

Development Strategy Analysis With IFE-EFE-IE Matrix, SWOT Matrix and AHP at PT Putra Morowali Sejahtera

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Abstract.

Heavy equipment construction equipment usage activities are used for material handling, excavation, lifting, and other heavy operations. PT PMS currently does not have a strategy to face challenges in the heavy equipment rental business, this causes a lack of maximization of the heavy equipment rental business so that an analysis of internal and external factors is needed to determine a strategy for PT PMS. The purpose of this research is to identify internal (strength and weakness) and external (opportunity and threat) factors using the IFE and EFE approaches and using the IE and SWOT Matrix to determine alternative business strategies that can be recommended to PT PMS to choose the most appropriate business strategy used with Analytical Hierarchy Process (AHP) priorities to develop the heavy equipment rental business. The research method used in this research is qualitative. Qualitative research gets data from interviews with sources and scoring on a matrix based on a list of questions that have been provided. The results showed that the IFE matrix score was 3.03 and the EFE matrix score was 2.43, so that the position of PT Putra Morowali Sejahtera in the IE matrix was in cell IV, namely the growth and build strategy. From the results of the SWOT matrix, the company has 8 alternative strategies. The 8 alternative strategies are then evaluated in the AHP matrix to determine priority or ranking. The recommended strategy for PT Putra Morowali Sejahtera according to the ranking in the AHP matrix is ranking 1 Improving the quality of heavy equipment rental services and increasing the efficiency and effectiveness of operational activities in order to provide services at more competitive prices, ranking 2 Continuous improvement to expand the heavy equipment rental market network and increase operational effectiveness and efficiency, and ranking 3 Increase the capacity of heavy equipment rental units to meet demand for heavy equipment usage. The strategy is expected to contribute to the development of PT Putra Morowali Sejahtera.

Keywords: Heavy Equipment Rental, SWOT, Strategy, IFE-EFE-IE Matrix, and Analytical Hierarchy Process (AHP).

I. INTRODUCTION

PT Putra Morowali Sejahtera (PMS) is a company engaged in the heavy equipment rental industry. PT PMS was established on August 05, 2015 and is located at Jalan Trans Sulawesi No. 08 Keurea, Bahodopi sub-district, Morowali district, Central Sulawesi province. The company is committed to participate in the development of the Sulawesi region from the construction sector, factory construction and mining activities. PT PMS provides heavy equipment rental services to customers both individually and companies. Currently the main customer of PT Putra Morowali Sejahtera is PT Sulawesi Cahaya Mineral (SCM) located in Konawe district, Southeast Sulawesi province. The cooperation has been going on since August 2019 until now, PT PMS is trusted to support mining activities by carrying out mine opening preparation activities (land clearing), topsoil removal, road maintenance activities and maintenance activities for water purification facilities because of mining activities. The development of the heavy equipment rental industry has a tough challenge, according to Chris Sleight, Director of Off-Highway Research at PT United tractor, the prospect of the heavy equipment business in 2024 highlights that in the context of the global market, there is an increase.

Heavy equipment demand increased in 2023 heavy equipment demand is expected to continue until 2025. The increase in heavy equipment demand is due to economic factors that grew by 5.6%, which affects the increase in heavy equipment demand in government support for the nickel downstream program (Mining & Smelter) and infrastructure development (construction). The use of heavy equipment in the Sulawesi area is 70% carried out to assist nickel mining activities and construction of nickel processing smelters. According to the Operations Manager of PT SJS, the development of the heavy equipment rental industry is influenced by the unstable nickel price factor, companies from China bring heavy equipment from China, More and more competitors in the heavy equipment rental industry. The problem with PT Putra Morowali Sejahtera is that the company does not have a definite business strategy, causing the company to develop less

because of doubts about the conditions in the heavy equipment rental industry. This is evidenced by the financial condition that is not consistently increasing and the increasing number of competitors in the heavy equipment rental business.

