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Quality of Agricultural Extension Services in Ambon

Yonette Maya Tupamahu[1*] Lydia Maria Ivakdalam[2]
1.Development Economics Study Program, Indonesian Christian University of Mollucas, Ot Pattimaipauw Street, Ambon, Indonesia
2.Public Health Study Program, Indonesian Christian University of Mollucas, Ot Pattimaipauw Street, Ambon, Indonesia

Abstract
This study aims to analyze the level of farmer satisfaction with the performance of agricultural extension workers, and recommend efforts to improve the performance of agricultural extension workers in providing farmer satisfaction in the future. The population of farmer groups in the working area of the Nania Agricultural Counseling Center is 118 farmer groups, with the Slovin formula at 90% accuracy, 54 samples were obtained. The sampling technique was purposive and incidental sampling, with 54 farmers chairing the group. The level of farmer satisfaction is measured by the Customer Satisfaction Index (CSI). Previously the questionnaire was tested for validity and reliability and the results showed 26 attributes of valid and reliable service quality. The results showed the CSI analysis for the performance attributes of agricultural instructors was 60.37 percent, meaning that in general the farmers were in the quite satisfied category. Recommendations for efforts to improve the performance of agricultural extension services in providing farmer satisfaction in the future is to improve the performance of the attributes in quadrant I namely: Counseling is done on time (S4), Serious attention from extension workers towards farmers (S5), Reliability in assisting farmers or farmer groups in preparing plans for farming activities (S9), The reliability of agricultural instructors for increasing business results (S14), Willing counselors provide services quickly (S15), Spent time for extension workers to respond quickly to farmers' requests (S17), Accuracy in handling farmers' complaints (S18), Extension agents have competency in guiding, solving problems of farmers or farmer groups in the field, and establishing business partnerships in agriculture (S19).
Keywords: service quality, agricultural extension workers, Customer Satisfaction Index
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1. Introduction

Law Number 16 of 2006 about Agriculture, Fisheries and Forestry Extension Systems explains that agricultural counseling is a learning process for the main actors and business actors so that they are willing and able to help and organize themselves in accessing market information, technology, capital, and other resources, as an effort to increase productivity, business efficiency, their income and welfare, and raising awareness in the preservation of environmental functions. Agricultural extension agencies are at the central, provincial, district/city, and sub-district levels, and are conducted by civil servant, self-help and independent extension workers. Specifically at the sub-district level there is the District Agricultural Extension Center (Indonesian Ministry of Agriculture, 2018). Specifically in Ambon, agricultural extension agents to date consist of: 31 civil servant extension agents, 9 freelance agriculture extension agents and 5 independent extension agents.

Agriculture is a sector that is quite important because of the absorption of labor and as a provider of raw materials for the industrial sector in Ambon. Agricultural production in Ambon includes food crops, horticulture and animal husbandry and fisheries. Ambon Central Bureau Statistics data (2019) shows that in 2018, with a planting area of 345 hectares capable of producing 1654.4 tons of cassava. Horticultural crops include vegetables and fruits, where in 2018 the biggest vegetable yield was mustard greens with a production of 1245 tons and water spinach with a production of 1323 tons. The results of the largest fruit crops are pineapple and jackfruit with production reaching 343.39 tons and 150 tons. The population of large livestock is 5233 cows and small livestock are 32 goats and 2579 pigs; poultry, namely 1347 ducks, 150,000 broilers and 3219 native chickens.

Based on institutional data, the Agriculture and Food Crops Office Ambon has 2 counseling centers, namely: first, Fisheries and Forestry Agricultural Counseling Center (FFACC) Technical Implementing Unit of Service (TIUS) Nania's Agricultural Counseling Center (ACC) with the working area of Ambon Bay District (45 farmer groups), Ambon Bay Baguala District (43 farmer groups), and South Leitimur District (30 farmer groups); and second, the FFACC TIUS of the ACC of Airlouw with the working area of Nusaniwe District (15 farmer groups) and Sirimau District (22 farmer groups). From this data, most farmers' groups are classified as beginner farmers, even though they have been formed for a long time. The real problem that occurs is that the performance of extension workers has not been fully implemented in accordance with the guidelines in the fields and this condition will certainly have an impact on the development of farmers or farmers groups themselves.

In the context of extension quality, Puspadi (2003) in Tahitu (2013) explains that the quality of agricultural extension activities is essentially a function of the quality of agricultural extension human resources. The quality

of agricultural instructors is influenced by competence and job dissatisfaction (Olantunji, et al, 2016; Bahua, 2016; Kassa, 2016). There is a significant relationship between job satisfaction and recognition for the best performance, level of promotion and regular training and education level (Kelemu, et al, 2014).

This study will examine the level of satisfaction of farmers' perceptions as objects of agricultural extension. Farmers who are considered as customers in the extension program want quality benefits from the results of extension services. Extension officers are responsible for the level of farmer satisfaction, quality and development of educational learning programs (Wilson, et al, 2008 in Agholor, et al, 2013).

