

Developing Strategy for Solar Panel Package Business in Kupang

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Abstract — This research aims to develop a strategy for the solar panel package business in Kupang. This research used SWOT analysis and SWOT matrix. SWOT analysis used from the start to improve internal and external business factors, where this research is a business strategy that focuses on production by considering aspects of strengths, strengths, threats, and weaknesses. The results of the SWOT matrix will determine the appropriate strategy for developing the Solar Panel Business Package.

Keywords — Develop strategy, SWOT analysis, Matrix SWOT

I. INTRODUCTION

Solar panel business in the city of Kupang shows excellent prospects. The panel uses solar energy, which is a clean, successful, and renewable resource in the form of photovoltaic technology to produce electricity. After the solar panels are installed, free solar energy can be generated and not generated accumulated. Solar panels can produce strong investments in the long run. There may be a high investment because of the amount of free energy that solar panels can produce. [1].

This potential can be utilized as an alternative energy source that is cheap and available throughout the year. In addition, Indonesia's geographical condition, which consists of thousands of islands, has caused many remote areas that have not yet been reached by PLN electricity. [2]. Research on SWOT analysis has been widely used for developing business strategies. SWOT analysis for solar panels as in Dr. Chandani Sharma and Dr. Anamika Jain SWOT Analysis for Solar PV Technology. [1] In addition, SWOT analysis is another business as well as Martín-Collado, D., Díaz, C., Mäki-Tanila, A., Colinet, F., Duclos, D., Hiemstra, SJ, & Gandini research, G.). Use SWOT analysis to discuss and prioritize conservation and development strategies for local cattle breeds. Animals: International Journal of Animal Bioscience. [9] and many others [3,10]

SWOT analysis is a widely used and important method for providing a systematic approach and decision making assistance for the regulation of internal and external analysis.[3,4,5,6] Research using SWOT analysis Note that this example SWOT analysis focuses specifically on marketing this small business. While a SWOT analysis can be done as a general description of the company, it is very helpful for scheduling purposes when focusing on certain aspects of the company's activities or as decision-making

assistance - in this situation, the choice of the best way to market this company.[7]

There is no research for the Solar Business Package Panel especially in East Nusa Tenggara (NTT). This research will help business owners to develop the right strategy to build a business to develop using the right method using identification swot.

II. METHODS

A. SWOT analysis

SWOT analysis provides a framework for vision by helping planners to identify and prioritize organizational goals in terms of technology and to better identify strategies for achieving them. [7]

SWOT analysis is an easy but effective instrument to measure the capacity for future organisational assets and shortcomings, market possibilities, and internal difficulties. [8]

Vision is best assisted by SWOT analysis.

"SWOT" is a simple acronym for Strengths, Weaknesses, Opportunities, and Threats. SWOT analysis consists of the following two activities:

- Assessment of organizational strengths and weaknesses
- Assessment of opportunities and threats posed by the external environment



Fig. 1. SWOT Identification

For Strengths: What areas of competitive advantage does your business have?
 For Weakness: Are there areas inside your company that restrict growth?
 For Opportunity: Where can you define your target market as friendly?
 For Threats: Is there any external situation that could cause trouble?

B. SWOT MATRIX

The SWOT matrix system strategy consists of four aspects. The first is the SO strategy; this strategy aims to use the company's strengths and take advantage of the benefits of external opportunities. Second, the WO Strategy aims to overcome internal weaknesses and take advantage of external opportunities. Third, the ST Strategy aims to use internal power to overcome external threats. fourth, the WT Strategy is used to reduce internal weaknesses and avoid external threats.

	Opportunities (external, positive)	Threats (external, negative)
Strengths (internal, positive)	Strength-Opportunity strategies Which of company's strengths can be used to maximize the opportunities you identified?	Strength-Threats strategies Which of company's strengths can be used to minimize the threats you identified?
Weaknesses (internal, negative)	Weakness-Opportunity strategies What action(s) can you take to minimize the company's weaknesses using the opportunities you identified?	Weakness-Threats strategies What action(s) can you take to minimize the company's weaknesses using the threats you identified?

