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RESEARCH PAPER

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Swot AHP approach for strategic development of Hiyung cayenne pepper commodity in Tapin Regency South Kalimantan Province

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Abstract

Tapin is one of the regencies in South Kalimantan Province, which has a comparative advantage over cayenne pepper. The commodity in question is cayenne pepper with the uniqueness of a very high level of spiciness compared to other varieties of cayenne pepper in Indonesia. To realize an increase in the economy of the community and the Tapin Regency area, a comprehensive business development strategy is needed for this commodity. The purpose of the study of the Hiyung Cayenne Pepper Commodity Development Strategy in Tapin Regency, in general, is to poduce a comprehensive concept of the cayenne pepper commodity business development strategy that will have a positive impact on improving the community's economy and the development of rural areas in Tapin Regency. The results showed that the development strategy of cayenne pepper commodity was directed at development priority areas, namely Candi Laras Utara, Candi Laras Selatan, and Tapin Tengah by implementing SO2 integrated partnership program model, SO3 branding strategy, and adding product variants in the form of derivative products and WO1 strategy promotion through social media.

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2022

Introduction

Rural agricultural development is carried out in the context of increasing food security, reducing the number of poor people, income distribution and increasing farmers' income (Purnamawati et al., 2021). In line with this, the development vision must be carried out in an integrated manner in an Agribusiness unit that realizes improving the welfare of farmers, where farmers play an active role while the government plays a role in facilitating, encouraging, and empowering the community. (Ariefien et al., 2021) stated that leading sectors could be utilized to improve the regional economy by making plans based on local economic potential. Tapin is one of the regencies in South Kalimantan Province, which has a comparative advantage over chili commodities, namely Hiyung cayenne pepper. Its uniqueness is that it has a very high level of spiciness compared to other varieties of cayenne pepper in Indonesia. Based on its uniqueness, in the future, this commodity will become a source of new economic growth, cash crops for farmers, a fairly high GDP (Gross Domestic Product), and a provider of employment opportunities.

The absence of action plans and roadmap strategies in developing superior commodities is an obstacle that must be faced in an area so that a comprehensive business development strategy is needed for commodities so that economic development and welfare can be improved (NCO *et al.*, 2013). The comprehensive concept of the cayenne pepper commodity business development strategy will have a **positive impact on** improving the community's economy and the development of rural areas in Tapin Regency. Based on this, the purpose of this research is to develop a strategy for developing the cayenne pepper commodity in Tapin Regency.

Material and methods

Quantitative methods are widely used for strategic development decision-making, including principal component analysis and SWOT analysis (Wang *et al.*, 2014). Strengths, Weakness, Opportunities, and Threats (SWOT) analysis is a tool that helps business

68 Prayoga et al.

managers to evaluate the strengths, weaknesses, opportunities, and threats involved in any business enterprise, including livestock and livestock. A SWOT analysis can help them gain insight into the past and think of possible solutions.

The Analytical Hierarchy Process is a measurement theory by comparing interests and relying on expert ecisions to determine priorities (Saaty, 1993). Analytical Hierarchy Process (AHP) is one of the most popular methods of multiple criteria decision making (Oreski, 2012). In every strategic planning situation, WOT analysis and AHP methods can be used. The SWOT analysis provides the basic framework that performs the analysis of the situation in which a decision is made, whereas the AHP helps to perform SWOT analytically. (Kangas., et al., 2001) stated that A'WOT is a combination of 2 analytical methods, namely the AHP and SWOT methods, in determining policy. A'WOT is an analytical tool commonly used in formulating policy strategies where AHP functions in giving weight to the swot component and determining strategic priorities (Yusuf, et al., 2020). In this study, the development of hiyung cayenne pepper was formulated using the A'WOT method. This aims to minimize the subjectivity of researchers in developing strategies for developing cayenne pepper hiyung. The A'WOT method is a combination of AHP and SWOT analysis by performing 2 stages. According to (Yusuf et al. 2020) these stages consist of Identification of internal and external factors based on SWOT elements (strengths, weakness, opportunities, threats) with the following stages:\, Conduct factor analysis of internal and external strategies. This stage is carried out by tabulating the respondent's assessment and scoring (weighting and rating), performing an internal and external matrix analysis. This stage is the stage of mapping the position related to the cayenne pepper agribusiness development strategy, Perform space matrix analysis. Whereas AHP Stage are Based on the results of the SWOT matrix analysis, priority determination is carried out using the AHP (approach analytical hierarchy process) with steps: Hierarchical arrangement (AHP structure), Preparation of questionnaires and

2022

determination of expert respondents, Input the results of respondents' answers into software, decision-making and evaluation.

