

Determining strategic decisions for local business sustainability in broiler partnerships

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Abstract. The broiler is one of the diversity of chicken species that has an upward trend in the public's amount of consumption every year. Market uncertainty caused by government policies affects the level of production and the price of the broiler. This is detrimental to the poultry farmers and the partnership industry because the selling price becomes lower than the production cost. The subjects were a random sample of poultry farmers and industry partnerships in a developing country with a high level of broiler consumption. A study was conducted on internal and external factors regarding strategic decisions. The strategy method stages include finding alternatives and framing strategies using the strength, weakness, opportunity, and threats (SWOT) matrix and quantitative strategic planning matrix (QSPM), respectively. The SWOT matrix analyzes the strategies that can be conducted in this case study: market penetration and product development. QSPM explained that the best strategic decisions were an intensive approach to quality animal feed producers, quality management training for poultry farmers and internal company parties, and business diversification for broiler processed products. Apart from preserving biodiversity, hopefully, this study will contribute to food security and improve the local communities' economy.

1. Introduction

Livestock is one of the biodiversity that is beneficial for the welfare of society. One of the popular livestock to breed and eat is chicken. Over time, various types of chicken, including laying, meat-producing/ broilers, and dual-purpose breeds. The broiler is a type of chicken that is very efficiently produced and local livelihoods. In just 6-8 weeks, the broiler can attain a life weight of 1.5-2 kg [1]. Broiler commodity has very potential market prospects as supported by the product characteristics. It can be accepted by all walks of life, lower cholesterol, and lower prices [2, 3]. Also, this commodity is a crucial driver of a national animal protein supply. Thus good business opportunities are more open. There are two business systems for breeding broilers that grow in the community, i.e., standalone and partnership [4].

Standalone is a system of broiler breeding business with capital fully covered by the breeder. Breeders also market their livestock, both live birds and processed meat. In comparison, the partnership system can be explained as broiler chicken farming's cooperation between two parties, namely companies and breeders. General forms of cooperation are companies as the core (poultry shop or factory), which act as providers of poultry production facilities (day old chicks/ DOC, feed, vaccines, and medication), while breeders as plasma. Breeders are responsible for raising the broiler until they are ready for harvest. The basic principle of partnership is mutually beneficial cooperation



because both parties need each other [5]. The core company benefits from poultry production facilities, and partners get capital and credit for poultry production facilities.

More and more broiler breeders have triggered an oversupply of broiler chicken meat. This causes the price of a live bird of broiler to be cheaper than its production cost. To overcome this issue, the government established a policy on reducing and limiting broiler DOC. This policy aims to balance supply so that live birds' prices will not inflict financial loss on broiler breeders. However, this policy forced all broiler chicken farmers to reduce their production capacity. It makes a financial loss, especially with the partnership system, due to lower broiler production capacity, which was not accompanied by a decrease in poultry production facilities.

In contrast to the conservation principle, partnership businesses compete and produce high-quality DOCs through livestock breeding. It is intended that production can survive in the market. This is also to reduce losses caused by the high production cost that exceeds the live bird's price on the market.

Capacity reduction strategy certainly would not be profitable if performed continuously [6]. The uncertainty experienced by this partnership requires a long-term strategy. Several studies have concluded that the proper strategy analysis in decision-making effectively help business sustainability and meet changing market needs [7-10]. Therefore, in this study, a strategy analysis was conducted by reviewing all internal and external aspects. This study is expected to contribute to supporting development goals and conserving broilers as a sustainable resource.

2. Research Method

The strategy is a potential action that can affect the company's future. Many generic strategy alternatives can be chosen for business development, for example, integration, intensive, diversification, and defensive strategies [11]. Strategy management is an approach in formulating, implementing, and evaluating strategic decisions to achieve company goals. In general, it is divided into three stages, namely input, matching, and decision [12, 13].

This study was conducted at one of the broiler chicken partnership businesses in a developing country with an increasing trend of broiler chickens consumption. The production cost that exceeds the selling price and the government policies causes partnership businesses to struggle in continuing their businesses. Determining the proper strategy is expected to help the partnership business in the long run. This study's strategic approaches are analysis of internal and external factors, analysis of strength, weakness, opportunity, and threats (SWOT); and analysis of quantitative strategic planning matrix (QSPM) for stages of input, matching, and decision, respectively.

