Analysis of farmers satisfaction on the services quality of cattle insurance program in Manuju District, Gowa Regency

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Abstract. The Livestock and Animal Health Service Office of South Sulawesi Province stated that in 2017 beef cattle in Gowa Regency registered in insurance reached 1,367, while in 2018 decreased significantly to 1,140. The decrease in number of insured cattle indicates a decrease in the number of farmers participating in the insurance program. This study aims to determine the Satisfaction Index of cattle farmers on the services quality of Cattle Insurance Program in Manuju District, Gowa Regency. This study was conducted from May to July 2019 with a type of descriptive quantitative research. The sample used was 50 participants who are/were insurance participants. The data collected through literature study, interviews and questionnaires. The data analysed with two methods of Customer Satisfaction Index (CSI) and Importance Performance Analysis (IPA). The results indicate that the Customer Satisfaction Index (CSI) of farmers is 68.49% which included in the category of Good. The top priority attributes in service quality of Cattle Insurance Program, namely Punctuality of claims payment, Management of administration and Clarity of CIP information.

1. Introduction
Cattle are one of the largest meat-producing livestock commodities from the ruminant group that significant to national meat production [1]. National meat production is expected to be able to meet the needs of the people of Indonesia so that the country can be self-sufficient in beef, considering the demand for beef in Indonesia continues to increase as a result of economic growth [2,3]. The risk faced by farmers in conducting their business is considered as a complexity that impacts on the drastically decreasing income of farmers. These risks could be in the form of climate change, livestock accidents, and lethal disease outbreaks. If the risks that arise cannot be handled and occur continuously then animal husbandry business will be led to significant losses. This phenomenon threatens the sustainability of livestock business in Indonesia.

Considering the magnitude of the risks faced by farmers/ranchers in managing their businesses, the government finally issued The Law of the Republic of Indonesia Number 19 of 2013 concerning Farmer Protection and Empowerment. Broadly speaking, this law aims to realize the sovereignty and independency of farmers in order to improve the level of prosperity and quality of life. In addition, Law number 19 of 2013 also contains one of the efforts in providing protection to farmers’ business, namely agricultural insurance [4].

The Ministry of Agriculture in 2016 through the Directorate General for Agriculture Infrastructure issued the Policy Minister of Agriculture of the Republic of Indonesia Number 56/Kpts/SR.230/B/06/2016 contains guidelines for the allocation of activities in the form of insurance,
namely insurance model facilities of Cattle Insurance Program (CIP). CIP is a form of protection against the possibility of risk in a livestock business as well as to protect creditors for the commodity that being funded. The goal is to transfer the risk of losing cattle to third parties through the insurance guarantee channel and the target is to protect cattle farmers from business losses. The insurance policy issued by the Ministry of Agriculture is required the payment of premiums from the breeding farmers and government.

Gowa is one of regencies in South Sulawesi which actively follow Cattle Insurance Program (CIP). However, the enthusiasm of farmers is known to decrease. Based on data obtained from the Department of Animal Husbandry of South Sulawesi Province, in 2017 beef cattle in Gowa regency registered with insurance reached 1,367 heads, while in 2018 it experienced a significant decrease to 1,140 head of cattle. The decrease in the number of insured animals in Gowa regency indicated a decrease in the number of farmers participating in the insurance program.

Masification in the Cattle Insurance Program (CIP) socialization is needed from officers to farmers [5]. So that, more and more of them will be interested in joining the program. In addition, training and increasing the number of fields workers are also need an extra attention. Therefore, researchers are interested in analysing the level of satisfaction of beef cattle breeders regarding the quality of service of the Cattle Insurance Program (CIP) in Gowa regency, especially Manuju district as an area with the highest number of CIP participating farmer groups according to the data.

2. Method
The research was conducted at Manuju district, Gowa regency in May to July 2019. This study is a quantitative descriptive type. Data collection techniques used are document studies, interviews, and questionnaires. Respondents numbered 50 farmers who were obtained by the Slovin Formula. The technique of determining respondents is by incidental technique. Analysing data used the methods of the Importance Performance Analysis (IPA) method and the Customer Satisfaction Index (CSI). Variables, Sub Variables [6] and measurement indicators in this study can be seen in Table 1.

| Variable                        | Sub Variable                      | Measurement Indicator                                                                 |
|---------------------------------|-----------------------------------|---------------------------------------------------------------------------------------|
| Service Quality for CIP         | The Service Characteristic        | 1. Availability of CIP guidelines                                                      |
| Participants (Farmers)          |                                   | 2. Clarity of CIP information                                                          |
|                                 |                                   | 3. Punctuality of Claims payment                                                       |
|                                 | The Personal Relationship          | 4. Hospitality of the officer (in socialization, registration and submission of claims) |
|                                 |                                   | 5. Responsiveness of the officer (in registration, filing claims, and inspection)       |
|                                 |                                   | 6. Comprehension of the officer                                                        |
|                                 |                                   | 7. Communication skill of the officer (in socialization)                               |
|                                 | The Service Setting                | 8. Completeness of facilities (in registration, examination of livestock, and the filing of the claim) |
|                                 |                                   | 9. Management of administration (in registration and submission of claims)              |
|                                 | The Customer Power                 | 10. Conformity of the insurance coverage received by farmers                           |
|                                 |                                   | 11. Farmers’ access to livestock service and insurance companies                      |
The results of data collection are then analysed using Importance Performance Analysis (IPA). The first stage in this method is to determine the level of appropriateness between the level of importance and the level of quality performance of the attributes by making a comparison between performance scores and importance scores. The conformity level using this formula below [7]:

\[ T_{ki} = \frac{X_i}{Y_i} \times 100\% \]