The results of the identification of external and internal factors of SWOT can be seen in Table 1.

Identification strengths, of weaknesses. opportunities, and threats based on interviews with respondents experts involved in the formulation of policies related to the development of cayenne pepper commodity in Tapin Regency consisting of; Head of the Tapin Regency Agriculture Service, Head of Bappelitbang Tapin Regency, Head of Horticulture Division of Tapin Regency Agriculture Service, Head of the Association of Hiyung Cayenne Farmers Group in Tapin Regency. Furthermore, based on the results of the SWOT, a questionnaire was compiled and paired weighting was carried out with the pro visions with AHP.The SWOT matrix analysis is then compiled based on the strategic choices that can be generated from the SWOT matrix, namely SO, WO, ST, and WT. The factors contained in the SWOT matrix make it easier to formulate various strategic options shown in Table 2.

Combining elements of strength to obtain opportunities (SO), using existing strengths to deal with future threats (ST), reducing existing weaknesses by taking advantage of existing opportunities (WO), and reducing existing weaknesses to face future threats (WT).

The determination of strategic priorities is carried out by adding weights derived from the linkage of the SWOT elements contained in the formulation strategy. Then the total weights are sorted/ranked. The highest order/rank is a strategic priority in the development of cayenne pepper in Tapin Regency. The format for calculating the order/ranking is shown in Table 3.

Results and discussion

SWOT analysis

SWOT analysis is a tool to build organizational strategy by identifying internal factors, as well as identifying internal factors (EFAS) (Oreski, 2012). IFAS and EFAS calculations are the next process in processing weight and data *rating* for each factor. The calculation of IFAS and EFAS factors can be seen in Table 4 and Table 5.

Table 1. Internal and external factors of cayenne pepper commodity development strategy in Tapin Regency.

| IFAS | Internal Factors | | | | | |
|-------------------|---|--|--|--|--|--|
| Strengths | Having available capital (S1) | | | | | |
| | Variety of product flavors (S2) | | | | | |
| | Having a brand in the packaging (S3) | | | | | |
| | Distinctive product characteristics (S4) | | | | | |
| | Good service quality (S5) | | | | | |
| | Having regular customers (S6) | | | | | |
| | Having a skilled and diligent workforce (S7) | | | | | |
| | Having production capabilities shortly (S8) | | | | | |
| | Have high-quality raw materials (S9) | | | | | |
| Weakness | No promotion (W1) | | | | | |
| | Relatively high price (W2) | | | | | |
| | Have not used hygienic equipment in the production process (W3) | | | | | |
| | Production results are not stable (W4) | | | | | |
| | Have traditional production equipment (W5) | | | | | |
| | raw material prices (W6) | | | | | |
| EFAS | External Factors | | | | | |
| Opportunities The | possibility of increasing public purchasing power (O1) | | | | | |
| | Rising Increasing population growth will increase the demand for cayenne pepper products (O2) | | | | | |
| | The market is wide (O3) | | | | | |
| | The number of suppliers of raw materials is more than one (O4) | | | | | |
| | By consumer tastes (O5) | | | | | |
| Threats | Availability of substitute goods that are more and cheaper (T1) | | | | | |
| | Scarcity of raw materials high quality (T2) The | | | | | |
| | number of similar companies is large (T3) | | | | | |
| | Increased fuel prices (T4) | | | | | |
| | 1 Changes to a more modern lifestyle (T5) | | | | | |

Based on the data presented in Table 4, shows that the overall weight of the internal factors of strength (*strengths*) is greater than the internal factors of weakness (*weaknesses*). Likewise, the total score for the internal factors of strength is greater than that of the internal factors of weakness. In terms of strength, having distinctive product characteristics is part of the factors that have the highest weight and score. Meanwhile, on the weakness side, the development of hiyung cayenne pepper, which has traditional production equipment, is also part of the weakness, and has a relatively high weight and score compared to other weaknesses. The total score of internal factors obtained, namely the subtotal score of strengths minus the subtotal score of weaknesses, resulted in a positive score of 0.5734.

