



Formulation of Chicken Egg Marketing Strategy



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Abstract

The laying chicken farming sector is an important sector because from this sector some animal protein needs for humans are met. The success of a layer farm is largely determined by marketing. Judging from the footsteps of livestock farming, it appears that older farmers have experienced several problems in animal husbandry, such as the 1997 monetary crisis, the outbreak of bird flu in late 2003, the fluctuation of corn prices in 2015. These conditions, many businesses closed farms. Even though there have been several problems with livestock, it turns out that some farms can still survive today, so it is necessary to conduct research on how to formulate an egg marketing strategy? This study took place in Karangasem Regency, Bali Province. Research data obtained from questionnaires and observations. Data analysis uses SWOT analysis techniques (strength, weakness, opportunity, and threat). The results of the study are expected to provide farmers with information about the formulation of egg marketing strategies so that their farms can still run. The results showed that to maintain the sustainability of animal husbandry, farmers had to do a turnaround strategy that is to minimize existing weaknesses. The method can be followed by following training on good and proper animal husbandry techniques, utilizing distributors of drugs and vaccines, seeking access to feed mills, promoting / finding customers, maximizing the use of technology, using the services of financial institutions and becoming its customers, using the services of animal husbandry experts, treat the waste, and improve the work ethic of its human resources.

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1 Introduction

The laying hen's sector is an important sector because from this sector some of the animal protein needs for humans are met, namely eggs and meat (Mohammed *et al.*, 2013). Therefore, the layer chicken farming sector must be handled seriously, so that it can provide benefits in accordance with human needs. The success of a laying hen is largely determined by marketing (Mohammed *et al.*, 2013).

The main production from laying hens is eggs, while the meat is a side product in the form of rejected chicken. Rejected chickens are old chickens around 100 weeks old and their production is not economically profitable (Hendrik, 2011). Eggs contain essential amino acids and high animal protein values. Only fish protein is equivalent to eggs, but egg protein turns out to be superior as a source of amino acids for humans. The egg protein content is 12.80 percent (Anggorodi, 1979). For this reason laying chicken farms need to be developed.

The development of laying hens is not only an effort to meet animal food needs, it also has promising future business prospects and is able to expand employment so that it will increase income for the community (Hidayati, 2017; Rahmawati *et al.*, 2016; Saputro *et al.*, 2016; Udayana, 2017). Based on the statement, it means that the potential for laying hens in Karangasem Regency is very large, for this reason, a management system is demanded to be more careful in determining its business strategy, because strategy is crucial for the success of a company (Hadiwidjaja & Dharmayanti, 2014). However, a number of challenges can hamper business and cause losses. Various constraints experienced by laying hens are weak maintenance management, fluctuations in product prices, fluctuations in production facilities, there is no certainty when selling products, low business margins, and production facilities that are still dependent on imports. In addition to the challenges and obstacles mentioned above, there are other factors, namely capital factors, disease factors such as avian influenza, imbalances in animal feed and egg prices, and high market competition. Even though there are challenges and obstacles as mentioned above, breeders must be very clever in looking for strategies in controlling their chicken farming business.

Judging from the footsteps of livestock farming, it appears that older farmers have experienced several problems in animal husbandry, such as the 1997 monetary crisis, the outbreak of bird flu in late 2003, the fluctuation of corn prices in 2015. These conditions, many businesses closed farms. Based on the results of an interview with I Nengah Simpen (2019), an academician and practitioner of animal husbandry said that due to the 1997 monetary crisis all smallholder farmers had a population of less than 10,000, while farmers with populations above 10,000 were uncertain. Likewise with the occurrence of bird flu cases in Bali from November 2003 to January 2004, hundreds of thousands of chickens died from bird flu (Liputan 6 News, January 25, 2004) which resulted in the collapse of the chicken farming sector in animal husbandry centers. The suffering of farmers has not ended, in 2015 there was a corn crisis that resulted in corn prices soaring to Rp. 7,500 / kg which results in an imbalance between the price of feed and the price of eggs, so that many farmers also close. Even though there have been several problems in animal husbandry, but laying hens in this area can still survive until now. Based on the situation of laying hens as such, it is necessary to conduct research on how to formulate an egg marketing strategy so that the farm still survives as it is now. The marketing strategy formulation is based on a thorough analysis of the influence of external and internal environmental factors of the company (Mongay, 2006; Okeudo & Margaret, 2013; Wibowo *et al.*, 2015; Ghosh, 2017). This research took place in Karangasem Regency. The results of this study will be expected to provide information to farmers about the formulation of egg marketing strategies so that the farm can still run.

2 Materials and Methods

Research design

The running of a laying hens business is largely determined by marketing. Factors that influence marketing are internal factors and external factors (Khotimah *et al.*, 2018). Laying chicken companies that have been repeatedly hit by problems, but still stand, certainly, have a strategy in marketing their products. Analysis of internal factors and external factors can give an idea of how the marketing strategy of livestock products (eggs). These two factors will be sought by distributing questionnaires. Internal analysis is to determine the factors that become strengths and the factors that become business weaknesses. Furthermore, these internal factors will be analyzed using the IFE (Internal Factor Evaluation) matrix. Likewise, external factors, these factors can become opportunities (opportunities) and threats (threats). The external factors will then be analyzed using the EFE (External Factor Evolution) matrix. Based on the SWOT analysis, it is expected to formulate an egg marketing strategy. The research design can be described as follows.

