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**Research Paper**

# Business Development Strategy for Essential Oils Made from Clove Leaves in Luwu Regency South Sulawesi Province

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***ABSTRACT:*** *Essential oil made from clove leaves is a commodity that has many benefits and quite high market potential. However, running an essential oil distillation business made from clove leaf waste has many challenges, so the right strategy is needed in building a business. This research aims to find out the right strategy that can be used to develop an essential oil distillation business made from clove leaf waste which is located in Salusana Village, Larompong District, Luwu Regency. This research is descriptive research using a qualitative approach. The determination of informants was carried out purposively, namely the owner of an essential oil business. Data collection procedures used in research include observation, interviews, and documentation. The data obtained was analyzed using SWOT analysis. The analysis results show that the S-O strategy is to increase the production of quality clove leaf essential oil to meet market demand; As an export commodity, clove leaf oil is very much needed because it can be used in various industries. S-T's strategy is to maintain a continuous supply of raw materials so that the production of clove leaf essential oil is maintained and sustainable; maintaining the quality of clove leaf essential oil production as an export commodity in anticipation of erratic price fluctuations. W-O's strategy is to increase the production volume of clove leaf essential oil by storing raw materials to cover the lack of business capital. W-T's strategy is to maximize the use of technology to increase the resulting production capacity so that it can win the competition if new competitors emerge.*

***KEYWORDS:*** *Essential oils, clove leaves, strategy, business development.*

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## I. INTRODUCTION

The clove plant (Syzygium aromaticum) is a producer of essential oils. Clove oil is a commodity that has great potential in Indonesia. Based on BPS data (2021), it can be seen that from 2017 to 2021 a total of 25 provinces have exported essential oils with a total of export destination countries to around 102 countries in the world [1]. Indonesia, which has a rich variety of essential oils, is ranked the 6th largest essential oil exporter in the world. Indonesia's essential oil exports in 2021 reached USD 248.4 million, up 15.09% from 2020 (USD 215.8 million). The five main destination countries for Indonesian essential oil exports in 2021 are the United States (17.67%), India (16.75%), France (12.27%), Spain (10.29%) and the Netherlands (9.70 %) [2]. There are several types of essential oils that have been exported abroad, including patchouli oil, clove leaf oil, lemongrass oil, eucalyptus oil, ylang-ylang oil, turpentine oil, sandalwood oil, and vetiver oil [3]

Apart from the local market, more demand for Indonesian essential oils comes from abroad. A number of countries in Europe, such as Switzerland and Germany, require up to 5 tons of essential oils/month. Demand also comes from drug and cosmetic manufacturers in North America, South America, and Asia. Indonesia is still listed as one of the world's largest suppliers of essential oil raw materials and has even supplied up to 90% of patchouli essential oil (around 1600 tons/year). According to the Ministry of Industry, of the 150 types of essential oils traded on the international market, 40 types can be produced in Indonesia, but only a few are used commercially and only 12 types are available that meet export quality standards, such as cinnamon oil, vetiver oil, sandalwood oil, cubeb oil, patchouli oil, ylang-ylang oil, nutmeg oil, clove oil, eucalyptus oil. Until now,

Indonesia's total essential oil production capacity has reached 5,000 to 6,000 tons per year with the number of business actors reaching 3,000 businesses [4].

Cloves (Syzygiumaromaticum) are one of the spice plants belonging to the Myrtaceae plant in the order Myrtales [5]. This type of plant is also an herbal plant that has long been used in Middle Eastern and Asian countries as a traditional medicine to cure various diseases and to flavor food [6]. Clove plants can produce three types of essential oil, clove oil, clove leaf oil, and clove leaf oil [7]. Clove bud oil has biological activities, such as antibacterial, antifungal, insecticidal, and antioxidant properties, and is used traditionally as a flavoring agent and antimicrobial agent in food [8]; [9]; [10].