2.1. Input stage

All information regarding the company's internal and external factors required in formulating strategies is identified in this stage. Using an internal and external factor evaluation matrix can conduct strategy identification [14]. The stage begins by assigning weight and rating/attractiveness score (AS) to the list of critical success factors (CSF) that describe the variables of internal and external factors. The next stage is to calculate the total attractiveness score (TAS) using Equation 1 [15]. The higher score indicates that the company maximizes opportunities and strengths while minimizing its threats and weaknesses [16].

$$TAS = Weight \times AS \quad (1)$$

2.1.1. *Internal factor evaluation (IFE)*. This list is used to evaluate the company's internal factors [17]. Company internal information can be identified from several functionalities, such as management, finance, production, HR, and marketing. These are grouped into company strengths and weaknesses. Strengths are particular competencies that provide a comparative advantage for companies in the market, such as resources, finance, market leadership, etc. On the other hand, weakness is a lack or limitation of available resources and is a barrier to organizational performance.

2.1.2. External factor evaluation (EFE). This list is used to evaluate the company's external factors. External data is collected to analyze matters relating to economic, social, cultural, environmental, political, government, legal, technological, and market competition aspects where the company is located [18]. These are grouped in the opportunities and threats. Opportunities are various things and situations in a company environment that are profitable for the company. In contrast, threats are unfavorable environmental factors in the company and become an obstacle if dissolved, such as the entry of new competitors, slow market growth, changes in regulations, etc.

2.2. Matching stage

This stage identifies several alternative strategies by matching information from the input stage, namely, external and internal factors [19]. The matrix used at this stage is the strengths, weaknesses, opportunities, and threats (SWOT) matrix [20]. It helps decision-makers develop four types of strategies, as shown in Table 1. It consists of an internal factor attractiveness summary (IFAS) and an external factor attractiveness summary (EFAS). IFAS is an arrangement of internal strategic factors of a company, i.e., strengths and weaknesses. In contrast, EFAS is an arrangement of external strategic factors of a company, i.e., opportunities and threats.

Table 1. SWOT matrix.

Factors		Internal factor attractiveness summary (IFAS)	
		Strengths (S)	Weakness (W)
External factor attractiveness summary (EFAS)	Opportunities (O)	SO Strategy (Develop strategies that use strengths to take advantage of opportunities)	WO Strategy (Develop strategies that minimize weaknesses to take advantage of opportunities)
	Threats (T)	ST Strategy (Develop strategies that use strengths to overcome threats)	WT Strategy (Develop strategies that minimize weaknesses and avoid threats)

2.3. Decision Stage

This stage aims to set priorities for alternative strategies objectively using a quantitative strategic planning matrix (QSPM) [21]. The main components of QSPM consist of critical factors, strategic alternatives, weights, AS, TAS, and the sum of TAS (Equation 2). It can generate alternative strategies that can be implemented, but not all of the strategies suggested by the matching stage should be assessed in QSPM [22].

$$\text{Sum of TAS} = \sum \text{TAS}_S + \sum \text{TAS}_W + \sum \text{TAS}_O + \sum \text{TAS}_T \quad (2)$$

3. Results and discussion

3.1. Input stage

This stage plans the strategy after the company's internal and external environmental conditions are known. After the data is collected from observations, discussions, and interviews, internal and external critical success factors (CSF) are generated. These factors are grouped into strengths, weaknesses, opportunities, and threats. Furthermore, the rating and weighting scores are calculated based on discussions with company stakeholders to get TAS of each factor with Equation 1.

The identification results for internal CSF formulate ten strength factors and five weaknesses factors. Examples of strengths and weaknesses CSFs are the access and trust of various factories of poultry production facilities and the limitations of the types of products sold (live broiler bird), respectively. As for the results of external CSF, identification formulates five opportunity factors and five threat factors. Examples of opportunities and threats CSFs are the absence of a policy on

importing chicken meat by the government and the many competitors in the same field. A complete list of CSFs is displayed on the internal factor evaluation (IFE) and the external factor evaluation (EFE) matrix (Tables 2 and 3).

