Jurnal Samudra Ekonomi & Bisnis
Volume 17, Nomor 2, Mei 2026
P-ISSN 2089-1989
E-ISSN 2614-1523
Terakreditasi (SK No. 225/E/KPT/2022)

Marketing Analysis of Gasketed Plate Heat Exchangers using the SWOT Method and Analytic Network Process

Analisis Pemasaran Gasketed Plate Heat Exchangers *menggunakan Metode SWOT dan* Analytic Network Process

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Article Info

Article History :
Received: 02 July 2025
Accepted: 12 February 2026
Published: May 2026

DOI Number :
10.33059/jseb.v17i2.12423

How to Cite :
Maulana, D., Fatimah, I., Rachman, F., Akseptori, R., & Devi, Y. N. (2026). Marketing analysis of gasketed plate heat exchangers using the SWOT method and analytic network process. *Jurnal Samudra Ekonomi dan Bisnis*, *17*(2), 342-356. DOI: 10.33059/jseb.v17i2.12423.

Abstract

The research evaluates the marketing strategy for gasketed plate heat exchangers at PT. XYZ, a mechanical and electrical engineering service firm in Surabaya. A SWOT analysis maps strengths, weaknesses, opportunities, and threats, while the Analytic Network Process ranks interrelated marketing elements. Score place the company in Quadrant I of the grand strategy matrix, indicating an aggressive growth posture. Promotion receives the highest weight, followed by product, price, and distribution. Leading sub-criteria are informational advertising, discounts, and sales promotions. The findings show that information-centric promotion is the most effective lever for expanding market coverage and boosting PT. XYZ's sales performance.

Keywords: Analytic Network Process, Gasketed Plate Heat Exchanger, Marketing Strategy, Promotion, SWOT.

Info Artikel

Riwayat Artikel :
Diterima: 02 Juli 2025
Disetujui: 12 Februari 2026
Dipublikasikan: Mei 2026

Nomor DOI :
10.33059/jseb.v17i2.12423

Cara Mensitasi :
Maulana, D., Fatimah, I., Rachman, F., Akseptori, R., & Devi, Y. N. (2026). Marketing analysis of gasketed plate heat exchangers using the SWOT method and analytic network process. *Jurnal Samudra Ekonomi dan Bisnis*, *17*(2), 342-356. DOI: 10.33059/jseb.v17i2.12423.

Abstrak

Penelitian ini mengkaji strategi pemasaran gasketed plate heat exchanger *di PT. XYZ, perusahaan jasa teknik mekanikal dan elektrikal di Surabaya. Analisis SWOT memetakan kekuatan, kelemahan, peluang, dan ancaman, sedangkan metode* analytic network process *menimbang prioritas unsur pemasaran yang saling terkait. Skor menempatkan perusahaan pada Kuadran I dari* grand strategy matrix, *menandakan posisi pertumbuhan agresif. Promosi memperoleh bobot tertinggi, diikuti produk, harga, dan distribusi. Sub-kriteria utama mencakup iklan informatif, diskon, dan promosi penjualan. Hasil ini menegaskan bahwa peningkatan kinerja penjualan PT. XYZ secara signifikan paling efektif dicapai melalui strategi promosi berbasis informasi yang memperluas jangkauan pasar.*

Kata kunci: *Analytic Network Process, Gasketed Plate Heat Exchanger, Strategi Pemasaran, Promosi, SWOT.*

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P-ISSN 2089-1989
E-ISSN 2614-1523
Terakreditasi (SK No. 225/E/KPT/2022)

INTRODUCTION

The growing global demand for energy-efficient solutions has significantly accelerated the development of the plate heat exchanger (PHE) market, particularly within industrial and infrastructure sectors. In Indonesia, this market is projected to grow at a compound annual growth rate (CAGR) of approximately 10.2 percent between 2024 and 2030, with an estimated market value reaching USD 973.8 million by 2030 (Maulana *et al*., 2025). This rapid expansion offers substantial opportunities while simultaneously intensifying competitive pressures. PT. XYZ, a company specializing in mechanical and electrical (M&E) engineering services, was recently appointed as an authorized distributor of a leading international PHE brand. Although this strategic position should enable the firm to capitalize on growing demand, PT. XYZ failed to achieve its quarterly sales targets, indicating a structural gap between market potential and actual performance. This gap suggests that the core challenge lies not in product quality or market availability, but in the effectiveness and prioritization of the firm's marketing strategy.

Most existing studies on industrial equipment marketing — particularly in energy and engineering contexts — tend to rely on descriptive SWOT analysis or isolated evaluations of marketing mix elements. While these approaches are useful for strategic diagnosis, they are limited in translating qualitative insights into actionable and prioritized decisions, especially for complex B2B products such as plate heat exchangers. To address this limitation, the present study introduces an integrative decision-making framework that combines SWOT analysis with the analytic network process (ANP) to systematically prioritize marketing strategies for industrial heat exchanger products. SWOT analysis is employed to map internal strengths and weaknesses — such as technological efficiency, energy performance, product reliability, and marketing capability — alongside external opportunities and threats arising from competition, substitute technologies, regulatory dynamics, and B2B customer characteristics (Larasati & Nugroho, 2023).

