



**ORIGINAL RESEARCH PAPER**

**Management**

**THE INFLUENCE OF PERCEPTION AND QUALITY OF SERVICE TO THE AGRICULTURAL QUARANTINE SERVICE USER BEHAVIOR**

**KEY WORDS:** customer Satisfaction, agricultural quarantine, participation, compliance

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<b>ABSTRACT</b>	Increased international trade flows of agricultural commodities (export and import) and domestic potentially bring in and disperses animal quarantine diseases and plant quarantine pests into/from the territory of the Republic of Indonesia and their dispersal from an area to another area. Indonesia Agricultural Quarantine Agency (IAQA) has a strategic role in protecting the country from the threat of entry and dispersal of this diseases and pests. In carrying out its duties, the IAQA needs an active role and participation of agricultural quarantine service users to report agricultural commodities that they brought to the IAQA officer for easier in its supervision. The behavior of service users in utilizing quarantine services is influenced by the level of service user satisfaction and their perception of agricultural quarantine. This study aims to analyze the effect of service user perceptions and the quality of service held on the behavior of service user participation and compliance. Analyzer used is Customer Satisfaction Index (CSI) and Structural Equation Modeling (SEM). From result of CSI analysis got value of service user satisfaction to service of agricultural quarantine equal to 78,26% is in satisfied range (66-80%). Research using SEM shows that service quality and user perception of service to agricultural quarantine have a significant influence on service user behavior in participating actively and comply.
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**1. Introduction**

In the current era of globalization, where there is an increase in the flow of goods and human traffic without knowing the borders between countries through the activities of exports, imports and trade between regions/domestic open opportunities for the possible entry and spread of animal and plant pests and diseases that can damage biological natural resources because Indonesia's homeland or some islands in Indonesia are still free from various pests and diseases of animals and plant pest organisms. In accordance with Law No. 16 of 1992 on Quarantine of Animal, Fish and Plant, the quarantine means place of isolation and/or actions as the effort to prevent the introduction into, the dissemination from one area to another within, or the exportation from the territory of the Republic Indonesia of pests and diseases of animals, fish and plants. As a member of the World Trade Organization (WTO), the state of Indonesia has been bound by international agreements through the Sanitary and Phytosanitary Measure (SPS) agreement. In the performance of its duties, the IAQA issues a quarantine certificate stating that the animal or plant or product to be passed has been examined and declared in good health, not infectious and does not carry harmful organisms that can threaten the health of human/other animals/plants. During the period of 2012-2016, agricultural quarantine certification activities have increased, indicating that agricultural commodity traffic flow has increased (Table 1).

**Table1. Achievement of Agricultural Quarantine Certification Period 2012-2016**

Certification	Frequency				
	2012	2013	2014	2015	2016
Plant Quarantine	443.401	413.280	556.331	575.830	688.084
Animal Quarantine	468.492	452.994	471.868	599.700	580.628
	911.893	866.274	1.028.199	1.175.530	1.268.712

Source : Government Performance Accountability Report, 2016 IAQA has 52 Technical Implementation Units with 3,723

employees guarding 394 entry and exit points. Indonesia has a vast territory with 17.503 islands requires the active participation of service users to report their commodities to quarantine officers. According to Baraniah (2014) the successful activities of the importation of animals and/or animal products to be free from infectious animal diseases agents, free of residue and/or not interfere with the health and tranquility of the community in addition to being determined by the ability of implementers, facilities and funding are also determined by the role and participation of the community, especially business actors, to be responsible for the non-polluting or non-hazardous commodities that they brought. Active role behaviors and service user participation are closely related to their perception of agricultural quarantine and the quality of services they have perceived. Therefore it is necessary research about the influence of perception and quality of service to the behavior of service users.

**2. Methods**

**2.1. Data Collection**

Data are collected from a survey, interview and filling questioner by purposive random sampling to 150 respondents conducted in Tanjung Priok Agricultural Quarantine Center, Soekarno Hatta Agricultural Quarantine Center and Makassar Agricultural Quarantine Center. Data collection is done during January to March 2017.