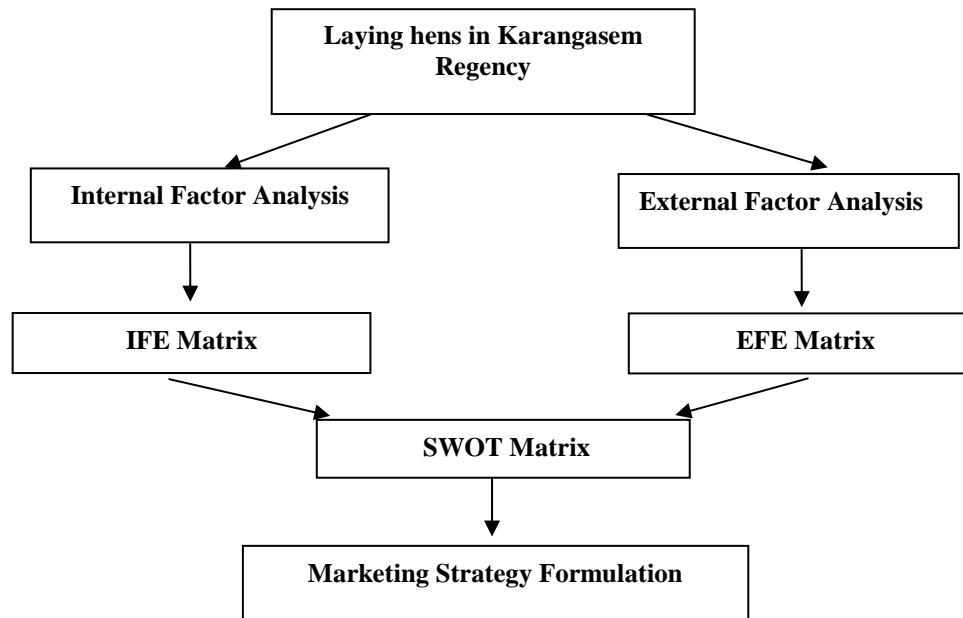


Figure 1. Research design
Source: (Nourlette & Hati, 2017)

Research location

The research was conducted in Karangasem Regency, Bali Province. Based on data from the Karangasem Regency Agriculture Office, there are many laying hens in this place (Pemerintah Kabupaten Karangasem, 2014).

Research subjects and objects

The subjects of this research were laying hens in Karangasem Regency. The object of this research is the strength, weakness, opportunity and threat variables.

Research variables

This study uses a SWOT analysis (Strength, Weakness, Opportunity, and Threat), so that the variables needed are all strengths, weaknesses, opportunities, and threats that exist in laying hens in Karangasem Regency, but ten variables are considered priorities. The priority SWOT variables and indicator variables can be seen in Table 1.

Table 1
SWOT Research Instruments

No.	Factor	Variable	Definition of Variable Operations	Variable Indicator
1	Internal	Strength	All the advantages possessed by livestock	<ol style="list-style-type: none"> 1. The existence of a professional workforce. 2. The existence of a cage building. 3. The existence of a warehouse building. 4. The knowledge to maintain laying hens. 5. There is a good relationship with the egg distributor. 6. There is a good relationship with the distributors of drugs and vaccines. 7. There is a good relationship with the feed mill.

			Opportunity	Every opportunity can benefit the farm	<ol style="list-style-type: none"> 8. There is good trust in the eyes of financial institutions. 9. There is an adequate source of water. 10. There is an adequate electricity network 1. Market demand for chicken eggs is quite high 2. There is access to communication and transportation. 3. Community awareness of nutritional needs 4. There is an agreement from the environment to raise chickens 5. The distribution of corn and bran. 6. There is access to concentrate and ready-to-feed factories 7. Access to drug and vaccine factories 8. There is access to financial services. 9. Access to expert livestock services. 10. Availability of labor
2	Exsternal	Threat		All deficiencies that can hinder the performance of livestock.	<ol style="list-style-type: none"> 1. There are fluctuations in the price of corn and bran. 2. There are fluctuations in the price of concentrate and ready-made feed. 3. The existence of fluctuations in egg prices. 4. The existence of new breeders. 5. Customers who are not on time for payment 6. Customers are selective about egg quality. 7. Chicken farms often experience disease problems. 8. Complaints from the environment if the farm is disturbing. 9. Difficult labor regeneration. 10. Provision of funds for loan repayments

Source: [Widyantara & Ardani \(2017\)](#)

Types and data sources

The type of data used is quantitative data and qualitative data. Quantitative data includes the number of respondents, the age of respondents, the number of production and the number of chicken populations. Qualitative data includes respondents' opinions on statements regarding strength analysis (strength), weakness (Weakness), opportunity (Opportunity) and threats (Threat). Both types of data are taken by giving questionnaires, observing and from institutions related to this research such as the Central Statistics Agency (BPS), the Karangasem Regency Agriculture Office, suppliers, scientific articles and electronic articles related to research, results of recording activities on farms, in the form of egg sales, and the amount of production.

Research instruments

The instrument used in data collection was a questionnaire and an observation guide sheet. Both the questionnaire and the observation guidelines use the Linkert Scale on a scale of 1 - 5. Respondents or observers fill in the answer column according to the indicator variable requested.

Population and sample

The population in this study is breeders who have a minimum installed capacity of 2000 birds. After the initial study, 66 people were eligible to be sampled, so this study used a non-probability sample system.

