

**PROPOSED BUSINESS DEVELOPMENT STRATEGY
IN MSMES USING THE SWOT-AHP METHOD (CASE
STUDY)**

FINAL PROJECT

By:

Ahmad Aufa

1910932021



**INDUSTRIAL ENGINEERING DEPARTMENT
ENGINEERING FACULTY
ANDALAS UNIVERSITY
PADANG**

2026

PROPOSED BUSINESS DEVELOPMENT STRATEGY IN MSMES USING THE SWOT-AHP METHOD (CASE STUDY)

FINAL PROJECT

*As One of the Requirements to Complete the Bachelor Program at the Department
of Industrial Engineering, Faculty of Engineering, Andalas University*

By:

Ahmad Aufa

1910932021

Supervisor:

Dr. Prima Fithri S.T, M.T



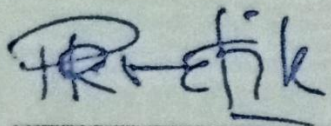
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ANDALAS UNIVERSITY**

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HALAMAN PENGESAHAN

Tugas akhir ini berjudul *Proposed Business Development Strategy of Toko Hazila Using the SWOT-AHP Method* ditulis dan diserahkan oleh **Ahmad Aufa** sebagai salah satu syarat untuk meraih gelar **Sarjana Teknik** (Bidang Teknik Industri), telah diperiksa dan oleh karena itu direkomendasikan untuk disahkan dan diterima.



Tanggal: 11/06/2026

Dr. Prima Fithri, M.T.

NIP. 198506282012122003

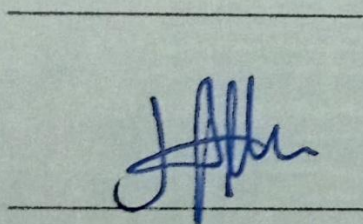
Pembimbing Tunggal

PANEL PENGUJI

Disahkan oleh Panel Penguji pada Ujian Tugas Akhir

11/06/2026

Tanggal Ujian Tugas Akhir



Dr. Dina Rahmavanti

NIP. 198505072010122005

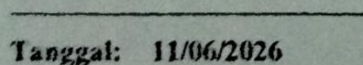
Ketua

Hary Fandeli, M.T.

NIP. 199306242024061001

Anggota

Diterima dan disahkan sebagai salah satu syarat untuk meraih gelar **Sarjana Teknik** (Bidang Teknik Industri)

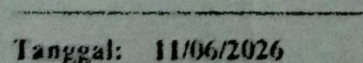


Tanggal: 11/06/2026

Dr. Eng. Desto Jumeno, S.T., M.T.

NIP. 196009081986031002

Ketua Program Sarjana Teknik Industri



Tanggal: 11/06/2026

Ir. Elita Amrina, S.T., M.Eng., Ph.D.

NIP. 197701262005012001

Ketua Departemen Teknik Industri

ABSTRAK

Toko Hazila merupakan usaha yang bergerak di bidang penjualan alat tulis kantor dan layanan dokumen. Meningkatnya persaingan usaha serta perubahan kebutuhan pelanggan menuntut adanya strategi pengembangan yang tepat untuk menjaga daya saing dan keberlanjutan usaha. Penelitian ini bertujuan untuk mengidentifikasi faktor internal dan eksternal yang memengaruhi Toko Hazila, merumuskan alternatif strategi pengembangan usaha, serta menentukan prioritas strategi yang paling sesuai. Metode yang digunakan dalam penelitian ini adalah SWOT-AHP (Strengths, Weaknesses, Opportunities, Threats – Analytical Hierarchy Process). Pengumpulan data dilakukan melalui observasi, wawancara, studi literatur, dan penyebaran kuesioner kepada pemangku kepentingan internal yang terdiri dari Pemilik Usaha, Manajer Toko, Karyawan, dan Helper.

Analisis SWOT digunakan untuk mengidentifikasi faktor-faktor strategis dan mengevaluasinya melalui matriks IFAS dan EFAS. Hasil analisis menunjukkan nilai IFAS sebesar 2,6111 dan EFAS sebesar 2,6179 yang mengindikasikan bahwa Toko Hazila memiliki kondisi internal yang relatif kuat serta peluang eksternal yang cukup baik. Berdasarkan Matriks SWOT, diperoleh beberapa alternatif strategi yang kemudian dianalisis lebih lanjut menggunakan metode AHP untuk menentukan tingkat prioritasnya.

Hasil AHP menunjukkan bahwa Aspek Pelayanan merupakan kriteria yang paling penting dengan bobot sebesar 0,4416. Strategi prioritas utama yang diperoleh adalah memperkuat loyalitas pelanggan melalui pelayanan yang unggul dengan nilai prioritas sebesar 0,3352. Oleh karena itu, peningkatan kualitas pelayanan direkomendasikan sebagai strategi utama dalam mendukung pertumbuhan dan daya saing Toko Hazila di masa mendatang.

Kata Kunci: Analisis SWOT; Analytical Hierarchy Process (AHP); Strategi Pengembangan Usaha; Toko Alat Tulis Kantor; UMKM.

ABSTRACT

Toko Hazila is a business engaged in the sale of stationery products and document-related services. Increasing competition and changing customer demands require the business to formulate an appropriate development strategy to maintain its competitiveness and sustainability. This study aims to identify the internal and external factors influencing Toko Hazila, formulate alternative business development strategies, and determine the most appropriate strategic priority. The research employed a SWOT–AHP (Strengths, Weaknesses, Opportunities, Threats – Analytical Hierarchy Process) approach. Data were collected through observation, interviews, literature studies, and questionnaires distributed to internal stakeholders consisting of the Business Owner, Store Manager, Employees, and Helper.

The SWOT analysis identified strategic factors and evaluated them using the IFAS and EFAS matrices. The results showed an IFAS score of 2.6111 and an EFAS score of 2.6179, indicating that Toko Hazila possesses relatively strong internal conditions and favorable external opportunities. Based on the SWOT Matrix, several strategic alternatives were formulated and further analyzed using AHP to determine their priority level.

The AHP results indicate that the Service Aspect is the most important criterion with a weight of 0.4416. The highest-priority strategy is strengthening customer loyalty through superior service, with a priority value of 0.3352. Therefore, improving service quality is recommended as the primary strategy to support the future growth and competitiveness of Toko Hazila.

Keywords: Analytical Hierarchy Process (AHP); Business Development Strategy; MSMEs; Office Stationery Store; SWOT Analysis.

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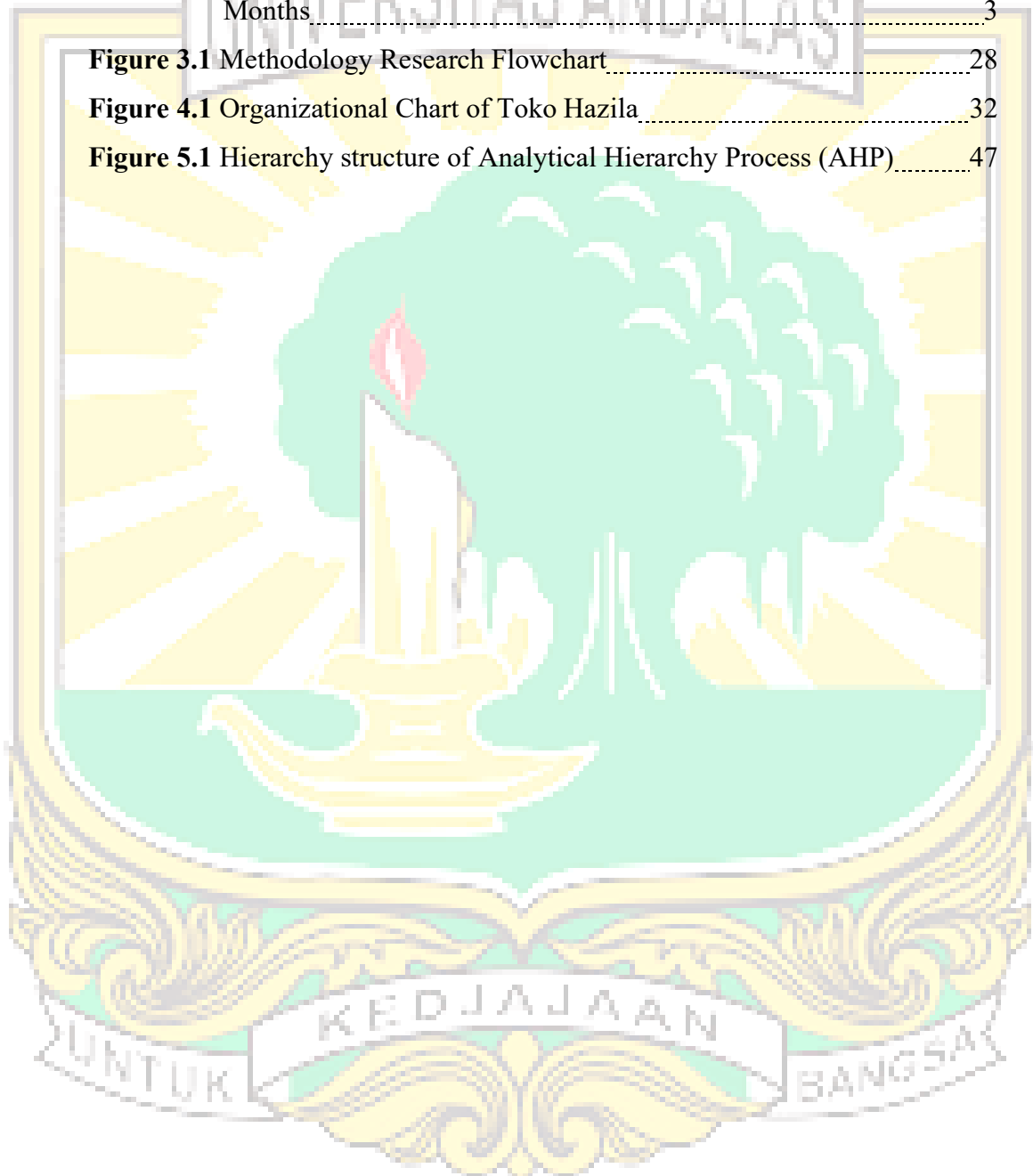
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CHAPTER I

INTRODUCTION

This chapter presents an overview of the research background, the urgency of research from the scientific perspective of Industrial Engineering, and the position of the problems raised in the context of MSME development. The preparation of Chapter I is intended to provide a logical and systematic basis for thinking about the reasons for choosing topics, methods, and research contributions. In addition, this chapter is an initial introduction to understanding the relationship between research problems and the methodological approach used in the following chapters.

1.1 Background

Micro, Small, and Medium Enterprises (MSMEs) have a strategic role in the national economy, especially in job creation, income equity, and strengthening the local economy. However, various studies show that MSMEs, especially those that are still in the early stages of operation, have a relatively high level of vulnerability due to limited resources, instability of operational systems, and immature strategic decision-making processes (OECD, 2023; Hokmabadi et al., 2024).

MSMEs engaged in the sale of office stationery (ATK) and correspondence services—such as *printing*, copying, binding, and document filing services—have considerable market opportunities, especially in educational, office, and residential environments. However, the sector also faces increasingly fierce competition and consumer demands for service speed, product quality, and flexibility of operating hours. Changes in consumer behaviour and the digitalization of service processes require MSMEs to be able to adapt systematically to remain competitive (Koporcic et al., 2025).

Toko Hazila, which is located in Kibing subdistrict, Batu Aji district, Batam

City, is a business engaged in the sale of office stationery and stationery services, such as printing, photocopying, and document filing. This business has only been running for five months, so it includes MSMEs that are still in the early stages of operation. This business faces various limitations, including a limited number of workers, inconsistent operating hours, and a variety of products and services that are still limited. This condition requires adaptive business management and appropriate decision-making so that the business can develop sustainably. International research shows that new MSMEs are very vulnerable to uncertainty in the business environment and have a high risk of failure if they are not accompanied by clear development planning and strategies (Williams et al., 2023).

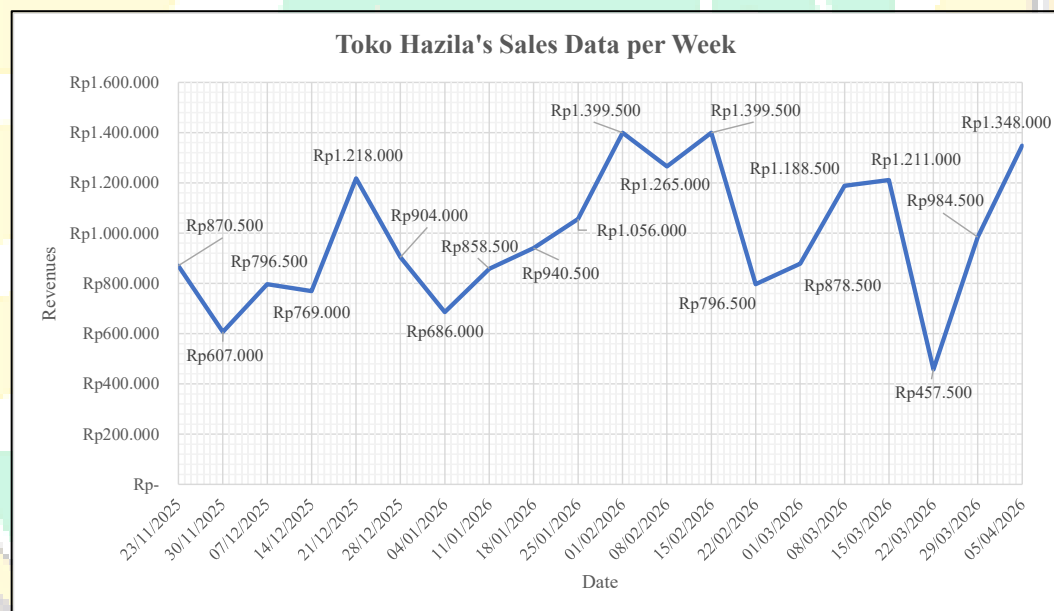


Figure 1.1 Toko Hazila's Sales Data Graph by Week in the Last 5 Months

Based on weekly sales data as shown in **Figure 1.1**, the sales value of MSMEs shows significant fluctuations between periods. This condition indicates that business performance is still unstable and is greatly influenced by internal and external factors. These sales fluctuations reflect the common challenges faced by MSMEs in the early stages of operations, particularly in managing market demand and limited resources.

