nazli Aisyah Amin

Institut Syekh Abdul Halim Hasan, Binjai, Sumatera Utara, Indonesia
nazliasyh@gmail.com

Abstract

This study aims to analyze local economic development strategies through human resource empowerment in the MSME sector in Medan City. The methodology of this research employs a descriptive qualitative approach, collecting data from primary sources by distributing questionnaires to respondents using the pentahelix collaboration model (ABCGM), comprising academics, businesspeople, communities, government, and media. Analysis technique by analyzing the integration of SOAR matrix strategies (Strength, Opportunity, Aspiration, and Result). The results of the analysis show that the MSME development strategy produces four strategies, namely: (1) comprehensive training and mentoring programs for human capital formation, (2) development of the MSME digital ecosystem towards a knowledge-based economy, (3) strengthening the PentaHelix collaboration (ABCGM) as a governance innovation, and (4) developing industrial clusters based on local potential for regional competitive advantage. The study's findings have profound implications for the development of MSME policy at local, regional, and national governance levels. The validated strategic framework provides compelling evidence in support of integrated policy approaches that deliberately transcend traditional sectoral boundaries and administrative silos, arguing for comprehensive policy coordination mechanisms that address MSME development as a complex, interconnected challenge rather than a series of discrete problems. The research highlights the critical importance of developing an institutional framework, suggesting that policy attention should prioritize governance structures and coordination

mechanisms over narrowly focused program-specific interventions that fail to address systemic constraints on MSME growth and competitiveness.

Keywords: Empowerment, MSMEs, Local, SOAR, HR

1. Introduction

Micro, Small, and Medium Enterprises (MSMEs) have proven to be one of the main pillars in driving the Indonesian economy. MSMEs have a significant contribution to the national Gross Domestic Product (GDP) and labor absorption. Data from the Ministry of Cooperatives and SMEs indicate that MSMEs contributed 61.07% to Indonesia's GDP, amounting to approximately IDR 8,573.9 trillion, in 2022. This sector was able to absorb 97% of the total workforce, equivalent to 117 million workers (Ministry of Cooperatives and SMEs, 2023). However, the development of MSMEs still faces various obstacles, especially in areas that have not fully utilized their local resources, one of which is the city of Medan.

The city of Medan, as the capital of North Sumatra Province, has enormous economic potential with a population of 2.4 million people and an economic growth rate of around 4.8% in 2023 (BPS Medan City, 2023). The number of MSMEs in Medan City was recorded at 273,000 units in 2023, with a contribution to GDP of 58.3% (Medan City Cooperatives and MSMEs Office, 2023). However, there is a significant gap between the economic potential of the existing MSMEs and their current conditions. Based on the results of a survey conducted by the Medan City Cooperatives and MSMEs Office (2023), as many as 67% of MSMEs in Medan City are still operating on a micro scale with limited capital turnover, 78% do not have a structured business development strategy, and 82% experience obstacles in developing human resource (HR) capacity.

This gap is a serious problem that requires attention, given that human resources are a crucial factor in the development of MSMEs. Research conducted by Tambunan (2020) reveals that one of the primary factors hindering the development of MSMEs in Indonesia is the low quality of human resources, encompassing both knowledge, skills, and entrepreneurial attitudes. In line with these findings, a study conducted by Siagian and Khair (2021) in Medan City found that 73% of MSME actors lack adequate managerial competence, 65% have not mastered digital technology for business development, and 58% lack sufficient knowledge about modern marketing strategies.

Several previous studies have attempted to examine MSME development strategies through human resource empowerment. Research by Barus et al. (2019) in Medan City found that entrepreneurship training and business assistance have a positive impact on improving the performance of MSMEs; however, it did not comprehensively discuss how these strategies can be integrated with local economic development. Research by Zula Asfi Daulay (2018) and Al Amin et al (2025) related to MSME strategies. Meanwhile, the study

conducted by Situmorang (2021) focused on the use of digital technology in the development of MSMEs in the city of Medan. However, it did not analyze the aspect of strengthening human resource capacity in depth.