Data collection methods

Data collection using questionnaires and observation methods. The questionnaire method was carried out by giving questionnaires directly to respondents. The observation was carried out by making direct observations to the location including the activities of laying hens, egg trading activities, and noting the things needed for research using observation guidelines.

Data analysis method

Data analysis using SWOT analysis. In the SWOT analysis, the calculation matrix for internal factors is the IFE (Internal Factor Evaluation) matrix and the calculation matrix for external factors is the EFE (External Factor Evaluation) matrix (Rahmayati, 2015). Internal and external variable values are obtained based on questionnaires distributed and observations made. The steps taken in the SWOT analysis are as follows:

1) Variable indicator value

Questionnaire data and observation data are tabulated, then calculated for the average value between the questionnaire value and the observation value for each indicator variable with the following equation:

$$\text{Variable indicator value} = (\text{questionnaire value} + \text{observation value}) / 2 \quad (1)$$

2) Calculate weights, ratings, and scores

The weight of each indicator variable is calculated by the equation:

IFAS weights and EFAS weights are calculated by the equation (Rangkuti, 2004):

$$\text{Weight IFAS} = \frac{I}{(S+W)} \quad (\text{for S and W}) \quad (2)$$

$$\text{Weight EFAS} = \frac{E}{(O+T)} \quad (\text{for O and T}) \quad (3)$$

Note:

I = Value of the internal indicator variable

E = Value of the external indicator variable

S = Number of values of the strength indicator variable

W = Number of weaknesses indicator variable values

O = Number of values of the opportunity indicator variable

T = Total value of threat indicator variables

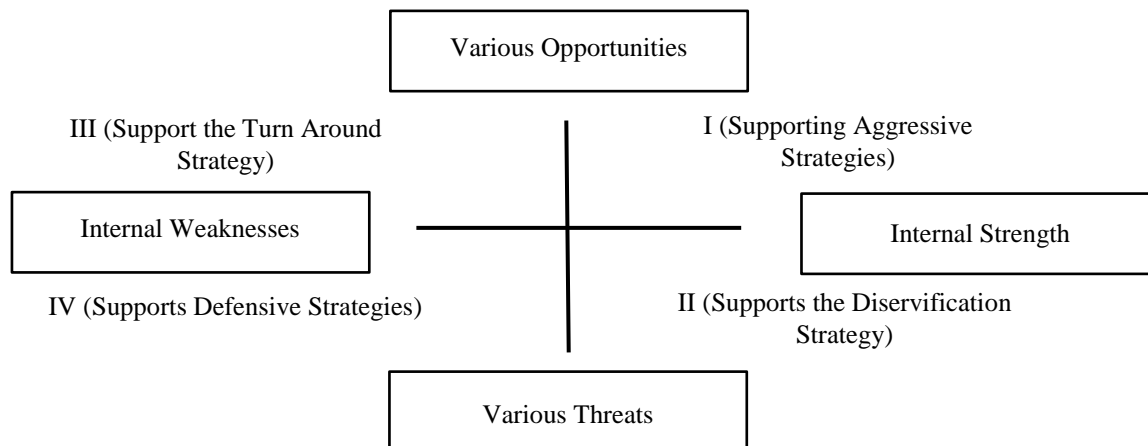


Figure 2. SWOT analysis diagram

Source: Nourlette & Hati (2017)

If the company is in quadrant I, then the company experiences a very favorable situation. The company has opportunities and strengths so that they can take advantage of existing opportunities. The strategy that must be applied in this condition is to support an aggressive growth policy. (Growth-Oriented Strategy). If the company is in quadrant II, then even though the company faces various threats, this company still has internal strength. The strategy that must be applied is to use power to take advantage of long-term opportunities by means of a diversification strategy (product/service). If the company is in quadrant III, then the company faces a huge market opportunity, but on the other hand, it faces some internal obstacles or weaknesses. The focus of the company is to minimize the company's internal problems so as to seize better market opportunities. In this quadrant, the company applies a turn around strategy. Turn around is a reversal of the company's direction from performance degradation. A successful turnaround is a complex process that includes a combination of environmental factors, internal resources, relevant corporate strategies at various stages of performance decline, which results in improved financial performance. Companies need effective strategies to achieve recovery or success in turn around (Lestari & Triani, 2018). If the company is in quadrant IV, the company experiences a very unfavorable situation, the company faces various internal threats and weaknesses.

Analyzing the influence of variables

To find out how much influence each variable has on chicken egg marketing, an analysis of the influence of variable indicators is performed. The effect criteria for each indicator variable are categorized as follows:

Table 2
Effect of Variable Indicator

No.	Score Range	Contribution	Criteria
1	< (Mean - 1 SD)	Low	Little influential
2	(Mean - 1 SD) - (Mean + 1 SD)	Medium	Take effect
3	> (Mean + 1 SD)	High	Very influential

Source: Widyanthi & Sukaatmadja (2013)

3 Results and Discussions

3.1 General description of research sites

Karangasem Regency is a regency located at the eastern end of the Bali island with its capital in Amlapura, having the following boundaries (Pemerintah Kabupaten Karangasem, 2009):

- a) North side : Bali Sea
- b) Southern Side : Indonesian Ocean
- c) West side : Klungkung, Bangli and Buleleng Regencies
- d) East side : Lombok Strait

Karangasem Regency has a very varied topography, in the form of plains, hills, mountains (including Mount Agung). Karangasem has a beach with a length of 87 km. Administratively, Karangasem Regency (in 2009) consists of 8 districts, with 78 villages / *kelurahan* (75 definitive villages, 3 *kelurahan*), 532 *banjar dinas*, 52 neighborhoods. Traditionally, Karangasem Regency consists of 189 traditional villages with 605 traditional *banjar*.