From the formulation of the problem, and based on internal research that has been carried out previously, which states that strategy adjustments are needed for PT PMS, the researcher believes that it is necessary to research or analyze business strategies using a SWOT analysis approach to determine the strengths and weaknesses of the company from the internal side, and opportunities and threats to the company that come from outside, weighting and rating these internal and external factors so that they can be mapped into an IE matrix that determines several alternative strategies that PMS may be able to take. To sharpen the analysis that will be carried out, the researcher will also compare it with its main competitors who play in similar industries using the Competitive Profile Matrix. And then, in the final stage, ranking the internal and external factors using the Analytical Hierarchy Process (AHP) method to determine the choice of alternative business strategies that are most appropriate for the management of PT PMS heavy equipment rental.

II. METHODS

Research is one way to solve a problem or find answers to problems faced scientifically. Research uses reflective thinking, scientific thinking with procedures that are in accordance with the purpose and nature of the investigation. While the research method is a systematic framework used to carry out research. Research design patterns in each discipline have their own peculiarities, but general principles have a lot in common. The research design provides an overview of the procedures for obtaining the information or data needed to answer all research questions. Therefore, a good research design will result in an effective and efficient research process. Based on the research methodology, data collection techniques and the problems that occur, this research is classified as qualitative research. Qualitative research methods are called new methods, because their popularity is not long. It is called postpositivistic because it is based on the philosophy of positivism. This method is also called an artistic method, because the research process is more artistic (less patterned), and is referred to as an interpretive method because the research data is more about the results of interpretation based on the philosophy of the data found in the field.

Question support is defining variables based on observed characteristics that allow researchers to make careful observations or measurements of an object or phenomenon. Defining variables operationally is describing or describing research variables in such a way that they are specific (not subject to multiple interpretations) and measurable. In qualitative research, guiding questions are obtained through a lens theory approach explaining that lens theory functions to help research to make various research questions, guide how to collect data and analyze data. In qualitative research, theory serves to guide researchers in asking questions, collecting data and analyzing data. In this study, operational variables are the focus of variables that will be used for deeper exploration and want to obtain data through in-depth interviews. Interviews are used as a data collection technique if the researcher wants to conduct a preliminary study to find problems that must be researched, and also if the researcher wants to know things from respondents that are more in-depth, and the number of respondents is small. In qualitative research, the term population is not used, because qualitative research departs from certain cases that exist in certain social situations and the results of its study will not be applied to the population, but transferred to other places in social situations that have similarities with the social situation in the case studied which consists of three elements, namely: place, actors and activities that interact synergistically. In this study, researchers conducted interviews with people who were deemed to know about the objects that researchers would examine. In this study, data obtained from interviews and matrix scoring were tested for validity using Source Triangulation and member check.

III. RESULT AND DISCUSSION

The research results include two main evaluations: internal evaluation and external evaluation. The internal evaluation aims to identify the strengths and weaknesses of the organization, which are then used to compile the Internal Factor Evaluation (IFE) matrix. In contrast, the external evaluation focuses on the

opportunities and threats facing the organization, which are used to compile the External Factor Evaluation (EFE) matrix. Information for this evaluation was obtained through interviews and observations. After that, the analysis continued with the creation of the Internal-External (IE) matrix and SWOT matrix, in making decisions, AHP analysis was used. Weighting is done by conducting focus discussion groups involving internal parties represented by the director and manager of PT Putra Morowali Sejahtera and validated by the director and manager of PT Putra Morowali Sejahtera and external parties who are professionals in the heavy equipment rental industry. The external party researcher who conducted the validation was the manager of PT Satria Jaya Sutra, which is a company engaged in the heavy equipment rental industry. The weighting shows the level of importance of the item to the success of the industry of a heavy equipment rental company.