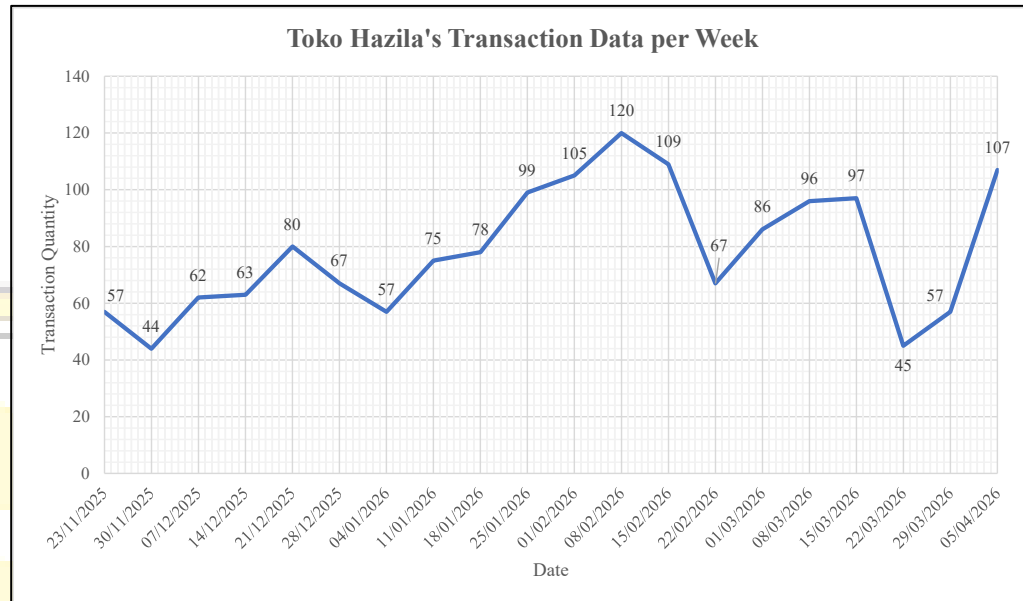


Figure 1.2 Toko Hazila's Transaction Data Graph per Week in the Last 5 Months

In addition, the data on the number of weekly transactions in **Figure 1.2** shows considerable variation between weeks, with a spike in transactions in a given period but not followed by a consistent pattern of increase. This shows that customer demand is still volatile and cannot be sustained sustainably. From the perspective of Industrial Engineering, this condition reflects the high variability of demand that has the potential to cause imbalances in the operational system, such as labour utilization, operating hours management, and service capacity planning.

Based on sales data and the number of transactions that have been presented previously, it can be seen that business activities have been running and show demand from customers. However, the data does not fully explain the factors that affect business performance and its potential for future development. Therefore, it is necessary to understand the field conditions in a more in-depth manner through direct observation of the business environment.

The results of observations show that correspondence services such as printing, photocopying, and photo printing are still not widely available around the business location. Some customers said that to get these services, they had to leave the residential complex area and even go to other urban areas. This condition shows

that there are potential market opportunities, especially in services. However, on the other hand, office stationery (*ATK*) products have a relatively high level of competition because they have been widely sold by grocery stores, minimarkets, and larger shopping centres.

In addition, observations show that the variety of products and services provided by Toko Hazila is still limited. The addition of products or services tends to be done after a request from customers, so it is not based on a structured development plan. Some services that have the potential to provide added value, such as laminating services and binding of theses or books, have also not been provided due to limited resources and supporting facilities. In terms of location, the business is located in a shopping complex area that is not directly on the main route of traffic, so the visibility of the business is relatively limited and has the potential to affect the level of new customer visits.

Based on sales data, the number of transactions, and the results of these observations, it can be concluded that MSMEs have considerable market opportunities, but still face various internal limitations and external challenges. This condition shows the need to conduct a strategic analysis that is able to systematically identify internal and external factors, as well as determine the most appropriate development strategy priorities.

In practice, business development decision-making in new MSMEs is often still intuitive and reactive, without being supported by a structured analytical approach. This approach has the potential to result in biased and sub-optimal decisions, especially in a dynamic and uncertain business environment. Van Wyk (2023) emphasized that the absence of a systematic strategic decision-making process for MSMEs can reduce decision consistency and negatively impact business performance in the long term.

The goal of this study is to prioritize business growth strategies for the selling of office stationery and communication services based on this description. Through

a scientific approach to industrial engineering utilizing the SWOT-AHP method, this research seeks to help Toko Hazila develop the market, improve the variety and quality of services, and optimize the operating system.

1.2 Problem Formulation

Based on this background, the formulation of the identified problems is as follows:

1. What are the strengths, weaknesses, opportunities, and threats that Toko Hazila has?
2. What development strategies can be formulated based on SWOT analysis?
3. How is the priority of the MSME development strategy determined using the Analytical Hierarchy Process (AHP) method?
4. What is the most prioritized development strategy to implement on Toko Hazila?

1.3 Research Objectives

The objectives of this study are as follows:

1. Identify internal and external factors of the business of selling office stationery and stationery services.
2. Formulate alternative business development strategies based on SWOT analysis.
3. Determine the priorities of business development strategies using the AHP method.
4. Providing recommendations for business development strategies at Toko Hazila.

1.4 Problem Limitations

To focus the research and avoid overly broad coverage, the following limitations were set for this study:

1. The research was conducted on one MSME selling office stationery and writing services, namely the Toko Hazila.
2. Research focus on business development strategies at Toko Hazila.

1.5 Research Outline

The writing systematics in this final project are as follows:

CHAPTER I INTRODUCTION

This chapter discusses the research background, problem formulation, research objectives, scope of research, and outline of the final project report.

CHAPTER II THEORETICAL FOUNDATIONS

This chapter contains the theoretical foundations related to and supporting this research and the methods used to solve the problems in this study.

CHAPTER III RESEARCH METHODOLOGY

This chapter discusses the steps used in research to solve problems systematically.

CHAPTER IV DATA COLLECTION

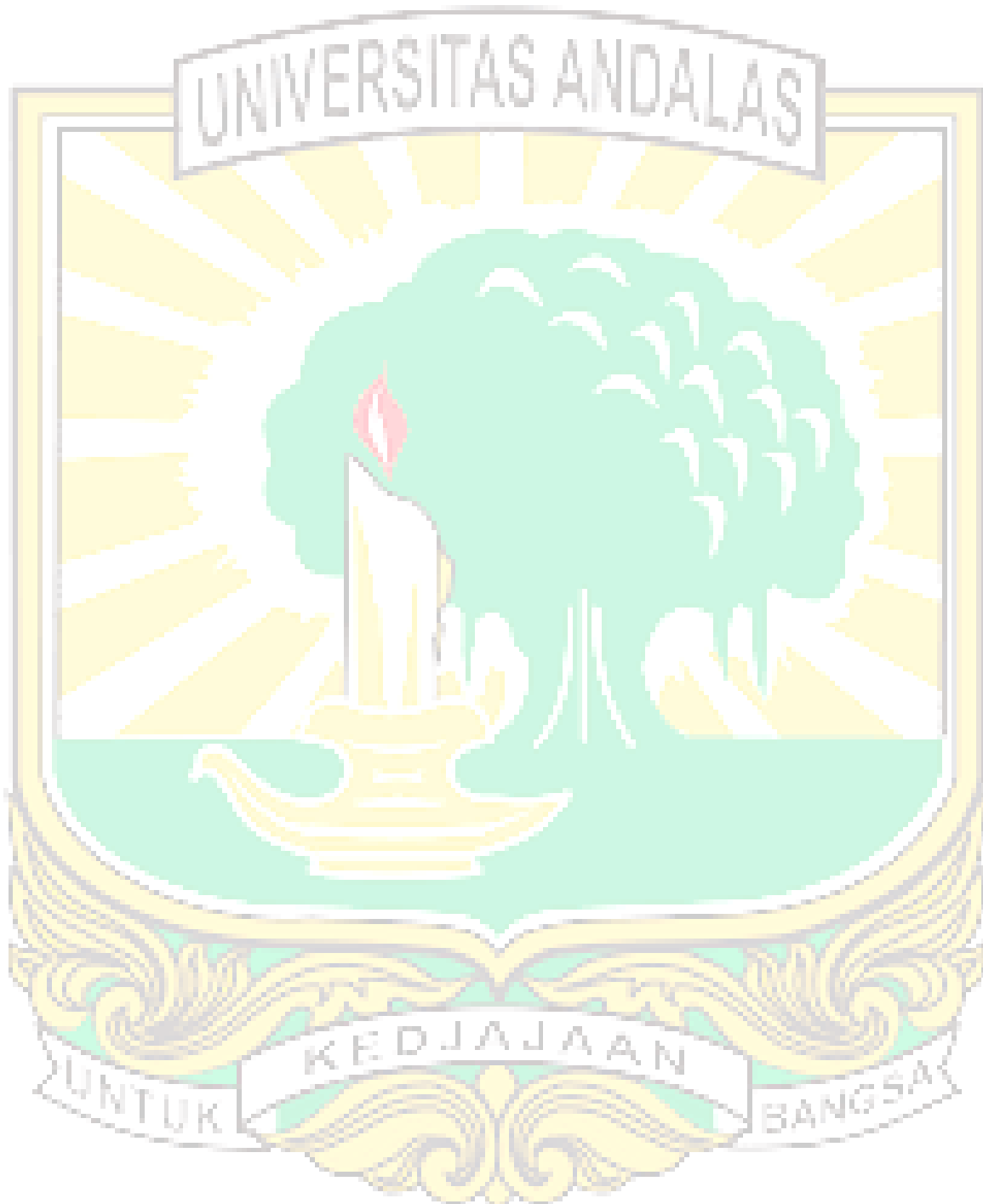
This chapter presents the profile of Toko Hazila and the data collected through observations, interviews, and questionnaires used in the SWOT and AHP analyses.

CHAPTER V DATA PROCESSING AND ANALYSIS

This chapter discusses the processing and analysis of research data using SWOT and AHP methods to formulate and prioritize business development strategies.

CHAPTER VI CONCLUSIONS AND RECOMMENDATIONS

This chapter presents the conclusions of the research and recommendations based on the results of the SWOT and AHP analyses.



CHAPTER II

LITERATURE REVIEW

The literature review in this study focuses on the concept of Micro, Small, and Medium Enterprises (MSMEs), business development strategies, SWOT analysis, Analytical Hierarchy Process (AHP) methods, and the integration of SWOT and AHP methods in strategic decision-making. All concepts discussed do not involve the object of research directly, but are used as a theoretical framework that supports the analysis process in Chapter III and Chapter IV.

2.1 Micro, Small, and Medium Enterprises (MSMEs)

Micro, Small, and Medium Enterprises (MSMEs) are economic sectors that have a strategic role in the national economy, especially in job creation and income equity. Conceptually, MSMEs are defined as productive business units that stand alone and are run by individuals or business entities with limited resources, both in terms of capital, labour, and managerial capacity (Rahmadania et al., 2023).

In the context of operational management, MSMEs face different characteristics compared to large companies, especially in the aspect of decision-making that is still intuitive and unstructured. This condition has caused many MSMEs to not take advantage of scientific approaches in developing business development strategies, making them vulnerable to uncertainty in the business environment and market competition (OECD, 2023).

Recent studies show that MSMEs that do not apply a system approach and analysis in decision-making tend to have difficulties in maintaining business sustainability. Therefore, the application of science-based decision-making methods, especially those relevant to Industrial Engineering, is an important need in efforts to develop MSMEs in a sustainable manner (Hokmabadi et al., 2024).

2.2 Strategic Decision Making in Industrial Engineering

Strategic decision-making is a systematic process of selecting the best alternatives in order to achieve the organization's long-term goals. In Industrial Engineering science, decision-making is seen as a multidimensional process involving various criteria, resource limitations, and environmental uncertainty (Erdogan & Kaya, 2021).

The Industrial Engineering Approach emphasizes the importance of using analytical and quantitative methods to improve decision rationality. The multi-criteria decision-making method is used to assist decision-makers in evaluating various competing alternatives based on different and often conflicting criteria (Perdana & Putro, 2025).

The application of structured decision-making methods allows organizations to reduce subjective bias and increase the transparency of the decision-making process. This is very relevant for MSMEs that have limited resources, so they require strategic decisions that are right on target and have a significant impact on business performance (Fauzi et al., 2024).

2.3 Strategy Management

Strategy management is a series of activities that include the formulation, implementation, and evaluation of organizational strategies to achieve a competitive advantage. This concept emphasizes the importance of conformity between the internal conditions of the organization and the dynamics of the external environment (David & David, 2022).

Strategy formulation begins with an analysis of the internal and external environment to identify strategic factors that affect organizational performance. This process is the basis for determining the direction of development and allocation

of resources effectively (David & David, 2022).

In the context of small-scale organizations, strategic management plays an important role in helping businesses deal with uncertainty and competition. The application of strategic management based on scientific analysis allows organizations to devise more targeted and sustainable development steps (OECD, 2023).

2.4 SWOT Analysis

SWOT analysis is a strategic analysis method used to identify and evaluate the internal and external conditions of the organization through four main dimensions, namely Strengths (S), Weaknesses (W), Opportunities (O), and Threats (T). The determination of Strengths, Weaknesses, Opportunities, and Threats (SWOT) factors is a fundamental stage in strategic analysis. The identification of SWOT factors must be carried out systematically and data-based so that the strategies formulated are not subjective (Rainanto, 2024).

Strengths are defined as all internal resources, capabilities, and competencies that provide a relative advantage to an organization compared to its competitors. Strengths reflect internal aspects that support the achievement of strategic goals, such as service quality, strategic location, process efficiency, or customer loyalty (David & David, 2022). From a strategic management perspective, strengths are factors that can be used directly to respond to market opportunities.