3.2 Characteristics of respondents

Respondents in this research were all breeders in Karangasem Regency had a minimum installed capacity of 2000 birds. There are 66 breeders. The demographic characteristics of the breeders are as follows:

Table 3
Demographic Characteristics of Respondents

Characteristics of Respondents	Classification	Amount	Percentage (%)
Sex	Male	62	0,94
	Famale	4	0,06
Amount		66	100%
Age (Years)	21-30	1	0,02
	31-40	6	0,09
	41-50	33	0,50
	51-60	20	0,30
	> 60	6	0,09
	Amount		66
Level of education	did not finish	3	0,05
	Primary School	15	0,23
	Junior High School	17	0,26
	Senior High School	26	0,39
	Vocational High	-	
	School	-	
	Diploma	-	
	S1	5	0,08
S2	-		
S3	-		
Amount		66	100%

Source: Tabulated Data, 2019

3.3 Variable assessment results

The value of each indicator variable is obtained based on the distribution of the questionnaire and the results of observations. Based on these two assessments, the mean value of each indicator variable calculated by equation (1) is obtained, the results are presented in the following table.

Table 4
Mean value of indicator variables based on questionnaire and observation results

Factor	Variable	No.	Variable Indicator	Questionnaire Value	Observation Value	Value Mean Variable Indicator
Internal	Strength	1	The existence of a professional workforce.	187	190	188,5
		2	The existence of a cage building.	291	294	292,5
		3	The existence of a warehouse building.	253	258	255,5
		4	The knowledge to maintain laying hens.	183	189	186
		5	There is a good relationship with the egg distributor.	237	239	238
		6	There is a good relationship with the distributors of drugs and vaccines.	207	210	208,5
		7	There is a good relationship with the feed mill.	203	204	203,5
		8	There is good trust in the eyes of financial institutions.	215	217	216

		9	There is an adequate source of water.	308	313	310,5
		10	There is an adequate electricity network	318	318	318
		1	Chicken farms do not yet have a neat company activity report.	235	237	236
		2	The process of producing chicken eggs has not been efficient.	251	252	251,5
		3	Promotion of chicken farming has not been maximized	290	292	291
		4	Laying hens has not yet maximized the existing technology	259	266	262,5
	Weakness	5	Not yet maximizing the services of financial institutions	206	205	205,5
		6	Not to maximize the services of animal husbandry experts	237	240	238,5
		7	Not yet able to process waste	290	299	294,5
		8	Can not produce its own concentrate	314	330	322
		9	Cannot determine market price	314	330	322
		10	Low human resources	232	232	232
		1	Market demand for chicken eggs is quite high	261	256	258,5
		2	There is access to communication and transportation.	273	276	274,5
		3	Community awareness of nutritional needs	256	257	256,5
		4	There is an agreement from the environment to raise chickens	240	241	240,5
External	Opportunity	5	The distribution of corn and bran.	264	269	266,5
		6	There is access to concentrate and ready-to-feed factories	205	212	208,5
		7	Access to drug and vaccine factories	199	201	200
		8	There is access to financial services.	214	214	214
		9	Access to expert livestock services.	174	181	177,5
		10	Availability of labor	232	234	233
		1	There are fluctuations in the price of corn and bran.	245	248	246,5
		2	There are fluctuations in the price of concentrate and ready-made feed.	247	248	247,5
		3	The existence of fluctuations in egg prices.	224	228	226
		4	The existence of new breeders.	123	123	123
		5	Customers who are not on time for payment	207	214	210,5
External	Threat	6	Customers are selective about egg quality.	221	227	224
		7	Chicken farms often experience disease problems.	257	257	257
		8	Complaints from the environment if the farm is disturbing.	135	131	133
		9	Difficult labor regeneration.	240	242	241
		10	Provision of funds for loan repayments	219	217	218

Source: Calculated Data, 2019

3.4 Data analysis

a) Calculated weights, ratings and scores of each indicator of internal variables

Based on the data obtained, we can find the weight, rating, and score of each indicator of internal variables calculated by equations (2), (3) and (5). The results of the calculations are presented in the following table.

Table 5
Weights, ratings, and scores of internal strategic environmental

Variable	No.	Internal Variable Indicator	Weight	Weight (%)	Rating	Score	Score (%)
Strength	1	There is an adequate electricity network.	0,0635	6,35	4,8788	0,3021	16,67
	2	Availability of adequate water sources.	0,0635	6,35	4,8788	0,2880	15,89
	3	The existence of a cage building.	0,0627	6,27	4,8182	0,2556	14,10
	4	The existence of a warehouse building.	0,0612	6,12	4,7045	0,1950	10,76
	5	There is a good relationship with the egg distributor.	0,0581	5,81	4,4621	0,1692	9,34
	6	There is good trust in the eyes of financial institutions.	0,0577	5,77	4,4318	0,1394	7,69
	7	There is a good relationship with the distributors of drugs and vaccines.	0,0574	5,74	4,4091	0,1299	7,17
	8	There is a good relationship with the feed mill (concentrate and ready feed).	0,0517	5,17	3,9773	0,1237	6,83
	9	The existence of a professional workforce.	0,0504	5,04	3,8712	0,1061	5,86
	10	The knowledge to keep laying hens.	0,0496	4,96	3,8106	0,1033	5,70
Weakness	11	Amount Can not produce their own concentrate.	0,0470	4,70	3,6136	0,3097	14,41
	12	Cannot determine market price.	0,0469	4,69	3,6061	0,3097	14,41
	13	Not yet able to process waste.	0,0465	4,65	3,5758	0,2591	12,05
	14	Promotion of chicken farming has not been maximized.	0,0457	4,57	3,5152	0,2529	11,77
	15	Laying chicken farms have not maximized the existing technology.	0,0426	4,26	3,2727	0,2058	9,58
	16	Chicken egg production process is not efficient.	0,0411	4,11	3,1591	0,1889	8,79
	17	Not yet utilizing the services of animal husbandry experts.	0,0405	4,05	3,1136	0,1699	7,91
	18	Chicken farms don't yet have a neat company activity report	0,0401	4,01	3,0833	0,1664	7,74
	19	Low human resources.	0,0372	3,72	2,8561	0,1608	7,48
	20	Amount Not yet utilizing the services of financial	0,0367	3,67	2,8182	0,1261	5,87
		Amount	1	100		2,1494	100