IFE Matrix

Based on the results of the analysis of the internal assessment of PT Putra Morowali Sejahtera conducted by researchers, the results of the IFE matrix of PT Putra Morowali Sejahtera can be seen in the following table:

No	Internal Factors	Weight	Average Rating	Value
	Strength			
1	Good company leadership	0.059	3.57	0.21
2	Employee qualifications and skills are good	0.059	3.29	0.19
3	Good operational cost management	0.074	3.43	0.25
4	The company's infrastructure is good	0.052	3.43	0.18
5	The company has a service guarantee	0.044	3.86	0.17
6	The company has ways to improve operational efficiency	0.074	3.57	0.26
7	The company complies with operational regulations	0.059	3.57	0.21
8	The company can measure service quality	0.052	3.57	0.19
9	The company has a training program	0.067	3.71	0.25
10	The marketing strategy carried out by the company with cooperation between companies and utilizing social media platforms	0.059	3.71	0.22
11	The company uses information systems in data monitoring activities	0.052	3.43	0.18
Total Strength Score				2.52
	Weakness			
12	The company does not have an innovation team	0.059	1.57	0.09
13	The company's financial condition is unstable	0.067	1.57	0.10
14	The company does not have risk management procedures	0.059	1.29	0.08
15	The company does not have a superior marketing strategy	0.067	1.43	0.10
16	Information systems have not been implemented in heavy equipment rental activities	0.044	1.43	0.06
17	The company does not have a business development plan	0.052	1.57	0.08
Total Weakness Score				0.51
Total Internal Factor Score				3.03

Total score of the IFE matrix of PT Putra Morowali Sejahtera is 3.03 which is classified as a strong internal position category. This shows that the company can respond and be able to utilize its strengths to run the business. Based on the IFE matrix, it can also be seen that the biggest strength of PT Putra Morowali Sejahtera is having ways to improve operational efficiency with a score of 0.26. While the major weakness is that the information system has not been implemented in heavy equipment rental activities with a score of 0.08.

EFE Matrix

Based on the results of the analysis of the external assessment of PT Putra Morowali Sejahtera conducted by researchers, the results of the EFE matrix of PT Putra Morowali Sejahtera can be seen in the following table:

No	External Factors	Weight	Average Rating	Value
	Opportunity			
1	The government supports the development of heavy equipment rental companies	0.049	2.82	0.14
2	The community gets economic benefits from heavy equipment rental companies	0.063	3.00	0.19
3	Social digital platforms have a positive impact on heavy equipment rental companies	0.063	2.91	0.18
4	Technology has a positive influence on business development	0.056	3.64	0.20
5	The company manages the environment well	0.056	2.73	0.15
6	The law provides a sense of security for consumers and heavy equipment rental companies	0.049	3.64	0.18
7	Legal factors support the development of heavy equipment rental companies	0.042	3.18	0.13
8	There is no substitute service for heavy equipment rental	0.070	3.36	0.24
9	New organizations are difficult to compete with the Company because they require large capital and a good service network	0.056	3.36	0.19
Total Opportunity Score				1.61
	Threat			
10	The government has no special regulations for foreign companies	0.063	1.64	0.10
11	Unstable economic growth is a threat to heavy equipment rental companies	0.056	1.64	0.09
12	Community social can be a threat if the company is not in accordance with the standard	0.042	1.82	0.08
13	The company has not used technology to run the business	0.049	2.00	0.10
14	The company realizes the influence of the environment is a threat if it does not meet the standards	0.063	1.36	0.09
15	the public view is generally negative with the project of heavy equipment rental company	0.056	2.09	0.12
16	Competition with other similar organizations is a threat to the Company's business	0.056	1.91	0.11
17	Suppliers have an important role in providing heavy equipment rental equipment so that it becomes a threat to the Company	0.049	1.73	0.09
18	Consumers have an important role in the use of heavy equipment so that it becomes a threat to the company	0.056	1.64	0.09
Total Threat Score				0.86
Total External Score				2.47

Total score of the EFE matrix of PT Putra Morowali Sejahtera is 2.47 which is classified as a moderate external position category. This shows that the company can respond and be able to take advantage of the opportunities it has to run a business and overcome threats that may arise in the heavy equipment rental business. Based on the EFE matrix, it can also be seen that the biggest opportunity that PT Putra Morowali Sejahtera has is that there is no replacement service for heavy equipment rental with a score of 0.24. while the threat is the unstable economic growth of the community which will have a negative impact on the use of heavy equipment rental.