Table 2. Matrix table of SWOT results strategy.

| | Faktor Eksternal | Strengths (S) | Weaknesses (W) |
|------------------|------------------|---------------|----------------|
| Faktor Eksternal | | | |
| Opportunit | ies (O) | SO Strategy | WO Strategy |
| Threats | (T) | ST Strategy | WT Strategy |
| Threats | (T) | ST Strategy | WT Strategy |

Table 3. Sequence/ranking of the cayenne pepper commodity development strategy in Tapin.

| SWOT Elements | Pairwise Comparison | Weighted Score |
|---------------|-------------------------|---------------------------------------|
| SO Strategy | | Based on SWOT elements and a pairwise |
| • SO1 | S1, S2, O1, O2, S3, O4, | comparison result |
| • SO2 | | |
| ST Strategy | | |
| • ST1 | S1, T2, S4, T4 | |
| • ST2 | | |
| WO Strategy | | |
| WO1 | W2, W3, 01, W1, O2, O4 | |
| WO2 | | |
| WT Strategy | | |
| WT1 | W2, T1, W4, T4 | |
| WT2 | | |

Based on the data presented in Table 7, the overall weight of the external factors (*opportunities*) is greater than the external threats (*threats*). Likewise, the total score for external factors has greater opportunities than external factors for weakness. In the mass of opportunity, conformity to consumer tastes is part of the factors that have the highest weight and score. Meanwhile, on the threat side, the development of cayenne pepper with the availability of more and cheaper substitutes is also part of the threat, has a relatively high weight and score compared to other threats. The total score of external factors obtained, namely the subtotal score of opportunities minus the subtotal score of threats, resulted in a positive value of 0.4095.

SWOT analysis diagram for the development of hiyung cayenne pepper obtained from the calculation of internal factors and external factors, namely the total score. Based on the total score above can be illustrated with a SWOT analysis diagram in Fig. 1 below.

Based on the data presented in Fig. 3, the SWOT analysis diagram shows that the development of hiyung cayenne pepper in Tapin Regency is in the

70 Prayoga et al.

2022

2022

quadrant I region, which means the conditions are very favorable. The development of cayenne pepper has strength so that it can take advantage of business opportunities. The strategy used in this condition is to support a significant (*growth Oriented Strategy*). The findings from the SWOT analysis can be used to assess the major aspects of sustainability of the dairy IP (Putaa *et al.*, 2019).

Table 4. IFAS calculation in the development of cayenne pepper commodity in Tapin Regency.

| 1 | | INTERNAL FACTOR SCORE CALCULATION | | | |
|----|-----------------------|--|---------|--------|--------|
| No | Code | Strength(S) | Weight | Rating | Score |
| 1 | S1 | Has the availability of capital | 0.0455 | 1.9167 | 0.0873 |
| 2 | S2 | Product taste variation | 0.0693 | 2.9167 | .2021 |
| 3 | S ₃ | Has the brand in packaging | 0.0792 | 3.3333 | 0.264 |
| 4 | S4 | product characteristics typical | 0.0871 | 3.6667 | 0.3195 |
| 5 | s ₅ | good service quality | 0.0733 | 3.0833 | 0.2259 |
| 6 | S6 | Having regular customers | 0.0495 | 2.0833 | 0.1031 |
| 7 | S 7 | Having a skilled and diligent workforce | 0.0594 | 2.5000 | 0.1485 |
| 8 | S 8 | Having production capability shortly | 0.0574 | 2.4167 | 0.1388 |
| 9 | S9 | Having high-quality raw materials | 0.0752 | 3.1667 | 0.2383 |
| 1 | | Subtotal | 0.596 | 25.083 | 1.7276 |
| No | Code | Weakness(W) | Weight | Rating | Score |
| 1 | W1 | No promotion | 0.0673 | 2.8333 | 0.1908 |
| 2 | W2 | Relatively high price | 0, 0634 | 2.6667 | 0.1690 |
| 3 | W3 | Not using hygienic equipment in the production process | 0.0673 | 2.8333 | 0.1908 |
| 4 | W4 | Unstable production results | 0.0713 | 3,0000 | 0.2139 |
| 5 | W5 | Have the means of production are still traditional | 0.0772 | 3.2500 | 0.2510 |
| 6 | W6 | raw material prices which increased | 0.0574 | 2.4167 | 0.1388 |
| | | Subtotal | 0404 | 17,000 | 1.1541 |
| | | TOTAL | 1 | 42.083 | 0.5734 |

Source: Primary Data Calculation (2021).

The SWOT matrix for the development of cayenne pepper is shown in Table 6.

The AHP method is based on three principles: first, the structure of the model; second, comparative judgment of the criteria and/or alternatives; third, synthesis of the priorities (Görener *et al.*, 2012). Analysis of AHP (*Analytical Hierarchy Process*) is made in compiling a hierarchy. The hierarchical structure of cayenne pepper commodity development is shown in Fig. 2.