Essential oil from cloves has chemical properties and pharmacological effects that function as an anesthetic, antimicrobial, and antiseptic [11], antioxidant, and immunomodulator [12]. The phenolic compounds of clove leaves also contain antioxidants and flavonoid compounds which function as free radical scavengers [13]. The essential oil obtained through hydrodistillation from fresh leaves and dried shoots of Syzigium caryophyllatum was analyzed by Gas Chromatography-Mass Spectrometry (GC-MS). Thirty-eight components were identified in the leaf oil. The main components are eugenol (74.3%), eucalyptol (5.8%), caryophyllene (3.85%) and α-cadinol (2.43%). Thirty-one components were identified in shoot oil with the main components being eugenol (49.7%), caryophyllene (18.9%), benzene,1-ethyl-3-nitro (11.1%), and benzoic acid,3-(1 -methyl ethyl) ( 8.9%). The country of Bangladesh suggests that cloves can be planted as an economically valuable crop [14].

Cloves in South Sulawesi Province are generally traded in the form of dried flowers. Processing of clove leaf oil is still limited, even though the oil can be produced using simple equipment. The main raw material used to produce clove leaf oil is dried clove leaves that have fallen, causing the clove leaf oil business to be seasonal because it is very dependent on the availability of raw materials. During the dry season, the availability of raw materials is abundant and conversely, in the rainy season there is a shortage of raw material supply, but this can be anticipated by saving some of their production to sell when they cannot carry out the production process at a better price. Generally, the production process can be carried out 5-6 months a year [15].

Apart from clove flowers, clove leaf oil is a mainstay commodity in Luwu Regency as a source of economic growth and regional income. Clove plants aged 6.5-8.5 years can produce 3 kg of wet clove flowers/tree/year and 26 kg of fallen clove leaves/tree/year or 2.6 t/ha/year (plant population of 100 trees/ha [16]. When cloves are harvested, the leaves fall, so dry clove leaves are sometimes left scattered under the clove tree [17]. The essential oil business in Salusana Village, which is made from clove leaves, is one of the sources of income for the people of Salusana Village. People use and sell clove flower buds which are used as cooking spices and in kretek cigarette mixtures. Meanwhile, the leaves are only used as waste and burned by farmers [18].

Research on business development strategies, in this case clove leaf essential oil, has been carried out, including: [19]; [20]; [21]; [22]; [23]; [24]; [25]. As time goes by, farmers are starting to use clove leaves to distill them into essential oils that have economic value. However, with so many distilling businesses emerging, farmers have difficulty obtaining raw materials in the form of clove leaves. This will affect the sustainability of the business of refining clove leaves into essential oil. Therefore, a strategy is needed in developing the essential oil business by identifying internal and external factors that influence the essential oil refining business in Salusana Village, Luwu Regency.

## II. RESEARCH METHODS

This research was carried out for 2 months, starting from November to December 2022. This research was carried out at a clove leaf oil refinery business located in Salusana Village, South Larompong District, Luwu Regency, South Sulawesi Province. Determining the research location was based on the consideration that the location of the refinery was strategic because it was located close to sources of raw materials.

The determination of respondents was carried out purposively. There were 3 respondents in this study, namely 1 company owner, 1 employee in the production department, and 1 collector/exporter of essential oils. The data used in this research comes from primary data and secondary data. Primary data was obtained from observations and direct interviews with respondents, and using a questionnaire. Secondary data was obtained from related agencies such as the South Sulawesi Provincial Central Statistics Agency and the Luwu Regency Central Statistics Agency and various literature related to the research.

The analytical method used is Strengths, Weakness, Opportunities, and Threats (SWOT) analysis, which is a way to systematically identify internal and external factors in order to formulate a company strategy. SWOT analysis is based on logic that can maximize strengths and opportunities, but simultaneously minimize weaknesses and threats. The Internal Strategic Factor Analysis Summary (IFAS) Matrix is the company's internal strategy which is prepared to formulate internal factors in the framework of strengths and weaknesses, while the External Strategic Factor Analysis Summary (EFAS) Matrix is The company's external strategy is prepared to formulate external factors in the framework of opportunities and threats.

