The level of fisherman compliance with the legality of vessel documents in Idi Fishing Port, East Aceh, Indonesia

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Abstract. Research on the level of fishermen's compliance with the legality of vessel documents at the Idi Fishing Port, East Aceh was carried out in January 2019. The purpose of this study was to determine the level of fishermen's compliance with vessel document legality and fisherman satisfaction with Idi fishing port services in managing vessel legality. The method used in this study is survey and interview methods with qualitative and quantitative descriptive analysis. The sampling technique is Simple Random Sampling (SRS) with the respondents being fishermen. Data analysis using chi-square. Based on the 5 tested variables (physical evidence, reliability, responsiveness, security and care) that had a significant effect on fisherman satisfaction were reliability variables (p=0.042 < 0.05) and security guarantees (p=0.000 <0.05). The results showed the level of compliance of fishermen as much as 90.2% of fishermen were obedient and satisfied with the services of the Idi Fishing Port, East Aceh.

1. Introduction

Aceh is a province located in the most western tip of Indonesia and many have fishing ports or fish landing sites. The existence of the fishing ports in Aceh has a very strategic role in supporting the development of capture fisheries [1]. One of them is the fishing port in Aceh, which is the Idi Fishing Port, East Aceh. This port is included in the type B fishing port with the function of providing services related to fisheries [2]. One form of service that has an important role in the world of fisheries, namely the availability of services in fishing ports [3]. Good service within a company or agency will create satisfaction for its customers [4].

Fisheries activities are inseparable from the large number of fleets that are now increasing. Therefore, service must also be increased, considering that there are many vessel of documents that must be prepared when going to sea. Both the documents of the vessel and crew itself so as not to arrest without permission. Through the licensing system, the government can determine those who may try in the field of fisheries, the amount of land allocated that must be given to each person, and how to run the business through licensing arrangements, the government can determine the number of fish that can be captured by each individual or may capture by the industry as a whole [5].

Licensing besides functioning as preserving fish resources also functions to foster fisheries and provide certainty in capture fisheries. Based on this, it turns out that in carrying out the capture fisheries business, there are various problems that arise, one of which is the problem of licensing that must go through many agencies with complicated and expensive procedures [6].
Good service is one reason for fishermen's compliance and fishermen's disobedience. Therefore, it is necessary to review further the level of compliance of fishermen and how the quality of services provided by the Idi Fishing Port, East Aceh against fishermen. Therefore, it is necessary to conduct research on the level of fishermen's compliance with legality document at the Idi Fishing Port, East Aceh. The objectives of this study are (1) to determine the level of fishermen's compliance with the legality of vessel documents at the Idi Fishing Port, East Aceh, (2) to find out fishermen's satisfaction with the services officers of Idi fishing port in East Aceh.

2. Materials and Methods

2.1 Site and time

This research will be conducted in January 2019 at the Idi Fishing Port, East Aceh District.

2.2 Data collection

The method used in this research is survey method, and an interview. Measuring the level of compliance and service quality is carried out by the servqual method using 5 dimensions consisting of responsiveness, reliability, assurance, empathy, and tangible [7]. The data collected in this study are primary data and secondary data. Primary data needed is assessment of compliance and service quality by distributing questionnaires to respondents and interviews. Secondary data were obtained from literature studies, companies, internet, and other sources related to this research. Respondents used in this study were 82 people. The sampling technique is done by simple random sampling. The respondents used were fishermen, crew members, and vessel owners.

2.3 Data analysis

The data analysis method used is a descriptive qualitative method of describing the answers of the respondents and to find out the fishermen's satisfaction with the services of the Idi fisheries port officer, East Aceh in managing the legality of vessel documents analyzed using Chi-Square [8] with 5 variables; physical evidence, responsiveness, care, security, and reliability with the following equation.

\[ \chi^2 = \frac{\Sigma (f_o - f_e)^2}{f_e} \]  \hspace{1cm} (1)

where: \( \chi^2 \) = Square value; \( f_o \) = Expected frequency; \( f_e \) = Frequency obtained/observed.

3. Results and Discussion

3.1 Fisherman compliance level.

The results showed that 90.2% of fishermen were obedient and 9.8% of fishermen were not compliant (Figure 2). Fishermen are not obedient because the vessel is damaged or is docked and the process of managing the vessel documents is complicated. Complicating document management is also one of the factors that fishermen do not obey. There are many requirements that must be met in managing vessel documents, this makes the service users feel burdened to take care of the completeness, so often every time in managing a service there are always documents that are lacking and must be returned to be equipped [9].
3.2. Fisherman's perception of service quality.

To determine whether there is a relationship between service quality variables (physical evidence, assurance and concern) on fisherman satisfaction (Table 1).

Table 1. Chi-Square test

| No | Variable             | Significance |
|----|----------------------|--------------|
| 1  | Physical evidence    | 0.279        |
| 2  | Reliability          | 0.040**      |
| 3  | Responsiveness       | 0.000**      |
| 4  | Security guarantee   | 0.389        |
| 5  | Concern              | 0.017**      |

Note**: Significance of α = 5%

3.2.1. Relation of physical evidence to fisherman satisfaction.

The results of Chi-Square analysis (Table 2) show that the physical evidence variable does not have a significant effect on fishermen's satisfaction in providing services, p-value of 0.279> 0.05 at the level of α = 5%. This is because direct evidence can be seen from the permit book issued by the Navy and not from the Idi fishing port, East Aceh.