The principal novelty of this research lies in the integration of SWOT with ANP, which explicitly accommodates interdependencies and feedback relationships among marketing mix elements, including product, price, place, and promotion (Alfiah *et al*., 2023). Unlike conventional hierarchical models, ANP enables a more realistic representation of industrial marketing decision-making, where strategic elements are interrelated rather than independent. This study contributes to the literature in three ways: by extending the SWOT–ANP framework to energy-efficient industrial equipment marketing, by operationalizing marketing mix prioritization through interrelated strategic modeling, and by linking strategic positioning via the grand strategy matrix to actionable marketing priorities. Through this integrated approach, the study offers a structured and replicable methodology for enhancing competitiveness and market effectiveness of plate heat exchanger products in industrial B2B applications.

LITERATURE REVIEW

Gasketed plate heat exchanger (GPHE) is an industrial product with high economic value and significant productivity impact, particularly in sectors that require energy efficiency, operational reliability, and cost optimization. As a technically complex product, GPHE marketing must emphasize value creation by clearly communicating efficiency gains, durability, and long-term operational benefits rather than relying on transactional sales approaches. Prior studies indicate that marketing strategies for productivity-driven industrial products should focus on conveying economic value and performance contributions to user operations (Adhawati, 2023). From an entrepreneurial

P-ISSN 2089-1989
E-ISSN 2614-1523
Terakreditasi (SK No. 225/E/KPT/2022)

and vocational business perspective, such products are more effectively positioned as solution-oriented offerings that integrate technical superiority with customer value perception and business sustainability (Maulana, 2024).

In this context, SWOT analysis serves as a strategic selection tool that links product characteristics with internal capabilities and external market conditions to guide marketing strategy formulation. SWOT enables firms to systematically assess internal strengths and weaknesses alongside external opportunities and threats, thereby supporting structured and rational strategic decision-making in competitive environments. Empirical research demonstrates that SWOT analysis is particularly effective in productivity-oriented and entrepreneurial contexts when used to align internal strengths with external opportunities (Nurhayati, 2024). Moreover, when SWOT analysis is applied as a foundation for value-oriented marketing strategies, it enhances strategic focus, reduces decision uncertainty, and improves the effectiveness of marketing initiatives for complex industrial products (Adhawati, 2023; Maulana *et al*., 2025).

Marketing constitutes a pivotal management function, transcending mere transactional sales to strategically encompass the comprehension and gratification of consumer needs and desires through the creation, communication, and delivery of value. This multifaceted process is systematically delineated by the seminal "4 Ps" framework of the marketing mix, as articulated by Kotler *et al*. (2022), which covers price (including list price, discounts, allowances, payment intervals, and credit terms), product (including variety, quality, style, features, brand, packaging, size, services, warranties, and returns), place (covering channels, coverage, assortments, locations, inventory, and transportation), and promotion (covering public relations, sales promotion, advertising, sales force, and direct marketing). Collectively, these integrated components are instrumental in fostering robust, long-term customer relationships and optimizing a firm's market potential.

High-efficiency devices called plate heat exchangers (PHEs) are made to transfer heat between fluids of varying temperatures (Figure 1). They feature a series of plates within a frame, creating distinct hot and cold fluid paths that facilitate thermal exchange (SaVRee, 2019). Gaskets seal these plates, preventing leakage and enabling easy disassembly for maintenance, which reduces operational costs. The design of gasketed PHEs (GPHEs) is particularly well-suited for applications requiring frequent mechanical cleaning, such as in food processing (Lee, 2022). However, the use of gaskets inherently limits their operational temperature and pressure ranges.



Figure 1. Gasketed Plate Heat Exchanger
Source: T6-Alfa Laval (2026).

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E-ISSN 2614-1523
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Table 1. IFE/EFE Matrix

Key Internal/ External Factors	Weight	Rating	Weighted Score
1.			
2.			
3.			
Total	1.00		

Source: Larasati & Nugroho, 2023.

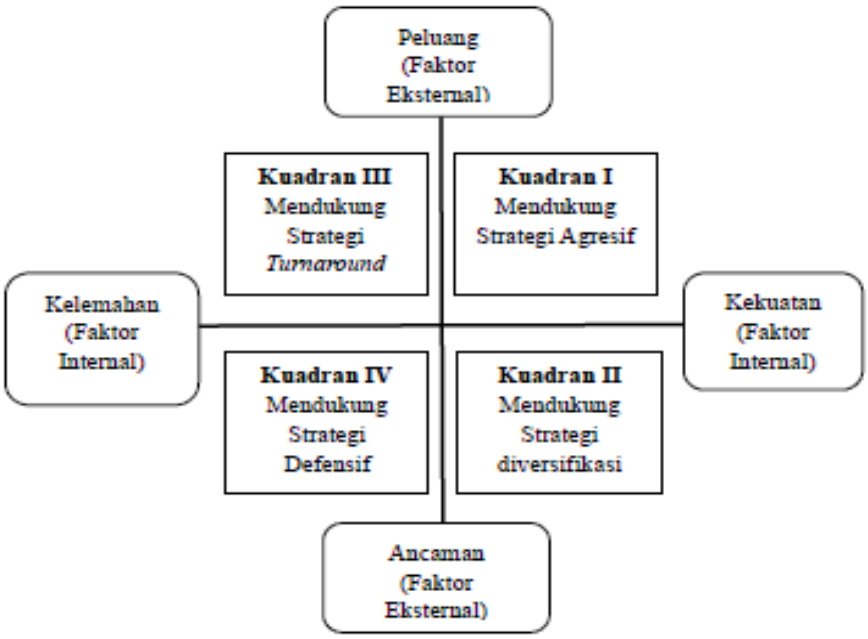


Figure 2. Grand Strategy Matrix
Source: Fadli & Yusnita, 2022.