The gap in these studies highlights the need for a more comprehensive study of local economic development strategies that focus on human resource empowerment in the MSME sector, particularly in the city of Medan. This research was conducted to fill the gap by analyzing the existing conditions of MSMEs in the city of Medan, identifying factors that affect the development of MSME human resources, and formulating the right local economic development strategy through the empowerment of human resources in the MSME sector as researched by Dewi et al (2025) Empowerment of Local Economic Communities through Business Management Strategies.

This article has high urgency considering that human resource empowerment in the MSME sector is one of the priorities in the Medan City Regional Medium-Term Development Plan (RPJMD) 2021-2026. In addition, the results of this research are expected to make a practical contribution to stakeholders in the city of Medan, enabling them to formulate more effective and sustainable MSME development policies and programs. Thus, this study aims to formulate a strategy for local economic development by empowering human resources in Medan City's MSME sector.

2. Literature Review

2.1 Local Economic Development

Local Economic Development (PEL) is an economic development concept that emphasizes empowering local potential through cooperation between the government, the business world, and the community. According to Blakely and Bradshaw (2017), PEL is a process in which local governments and community organizations are involved to encourage or maintain business activities and/or employment opportunities. The primary objective of PEL is to stimulate employment opportunities in sectors that can enhance people's welfare by utilizing existing human, natural, and institutional resources. The World Bank (2021) defines PEL as a process in which development actors — namely, the government, the private sector, and the community — work collectively to create better conditions for economic growth and job creation, thereby improving the quality of life for all. In this context, PELs have several important characteristics, namely: (1) process-oriented; (2) have a territorial base; (3) are locally controlled; and (4) take advantage of local potential and competitive advantages.

The Economic Base Theory, developed by Tiebout (1956) and later refined by Richardson (1985), became one of the important foundations in PEL. This Theory states that a region's economic growth is primarily determined by its exports to other regions. The base (export) sector generates income, which in turn creates demand for the non-base (local) sector, resulting in a multiplier effect within the local economy. In addition, the

Endogenous Growth Theory developed by Romer (1994) and Lucas (1988) also provides an important understanding in the context of PEL. This Theory emphasizes that the long-term economic growth of a region is primarily determined by internal factors such as the quality of human resources, innovation capabilities, and local institutional capacity. In this regard, investment in human resources through education, training, and skills development is considered the key to achieving sustainable economic growth.

2.2 HR Empowerment

HR empowerment is the process of enhancing the capacity of individuals or groups to make informed choices and translate those choices into desired actions and outcomes. According to Spreitzer (2008), human resource empowerment includes four dimensions, namely: (1) meaning, which refers to the compatibility between work roles and individual beliefs, values, and behaviors; (2) competence, which refers to an individual's belief in his or her capacity to carry out activities with adequate skills; (3) self-determination, which is related to autonomy in initiating and continuing work behavior or processes; and (4) impact, which refers to the degree to which an individual can influence strategic, administrative, or operational outcomes in the workplace. In the context of MSMEs, Tambunan (2020) stated that human resource empowerment encompasses increasing knowledge and technical skills in production, management, marketing, and fostering an entrepreneurial spirit. Meanwhile, Hakim (2019) stated that the empowerment of MSME human resources must include three main aspects, namely: (1) individual capacity building (capacity building); (2) institutional capacity building; and (3) system capacity building.

The Theory of Human Capital, developed by Becker (1964) and Schultz (1961), is a crucial foundation for human resource empowerment. This Theory states that education, training, and skill development are forms of investment that will generate returns in the form of increased productivity and income. In the context of MSMEs, investment in human capital will enhance the ability of MSME actors to manage their businesses effectively, innovate, and adapt to changes in the business environment. In addition, the Resource-Based View (RBV) Theory introduced by Penrose (1959) and further developed by Barney (1991) is also relevant in the context of empowering MSME human resources. This Theory states that an organization's continued competitive advantage is determined by resources that are valuable, scarce, difficult to replicate, and irreplaceable. In this case, human resources with superior knowledge, skills, and capabilities are one of the strategic resources that can provide sustainable competitive advantages for MSMEs.