In the IFE matrix calculation in Table 2, TAS's total score for the company's internal factors is 3.18. This shows that the company's internal position is quite strong in running a broiler chicken partnership business because it is above the average score, which are 2.5 [23]. However, because it has not yet reached its optimal score, it is expected to continue to make continuous improvements [24]. In this IFE matrix, it is also known that the main factor of the strength of the most influential companies in running their business with a score of 0.60 is the access and trust of various factory poultry production facilities. While the main weakness that has the most significant influence with a score of 0.16 is the limitations of the types of products sold (broiler live bird). Enough internal strength score can focus on the achievement of priority to change the main weaknesses potentially become a new force in advancing the company's business [25].

In the calculation of the EFE matrix in Table 3, the total TAS score for external factors of the company is 2.75. This score is also vital because it is above the mean of the midpoint 2.5. This indicates that the company can take advantage of the opportunities and minimize the threats to formulate its strategy [26]. The opportunity factor that has the most significant influence in the partnership business is chicken meat consumption that continues to increase each year with a score of 0.60. In contrast, the most significant external threat factor is shown by the fluctuating live bird price factor and tends to decrease with a score of 0.45. The company, as one of the perpetrators of the broiler business partnership, cannot regulate external factors. Therefore, companies need to formulate adaptive strategies to policies and uncertain market conditions for their sustainability.

Table 2. IFE matrix of a broiler chicken partnership.

Code	Internal critical success factors	AS	Weight (%)	TAS
A. Strengths (S)				
S1	Access and trust of various poultry production facilities factories	4	0.15	0.60
S2	Varied choices of poultry production facilities	4	0.05	0.20
S3	Affordable prices of poultry production facilities	3	0.05	0.15
S4	Quality and superior products	4	0.10	0.40
S5	Expert team support	3	0.05	0.15
S6	A pioneering business partnership	3	0.05	0.15
S7	Ease of administration in accepting new partners	3	0.05	0.15
S8	Higher bonuses than competitors	3	0.05	0.15
S9	Availability of stock of drugs, feed, and vaccines	4	0.10	0.40
S10	Good reputation among poultry farmer partners	4	0.10	0.40
B. Weaknesses (W)				
W1	Limitations on the types of products sold (live bird)	2	0.08	0.16
W2	The absence of an SOP	2	0.05	0.10
W3	Low levels of employees education	1	0.05	0.05
W4	Partners use traditional methods	2	0.05	0.10
W5	Distance headquarters with distant partners	1	0.02	0.02
Total			1.00	3.18

Table 3. EFE matrix of a broiler chicken partnership.

Code	External critical success factors	AS	Weight (%)	TAS
A. Opportunities (O)				
O1	The absence of chicken meat import policy by the government	3	0.10	0.30
O2	The upward trend in consumption of chicken meat	4	0.15	0.60
O3	Many cafe and restaurant business	3	0.10	0.30
O4	The most efficient and popular breeding model	2	0.10	0.20
O5	Located in an area that has a high selling price	2	0.05	0.10
B. Threats (T)				
T1	A large number of competitors in the same field	3	0.05	0.15
T2	The selling price is volatile and tends to decline	3	0.15	0.45
T3	Inflation	2	0.10	0.20
T4	The competition to get high-quality DOC	2	0.15	0.30
T5	The quality of poultry production facilities is volatile	3	0.05	0.15
Total			1.00	2.75

3.2. Matching stage

The next stage is formulating strategic positions and alternative strategies using the Internal-External (IE) matrix and the SWOT Matrix [27]. The IE matrix determines the appropriate strategy based on the total score from the input stage. The total score of external and internal factors, 3.18 and 2.75, becomes a scale on the vertical (y) and horizontal (x) axes, respectively. The meeting point between the axis formed matrix quadrants occupied with a variety of options strategies that can be conducted by the company. IE matrix developed can be seen in Figure 1.