Some previous studies related to farmer satisfaction with agricultural extension workers, namely Elias, et al (2015) examining using the logit model found that the factors driving farmer satisfaction were perceived economic returns, contact of regular extension workers, family size, and off-farm income. Rifani, et al (2019) in his research did not formulate the quality extension attributes according to service quality. Ali, et al (2018) assessed the performance of field agriculture instructors from cognitive (knowledge), affective (attitude), and conative (ability) aspects. Whereas Agholor, et al (2013) examined that female farmers have more satisfaction with extension services than men. This implies that men have a low level of trust. Other researchers (Listiawati, 2010; Mensah, et al, 2012; Kontogeorgos, et al, 2014; Tinaprilla, 2014; Simpson, et al, 2015; Arifin, 2015; Wijayanti, et al, 2015; Rashid, et al, 2018) examine the quality of extension services based on 5 service quality indicators, namely reliability, assurance, responsiveness, empathy and tangibility.

This study also examines 5 service quality indicators, but service quality is not considered as a separate construct but is the sum of the values of all components. It is hoped that through this study, extension workers can find out what they are doing, so improvements can be made in the future. Good performance will have an impact on farmers in cultivating agricultural products, so as to increase production and income of farmers. Considering that the performance of agriculture extension workers has not been measured in this location, it is necessary to conduct research that can measure farmers' satisfaction with the quality of agricultural extension services. This study was limited to farmer groups in the service area of Nania Agricultural Counseling Center. This study aims to analyze the level of farmer satisfaction with the performance of agricultural extension workers, and recommend efforts to improve the performance of agricultural extension workers in providing farmer satisfaction in the future to come.

2. Literature Review

2.1. Agricultural Extension Officer

The Indonesian Ministry of Agriculture (2018) defines agriculture instructors as individual Indonesian citizens who carry out Agricultural Counseling activities. Agricultural extension workers consist of: (1) Agricultural Extension Service Civil Servants are civil servants who are given the duties, responsibilities, authority and full rights by the authorized official in the organization unit of scope of Agriculture to conduct Agricultural Extension activities. (2) Released Daily Personnel or Agricultural Extension Assistance Staff are agricultural extension assistants who are recruited by the Ministry of Agriculture for a certain period of time and carry out their duties and functions in Agricultural Extension activities. (3) Self-supporting Agricultural Extension Workers are the Main Actors who are successful in their business and other community members who with their own awareness are willing and able to become extension agents. And (4) Private Agricultural Extension Workers are extension agents who come from the business world and / or institutions that have competency in Agricultural Education.

2.2. Service Quality and Consumer Satisfaction

One service quality approach that is often used as a reference is the Service Quality (SERVQUAL) model, and is built on the comparison of two main factors, namely customer perceptions of the services they actually receive (perceived service) with the services actually expected (expected service). The SERVQUAL model emphasizes the importance of customer expectations before buying or consuming a service as a standard / reference in evaluating the performance of the service concerned (Parasuman, et al, 1988 in Lupiyoadi, 2013; Tjiptono, 2019).

There are five dimensions of SERVQUAL namely tangible, reliability, responsiveness, assurance, and empathy; this dimension is an important aspect of service quality (Fisk, et al, 1993 in Tjiptono, 2019): (1) Tangible, including physical facilities (for example: buildings, warehouses, etc.), equipment and equipment used by technology), and the appearance of employees. (2) Reliability, namely providing services in accordance with what was promised accurately, reliably, on time, the same service for all customers without errors, sympathetic attitude, with high accuracy. (3) Responsiveness, which is a policy to help and provide fast and responsive services to customers, by delivering clear information. (4) Guarantee and assurance, namely knowledge, politeness, and the ability of employees to grow the trust of customers to service providers. This includes: communication, credibility, security, competence, and courtesy. And (5) Empathy, which gives sincere and individual or personal attention given to customers by trying to understand their desires. Service providers have understanding and knowledge about customers, understand customer needs specifically, and have a comfortable operating time for customers.

So far the SERVQUAL model has been applied in a variety of services including agricultural extension

services, the quality attributes of agricultural extension services have been adapted to the context of agricultural extension services and also based on applicable agricultural instructor performance guidelines (Listiawati, 2010; Mensah, et al, 2012; Kontogeorgos, et al, 2014; Tinaprilla, 2014; Simpson, et al, 2015; Arifin, 2015; Wijayanti, et al, 2015; Rashid, et al, 2018).

Service quality also has an impact or effect on customer satisfaction. The word "satisfaction" comes from the Latin words "satis" (meaning good enough, adequate) and "facid" (meaning to do or make), can simply be interpreted as an effort to fulfill something or make something adequate (Tjiptono, 2019). Satisfaction is the level of feeling in which a person expresses the results of comparisons of the performance of service products received with expected (Kotler, 1997). There are six core concepts regarding the object of measuring customer satisfaction, namely overall customer satisfaction, dimensions of customer satisfaction, confirmation of expectations, repurchase intentions, willingness to recommend, and customer dissatisfaction (Tjiptono, 2019). This research will measure overall satisfaction, which directly asks farmers how satisfied they are with agricultural extension services. The overall level of customer satisfaction is not compared to other products and / or services. Next identify the level of importance and satisfaction with the items dimensions of customer satisfaction.