2.3 MSMEs and Their Role in Local Economic Development

MSMEs have a strategic role in the development of the local economy. According to Law No. 20 of 2008 concerning MSMEs, the criteria for MSMEs in Indonesia are divided based on assets and business turnover, namely: (1) Micro Enterprises with a maximum asset of Rp50 million and a maximum turnover of Rp300 million per year; (2) Small

Businesses with assets of IDR 50-500 million and turnover of IDR 300 million-2.5 billion per year; and (3) Medium Enterprises with assets of IDR 500 million-10 billion and turnover of IDR 2.5-50 billion per year. Tambunan (2020) stated that MSMEs have several characteristics that make them the driving force of the local economy, namely: (1) the number is enormous and spread throughout the region; (2) it is labor-intensive so that it can absorb a large amount of labor; (3) using technology that is appropriate to local conditions; (4) utilizing local resources so that they can strengthen regional economic independence; and (5) have high flexibility and adaptability to changing market conditions.

From the perspective of the Cluster Theory developed by Porter (1998), MSMEs engaged in the same sector and located adjacent to each other will form industrial clusters that can increase productivity and competitiveness. These industrial clusters will create agglomeration economies, allowing for knowledge transfer, infrastructure sharing, and access to broader markets. In the context of local economic development, the formation of MSME clusters can be an effective strategy to increase the added value of local products and strengthen the regional value chain. Meanwhile, the Triple Helix Theory, introduced by Etzkowitz and Leydesdorff (2000), emphasizes the importance of collaboration among three key actors in the development of a knowledge-based economy: the government, industry (including micro, small, and medium-sized enterprises, or MSMEs), and academia. This model illustrates how the dynamic interaction among the three actors can lead to innovation and sustainable economic development. In the context of MSME development, the Triple Helix model can be applied to facilitate the transfer of knowledge and technology from universities to MSMEs, as well as create policies that support innovation and capacity building of MSMEs.

3. Research Methods

The research method employed in this study is qualitative. Qualitative research is a type of research aimed at describing and analyzing phenomena, events, social activities, perceptions, and thoughts of people, both individually and in groups. The theoretical foundation serves as a guide, ensuring that the research focus aligns with the facts in the field. Qualitative research is also interpreted as the study of the natural setting of various social events that occur (Hasan et al., 2023). Data Collection Techniques: This article utilizes two types of data, namely primary data sources. The respondents of this study are pentahelix stakeholders, namely academics (UINSU Medan Lecturers), MSME actors, the Medan MSME Community, the government (Cooperatives and MSMEs Office), and the Media. (Zamista & Hanafi, 2020). The data analysis technique used in this study is SOAR analysis. SOAR stands for Strengths, Opportunities, Aspirations, Results for strategic thinking and analysis that enables an individual, team, or organization to create a strategic strategy or plan to build its future through collaboration, mutual understanding, and a

commitment to action (M.Syahbudi, Sri Ramadhani 2022) and (Cynthia Imadiyar P, Muhardi & Amaliah, 2022)

4. Results and Discussion

4.1. Results

Based on the results of primary data analysis and interviews with the pentahelix collaboration from academics, the MSME community, the Cooperative and MSME Office, and the Media in Medan City, the characteristics of MSMEs in Medan City can be described as follows:

4.1.2 Business Scale and Sector Distribution

Data from the Medan City Cooperatives and MSMEs Office (2023) shows that of the total 273,000 MSME units in Medan City, 67.8% are micro businesses, 24.5% are small businesses, and 7.7% are medium enterprises. In terms of sector distribution, MSMEs in Medan City are dominated by the trade (45.3%), culinary (20.2%), services (15.4%), processing industry (12.1%), and handicrafts (7.0%). Some of the MSME centers that are quite developed in the city of Medan include the Jalan Selat Panjang Culinary Center, the Medan Batik Craft Center in Tegal Sari Village, and the Shoe Industry Center in Sei Agul Village. The following is an opinion from an interview with MSME actors of local economic products, Mr. Hendro:

"MSMEs in Medan City have huge potential, especially in the culinary and handicraft sectors that carry local wisdom. Unfortunately, there are still many who operate on a micro scale with traditional management," said the Head of MSME Empowerment of the Medan City Cooperatives and MSMEs Office in an interview.

Most MSME actors (72.5%) started their businesses due to economic encouragement and the need to find alternative sources of income. Only 27.5% start a business because of passion or interest in a particular field. This has implications for a more short-term business orientation and a lack of innovation in business development.