Table 5. Calculation of EFAS in the development of cayenne pepper in Tapin Regency.

| | | TOTAL | 1 | 27.250 | 0.4095 |
|-----|---------|--|-------------|--------|---------------|
| | | Subtotal | 0.4618 | 12.583 | 1.1761 |
| 5 | T5 | Changes in lifestyle are more modern | 0.0765 | 2.0833 | 0.1593 |
| 4 | T4 | Increased fuel prices | 0.0887 | 2.4167 | 0.2143 |
| 3 | T3 The | number of similar companies is large | 0.0979 | 2.6667 | 0.2610 |
| 2 | T2 | Scarcity of materials high-quality raw materials | 0.0917 | 2.5000 | 0.2294 |
| 1 | Tı | Availability of more and cheaper | substitutes | 0.1070 | 2.9167 0.3122 |
| No | Code | Threat(T) | Weight | Rating | Score |
| 1 | | Subtotal | 0.5382 | 14,667 | 1.5856 |
| 5 | O5 | accordance with consumer tastes | 0.1162 | 3.1667 | 0.3680 |
| 4 | 04 | number of suppliers of raw materials more than one | 0.0948 | 2.5833 | 0.2449 |
| 3 | O3 | the market area | 0.107 | 2.9167 | 0.3122 |
| | | requests for chili products hiyung | | | |
| 2 | 02 | Increased population growth will be increasing the number of | 0.1101 | 3.0000 | 0.3303 |
| 1 | O1 | Possibility of increasing public purchasing power | 0.1101 | 3,0000 | 0.3303 |
| No. | Code of | Opportunity (O) | Weight | Rating | Score |
| | | EXTERNAL FACTORS | | | |

Source: Primer Data Processing (2021).

Assessment of Alternative Strategies is prepried based on the results of questionnaires assessing each alternative strategy by experts and related sector leaders, then processed with a pairwise comparison matrix on a hierarchical level. Furthermore, the consistency test can be carried out on the assessment. If the value has been obtained *Consistency Ratio* or CR < 0.01; then the data obtained is consistent (Albayrak, 2004). Furthermore, the obtained *geometric mean* from each criterion. The pairwise comparison matrix *geometric mean of* alternative strategies can be seen in Table 7.

Table 6. SWOT matrix for the development of cayenne pepper hiyung.

| IFAS/EFAS | STRENGTHS (STRENGTHS) | WEAKNESSES (WEAKNESS) |
|---|--|---|
| | Has the availability of capital (S1) | No promotion (W1) |
| | Variety of product flavors (S2) | Price relatively high (W2) |
| | Have a brand in the packaging (S3) | Have not used hygienic equipment in the |
| | | production process (W3) |
| | Typical product characteristics (S4) | Production results are unstable (W4) |
| | Good service quality (S5) | Have traditional production equipment (W5) |
| | Have regular customers (S6) | Increased raw material prices (W6) |
| | Availability of skilled and diligent workforce (S7) | |
| | Have production capability shortly (S8) | |
| | Have high-quality raw materials (S9) | |
| OPPORTUNITIES (OPPORTUNITIES) | STRATEGY-SO | STRATEGY-WO The |
| possibility of increasing public | Maximizing capital and human resources in the | Carrying out promotional strategies through social |
| purchasing power (O1) | production process to meet consumer needs (S1, | media such as Facebook, Instagram, WhatsApp, |
| Increasing population growth will | S7, O1, O2, O5) | websites, social and other online media that can be |
| ncrease the number of product demand | | used to maximize the market (W1, O1, O2, O3) |
| cayenne hiyung (O2) | | |
| the market is wide (O3) | Doing models integrated partnership program | Implement standardized operational management |
| | between farmers and chili processing production | to maintain product quality according to taste |
| | houses (for example chili floss), then production | consumers (W3, W4, W5, O5) The |
| | houses with modern retail, kiosks, and | |
| | supermarkets (S5, S6, S8, O3, O4) | |
| number of suppliers of raw materials is | | Determination of a pricing model that is not |
| more than one (O4) | | detrimental between partners (p gold supply & |
| Under consumer tastes (O5) | Performstrategies branding and add product | production house; modern production & retail |
| | variants in the form of derivative products (S2, S3, | houses, kiosks, and supermarkets) (W2, W6, O4) |
| | S4, S9, O3, O5) | |
| THREATS | STRATEGY-ST | STRATEGY-WT |
| Availability of more and cheaper | Maintaining product quality and developing | Introducing varieties -a variety of products, |
| substitutes (T1) | products, as well as facilities by optimizing existing | conduct counseling and involve members and |
| Scarcity of high-quality raw materials | resources to win the competition (S2, S4, S5, T1, | prospective partner members in introducing any |
| (T2) | T5) | existing products, and provide a way to join the |
| Number of similar companies is large (| company is expected to improve the monthly | partnership model (W1, T1) |
| T3) The | performance evaluation or a certain specified | |
| Increased prices a fuel (T4) | period and make a series of improvements, to | |
| | continue to grow and be able to compete (S5, T3) | |
| Changes to a more modern lifestyle (T5) | | |