3. Research Methodology

3.1. Research Sites

This research was carried out in the working area of the Nania Agricultural Counseling Center, including Ambon Bay District, Ambon Bay Baguala District, and South Leitimur District. This location was chosen deliberately on the basis that based on data from the Agricultural Extension Management Information System, many farmer groups are scattered in this region, as well as related technical research implementation. The study was conducted in October - December 2019.

3.2. Research Design

Based on the nature of the problem, this study is classified as socioeconomic research. According to Rianse and Abdi (2009), to achieve the objectives of this study, the approach used is a combination of qualitative and quantitative research. This is related to the object of research is human and human phenomena. The use of these two approaches is needed to obtain accurate and objective conclusions, the weaknesses possessed in qualitative and quantitative research can be overcome, so that a holistic conclusion is obtained, and the generalization of research results can be achieved.

3.3. Sample Determination Method

Obtaining data by means of observation, farmer interviews and questionnaire data filling. Based on data from the Ambon City Agriculture and Food Crops Office, the number of farmer groups in the working area of the Nania Agricultural Counseling Center is 118 farmer groups, with details as follows: Ambon Bay District as many as 30, Ambon Bay Baguala District as many as 45 and South Leitimur District as many as 43. Determination of the number of samples using the Slovin formula, as follows:

$$N = \frac{n}{1 + n(d)^2} \tag{1}$$

Notes:
N = number of samples
n = number of population
d = 90% precision value

The number of samples in this study is:

$$N = \frac{n}{1 + n(d)^2} = \frac{118}{1 + 118(0{,}1)^2} = \frac{118}{2{,}18} = 54{,}12 \approx 54 \tag{2}$$

The sampling technique used is purposive sampling, which is a sampling technique with certain considerations (Sugiyono, 2010; Rianse and Abdi, 2009). This study examines farmers' satisfaction with extension services, so the sample data source is the head of the farmer group, the consideration is all the Training and Visiting activities, reporting, making Farmer Group Definitive Plan/Definitive Plan for Group Needs, and others, so the group leader will always coordinate with agricultural extension workers. This research also uses incidental sampling technique, which is a sampling technique based on coincidence, i.e. anyone who incidentally / incidentally meets a researcher can be used as a sample, if it is deemed that the person who happens to be found is suitable as a source of data, in this case the head of the farmer group. Thus, the number of samples was 54 farmer group leaders.

3.4. Data Analysis Method

3.4.1. Validity and Reliability Test

Before the questionnaire is distributed to respondents, the validity and reliability of the questionnaire must be tested first, so that the variables used are proven to be good and reliable. Validity and reliability tests are used to find out whether the contents of the questions in a questionnaire are valid and reliable. Validity test shows how far the measuring device (questionnaire) measures what you want measured (Umar, 2003).

To test the validity is known by calculating the correlation between each statement with a total score using the Pearson Product Moment correlation technique formula (Umar, 2003) with the help of SPSS version 21.00 for windows and then comparing it with critical values.

$$r = \frac{n(\sum XY) - (\sum X \sum Y)}{\sqrt{[n\sum X^2 - (\sum X)^2][n\sum Y^2 - (\sum Y)^2]}} \quad (3)$$

Notes:
r = correlation coefficient
X = score of question items
Y = total score
N = number of respondents

After r_{xy} is obtained, then it is compared with r table (with a certain error level). If r_{xy} is greater than the value of r table then H_0 is rejected, and H_a is accepted. According to Arikunto in Umar (2003) it is recommended that the number of respondents for the trial, a minimum of 30 people, use a 95 percent confidence level (α = 0.05). Thus, the attribute can be declared valid if the r_{xy} value or the calculated r value is greater than 0.361.

Reliability is a value that shows the extent of consistency of a measuring tool in measuring the same symptoms (Umar, 2003). The reliability test for instruments in the range of 1-5 uses the Cronbach's Alpha (α) formula, with SPSS version 21.00 for windows. Cronbach's Alpha formula (α):

$$r_{11} = \left(\frac{k}{k-1}\right)\left(1 - \frac{\sum \sigma_b^2}{\sigma_t^2}\right)\pi r^2 \quad (4)$$

Notes:
r_{11} = reliability of the questionnaire
k = number of questions
σ_t^2 = total variants
$\sum \sigma_b^2$ = number of variants

3.4.2. Important Performance Analysis

This method is used to obtain information about the level of customers of a service by measuring the level of importance and level of implementation. The level of importance of service quality is how important a service variable for customers on service performance. To measure the level of field extension service quality that concerns farmers' expectations and in measuring the level of performance implementation of the field extension service quality the Likert scale is used (Lupiyoadi, 2013).