Source: Calculated Data, 2019

b) Calculated weights, ratings and scores of each indicator of external variables

The weights, ratings, and scores of each indicator of external variables are calculated by equations (2), (4) and (5). The results of the calculations are presented in the following table.

Table 6
Weights, Ratings and External Strategic Environmental Scores

Variable	No.	External Variable Indicator	Weight	Weight (%)	Rating	Score	Score (%)
Opportunity	1	Access to communication and transportation.	0,0616	6,16	4,1591	0,2562	13,65
	2	The distribution of corn and bran.	0,0598	5,98	4,0379	0,2415	12,87
	3	Market demand for chicken eggs is quite high.	0,0580	5,80	3,9167	0,2272	12,11
	4	Public awareness of nutritional needs.	0,0577	5,77	3,8939	0,2237	11,92
	5	There is an agreement from the environment to raise chickens.	0,0576	5,76	3,8864	0,1967	10,48
	6	Availability of labor.	0,0555	5,55	3,7500	0,1846	9,84
	7	Access to financial services.	0,0553	5,53	3,7348	0,1557	8,30
	8	Access to concentrate and ready-to-feed factories.	0,0541	5,41	3,6515	0,1478	7,88
	9	Access to drug and vaccine factories.	0,0540	5,40	3,6439	0,1360	7,25
	10	Access to expert livestock services.	0,0523	5,23	3,5303	0,1071	5,71
Threat		Amount				1,8766	100
	11	Chicken farms often experience disease problems.	0,0507	5,07	3,4242	0,2246	13,99
	12	Fluctuations in the price of concentrate and finished feed.	0,0503	5,03	3,3939	0,2083	12,98
	13	Fluctuations in corn and bran prices.	0,0489	4,89	3,3030	0,2066	12,87
	14	Difficult labor regeneration	0,0480	4,80	3,2424	0,1975	12,30
	15	Fluctuations in egg prices.	0,0472	4,72	3,1894	0,1737	10,82
	16	Customers who are selective about egg quality.	0,0468	4,68	3,1591	0,1706	10,63
	17	Provision of funds for loan repayment.	0,0449	4,49	3,0303	0,1616	10,07
	18	Customers who are not on time for payment.	0,0398	3,98	2,6894	0,1507	9,39
	19	Complaints from the environment if the farm disturbs.	0,0298	2,98	2,0152	0,0601	3,75
20	New breeders.	0,0276	2,76	1,8636	0,0514	3,20	
	Amount	1	100		1,6051	100	

Source: Calculated data, 2019

3.5 Discussion

a) Assessment of internal variable indicators

Table 5 shows that the internal strength factor has a score of 1.8122 while the internal weakness factor has a score of 2.1494. This means that chicken farms in Karangasem Regency are in a weak position, (weakness score is greater than strength score, $2.1494 > 1.8122$).

b) Rating of external variable indicators

Table 6 shows that the external opportunity factor has a score of 1.8766 while the external weakness factor has a score of 1.6051. This means that chicken farms in Karangasem Regency have opportunities, (the probability score is greater than the threat score, $1.8766 > 1.6051$).

c) Determine the business position of laying hens in the Karangasem Regency

Based on calculations in Table 5 and Table 6, it appears that internal and external factors for animal husbandry in Karangasem Regency have a strength variable score (S) 1.8122, a weakness variable score (W) 2.1494, a probability variable score (O) 1, 8766, and the threat variable score (T) 1.6051, so that the business position for animal husbandry in Karangasem Regency is obtained as follows:

$$\text{Strength-weakness assessment} = \text{strength score (S)} - \text{weakness score (W)} \dots (4)$$

$$= 1.8122 - 2.1494 = -0.33372$$

$$\text{Opportunity-threat assessment} = \text{opportunity score (O)} - \text{threat score (T)} \dots (5)$$

$$= 1.8766 - 1.6095 = 0.2671$$

The above value is entered into the SWOT analysis diagram so that the chicken farm in Karangasem Regency is in the position as in Figure 3, which is in quadrant III.

