Strategy of Business Development Based on Potential Area of Livestock in Gianyar Regency

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ABSTRACT

The zoning area of livestock based on the diversity of local resources, have relationship and mutually support one others in order to strengthen the economic of rural communities. This study are held in order to provide guidance to develop the area of livestock commodities as prescribed by the Minister of Agriculture Number: 43/Kpts /PD/410/1/, 2015. This study is a survey research, conducted in cattle, pigs, and goats farming in Gianyar. Locations were selected by purposive sampling, and respondents (farmers) are selected by stratified random sampling. Expert respondents are determined by purposive sampling method. This study aims to identify the concept of regional development of livestock commodities in each district based on the potential area, and create strategies to develop livestock business in Gianyar. This study used quantitative and qualitative data, sourced from primary and secondary data. Data were collected by interview using a structured questionnaire, in-depth interviews, observation, study literature and document searches. Data were analyzed by LQ, IE, SWOT, and QSPM analysis. The results of this study are: 1) Pig farming are potential to develop in Payangan (LQ 4.78), Gianyar (LQ 1.41), Tampaksiring (LQ 1.29) and Ubud (LQ 1.09); 2) Cattle farm are potensial to develop in Tegallalang (LQ 6.25), Payangan (LQ 4.41), Tampaksiring (LQ 4.06), Ubud (LQ 2.46), and Blahbatuh (LQ 1.47); 3) Goat farming are potential to develop in Gianyar (LQ 2.46) and Sukawati (LQ 1.47); 4) There are six alternative strategies that can be applied in the development of farming business in Gianyar, namely: a) develop the farming based home industry, b) develop the farming based tourism, c) build a small scale of animal feed factory, d) create an effective and efficient feed formulation to develop productivity of livestock, e) intensify the planting of horticultural which their waste can be used as qualified animal feed, and f) create an agribusiness system based on potential area in order to develop the livestock business in Gianyar; and 5) The priority strategy recommended in this study is create an agribusiness system based on potential area in order to develop the livestock business in Gianyar.

Keywords: Zoning area, Potential area, Alternative strategy, Priority strategy

INTRODUCTION

The Government give a special attention for economic development of rural communities, through competitive and sustainable livestock approaches by optimizing the utilization of local resources. Along by the increasing of population growth, level of community income, and the increasing of public awareness about the importance of animal protein, causing an increase in demand of animal products. This condition prompted the

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government to make efforts to increase livestock production and productivity in accordance its genetic potentials, and development of the superior commodities based on potential livestock areas.

Bali have a *plasma nutfah* Sapi bali, a superior local cattle in Indonesia. Bali cattle breeding have been cultivated since ancient times. In addition to raising cattle, farmers in Bali also have a goats, and pigs. Selection of livestock commodity is naturally affected by local conditions, rice fields areas usually choose a cattle farming, dry areas or plantation areas usually choose a goat farming. The pig farming is almost equally carried out by the Balinese people in rural areas, due to the high demand of pigs for ceremony or daily consumption.

Based on the Decree of the Minister of Agriculture Republic Indonesia No. 43 / Kpts / PD.410 / 1/2015, Gianyar regency has been designated as the development area of pig farms (Ministry of Agriculture Republic Indonesia, 2015). The Government of Gianyar Regency gives an attention to increase the livestock business growth, in order to fulfill the demand of animal products. There are seven sub-districts in Gianyar Regency, namely Blahbatuh, Gianyar, Tegalalang, Payangan, Tampaksiring, Sukawati, and Ubud which have various resources and different regional development appropriations.

To Development of the livestock business, it should be focus to the existing condition of livestock resources in each sub-district, the carrying capacity of forage forage, and then the socio-cultural and economic conditions, by mapping the potential of livestock area. Mapping of the livestock area will estimate the potential of each area to development of livestock commodities. Potential commodities that have been identified, will be the main focus in the development of livestock business in each district. Putri *et al.* (2016) said that the government have to create a strategy based on the potential of each subdistrict in Gianyar Regency, so that the development of livestock business can be programmed and directed well.

MATERIALS AND METHODS

This research was conducted in Gianyar Regency from June to August 2016. The research location was determined based on purposive sampling method, farmer's respondents were determined by stratified random sampling method, and expert respondents were chosen by purposive sampling method based on the research criteria. The research data was obtained by interviews using structured questionnaires, indepth interviews, observation, and literature study.