Table 1. Likert Scale Measurement of Importance and Satisfaction

Importance Level	Satisfaction Level	Score
Very Important	Very Satisfied	5
Important	Satisfied	4
Neutral	Neutral	3
Unimportant	Unsatisfied	2
Very Unimportant	Very Unsatisfied	1

To determine the level of importance and level of performance of each attribute as a whole, the following formula is used:

Maximum score = Highest score that can be given x ∑ respondent (5)
= 5 x 54
= 270

Minimum score = Lowest score that can be given x ∑ respondent (6)
= 1 x 54
= 54

Score interval $= \frac{\text{maximum score} - \text{minimum score}}{5} = \frac{270-54}{5} = 43$ (7)

Table 2. Distribution of Total Value of Importance (Expectation) and Performance

Importance Level	Range	Performance Level	Range
Very Important	54 – 97	Not Satisfied	54 – 97
Less Important	98 – 140	Less Satisfied	98 – 140
Neutral	141 – 184	Neutral	141 – 184
Important	185 – 228	Satisfied	185 – 228
Very Important	229 – 272	Very Satisfied	229 – 272

The Importance and Performance Analysis method is carried out through the following stages:

1. Based on the results of research on the level of importance and satisfaction, a calculation will be made regarding the level of conformity between the level of importance and the level of consumer satisfaction. The formulas used are:

$$Tk_i = \frac{X_i}{Y_i} \times 100\% \quad (8)$$

Notes:
Tk_i = Conformance level of the respondent
X_i = Level of implementation / customer satisfaction score
Y_i = Assessment of consumer interests score

2. In the use of a Cartesian diagram, the horizontal axis (X) will be filled by the performance / satisfaction level score, while the upright axis (Y) will be filled by the importance level score. The formula for each of these factors is:

$$\bar{\bar{X}} = \frac{\sum_{i=1}^{n} X_i}{n} \quad (9)$$

$$\bar{\bar{Y}} = \frac{\sum_{i=1}^{n} Y_i}{n} \quad (10)$$

Notes:
$\bar{\bar{X}}$ = Average level of customer satisfaction
$\bar{\bar{Y}}$ = Average score of importance
n = Number of respondents

3. Cartesian diagram is used in describing the attributes of the suitability of the interests and satisfaction of the customer to the quality of service. This diagram is a chart divided into four parts and is limited by two lines that intersect perpendicular to the points (X, Y), the points are obtained from the calculation as follows:

$$\bar{\bar{\bar{X}}} = \frac{\sum_{i=1}^{n} X_i}{k} \quad (11)$$

$$\bar{\bar{\bar{Y}}} = \frac{\sum_{i=1}^{n} Y_i}{k} \quad (12)$$

Notes:
$\bar{\bar{\bar{X}}}$ = The average score of the average level of satisfaction of all service quality attributes
$\bar{\bar{\bar{Y}}}$ = The average score of the average level of importance of all service qulity attributes
k = Number of attributes that can affect customer satisfaction

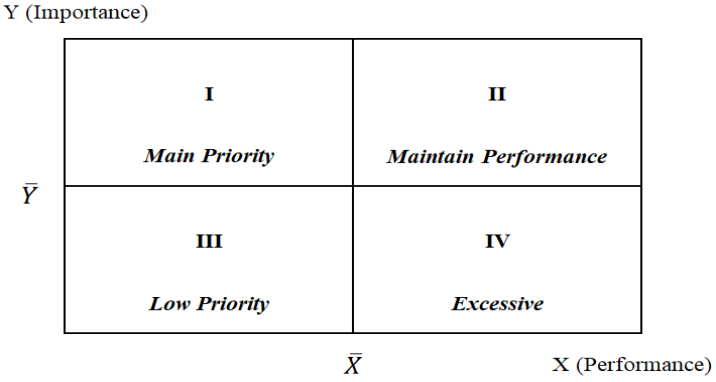

Figure 1. Cartesian Chart

Each quadrant represents a different situation, namely:
a. Quadrant I (Main Priority)
Shows the attributes that are considered to affect customer satisfaction, including service elements that are considered very important, but the company has not carried out in accordance with consumer desires, thus considered as disappointing / dissatisfied.
b. Quadrant II (Maintain Performance)
Demonstrating the performance of service quality attributes that have been successfully implemented by the company, therefore it must be maintained, considered very important and very satisfying.
c. Quadrant III (Low Priority)
Showing several attributes that are less important for consumers to influence, its implementation by mediocre companies, is considered less important and less satisfying.
d. Quadrant IV (Excessive)
Showing the attributes that affect consumer are less important. However, the implementation is excessive, considered less important but very satisfying.
The quality attributes of extension services based on theory and empirical review (Listiawati, 2010; Arifin, 2015; Wijayanti, et al, 2015; Tinaprilla, 2014) with some adjustments are shown in Table 3.