Next is looking at which criteria or alternative strategies are the priorities of the SWOT analysis factor members that have been identified through the AHP normalization process. As well as a consistency test on the criteria assessment, if the results obtained are inconsistent then the data collection must be repeated. The results of the calculation of strategic priorities and consistency tests can be seen in Table 8. Strategy Priority Analysis can be seen from the final results of the AHP calculation, which is a strategy that is prioritized in the development of cayenne pepper commodities. From the calculation of the priority of alternative strategies, it can be seen in the pie chart form in Fig. 3. Analysis based on the order of strategic priorities presented in Fig. 3, shows that the results of the questionnaire data processing using the AHP method are SO2: conducting an integrated partnership program model between farmers and chili processing production houses (for example, chili floss), then production houses with modern retail,

72 Prayoga et al.

2022

2022

kiosks and supermarkets (31.26%) (Solangi *et al.* 2019), SO3: carrying out branding strategies and adding product variants in the form of derivative products (12,65%), WO1: carry out promotional strategies through social media such as Facebook, Instagram, WhatsApp, websites, and other online social media that can be used to maximize the market (9,09%), SO1: maximize capital and human resources in the process production to meet consumer needs (8.95%), WO2: implement standardized operational management to ensure ap maintain product quality in accordance with consumer tastes (8.11%), ST2: the company is expected to improve the monthly performance evaluation or a certain specified period and make a series of improvements, in order to

continue to grow and be able to compete (7.57%), WO3: determine the model determination of prices that are not detrimental between partners (suppliers & production houses; modern production & retail houses, kiosks and supermarkets) (7.56%), WT1: introduce various products, conduct counseling and involve members and prospective partner members in introducing any existing products, and provide ways to join in partnership model (7.42%), ST1: maintaining product quality and developing products, as well as facilities by optimizing existing resources to win the competition (7.38%). The factors that influence the development of hiyung cayenne pepper and its processed products based on a SWOT analysis can be described as follows.

Table 7. Pairwise comparison matrix of alternative strategies.

| | SO1 | SO ₂ | SO_3 | WO1 | WO ₂ | WO ₃ | ST1 | ST2 | WT1 |
|-----------------|------------|-----------------|--------|--------|-----------------|-----------------|--------|--|--------|
| SO1 | | | | | | | | 1.0000 1.2599 0.3333 0.2371 0.5000 | |
| | | | | | | | | 0.5000 0.5000 1.4422 | |
| SO ₂ | 3.9149 | 1.0000 | | 0.7937 | 4.6416 | | | | 5.6462 |
| | 4.0000 | | | | 5.0000 | | | | |
| | | | | | 4.0000 | | | | |
| | | | | | 5.6462 | | | | |
| SO3 | | | | | | | | 3.0000 0.2554 1.0000 4.0000 1.0000 | |
| | | | | | | | | 2.0000 1.2599 2.0000 | |
| WO1 | 4.2172 | 0.2500 | 0.7937 | 1.0000 | | | | | 0.2500 |
| | | | 0.7937 | | | | | | |
| | | | 2.0000 | | | | | | |
| | | | 0.9086 | | | | | | |
| | | | 0.9086 | | | | | | |
| WO ₂ | | | | | | | | 2.0000 0.1771 1.0000 1.2599 1.0000 | |
| | | | | | | | | 0.7937 1.2599 0.7937 | |
| WO ₃ | | | | | | | | 2.0000 0.2154 0.5000 1.2599 1.2599 | |
| | | | | | | | | 1.0000 0.7937 0.7937 | |
| ST1 | 0.2000 | | | 0.5000 | | 2.0000 | 1.0000 | 0 ,7937 | 1.2599 |
| | 0.79370.7 | | | | | | | | |
| | 937 1.2599 | | | | | | | | |
| ST2 | 0.6934 | 0.2500 | 0.5000 | 1.1006 | 1.2599 | 1.2599 | 1.2599 | 1.0000 | 1.2599 |
| WT1 | 0.5000 | 0.1771 | 2.0000 | 1.1006 | 0.7937 | 0, 9410 | 0.7937 | 0.7937 | 1.0000 |
| Total | | | | | | | | 16.2042 3.7850 10.2919 14.4583 13.0472 | |
| | | | | | | | | 13.1899 13.8672 12.5256 | |

Source: Primary Data Processing (2021).