The external factor evaluation (EFE) and internal factor evaluation (IFE) matrices are two important analytical techniques that are frequently used to determine a firm's market position and develop strategic direction (Table 1). While the IFE matrix analyzes a company's internal strengths and weaknesses, the EFE matrix finds and evaluates external opportunities and threats (Larasati & Nugroho, 2023). The IFE matrix involves five steps identifying internal factors, assigning weights (0.0 - 1.0) based on importance (summing to 1.0), rating each factor (1 - 4) based on the organization's condition, calculating weighted scores, and summing these for a total weighted score (Setyadi *et al*., 2023).

A strategic planning tool called a SWOT analysis is used to assess an organization's external opportunities and threats as well as its internal strengths and weaknesses (Ahmad, 2020). Strengths are advantageous internal capabilities, while weaknesses are internal limitations. Following SWOT, the grand strategy matrix helps determine strategic direction by mapping the firm's competitive position against industry market growth (Figure 2). It comprises four quadrants (Fadli & Yusnita, 2022). The grand strategy matrix serves as an analytical tool to interpret a firm’s strategic position by integrating internal strength and external market conditions, thereby providing clear guidance for marketing direction and strategic decision-making. Organizations positioned in Quadrant I demonstrate strong internal capabilities and face abundant external opportunities, enabling them to pursue aggressive growth strategies through market expansion, product differentiation, and proactive

P-ISSN 2089-1989
E-ISSN 2614-1523
Terakreditasi (SK No. 225/E/KPT/2022)

promotional activities. Quadrant II reflects firms with strong internal positions but significant external threats, where diversification becomes a strategic response to reduce dependency on a single market or product by exploring new segments, applications, or complementary offerings.

In contrast, Quadrant III represents firms that encounter favorable market opportunities but lack sufficient internal strength, requiring turnaround strategies focused on improving internal capabilities, refining marketing processes, and strengthening product–market alignment before fully exploiting external opportunities. Quadrant IV characterizes firms with weak internal positions operating in hostile external environments, necessitating defensive strategies that emphasize market retention, cost efficiency, risk minimization, and selective marketing efforts. Within the context of this article, the grand strategy matrix functions as a conceptual bridge between SWOT-based strategic positioning and marketing strategy formulation, clarifying how different strategic postures shape appropriate marketing responses for the analyzed product and guiding the overall strategic direction of the study.

Analytical network process (ANP) is essential in this study because it strengthens SWOT analysis by transforming qualitative strategic factors into measurable priority decisions while explicitly considering interdependencies among internal and external elements. Although SWOT analysis is effective in identifying strengths, weaknesses, opportunities, and threats, it does not provide a structured mechanism for prioritizing strategic alternatives. ANP addresses this limitation by enabling feedback relationships and pairwise comparisons among SWOT-derived factors and strategy options, making it suitable for complex strategic and marketing decisions (Purnomo *et al*., 2020; Fadli & Yusnita, 2022). In this study, the ANP stages include problem structuring into a SWOT-based network, expert judgment through pairwise comparisons, supermatrix construction, and priority synthesis, ensuring analytically justified strategic outcomes. This integrated SWOT – ANP approach is consistent with empirical findings that demonstrate its effectiveness in improving strategic focus and decision quality in business and MSME contexts (Nurhayati, 2024).

METHOD

This study used a quantitative descriptive research approach, which uses numerical data to systematically describe phenomena or population traits, and emphasizes objective measurement and statistical data analysis from the field (Sahir, 2021; Abdullah *et al*., 2022). Descriptive research aims to accurately portray facts, characteristics, and relationships among variables without manipulating the research object. The core objective of this investigation was to analyze and formulate pertinent marketing strategies for gasketed plate heat exchanger (PHE) products distributed by PT. XYZ (Figure 3). As an official distributor, the company is responsible for the marketing, sales, spare parts provision, and after-sales service of these industrial components.

Because this study uses a comprehensive sampling technique, the sample consists of every member of the population. The population includes nine businesses that have purchased PHE (Plug-in Heat Exchanger) units with gaskets from PT. XYZ and are familiar with competing brands. Marketing mix modeling produces the following research variables, namely place, price, promotion, and product. As indicated in Table 2, each variable was divided into quantifiable indicators. In order to assess each indicator's performance or significance, respondents were given a four-point Likert scale, with 1 denoting "weak" and 4 denoting "very strong" (Maulana, 2024).

The study utilized both primary and secondary data sources. Primary data were collected through structured questionnaires distributed to the nine companies and interviews with seven internal experts from PT. XYZ, including the sales & marketing manager, business unit manager, technical

P-ISSN 2089-1989
E-ISSN 2614-1523
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advisor, and sales engineers. To identify important strengths, weaknesses, opportunities, and threats, secondary data were gathered from firm paperwork, including product catalogs, internal reports, marketing brochures, and organizational profiles.

Data analysis followed a structured, two-stage approach. The first stage is a SWOT analysis. which aims to determine the external (opportunities and threats) and internal (strengths and weaknesses) aspects relevant to PT. XYZ as a distributor of PHE products. To create the internal factor evaluation (IFE) and external factor evaluation (EFE) matrices, each factor is assigned a score and weight. The grand strategy matrix is then created using these matrices to determine the company's current strategic position (Larasati & Nugroho, 2023).