Internal Strategic Factor Analysis Summary (IFAS) and External Strategic Factor Analysis Summary (EFAS) matrices which have weight and rating values from the results of the research interview questionnaire. The weight calculation adds up all the weight values and then divides them by the first value and the weight value cannot exceed (1.00) because it is a provision for calculating the Internal Strategic Factor Analysis Summary (IFAS) and External Strategic Factor Analysis Summary (EFAS)[26], Meanwhile, for rating calculations, add up the rating values and then divide by the total number of ratings. The calculation results are multiplied by the weight and rating to get the score value for each internal and external factor.

The SWOT matrix clearly describes how the opportunities and threats faced by the company can be adjusted to strengths and weaknesses. The SWOT matrix as a matching tool in entering score values on the SWOT diagram to determine the position of quadrant I, quadrant II, quadrant III, and quadrant IV is adjusted to the resulting score value for each internal and external factor, then the largest number between strengths and weaknesses and opportunities is selected. threat. The SWOT diagram develops four types of strategies, namely Strengths-Opportunites (S-O), Weakness-Opportunites (W-O), Strengths-Threats (S-T), and Weakness-Threats (W-T) [20].

## III. RESULT AND DISCUSSION

### A. Internal Factors

Identification of internal factors in the business of refining essential oil from clove leaves is as follows:

1. Strength
a) The clove tree that produces leaves is your own
b) Availability of labor
c) Clove leaf oil is a product that can be exported
d) Have a permanent raw material supplier
e) Quality clove leaf oil products because there are no other mixed ingredients.
2. Weakness
a) The profits obtained are low.
b) Non-continuous production of clove leaf oil.
c) Production technology/equipment is still traditional.
d) Limited production capacity
e) Lack of business capital

### B. External Factors

Identification of external factors for the business of refining essential oil from clove leaves is as follows:

1. Opportunity
a) Clove leaf oil can be widely applied in various industries
b) Market demand for clove leaf oil is high
c) Adequate transportation access
d) The number of clove farmers who can become business partners
e) Raw materials are easy to obtain
2. Threat
a) Number of competitors
b) The influence of erratic weather changes which result in a shortage of raw materials
c) Fluctuations in the price of clove leaf oil
d) Decrease in clove leaf oil production

### C. IFAS Matrix

Based on the processing of data and information from informants, internal factors and external factors can be identified which are then entered into the internal strategy factor matrix (IFAS) and external strategy factor matrix (EFAS) to carry out evaluations so that an appropriate strategic alternative is obtained in development. essential oil made from clove leaves in Salusana Village, Luwu Regency. The matrix (IFAS) for the clove leaf-based essential oil business in Salusana Village, Luwu Regency.

**Table 1**. Internal Strategic Factor Analysis Summary (IFAS) matrix in developing the clove leaf-based essential oil business in Salusana Village, Luwu Regency.

| No | Internal Strategy Factors | Value | Weight | Rating | Weight x Rating |
|---|---|---|---|---|---|
| **A** | **Strength** | | | | |
| 1 | Own clove tree | 4 | 0,15 | 4 | 0,60 |
| 2 | Essential oil production can be exported | 4 | 0,14 | 3 | 0,42 |
| 3 | Permanent raw material supplier | 4 | 0,14 | 4 | 0,56 |
| 4 | The production produced is quality | 4 | 0,15 | 4 | 0,60 |
| 5 | Labor Available | 3 | 0,13 | 3 | 0,39 |
| **Amount A** | | **19** | **0,71** | **18** | **2,57** |
| **B** | **Weakness** | | | | |
| 1 | The profits earned are low | 3 | 0,08 | 4 | 0,32 |
| 2 | Non-continuous production | 3 | 0,05 | 3 | 0,15 |
| 3 | production capacity is still limited | 2 | 0,04 | 2 | 0,08 |
| 4 | Lack of business capital | 3 | 0,07 | 3 | 0,21 |
| 5 | Production equipment is still traditional | 2 | 0,05 | 3 | 0,15 |
| **Amount B** | | **13** | **0,29** | **1** | **0,91** |
| **Amount A + B** | | **32** | **1** | **2** | **3,48** |

*Source: Data processing results, 2023*

The results of the analysis of internal factors in Table 1 show that the indicators of internal factors are that the tree that produces clove leaves to be processed into essential oil is owned by oneself. The production of essential oil from clove leaves is of high quality because it is pure without mixed ingredients, and has a score of 0.60 so it is a strength for future business development. However, the production capacity of essential oil is still limited with a score of 0.08, so efforts are needed so that the production capacity of clove leaf essential oil can be increased. The results of the IFAS matrix for strengths and weaknesses obtained a total weighted value of 3.48, this shows that the ability of the clove leaf essential oil business, to use strengths and overcome weaknesses is classified as strong.