Strengths

Distinctive product characteristics, having a brand in the packaging, having high-quality raw materials, good service quality, variety of product flavors, having a skilled and tenacious workforce, having production capabilities shortly, having regular customers, and available capital.

Weaknesses

Production equipment owned is still traditional, production results are unstable, have not used hygienic equipment in the production process and lack of promotion, product prices are relatively expensive and raw material prices are increasing (Dončić *et al.* 2019).

2022

Table 8. The results of priority calculations and consistency tests.

| | 1 | | · · | | | | | | | | | | |
|-----------------|---------|-----------------|--------|--------|-----------------|-----------------|-----------|---------|--------|--------|----------|-----------|------------|
| | SO1 | SO ₂ | SO3 | WO1 | WO ₂ | WO ₃ | ST1 | ST2 | WT1 | Jumlah | Priority | Matriks × | Consistenc |
| | | | | | | | | | | | Vector | Priority | |
| | | | | | | | | | | | | Vector | |
| SO1 | 0.0617 | 0.3329 | 0.0324 | 0.0164 | 0.0383 | 0.0379 | 0.0361 | 0.1151 | 0.1343 | 0.8051 | 0.0895 | 0.9199 | 10.2843 |
| SO ₂ | 0.0490 | 0.2642 | 0.3804 | 0.2767 | 0.4328 | 0.3519 | 0.3606 | 0.3193 | 0.3790 | 2.8138 | 0.3126 | 0.9199 | 2.9424 |
| SO3 | 0.1851 | 0.0675 | 0.0972 | 0.2767 | 0.0766 | 0.1516 | 0.0909 | 0.1597 | 0.0336 | 1.1388 | 0.1265 | 0.9199 | 7.2702 |
| WO1 | 0.2603 | 0.0660 | 0.0243 | 0.0692 | 0.0608 | 0.0602 | 0.1442 | 0.0725 | 0.0610 | 0.8185 | 0.0909 | 0.9199 | 10.1152 |
| WO2 | 0.1234 | 0.0468 | 0.0972 | 0.0871 | 0.0766 | 0.0602 | 0.0909 | 0.0634 | 0.0846 | 0.7301 | 0.0811 | 0.9199 | 11.3395 |
| WO3 | 0.1234 | 0.0569 | 0.0486 | 0.0871 | 0.0966 | 0.0758 | 0.0572 | 0.0634 | 0.0713 | 0.6804 | 0.0756 | 0.9199 | 12.1687 |
| ST1 | 0.1234 | 0.0528 | 0.0771 | 0.0346 | 0.0608 | 0.0955 | 0.0721 | 0.0634 | 0.0846 | 0.6644 | 0.0738 | 0.9199 | 12.4620 |
| ST2 | 0.0428 | 0.0660 | 0.0486 | 0.0761 | 0.0966 | 0.0955 | 0.0909 | 0.0798 | 0.0846 | 0.6809 | 0.0757 | 0.9199 | 12.1595 |
| WT1 | 0.0309 | 0.0468 | 0.1943 | 0.0761 | 0.0608 | 0.0713 | 0.0572 | 0.0634 | 0.0671 | 0.6680 | 0.0742 | 0.9199 | 12.3942 |
| Jumlah | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 9 | 1 | | |
| | | | | | | Menghit | ung CR Ki | riteria | | | | | |
| λ Maks | 10.1262 | | | | | | | | | | | | |

 CI
 0.1408

 RI
 1.4500

 CR
 0.0971

Opportunities

Corresponding to consumer tastes, *POSSIBLE* people's purchasing power continues to increase, rising population growth will increase the number of requests for hiyung cayenne pepper and other dairy products, the market is vast and the number of suppliers of raw materials is more than one.

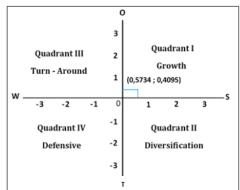


Fig. 1. SWOT analysis diagram of Hiyung cayenne pepper development.