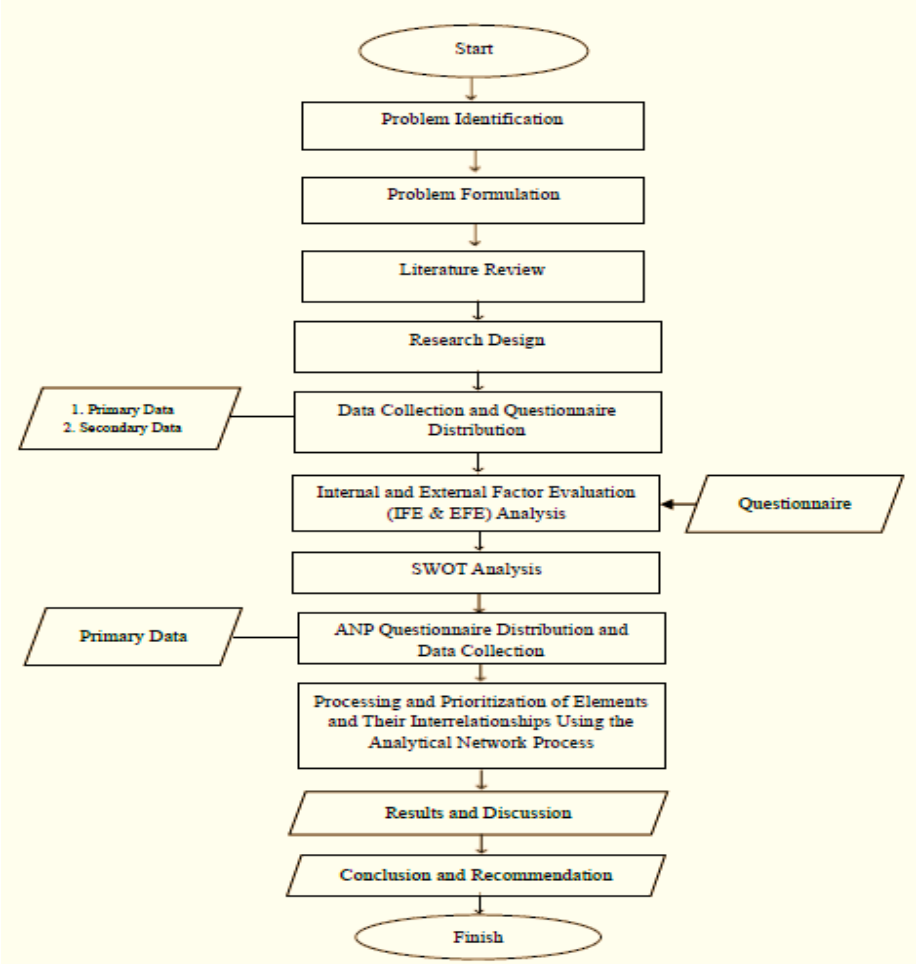


Figure 3. Research Flow
Source: Authors (processed), 2025.

Table 2. Variables and Indicators

Variable	Indicators
Product	Product variety, quality, design, features, brand image, packaging, sizing, after-sales services, warranty, return policy
Price	Price competitiveness, discount schemes, financing options, payment terms, credit policies
Promotion	Sales promotions, advertising, personal selling, public relations, direct marketing
Place	Distribution channels, product availability, logistics efficiency, accessibility, delivery time

Source: Adapted from Maulana, 2024.

P-ISSN 2089-1989
E-ISSN 2614-1523
Terakreditasi (SK No. 225/E/KPT/2022)

Table 3. Scale Pairwise Comparison Judgments

Intensity of Importance	Definition	Explanation
1	Equally Important	Both elements contribute equally to the objective.
3	Slightly More Important	One element is slightly more important than another.
5	More Important	One element is more important (dominates) than another.
7	Much More Important	One element is clearly and absolutely more important than another.
9	Absolutely More Important	One element is absolutely important compared to another.
2,4,6,8	Intermediate Values	Used for compromise between the above-mentioned fundamental judgments.

Source: Adapted from Alfiah *et al*., 2023.

In the second stage, strategic elements were prioritized using ANP. Data for this process was collected through a paired comparison questionnaire distributed to nine of the company's customers to gauge their perceptions of marketing importance. These responses were then processed using Super Decisions version 3.2 ANP software to assign priority rankings to each strategic element. This approach allows ANP to consider the complex interdependencies among various criteria and sub-criteria, ultimately highlighting the most critical factors in a marketing strategy that can effectively improve a company's sales performance (Fadli & Yusnita, 2022). The evaluation used a 1-9 scale for pairwise comparisons (Table 3).

RESULTS

An essential analytical tool for determining an organization's internal strengths and shortcomings is the internal factor evaluation (IFE) matrix. As a key component of strategic planning, it offers an organized way to assess an organization's internal capabilities. The IFE Matrix results for PT. XYZ are shown in Table 4.

On the other hand, an important analytical tool used to identify and evaluate important external factors — opportunities and threats — that influence an organization's competitive environment is the external factor evaluation (EFE) matrix. This tool aids strategists in assessing how well a business's present tactics take advantage of opportunities and counteract risks (Larasati & Nugroho, 2023). The external factor evaluation (IFE) matrix results for PT. XYZ are shown in Table 5.

The grand strategy matrix is a crucial analytical tool for outlining a company's overall strategy stance, which comes after the thorough assessment provided by the IFE and EFE matrices (Larasati & Nugroho, 2023). Critical information relevant to strategic direction and decision-making is obtained by methodically integrating the combined total weighted scores from the IFE (representing internal strategic position) and EFE (representing external strategic position) into plotting coordinates. As visually represented in Figure 2, the X-axis of the Grand Strategy Matrix corresponds to the internal and external strategic position. Based on its empirically calculated total weighted IFE score of 1,79 and the total weighted EFE score of 1,94, The plotting of these coordinates (1,79;1,94) onto the Grand Strategy Matrix, as illustrated in Figure 4, unequivocally positions the company within Quadrant I.