Location Quotient Analysis (LQ) is used to analyze the potential of livestock development area, whether as a bases or non-bases sector. The LQ method is formulated as follows:

$$LQ = \frac{vi/vt}{Vi/Vt}$$

vi   = population of bali cattle/goats/pigs in sub distric
vt   = population of ruminants/non ruminants in sub distric
Vi   = population of cattle/goats/pigs in Gianyar Regency
Vt   = population of ruminants/non ruminants in Gianyar Regency
Decision criteria:
  1. If the LQ value of sub distric $\geq$ 1, then that sub distric is the bases sector
  2. If the LQ value of sub distric <1, then that sub distric is the non bases sector

The business environment condition is determined by using Internal Factor Evaluation and External Factor Evaluation Factors of strength and weakness of livestock business in

Gianyar regency were analysis using Internal Factor Evaluation, and then Factors of opportunity and threat of livestock business in Gianyar regency were analysis using external Factor Evaluation. Each factor is given a weight and rating that describes its importance. Weights are determination by Paired Comparison (Kinnear and Taylor, 1996), with the following formula:

$$\propto_i = \frac{X_i}{\sum_{i=1}^{n} X_i}$$

α_i = Weight of the variable-i
X_i = Weight of the variable-i
i = 1,2,3…..n
n = Number of factors

According to David (2002) the rating is determined based on the importance of each factor, on a scale of 1 (low/poor), 2 (average), 3 (high/above average), 4 (very high/superior).

Strategic alternatives are determined using the SWOT analysis (Rangkuti, 2002), comparing between internal and external factors, to obtain alternative strategies that maximize Strengths and Opportunities, and minimizing Weaknesses and Threats). QSPM analysis is used to evaluate the alternative strategies based on the attractiveness score of each strategy. Attractiveness score (AS) is determined by examining internal and external factors, and how the role of each factor in the process of selecting the strategy. The AS value are: 1 = uninteresting, 2 = rather interesting, 3 = interesting, 4 = very interesting.

RESULTS AND DISCUSSION

Wilayah Basis Peternakan Babi, Sapi, dan Kambing

Based on the research results, each district in Gianyar Regency has the different potential of livestock development. Based on Location Quotient (LQ) analysis, the basis areas for pig farms development are: Payangan with LQ value 4.78; Gianyar with LQ value 1.41; Tampaksiring with LQ value of 1.29; and Ubud with LQ value 1.09 (Figure 1).

Sub districts that can be developed into bali cattle farming development are: Tegalalang with LQ value 6.25; Payangan with LQ value 4,41; Tampaksiring with LQ value 4.06; Ubud with LQ value 2,46; and Blahbatuh with LQ value 1.47 (Figure 2). Sub districts that can be developed as a base for the development of goat farming are: Gianyar with LQ value 2,46; and Sukawati with LQ value 1.47 (Figure 3).
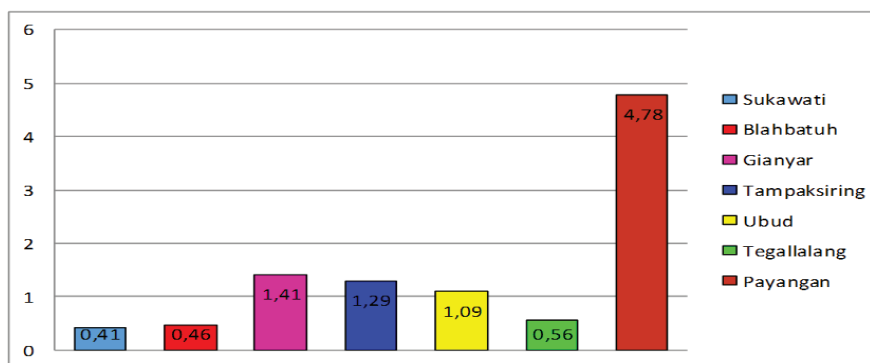

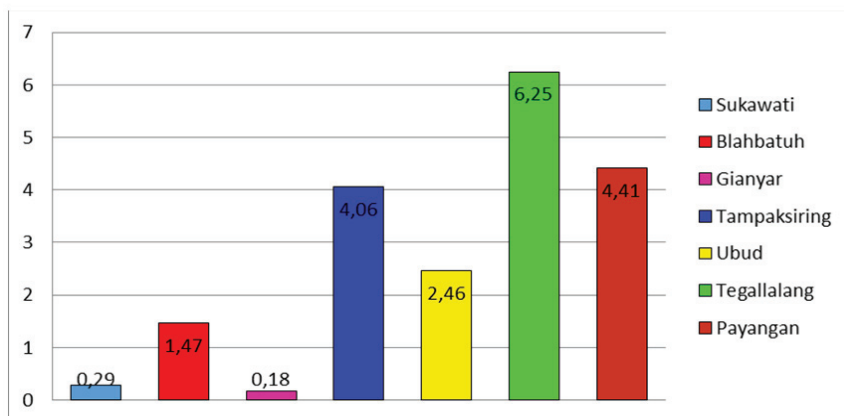**Figure 1.** LQ Analysis Result of Pig Farming in Gianyar Regency