Table 3. Quality Attributes of Agricultural Extension Services

Dimension	Service Attributes		Symbol
TANGIBLE	1	Completeness of physical facilities for extension workers such as buildings, rooms and others	S1
	2	Neatness and appearance of extension workers	S2
	3	Extension equipment and equipment used	S3
RELIABILITY	1	Counseling is carried out on time	S4
	2	Serious attention from extension workers towards farmers	S5
	3	Practice on the ground during training and visits	S6
	4	Regular training and visits	S7
	5	Reliability in seeking facilities and infrastructure needed by farmers	S8
	6	Reliability in assisting farmers or farmer groups in preparing plans for farming activities	S9
	7	Reliability in helping farmer groups to make group administration	S10
	8	Reliability delivers the latest technology	S11
	9	Reliability of conveying market information	S12
	10	The reliability of agricultural instructors conveys information on business opportunities and capital	S13
	11	Reliability of agricultural instructors for increasing business results	S14
RESPONSIVENESS	1	Willingness of extension agents to provide services quickly	S15
	2	Willingness of extension agents to help farmers face difficulties	S16
	3	Spent time for extension workers to respond quickly to farmers' requests	S17
	4	Accuracy in handling farmers' complaints	S18
ASSURANCE	1	Extension agents have competency in guiding, solving problems of farmers or farmer groups in the field, and establishing business partnerships in agriculture	S19
	2	The instructor is polite and friendly	S20
	3	Extension agents have the knowledge and skills to provide clear and easily understood information to farmers	S21
	4	Farmers have a feeling of security during contact with extension workers	S22
	5	Extension Center support for extension workers to carry out their duties properly	S23
EMPHATHY	1	Easy to find and contact to consult	S24
	2	Understanding extension agents about farmers' needs and feelings	S25
	3	Give special attention (individually) to specific problems	S26

3.4.3. Customer Satisfaction Index
The customer satisfaction index is used to measure the level of overall customer satisfaction. Following are the steps for calculating the Customer Satisfaction Index (CSI).
a. Calculating Mean Important Score (MIS)
MIS value is the average interest of each respondent. The formula used is as follows:

$$MIS = \frac{\sum_{i=1}^{n} Y_i}{n} \quad (13)$$

Whereby:
N = number of customers
Y_i = i-th importance

b. Calculating Weight Factor (WF)
WF value is the percentage of MIS value per attribute or statement of the total MIS of all attributes or statements.

$$WF = \frac{MIS_i}{\sum_{i=1}^{p} MIS_t} x100\% \quad (14)$$

Whereby:
P = p-th importance

c. Calculating Mean Satisfaction Score (MSS)
MSS value is the average level of performance. The formula used is as follows:

$$MSS = \frac{\sum_{i=1}^{n} X_i}{n} \quad (15)$$

Whereby:
N = number of customers
X_i = i-th importance

d. Calculating Weight Score (WS)
WS value is a weight derived from multiplication between WF and MSS.

e. Calculating Customer Satisfaction Index (CSI)
CSI values are obtained using the following formula:

$$CSI = \frac{\sum_{i=1}^{n} WS_i}{HS} \quad (16)$$

Whereby:
P = p-th importance attribute
HS = highest scale

CSI values are in the range of 0 to 100 percent. The types of customer satisfaction based on CSI values are: 81-100% = Very Satisfied, 66-80% = Satisfied, 51-65% = Quite Satisfied, 35-50% = Less Satisfied, and 0 - 34% = Not Satisfied.

4. Results and Discussions

4.1. Validity and Reliability Test Results

The validity test results show that 26 attributes used in data collection are valid, where at n = 30 and α = 0.05, the calculated r value ranges from 0.405 to 0.790, greater than r table = 0.361. The reliability test results showed that the value of Alpha of Interest = 0.953 and Satisfaction = 0.918 means it was already greater than 0.7. The draft questionnaire can be relied upon to achieve the research objectives, this can be seen from the Cronbach alpha statistical value greater than 0.7 (Lupiyoadi, 2013). Thus it can be concluded that the results of research instrument data have a good level of reliability, or in other words the results of research instrument data can be trusted.

4.2. Importance Performance Analysis

Based on the calculation of the average value of the level of importance and performance, the results obtained an average value for the level of importance of 45.51. Attributes whose importance is above the average of 14 attributes. As for the level of satisfaction obtained an average value of 32.17, attributes whose satisfaction value is above the average are 14 attributes (Table 4).

Table 4. Average Score of Importance and Performance of Agricultural Extension Workers

No	Attributes	Average Score	
		Importance Level	Performance Level
1	S1	44.40	35.20
2	S2	37.40	33.80
3	S3	45.00	34.80
4	S4	45.60	29.40
5	S5	47.20	31.60
6	S6	44.40	32.00
7	S7	44.60	31.00
8	S8	46.80	32.80
9	S9	46.60	31.60
10	S10	46.40	34.00
11	S11	43.00	29.40
12	S12	45.20	31.40
13	S13	45.20	28.80
14	S14	46.00	32.20
15	S15	48.20	32.20
16	S16	48.80	33.80
17	S17	46.00	28.60
18	S18	47.20	29.60
19	S19	45.80	32.20
20	S20	46.20	40.20
21	S21	46.40	34.60
22	S22	45.00	35.20
23	S23	44.40	34.80
24	S24	47.20	34.00
25	S25	45.60	32.80
26	S26	44.60	31.60
Average		**45.51**	**32.60**

Then the analysis is done using Cartesian Diagram, this diagram is made to know clearly the placement of 26 attributes that have been analyzed into 4 quadrants. The first quadrant is located on the upper left, the second quadrant is on the upper right, the third quadrant is on the lower left and the fourth quadrant is on the lower right. The position of each attribute in the four quadrants can be used as a tool in providing alternative strategies to increase farmer satisfaction.