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E-ISSN 2614-1523
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Table 4. Internal Factor Evaluation (IFE) Matrix

No.	Key Internal Factor	Weight	Average Score	Weighted Score
	Strengths			
1	Varied Plate Heat Exchanger Products	0.048	3	0.16
2	Durable Product Quality	0.050	4	0.18
3	Efficient Design for Heat Exchange	0.052	3	0.15
4	Highly Supportive Features	0.047	3	0.15
5	Product Brand Name with Good Reputation	0.054	3	0.19
6	Safe and Undamaged Packaging during Shipping	0.048	3	0.13
7	Product Size in Accordance with Needs	0.043	3	0.14
8	Satisfying After-Sales Service	0.039	3	0.11
9	Adequate Warranty Provided by the Company	0.031	3	0.11
10	Flexible Payment Periods for PHE Purchase	0.047	3	0.13
11	Friendly and Helpful Sales Force	0.052	3	0.18
12	Good Company Image in the Community	0.052	3	0.16
13	Attractive Direct Marketing	0.043	3	0.12
14	Easily Accessible Plate Heat Exchanger Distribution Channels	0.037	3	0.10
15	Product Variety Meeting Market Needs	0.048	3	0.16
16	Easily Accessible Locations for Consumers	0.054	2	0.13
	Sub Total	0.746		2.30
	Weaknesses			
1	Lengthy Product Return Procedures	0.021	2	0.04
2	Less Competitive Price List	0.031	2	0.06
3	Lack of Discounts Offered	0.029	2	0.05
4	No Financial Purchase Allowances	0.019	1	0.02
5	No Credit System Provided	0.021	2	0.03
6	Less Attractive Sales Promotion	0.025	2	0.06
7	Lack of Advertising	0.019	2	0.03
8	Limited Sales Coverage	0.031	2	0.07
9	No Plate Heat Exchanger Stock Provided	0.033	3	0.10
10	Unpredictable Arrival of Goods	0.023	2	0.05
	Sub Total	0.254		0.51
	Grand Total	1.000		1.79

Source: Primary data (processed), 2025.

The analytical network process (ANP) serves as an effective decision-making tool for determining the relative importance and priorities of interdependent elements within the marketing mix (Fadli & Yusnita, 2022). To achieve this, the following section outlines the specific criteria and sub-criteria utilized in this analysis (Table 6). Figure 5 shows the network among criteria and sub-criteria elements derived from the ANP results utilizing Super Decisions software ver. 3.2 and questionnaires given to nine responding client companies.

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E-ISSN 2614-1523
Terakreditasi (SK No. 225/E/KPT/2022)

Table 5. External Factor Evaluation (IFE) Matrix

No.	Key External Factor	Weight	Average Score	Weighted Score
	Opportunities			
1	Has business license and trusted distributor and service certificate from manufacturer.	0.257	4	0.97
2	Technological advancements as marketing and sales tools supporting marketing strategy	0.211	4	0.80
3	Growing market potential for Plate Heat Exchanger in Indonesia	0.202	3	0.65
	Sub Total	0.670		2.42
	Threats			
1	Emergence of many competitors with similar businesses	0.110	1	0.12
2	Many counterfeit products offered in the Plate Heat Exchanger market	0.083	1	0.10
3	Changes in consumer interest for needs	0.138	2	0.26
	Sub Total	0.330		0.48
	Grand Total	1.000		1,94

Source: Primary data (processed), 2025.

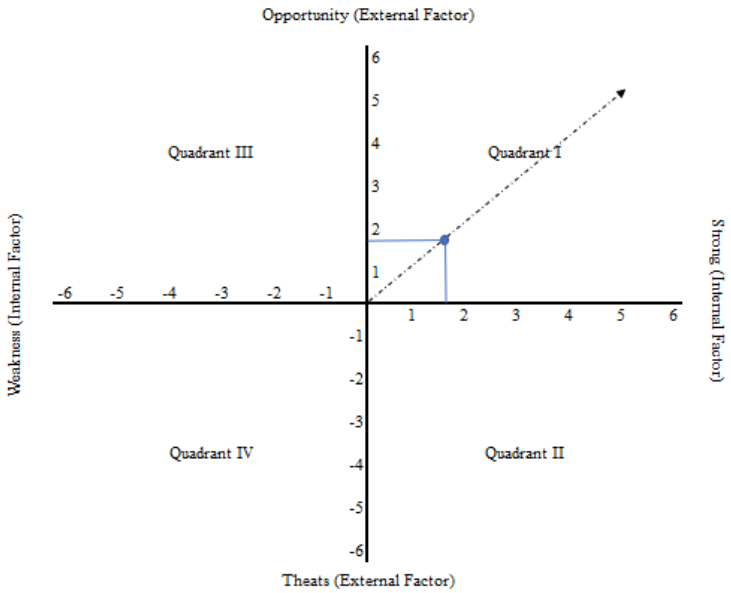


Figure 4. PT. XYZ Position in the SWOT Analysis Diagram
Source: Primary data (processed), 2025.

Based on Figure 6, criteria have inconsistency 0.05131; product have inconsistency 0.05297; price have inconsistency 0.05131; promotion have inconsistency 0.06588; and, place have inconsistency 0.03487. Thus, it is evident that all criteria and sub-criteria demonstrate inconsistency ratios below the 10 percent threshold. This result confirms that the pairwise comparisons conducted within the ANP framework are logically consistent and fall within the acceptable range, as suggested by Saaty (2005) who emphasized that a consistency ratio (CR) of ≤ 0.10 is generally considered acceptable in ANP-based decision models.