Weaknesses are internal limitations or shortcomings that can hinder organizational performance and the achievement of strategic goals. This factor can be in the form of limited human resources, low production capacity, suboptimal operational systems, or limited capital (Efnita et al., 2025). Identification of weaknesses is important so that the organization can design a strategy to improve or minimize its negative impact.

Opportunities are external conditions that have the potential to provide benefits for the organization if they can be used appropriately. Opportunities can come from changes in market trends, technological developments, government policies, or unmet consumer needs (OECD, 2023). In strategic analysis, opportunities are the basis for organizations to expand or innovate.

Threats are external factors that can disrupt the stability and sustainability of the organization. Threats can be in the form of increased levels of competition, regulatory changes, product substitution, or fluctuations in economic conditions (Sari & Ramadhan, 2023). Threat identification aims to prepare a risk mitigation strategy and maintain a competitive position. Internal factors are determined through the evaluation of the organization's resources, processes, and capabilities, while external factors are identified through an analysis of the business environment and market dynamics (David & David, 2022).

The first step in determining internal factors involves observation of operational conditions, organizational structure, service quality, and resource limitations. These factors are then classified into strengths and weaknesses based on their influence on business performance. This approach is widely used in MSME research because it is able to represent the actual conditions of the business realistically (Efnita et al., 2025).

The determination of external factors is carried out by observing opportunities and threats originating from the environment outside the organization, such as market demand trends, technological developments, and the level of competition. Relevant external factors are validated through literature studies and discussions with parties who understand the business context (OECD, 2023).

To increase the objectivity of the analysis, the SWOT factors are arranged into the Internal Factor Analysis Summary (IFAS) and External Factor Analysis Summary (EFAS) matrices. Each SWOT factor (S, W, O, T) is not considered equally important, so weighting is required. In a SWOT analysis, weighting aims

to:

1. Measure the relative importance of each factor
2. Reduce the subjectivity of judgments
3. Produce a quantitative basis for strategy formulation

Each strategic factor is given a weight (w_i) which indicates the level of relative importance of that factor to the overall factor. The value of the weight is in the range of 0 to 1 with the following conditions:

$$\sum_{i=1}^n w_i = 1, \quad \dots (1)$$

Weights were obtained from the average respondent assessment, expert discussions, and normalization of questionnaire results (Rainanto, 2024).

Next, each factor is assigned a rating (r_i) that describes the organization's condition of that factor. The rating scale generally uses a scale of 1–4. The following **Table 2.1** shows the ratings according to the type of SWOT factor (David & David, 2022).

Table 2.1 Rating scale of factors for each type of SWOT factor

Types of Factors	Rating Scale
Strength	3–4 (strong–very strong)
Weakness	1–2 (weak–very weak)
Opportunity	3–4 (good response)
Threat	1–2 (bad response)

The weighted score (S_i) is calculated using the equation:

$$S_i = w_i \times r_i, \quad \dots (2)$$

With captions:

S_i = Weighted score of factor i

w_i = Weight of factor i

r_i = Rating of Factor i

The total scores of IFAS and EFAS are obtained by summing all the weighted scores of each matrix. This total value is used to describe the strategic position of

the organization internally and externally. The total scores of IFAS and EFAS can be formulated as follows,

$$\text{Total IFAS} = \sum S_i^{(\text{Internal})}, \quad \dots (3)$$

$$\text{Total EFAS} = \sum S_i^{(\text{Exsternal})}, \quad \dots (4)$$

By general interpretation, if the total > 2.5 then the conditions are relatively strong. Meanwhile, if the total < 2.5 , the condition is relatively weak (David & David, 2022).

The next stage is the preparation of the SWOT Matrix, which combines internal and external factors to produce four groups of strategies, namely SO (Strength–Opportunity), WO (Weakness–Opportunity), ST (Strength–Threat), and WT (Weakness–Threat) strategies. The SO strategy is designed to harness internal strength in seizing external opportunities, the WO strategy aims to minimize weakness by taking advantage of opportunities, the ST strategy focuses on using force to deal with threats, while the WT strategy is defensive in nature to minimize weaknesses and avoid threats.

Although SWOT analysis is capable of generating comprehensive strategy alternatives, this method has limitations because it does not provide a quantitative mechanism to determine strategy priorities. Therefore, a multi-criteria decision-making method is needed as a follow-up approach to determine the most priority strategies.

2.5 Analytical Hierarchy Process (AHP)

The Analytical Hierarchy Process (AHP) is a multi-criteria decision-making method developed to help determine alternative decision priorities systematically. AHP is used to solve complex problems by breaking them down into a hierarchical structure consisting of goals, criteria, and alternatives (Erdogan & Kaya, 2021).

The main principle of AHP is to make paired comparisons between elements

at the same level of the hierarchy against elements at levels above it. The assessment was carried out using the fundamental scale of 1–9, which represents the level of relative importance between the elements. AHP performs weighting based on paired comparisons, eigenvector theory, and logical consistency testing. This method is designed to convert subjective judgments into valid quantitative weights (Erdogan & Kaya, 2021).

Paired comparisons are formed in a matrix. For n elements, a matrix is formed as follows,

$$A = \begin{bmatrix} a_{11} & \cdots & a_{1j} \\ \vdots & \ddots & \vdots \\ a_{i1} & \cdots & a_{ij} \end{bmatrix}, \quad \dots(5)$$

with:

a_{ij} = The level of importance of element i to j

$$a_{ji} = \frac{1}{a_{ij}}$$

$$a_{ii} = 1$$

Saaty Scale (1–9):

1 = Just as important

9 = is much more important.

The matrix can be normalized to,

$$n_{ij} = \frac{a_{ij}}{\sum_{i=1}^n a_{ij}}, \quad \dots(6)$$

In general, the weight of the i -th element (w_i) can be calculated using the normalized matrix row average approach as follows,

$$w_i = \frac{\sum_{j=1}^n n_{ij}}{n}, \quad \dots(7)$$

To ensure the reliability of the results, the AHP is equipped with an assessment consistency test. The maximum value of eigen ($\lambda_{\max}$) is used to calculate the Consistency Index (CI) with the equation:

$$CI = \frac{\lambda_{\max} - n}{n-1}, \quad \dots(8)$$

Next, the Consistency Ratio (CR) is calculated by the equation:

$$CR = \frac{CI}{RI}, \quad \dots(9)$$

with:

n = number of elements compared

RI = Random Index (reference value of the Saaty table)

The assessment is considered consistent when the CR value ≤ 0.10 . If the CR value exceeds that limit, then the comparison matrix needs to be corrected. The advantage of AHP lies in its ability to convert subjective judgments into rational, transparent, and consistent numerical weights (Erdogan & Kaya, 2021; Fauzi et al., 2024).

2.6 SWOT-AHP Method Integration

The integration of SWOT and AHP methods aims to combine SWOT capabilities in identifying alternative strategies with AHP's ability to quantitatively determine strategic priorities. This approach is widely used in organizational development research and MSMEs (Hokmabadi et al., 2024).

In this integration, the SWOT results strategy is used as an alternative in the AHP hierarchical structure. AHP is then used to perform paired comparisons between strategies so that the most optimal priority weight of the strategy is obtained (Rainanto, 2024).

The integration of SWOT analysis and the AHP has emerged as a vital methodology for micro-enterprises seeking to transition from qualitative assessment to structured, quantitative action. While a standard SWOT matrix identifies environmental factors, it lacks the mathematical capability to prioritize which strategy to execute first. By applying AHP pairwise comparisons to the SWOT quadrants, decision-makers can systematically eliminate subjective bias and compute precise priority weights for localized operational alternatives. Recent empirical evidence in the Indonesian micro-enterprise sector demonstrates that this

hybrid framework successfully optimizes resource allocation, especially when evaluating e-commerce adoption and digital queue-management tools to counter local competitor density (Imaroh, 2025).

2.7 Previous Research

Number of studies also reveal that SWOT has limitations in determining strategy priorities quantitatively, so integration with advanced methods such as the Analytical Hierarchy Process (AHP), or QSPM is needed to produce more objective and measurable decisions. These findings indicate that SWOT-AHP integration is a relevant approach in business development strategy research, especially to ensure that strategy prioritization is based on a systematic and scientifically accountable analysis. Therefore, this research is in line with previous research in the use of strategic analysis approaches, while expanding its application in the context of retail and service MSMEs that are still in the early stages of business development. The list of previous research used for this report are shown at **Table 2.2**,

Table 2.2 List of previous research

No.	Author	Year	Method	Result of the Research
1	Afdhal Habibullah	2022	SWOT Analysis, STEEP Analysis	Formulated cultural tourism development strategies for Saribu Rumah Gadang, focusing on socio-cultural and technological factors.
2	Aidul Fitra Rahman	2023	Business Model Canvas (BMC), SWOT Analysis, QSPM	Identified 8 internal weaknesses and proposed a new business model to improve the competitiveness of Anandia Bakery.
3	Aurelia Khalisha Putri	2025	SWOT Analysis, AHP, QSPM, BMC	Generated six priority strategies for Batik Tanah Liek business development, emphasizing growth and sustainability.

4	Firman Fauzi, Hermanto Siregar, Baba Barus, & Galuh Syahbana	2025	SWOT Analysis, AHP	Formulated comprehensive digital era adaptation and operational empowerment strategies for small retail and service enterprises to overcome local structural vulnerabilities.
5	Tita Siti Imaroh, Adnan H. D. Purwanto, & Sulaeman Indrajaya	2025	SWOT Analysis, AHP, Lean Framework	Demonstrated the systematic integration of strategic SWOT-AHP framework with process-level diagnostics to optimize small business operations management, marketing efficiency, and distribution pathways.
6	Lili Efnita, Ma'mun Sarma, & Elisa Anggraeni	2025	SWOT Analysis, AHP	Developed strategic development matrices for retail market store actors, ranking digital service integration ("Go Digital") as the highest priority to reverse competitive losses.
7	Emilda Rahmadania, Kresnawati, & Rina Trisna Yanti	2023	SWOT Analysis, AHP Matrix	Evaluated micro-enterprise scalability by combining qualitative internal-external factors with quantitative hierarchy analysis to mitigate unorganized operational management and limited resource issues.
8	I Komang Wira Yuda Perdana & Utomo Sarjono Putro	2025	TOWS Matrix, AHP	Applied Multi-Criteria Decision-Making (MCDM) tools to address volatile sales decline, prioritizing service diversification, automation of manual records, and digital exposure for brick-and-mortar retail shops.

9	Muhammad Iqbal	2023	Business Model Canvas (BMC), SWOT Analysis	Proposed business model improvements for Patua Kopi to address high competition in the Menteng district.
10	Dzakwan Muhammad Nurfalah	2025	IWP, SWOT-AHP, Talent Management	Analyzed the impact of talent management on employee performance and formulated strategies for effective talent placement at Balai Bahasa.



CHAPTER III

RESEARCH METHODOLOGY

This chapter describes the stages of research methodology used to answer problem formulations and achieve research objectives systematically. The preparation of the methodology is based on the theoretical foundations that have been discussed in Chapter II, especially related to SWOT analysis, the Analytical Hierarchy Process (AHP) method, and the integration of the two methods. With a structured methodology, the research is expected to produce recommendations for MSME development strategies that are objective, measurable, and scientifically accountable.

3.1 Preliminary Study

The preliminary study was conducted to obtain an initial picture of the condition of MSMEs that are the object of research and the strategic problems faced. This stage aims to identify real phenomena that occur in operational and business management activities, especially those related to business performance stability, resource utilization, and strategic decision-making.

The implementation of the preliminary study was carried out through initial observation and informal communication with MSME management. The results of this preliminary study are used as a basis for directing the focus of research, determining the scope of the problem, and ensuring that the analysis method used is relevant to the empirical conditions faced by MSMEs.

3.2 Literature Study

A literature study was conducted to examine the concepts, theories, and results of previous research that are relevant to the topic of MSME development

and strategic decision-making. The literature used includes predecessor theses, accredited national journals, and reputable international journals that discuss SWOT analysis, Analytical Hierarchy Process (AHP), and the integration of these two methods.

Through a literature study, the researcher gained a conceptual understanding of the stages of SWOT analysis, the weighting and assessment mechanisms in AHP, and the practice of applying the SWOT-AHP method in the context of organizational and MSME development. The results of this literature study function as a theoretical foundation in the preparation of research instruments and data analysis techniques.

3.3 Problem Formulation

The formulation of the problem is carried out based on the results of preliminary studies and literature studies that have been carried out previously. This stage aims to formulate research problems in a specific, directed, and in accordance with scientific principles. The research problem is focused on efforts to develop MSMEs through the identification of internal and external factors and the determination of the most appropriate development strategy priorities. The formulation of this problem is the basis for determining the objectives of the research, the preparation of data collection instruments, and the selection of the analysis methods used in this research.

3.4 Data collecting

Data gathering is carried out using a variety of methods, including direct observation of MSME operational activities, interviews with owners and linked parties, and questionnaire distribution. The primary tool for the AHP method's paired comparison and SWOT factor assessment is the questionnaire. The

questionnaires were completed by Toko Hazila employees, including the owner, store manager, workers, and helper. The respondent was chosen due to their in-depth knowledge of Toko Hazila's circumstances. A literature review is also carried out to make sure the methodology is appropriate in light of published theories.

3.5 Method Selection

From the scientific perspective of Industrial Engineering, a Micro, Small, and Medium Enterprise (MSME) is evaluated as a complex, integrated system consisting of human resources, internal processes, localized infrastructure, and a highly dynamic external market environment. Designing a resilient business development strategy for such an enterprise requires a dual-layered methodological approach: first, a robust environmental diagnostic tool to audit the enterprise's strategic position; and second, a mathematical Multi-Criteria Decision-Making (MCDM) mechanism to rank alternative strategies without subjective bias (Rainanto, 2024). To establish the academic validity of this study, both stages of the methodological framework were systematically evaluated against alternative contemporary frameworks found in recent strategic management literature.