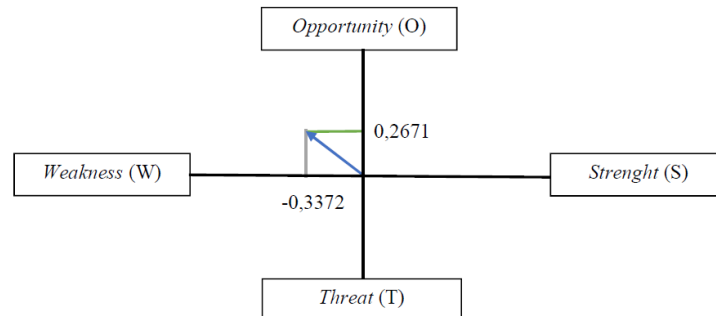


Figure 3. SWOT Analysis Diagram on Laying Chicken Farms in Karangasem Regency

d) Analysis of each variable

Based on Table 5 and Table 6, it can be made an analysis table for each variable in laying hens in Karangasem Regency as presented in Table 7, Table 8, Table 9 and Table 10. Based on this table, the contribution of each variable can be seen.

Table 7
Strength Variables Analysis

Factor	Variable	No.	Variable Indicator	Score	Score (%)	Contribution	Criteria
Internal	Strength	1	The existence of a professional workforce.	0,1061	5,86	Medium	Take effect
		2	The existence of a cage building.	0,2556	14,10	Medium	Take effect
		3	The existence of a warehouse building.	0,1950	10,76	Medium	Take effect
		4	The knowledge to maintain laying hens.	0,1033	5,70	Low	Little influential
		5	There is a good relationship with the egg distributor.	0,1692	9,34	Medium	Take effect
		6	There is a good relationship with the distributors of drugs and vaccines.	0,1299	7,17	Medium	Take effect
		7	There is a good relationship with the feed mill.	0,1237	6,83	Medium	Take effect

	8	There is good trust in the eyes of financial institutions.	0,1394	7,69	Medium	Take effect
	9	There is an adequate source of water.	0,2880	15,89	Hight	Very influential
	10	There is an adequate electricity network	0,3021	16,67	Hight	Very influential
Mean=0,1812	SD = 0,0755	Amount	1,8122	100		

Tabel 8
Weakness variable analysis

Factor	Variable	No.	Variable Indicator	Score	Score (%)	Kontribution	Criteria
		1	Chicken farms do not yet have a neat company activity report.	0,1664	7,74	Medium	Take effect
		2	The process of producing chicken eggs has not been efficient.	0,1889	8,79	Medium	Take effect
		3	Promotion of chicken farming has not been maximized	0,2529	11,77	Medium	Take effect
		4	Laying hens has not yet maximized the existing technology	0,2058	9,58	Medium	Take effect
Internal	Weakness	5	Not yet maximizing the services of financial institutions	0,1261	5,87	Low	Little influential
		6	Not to maximize the services of animal husbandry experts	0,1699	7,91	Medium	Take effect
		7	Not yet able to process waste	0,2591	12,05	Low	Little influential
		8	Can not produce its own concentrate	0,3097	14,41	Hight	Very influential
		9	Cannot determine market price	0,3097	14,41	Hight	Very influential
		10	Low human resources	0,1608	7,48	Medium	Take effect
Mean=0,2149	SD = 0,0644	Amount	2,1494	100			

Tabel 9
Opportunity Variable Analysis

Factor	Variable	No.	Variable Indicator	Score	Score (%)	Contribution	Criteria
		1	Market demand for chicken eggs is quite high	0,2272	12,11	Medium	Take effect
External	Oppoturnity	2	There is access to communication and transportation.	0,2562	13,65	Hight	Very influential
		3	Community awareness of nutritional needs	0,2237	11,92	Medium	Take effect

4	There is an agreement from the environment to raise chickens	0,1967	10,48	Medium	Take effect
5	The distribution of corn and bran.	0,2415	12,87	Hight	Very influential
6	There is access to concentrate and ready-to-feed factories	0,1478	7,88	Medium	Take effect
7	Access to drug and vaccine factories	0,1360	7,25	Low	Little influential
8	There is access to financial services.	0,1557	8,30	Medium	Take effect
9	Access to expert livestock services.	0,1071	5,71	Low	Little influential
10	Availability of labor	0,1846	9,84	Medium	Take effect
Mean = 0,1623		SD = 0,0761	Amount	1,8766	100

Tabel 10
Threat Variable Analysis

Factor	Variable	No.	Variable Indicator	Score	Score (%)	Contribution	Criteria
External	Threat	1	There are fluctuations in the price of corn and bran.	0,2066	12,87	Medium	Take effect
		2	There are fluctuations in the price of concentrate and ready-made feed.	0,2083	12,98	Medium	Take effect
		3	The existence of fluctuations in egg prices.	0,1737	10,82	Medium	Take effect
		4	The existence of new breeders.	0,0514	3,20	Low	Little influential
		5	Customers who are not on time for payment	0,1507	9,39	Medium	Take effect
		6	Customers are selective about egg quality.	0,1706	10,63	Medium	Take effect
		7	Chicken farms often experience disease problems.	0,2246	13,99	Hight	Very influential
		8	Complaints from the environment if the farm is disturbing.	0,0601	3,75	Low	Little influential
		9	Difficult labor regeneration.	0,1975	12,30	Medium	Take effect
		10	Provision of funds for loan repayments	0,1616	10,07	Medium	Take effect
Mean = 0,1247		SD = 0,0250	Amount	1,6051	100		

e) Determine business strategies for laying hens business in Karangasem Regency

The business strategy of laying hens business is based on a SWOT analysis diagram. Based on the SWOT analysis diagram of Figure 3, it is found that the position of the business is in quadrant III, this means that the farm has a chance, but on the other hand, it faces some internal obstacles or weaknesses, so to be able to survive in the future, it must use a turn around strategy that is a strategy change things. Laying hens in Karangasem Regency can use a variety of strategies including:

In overcoming weaknesses:

- 1) Make a neat farm activity report and digitize it.
- 2) Streamline the production process.
- 3) Maximize promotions or find customers.
- 4) Maximizing the use of technology.
- 5) Using the services of financial institutions and becoming its customers.
- 6) Using the services of an animal husbandry expert i = to minimize chicken deaths due to disease.
- 7) Take care of the waste so as not to pollute the environment.
- 8) Industrial breeders make substitution concentrates, while smallholder farmers unite to get cheap prices.
- 9) Farmers unite to establish livestock cooperatives to be able to determine market prices or sell them in the Village Unit Cooperatives.
- 10) Fostering human resources to be more professional.