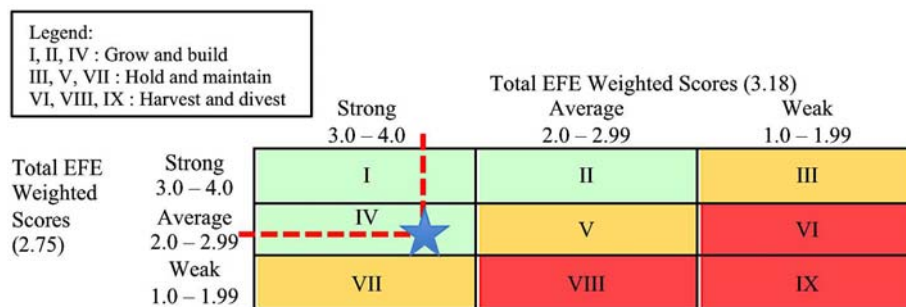
**Figure 1.** Internal and external (IE) matrix of a broiler chicken partnership.

Figure 1 shows that the company's position is in quadrant IV, growing, and building. The primary strategy that can be implemented in this position is market penetration and product development to enhance the strength and take advantage of available opportunities [28]. Furthermore, to generate alternative strategies based on its current position, an analysis using the SWOT matrix (Table 2). The four strategies raised in the SWOT matrix include strength-opportunities (SO), strength-threats (ST), weakness-opportunities (WO), and weakness-threats (WT) strategies [29].

Table 4. SWOT matrix of a broiler chicken partnership.

Factors	Internal	
	Strengths (S)	Weaknesses (W)
External	Opportunities (O) <ol style="list-style-type: none"> Maintain the confidence of poultry production facilities factories by establishing a more professional business system through work guidelines and SOPs (S1, S2, S3, O2, O3) (ST1) Build a marketing team to promote the company to farmers in various regions (S7, S8, S10, O4) (ST2) Promotes the availability of the drug, feed, and vaccine stocks (S9, O4) (ST3) 	<ol style="list-style-type: none"> Create business diversification for other processed chicken products following high demand for chicken meat (W1, O2, O3) (ST6) Make SOP as a reference for employees in working (W1, O2, O4) (ST7) Organize training for the company's internal team to optimize production quality (S3, O2) (ST8)
	Threats (T) <ol style="list-style-type: none"> Take an intensive approach with the trust of poultry production facilities factories to get priority of quality poultry production facilities (S1, S2, T5) (ST4) Expand business by collaborating/ merging with other companies engaged in the same field (S1, S6, S10, O1) (ST5) 	Set up efficiency in production costs (W1, O2, O3) (ST9)

Based on Table 2, nine alternative strategies can be applied in this case study. The nine alternatives are grouped based on the strategic position of the IE Matrix, namely, grow and build. Alternative strategies included in market penetration are ST1, ST4, ST6, ST7, ST8, and ST9. At the same time, alternative strategies included in product development are ST2, ST3, and ST5.

3.3. Decision stage

The last step to obtain the best strategy from alternative strategies is to use a qualitative strategy-planning matrix (QSPM) [30]. The purpose of using this matrix is to determine the attractiveness score (AS) of the strategies that have been built on external and internal factors. AS is obtained through interviews and discussions with company stakeholders. The AS used is 1, 2, 3, and 4, which means it has no traction, low, medium, and high tractions, respectively [31]. After obtaining the AS score of each factor against alternative strategies, the score is multiplied by each strategic factor's weight to get TAS and the sum of TAS (Equation 2). Table 3 displays the QSPM matrix to obtain the best partnership strategy for the company.

Further, the strategy alternatives are selected strategies that have a $TAS > 1.15$. This score is obtained from the average TAS [32]. The number of TAS for each alternative strategy is divided into nine: the number of alternative strategies available. Based on the calculation results, alternative strategies that have a $TAS > 1.15$ are three alternative strategies. The alternative strategies chosen to start from the biggest TAS are ST4, ST8, and ST6.

ST4 maintains poultry production facilities factories' confidence by establishing a more professional business system through work guidelines and SOPs. Based on the TAS calculation, ST4 gets the highest score of 2.15. Action plans that can be carried out by companies following this

strategy include maintaining cash flow so that it is no overdue on payments and maintaining good relations with factory sales representatives.