Before selecting the traditional Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis, three other prominent diagnostic frameworks were considered to audit the operational ecosystem of Toko Hazila:

- 1) Porter's Five Forces Analysis: This framework evaluates external industry attractiveness by analyzing market entry barriers, supplier power, buyer power, substitute threats, and competitive rivalry (Bruijl, 2021). While highly effective at capturing the intense retail competition Toko Hazila faces from nearby minimarkets and grocery stores for basic stationery (ATK) products, it was rejected because it completely ignores internal operational constraints, such as the store's severe workforce shortage and unstable daily operating schedules.
- 2) The VRIO Framework (Resource-Based View): VRIO evaluates an

organization's internal resources based on Value, Rarity, Inimitability, and Organization to identify sustained competitive advantages (Ariyani & Rahmawati, 2024). Although useful for analyzing specific internal assets like a cross-trained workforce schedule or WhatsApp pre-ordering systems, VRIO is fundamentally unfeasible for a newly established 5-month-old micro-business whose operational workflows have not yet matured enough to demonstrate true inimitability or stabilized organizational structures.

- 3) The ERAC Matrix (Blue Ocean Strategy): This action-oriented framework focuses on value innovation by determining which operational elements to Eliminate, Reduce, Raise, and Create (Kim & Mauborgne, 2023). It could serve to eliminate manual customer queue bottlenecks or create value-added thesis binding services. However, ERAC requires aggressive capital risk and strategic shifts that do not align with the strict resource limitations of an early-stage micro-enterprise.

Consequently, SWOT analysis was selected as the primary diagnostic framework due to its capacity to provide a balanced, dual-audit mechanism. This framework simultaneously delineates immediate internal operational vulnerabilities, such as deficient spatial visibility within a secondary commercial block, and synthesizes them with highly localized external market opportunities, exemplified by the substantial demand for comprehensive document printing and laminating services within the surrounding residential perimeter.

While SWOT analysis excels at descriptive environmental mapping, it lacks an integrated mathematical mechanism to resolve conflicting strategic parameters or rank alternatives quantitatively. To bridge this gap, three contemporary hybrid MCDM approaches were evaluated to weight and prioritize the alternative strategies derived from the SWOT matrix:

- 1) SWOT-TOPSIS (Technique for Order of Preference by Similarity to Ideal Solution): This framework ranks strategic alternatives based on their geometric distance from a positive ideal solution (Sari & Ramadhan, 2023). While computationally robust, TOPSIS assumes that baseline criterion

weights are already perfectly known and accurate, lacking an independent mechanism to verify respondent data integrity.

- 2) SWOT-VIKOR (VlseKriterijumska Optimizacija I Kompromisno Resenje): This compromise-ranking method optimizes multi-criteria systems by maximizing group utility and minimizing individual regret in highly volatile market environments (Widyaningrum & Hidayat, 2025). However, it requires highly precise quantitative inputs, making it less adaptable for small-scale retail setups driven by qualitative service factors.
- 3) SWOT-ANP (Analytic Network Process): ANP releases the restriction of strict linear hierarchies, modeling complex, non-linear feedback loops and interdependencies among criteria (Kurniawan & Setiawan, 2022). Though mathematically advanced, ANP demands an exponentially larger volume of pairwise comparison questions, which induces severe cognitive fatigue during questionnaire data collection from small-business stakeholders.

To maintain methodological efficiency and rigor, the integrated SWOT-AHP method was selected due to three system-level justifications:

- a) Mathematical Verification of Input Consistency: Unlike TOPSIS or VIKOR, AHP features a built-in mathematical consistency test via the Consistency Ratio (CR) calculation. Because Toko Hazila's strategic input relies on a small, highly localized internal stakeholder pool (Business Owner, Store Manager, Employees, and Helper), the ability to mathematically verify and validate the logical consistency of questionnaire data is critical to eliminate cognitive bias and subjective noise.
- b) Avoidance of Model Over-Engineering: For a micro-retail enterprise, operational criteria remain relatively independent, making the linear hierarchical structure of AHP mathematically sufficient and structurally transparent without over-engineering the decision model via ANP (Kurniawan & Setiawan, 2022).
- c) Hierarchical Deconstruction of Retail-Service Duality: AHP allows the decision tree to break down the primary goal into distinct, scannable operational criteria. This accommodates Toko Hazila's dual-business nature,

which simultaneously balances high-turnover physical stationery retail with high-margin, queue-sensitive document processing services.

Therefore, the hybrid SWOT-AHP methodology serves as the most reliable, objective, and scientifically valid engineering tool to construct a sustainable operational and development roadmap for Toko Hazila.

3.6 Data Processing

Data processing is an advanced stage after research data is successfully collected through observation, interviews, and questionnaires. This stage aims to convert raw data into structured information that is ready to be analysed according to the methods used, namely SWOT analysis and Analytical Hierarchy Process (AHP). Data processing is carried out systematically so that the research results are objective, consistent, and scientifically accountable.

The initial stage of data processing is carried out by grouping the data from observations and interviews into internal and external factors of MSMEs. Internal factors include strengths and weaknesses, while external factors include opportunities and threats. These factors are selected based on relevance and frequency of occurrence in the field data to ensure that the factors used truly reflect the conditions of the business.

After the SWOT factor is determined, the next step is the preparation of the IFAS (Internal Factor Analysis Summary) and EFAS (External Factor Analysis Summary) matrix. At this stage, each factor is given weight based on its level of importance to the development of MSMEs, provided that the number of weights in each matrix is equal to 1. The determination of weights is carried out based on the results of the questionnaire and discussions with parties who understand the business conditions.

Furthermore, each factor is given a rating that reflects the condition of MSMEs against these factors. Ratings are given using a specific scale, where higher values indicate increasingly strong conditions for internal factors or external opportunities, as well as worsening conditions for weaknesses and threats. The weighted score of each factor is calculated using the equation:

$$S_i = w_i \times r_i$$

The results of the weighted score calculation in the IFAS and EFAS matrix were summed to obtain the total internal and external scores. The total value is used to determine the position of MSMEs in the SWOT matrix, which then becomes the basis for the formulation of alternative SO, WO, ST, and WT strategies.

Alternative strategies resulting from SWOT analysis are then used as inputs to the AHP method. At this stage, these strategies are prepared as an alternative decision in the AHP hierarchical structure, with the main goal of determining the priority of MSME development strategies.

The processing of AHP data begins with the preparation of a paired comparison matrix between alternative strategies based on the criteria that have been set. The assessment was carried out using the fundamental scale of Saaty 1–9 to describe the level of relative importance between strategies. The comparison matrix is then normalized to obtain the priority weight of each strategy.

To ensure the reliability of the assessment results, a consistency test was carried out by calculating the Consistency Index (CI) and Consistency Ratio (CR) values. Assessment is considered consistent when the CR value is less than or equal to 0.10. If the CR value exceeds this limit, a review of the paired comparison assessment will be carried out.

The final result of data processing is in the form of priority order of MSME development strategies based on the weight value of AHP. The strategy with the highest weight is set as the main recommended strategy, while the other strategies can be used as supporting alternatives in the gradual development of the business.

The data analysis technique begins with the identification of internal and external factors of MSMEs based on the results of observations and interviews. These factors are then compiled into the IFAS and EFAS matrix with weights and ratings to obtain a weighted score. The results of the SWOT analysis are used to formulate alternative development strategies.

Furthermore, alternative strategies resulting from SWOT analysis are used as alternative decisions in the AHP method. The AHP process is carried out through the preparation of a decision hierarchy, paired comparisons between strategies, calculation of priority weights, and consistency testing using *the* Consistency Ratio. The strategy with the highest priority weight is set as the main recommendation for MSME development.

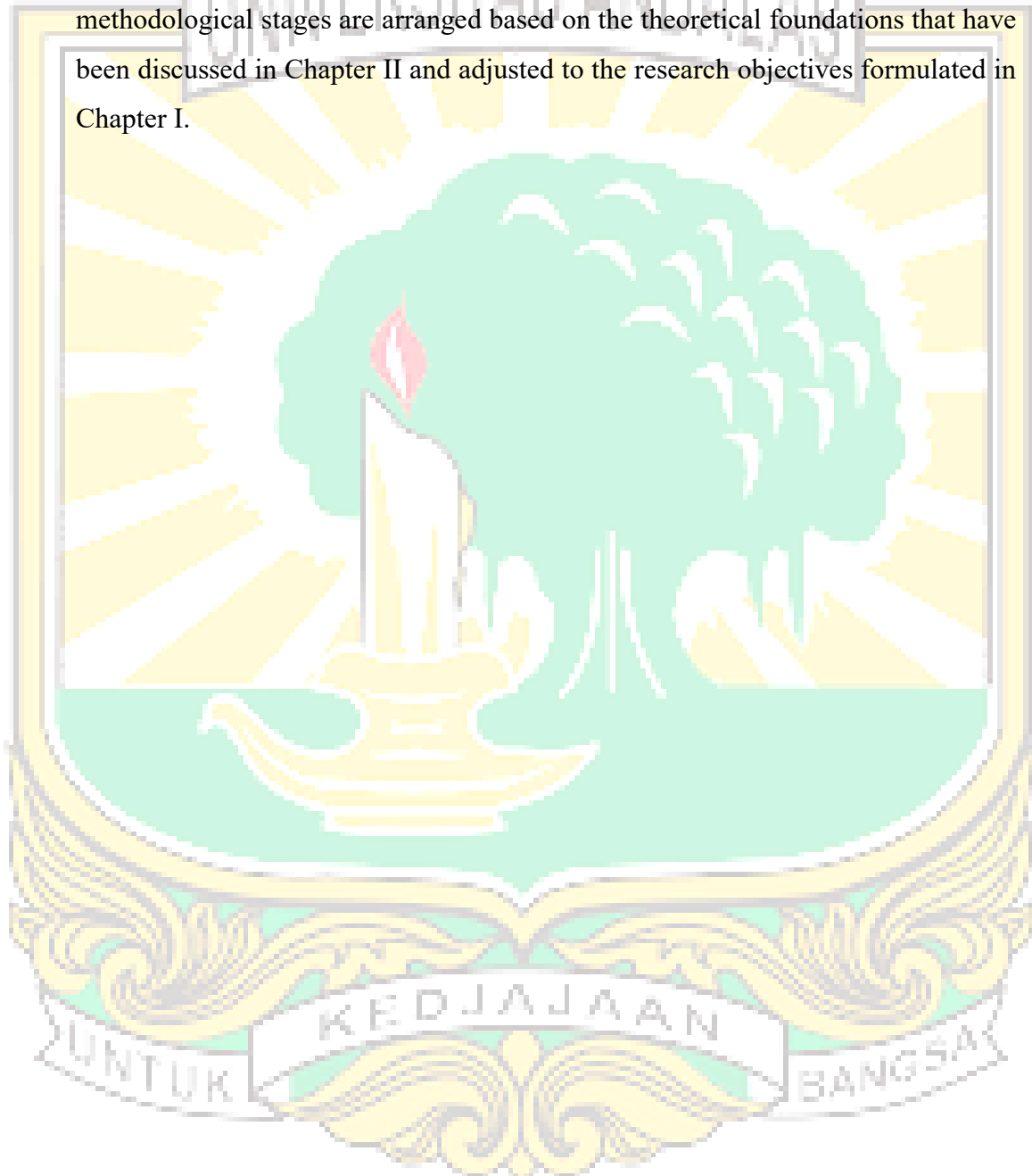
3.7 Analysis

The data analysis technique begins with the identification of internal and external factors of MSMEs based on the results of observations and interviews. These factors are then compiled into the IFAS and EFAS matrix with weights and ratings to obtain a weighted score. The results of the SWOT analysis are used to formulate alternative development strategies.

Furthermore, alternative strategies resulting from SWOT analysis are used as alternative decisions in the AHP method. The AHP process is carried out through the preparation of a decision hierarchy, paired comparisons between strategies, calculation of priority weights, and consistency testing using Consistency Ratio (CR). The strategy with the highest priority weight is set as the main recommendation for MSME development.

3.8 Conclusion

Chapter III has systematically outlined the research methodology used in the preparation of the final project, starting from preliminary studies, literature studies, problem formulation, to the stages of data collection and processing. All methodological stages are arranged based on the theoretical foundations that have been discussed in Chapter II and adjusted to the research objectives formulated in Chapter I.