Which:
\( T_{ki} \) = consumer conformity level
\( X_i \) = score of consumer satisfaction assessment
\( Y_i \) = score of indicator’s importance assessment

2.1. Class Intervals
To find out the categories of indicator’s importance and customer satisfaction, the following classification is used:

- **Highest Rate**: Highest score x Number of respondents
  \[ = 5 \times 50 \]
  \[ = 250 \]
- **Lowest Rate**: Lowest score x Number of respondents
  \[ = 1 \times 50 \]
  \[ = 50 \]

To find out the class intervals, the following formula is used:

\[ \text{Scale Range} = \frac{\text{Highest Rate} - \text{Lowest Rate}}{\text{Class Amount}} \]

\[ = \frac{250 - 50}{5} \]

\[ = 40 \]

Based on the above calculations, a scale range obtained is 40. Thus, the scale range and categorisation [8] for each class can be seen in Table 2 as follows.

| Scale range | Satisfaction        | The Importance     |
|-------------|---------------------|--------------------|
| 50-90       | Very dissatisfied   | Very unimportant   |
| 91-131      | Not satisfied       | Not important      |
| 132-172     | Quite satisfied     | Quite important    |
| 173-213     | Satisfied           | Important          |
| 214-250     | Very satisfied      | Very important     |

In the course of research, methods of Importance Performance Analysis (IPA) will be used to analyse the descriptive quality of services provided, seen by a score of Performance and Importance Level of each service indicators. The following formula determines these scores [9].
In which:
\( \bar{X}_i \) = The average value of the i-th performance attribute
\( \bar{Y}_i \) = The average value of the i-th importance attribute
\( X_i \) = Total score of the i-th performance attribute
\( Y_i \) = Total score of the i-th importance attribute
\( n \) = Amount of consumer data

Furthermore, the average of all attributes of importance (\( Y \)) and performance (\( X \)) is calculated as the values will shape the borders then in Cartesian diagram, using the formula:

\[
\bar{X} = \frac{\sum_{i=1}^{K} X_i}{K} \quad \bar{Y} = \frac{\sum_{i=1}^{K} Y_i}{K}
\]

In which:
\( \bar{X} \) = The average score of perceived service assessment
\( \bar{Y} \) = The average score of expected service assessment
\( \bar{X} \) = Average score from the average level of all performance attributes
\( \bar{Y} \) = Average score from the average level of all importance attributes
\( K \) = Number of attributes

2.2. Importance and Performance Analysis (IPA)
The next stage is the elaboration of each attribute in the Cartesian diagram [10] as shown in Figure 1.

2.3. Customer Satisfaction Analysis (CSI)
Customer Satisfaction is then calculated using the CSI (Customer Satisfaction Index) method with the following steps [11]:

1. Calculate Weighted Factor, i.e change the average value of importance to a percent, so we get a total Weighting Factor of 100%.
2. Calculating Weighting Score, which is the multiplication result between the average value of performance level and the Weighting Factor.
3. Calculate Total Weighted, i.e sums the Weighted Scores of all attributes.
4. Calculate the Satisfaction Index, which is Weighted Total divided by the maximum scale (in this study the maximum scale used is 5) then multiply it by 100%. Here below the satisfaction level criteria Error! Reference source not found. presented in a table.
Table 3. Satisfaction Level Criteria

| No | CSI Value (%) | Description (CSI) |
|----|---------------|-------------------|
| 1  | 81-100        | Very satisfied    |
| 2  | 66-80.99      | Satisfied         |
| 3  | 51-65.99      | Quite satisfied   |
| 4  | 35-50.99      | Less satisfied    |
| 5  | 0-34.99       | Not satisfied     |

The maximum value of the Customer Satisfaction Index (CSI) is 100%. A CSI value of 50% or lower indicated poor service performance. A CSI value of 80% or higher reflected that the user is satisfied with the service performance.

3. Results and discussion

3.1. Analysis of conformity level

The conformity level is the result of a comparison between performance scores and importance scores. The results of the comparison are used as a basis to determine the priority of service attributes that need to be improved. To measure the users satisfaction is to compare the percentage level of conformity between perceived service and expected service. The higher the conformity percentage of perceived service to expected service, the higher the user satisfaction level to the service quality[12]. The level of conformity between the performance and the importance score can be seen in Table 4.