ST8 is training for internal teams to optimize production quality. This strategy is in second place with a TAS of 1.80. The action plan that the company can undertake by this strategy is to include an internal team at a seminar on broiler chicken farming and invite a team of experts from the factory to provide counseling and training for the internal team.

ST6 is a diversifying business producing live birds and other products, such as carcasses, frozen food, and others under the high demand for chicken meat. This strategy is in third place with a TAS of 1.35. Action plans that can be taken for this strategy are, for example, learning how to make carcass products, recognizing the market needs for marketing carcass products, and attending workshops on how to make frozen food.

4. Conclusions

The uncertainty experienced by a company requires a long-term strategy to maintain its business's sustainability, one of which is in the partnership business. Based on this study's results, we propose a strategy analysis conducted in three stages, i.e., input, matching, and decision stages using IFE-EFE Matrix, IE and Swot Matrix, and QSPM, respectively.

The resulting strategy is arranged for the company's position analyzed based on the company's internal and external factors. The results pointed to the company were in a position of growth and built, so the main strategies proposed were product development and market penetration. Alternatives for each of these strategies are raised to choose the best alternative strategy. Based on the analysis using QSPM at the decision stage, three best alternatives were obtained for the partnership effort. They are using the factory's trust in the company to get quality poultry production facilities, provide training for internal teams to optimize production quality, and diversify businesses for other processed chicken products.

This study contributes to enriching the references regarding decision-making and strategy analysis in companies with high uncertainty, e.g., due to the environment. It is also expected that with the proper strategy, proposals can escalate company productivity and profitability and achieve business sustainability. Future studies should investigate not only internal and external companies but also the entire supply chain. Applications using different methods can also be compared to determine more efficient decision-making steps.

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Table 5. QSPM of a broiler chicken partnership.

Key Factors	Weight	Strategic Alternatives																			
		ST1		ST2		ST3		ST4		ST5		ST6		ST7		ST8		ST9			
		AS	TAS	AS	TAS	AS	TAS	AS	TAS	AS	TAS	AS	TAS	AS	TAS	AS	TAS	AS	TAS		
S	S1	0.15	4	0.60	-	-	-	-	4	0.60	-	-	-	-	-	-	-	-	-	-	
	S2	0.05	-	-	3	0.15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	S3	0.05	-	-	3	0.15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	S4	0.10	-	-	3	0.30	-	-	4	0.40	-	-	-	-	-	-	-	-	-	-	
	S5	0.05	2	0.10	-	-	-	-	-	-	-	-	-	-	-	4	0.20	-	-	-	
	S6	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	S7	0.05	-	-	4	0.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	S8	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	S9	0.10	-	-	-	-	4	0.40	-	-	-	-	-	-	-	-	-	-	-	-	
	S10	0.10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
W	W1	0.08	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	W2	0.05	-	-	-	-	-	-	-	-	-	-	-	4	0.20	-	-	-	-	-	
	W3	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	4	0.20	-	-	-	
	W4	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	0.20	-	-	
	W5	0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
O	O1	0.08	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	O2	0.05	-	-	-	2	0.10	-	-	3	0.15	4	0.20	-	-	-	-	-	-	-	
	O3	0.05	-	-	-	-	-	-	-	-	4	0.20	-	-	-	-	-	-	-	-	
	O4	0.05	3	0.15	-	-	3	0.15	3	0.15	-	-	-	-	-	-	-	-	2	0.10	
	O5	0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
T	T1	0.05	4	0.20	4	0.20	-	-	4	0.20	-	-	4	0.20	2	0.10	4	0.40	-	-	
	T2	0.15	-	-	-	-	-	-	-	-	4	0.60	-	-	-	-	-	-	4	0.60	
	T3	0.10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	0.40	
	T4	0.15	-	-	-	-	-	-	4	0.60	3	0.45	-	-	2	0.30	4	0.60	-	-	
	T5	0.05	-	-	-	-	-	-	4	0.20	-	-	3	0.15	-	-	4	0.20	-	-	
Sum of TAS		1.05		1.00		0.65		2.15		0.70		1.35		0.60		1.80		1.10			

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