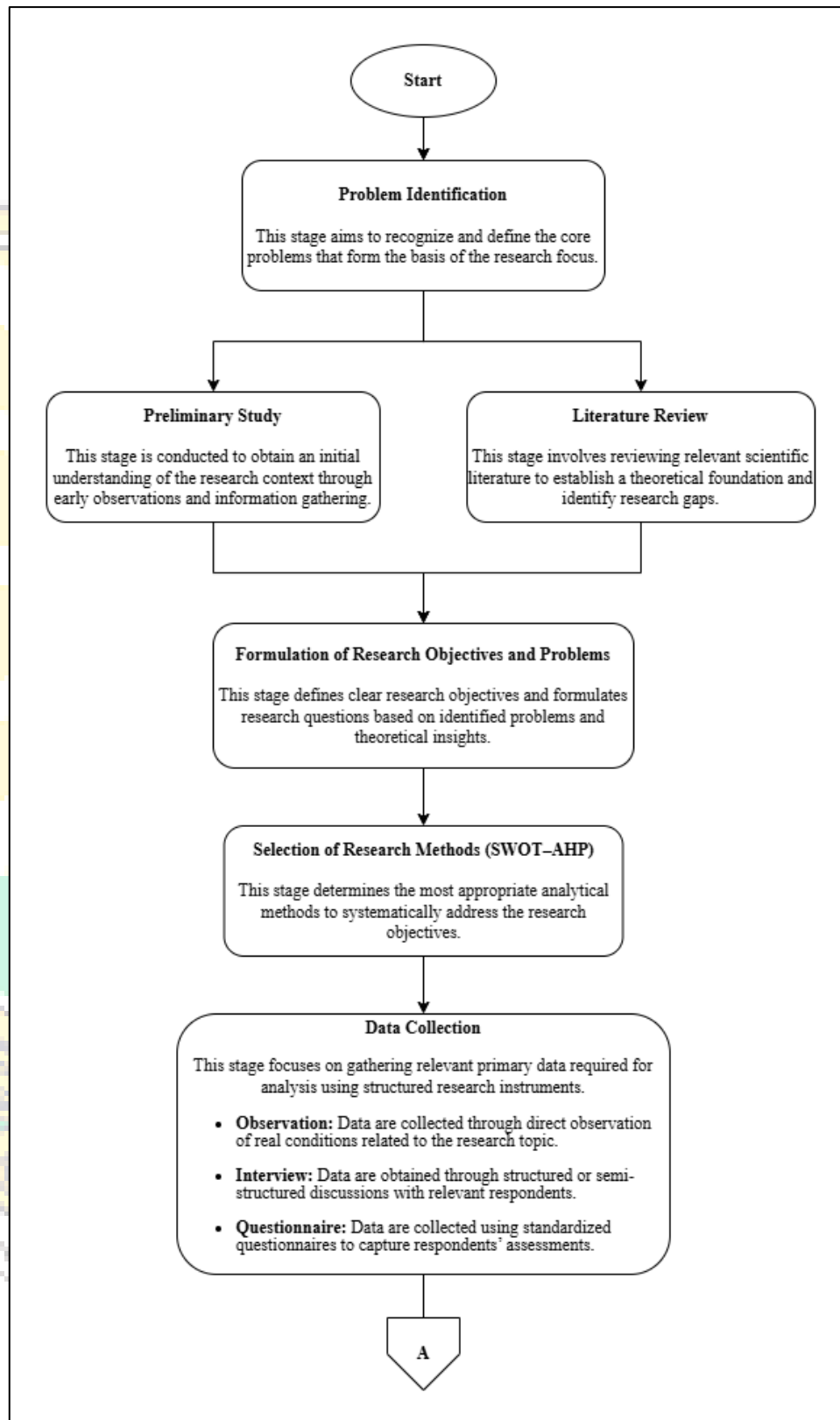


Figure 3.1 Methodology Research Flowchart

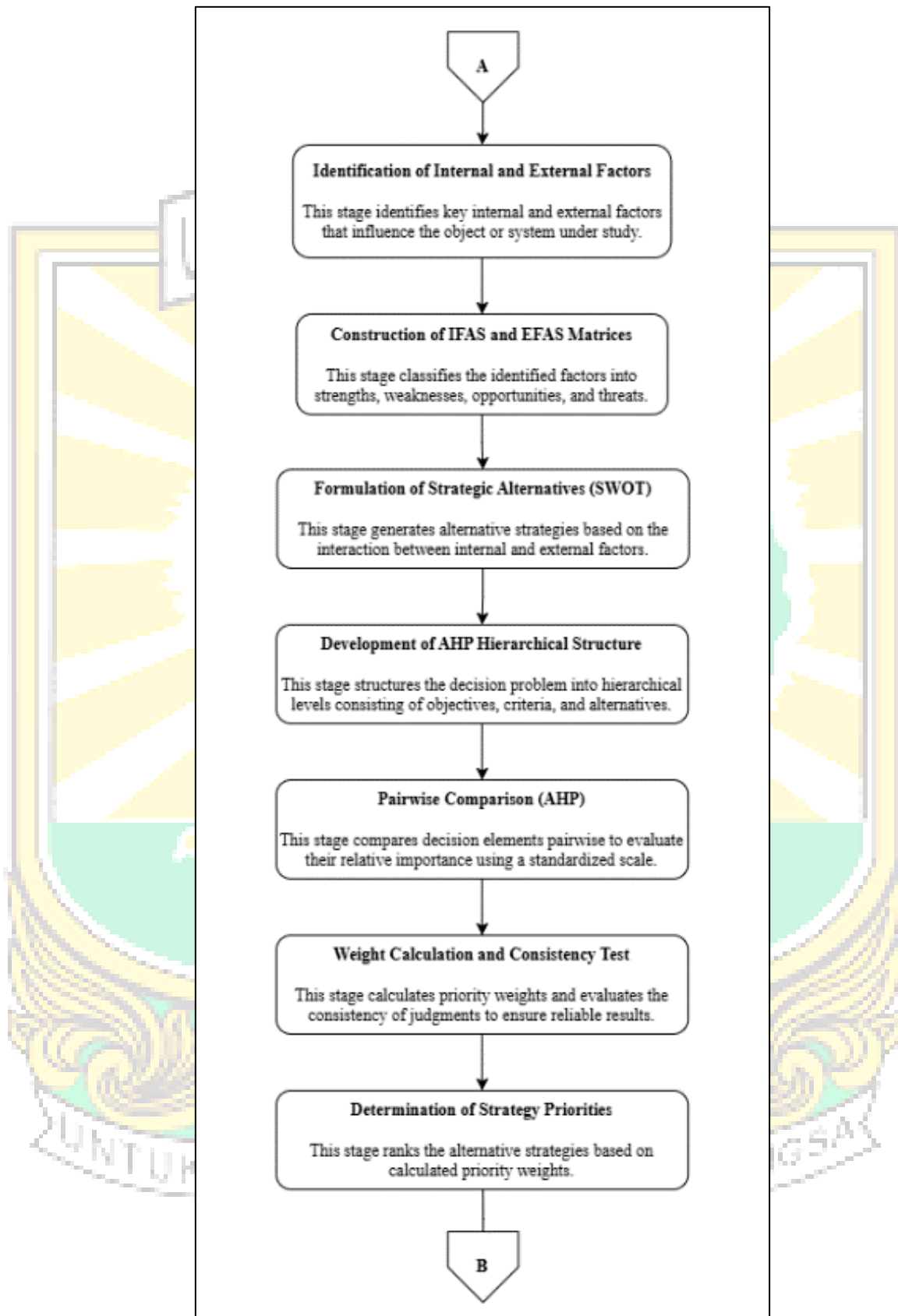


Figure 3.1 Methodology Research Flowchart (cont.)

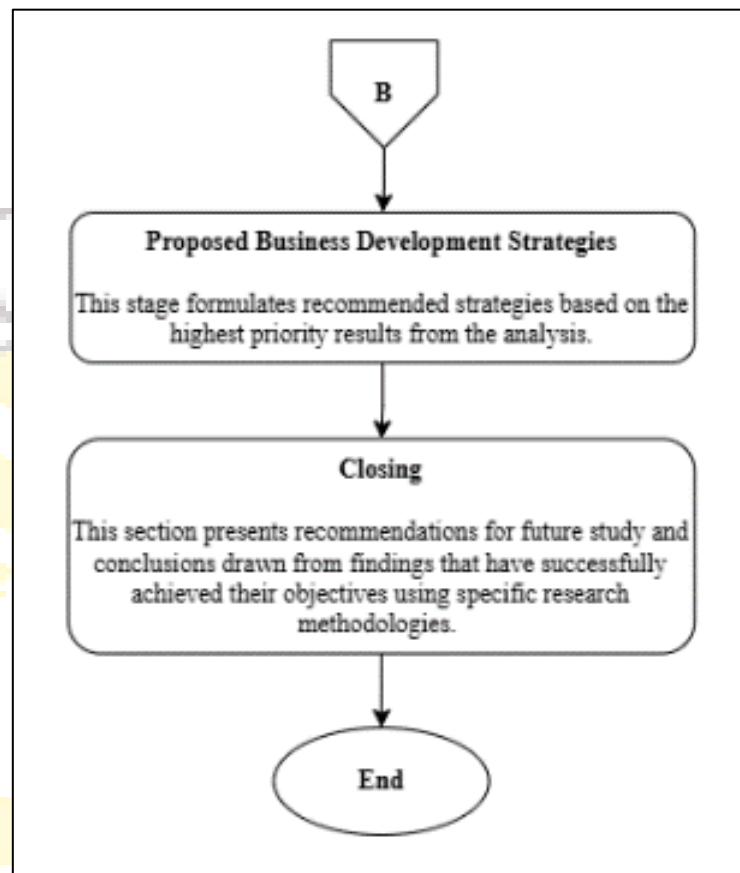


Figure 3.1 Methodology Research Flowchart (cont.)

Figure 3.1 illustrates the research methodology flowchart used in this study. The flowchart describes a systematic sequence of research stages, starting from problem identification, data collection, SWOT analysis, and AHP-based strategy prioritization, to generate a proposed business development strategy.

CHAPTER IV

DATA COLLECTION

This chapter presents the data collection process conducted in this study. The collected data serve as the foundation for identifying the internal and external conditions of Toko Hazila and for formulating appropriate business development strategies. Furthermore, this chapter explains the general description of the business, the methods used to gather data, and the characteristics of the respondents involved in the research.

4.1 General Description of Toko Hazila

Toko Hazila is a Micro, Small, and Medium Enterprise (MSME) engaged in the sale of office stationery (ATK) and document-related services such as printing, photocopying, and document filing services. The business is located in Kibing Subdistrict, Batu Aji District, Batam City. Based on the results of preliminary observations, the business is categorized as an MSME that is still in the early stage of operation because it has only been operating for approximately five months.

The establishment of Toko Hazila was motivated by the limited availability of office stationery and document services in the surrounding residential area. Several consumers still need to travel to other urban areas to access services such as printing, photocopying, and document processing. This condition indicates the existence of market opportunities for businesses operating in the office stationery and document service sector.

Based on the results of observations and interviews, Toko Hazila implements a simple organizational structure that is adjusted to its operational needs and business scale. The structure reflects the actual division of responsibilities, authority, and coordination among individuals involved in managing the business.

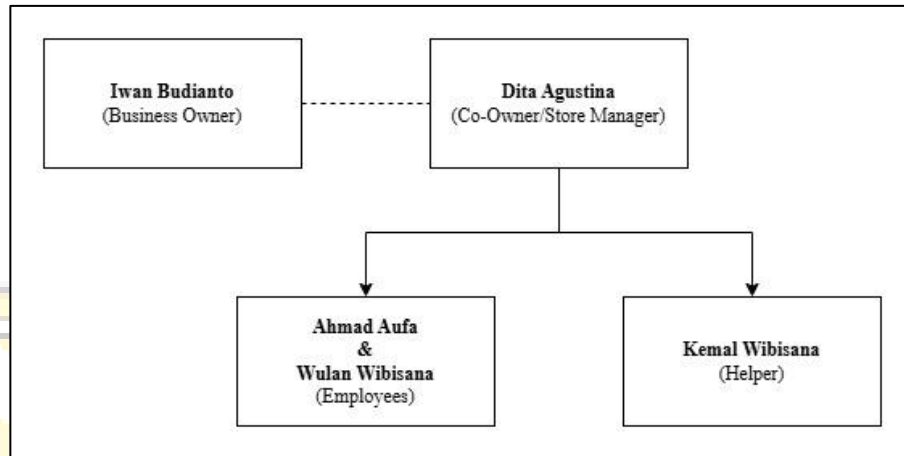


Figure 4.1 Organizational Chart of Toko Hazila

The dashed line on **Figure 4.1** indicates a coordination and consultation relationship between the business owner and the store manager. Although both parties are owners of Toko Hazila, business owner primarily focuses on capital investment and strategic business decisions, while store manager is responsible for daily operational activities, financial administration, customer service, inventory management, and supervision of business operations.

Employees and helper are positioned at the same organizational level because both perform operational activities under the direct supervision of the store manager. The distinction between the two positions lies in the continuity of their involvement. Employees are involved in routine daily operations, while helper provide additional support during specific operational needs or periods of increased workload.

This organizational structure reflects the actual condition of Toko Hazila and supports effective communication, coordination, and decision-making processes within the business.

4.2 Data Collection Method

The data collection process in this study was conducted systematically to

obtain information related to the internal and external conditions of Toko Hazila. The collected data were used as the basis for SWOT factor identification and AHP-based strategy prioritization.

Observation was conducted directly at Toko Hazila to understand operational conditions, customer activities, business environment conditions, and service processes. The observation process was carried out during the operational activities of the business.

Interviews were conducted with the owner and related parties involved in the operational activities of Toko Hazila. The interviews aimed to obtain information regarding business conditions, operational constraints, business opportunities, and strategic issues faced by the MSME.

Questionnaires were provided by internal parties of Toko Hazila, namely the Business Owner, Store Manager, Employees, and Helper. These respondents were selected because they possess direct understanding and experience regarding operational activities, business conditions, customer interactions, strategic constraints, and business development. The first questionnaire was used to determine the relative importance of internal and external strategic issues for SWOT analysis. The second questionnaire was utilized for AHP analysis, which involved paired comparisons of criteria and strategic alternatives using Saaty's comparison scale.

4.3 Observation Result

Based on the observations conducted at Toko Hazila, several conditions were identified as follows:

1. Toko Hazila provides office stationery products and document services such as printing and photocopying.
2. The business location is located within a residential and shopping complex

area.

3. The surrounding area still has limited access to complete document services.
4. The number of workers involved in operational activities is still limited.
5. The variety of products and services provided is still relatively limited.
6. Operating hours are still inconsistent due to operational constraints.
7. Promotional activities are still minimal and mostly rely on nearby consumers.
8. Business visibility from the main road is relatively limited.

These observation results were used as the basis for identifying SWOT factors.

4.4 Interview Result

Based on interviews with the owner and related parties, several strategic issues were identified:

1. The owner stated that customer demand for printing and photocopy services continues to increase.
2. Customers often request additional services such as laminating and thesis binding.
3. The business still experiences operational limitations due to limited resources and supporting equipment.
4. Competition in stationery products is relatively high because many minimarkets and grocery stores also sell similar products.
5. Social media has not been utilized optimally as a promotional medium.
6. The owner plans to gradually increase the variety of products and services.

The interview results were then combined with observation results and literature studies to formulate internal and external strategic factors.

4.5 SWOT Factor Identification

Based on observations, interviews, and literature studies, the following

SWOT factors were identified as shown as **Table 4.1** to **Table 4.4**.