Fig. 2. SWOT matrix

III. RESULTS AND DISCUSSION

Identification of various factors that influence the Solar Panel Business Package business is done both internally and externally. Internal and external environment analysis through the identification of SWOT (Strength, Weakness, Opportunity, Threat) is described through the following tables:

TABLE I. INTERNAL FACTORS: STRENGTHS

Strengths (S)
1. Renewable Energy Source
2. Reduces Electricity Bills
3. Diverse Applications
4. Low Maintenance Costs
5. Technology Development

Table I shows that the elements of strength can be the basis for determining product strategies. The strategy is Renewable Energy Source, Reduces Electricity Bills, Diverse Applications, Low Maintenance Costs, Technology Development

TABLE II. INTERNAL FACTORS: WEAKNESSES

Weaknesses (W)
1. The production process is still manual
2. Cost
3. Weather Dependent
4. Solar Energy Storage is Expensive
5. Uses a Lot of Space

Table II shows that the elements of weakness can be the basis for determining strategy. The strategy is the production process is still manual, Cost, Weather Dependent, Solar Energy Storage is Expensive, Uses a Lot of Space

TABLE III. EXTERNAL FACTORS: OPPORTUNITIES

Opportunities (O)
1. High radiation level
2. NTT is one of the provinces that has the lowest electrification ratio, which is 59%
3. Government support for capital for SMEs
4. Energy dependence on imports
5. Development of human resources

Table III shows that the elements of opportunity can be the basis for determining strategy. The strategy is High radiation level, NTT is one of the provinces that has the lowest electrification ratio, which is 59%, Government support for capital for SMEs, Energy dependence on imports, Development of human resources

TABLE IV. EXTERNAL FACTORS: THREATS

Threats (T)
1. Raw materials are mostly imported
2. Logistics costs are expensive
3. The ease of entering new competitors
4. Long term return of investments
5. Change in long term government policy

Table IV shows that the elements of threats can be the basis for determining promotion strategies. The strategy is Raw materials are mostly imported, Logistics costs are expensive, The ease of entering new competitors, Long term return of investments, Change in long term government policy

Based on the SWOT matrix, the strategies result from the combined aspects as follows :

1. Strategy SO
 - a) Always provide various types of solar panel products to meet consumer needs (S1, O2)
 - b) Maintain price and provide good services so that consumer purchasing power increases (S3, O2)
 - c) Providing products that are affordable to the community (S3, O3)
2. Strategy WO
 - a) Expanding the marketing area so that the demand for solar panels increases (W2.O5)

IFAS EFAS	Strengths (S) 1. Renewable Energy Source 2. Reduces Electricity Bills 3. Diverse Applications 4. Low Maintenance Costs 5. Technology Development	Weaknesses (W) 1. The production process is still manual 2. Cost 3. Weather Dependent 4. Solar Energy Storage is Expensive 5. Uses a Lot of Space
Opportunities (O) 1. High radiation level 2. NTT is one of the provinces that has the lowest electrification ratio, which is 59% 3. Government support for capital for SMEs 4. Energy dependence on imports 5. Development of human resources	Strategy SO 1. Always provide various types of solar panel products to meet consumer needs (S1, O2) 2. Maintain price and provide good services so that consumer purchasing power increases (S3, O2) 3. Providing products that are affordable to the community (S3, O3)	Strategy WO 1. Expanding the marketing area so that the demand for solar panels increases (W2.O5) 2. Cooperate with the government (W4, O2)
Threats (T) 1. Raw materials are mostly imported 2. Logistics costs are expensive 3. The ease of entering new competitors 4. Long term return of investments 5. Change in long term government policy	Strategy ST 1. Maintain prices so they can compete with other compotes (S3, T3) 2. Buy raw materials in large quantities (S2, T1)	Strategy WT 1. Develop business and expand marketing locations to compete with competitors (W1, W2, T1) 2. Educate the public to start using solar panels.

b) Cooperate with the government (W4, O2)

3. Strategy ST

- a) Maintain prices so they can compete with other compotes (S3, T3)
- b) Buy raw materials in large quantities (S2, T1)

4. Strategy WT

- a) Develop business and expand marketing locations to compete with competitors (W1, W2, T1)
- b) Educate the public to start using solar panels.

The results of the study produced a business strategy based on aspects consisting of strengths - opportunities, weaknesses - opportunities and strengths - threats, weaknesses-threats. The results of these studies produced a business strategy that is expected to have a positive impact on the solar panel business package.

IV. CONCLUSION

Based on the results and discussion that has been done, The Solar Panel Business Package development approach can be acquired from the SWOT matrix outcomes. The effect of a well-managed business development strategy will be the rise in revenues and winning in competition. Clean and green solar energy applications with difficulties and possibilities have been discussed. Reliance threats identified need to be tracked in order to revolutionize solar energy.

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