In tackling threats:

- 1) Storing corn during the harvest season. However, bran cannot be stocked because it will be damaged quickly.
- 2) Community farmers join to buy prices at the factory. Meanwhile, industrial farmers can buy concentrated raw materials. To maintain quality, it is mixed with a ratio of 50% concentrated manufacturer and 50% concentrated yield alone.
- 3) Maintaining egg quality. For people farmers, they can join in one cooperative.
- 4) Make an invoice and be firm in making the maturity.
- 5) Maintaining egg quality.
- 6) Utilizing the services of animal husbandry experts to find out diseases on their farms quickly.
- 7) Take care that the waste does not pollute the environment.
- 9) Train young workers.
- 10) Farmers must understand the contents of the loan agreement before signing it.

Existing strengths include:

- 1) There is a professional workforce. Based on the answers of 66 respondents, in general, breeders have sufficient labor.
- 2) The existence of a cage building. Based on the answers of 66 respondents, in general breeders have a cage building and the conditions are good because they are regularly serviced every cage break.
- 3) The existence of a warehouse building. Based on the answers of 66 respondents, farmers generally have a warehouse building and the conditions are good.
- 4) There is knowledge to keep laying hens. Based on the answers of 66 respondents, generally the last education of breeders is at the high school level, but it is still qualified to raise chickens.
- 5) There is a good relationship with the egg distributor. Based on the answers of 66 respondents, in general, breeders already have relationships with egg distributors to sell their eggs.
- 6) There is a relationship between farmers and distributors of drugs and vaccines. Based on the answers of 66 respondents, farmers generally do not have access to distributors of medicines and vaccines.
- 7) There is a relationship between breeders and concentrated distributors and finished the feed. Based on the answers of 66 respondents, farmers generally still buy at retailers.
- 8) The relationship between farmers and financial institutions. Based on the answers of 66 respondents, farmers generally have a relationship with financial institutions.
- 9) Availability of water sources. Based on the answers of 66 respondents, all farmers have adequate water sources.
- 10) Electricity networks on farms. Based on the answers of 66 respondents, all farmers have an adequate electricity network.

Weaknesses faced include:

- 1) Laying hens have no neat company activity reports. Based on the answers of 66 respondents, farmers generally have a sales record, but it is still manual.
- 2) The process of producing chicken eggs has not been efficient. Based on the answers of 66 respondents, farmers generally say that the production process is quite wasteful.
- 3) The promotion of the results of laying hens has not been efficient. Based on the answers of 66 respondents, farmers generally only sell it to a few distributors and several local markets.

- 4) Laying chicken farms have not maximized existing technology. Based on the answers of 66 respondents, in general the use of technology by farmers is still traditional.
- 5) It has not utilized the services of financial institutions. Based on the answers of 66 respondents, in general, breeders have used the services of financial institutions.
- 6) Not yet utilizing the services of animal husbandry experts. Based on the answers of 66 respondents, farmers generally do not use the services of animal husbandry experts.
- 7) Not yet able to process waste. Based on the answers of 66 respondents, farmers generally said that their livestock waste was still scattered, but it was anticipated by the farmers.
- 8) It can not produce its own concentrate. Based on the answers of 66 respondents, all farmers could not produce their own concentrate.
- 9) It Can not determine market prices. Based on the answers of 66 respondents, all farmers could not determine the market price.
- 10) Low human resources. Based on the answers of 66 respondents, farmers generally have a fairly low human resource.

Opportunities available include:

- 1) Market demand for chicken eggs is quite high, so that egg production can be absorbed by the market
- 2) Chicken farms have easy, fast and precise communication and transportation access.
- 3) Public awareness of nutritional needs is increasing, thus making consumer demand high.
- 4) An environment that gives permission for livestock, so that the farm can operate without protest from neighbors.
- 5) Smooth distribution of corn and bran, so livestock can continue to produce and can get lower prices.
- 6) There is access to concentrate and ready-made feed factories, so that livestock can continue to produce and can get lower prices.
- 7) There is access to drug and vaccine factories, so that livestock can continue to produce and can get lower prices.
- 8) There is access to financial institution services so that farmers can keep their money in peace.
- 9) There is access to expert livestock services, so breeders can quickly find out the types of diseases that attack laying hens.
- 10) The availability of abundant labor should be able to be recruited for livestock.