Table 4. Performance and Importance Conformity Levels of CPI Service Quality Attributes in Manuju District, Gowa Regency

| Measurement Indicator | The Performance | The Importance | Conformity Level (%) |
|-----------------------|-----------------|----------------|---------------------|
|                       | (Xi) Category    | (Yi) Category  |                     |
| The Service Character |                 |                |                     |
| 1                     | 126             | Not satisfied  | 184                 | Important | 68  |
| 2                     | 156             | Quite satisfied| 213                 | Important | 73  |
| 3                     | 128             | Not satisfied  | 229                 | Very important | 55 |
| Average               | 136.67          | Quite satisfied| 208.67              | Important | 65.33 |
| The Personal Relationship |            |                |                     |
| 4                     | 213             | Satisfied      | 197                 | Important | 108 |
| 5                     | 211             | Satisfied      | 225                 | Very important | 93 |
| 6                     | 214             | Very satisfied | 218                 | Very important | 98 |
| 7                     | 217             | Very satisfied | 215                 | Very important | 100 |
| Average               | 213.75          | Satisfied      | 213.75              | Very important | 99.75 |
| The Service Setting   |                 |                |                     |
| 8                     | 150             | Quite satisfied| 209                 | Important | 71  |
| 9                     | 143             | Quite satisfied| 212                 | Important | 67  |
| Average               | 146.50          | Quite satisfied| 210.50              | Important | 69  |
| The Customer Power    |                 |                |                     |
| 10                    | 182             | Satisfied      | 233                 | Very important | 78 |
| 11                    | 133             | Quite satisfied| 182                 | Important | 73  |
| Average               | 157.50          | Quite satisfied| 207.50              | Important | 75.50 |
Table 4: Cattle Insurance Program (CIP) Service Attributes

| Total  | 1873 | 2317 | 884 |
|--------|------|------|-----|
| Average| 170.27 | 210.63 | 80.36 |

Based on Table 4, an average value obtained of conformity of each Cattle Insurance Program (CIP) service attribute is 80.36% so that it can be concluded as a whole that these attributes are included in the "appropriate" category. If the percentage of the conformity level is close to 100% and is above the average, it can be concluded that the conformity level is good [13].

3.2. Importance and Performance Analysis (IPA)

The average performance of each attribute is the basis to determine whether each attribute of CIP service Manuju District is good or not, by comparing to the average of all the attributes’ averages (X) and the score result is 3.4. The average expectation of each attribute is the basis to determine whether the attribute is important or not important, namely by comparing the average of all attributes (Y) and the result obtained is 4.21. The average value of performance and expectations is used to analyse the data in Cartesian diagram in the following figure.

Figure 2. Cartesian Diagram of Cattle Insurance Program (CIP) Service Attributes

Quadrant I is occupied by attributes with a very low level of satisfaction so that it becomes a top priority for improvement. The three attributes included in quadrant I, in the order of their priority level are as follows: Punctuality of Claims payment, Management of administration and Clarity of Cattle Insurance Program (CIP) information.

Quadrant II is a quadrant where attributes that according to customers perform according to their expectations. Attributes in quadrant II can also be sorted according to the priority level to be maintained are as follows: Communication skill of the officer, Comprehension of the officer, Responsiveness of the officer, and Conformity of the insurance coverage received by farmers.
Quadrant III is the location of attributes with low priority because it contains attributes that are considered less important by the customer and in fact the performance is not too special. The order of attributes according to the priority level to be improved is as follows: the attributes of the Availability of CIP guidelines, Completeness of the facilities, and the Farmers' access to the livestock service and insurance companies.

Attributes in quadrant IV have a low level of importance, but have a high level of performance implementation. In this quadrant there is only one attribute, namely the Hospitality of the officers.

3.3. Customer Satisfaction Index (CSI)

Company managers cannot determine goals in increasing customer satisfaction without using the method of Customer Satisfaction Index (CSI) Error! Reference source not found.. The Customer Satisfaction Index (CSI) calculation uses the average score of the expectation level and the perception level of each attribute. Based on the results of calculations, the CSI value is of 68.49%. This value is obtained from the division between the total Weight Score (WS) value and the maximum scale used in this study which is 5 and then multiplies them by 100%.

Based on the results of the study, the satisfaction index value was obtained in the range of 66-80.99% which means that overall breeders of CIP participants in Manuju District were satisfied with the quality of CIP services. The value of Customer Satisfaction Index (CSI) can be improved by making improvements to the performance attributes from the results of the Importance Performance Analysis (IPA) [14]. The improvement of attributes obtained through IPA is expected to increase the value of CSI up to 100%.

4. Conclusion

Cattle farmers satisfaction rate on the services quality of Cattle Insurance Program in Manuju District, Gowa Regency is in the Satisfaction category with a value of 68.49%. Attributes that become the main priority in increasing the satisfaction of cattle farmers with quality services related to the Cattle Insurance Program (CIP) in sequences, namely Punctuality of claims payment, Management of administration and Clarity of CIP information.

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