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Table 6. Criteria and Sub-Criteria

No.	Criteria	Sub-Criteria
A	Product	A1 (Product Variety)
		A2 (Product Quality)
		A3 (Efficient Design)
		A4 (Product Features)
		A5 (Brand Name)
		A6 (Shipping Packaging)
		A7 (Product Size)
		A8 (After-Sales Service)
		A9 (Warranty)
		A10 (Return Policy)
B	Price	B1 (Price List)
		B2 (Discounts)
		B3 (Financial Allowances)
		B4 (Flexible Installment Period)
		B5 (Credit Terms)
C	Promotion	C1 (Sales Promotions)
		C2 (Informative Advertising)
		C3 (Helpful Salespeople)
		C4 (Good Public Relations)
		C5 (Direct Marketing)
D	Place	D1 (Distribution Channel Access)
		D2 (Sales Coverage)
		D3 (Product Assortment)
		D4 (Accessible Location)
		D5 (Inventory Availability)
		D6 (Ease of Transportation)

Source: Primary data (processed), 2025.

Maintaining a low inconsistency ratio is crucial in ANP, given its complex interdependencies among elements. The consistency observed in this study indicates that respondents provided coherent judgments, thereby enhancing the reliability of the derived priority weights. As noted by Alfiah *et al*. (2023), consistency in ANP not only strengthens the credibility of the network model but also ensures that the feedback loops and interrelated criteria yield robust and defensible outcomes.

Prior to the judgment input procedure, expert opinions were synthesized into a single representative value by aggregating individual judgments using the geometric mean method (Fadli & Yusnita, 2022). “Promotion” has the highest weighted priority among the analyzed criteria, with a weight value of 0.37264, according to Table 7. This suggests that the most important component of the gasketed plate heat exchanger’s marketing plan is thought to be promotion. With a normalized weight of 0.29538, “product” comes in second, while “price” comes in third with a weight of 0.24572. Finally, with a weight of 0.08627, “place” has the fourth-lowest rank.

P-ISSN 2089-1989
E-ISSN 2614-1523
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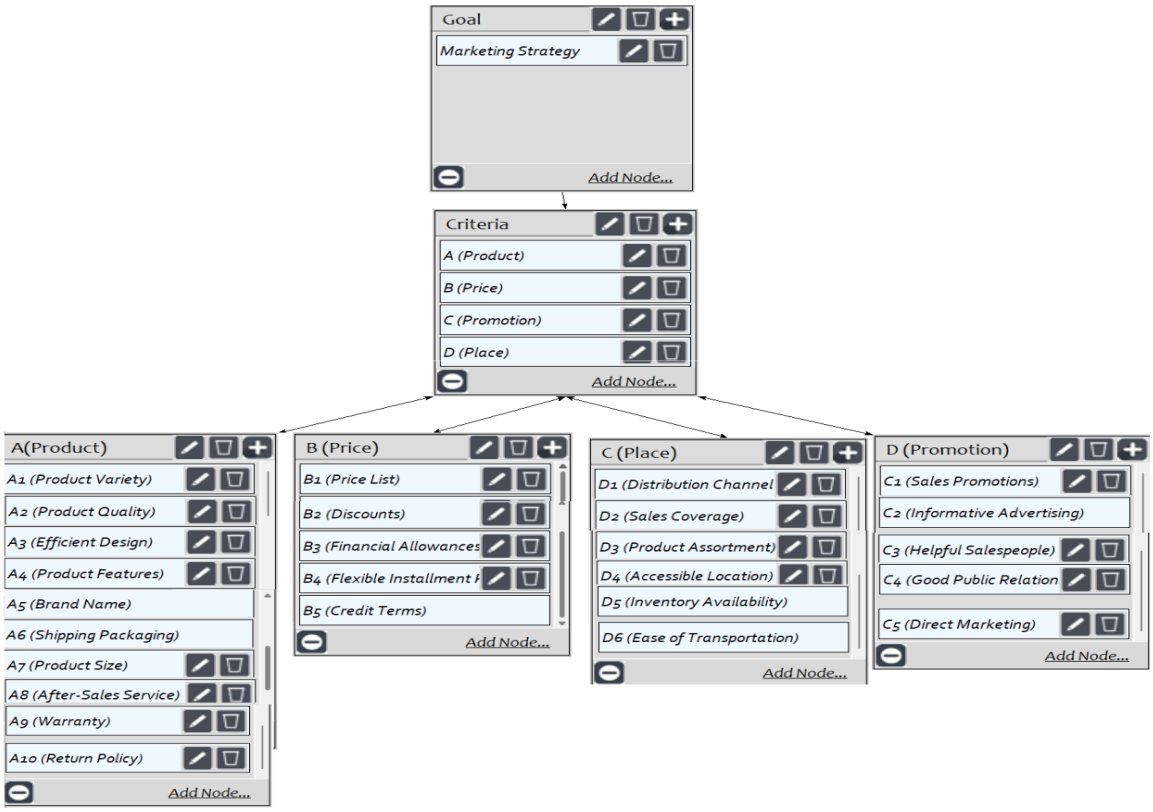


Figure 5. Network Structure
Source: Primary data (processed), 2025.