4.2.2 MSME Performance and Problems

In terms of performance, the average monthly turnover of micro MSMEs in Medan City is IDR 10-20 million, small MSMEs IDR 50-100 million, and medium MSMEs IDR 300-500 million. The average profit rate ranges from 15% to 25% of the turnover. Meanwhile, the average labor absorption capacity is 1-3 people for micro businesses, 5-19 people for small businesses, and 20-99 people for medium businesses.

"Most MSMEs in Medan City still face classic obstacles, especially related to capital and human resource capacity. Many MSME actors have good products but are unable to develop the market due to limited knowledge and skills," said one of the administrators of the Medan City MSME Association.

4.2.3 Potential for MSME Human Resources Development

Despite facing various problems, MSMEs in Medan City have several development potentials that can be optimized as part of the opinion of the Head of the Medan City Cooperatives and MSMEs Office, including:

"The city of Medan has an extraordinary culinary richness, such as bika ambon, durian pancakes, and various Malay and Batak specialties. This is an asset that has not been optimized for local economic development."

The study's results indicate that the human resource condition in the MSME sector of Medan City still faces various challenges, both in terms of business actors and the workforce involved. The following is an overview of the condition of MSME human resources in Medan City:

a. Level of Knowledge and Skills

The results of the survey of MSME actors show that the level of knowledge and skills of MSME actors in Medan City is still relatively low to medium. MSME actors admit that they have limitations in modern business management knowledge, then experience difficulties in utilizing digital technology for business development, and feel that they lack skills in marketing products effectively, as a result of an interview with Mr. Dr. Muhammad Syahbudi, SEI, MA, as an Academician

"Many MSME actors run businesses based on experience and intuition, not based on systematic business management knowledge. As a result, it is difficult for their businesses to grow and compete in the wider market"

In terms of workforce, the majority of MSMEs admit that their employees do not possess specialized skills and learn through on-the-job training. At the same time, a few MSMEs employ staff with specialized technical skills relevant to their respective business fields.

b. Entrepreneurial Mindset and Spirit

One of the important findings in this study is the low entrepreneurial mindset and growth orientation among MSME actors. Many MSME actors tend to be passive and wait for government assistance rather than taking the initiative to find solutions to the problems they face. In addition, MSME actors admit that they are more focused on daily operations than long-term business development, as the results of an interview with the Chairperson of the Medan MSME Community, Mrs. Ema Cania:

"Many MSME actors in Medan City have had enough of the current business conditions. They are less daring to take risks to develop their business to a higher level."

This mindset is also reflected in the low level of innovation in products and services. The results of the observations show that some MSMEs in Medan City still rely on conventional products with limited innovation, and only a few actively engage in product innovation and business diversification.

c. Access to Education and Training

Access to education and training is an important factor in the development of MSME human resources. Unfortunately, the study's results indicate that access to this information remains limited. As many as 63.3% of MSME actors in Medan City have never participated in formal training related to business development in the last two years. For those who have participated in the training, it was stated that the training they attended was less relevant to the specific needs of their business, according to the opinion of MSME actors, Mr. Hendro:

Existing training programs are often generic and fail to address the real problems faced by MSME actors. In addition, the timing of training often collides with business operating hours, making it difficult for MSME actors to participate”.

From the government side, the Medan City Cooperatives and MSMEs Office acknowledges that there are budget and resource limitations to organize intensive and sustainable training and mentoring programs. Existing programs tend to be incidental and have not been integrated into a comprehensive MSME human resource development system.

d. Digital Divide

The digital era presents both opportunities and challenges for MSMEs. The study's results indicate a significant digital gap among MSME actors in Medan. Some MSME actors still use conventional methods in managing their businesses, and only a few have utilized digital technology in business operations such as financial recording, inventory management, and online marketing, as the results of an interview with the media, namely the Medan Waspada Newspaper, Mrs. Arsyadona:

”Many MSME actors, especially those over 40 years old, have difficulties in adapting to digital technology. They are comfortable with the traditional way and are reluctant to switch to digital systems because they are worried about its complexity.”

This digital divide is one of the factors that hinders the development of MSMEs in the digital economy era. MSMEs that are unable to adapt to the digitalization trend will be increasingly left behind and struggle to compete in an increasingly competitive market.