Figure 2. LQ Analysis Result of Bali Cattle Farming in Gianyar Regency
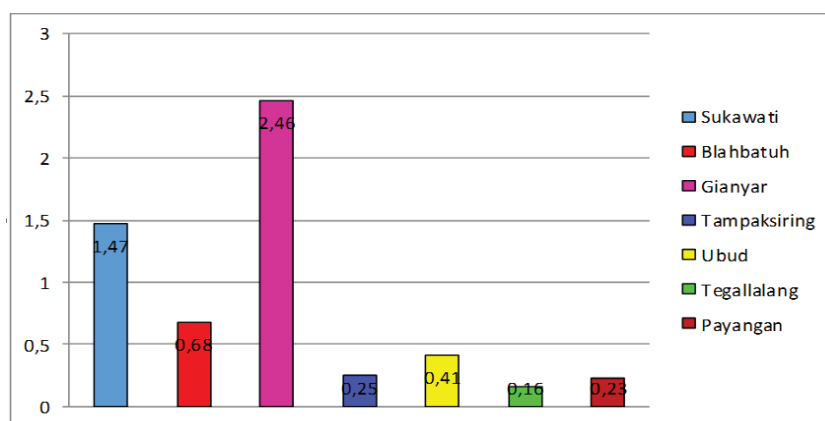

Figure 3. LQ Analysis Result of Goat Farming in Gianyar Regency

The LQ values greater than one indicate that the sub district is a bases area for development of livestock business. For example, Payangan District has a LQ value of pig farms of 4.78, meaning that Payangan District is very potential in the development of pig farm business compared to other livestock business.

Livestock Business Condition in Gianyar Regency

Based on the results of the survey, indepth interviews and literature studies that have been conducted, critical success internal factors of of livestock business development has been analyzed, and than determined the weights and scores (Table 1).

An analysis of the external environment of livestock enterprises in Gianyar Regency is the identification of opportunity and threat factors that are beyond the control of the farmers, but may have an impact on business performance. The success of the business lies in its ability to adapt and adapt in an ever-changing environment, affecting the business strategy to determine how and when it is appropriate to survive and develop. These factors are then weighted and scored (Table 2), furthermore they are arranged into the IE matrix (Figure 2).

The result of internal and external factor analysis that has been obtained, then analysed using IE matrix (Figure 4) to determine the position of livestock business in Gianyar regency.

The existing livestock business in Gianyar Regency is in the second cell within the IE matrix with a total IFE score of 2.58 and a total EFE score of 3.07. The second cell on the IE matrix shows that livestock business activities in Gianyar Regency have high industrial attractiveness, and potential to be developed.

Table 1. Determination of ratings and scores of internal factors

	Weight	Rating	Score
Strengths			
Livestock business has been secured by government / private companies	0.14	3	0.43
Farmers have a good experience	0.14	3	0.43
Business activities of beef cattle farms have become a culture in the community	0.08	4	0.31
The farmers have a high level education	0.08	3	0.23
The animal feed materials are available from agricultural waste and kitchen waste as an alternative animal feed with low prices	0.19	4	0.76
Livestock business is integrated with agricultural and plantation business	0.19	4	0.76
Sub Total			2.92
Weaknesses			
The farmers knowledge of feed processing technolgy are still low	0.12	-2	-0.16
Low application of livestock management	0.01	-2	-0.16
Small business scale	0.06	-1	-0.01
Continuity of product availability is not guaranteed, in terms of quality and quantity	0.01	-1	-0.01
Sub Total			-0.34
TOTAL			2.58

Table 2. Determination of rating and score of external factors

	Weight	Rating	Score
Opportunities			
Market demand continues to increase	0.26	4	1.05
There are supporting from related universities and government	0.17	3	0.50
There are various Government's programs that support the growth of livestock business in Gianyar Regency	0.21	4	0.86
The availability animal feed materials based on agricultural waste are not yet fully utilized	0.21	4	0.86
Sub Total			3.27
Threats			
The high level of diversion of agricultural / livestock as settlement / other industries	0.05	-2	-0.10
The location of the livestock business is in the tourism area	0.05	-1	-0.05
The long dry season reduces the availability of forage	0.05	-1	-0.05
Sub Total			-0.20
TOTAL			3.07