**2.2. Data Analysis**

This research uses Customer Satisfaction Index (CSI) to measure the level of service user satisfaction and Structural Equation Modeling (SEM) to know the influence of perception and quality of service to behavior of service user.

**Table 2. Variable Measurement of Service User Perception**

Variable	Indicator
Ecological Benefits	Quarantine role in preventing entry and dispersal of animal diseases and plant pests
	Quarantine role in safeguarding Indonesia's biodiversity

	Quarantine role in prevent exposure from Invasive Alien Species
Economic Benefits	Quarantine role in export acceleration of agricultural commodities
	Quarantine role in maintaining and increasing agricultural productivity
	Quarantine as technical barrier for import of agricultural commodities
Social Benefits	Protecting people from zoonosis disease
	Maintenance of public health and the environment
	Avoid the anxiety of disease outbreaks
HR Competence	The quantity and quality of human resources
Facilities	Facilities and infrastructure is adequate and meet expectations
Procedure	Knowledge and understanding of the procedure by service users
	Ease of implementation of the procedure

This study uses five dimensions of customer satisfaction measurement according to Parasuraman et al. (1994), namely: reliability, responsiveness, assurance, empathy, and tangible.

**Table 3. Dimensions and Attributes of Service Quality Assessment**

Dimensions	Attributes
Reliability	Providing services as promised (1)
	Dependability in handling customers's service problems (2)
	Performing services right the first time (3)
	Providing services at the promised time (4)
	Maintaining error-free records (5)
Responsiveness	Keeping customers informed about when services will be performed (6)
	Prompt service to customers (7)
	Willingness to help customer (8)
	Readiness to respond to customer request (9)
Assurance	Officers who instill confidence in customers (10)
	Making customer feel safe in their transactions (11)
	Officers who are consistently courteous (12)
Empathy	Officers who have the knowledge to answer customer questions (13)
	Giving customer individual attention (14)
	Officers understand the needs of customer (15)
	Convenient business hours (16)
Tangible	Compatibility between existing services and procedures (17)
	Modern equipment (18)
	Visually appealing facilities (19)
	Officers who have neat and professional appearance (20)
	Visually appealing materials associated with services (21)

Source : adapted from Parasuraman, et al(1994)

### 3. RESULTS AND DISCUSSION

#### 3.1. Demographic Profile

Respondents of this study were 129 male and 21 female of quarantine service users. The respondents are mostly private employees of 109 people (72%), 17 entrepreneurs (11%), service bureaus/intermediaries 12 people (8%), and others 12 (8%). The majority of respondents have been users of agricultural quarantine services for more than 5 years as many as 56 people (37%), 3-5 years as many as 43 people (29%), 1-2 years as many as 27 people

(18%), and less than one year 24 people (16%). Respondents generally use quarantine services for import activities of 78 people (52%), export of 39 people (26%) and domestic as many as 33 people (22%). While the average frequency of agricultural commodity traffic they do in a year the majority of more than 20 times as many as 56 people (37%), 11-20 times as many as 43 people (29%), 6-10 times as many as 27 people (18%) , and 1-5 times as many as 24 people (16%).

#### 3.2. Validity and Reliability Results

Based on validity test using Pearson Correlation > 0,3610 or Sig.2tailed value <5% (n = 30, alpha 5%), so it indicates that all indicator of the question is valid. While the reliability test produces a good value of reliability if the value of reliability > 0.6.