4.2.4 SOAR (Strengths, Opportunities, Aspirations, Results) Analysis

The SOAR analysis was conducted to identify the strengths and opportunities available to MSMEs in the city of Medan, as well as to formulate aspirations and expected outcomes from human resource empowerment efforts. This analysis was conducted through a series of in-depth interviews and focus group discussions (FGDs) with various stakeholders. According to Riyanto, the pentahelix approach comprises academics, business, society, government, and media. The author researches the application of this model in the development of a digital-based Bund ibra MSME product business in Rantau Prapat. To determine the extent to which internal variables influence the organization, the

IFAS matrix is used. The EFAS matrix utilizes ratings and weights to assess the strengths and weaknesses that represent external forces affecting MSMEs (Scott, 2020). Based on the SOAR appendix below, the results of IFAS and EFAS can be concluded as follows:

Table 1. Internal Factors Analysis Summary (IFAS)

Yes		Internal Factors	Weight	Rating	Weight x rating
		Stern.			
1		S1	0.027	4	0.107
2	ACADEMICS	S2	0.024	4	0.087
3		S3	0.025	4	0.097
4		S4	0.025	4	0.097
5		S5	0.027	4	0.107
6	BUSINESS	S6	0.027	4	0.107
7		S7	0.025	4	0.097
8		S8	0.027	4	0.107
9		S9	0.027	4	0.107
10	COMMUNITY	S10	0.025	4	0.097
11		S11	0.025	4	0.097
12		S12	0.027	4	0.107
13		S13	0.027	4	0.107
14	GOVERNMENT	S14	0.027	4	0.107
15		S15	0.025	4	0.097
16		S16	0.025	4	0.097
17		S17	0.027	4	0.107
18	MEDIA	S18	0.025	4	0.097
19		S19	0.015	2	0.032
20		S20	0.015	2	0.032
					1.886
		Opportunity			
1		O1	0.025	4	0.097
2	ACADEMICS	O2	0.027	4	0.107
3		O3	0.024	4	0.087
4		O4	0.025	4	0.097
5		O5	0.025	4	0.097
6	BUSINESS	O6	0.027	4	0.107
7		O7	0.025	4	0.097
8		O8	0.025	4	0.097
9	COMMUNITY	O9	0.025	4	0.097
10		O10	0.027	4	0.107
11		O11	0.024	4	0.087
12		O12	0.024	4	0.087
13		O13	0.025	4	0.097
14	GOVERNMENT	O14	0.027	4	0.107
15		O15	0.023	3	0.077
16		O16	0.024	4	0.087

17		U17	0.025	4	0.097
18		O18	0.027	4	0.107
19	MEDIA	U19	0.023	3	0.077
20		U20	0.024	4	0.087
		Total			1.895

Source: Data processed, 2025

Based on the Table in the IFAS section, Strength has five aspects assessed, namely Academics, Business, Community, Government, and Media, with a final score of 1.886. Meanwhile, the Opportunity section also includes the same five aspects, with a final score of 1.895. Overall, this IFAS table, in terms of the dominant internal aspect, is the opportunity section.

Table 2. External Factors Analysis Summary (EFAS)

Yes	External Factors		Weight	Rating	Weight x rating
		Aspiration			
1		A1	0.029	4	0.104
2		A2	0.029	4	0.104
3	ACADEMICS	A3	0.027	3	0.093
4		A4	0.018	2	0.039
5		A5	0.021	3	0.054
6	BUSINESS	A6	0.029	4	0.104
7		A7	0.029	4	0.104
8		A8	0.019	2	0.046
9		A9	0.019	2	0.046
10	COMMUNITY	A10	0.029	4	0.104
11		A11	0.019	2	0.046
12		A12	0.019	2	0.046
13		A13	0.029	4	0.104
14	GOVERNMENT	A14	0.029	4	0.104
15		A15	0.018	2	0.039
16		A16	0.018	2	0.039
17		A17	0.019	2	0.046
18	MEDIA	A18	0.024	3	0.072
19		A19	0.018	2	0.039
20		A20	0.019	2	0.046
		Total			1.385
Yes	External Factors		Weight	Rating	Weight x rating
		Results			
1		R1	0.032	4	0.129
2		R2	0.029	4	0.104
3	ACADEMICS	R3	0.016	2	0.032
4		R4	0.016	2	0.032