Table 4.1 Strength factor of Toko Hazila

Code	Factor
S1	Provides stationery and document services needed by local residents
S2	Location close to residential area and potential customers
S3	Limited nearby printing and photocopy competitors
S4	Friendly and responsive customer service
S5	Affordable prices and services
S6	Flexible service according to customer needs
S7	Owner directly involved in operations
S8	Already has regular customers

Table 4.2 Weakness factor of Toko Hazila

Code	Factor
W1	Limited workforce
W2	Inconsistent operating hours
W3	Limited stationery product variety
W4	Additional services not yet available
W5	Minimal promotion and marketing
W6	Location less visible from main road
W7	Financial and operational management still simple
W8	Product additions mostly based on customer requests

Table 4.3 Opportunity factor of Toko Hazila

Code	Factor
O1	Increasing printing and photocopy demand
O2	Residential area contains students and workers
O3	Limited competitors with complete document services
O4	Social media as low-cost promotion
O5	Laminating and thesis binding have market potential
O6	Demand for fast document services increasing
O7	Cooperation opportunities with schools and offices
O8	Digital technology can improve efficiency

Table 4.4 Threat factor of Toko Hazila

Code	Factor
T1	Competition from minimarkets and stationery stores
T2	Online and digital services reducing printing demand
T3	Rising operational costs
T4	Competitors may offer more complete services
T5	Customer preference changes
T6	Larger businesses have stronger promotion
T7	Economic instability reduces purchasing power
T8	New competitors may enter the area

Toko Hazila's strength and weakness factors are listed in **Tables 4.1** and **Table 4.2** respectively. These factors will be applied to the IFAS matrix after being determined using actual internal data. Additionally, Toko Hazila's opportunity and threat factors are shown in **Tables 4.3** and **Table 4.4** respectively. These factors will be added to the EFAS matrix since, unlike the probability and the limit, they are defined by actual external data.

4.6 SWOT Questionnaire Result

The SWOT questionnaire was used to identify internal and external strategic factors affecting the development of Toko Hazila. The questionnaire used a Likert scale assessment to determine the level of importance and condition of each factor.

The SWOT questionnaire results were used to prepare IFAS and EFAS matrices, while the AHP questionnaire results were used to determine the priority order of business development strategies. The result of the questionnaire is shown by **Table 4.5** and **Table 4.6**.

Table 4.5 Internal factor questionnaire result

Code	Factor	Avg. Score
S1	Provides stationery and document services needed by local residents	4,6
S2	Location close to residential area and potential customers	4,6
S3	Limited nearby printing and photocopy competitors	4,8
S4	Friendly and responsive customer service	5
S5	Affordable prices and services	3,6
S6	Flexible service according to customer needs	4,6
S7	Owner directly involved in operations	4,8
S8	Already has regular customers	4,4
W1	Limited workforce	4,6
W2	Inconsistent operating hours	4,6
W3	Limited stationery product variety	4
W4	Additional services not yet available	3,4
W5	Minimal promotion and marketing	4,2
W6	Location less visible from main road	3,8
W7	Financial and operational management still simple	3,8
W8	Product additions mostly based on customer requests	3,6

Table 4.6 External factor questionnaire result

Code	Factor	Avg. Score
O1	Increasing printing and photocopy demand	4,8
O2	Residential area contains students and workers	4,2
O3	Limited competitors with complete document services	4,4
O4	Social media as low-cost promotion	4,2
O5	Laminating and thesis binding have market potential	4,4
O6	Demand for fast document services increasing	4,4
O7	Cooperation opportunities with schools and offices	4
O8	Digital technology can improve efficiency	4,6
T1	Competition from minimarkets and stationery stores	3,4
T2	Online and digital services reducing printing demand	4
T3	Rising operational costs	4,8
T4	Competitors may offer more complete services	3,2
T5	Customer preference changes	4
T6	Larger businesses have stronger promotion	4,2
T7	Economic instability reduces purchasing power	4,4
T8	New competitors may enter the area	4

CHAPTER V

DATA PROCESSING AND ANALYSIS

This chapter presents the processing and analysis of data collected from observations, interviews, and questionnaire distributions conducted at Toko Hazila. The analysis is carried out using the SWOT method to identify internal and external strategic factors affecting the business, followed by the Analytical Hierarchy Process (AHP) to determine the priority of business development strategies. The results of these analyses serve as the basis for formulating strategic recommendations that can support the growth and competitiveness of Toko Hazila.

5.1. Internal Factor Analysis Summary (IFAS)

The IFAS matrix was used to evaluate the internal conditions of Toko Hazila based on identified strengths and weaknesses. The weight value of each factor was obtained from the average importance assessment provided by respondents through the SWOT questionnaire. The average score of each factor was normalized so that the total weight of all internal factors equals 1.00.

Weight Formula:

$$w_i = x_i / \sum x_i$$

where:

w_i = Weight of factor-i

x_i = Average score of factor-i

Now, try to calculate the weight of each factor using that formula;

Take the example using S1, based **Table 4.5** we get $x_{S1} = 4,6$, so the calculation for w_{S1} is:

$$w_{S1} = \frac{4,6}{4,6+4,6+4,8+5+3,6+4,6+4,8+4,4+4,6+4,6+4+3,4+4,2+3,8+3,8+3,6} = 0,0673$$

So, the weight for S1 is 0,0673

The rating value represents the actual condition of Toko Hazila. The rating was determined based on observations, interviews, validation with the owner and operational manager, and actual business conditions.

Strength Rating Scale:

4 = Major Strength

3 = Minor Strength

Weakness Rating Scale:

2 = Minor Weakness

1 = Major Weakness

After determine the weight and the rating for each internal factor, next calculate the weighted score for each internal factor, the weighted score formula is;

Weighted Score = Weight $\times$ Rating

Now try to calculate S2 weighted score using that formula

Score = $w_{S2} \times R_{S2}$

= $0,673 \times 4$

= 0,2690

So on, until all internal factor calculated using the same formula.

After completed all score for each internal factors, the **Table 5.1** is shown the score and total IFAS Score of Toko Hazila SWOT analysis,

Table 5.1 IFAS score table

Code	Factor	Avg. Score	Weight	Rating	Score
S1	Provides stationery and document services needed by local residents	4,6	0,0673	4	0,2690
S2	Location close to residential area and potential customers	4,6	0,0673	4	0,2690
S3	Limited nearby printing and photocopy competitors	4,8	0,0702	3	0,2105
S4	Friendly and responsive customer service	5	0,0731	4	0,2924
S5	Affordable prices and services	3,6	0,0526	3	0,1579
S6	Flexible service according to customer needs	4,6	0,0673	4	0,2690
S7	Owner directly involved in operations	4,8	0,0702	3	0,2105
S8	Already has regular customers	4,4	0,0643	3	0,1930
W1	Limited workforce	4,6	0,0673	1	0,0673
W2	Inconsistent operating hours	4,6	0,0673	1	0,0673
W3	Limited stationery product variety	4	0,0585	2	0,1170
W4	Additional services not yet available	3,4	0,0497	2	0,0994
W5	Minimal promotion and marketing	4,2	0,0614	1	0,0614
W6	Location less visible from main road	3,8	0,0556	2	0,1111
W7	Financial and operational management still simple	3,8	0,0556	2	0,1111
W8	Product additions mostly based on customer requests	3,6	0,0526	2	0,1053
	TOTAL		1		2,6111

Based on **Table 5.1**, total IFAS score is 2,6111 which is greater than 2,5. So, Toko Hazila's internal conditions are relatively strong.

5.2. External Factor Analysis Summary (EFAS)

The EFAS matrix was used to evaluate external opportunities and threats affecting Toko Hazila. The weight value of each factor was obtained from the SWOT questionnaire results using the same normalization procedure applied in the IFAS matrix.

The rating value was determined based on observations, interviews, validation with the owner and operational manager, and the business's ability to respond to external environmental conditions.

Opportunity Rating Scale:

4 = Very Good Response

3 = Good Response

Threat Rating Scale:

2 = Less Effective Response

1 = Ineffective Response

After determine the weight and the rating for each external factor, next calculate the weighted score for each external factor, the weighted score formula for external factor still same like internal factor scoring, such as;

Weighted Score = Weight $\times$ Rating

Now try to calculate O3 weighted score using that formula

Score = $w_{O3} \times R_{O3}$

= $0,657 \times 3$

= 0,197

So on, until all external factor calculated using the same formula.

After completed all score for each external factors, the **Table 5.2** is shown the score and total EFAS Score of Toko Hazila SWOT analysis,

Table 5.2 EFAS score table

Code	Factor	Avg. Score	Weight	Rating	Score
O1	Increasing printing and photocopy demand	4,8	0,0716	4	0,2866
O2	Residential area contains students and workers	4,2	0,0627	4	0,2507
O3	Limited competitors with complete document services	4,4	0,0657	3	0,1970
O4	Social media as low-cost promotion	4,2	0,0627	3	0,1881
O5	Laminating and thesis binding have market potential	4,4	0,0657	4	0,2627
O6	Demand for fast document services increasing	4,4	0,0657	4	0,2627
O7	Cooperation opportunities with schools and offices	4	0,0597	3	0,1791
O8	Digital technology can improve efficiency	4,6	0,0687	3	0,2060
T1	Competition from minimarkets and stationery stores	3,4	0,0507	2	0,1015
T2	Online and digital services reducing printing demand	4	0,0597	1	0,0597
T3	Rising operational costs	4,8	0,0716	2	0,1433
T4	Competitors may offer more complete services	3,2	0,0478	1	0,0478
T5	Customer preference changes	4	0,0597	2	0,1194
T6	Larger businesses have stronger promotion	4,2	0,0627	1	0,0627
T7	Economic instability reduces purchasing power	4,4	0,0657	2	0,1313
T8	New competitors may enter the area	4	0,0597	2	0,1194
	TOTAL		1		2,6179

Based on **Table 5.2**, total EFAS score is 2,6179 which is also greater than 2,5. So, Toko Hazila's external conditions are relatively strong too.

5.3. SWOT Matrix Analysis

Based on the results of the IFAS and EFAS analyses, strategic alternatives were formulated using the SWOT Matrix. The SWOT Matrix combines internal

and external strategic factors to generate possible business development strategies for Toko Hazila.

The strategic alternatives generated from the SWOT Matrix are classified into four categories, namely Strength–Opportunity (SO), Weakness–Opportunity (WO), Strength–Threat (ST), and Weakness–Threat (WT) strategies.

Table 5.3 SWOT matrix alternative strategies

Code	Internal Factor (S/T)	External Factor (O/T)	Alternative Strategy
SO1	S1, S2	O1, O2	Utilize the strategic business location and existing customer demand to expand printing, photocopying, and document-related services.
SO2	S4, S6	O6	Maintain friendly, responsive, and flexible customer service to meet the increasing demand for fast document services.
SO3	S1, S4	O5	Introduce laminating and thesis binding services by leveraging customer trust and existing demand.
WO1	W3, W4, W8	O5	Expand product and service offerings by introducing laminating and thesis binding services.
WO2	W5, W6	O4,O8	Utilize social media and digital technology to improve business visibility and promotional activities.
WO3	W7	O8	Improve operational management and administrative systems through digital technology utilization.
ST1	S4, S6	T8	Strengthen customer loyalty through superior service quality to withstand increasing competition.
ST2	S5	T7	Maintain affordable pricing and customer-oriented services to address economic uncertainty.
ST3	S4	T5	Continuously improve service responsiveness to adapt to changing customer preferences.
WT1	W7	T3	Improve operational management and cost control to mitigate rising operational costs.
WT2	W3, W8	T5, T8	Develop a structured product and service development plan to reduce the risk of losing customers to competitors.
WT3	W5, W6	T6, T8	Increase promotional activities to strengthen competitiveness against larger and more established competitors.

Table 5.3 shown the SWOT matrix generated alternative strategies based on Internal-External factor indicates that Toko Hazila possesses several opportunities that can be utilized to support future business growth. Therefore, strategic efforts should focus on improving business visibility, expanding service offerings, strengthening operational management, and maintaining customer satisfaction.

5.4. Selection of Strategic Alternatives for AHP Analysis

Not all strategies generated from the SWOT Matrix were further processed using AHP. Therefore, several strategic alternatives considered the most relevant, feasible, and aligned with the development needs of Toko Hazila were selected. The selection was based on the relationship between the SWOT factors, the business's actual conditions, and the practicality of implementation. The selected strategic alternatives are presented in **Table 5.4**,

Table 5.4 Selected strategic alternatives

Code	Strategic Alternative
A1	Introduce laminating and thesis binding services.
A2	Improve social media promotion and business visibility.
A3	Improve operational management using digital tools.
A4	Strengthen customer loyalty through superior service.

These alternatives shown on **Table 5.4** were selected because they directly address the major weaknesses and opportunities identified during the SWOT analysis while remaining feasible for implementation within the business's operational capabilities. Because these precise strategic titles have already been deployed as the structural foundation for the expert comparison questionnaire, their nomenclature remains entirely unaltered to preserve mathematical alignment between the qualitative diagnostics and quantitative prioritization. Each strategic alternative is systematically justified and contextualized below by anchoring its implementation entirely to the empirical data collected through field observations, semi-structured interviews, and operational transaction logs gathered during the initial five-month operational cycle of Toko Hazila in Batu Aji, Batam.

A1) Launching Value-Added Document Services including Laminating, Thesis Binding, and Heavy-Duty Finishing

The selection of this strategic alternative is grounded in the competitive realities recorded during local market scans and semi-structured interviews with the business owner. These assessments highlighted that Toko Hazila faces intense price competition and severe margin pressures on standard stationery items due to the high density of established local grocery stores and minimarkets operating in the immediate vicinity. Conversely, field observations revealed a prominent service gap, namely a total absence of specialized document processing centers within the residential zone. Interview data from local residents, students, and remote workers confirmed that consumers encounter significant geographic barriers, forcing them to travel outside the immediate residential complex to distant urban zones to access complete filing, laminating, or thesis binding facilities. The execution of this strategy addresses these findings by deploying a designated portion of capital investment to acquire a standard thermal laminating machine and a manual comb-binding device, thereby transforming the store from a vulnerable commodity retailer into a specialized service hub capable of generating stable, high-margin revenue.