#### 3.3. Goodness of Fit Results

The size of the suitability of the SEM model, according to Hair JFJ et al. (2006), there is no single statistical test to measure or test the overall model so that multiple measures of conformity criteria can be used to support each other, reflecting whether existing data support a predefined research model

**Table 4. Conformity Criteria Test of Structural Equation Model**

Goodness-of-Fit	Cutt-off-Value	Result	Conclusion
$\chi^2$ - Chi-square	expected small	939.45	goodness of fit
Significance	≥ 0.05	P = 0.67662	
RMSEA	≤ 0.08	0.000	goodness of fit
GFI	approaching 1	0.97	goodness of fit
NFI	approaching 1	1.00	goodness of fit
CFI	approaching 1	1.00	goodness of fit

Several criteria for the suitability of the overall model that can be used is to use a goodness of fit indicator of the Lisrel output as in Table 4. The results of the questionnaire have been able to answer the constructed theory. Because the conclusion of several indicators resulted in the conclusion of goodness of fit model hence hypothesis testing theory can be done.

#### 3.4. Level of Service Users Satisfaction

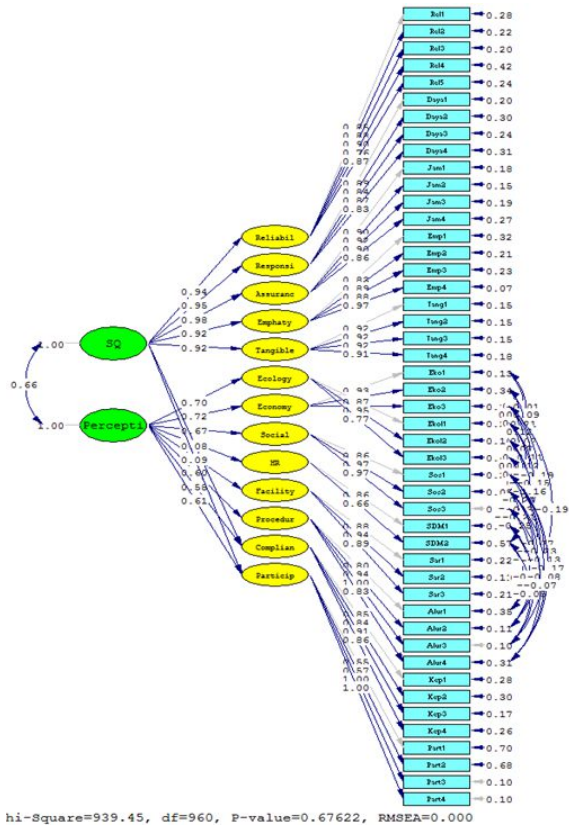
Result of Customer Satisfaction Index (CSI) got value equal to 78,26% whose value is at interval 66% -80,99%, meaning service user feel "satisfied" to performance done by agricultural quarantine, but not yet to level very satisfied. Measurement of satisfaction index should be done continuously in order to know that what is done in accordance with the expectations of service users, because this will impact on the level of participation and compliance of service users. The full CSI test results can be seen in table 5.

**Table 5. Calculation Results of Customer Satisfaction Index (CSI)**

Attributes	Importance	Performance	Weighted Factor	Weighted Score
1	4.447	3.940	0.049	0.195
2	4.340	3.947	0.048	0.191
3	4.360	4.020	0.049	0.195
4	4.420	3.940	0.049	0.194
5	4.313	3.947	0.048	0.189
6	4.473	4.007	0.050	0.199
7	4.487	4.013	0.050	0.200
8	4.367	3.947	0.049	0.192
9	4.327	3.907	0.048	0.188
10	4.227	3.880	0.047	0.182
11	4.213	3.920	0.047	0.184
12	4.353	4.007	0.048	0.194
13	4.313	3.947	0.048	0.189
14	4.113	3.740	0.046	0.171
15	4.133	3.833	0.046	0.176
16	4.260	3.933	0.047	0.186
17	4.340	3.920	0.048	0.189

18	4.067	3.747	0.045	0.169
19	4.107	3.753	0.046	0.171
20	4.153	3.960	0.046	0.183
21	4.080	3.827	0.045	0.174
Mean	4.28	3.91		
Sum	89.89	82.13		3.91
			CSI	<b>78.26%</b>

3.5.The Influence of Perception and Quality of Service on



Chi-Square=939.45, df=960, P-value=0.67622, RMSEA=0.000

Figure 1. Estimate (Loading Factor)