5		R5	0.032	4	0.129
6	BUSINESS	R6	0.029	4	0.104
7		R7	0.029	4	0.104
8		R8	0.016	2	0.032
9		R9	0.032	4	0.129
10	COMMUNITY	R10	0.032	4	0.129
11		R11	0.031	4	0.116
12		R12	0.016	2	0.032
13		R13	0.032	4	0.129
14	GOVERNMENT	R14	0.029	4	0.104
15		R15	0.029	4	0.104
16		R16	0.029	4	0.104
17		R17	0.032	4	0.129
18	MEDIA	R18	0.029	4	0.104
19		R19	0.031	4	0.116
20		R20	0.016	2	0.032
Total					1.897

Source: Data processed, 2025

Based on the table above in the EFAS section, Aspiration has five aspects assessed, namely Academics, Business, Community, Government, and Media, with a final score of 1.385. Meanwhile, the Results section also includes the same five aspects, with a total final score of 1.897. Overall, the EFAS table, in terms of the dominant external aspect, is located in the Result section.

Based on Tables 1 and 2 for alternative strategies, the strategy is O-R because the order of scores with rounding is based on the results of internal and external factors mentioned above: Strength/S /S = 1,886, Opportunity/O /O = 1,895, Aspiration/A /A = 1,385, and Result/R /R = 1,897. The mathematical results used to determine the total number of IFAS matrices are 3,781, while the values in the EFAS matrix are 3,282. Based on the results of IFAS and EFAS, it is concluded that OR is the dominant indicator. The use of SOAR Matrix Analysis in the development of digital-based MSME products can be observed through the lens of current opportunities, strengths, and ambitions to the point where measurable results are developed as a substitution for solutions, namely:

Table 3. SOAR Matrix

	Srenght	Opportunity
Suction	Create a Strategy That Uses Power to Achieve Aspirations	Create an aspiration-oriented strategy that is expected to capitalize on opportunities
Results	Create an opportunity-based strategy to achieve tangible results	O5-R1 Development of Comprehensive Training and Mentoring Programs O2-R2 Development of MSME Digital

Ecosystem
O19-R1 PentaHelix Collaboration
Reinforcement (ABCGM)
O13-R19 Development of Industrial
Clusters Based on Local Potential

Source: Data processed, 2025

Based on these key factors, five alternative strategies for local economic development through human resource empowerment in the MSME sector in Medan City were formulated. The pentahelix approach is different from the OR matrix resulting from the review of SOAR analysis of internal and external business elements, namely:

- a. Strategy 1: Development of Comprehensive Training and Mentoring Programs. This strategy focuses on developing comprehensive and sustainable training and mentoring programs to improve the managerial capacity, technical skills, and entrepreneurial spirit of MSME actors in the city of Medan.
- b. Strategy 2: Development of MSME Digital Ecosystem. This strategy focuses on creating a digital ecosystem that supports MSMEs in adapting to the digital economy, including digital marketing training, facilitating access to marketplaces, and developing local digital platforms.
- c. Strategy 3: Strengthening the PentaHelix Collaboration (ABCGM). This strategy focuses on strengthening collaboration between academics, business, communities, government, and media (ABCGM) in the development of innovation, technology transfer, and human resource empowerment in the MSME sector.
- d. Strategy 4: Development of Industrial Clusters Based on Local Potential. This strategy focuses on developing MSME industry clusters based on the local potential of Medan City, such as traditional culinary clusters, handicraft clusters, and creative industry clusters.