The Cartesian diagram illustrates the priority level of improvement based on the level of importance and satisfaction. The line that intersects the performance axis (X) is the average of satisfaction level of 32.60 and the line that intersects the importance axis (Y) is the average of the level of importance of 45.51 (Figure 2).

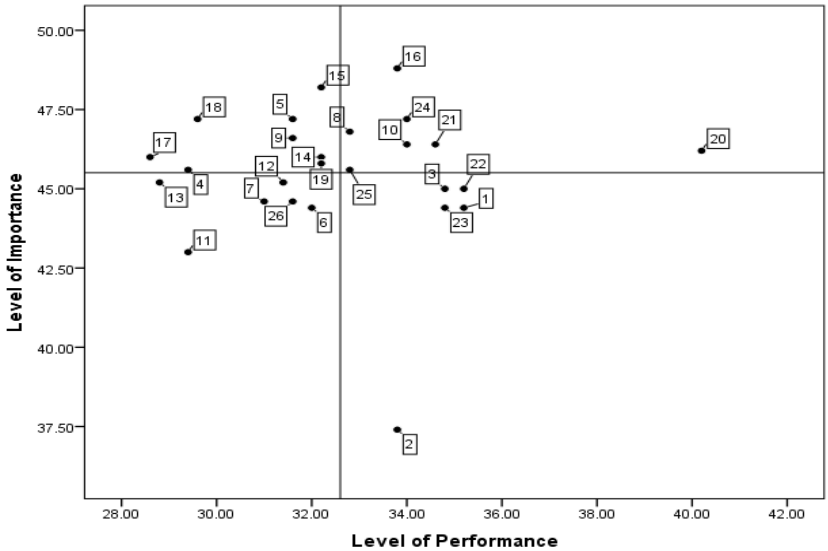

Figure 2. Cartesian Diagram of *Important Performance Analysis*

The analysis results in Figure 2 can be explained as follows:

1. Quadrant I

Quadrant I shows that the service elements are very important for farmers, but the instructor has not carried out in accordance with the wishes of the farmers, causing dissatisfaction with dissatisfaction. Attributes in quadrant I have a score of importance above the average (> 45.51), which means farmers consider this attribute has a high level of importance, while for the performance level score of this attribute is below average (< 32.60) which means that farmer satisfaction with this attribute is still low. Attributes that affect farmers satisfaction with agricultural instructors who are in this quadrant, their handling needs to be prioritized by the extension workers. This attribute is considered very important by farmers, while the level of implementation is still not satisfactory, namely: Counseling is done on time (S4), Serious attention from extension workers to farmers (S5), Reliability in assisting farmers or farmer groups in preparing plans for farming activities (S9), The reliability of agricultural instructors for increasing business results (S14), Willing counselors provide services quickly (S15), Spent time for extension workers to respond quickly to farmers' requests (S17), Accuracy in handling farmers' complaints (S18), and Extension agents have competency in guiding, solving problems of farmers or farmer groups in the field, and establishing business partnerships in agriculture (S19).

2. Quadrant II

Quadrant II shows that the basic service elements that are considered important by farmers have been implemented well and can satisfy farmers, so the obligation of the instructor is to maintain performance. Attributes in quadrant II have a score of importance above the average level (> 45.51), which means farmers consider this attribute has a high importance level and even the performance level of this attribute is above the average (> 32.60) which means that the level of performance of agricultural instructors is high. The attributes that influence the satisfaction of farmers who are in this quadrant need to be maintained, because in general the level of implementation is in accordance with the interests and expectations of farmers, so they can satisfy farmers. The attributes included in quadrant II are: Reliability in seeking facilities and infrastructure needed by farmers (S8), Reliability in helping farmer groups to make group administration (S10), Willingness of extension agents to help farmers face difficulties (S16), The counselor is polite and friendly (S20), Extension agents have the knowledge and skills to provide clear and easily understood information to farmers (S21), Easy to find and contact to consult (S24), and Understanding extension agents of farmers' needs and feelings (S25).

3. Quadrant III

Quadrant III shows that the elements that are considered less important by farmers where the instructor should run it moderately. Attributes in quadrant III have a score of importance below the average (< 45.51), which means farmers consider this attribute has a low importance, and the performance level of this attribute is below average (< 32.60) which means that farmer satisfaction with this attribute is still low. The attributes that influence farmers' satisfaction in this quadrant are still considered important for farmers, while the quality of implementation is normal or sufficient. The attributes included in this quadrant are:, Practice on the ground during training and visits (S6), Training and regular visits (S7), Reliability conveys the latest technology (S11), Reliability of conveying market information (S12), The reliability of agricultural instructors conveys information on business opportunities and capital (S13), and Give special attention (individually) to specific problems (S26).