**D. EFAS Matrix**

The EFAS matrix for the clove leaf-based essential oil business in Salusana Village, Luwu Regency can be seen in the following table:

**Table 2.** EFAS Matrix (External Factor Analysis Summary) in the strategy for developing an essential oil business made from clove leaves in Salusana Village, Luwu Regency

| No | External Strategy Factors | Value | Weight | Rating | Weight x Rating |
|---|---|---|---|---|---|
| **A** | **Opportunities** | | | | |
| 1 | Clove leaf oil can be applied in various industries | 4 | 0,16 | 4 | 0,64 |
| 2 | High market demand | 4 | 0,17 | 3 | 0,51 |
| 3 | Adequate transportation access | 4 | 0,16 | 3 | 0,48 |
| 4 | Many people can become business party Many M | 4 | 0,13 | 3 | 0,39 |
| 5 | Raw materials are easy to obtain | 3 | 0,18 | 4 | 0,72 |
| **Amount A** | | **19** | **0,71** | **17** | **2,74** |
| **B** | **Threats** | | | | |
| 1 | Many competitors | 3 | 0,09 | 4 | 0,36 |

| | | | | | |
|---|---|---|---|---|---|
| 2 | The influence of unpredictable weather | 2 | 0,06 | 4 | 0,24 |
| 3 | Fluctuations in the price of clove leaf oil | 3 | 0,08 | 3 | 0,24 |
| 4 | Decrease in clove oil production | 3 | 0,06 | 3 | 0,18 |
| **Amount B** | | **11** | **0,29** | **14** | **1,02** |
| **Amount A + B** | | **30** | **1** | **31** | **3,76** |

*Source: Data processing results, 2023*

The results of the analysis of external factors in Table 2 show that the external factor indicator is that the raw material in the form of clove leaves is easy to obtain with a score of 0.72, so it is an opportunity to cultivate clove leaf essential oil. Meanwhile, the influence of erratic weather and fluctuating prices of clove leaf essential oil are threats to the sustainability of this business with a score of 0.24. The results of the EFAS matrix for opportunities and threats obtained a total weighted value of 3.76, this shows that the essential oil business from clove leaves can take advantage of opportunities and overcome relatively strong threats.