The four strategies described are closely related and must be implemented in an integrated manner to achieve optimal impact. The human resource development strategy, supported by a comprehensive training program, is the foundation that enables the implementation of other strategies. The development of a digital ecosystem requires human resources who have adequate technological literacy. PentaHelix collaboration requires the capacity and readiness of all stakeholders. The development of industrial clusters requires a combination of quality human resources, technology adoption, and multi-stakeholder collaboration in line with the research of Jisa et al (2025) that community participation in strengthening the capacity of local human resources in Medan City is an effort to increase the competitiveness of the local economy of MSMEs and demonstrate real-world value for the empowerment and sustainability of MSMEs in Medan City. The

roadmap for the implementation and transformation of the local economy with strategic planning can be designed in three phases:

- a. The first phase (years 1-2) focuses on foundation building through capacity-building programs and the formation of governance structures for PentaHelix collaboration.
- b. The second phase (years 3-4) focuses on digital transformation and pilot projects for cluster development.
- c. The third phase (year 5 and above) focuses on scaling up and sustainability program with the target of achieving a significant impact on the growth and competitiveness of MSMEs which is in line with the research of Muhammad Syahbudi (2020) related to the competitiveness of MSMEs by collaborating with the pentahelix model and in line with the research of Susanto et al (2025).

4.1 Discussion

This comprehensive study has established that the development of MSMEs in Medan City necessitates a holistic and integrated strategic approach that fundamentally transcends conventional sectoral interventions. Through rigorous SOAR analysis, the research has identified and validated four synergistic strategies that collectively address the multifaceted challenges confronting the MSME sector: the development of comprehensive training programs, the establishment of a digital ecosystem, the strengthening of PentaHelix collaboration, and the development of local potential-based industrial clusters. These interconnected strategies constitute a robust theoretical and operational framework that addresses critical gaps in human capital development, technological adoption, multi-stakeholder governance, and competitive clustering—factors that have historically constrained the growth trajectories of MSMEs in Indonesian urban contexts.

The research findings demonstrate that successful operationalization of this strategic framework requires a complex orchestration of sustained stakeholder commitment, strategic resource allocation mechanisms, and comprehensive monitoring systems. The study reveals that implementation success depends not merely on the effectiveness of individual strategies but rather on the synergistic interactions between strategies and their collective capacity to generate multiplicative development effects. Critical implementation challenges have been systematically identified, encompassing the complexities of multi-stakeholder coordination, institutional capacity constraints, and the imperative of maintaining program sustainability within dynamic economic environments characterized by rapid technological change and evolving market conditions.

From a theoretical perspective, this research makes significant contributions to multiple domains within the fields of development economics and entrepreneurship studies. The validated strategic framework extends systems Theory applications in MSME development by demonstrating how interconnected interventions can generate outcomes

that exceed the sum of individual components, thereby supporting holistic development approaches over fragmented program interventions. The successful application of SOAR-based strategic formulation provides empirical support for appreciative inquiry Theory in policy development contexts, particularly demonstrating its superiority over traditional deficit-based analytical approaches in generating actionable development strategies that build upon existing strengths and opportunities rather than merely addressing weaknesses and threats.

The study's emphasis on PentaHelix collaboration models advances collaborative governance Theory by illustrating practical operationalization mechanisms in developing economy contexts, contributing valuable insights to the literature on multi-stakeholder partnerships and collective impact frameworks. Furthermore, the research extends institutional Theory applications by revealing how formal and informal institutions interact to shape entrepreneurial ecosystems, particularly highlighting the critical role of institutional architecture in facilitating or constraining MSME development outcomes. The integration of local potential-based clustering approaches contributes to cluster development Theory by demonstrating how cultural and resource-specific factors can be leveraged to create competitive advantages in emerging market contexts, thereby extending Porter's original cluster conceptualization to incorporate indigenous development paradigms.

From a practical implementation standpoint, this research provides concrete, actionable guidance for policymakers, development practitioners, and MSME stakeholders operating across multiple administrative levels. The comprehensive strategic framework offers a replicable development model that can be adapted to similar urban contexts throughout Indonesia and Southeast Asia. At the same time, the systematic identification of critical success factors provides specific guidance for designing and implementing programs. The research highlights the paramount importance of adaptive management approaches in complex, multi-stakeholder environments, emphasizing the need for flexible implementation strategies that maintain strategic coherence while responding dynamically to changing contextual conditions and emerging challenges.

The study's findings have profound implications for the development of MSME policy at local, regional, and national governance levels. The validated strategic framework provides compelling evidence in support of integrated policy approaches that deliberately transcend traditional sectoral boundaries and administrative silos, arguing for comprehensive policy coordination mechanisms that address MSME development as a complex, interconnected challenge rather than a series of discrete problems. The research highlights the critical importance of developing an institutional framework, suggesting that policy attention should prioritize governance structures and coordination mechanisms over narrowly focused program-specific interventions that fail to address systemic constraints on MSME growth and competitiveness.