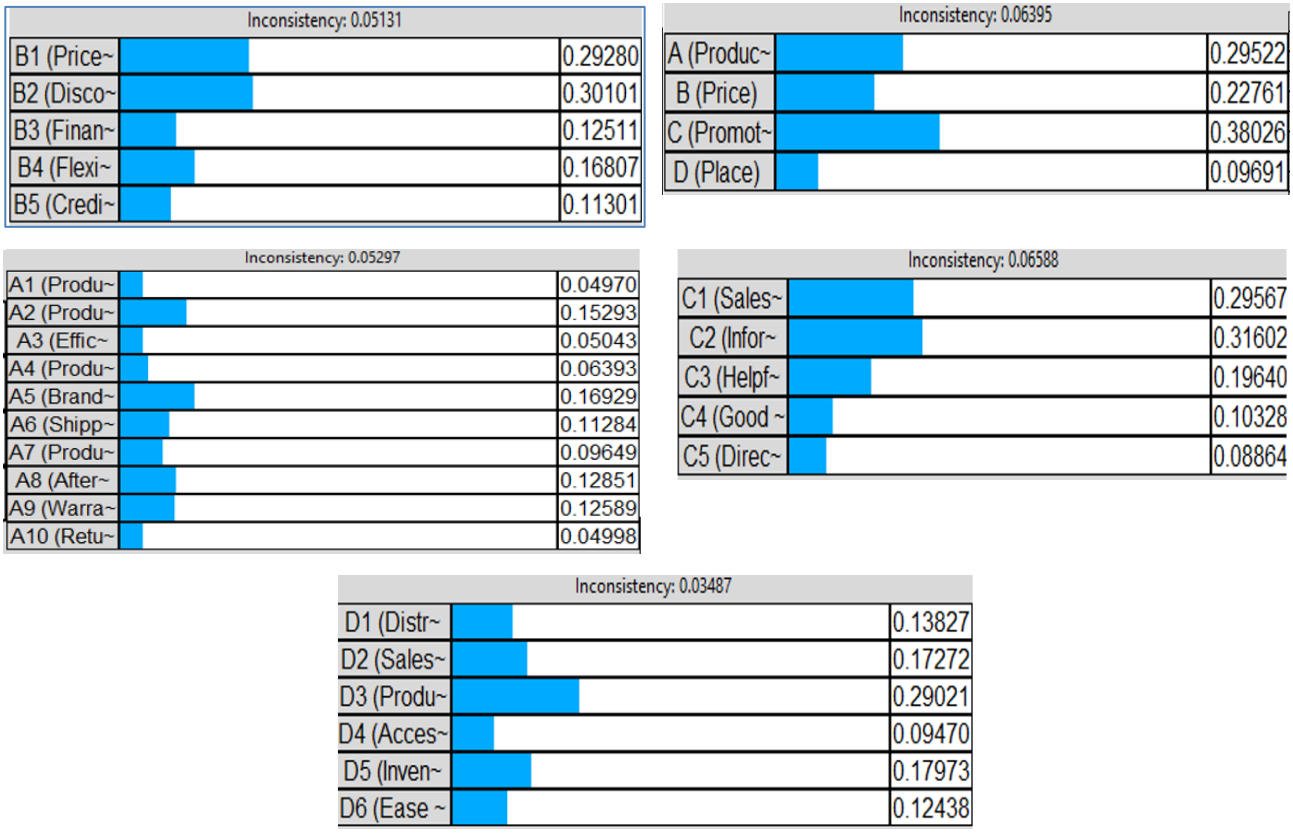


Figure 6. Inconsistency Ratio
Source: Primary data (processed), 2025.

P-ISSN 2089-1989
E-ISSN 2614-1523
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Table 7. Criteria Weighted

Name	Normalized by Cluster	Rank
A (Product)	0.29538	2
B (Price)	0.24572	3
C (Promotion)	0.37264	1
D (Place)	0.08627	4

Source: Primary data (processed), 2025.

Table 8. Sub-Criteria Weighted

Name		Normalized by Cluster	Rank
Product (A)	A1 (Product Variety)	0.04971	26
	A2 (Product Quality)	0.15292	11
	A3 (Efficient Design)	0.05043	24
	A4 (Product Features)	0.06393	23
	A5 (Brand Name)	0.16929	9
	A6 (Shipping Packaging)	0.11284	18
	A7 (Product Size)	0.09649	20
	A8 (After-Sales Service)	0.12851	14
	A9 (Warranty)	0.12589	15
	A10 (Return Policy)	0.04998	25
Price (B)	B1 (Price List)	0.29280	**4**
	B2 (Discounts)	0.30101	**2**
	B3 (Financial Allowances)	0.12511	16
	B4 (Flexible Installment Period)	0.16807	10
	B5 (Credit Terms)	0.11301	17
Promotion (C)	C1 (Sales Promotions)	0.29566	**3**
	C2 (Informative Advertising)	0.31602	**1**
	C3 (Helpful Salespeople)	0.19640	6
	C4 (Good Public Relations)	0.10327	19
	C5 (Direct Marketing)	0.08864	22
Place (D)	D1 (Distribution Channel Access)	0.13605	13
	D2 (Sales Coverage)	0.17201	8
	D3 (Product Assortment)	0.28638	**5**
	D4 (Accessible Location)	0.08956	21
	D5 (Inventory Availability)	0.17938	7
	D6 (Ease of Transportation)	0.13663	12

Source: Primary data (processed), 2025.