Based on SWOT analysis, there are six alternative strategies that can be applied in the development of farming business in Gianyar, namely: a) develop the farming based home industry, b) develop the farming based tourism, c) build a small scale of animal feed factory, d) create an effective and efficient feed formulation to develop productivity of livestock, e) intensify the planting of horticultural which their waste can be used as qualified animal feed, and f) create an agribusiness system based on potential area in order to develop the livestock business in Gianyar. Based on QSPM analysis (Table 3), the priority strategy is create an agribusiness system based on potential area in order to develop the livestock business in Gianyar with total atractives score 6,24.
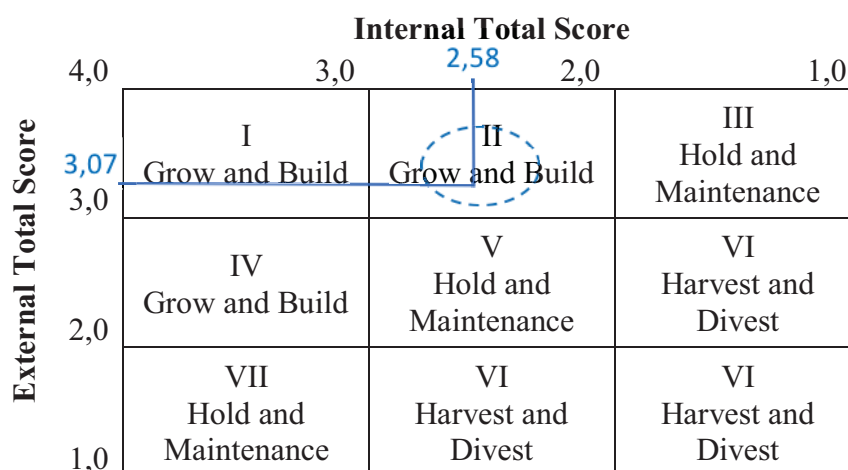
Internal Total Score

Figure 4. Internal – External Matrix

Table 3. Quantitative strategic planning matrix for livestock business development at Gianyar District

Critical Success Factors	Weight	alternative strategy 1		alternative strategy 2		alternative strategy 3		alternative strategy 4		alternative strategy 5		alternative strategy 6	
		AS	TAS	AS	TAS	AS	TAS	AS	TAS	AS	TAS	AS	TAS
Strengths													
S1	0.14	4	0.58	4	0.58	4	0.58	4	0.58	3	0.43	4	0.58
S2	0.14	3	0.43	3	0.43	-	-	-	-	-	-	3	0.43
S3	0.08	2	0.16	4	0.31	-	-	-	-	-	-	2	0.16
S4	0.08	3	0.23	3	0.23	3	0.23	-	-	-	-	3	0.23
S5	0.19	-	-	-	-	-	-	-	-	-	-	3	0.57
S6	0.19	-	-	4	0.76	3	0.57	4	0.76	4	0.76	3	0.57
Weaknesses													
W1	0.08	3	0.23	-	-	-	-	4	0.31	3	0.23	-	-
W2	0.08	3	0.23	-	-	-	-	-	-	-	-	2	0.16
W3	0.01	2	0.02	-	-	-	-	-	-	-	-	2	0.02
W4	0.01	3	0.03	-	-	-	-	3	0.03	3	0.03	3	0.03
Opportunities													
O1	0.26	4	1.05	4	1.05	3	0.79	-	-	2	0.52	4	1.05
O2	0.17	4	0.67	3	0.50	4	0.67	4	0.67	4	0.67	4	0.67
O3	0.21	4	0.86	3	0.64	4	0.86	4	0.86	4	0.86	4	0.86
O4	0.21	-	-	-	-	4	0.86	4	0.86	-	-	3	0.64
Threats													
T1	0.05	-	-	-	-	3	0.14	-	-	3	0.14	-	-
T2	0.05	3	0.14	4	0.19	-	-	-	-	-	-	3	0.14
T3	0.05	-	-	-	-	3	0.14	4	0.19	4	0.19	3	0.14
Total score			4.64		4.69		4.83		4.25		3.84		6.24

The concept of agribusiness system are to improve the linkages between upstream industry, on farm, downstream industry and its supporting institutions with the aim to increase business growth and farmer's income. The concept of agribusiness system are applied in each sub district with the livestock commodities are according to the potential of each region. The implementation of integrated agribusiness system consept from upstream to downstream, and determination of the right commodity based on potential area, it is expected that livestock business in Gianyar Regency are grows and develop sustainably.

CONCLUSIONS

The conclution of this reseach are: 1) Payangan are potential to develop a Pig farming; 2) Tegallalang, Tampaksiring, Ubud, Blahbatuh, 3) Gianyar and Sukawati are potential to develop goat farming; 4) There are seven alternative strategies that can be applied in the development of farming business in Gianyar, namely: a) develop the farming based home industry, b) develop the farming based tourism, c) build animal feed factory, d) create an effective and efficient feed formulation to develop productivity of livestock, e) provision of animal feed price subsidies by government, f) intensify the planting of horticultural which their waste can be used as qualified animal feed, and g) create an agribusiness system in order to develop the livestock business in Gianyar; and 5) The priority strategy recommended in this study is create an agribusiness system in order to develop the livestock business in Gianyar.

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