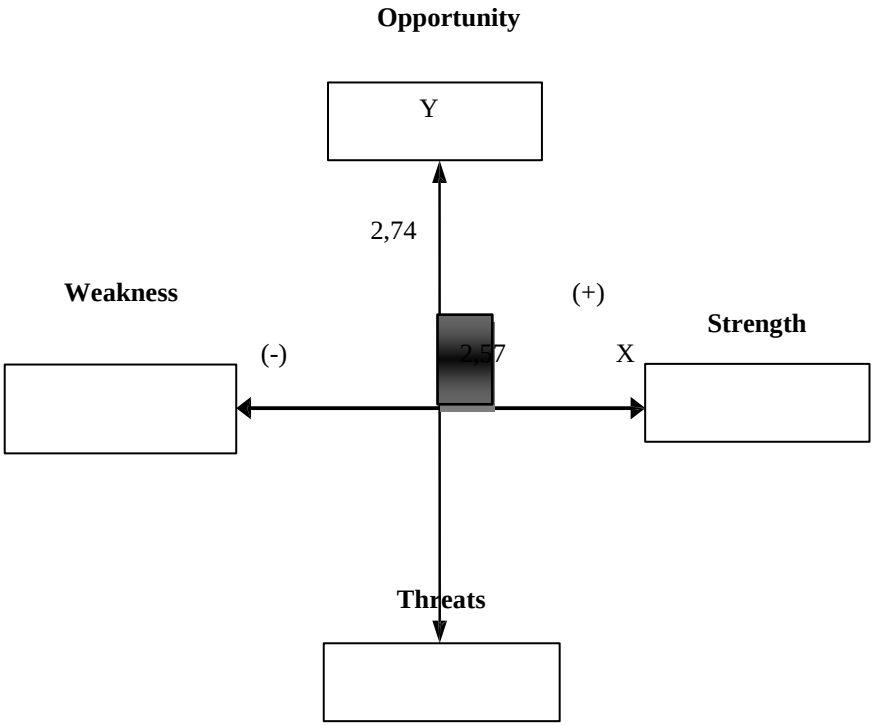


**Figure 1.** Position Strategy for Clove Leaf Essential Oil Business Development in Salusana Village, South Larompong District, Luwu Regency, 2023

The calculation results of the IFAS (Internal Strategic Factor Analysis Summary) matrix and the EFAS (External Strategic Factor Analysis Summary) matrix produce a horizontal axis (X) value of the strength factor of 2.57 and a vertical axis (Y) value of the opportunity factor of 2.74. Based on the results of these calculations, the development of the clove leaf essential oil business in Salusana Village, South Larompong District, Luwu Regency can be depicted in a SWOT diagram as in Figure 1.

Based on the SWOT diagram in Figure 1, shows that the strategic position of developing the clove leaf essential oil refining business in Salusana Village, South Larompong District, Luwu Regency in the strategic environmental analysis mapping (internal and external environment) is in the first quadrant (I) or in a dynamic position growth or in a position of strength-opportunity strategy (using strengths to take advantage of opportunities in making decisions). This provides an indication that there is an opportunity to develop a clove leaf essential oil refining business, which apart from having strengths that are greater than weaknesses, also has opportunities that are greater than threats.

**E. SWOT Matrix**

The SWOT Matrix is a matching tool used to compile the strategic factors of a business. The IFE and EFE matrix analysis that has been carried out is then arranged in a SWOT matrix to formulate strategies based on the internal and external factors that have been identified. Strategy formulation using the SWOT matrix consists of four (4) combinations of factors, consisting of Strength–Opportunity (S–O) strategy, Strength–Threat (S–T) strategy, Weakness–Opportunity (W–O) strategy, and Weakness– Threats (W–T) in table 3 are as follows:

Table 3. SWOT Analysis Matrix for Business Development Strategy for Essential Oils Made from Clove Leaves in Salusana Village, Luwu Regency

| **Internal Factors** | **Strengths (S)** | **Weaknesses (W)** |
|---|---|---|
| **Eksternal Factors** | 1. Own clove tree<br>2. Essential oil production can be exported<br>3. Permanent raw material supplier<br>4. The production produced is quality<br>5. Labor Available | 1. The profits earned are low<br>2. Non-continuous production<br>3. production capacity is still limited<br>4. Lack of business capital<br>5. Production equipment is still traditional |
| **Opportunities (O)**<br>1. Clove leaf oil can be applied in various industries<br>2. High market demand<br>3. Adequate transportation access<br>4. 4. Many people can become business party<br>5. 5. Raw materials are easy to obtain | **S-O Strategies**<br>1. With the availability of labor, clove leaf essential oil production can be increased to meet high market demand (S1 and O2)<br>2. Having clove trees that produce clove leaves as raw material for making essential oils is an advantage in itself because many farmers can become business partners (S1 and O4).<br>3. Increase the production of quality clove leaf essential oil to meet market demand (S5 and O2)<br>4. As an export commodity, clove leaf oil is very much needed because its use can be applied in various industries (S3 and O1) | **W-O Strategies**<br>1. Increase production capacity because raw materials are easy to obtain (W4 and O5)<br>2. Maximizing the use of technology to increase the production of clove leaf essential oil which is much needed by various industries (W3 and O1)<br>3. Maximizing the use of technology to increase the production of clove leaf essential oil to meet market demand (W3 and O2).<br>4. Increase the production volume of clove leaf essential oil by storing raw materials to cover the lack of business capital (W5, O5). |
| **Threats (T)**<br>1. Many competitors<br>2. The influence of unpredictable weather<br>3. Fluctuations in the price of clove leaf oil<br>4. Decrease in clove oil production | **S-T Strategies**<br>1. Increase the production of quality clove leaf essential oil so that it can compete in the market (S5 and T1).<br>2. Maintain a continuous supply of raw materials so that the production of clove leaf essential oil remains maintained and sustainable (S4 and T4)<br>3. Maintain the quality of clove leaf essential oil production as an export commodity in anticipation of erratic price fluctuations (S3, S5 and T3) | **W-T Strategies**<br>1. Maximize the use of technology to increase the resulting production capacity in order to win the competition if new competitors emerge (W3, W4 and T1)<br>2. Reduce the use of business capital costs to anticipate fluctuations in the production price of clove leaf essential oil (W5 and T3)<br>3. Maximizing the use of technology to anticipate a decline in clove leaf essential oil production (W3 and T4) |