4. Quadrant IV

Quadrant IV shows that the service elements are considered less important but have been carried out very well with agricultural extension workers. This is considered excessive. The attributes that influence farmers' satisfaction in this quadrant are considered excessive in their implementation. This is mainly due to the fact that farmers consider it not too important to the existence of these attributes, but the implementation is done very well by agricultural extension workers, so it is very satisfying. Attributes that are in this quadrant are Completeness of physical facilities for extension workers such as buildings, rooms and others (S1), Neatness and appearance of extension workers (S2), Extension equipment and equipment used (S3), Farmers have a feeling of security during contact with extension workers (S22) and Extension Center support for extension workers to carry out their duties properly (S23).

4.3. Customer Satisfaction Index (CSI)

The level of overall farmer satisfaction can be measured using the CSI analysis tool. This level of satisfaction is calculated based on the average total value of the level of importance and level of satisfaction. The results of this level of satisfaction analysis can be seen in Table 5. Based on the CSI calculation results for the performance of agricultural extension workers is 60.37 %. This value is in the interval 51 - 65%. This figure identifies that in general farmers are in the Quite Satisfied category. So that agricultural extension workers of the Nania Agricultural Counseling Center need to evaluate the performance that has been done so far, and make improvements in order to meet the expectations of farmers. The evaluation needs to be prioritized on the attributes that are in Quadrant I. According to farmers, the attribute of counseling done on time (S4) is classified as Important (weighting 228), but in its implementation 9 people stated that they were Not Satisfied, 20 people said they were Less Satisfied, 8 people

stated that they were Neutral, 11 people said they were Satisfied, and 6 people said they were Very Satisfied, on average they were rated Neutral (weight 147). Based on the real condition of the field, there is a routine counseling that is done every month so that farmers feel satisfied, there is counseling that is done every 2-3 months and even more.

Table 5. CSI Calculation of Agricultural Extension Worker Performance

No	Attributes	MIS	WF (%)	MSS	WS
1	S1	4.11	3.75	3.26	0.12
2	S2	3.46	3.16	3.13	0.10
3	S3	4.17	3.80	3.22	0.12
4	S4	4.22	3.85	2.72	0.10
5	S5	4.37	3.99	2.93	0.12
6	S6	4.11	3.75	2.96	0.11
7	S7	4.13	3.77	2.87	0.11
8	S8	4.33	3.96	3.04	0.12
9	S9	4.31	3.94	2.93	0.12
10	S10	4.30	3.92	3.15	0.12
11	S11	3.98	3.63	2.72	0.10
12	S12	4.19	3.82	2.91	0.11
13	S13	4.19	3.82	2.67	0.10
14	S14	4.26	3.89	2.98	0.12
15	S15	4.46	4.07	2.98	0.12
16	S16	4.52	4.12	3.13	0.13
17	S17	4.26	3.89	2.65	0.10
18	S18	4.37	3.99	2.74	0.11
19	S19	4.24	3.87	2.98	0.12
20	S20	4.28	3.90	3.72	0.15
21	S21	4.30	3.92	3.20	0.13
22	S22	4.17	3.80	3.26	0.12
23	S23	4.11	3.75	3.22	0.12
24	S24	4.37	3.99	3.15	0.13
25	S25	4.22	3.85	3.04	0.12
26	S26	4.13	3.77	2.93	0.11
	Total	**109.56**	**100.00**	**78.48**	
Weighted Total					**3.02**
Satisfaction Index					**60.37**

The results of the analysis, the level of importance attribute Serious attention from extension workers towards farmers (S5) classified as Very Important (weight 236), but from the implementation 9 people stated Not Satisfied, 13 people stated Less Satisfied, 11 people stated Neutral, 15 people declared Satisfied and 6 people stated Very Satisfied. This is because there are extension agents themselves who do not regularly carry out counseling, some even do not carry out counseling at all. Farmers generally express the hope of the attention of extension workers both directly and indirectly, namely communication via mobile phones. In general, farmers rate the attention of extension agents to farmers as an average of Neutral (weight 158). Nashruddin's research results (2016) stated that farmers will be satisfied if the instructor visits farmers > 2 times a month.

The results of the importance level analysis show that the Reliability attribute in in helping farmers or farmer groups in preparing plans for farming business activities (S9) is Very Important (weight 233), but in terms of implementation 6 people said they were Not Satisfied, 11 people stated they were Less Satisfied, 22 people stated that they were Neutral, 11 people said they were Satisfied, and 4 people said they were Very Satisfied, so overall they were rated as Neutral (weight 158). In the extension guide, the preparation of a Group Definitive Plan or Definitive Plan for the Needs of Farmer Groups to be guided and facilitated by agricultural extension workers. This is attached to the duty of the instructors to pour out the activity in the extension work plan in the Agricultural Extension Workers' Area. The facilitation of the preparation of the Group Definitive Plan / Definitive Plan for the Farmer Group needs to be done in the form of direct practice and simulation so that the preparation process can be carried out correctly in accordance with the conditions and the real needs of farmers. This has not been done properly by the instructor.