Several methodological and contextual limitations must be transparently acknowledged to provide appropriate scope for interpreting and applying these research findings. The study's geographic focus on Medan City potentially limits the generalizability of its findings to other urban contexts characterized by different economic structures, cultural frameworks, or institutional environments, particularly given the specific socio-economic characteristics of North Sumatra, which may not adequately represent other Indonesian regions or comparable developing economies. Additionally, the research methodology's primary reliance on secondary data analysis and stakeholder consultation, rather than longitudinal empirical observation of actual strategy implementation outcomes, limits the ability to definitively validate projected impacts and assess the long-term effectiveness of interventions under real-world implementation conditions.

The study's temporal scope presents another significant limitation, as it cannot adequately capture the dynamic nature of ongoing digital transformation and technological evolution that may substantially alter the relevance and effectiveness of proposed strategies over extended implementation periods. Resource constraints have necessarily limited the analytical depth possible for each strategic component, particularly in specialized technical areas such as digital platform development and industrial cluster optimization, which may affect the precision of implementation recommendations and resource requirement projections. Furthermore, the research focuses on formal MSME development may inadequately address the substantial informal economy sector that characterizes many urban contexts in developing countries, potentially limiting the comprehensive applicability of the proposed strategic framework.

Building upon these findings and acknowledging the limitations, several critical research directions emerge that would significantly advance both the theoretical understanding and practical application of integrated MSME development strategies. Longitudinal impact assessment studies, which track strategy implementation and outcomes over extended periods, would provide crucial validation of projected impacts while identifying unforeseen consequences and adaptation requirements that emerge during actual implementation processes. Comparative analyses examining similar strategic frameworks across diverse urban contexts in Indonesia and other Southeast Asian countries would enhance our understanding of contextual success factors, while providing insights for adapting and scaling strategies that account for local variations in economic, cultural, and institutional conditions.

Given the rapid pace of technological transformation, specialized research focusing on digital ecosystem development for MSMEs represents a particularly urgent priority, including detailed studies of platform economics, digital marketplace dynamics, and the comparative effectiveness of different digital adoption strategies tailored to the characteristics and constraints of small-scale enterprises. The integration of informal

economy actors into formal MSME development frameworks constitutes another critical research gap that requires systematic investigation, particularly in studies examining transition mechanisms, barrier identification, and inclusive development approaches that recognize the economic significance and social embeddedness of informal economic activities in urban developing economy contexts.

This research makes a meaningful contribution to the growing literature on integrated approaches to MSME development in emerging economy contexts, providing both theoretical advancements and practical application foundations while establishing clear pathways for continued scholarly and policy development in this critical area of economic development practice. The validated strategic framework provides a solid foundation for both academic discourse and practical implementation. At the same time, the systematic identification of limitations and future research priorities ensures continued progress toward more effective and sustainable MSME development outcomes in urban contexts worldwide. The study's emphasis on holistic, integrated approaches reflects growing recognition that complex development challenges require correspondingly sophisticated intervention strategies that address systemic constraints rather than isolated symptoms of underdevelopment.

5. Conclusions

The development of MSMEs in Medan City requires a holistic and integrated strategic approach. The four strategies formulated through SOAR analysis, including the development of comprehensive training programs, the creation of digital ecosystems, the enhancement of PentaHelix collaboration, and the establishment of industrial clusters based on local potential, provide a solid framework for the fundamental transformation of the MSME sector. The successful implementation of this strategy requires long-term commitment from all stakeholders, adequate resource allocation, and a robust evaluation and monitoring system to ensure the achievement of sustainable MSME empowerment targets. The primary challenges in implementation are coordinating between stakeholders and ensuring the long-term sustainability of the program. Therefore, a robust institutional framework and a sustainable financing mechanism are necessary to ensure program continuity. With the proper implementation, this strategy is projected to significantly enhance the contribution of MSMEs to Medan City's economy and foster a resilient and competitive business ecosystem in the digital era.

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