*Source: Data processing results, 2023*

Based on the SWOT matrix table above, several suitable strategies can be identified for developing an essential oil business made from clove leaves in Salusana Village, Luwu Regency. There are several alternatives that can be formulated as follows:

**a. SO Strategy**

The SO strategy is to create a strategy that uses strengths to take advantage of opportunities. The strategies are;

- With the availability of labor, the production of clove leaf essential oil can be increased to meet high market demand,

- Own clove tree that produces clove leaves as raw material is an advantage in itself because many farmers can become business partners,
- Increasing the production of quality clove leaf essential oil to meet market demand,
- As an export commodity, clove leaf essential oil is very much needed because its use can be applied in various industries

**b. WO Strategy**

The WO strategy is to create a strategy that minimizes weaknesses to take advantage of opportunities. The strategies are;

- Increase the production capacity of clove leaf essential oil because raw materials are easy to obtain
- Maximizing the use of technology to increase the production of clove leaf essential oil which is much needed by various industries
- Maximizing the use of technology to increase the production of clove leaf essential oil to meet market demand
- Increase the production volume of clove leaf essential oil by storing raw materials to cover the lack of business capital

**c. ST Strategy**

The ST strategy is to create a strategy that uses power to overcome threats. The strategies are;

- Increase the production of quality clove leaf essential oil so that it can compete in the market.
- Maintain a continuous supply of raw materials so that the production of clove leaf essential oil remains maintained and sustainable.
- Maintain the quality of clove leaf essential oil production as an export commodity in anticipation of erratic price fluctuations.

**d. WT Strategy**

The WT strategy is to create a strategy that minimizes weaknesses and avoids threats. These strategies are:

- Maximize the use of technology to increase the resulting production capacity in order to win the competition if new competitors emerge
- Reduce the use of business capital costs to anticipate fluctuations in the production price of clove leaf essential oil
- Maximizing the use of technology to anticipate a decline in clove leaf essential oil production.

## IV. CONCLUSION

Based on the results of research on the strategy for developing an essential oil business made from clove leaves in Salusana Village, Luwu Regency, it can be concluded as follows: (1) The S-O strategy that can be used is increasing the production of quality clove leaf essential oil to meet market demand, the availability of sufficient labor so that Clove leaf oil production can be increased to meet high market demand. As an export commodity, clove leaf oil is very much needed because its use can be applied in various industries. (2) The W-O strategy that can be used is increasing production capacity because raw materials are easy to obtain, maximizing the use of technology to increase the production of clove leaf essential oil which is much needed by various industries, increasing the production volume of clove leaf essential oil by storing raw materials to cover shortages. venture capital. (3) The S-T strategy that can be used is increasing the production of quality clove leaf essential oil so that it can compete in the market, maintaining the continuity of the supply of raw materials so that clove leaf essential oil production remains maintained and sustainable, maintaining the quality of clove leaf essential oil production as an export commodity in anticipate erratic price fluctuations. (4) The W-T strategy that can be used is maximizing the use of technology to increase the resulting production capacity in order to win the competition if new competitors emerge, reducing the use of business capital costs to anticipate fluctuations in the production price of clove leaf essential oil, maximizing the use of technology to anticipate a decline. production of clove leaf essential oil.

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