IE Matrix

The Internal-External (IE) matrix is a strategic analysis tool used to evaluate the strategic position of a company or business unit within its business portfolio. The IE matrix combines internal and external factors to help determine the most appropriate strategy for the business.

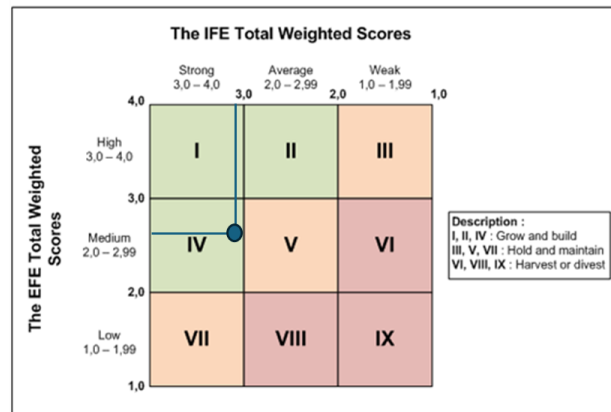


Fig 1. IE Matrix PT Putra Morowali Sejahtera

PT Putra Morowali Sejahters' Internal-External (IE) matrix is in Cell IV. This position is based on the horizontal axis which represents the IFE matrix with a score of 3.03 and the vertical axis represented by the EFE matrix with a score of 2.43. The recommended strategy for PT Putra Morowali Sejahtera based on the position of the IE matrix in cell IV is to grow and build, namely by implementing a strategy of forward integration, backward integration, horizontal integration, service development, improving service quality and innovating services and services.

SWOT Matrix

The SWOT matrix is a strategic analysis tool used to identify and evaluate the Strengths, Weaknesses, Opportunities, and Threats faced by an organization, business, or project. This matrix assists organizations in formulating strategies by considering internal and external factors that influence success.

	<i>Strength</i>	<i>Weakness</i>
	<ol style="list-style-type: none"> 1. Good company leadership 2. Employee qualifications and skills are good 3. Good operational cost management 4. The company's infrastructure is good 5. The company has a service guarantee 6. The company has ways to improve operational efficiency 7. The company complies with operational regulations 8. The company can measure service quality 9. The company has a training program 10. The marketing strategy carried out by the company with cooperation between companies and utilizing social media platforms 11. The company uses information systems in data monitoring activities 	<ol style="list-style-type: none"> 1. The company does not have an innovation team 2. The company's financial condition is unstable 3. The company does not have risk management procedures 4. The company does not have a superior marketing strategy 5. Information systems have not been implemented in heavy equipment rental activities 6. The company does not have a business development plan
<i>Opportunity</i>	<i>SO Strategy</i>	<i>WO Strategy</i>
1. The government supports the development of heavy	1. Improve operational	1. Innovate and

equipment rental companies 2. The community gets economic benefits from heavy equipment rental companies 3. Social digital platforms have a positive impact on heavy equipment rental companies 4. Technology has a positive influence on business development 5. The company manages the environment well 6. The law provides a sense of security for consumers and heavy equipment rental companies 7. Legal factors support the development of heavy equipment rental companies 8. There is no substitute service for heavy equipment rental 9. New organizations are difficult to compete with the Company because they require large capital and a good service network	effectiveness and efficiency (Operational Strategy). (S1,S2,S3,S4,S5,S6,O1,O5,O6,O7) 2. Conduct regular training for employees and the community (HR Strategy). (S1,S2,S3,S5,S7,S8,S9,O2,O3,O4,O5) 3. Expanding the heavy equipment rental market network (Market Development). (S3,S4,S5,S6,S7,O1,O2,O6,O7)	control technological developments (Innovation Strategy / Continues Improvement). (W1,O1,O2,O3,O4,O5) 2. Create standardized risk management procedures (Sustainability Strategies). (W2,W3,O1,O6,O7)
<i>Treath</i>	ST Strategy	WT Strategy
1. The government has no special regulations for foreign companies 2. Unstable economic growth is a threat to heavy equipment rental companies 3. Community social can be a threat if the company is not in accordance with the standard 4. The company has not used technology to run the business 5. The company realizes the influence of the environment is a threat if it does not meet the standards 6. the public view is generally negative with the project of heavy equipment rental company 7. Competition with other similar organizations is a threat to the Company's business 8. Suppliers have an important role in providing heavy equipment rental equipment so that it becomes a threat to the Company 9. Consumers have an important role in the use of heavy equipment so that it becomes a threat to the company	1. Provide services at a more competitive price (Cost Leadership). (S4,S5,S6,S8,S9,T1,T4) 2. Involving the Community for every heavy equipment rental project activity (Strategic Alliance). (S1,S3,S4,T2,T3,T5,T6)	1. Cooperate with foreign parties, banks and other parties (Joint Venture). (W1,W2,W3,T1,T2,T4)