Based on results in Table 8, the sub-criterion with the highest priority weight is “informational advertising” (C2) with a normalized value of 0.31602, highlighting the importance of delivering clear and accessible information to consumers. Ranked second is “discounts” (B2) with a weight of 0.27041, reflecting the role of price reductions in boosting purchasing interest. In third place, “sales promotion” (C1) holds a weight of 0.23600, indicating that tactical promotions remain a valuable component of marketing execution. “Price list” (B1) follows in fourth with a weight of 0.20990,

P-ISSN 2089-1989
E-ISSN 2614-1523
Terakreditasi (SK No. 225/E/KPT/2022)

underscoring the need for transparent and affordable pricing. Finally, “product assortment” (D2) ranks fifth at 0.19661, suggesting that a well-curated variety of product options contributes meaningfully to customer satisfaction.

Although not all top-ranked sub-criteria fall under the “romotion cluster, the integrated ANP results indicate that they also play a significant role in shaping promotional strategy, highlighting interconnections across clusters.

Discussion

The grand strategy matrix’s SWOT analysis places PT. XYZ in Quadrant I, indicating a strategic position characterized by strong internal capabilities and significant external opportunities. This position suggests that the company is well-suited to pursue aggressive growth strategies, including product development, market expansion, and market penetration. PT. XYZ is able to respond effectively to favorable market conditions — such as the increasing demand for natural products and the expanding role of digital platforms — supported by key internal strengths including product durability and reliability, supportive and responsive sales personnel, and improving brand recognition (Larasati & Nugroho, 2023). Previous studies emphasize that firms positioned in Quadrant I should capitalize on internal strengths to aggressively exploit market opportunities through proactive marketing and innovation-oriented strategies (Fadli & Yusnita, 2022). In addition, strong internal resources combined with favorable market dynamics enable companies to implement growth-oriented marketing strategies more effectively and sustainably in competitive environments (Kotler *et al*., 2022).

This strategic goal is further supported by the ANP technique. Promotion was found to be the most important factor in determining the efficacy of marketing strategies. Its leading weight emphasizes the importance of giving promotional efforts top priority as a means of expanding market reach and gaining a competitive edge. This result is in line with current research that highlights the importance of promotion in raising consumer awareness, establishing brand positioning, and influencing decisions to buy (Setyadi *et al*., 2023). Among the promotional sub-criteria, informational advertising (C2) holds the highest priority with a normalized value of 0.31602, have the highest priority due to the importance of delivering clear and relevant information to the target audience. This is in line with recent research that shows that organic content and influencer recommendations are more trustworthy than conventional ads. This trust makes informative promotions more effective in create engagement, loyalty, and message clarity (Maulana *et al*., 2025). This is followed by discounts (B2), sales promotion (C1), price list (B1), and product assortment (D2). Notably, although not all these sub-criteria fall within the formal "Promotion" cluster, the integrated ANP results reveal their substantial contribution to the broader marketing strategy. This interconnection suggests that effective marketing communication is not only about message delivery but also about coherent alignment with pricing transparency, value perception, and product diversity (Agustin & Andika, 2022).

Based on the combined SWOT and ANP results, strengthening informational advertising through digital platforms — particularly the company’s website — by integrating a product recommendation feature tailored to customer needs is recommended to improve clarity and relevance of marketing communication. Personalized digital information is especially important in industrial marketing, as it supports customer understanding of complex products and reduces decision uncertainty (Agustin & Andika, 2022). Providing value-oriented and relevant information also

P-ISSN 2089-1989
E-ISSN 2614-1523
Terakreditasi (SK No. 225/E/KPT/2022)

contributes to more efficient product selection and improved productivity outcomes for customers (Adhawati, 2023; Kotler *et al*., 2022).

The application of targeted discount strategies during product campaigns or through partner-based programs is also recommended to stimulate purchasing behavior and reinforce long-term customer relationships. In B2B markets, pricing incentives function not only as short-term sales drivers but also as relational tools that strengthen trust and loyalty when aligned with customer value creation (Agustin & Andika, 2022). Such strategies can enhance transactional efficiency and support sustainable economic performance for both firms and customers (Adhawati, 2023; Kotler *et al*., 2022).

Strengthening community-based sales promotions through collaboration with seminars or educational events related to gasketed plate heat exchanger products is further recommended to enhance market awareness and technical credibility. Educational and community-oriented promotional activities facilitate knowledge transfer, build professional trust, and increase adoption of technically complex products (Agustin & Andika, 2022; Adhawati, 2023; Kotler et al., 2022). This approach also supports informed decision-making and productivity improvement by disseminating applied knowledge to relevant industry audiences.

CONCLUSION

Based on the combined SWOT and ANP results, enhancing informational advertising through digital platforms — particularly the company's website — by integrating a product recommendation feature tailored to customer needs emerges as the primary strategic priority. Clear, value-oriented, and personalized information supports better understanding of complex industrial products, reduces decision uncertainty, and strengthens customer engagement in B2B markets. In addition, targeted discount strategies during specific campaign periods or strategic partnerships, along with community-based promotional activities such as seminars and technical education events, are recommended to stimulate purchasing decisions, reinforce long-term customer relationships, and enhance market awareness and technical credibility of gasketed plate heat exchanger products.

Despite these contributions, this study has several limitations that provide opportunities for future research. The analysis is confined to a single company with a limited number of respondents, which may restrict the generalizability of the findings across industries or regions. Moreover, the study focuses on marketing mix prioritization without explicitly integrating financial performance indicators or longitudinal market dynamics. Future research is encouraged to expand the sample scope, incorporate financial and performance-based metrics, and explore dynamic or technology-driven decision-support models — such as digital analytics or AI-based recommendation systems — to further refine strategic marketing decisions for complex industrial products.

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