A2) Executing Targeted Physical Visibility Campaigns and Geo-Located Digital Marketing

This strategic alternative directly addresses the spatial and operational constraints identified through physical store audits. Direct spatial mapping and field observations confirmed that Toko Hazila suffers from deficient spatial visibility because it is positioned inside a secondary commercial block situated away from the primary main road corridor. Interview data indicated that this physical disadvantage is further aggravated by highly inconsistent daily operating hours resulting from unorganized internal schedules. To resolve these specific empirical challenges, the strategy mandates the immediate installation of high-contrast physical directional signs and directional sandwich boards at major intersections along the main Kibing

traffic routes. Furthermore, the operational workflow requires the registration of a verified Google Maps Business Profile under the explicit title of Toko Hazila to capture localized mobile search queries from consumers within the Batu Aji district, effectively generating sustainable foot traffic regardless of the physical limitations of the storefront.

A3) Institutionalizing a Digital Inventory System and Multi-Skilled Workforce Schedule

The integration of this alternative is necessitated by critical structural disruptions documented during internal store audits and daily workflow observations. Field tracking during the initial five-month cycle identified a consistent pattern of reactive procurement, wherein product stocks are only replenished after a customer explicitly requests an item, which frequently results in stockouts and documented revenue losses. This vulnerability is deepened by a severe human resource shortage, leaving the business susceptible to temporary closures whenever the store manager is absent. Real-world execution of this strategy requires replacing manual ledger-keeping with a free, cloud-based point-of-sale smartphone application to systematically log daily transaction volumes and automate low-stock alerts. Concurrently, the business must implement a cross-training matrix designed to upscale the single helper role, ensuring this individual can execute complex printing tasks and manage cash register operations independently to maintain consistent, uninterrupted daily opening hours.

A4) Establishing WhatsApp-Based Pre-Ordering Services and Micro-Institutional Business-to-Business Contracts

This strategy relies on the operational data extracted from internal store logs and consumer feedback. Weekly transaction logs and physical observations illustrated severe demand variability, characterized by intense customer friction and physical queue bottlenecks during peak late-afternoon operational hours. Semi-structured interviews with local consumers revealed that these bottlenecks often deter students and corporate workers who require rapid document processing. To eliminate this friction, the strategy establishes a dedicated WhatsApp

Business communication channel featuring automated greetings to allow remote file submission prior to physical store arrival. Additionally, the strategy leverages existing inventory volumes to secure micro-institutional business-to-business supply contracts for standardized basic stationery packets with primary schools located within the surrounding residential perimeter, ensuring a predictable, non-volatile base volume of recurring transactions.

5.5. Analytical Hierarchy Process (AHP) Analysis

Analytical Hierarchy Process (AHP) was employed to determine the priority business development strategy for Toko Hazila. AHP was selected because it can accommodate multiple criteria and alternatives in a structured decision-making process. AHP analysis was conducted through pairwise comparisons involving the respondents consisting of the Business Owner, Store Manager, Employees, and Helper.

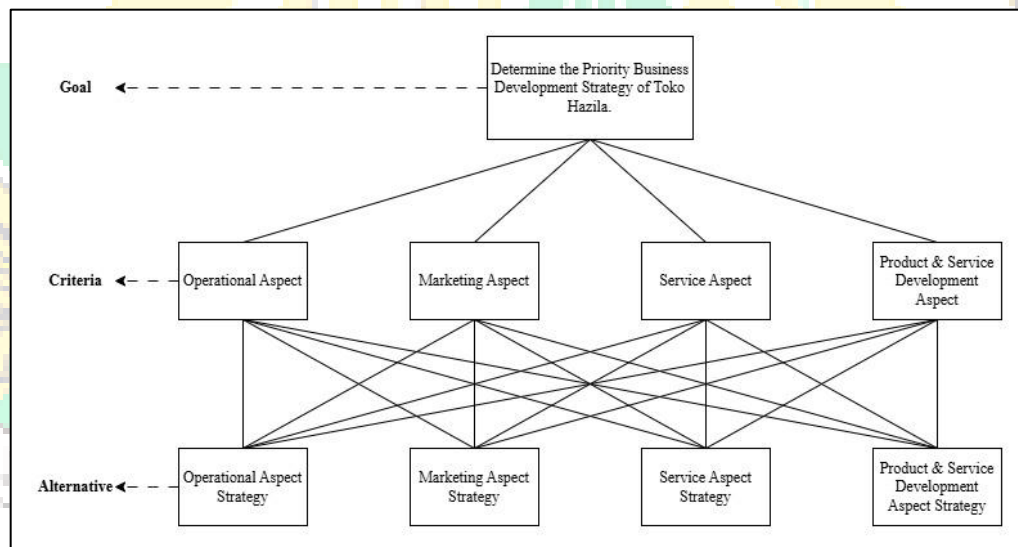


Figure 5.1 Hierarchy structure of Analytical Hierarchy Process (AHP)

The hierarchy structure developed in this study consists of one goal, four criteria, and four strategic alternatives. The structure shown on **Figure 5.1** tells for

each criteria support to reach goal. Then, the alternative will be compared each other according of each criterion or aspect the goal needed. The relative importance of each criterion was determined using pairwise comparisons based on Saaty's scale. The responses obtained from all respondents were combined using the geometric mean method to produce a collective judgment matrix.

5.5.1. Geometric Mean Calculation

The geometric mean method was used to combine pairwise comparison judgments from multiple respondents into a single representative value. This method will help to build the matrix further to be calculate. The geometric mean formula is:

$$GM = (\chi_1 \times \chi_2 \times \dots \times \chi_n)^{\frac{1}{n}}$$

where:

GM = Geometric Mean

χ_i = respondent assessment

n = number of respondents

On **Table 5.5** shown the AHP questionnaire result. Each respondent gives the assessment to compare of two of aspect which they thought more important. Questionnaire have the five parts, there are; criteria comparison, and four strategy alternative comparison by considerate for each criteria aspect or perspective.

Table 5.5 AHP questionnaire result and geometric mean value

Respondent	Part A - Criteria Comparison						Part B - Strategy Alt. Comparison (Operational Aspect)					
	C1 vs C2	C1 vs C3	C1 vs C4	C2 vs C3	C2 vs C4	C3 vs C4	A1 vs A2	A1 vs A3	A1 vs A4	A2 vs A3	A2 vs A4	A3 vs A4
Owner	5,00	0,33	0,20	0,20	0,33	5,00	7,00	0,20	1,00	0,20	0,33	9,00
Store Manager	3,00	0,33	5,00	0,20	0,20	3,00	3,00	0,33	1,00	0,20	0,14	0,11
Employee 1	5,00	0,20	3,00	0,14	3,00	0,14	5,00	7,00	3,00	3,00	0,20	0,14
Employee 2	5,00	0,20	0,20	0,17	0,17	1,00	2,00	1,00	0,20	0,25	0,17	0,50
Helper	0,20	0,25	0,33	1,00	0,33	1,00	1,00	0,33	0,33	3,00	1,00	0,33
GM	2,371	0,257	0,725	0,249	0,407	1,165	2,914	0,689	0,725	0,618	0,276	0,474

Table 5.5 AHP questionnaire result and geometric mean value (cont.)

	Part C - Strategy Alt. Comparison (Marketing Aspect)						Part D - Strategy Alt. Comparison (Service Aspect)					
Respondent	A1 vs A2	A1 vs A3	A1 vs A4	A2 vs A3	A2 vs A4	A3 vs A4	A1 vs A2	A1 vs A3	A1 vs A4	A2 vs A3	A2 vs A4	A3 vs A4
Owner	5,00	0,33	1,00	3,00	0,33	1,00	7,00	0,20	3,00	1,00	1,00	5,00
Store Manager	0,20	3,00	0,14	5,00	0,11	0,33	5,00	3,00	1,00	7,00	0,14	0,20
Employee 1	0,14	3,00	0,33	9,00	5,00	3,00	5,00	5,00	0,14	3,00	0,14	0,33
Employee 2	0,33	0,20	0,17	1,00	0,50	0,25	5,00	2,00	6,00	0,20	0,14	0,33
Helper	0,14	3,00	0,33	7,00	5,00	0,20	3,00	1,00	0,33	1,00	0,33	0,33
GM	0,369	1,125	0,305	3,936	0,857	0,549	4,829	1,431	0,970	1,332	0,250	0,517

Table 5.5 AHP questionnaire result and geometric mean value (cont.)

	Part E - Strategy Alt. Comparison (Development Aspect)					
Respondent	A1 vs A2	A1 vs A3	A1 vs A4	A2 vs A3	A2 vs A4	A3 vs A4
Owner	7,00	7,00	0,20	1,00	3,00	5,00
Store Manager	7,00	0,33	3,00	0,20	0,14	0,33
Employee 1	7,00	3,00	3,00	0,20	3,00	5,00
Employee 2	5,00	3,00	0,20	0,25	0,14	1,00
Helper	3,00	1,00	3,00	1,00	0,33	0,33
GM	5,524	1,838	1,016	0,398	0,572	1,227

Here is the example resolve of A1 compare to A2 on Part E,

$$\begin{aligned}
 GM &= (\chi_{\text{owner}} \times \chi_{\text{store manager}} \times \chi_{\text{employee 1}} \times \chi_{\text{employee 2}} \times \chi_{\text{helper}})^{\frac{1}{5}} \\
 &= (7 \times 7 \times 7 \times 5 \times 3)^{\frac{1}{5}} \\
 &= (7 \times 7 \times 7 \times 5 \times 3)^{\frac{1}{5}} \\
 &= (5.145)^{\frac{1}{5}} \\
 &= 5,52429...
 \end{aligned}$$

After calculate all geometric value for each question, all of the value will be display on comparison matrix by each of the questionnaire part.

5.5.2. Pairwise Comparison Matrix of Criteria

Based on the geometric mean calculations, the pairwise comparison matrix of criteria is shown in **Table 5.6**. The opposite score of each comparison will be multiplicative inverse. So, there still have the same meaning of importance if the comparison aspect switched.

Table 5.6 Pairwise comparison matrix of criteria

Criteria Matrix				
A	C1	C2	C3	C4
C1	1	2,371	0,257	0,725
C2	0,422	1	0,249	0,407
C3	3,898	4,020	1	1,165
C4	1,380	2,460	0,859	1
Operational Matrix				
B	A1	A2	A3	A4
A1	1	2,914	0,689	0,725
A2	0,343	1	0,62	0,28
A3	1,451	1,619	1	0,474
A4	1,380	3,630	2,112	1
Marketing Matrix				
C	A1	A2	A3	A4
A1	1	0,369	1,125	0,305
A2	2,713	1	3,936	0,857
A3	0,889	0,2540	1	0,549
A4	3,277	1,167	1,821	1
Service Matrix				
D	A1	A2	A3	A4
A1	1	4,829	1,431	0,970
A2	0,207	1	1,332	0,250
A3	0,699	0,750	1	0,517
A4	1,031	4,004	1,933	1
Product & Service Development Matrix				
E	A1	A2	A3	A4
A1	1	5,524	1,838	1,016
A2	0,181	1	0,398	0,572
A3	0,544	2,512	1	1,227
A4	0,985	1,748	0,815	1

Table 5.6 shown how the hierarchy structure creates five different matrices. These matrices are the actual response of the respondent to assess Toko Hazila. But this value still not normalize and do not have their weight score yet. To ranking these criteria and strategies, each aspect must have weight score to tell how much they can affect the decision.

5.5.3. Matrix Normalization

The normalization process was conducted to transform the pairwise comparison matrix into proportional values. The normalization formula is:

$$N_{ij} = a_{ij} / \sum a_j$$

where:

N_{ij} = normalized value

a_{ij} = original matrix value

$\sum a_j$ = column total

Here is the resolve for C1:

$$\begin{aligned} N_{11} &= 1 / (1 + 0,422 + 3,898 + 1,380) \\ &= 1 / 6.700 \\ &= 1,1493 \end{aligned}$$

After resolve all the matrix element, here is the new normalization matrix for AHP analysis of Toko Hazila shown in **Table 5.7**.

Table 5.7 Normalization matrix of criteria

Criteria Matrix				
	C1	C2	C3	C4
C1	0,149	0,241	0,109	0,220
C2	0,063	0,102	0,105	0,123
C3	0,582	0,408	0,423	0,353
C4	0,206	0,250	0,363	0,303
Operational Matrix				
	A1	A2	A3	A4
A1	0,240	0,318	0,156	0,293
A2	0,082	0,109	0,140	0,111
A3	0,348	0,177	0,226	0,191
A4	0,331	0,396	0,478	0,404
Marketing Matrix				
	A1	A2	A3	A4
A1	0,127	0,132	0,143	0,113
A2	0,344	0,359	0,499	0,316
A3	0,113	0,091	0,127	0,203
A4	0,416	0,418	0,231	0,369
Service Matrix				
	A1	A2	A3	A4
A1	0,340	0,456	0,251	0,354
A2	0,071	0,094	0,234	0,091
A3	0,238	0,071	0,176	0,189
A4	0,351	0,378	0,339	0,365
Product & Service Development Matrix				
	A1	A2	A3	A4
A1	0,369	0,512	0,454	0,266
A2	0,067	0,093	0,098	0,150
A3	0,201	0,233	0,247	0,322
A4	0,363	0,162	0,201	0,262

Table 5.7 shown the proportional value of each element in matrix. Since all element have been normalized, that value can be executed to get their priority vector.

5.5.4. Priority Vector Calculation

Priority vector obtains by the average of normalized values in each row. This value also known as the criteria priority weight. That means each criterion can be sort from the highest priority to the lowest. Here is the formula of priority vector or weight score of each criterion.

$$PV_i = \Sigma N_{ij} / n$$

Where:

ΣN_{ij} = total row from i-criteria

n = numbers of criteria

So, the calculation for C1 will be,

$$\begin{aligned} PV_{C1} &= (N_{11} + N_{12} + N_{13} + N_{14}) / n \\ &= (0,149 + 0,241 + 0,109 + 0,220) / 4 \\ &= 0,719 \\ &= 0,1796 \end{aligned}$$

This formula can be used on alternative strategies matrix to define their weight value as well. After resolve all these criteria priority vector. On **Table 5.8** shown the sort of criteria priority from the highest to the lowest.