Threats

Availability of more and cheaper substitutes, a large number of similar businesses, scarcity of high-quality raw materials, rising fuel prices, and lifestyle changes.Alternative business strategies that can be done to develop the cayenne pepper commodity based

74 Prayoga et al.

on the influencing factors are described as follows. SO strategy (*Strengths-Opportunities*): maximizing capital and human resources in the production process to meet consumer needs (SO1); conduct an integrated partner program model between farmers and chili processing production houses (for example chili floss), then production houses with modern retail, kiosks, and supermarkets (SO2); carry out branding strategies and add product variants in the form of derivative products (SO3).

ST Strategy (Strengths-Threats)

(ST1); the company is expected to improve the monthly performance evaluation or a certain specified period and make a series of improvements, to continue to grow and be able to compete; maintain product quality and develop products, as well as facilities by optimizing existing resources to win the competition (ST2).

WO (Weaknesses-Opportunities) strategy

carry out promotional strategies through social media such as Facebook, Instagram, WhatsApp, websites, and other online social media that can be used to maximize the market (WO1); implementing standardized operational management to maintain product quality under consumer tastes (WO2); determining a pricing model that is not detrimental

2022

between partners (suppliers & production houses; modern production & retail houses, kiosks and supermarkets) (WO₃) (Aleksandra and Gordana, 2012).

WT strategy (Weaknesses-Threats)

Introduces various products, conducts outreach and involves members and potential partner members in introducing any existing products, and provides a way to join the partnership model (WT1). The order of priority of alternative strategies in developing cayenne pepper commodities using the AHP method is SO2: modeling an integrated partnership program between farmers and chili processing production houses (for example, chili floss), then production houses with modern retail, kiosks, and supermarkets (31,26 %), SO3: carry out a branding strategy and add product variants in the form of derivative products (12.65%).

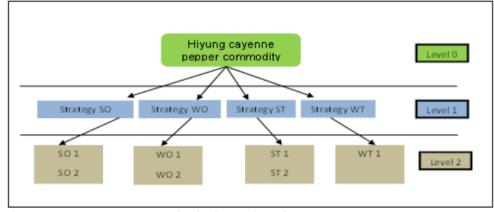


Fig. 2. Hiyung cayenne pepper commodity development hierarchy structure.

WO1: carry out promotional strategies through social media such as Facebook, Instagram, WhatsApp, website, and other online social media that can be used to maximize the market (9.09%), SO 1: maximize capital and human resources in the production process to meet consumer needs (8.95%), WO₂: implementing standardized operational management to maintain product quality under consumer tastes (8.11%), ST2: the company is expected to improve the monthly performance evaluation or certain specified period and make a series of improvements, to keep growing and being able to compete (7.57%), WO3: determining a pricing model that is not detrimental between partners (suppliers & production houses; modern production & retail houses, kiosks and supermarkets) (7.56%).

WT_1

Introducing various products, conducting counseling and involving members and prospective partner

75 Prayoga et al.

members in introducing any existing products, and providing ways to join the partnership model (7.42%), ST1: maintaining product quality and developing products, as well as facilities by optimizing existing resources to win the competition (7.38%).

The implementation of the policy strategy for the area of cayenne pepper commodity development can be carried out in areas that still have available land and are suitable for planting cayenne pepper (Prayoga *et al.* 2021). The dominating areas are North Laras Temple, South Laras Temple, and Central Tapin. From the spatial plan of Tapin Regency, these three areas are Provincial Strategic Areas (KSP) from an economic point of view. More specifically, the new Margasari is one of the Regency Strategic Areas (KSK) from the point of view of the importance of economic growth. These three areas have almost the same land characteristics and are located in the Batang Banyu Swamp Area.

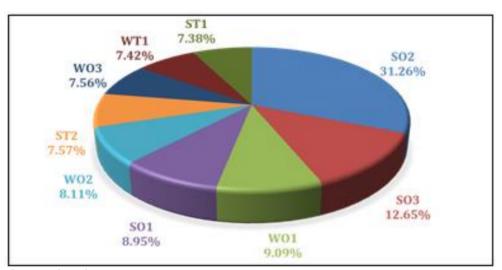


Fig. 3. Pie chart of strategic priorities strategy.

This is also supported by the many combinations of cayenne pepper farmer groups in the area. These three sub-districts are areas designated for horticultural agriculture. This area also has the closest road access to the Barito Kuala Regency area so that it can expand the market and distribution of sales of harvested crops and processed products to other areas outside Tapin Regency.