The SWOT matrix produces 8 alternative strategies consisting of 3 SO strategies, 2 SR strategies, 2 WO strategies and 1 WT strategy. to get the alternative strategy that best suits PT Putra Morowali Sejahtera in this study researchers used Analytical Hierarchy Process (AHP). Identifying strategy alternatives in the SWOT matrix depends on the combination of the results of the IE matrix with the SWOT diagram that has been previously made.

Analytical Hierarchy Process (AHP)

Analytical hierarchy process aims to assist complex decision making by comparing various alternatives based on certain criteria. The AHP method is used in this research to determine the priority strategy and sorted based on its priority ranking. In this study, to determine the value of the alternative comparison matrix, a questionnaire was given to three leaders from PT Putra Morowali Sejahtera. The questionnaire was given directly to Mr. Putra, Mr. Asman and Mr. Mustamin. Based on the results of data processing, the normalized alternative value matrix results are obtained as follows:

Normalised											
	SO1	SO2	SO3	ST1	ST2	WO1	WO2	WT1	Total	Priority	Eigen value
SO1	0.07	0.17	0.18	0.10	0.17	0.17	0.13	0.17	1.16	0.15	2.13
SO2	0.16	0.07	0.15	0.18	0.13	0.21	0.04	0.07	1.02	0.13	1.72
SO3	0.17	0.15	0.07	0.03	0.12	0.11	0.16	0.25	1.06	0.13	1.77
ST1	0.11	0.22	0.04	0.06	0.31	0.15	0.32	0.14	1.35	0.17	2.77
ST2	0.14	0.12	0.11	0.23	0.08	0.04	0.03	0.12	0.87	0.11	1.32
WO1	0.13	0.17	0.09	0.10	0.03	0.09	0.12	0.09	0.82	0.10	1.11

WO2	0.09	0.03	0.12	0.19	0.03	0.11	0.10	0.08	0.75	0.09	0.93
WT1	0.15	0.07	0.23	0.10	0.12	0.11	0.10	0.08	0.96	0.12	1.50
Total	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	8.00	1.00	13.25
CI	0.75										
RI	1.41										
CR	0.53	Consistent									

CR value ≤ 1 so that it is in the consistent category can be used as an alternative determinant of strategy to increase the heavy equipment rental business of PT Putra Morowali Sejahtera. From the table we know that the strategy with the three (3) highest priorities is ST1, namely Providing services at a more competitive price (Cost Leadership). (S4,S5,S6,S8,S9,T1, T4), SO1, namely Increasing operational effectiveness and efficiency (Operational Strategy). (S1,S2,S3,S4,S5,S6,O1,O5,O6, O7), SO3, namely Expanding the heavy equipment rental market network (Market Development). (S3,S4,S5,S6,S7,O1,O2, O6,O7). The ranking order of alternative strategies can be seen in the following table:

Rank	Description Alternative Strategy	Priority	Alternatif Code
1	Provide services with more competitive prices (Cost Leadership)	0.17	ST1
2	Improve operational effectiveness and efficiency (Operational Strategy)	0.15	SO1
3	Expanding the heavy equipment rental market network (Market Development)	0.14	SO3
4	Conduct regular training for employees and the community (HR Strategy)	0.13	SO2
5	Cooperate with foreign parties, banks and other parties (Joint Venture)	0.12	WT1
6	Involve the community for every heavy equipment rental project activity (Strategic Alliance)	0.11	ST2
7	Innovate and control technological developments (Innovation Strategy / Continues Improvement)	0.10	WO1
8	Create standard risk management procedures (Sustainability Strategies)	0.09	WO2