Table 5.8 Priorities or weight value of criteria aspects

Code	Criteria	Weight
C3	Service Aspect	0,4416
C4	Product & Service Development Aspect	0,2806
C1	Operational Aspect	0,1796
C2	Marketing Aspect	0,0983
Total		1

Table 5.8 shown the priority vector of each criterion of Toko Hazila have. These results indicate that the Service Aspect has the highest priority among all criteria. So that, Toko Hazila probably prefer use the service aspect strategy to

develop their business further. Then, **Table 5.9** shown the weight value for each alternative strategy on each matrix.

Table 5.9 Priorities or weight value of alternative strategy

	Operational	Marketing	Service	Development
Code	Weight			
A1	0,2516	0,1286	0,3506	0,4003
A2	0,1106	0,3796	0,1225	0,1019
A3	0,2355	0,1333	0,1683	0,2505
A4	0,4022	0,3585	0,3586	0,2472
Total	1	1	1	1

5.5.5. Consistency Test

Consistency test was conducted to ensure that the pairwise comparison judgments were logically consistent. Before get the consistency vector, each matrix needs to define their weighted sum vector (AW). The AW can be calculated by added all the multiplication element original matrix value and they weight vector matrix. The example of the multiplication on C1 is:

Known:

$$C1 = [1 \quad 2,371 \quad 0,257 \quad 0,725]$$

$$W_C = [0,1796 \quad 0,983 \quad 0,4416 \quad 0,2806]$$

So, AW on C1 should be:

$$\begin{aligned} AW_{C1} &= (1 \times 0,1796) + (2,371 \times 0,0983) + (0,257 \times 0,4416) + (0,725 \times 0,2806) \\ &= 0,729 \end{aligned}$$

After resolve all the AW for each matrix element, all of the AW value shown on **Table 5.10**

Table 5.10 Weighted sum vector for each matrix

Criteria		Operational		Marketing		Service		Development	
C1	0,7292	A1	1,0278	A1	0,5279	A1	1,5308	A1	1,6751
C2	0,3979	A2	0,4533	A2	1,5606	A2	0,5090	A2	0,4155
C3	1,8635	A3	0,9701	A3	0,5410	A3	0,6908	A3	1,0276
C4	1,1492	A4	1,6483	A4	1,4654	A4	1,5362	A4	1,0239

for the maximum value of eigen ($\lambda_{\max}$) is used to calculate the Consistency Index (CI). The formula to get the $\lambda_{\max}$ is:

$$\lambda_{\max} = \frac{\sum \frac{AW}{PV}}{n}$$

Example of resolve is using the criteria matrix:

$$\begin{aligned}\lambda_{\max} &= \frac{\sum \frac{AW}{PV}}{n} \\ &= \frac{\frac{0,7292}{0,1796} + \frac{0,3979}{0,0983} + \frac{1,8635}{0,4416} + \frac{1,1492}{0,2806}}{4} \\ &= \frac{4,060 + 4,052 + 4,226 + 4,098}{4} \\ &= 4,1065\end{aligned}$$

Also, the CI have the equation:

$$CI = \frac{\lambda_{\max} - n}{n - 1}$$

Example of resolve using the same criteria matrix:

$$\begin{aligned}CI &= \frac{4,1065 - 4}{4 - 1} \\ &= 0,0355\end{aligned}$$

Next, the Consistency Ratio (CR) is calculated by the equation:

$$CR = \frac{CI}{RI}$$

Example of resolve the CR using the same criteria is:

Known:

$$RI (n=4) = 0,90$$

$$\begin{aligned}CR &= \frac{0,355}{0,90} \\ &= 0,0394\end{aligned}$$

with:

n = number of elements compared

RI = Random Index (reference value of the Saaty table)

The assessment is considered consistent when the CR value ≤ 0.10 . According to all CR result by five matrices shown on **Table 5.11**, all these matrices considerate consistent.

Table 5.11 CR value of each matrix

Matrix	CR
Criteria	0,0394
Operational	0,0370
Marketing	0,0335
Service	0,0841
Development	0,0467

5.6. Determination of Priority Strategy

Based on the results of the AHP analysis, the strategic alternatives were ranked according to their final priority values. The strategy with the highest priority value is considered the most appropriate business development strategy for Toko Hazila. The formula to get the priority value of alternative strategy is:

$$P = \sum (PV_A \times PV_C)$$

Resolve to get the A1 priority could be:

$$\begin{aligned} P_{A1} &= (0,252 \times 0,1796) + (0,129 \times 0,0983) + (0,351 \times 0,4416) + (0,400 \times 0,2806) \\ &= 0,3249 \end{aligned}$$

After completely find each of alternative strategy priority, then the final ranking of business development strategy for Toko Hazila be sort on **Table 5.12**.

Table 5.12 Final strategy ranking

Rank	Alternative	Priority
1	A4 – Strengthen customer loyalty through superior service	0.3352
2	A1 – Introduce laminating and thesis binding services	0.3249
3	A3 – Improve operational management using digital tools	0.2000
4	A2 – Improve social media promotion and business visibility	0.1399

The analytical hierarchy process framework translates stakeholder judgments into a prescriptive operational roadmap, establishing a priority sequence that places

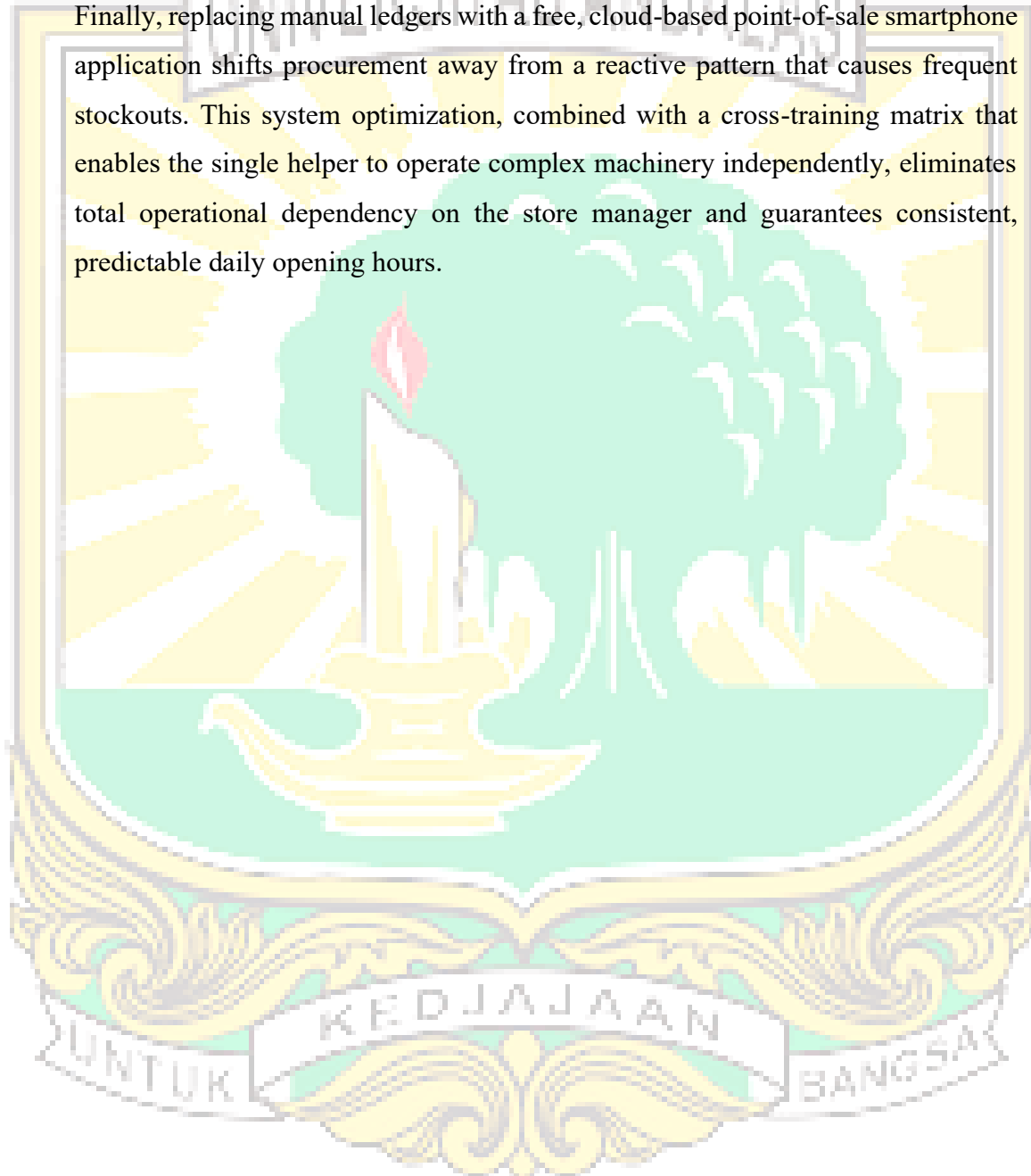
Alternative 4 (A4) as the primary developmental path, followed sequentially by Alternative 1 (A1), Alternative 3 (A3), and Alternative 2 (A2). This ranking directly addresses the critical operational urgencies identified during Toko Hazila's initial five-month cycle in Batu Aji, Batam, creating a streamlined implementation flow anchored entirely to field data.

A4 which focuses on establishing WhatsApp-Based Pre-Ordering Services and Micro-Institutional Business-to-Business Contracts, captures the highest priority by directly resolving the severe peak-hour bottlenecks recorded in the daily transaction logs. Field observations during late-afternoon periods documented intense customer friction around the single printing station, causing direct revenue loss as time-sensitive consumers left the store to find less congested venues. Implementing a digital pre-ordering queue allows remote file submission, which enables the manager to distribute document processing workloads evenly during low-traffic morning hours and optimizes equipment utilization. Concurrently, securing recurring stationery supply contracts with primary schools within the surrounding residential perimeter provides a stable financial baseline that insulates the new micro-enterprise against seasonal demand volatility.

A1 involving the launch of value-added document services such as laminating and thesis binding, ranks second as a vital strategy to counter aggressive price undercutting from surrounding grocery stores and minimarkets. Because neighborhood market scans confirmed that Toko Hazila faces severe margin pressures on standard retail stationery due to competitor bulk purchasing power, shifting the commercial focus toward specialized technical services utilizes a prominent local service gap. Field interviews confirmed that local students and remote workers currently travel outside the residential complex to access heavy document finishing. Acquiring thermal laminating and manual comb-binding devices allows the business to capture this captive local market, generating high profit margins that effectively subsidize the low-margin retail division.

A3 and A2 serve as essential secondary support mechanisms that resolve

long-term structural and environmental constraints. Direct spatial mapping revealed that Toko Hazila suffers from deficient exposure due to its positioning inside a secondary commercial block away from the main road corridor, a weakness remediated by installing high-contrast directional physical signage at key Kibing traffic intersections and optimizing a verified Google Maps Business Profile. Finally, replacing manual ledgers with a free, cloud-based point-of-sale smartphone application shifts procurement away from a reactive pattern that causes frequent stockouts. This system optimization, combined with a cross-training matrix that enables the single helper to operate complex machinery independently, eliminates total operational dependency on the store manager and guarantees consistent, predictable daily opening hours.



CHAPTER VI

CONCLUSIONS AND RECOMMENDATIONS

This final chapter outlines the core conclusions derived from the research data and provides actionable recommendations. The insights presented here directly satisfy the research objectives formulated at the beginning of this study and offer a practical operational path for the enterprise.

6.1. Conclusion

Based on the application of the SWOT-AHP methodology at Toko Hazila, the following conclusions can be drawn:

1. The internal and external strategic factors affecting Toko Hazila were successfully identified through SWOT analysis. The internal factors consist of strengths and weaknesses related to operational activities, service quality, product offerings, promotion, and management systems. The external factors consist of opportunities and threats originating from market conditions, customer demand, technological developments, competition, and economic conditions.
2. The synthesis of environmental factors generated 4 distinct strategic alternatives designed to stabilize daily workflows, enhance market exposure, and diversify revenue streams.
3. The analytical hierarchy process successfully eliminated subjective bias from the strategic evaluation, achieving a mathematically valid consistency ratio (CR) value is well below the maximum threshold ($CR < 0.1$).
4. The final global synthesis determines that A4, which establishes WhatsApp-Based Pre-Ordering Services and Micro-Institutional Business-to-Business Contracts, is the absolute priority path with a dominant global weight of 0.3352. A1, involving Launching Value-Added Document Services including Laminating, Thesis Binding, and Heavy-Duty Finishing, ranks second with a weight of 0.3249. A2, focused on physical and digital marketing, ranks third

with weight of 0.2000. Finally, A3, regarding a digital inventory and multi-skilled workforce schedule, represents a long-term secondary refinement with the lowest global weight of 0.1399.

6.2. Recommendations

The following actionable steps are recommended based on the prioritized strategic roadmap:

1. For the Management of Toko Hazila: Immediately launch the WhatsApp Business pre-ordering channel to eliminate late-afternoon customer printing bottlenecks and distribute workloads to low-traffic morning hours. Concurrently, allocate initial capital reserves to acquire thermal laminating and manual comb-binding machinery to capture high-margin student demand and insulate the business against stationery price competition from surrounding minimarkets. Low-cost directional street signage should also be deployed to counter the visibility limitations of the secondary commercial block.
2. For Future Research: Extend this study by implementing discrete event simulation modeling to precisely quantify the reduction in customer queue waiting times achieved by the digital pre-ordering system. Furthermore, researchers can extend the multi-criteria decision model by incorporating financial budgeting constraints directly into the hierarchy to optimize resource allocation as the enterprise matures. Toko Hazila should prioritize the implementation of strengthening customer loyalty through superior service which obtained from the AHP analysis to maximize business development effectiveness.

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