Conclusion

Based on the results of the study, the following conclusions can be drawn: The strategy for developing cayenne pepper commodities is directed at development priority areas, namely Candi Laras Utara, Candi Laras Selatan, and Tapin Tengah with the application of the SO2 integrated partnership program model, SO3 branding strategy and the addition of product variants in the form of derivative products and WO1 promotion strategies through social media. Based on the results of the study, the following suggestions can be given to the local government of Tapin Regency needs commitment in developing cayenne pepper agribusiness as comparative advantages in Tapin Regency.

Further research is needed on the factors that influence farmers' interest in growing cayenne pepper in priority areas for development.

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2022

References

Aleksandra F, Gordana RŽV. 2012. Diversification of The Rural Economy as A Function of The Sustainability of Rural Areas. Agriculture & Forestry **58(3)**, 51–61.

http://www.agricultforest.ac.me/paper.php?journal_ id=171&id=2112

Albayrak E. 2004. Using analytic hierarchy process (AHP) to improve human performance: An application of multiple criteria decision-making problems. Journal of Intelligent Manufacturing **15**, 491–503.

Ariefien M, Fafurida, Noekent V. 2021. Food Crops-Based Development Planning in Efforts to Relieve Poverty Problems. Journal of Development Economics **13**, 266–302.

https://doi.org/https://doi.org/10.23917/jep.v13i2.17 5

Dončić D, Popović VM, Lakić Ž, Popović DB, Petković Z. 2019. Economic analysis of wheat production and applied marketing management. Agriculture and Forestry **65(4)**, 91–100. https://doi.org/10.17707/AgricultForest.65.4.08

Görener A, Toker K, Uluçay K. 2012. Application of Combined SWOT and AHP: A Case Study for a Manufacturing Firm. Procedia - Social and Behavioral Sciences **58**, 1525–1534.

https://doi.org/10.1016/j.sbspro.2012.09.1139

Kangas J, Pesonen M, Kurttila M, Kajanus M. 2001. SWOT: integrating the AHP with SWOT analysis. In ISAHP.

NCO R, Najmudin N, Istiqomah I. 2013. Local Economic Development Strategy Based on Localindustrial Core Competence. International Journal of Business and Management **8(16).** https://doi.org/10.5539/ijbm.v8n16p41

Oreski D. 2012. Strategy development by using SWOT-AHP. Technology, Education, Management Journal **1**, 283–291.

Prayoga MH, Bahri AA, Azis Y, Rahmawati E. 2021. Land suitability evaluation to increase Hiyung cayenne pepper production at Tapin district South Kalimantan Province Doctoral Program of Agriculture Science, Postgraduate Lambung Mangkurat University, International Journal of Biosciences, **6655**, 126–140.

http://dx.doi.org/10.12692/ijb/19.3.126-140

Putaa H, Chachage B, Pasape L, Agron ARIJ.

2022

2019. The role of SWOT analysis and stakeholders characterization towards sustainability of dairy innovation platforms in Lushoto District, Tanzania. **14(6)**, 46–58.

https://innspub.net/ijaar/role-swot-analysisstakeholders-characterization-towards-sustainabilitydairy-innovation-platforms-lushoto-districttanzania/

Purnamawati IGA, Yuniarta GA Herliyani E. 2021. Local Agricultural Products Strategy to Improve Resilience in a New Adaptation Era. Ekuitas: Jurnal Pendidikan Ekonomi **9(1)**, 18.

https://doi.org/10.23887/ekuitas.v9i1.32918

Solangi YA, Tan Q, Mirjat NH, Ali S. 2019. Evaluating the strategies for sustainable energy planning in Pakistan: An integrated SWOT-AHP and Fuzzy-TOPSIS approach. Journal of Cleaner Production **236**, 117655.

https://doi.org/10.1016/j.jclepro.2019.117655

Saaty LT. 1993. Pengambilan Keputusan Bagi Para Pemimpin: Proses Hirarki Analitik untuk Pengambilan Keputusan dalam Situasi yang Kompleks (Seri Manajemen, **134**), PT. Pustaka Binaman Pressindo.

Wang XP, Zhang J, Yang T. 2014. Hybrid SWOT approach for strategic planning and formulation in china worldwide express mail service. Journal of Applied Research and Technology **12(2)**, 230–238. https://doi.org/10.1016/S1665-6423(14)72339-9

Yusuf M, Setiawan NY, Supeni AE. 2020. Decision Support System di Era 4.0 (Cetakan 1). IPB Press.

2._Meidi,_Ahmad,_Yusuf,_Yunani.pdf

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