Threats faced include:

- 1) There are fluctuations in the price of corn and bran. Based on the answers of 66 respondents, farmers generally feel the effect of fluctuations in the price of corn and bran.
- 2) There are fluctuations in the price of concentrate and finished the feed. Based on the answers of 66 respondents, farmers generally feel the effect of fluctuations in the price of concentrate and finished feed.
- 3) There are fluctuations in egg prices. Based on the answers of 66 respondents, generally felt the effect of egg price fluctuations.
- 4) The existence of new breeders (not the successor to the owner concerned). Based on the answers of 66 respondents, farmers generally did not feel the existence of new farmers.
- 5) Customers who are not on time for payment. Based on the answers of 66 respondents, in general, the customers owe quite a long time but still remember the payment.
- 6) Customers are selective about egg quality. Based on the answers of 66 respondents, customers are generally selective about egg quality, because customers want good egg quality.
- 7) Chicken farms often experience disease problems. Based on the answers of 66 respondents, in general, farmers quite often experience disease problems.
- 8) Complaints from the environment if the farm is disturbing. Based on the answers of 66 respondents, in general, they do not have a problem with the environment because generally the farm first exists and the surrounding environment does not matter.
- 9) Difficult labor regeneration. Based on the answers of 66 respondents, in general, almost have a workforce where almost all of the workforce is old.
- 10) Provision of funds for loan repayments. Based on the answers of 66 respondents, in general, they have almost fewer funds to repay loans.

f) Formulation of marketing strategies

Based on the results of IFE, EFE, IE, and SWOT analysis, it is possible to formulate a strategy carried out by laying hens in terms of internal and external strategic environment. The marketing strategy formulations can be explained as follows:

Opportunities that must be utilized include:

- 1) The market demand for chicken eggs is quite high. Farmers try to meet market demand.
- 2) Availability of communication access and transportation that is easy, fast and precise. Farmers use communication and transportation systems in managing their farms.
- 3) Public awareness of nutritional needs. Farmers participate in promoting nutritional needs and provide an understanding that one of the ingredients to meet nutritional needs.
- 4) There is an agreement from the environment to raise chickens. Farmers participate in maintaining environmental cleanliness.
- 5) The distribution of corn and bran. Breeders take advantage of the distribution of corn and bran, so they get low prices both individually and in groups.
- 6) Access to concentrate and ready-to-feed factories. Breeders take advantage of the distribution of concentrates and ready feed, so they get low prices both individually and in groups.
- 7) Access to medicines and vaccine factories. Farmers utilize the distribution of drugs and vaccines, so they get low prices both individually and in groups.
- 8) There is access to financial services. Farmers can more easily transact and save their money safely.
- 9) There is access to expert livestock services. Animal husbandry expert services to determine the type of disease that attacks laying hens quickly so that it can be given drugs, vaccines or appropriate response.
- 10) Availability of labor. Farmers train workers to carry out their farm activities.

Weaknesses that must be overcome include:

- 1) Animal husbandry doesn't have a neat report on farm activity. Breeders make neat farm activity reports and digitize them.
- 2) The process of producing chicken eggs has not been efficient. Animal husbandry makes the production process efficient.
- 3) The promotion of chicken farming has not been maximized. Breeders maximize promotions or find customers.
- 4) Animal husbandry has not maximized the existing technology. Farmers maximize the use of technology.
- 5) It has not utilized the services of financial institutions. Farmers use the services of financial institutions and become their customers.
- 6) Animal husbandry has not utilized the services of animal husbandry experts. Farmers use the services of animal husbandry experts to minimize chicken deaths due to disease.
- 7) Livestock cannot yet process waste. Farmers maintain their waste so as not to pollute the environment.
- 8) It can not produce its own concentrate. Farmers unite to get prices from the factory.
- 9) It can not determine market prices. Breeders sell it in the Village Unit Cooperative.
- 10) Low human resources. Farmers develop their human resources to be more professional.

g) Research implications

Based on these results the theoretical and practical implications can be stated as follows:

Theoretical implications. The results of this study can be used by academics as a basis for further research. The results of this study can be used by breeders and prospective breeders as a guide in running their farms because running a farm requires separate patience.

Practical implications. The use of marketing strategies can affect the course of livestock. Therefore, farmers should be careful in choosing strategies so that their farms can run well.

4 Conclusion

Based on the analysis of the data in this study, it can be concluded that:

- 1) There are internal and external factors that influence the marketing of chicken eggs in Karangasem Regency. Internal factors such as strength (strength) and weakness (weakness), and external factors (weakness). External factors are opportunities and threats.
- 2) The business position of laying poultry farms in Karangasem Regency is in quadrant III, for those breeders must carry out a turn around strategy which means the breeders must change the conditions on the farm.
- 3) Turn around strategies in laying poultry farms in Karangasem Regency that can be applied include: making neat farm activity reports and digitizing them, streamlining the production process, maximizing promotions or finding customers, maximizing the use of technology, using the services of financial institutions and being its customers to facilitate transactions and save large amounts of money for safety, use the services of animal husbandry experts to minimize chicken deaths due to disease, maintain waste so as not to pollute the environment, and foster human resources to be more professional.

Suggestions that can be given based on the results of the research and conclusions obtained are as follows:

Share further research. Suggestions that can be given to future research is to analyze other SWOT variable indicators on laying hens.

For breeders. Farmers should improve their weaknesses and overcome threats to maintain the continuity of their farms, which is to increase the amount of production, make a neat report of livestock activity, and conduct promotions, and prevent the emergence of various diseases in the farm by regularly spraying the cage, vaccinating, administering drugs and vitamins according to the dose. Farms in Karangasem Regency should use a turn around strategy in order to increase production output.

Conflict of interest statement

The authors declared that they have no competing interests.

Statement of authorship

The authors have a responsibility for the conception and design of the study. The authors have approved the final article.

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