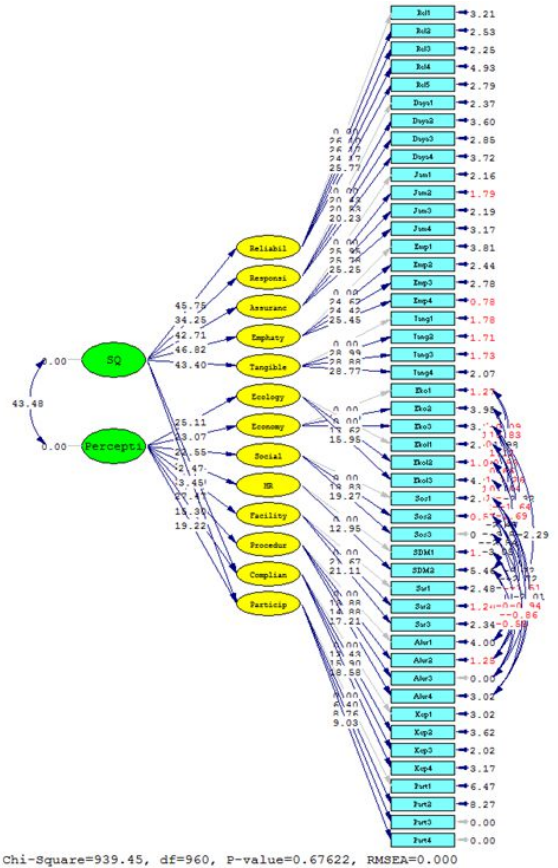
Based on Figure 1, for the service quality, the assurance variable has the largest load factor, which is 0.98, which means that this variable contributes more than other variables. As for the perception of service users, the service user perception variable about the economic benefit of agricultural quarantine (0.72) contributed more than other variables. It shows that the guarantee variable is the variable that most reflects or describes about the quality of service, while the user service perception variable about economic benefit is the variable that most reflects the perception of service users about agricultural quarantine.

Based on figure 2, perceptions of service users about agricultural quarantine in terms of ecological benefits, economic benefits, social benefits, perceptions of human resources, facilities and procedure have a more significant impact than the quality of the service itself on the formation of participatory behavior and compliance behavior. Perceptions and behaviors are two strongly linked variables. Perceptions of service users about agricultural quarantine is something that must be improved, because perception is an important factor that will continue in determining the actions of each individual.

Table 6.. The Result of SEM Regression Estimation

Service User Behavior

In this research, data analysis technique using SEM model which operated with Linear Structural Relationship (LISREL). The structural model and the model load value of the treated data are shown in Figure 1. The model load charge, ie the coefficient showing how much the relative contribution rate of each indicator variable in forming the latent variable. The greater the value shows the greater the contribution in forming latent variables.



Chi-Square=939.45, df=960, P-value=0.67622, RMSEA=0.000

Figure 2. Significance test (t-test)

Path	Estimate	S.E.	t test > 1,96	Conclusion
1. Service Quality Compliance	0,082	0,033	2,470	Significant
2. Perception Compliance	0,580	0,038	15,300	Significant
3. Service Quality Participation	0,086	0,025	3,450	Significant
4. Perception Participation	0,610	0,032	19,220	Significant

From the result of SEM analysis (Table 6), all the variables have significant influence to service user behavior, but the most influential variable is user service perception variable to agricultural quarantine.

4.CONCLUSION

The conclusion that can be taken based on the results of the above research is that the quality of agricultural quarantine service is well indicated by the CSI score on the satisfied range. Perceptions of service users and the quality of agricultural quarantine services have a significant effect on the compliance and participative behavior of service users. Therefore it is necessary to increase the socialization activities in increasing the knowledge and awareness

of the community and service users about the importance of quarantine actions in supporting the protection of biological natural resources and facilitating the flow of trade activities in Indonesia.

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