From the research results and ranking of alternative strategies obtained, the researcher verified the results by means of a focus group discussion with the management of PT Putra Morowali Sejahtera. Mr. Asman representing the management of PT Putra Morowali Sejahtera said that the research results of PT PMS were in quadrant IV of the IE matrix (Grow and Build) with an unstable financial condition of the Company which was acceptable, this was because the Company was not responsive in facing threats from competitors and was less precise in maximizing internal strengths to see existing opportunities. Based on the results of the research, the company accepts the recommended strategic priorities and is expected to contribute to the development of PT Putra Morowali Sejahtera. The limitations of research on development strategy analysis with the IFE-EFE matrix, SWOT Matrix and AHP at PT Putra Morowali Sejahtera are Researchers are not part of PT Purta Morowali Sejahtera so they are not directly involved in the Company's operations, Limited references regarding business strategy research in heavy equipment rental companies, Limited sources of competitors and consumers to add to the analysis of external factors.

IV. CONCLUSION

Based on the results of the analysis and discussion carried out by the author, the conclusions obtained are as follows:

Based on IFE-EFE- IE Matrix PT Putra Morowali Sejahtera responds well to strengths and weaknesses to face competition through good leadership, good employee skill qualifications, effective operational cost processing, complete facilities and infrastructure, service guarantees, regular training programs and compliance with government regulations. In addition, the company also has weaknesses such as unstable financial conditions, not having an improvement team and not having risk management procedures so that the company is vulnerable to competition. utilize opportunities to deal with competitive

threats. The opportunities owned by PT Putra Morowali Sejahtera are support from the government, support from the community who feel the positive economic impact of the heavy equipment rental project, the use of social media platforms for work and service marketing, utilization of technology, good environmental management and the influence of laws that maintain and provide a sense of security for consumers and service providers. While the threats owned by the Company are that the government has not provided special regulations for heavy equipment rental companies owned by foreign countries, the instability of the economic improvement of the community reduces the use of heavy equipment rental services, the social conditions of the community are still many who think negatively about the project of using heavy equipment rental, not all the latest technology has been implemented on heavy equipment.

Based on the SWOT Matrix, eight (8) alternative strategies were identified consisting of 3 SO strategies, 2 SR strategies, 2 WO strategies and 1 WT strategy, namely increasing operational effectiveness and efficiency (Operational Strategy). (S1,S2,S3,S4,S5,S6,O1,O5, O6,O7), Conduct regular training for employees and the community (HR Strategy). (S1,S2,S3,S5,S7,S8,S9,O2 ,O3,O4,O5), Expanding the heavy equipment rental market network (Market Development). (S3,S4,S5,S6,S7,O1,O2,O6,O7), Providing services at more competitive prices (Cost Leadership). (S4,S5,S6,S8,S9,T1,T4), Involving the Community for every heavy equipment rental project activity (Strategic Alliance). (S1,S3,S4,T2,T3,T5,T6), Innovating and controlling technological developments (Innovation Strategy / Continues Improvement). (W1,O1,O2,O3,O4,O5), Creating standard risk management procedures (Sustainability Strategies). (W2,W3,O1,O6,O7), Cooperate with foreign parties, banks and other parties (Joint Venture). (W1,W2,W3,T1,T2,T4). Based on the results of analytical hierarchy process processing, it can be seen that of the eight existing strategies, there are three top priority strategies that are expected to be implemented by PT Putra Morowali Sejahtera with ranking 1 Providing services at more competitive prices (Cost Leadership), ranking 2 Improving operational effectiveness and efficiency (Operational Strategy), and ranking 3 Expanding the heavy equipment rental market network (Market Development). The strategy is considered the most appropriate to help face the problems that PT Putra Morowali Sejahtera has.

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