Vessels that will sail must have a permit book issued by the Navy, located in the fishing port of Idi, East Aceh. Meanwhile, the results of this study are not in accordance with the results of previous studies about the assessment of fishermen's satisfaction with the dimensions of the tangibles of service perceived to be quite satisfied [10].

Table 2. The results of the analysis of physical evidence variables on fisherman satisfaction

| Physical Evidence | Fisherman Satisfaction | Total |
|-------------------|------------------------|-------|
|                   | Disagree | Agree |       |
| Not satisfied     | 4        | 23    | 27    |
| Satisfied         | 4        | 51    | 55    |
| Total             | 8        | 74    | 82    |

3.2.2. Relation of reliability to fisherman satisfaction.

The results of Chi-Square analysis (Table 3) show that the reliability variable has a significant effect on the services of Idi Fishing Port officers, East Aceh, in the management of vessel document legality. This can be seen from the p-value of 0.040 <0.05 at the level of α = 5%. The reliability variable of 55 respondents answered disagree in managing the vessel's documents was easy while 27 people agreed to vessel document management, which was easy and satisfied with the reliability of officers at the Idi.
Fishing Port, East Aceh because one of them was arranging the fishing license/SIUP and Fishing License/SIPI.

This result is in accordance with previous research, there is a relation between the reliability variable and fisherman satisfaction in the study of the service of the technical implementing unit in the Lampulo fishing port area. This is due to the lack of ability of officers to speed up the process of arranging vessel documents in the port area. This makes the reliability variable need special attention from related parties in optimizing service reliability variables [11].

3.2.3. The results of the analysis of reliability variables on fisherman satisfaction.

The results of the Chi-Square analysis (Table 4) show that the responsiveness has a significant effect on fisherman satisfaction in the service of officers of the Idi Fishing Port, East Aceh in managing vessel legality by looking at the p-value of 0.000 > 0.05 at the level α = 5%. The results of the Chi-Square analysis show that 24 respondents agreed on the responsiveness of fishermen who provided clear information about fishing boat documents but 58 respondents said they did not agree because according to fishermen, their officers were still minimal in disseminating information to fishermen, such as when they wanted to take care of the documents. The officer does not clearly state the vessel's document requirements and feels unsatisfied with the long document management in its completion. The results of this study are not in accordance with the previous results about the study of the performance of managers of Tegal Tegalsari fishing port in capture fisheries business services which concluded that the effect of responsiveness service quality did not affect facility users [12].

3.2.4. The relation of security guarantees to fisherman satisfaction.

The results of Chi-Square analysis (Table 5) show that the reliability variable is not significantly related to the services of the Idi Fishing Port Officer, East Aceh. Management of vessel document legality by looking at p-value of 0.389 > 0.05 at the level of α = 5%. These results indicate that 51 people answered, agreeing to security guarantees that proved that the costs incurred to manage vessel documents where cheap, but 31 respondents answered disagreeingly because fishermen considered the costs incurred for arranging vessel ping documents very high or expensive.

The payment for managing the vessel's documents is in accordance with the Aceh Qanun Number 3 of 2014 concerning Specific Licensing Levies. The cost of the fee is issued depending on the fishing gear used and the size of the vessel made. SIUP and SIPI documents install rates of Rp 25,000 / GT for purse seine and Rp. 50,000 / GT for vessels with longline fishing gear.
Table 5. The results of the variable analysis of security guarantees on fisherman satisfaction

| security guarantees | Disagree | Agree | Total |
|---------------------|----------|-------|-------|
| Fisherman Satisfaction |
| Not satisfied       | 11       | 16    | 27    |
| Satisfied           | 20       | 35    | 55    |
| Total               | 31       | 51    | 82    |

3.2.5. Relation vessel of unselfishness for fisherman satisfaction.
The results of the Chi-Square analysis (Table 6) show that the variables of significant unselfishness for fisherman satisfaction are in the service of managing vessel document legality. This can be seen from the p-value of 0.017 < 0.05 at the level of α = 5%. These results indicate that 23 people agreed to the care of the officers who provided information about documents that had expired and 59 people who answered in disagreement with the unselfishness of officers to the fishermen on handling vessel documents because fishermen felt the officers did not serve fishermen well, fisheries officers did not blend with fishermen. Fishermen feel dissatisfied with the unselfishness of officers to fishermen. This is in accordance with previous research regarding the care and unselfishness in of service providers to service recipients as a means of the dimension of care needs to be improved [10].

Table 6. The results of the analysis of the variables of unselfishness for fisherman satisfaction

| Unselfishness | Disagree | Agree | Total |
|---------------|----------|-------|-------|
| Fisherman Satisfaction |
| Not satisfied | 24       | 3     | 27    |
| Satisfied     | 35       | 20    | 55    |
| Total         | 59       | 23    | 82    |

4. Conclusion

Based on the results of the analysis using the Chi-Square test, a number of variables that are significantly associated with the level of satisfaction of fishermen include reliability = 0.042; responsiveness = 0,000 and unselfishness = 0.017 at the level of α = 5%, and as many as 90.2% of fishermen were obedient and 9.8% of fishermen were not obedient in the fishing port of Idi, East Aceh.

Acknowledgement

Thank you to us; the Head of the Fishing Port of Idi of East Aceh, the Head of the Marine and Fisheries department of the East Aceh District, the Panglima Laot of East Aceh District, the Panglima Laot of Idi, the fishing masters, the vessel owner, the crew and friends who have helped in completing this research

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