The results of the importance level analysis show that the attribute of the reliability of agricultural instructors for increasing business results (S14) is Very Important (weight 230). Based on the aspect of its implementation, 2 people stated that they were Not Satisfied, 17 people said they were Less Satisfied, 20 people said that they were Neutral, 10 people said they were Satisfied and 5 people said they were Very Satisfied. Although extension

services for farmer groups are not optimal as previously explained, the role of extension workers in seeking assistance in the form of seeds or seeds, fertilizers, agricultural tools and machinery, is felt to have helped farming activities. This is specifically for vegetable farmers, farming activities have also been profitable for farmers.

The results of the analysis of the importance level indicate that the willingness of extension agents to provide services quickly (P15) is Very Important (weight 241). Based on the aspect of its implementation, 6 people said they were Not Satisfied, 13 people said they were Less Satisfied, 15 people said they were Neutral, 16 people said they were Satisfied, and 4 people said they were Very Satisfied. Overall stated Neutral (weight 161). The results showed that farmers who were Satisfied or Very Satisfied because the extension agent actively visited farmer groups and easily communicated at any time even through mobile communication.

The results of the importance level analysis show that the extension of the extension of time extension to respond to farmers' requests quickly (S17) is Very Important (weight 230), and from the implementation point of view 12 states that they are Not Satisfied, 12 people say they are Less Satisfied, 17 people say that they are Neutral, 9 people said they were Satisfied, and 4 people said they were Very Satisfied, overall they were declared Neutral (weight 143). This is shown by the farmer's assessment of the performance of extension workers that farmers easily contact extension agents at any time even when free time.

The results of the importance level analysis show that the attribute of accuracy in handling farmers' complaints (S18) is Very Important (weight 236), and from the implementation point of view 6 states that they are Not Satisfied, 18 people say they are Less Satisfied, 16 people say that they are Neutral, 12 people say they are Satisfied, and 2 people stated that they were Very Satisfied, as a whole they were declared Neutral (weight 148). The results showed that not all farmers' complaints were resolved appropriately, such as cultivation problems, the problem of the vegetable market, as well as the role of the government in helping the problem of unclear ownership of the lease / contract land which will have an impact on the continuity of farming and even vegetable production in Ambon City.

The results of the importance level analysis show that the instructor attribute has competence (S19) is Very Important (weight 229), and from the implementation point of view 5 states that they are Not Satisfied, 13 people say they are Less Satisfied, 21 people say that they are Neutral, 8 people say they are Satisfied, and 7 people expressed Very Satisfied, overall stated Neutral (weight 161). Based on the explanation on the previous attribute, not all instructors have this competency, in fact most of them said that the instructor's competency is neutral.

Based on the description above, it is known that overall satisfaction level of extension service in quadrant I is declared Neutral. This indicates that agricultural extension workers have not yet done their services optimally to the farmers they are assisting. Damanik (2016) states three steps that need to be done, namely the rearrangement of farmer groups in Ambon City, structuring the distribution of field extension workers, preserving local wisdom especially related to the life of farmers and agriculture in Maluku, and the seriousness of the government in implementing Law Number 16 of 2006 about Agriculture, Fisheries and Forestry Extension Systems.

5. Conclusions and Recommendations

The level of farmer satisfaction with agricultural extension services is measured through the Consumer Satisfaction Index (CSI). The results of the analysis of the CSI for the performance attributes of agricultural instructors are 60.37 % which are in the interval 51-65 %. This figure identifies that in general the farmers in the working area of the Nania Agricultural Counseling Center are in the category of Quite Satisfied with the services provided by the instructor so far.

Recommendations on efforts to improve the performance of agricultural extension services in providing farmer satisfaction in the future is the extension agent need to prioritize to improve the performance of attributes that are in quadrant I, namely : Counseling is done on time (S4), Serious attention from extension workers towards farmers (S5), Reliability in assisting farmers or farmer groups in preparing plans for farming activities (S9), The reliability of agricultural instructors for increasing business results (S14), Willing counselors provide services quickly (S15), Spent time for extension workers to respond quickly to farmers' requests (S17), Accuracy in handling farmers' complaints (S18), Extension agents have competency in guiding, solving problems of farmers or farmer groups in the field, and establishing business partnerships in agriculture (S19). These attributes are considered very important by farmers, while the level of implementation is still not satisfactory. After that, the instructor can improve the performance of attributes in quadrant III that is Practice on the ground during training and visits (S6), Training and regular visits (S7), Reliability conveys the latest technology (S11), Reliability of conveying market information (S12), The reliability of agricultural instructors conveys information on business opportunities and capital (S13), and Give special attention (individually) to specific problems (S26). In addition, the relevant policy makers also need to evaluate and take action to overcome the problem of activeness of farmer groups and the availability of extension workers who have competencies according to the target farmer groups.

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