

Determination of Competence, Work Discipline, and Utilization of Technology towards Public Satisfaction Through Service Quality in the Fisheries Service of Karimun Regency

Syamsurizal^{1*}, Ngiliman¹, Sri Yanti¹

¹Faculty of Economics and Bussiness, Universitas Batam, Batam 29432 Indonesia

Corresponding Author: syamsurizal.1980@gmail.com

Received: 4 August 2024; Accepted: 9 September 2024

ABSTRACT

High employee competency will ensure that every task and responsibility can be completed effectively and efficiently. Good work discipline will create an orderly and productive work environment, improving the quality of services provided to the community. Technology also plays an equally important role; because of sophisticated technology, service processes can be carried out more quickly and accurately, reducing human error and increasing people's comfort in accessing public services. The research aims to determine the effect of competence, work discipline, and the use of technology on community satisfaction through service quality. The study was conducted for 5 months (March–July) at the Karimun Regency Fisheries Service. Quantitative research methods were analyzed using the Smart PLS application from questionnaire data with 201 respondents and concluded that there is a direct determination of employee competency, work discipline, use of technology, and service quality on community satisfaction in the Karimun Regency Fisheries Service area. There is a determination of employee competency in work discipline and the use of technology directly on the quality of services of the Karimun Regency Fisheries Service. It is recommended to the Head of the (Karimun Regency Fisheries Service: 1) optimize the number of employees who take part in work competency training, especially regarding increasing knowledge and skills according to the fields listed. 2) Providing training programs or seminars to improve employee work discipline regarding the importance of arriving on time, effectively using time, compliance with agency regulations, and achieving work targets. 3) Optimizing an integrated information system in providing services and basic skills using the latest technology, which can help communicate with the service user community by keeping up with the latest technological developments and meeting needs in completing tasks appropriately based on the availability of information.

Keywords: Competence, Work Discipline, Service, Technology, Satisfaction.

1. INTRODUCTION

Public satisfaction with the services of the Karimun Regency Fisheries Service is in the less-than-good category. According to [Kweonet in Zhen et al. \(2019\)](#), public satisfaction is the most crucial component of life satisfaction. Then [Ladewig & McCann in Zhen et al. \(2019\)](#) define public satisfaction as a reflection of the psychosocial of citizens towards public services.

[Roberto et al. \(2019\)](#) there is information on problems related to service quality in the form of constraints on competence, work discipline, and use of technology in the service. This is indicated by public input regarding the impression of employees who show attitudes such as lacking expertise and skills, employees who do not follow standard operating

procedures, and there are still special services for certain people. Then the public feels they have to wait a long time to get services, do not meet service officers during effective working hours, and officers need to be faster to come to provide services.

The slow implementation of services is due to slow internet access, the lack of technological equipment to speed up the implementation, and the lack of information related to technology-based services. This also generally indicates problems related to service quality. According to [Atmaja \(2018\)](#), service quality is an organizational activity that meets consumer expectations.

[Widiyanto \(2018\)](#) argues that service quality is the magnitude of an organization's ability to provide service benefits according to

the expectations of service users, especially competence. According to [Dessler in Lianasari & Ahmadi \(2022\)](#), competence is the quality of ability that includes skills, attitudes, beliefs, or employee traits to complete work. Work discipline and utilization of technology in the service. This study is focused and aimed at analyzing and knowing the determination of employee competence, work discipline, and utilization of technology on public satisfaction and service quality, as well as the determination of service quality directly on public satisfaction in the work area of the Karimun Regency Fisheries Service.

[Nura & Ediwijoyo \(2020\)](#), indicators of public satisfaction are requirements, systems, mechanisms, procedures, completion time, costs, types of services and infrastructure, competence, the behaviour of implementers, complaint handling, suggestions, and input. According to [Firmansyah \(2021\)](#), Measuring instruments for assessing the quality of services or services include reliable, responsive, confident, tangible, and empathetic. In this study, the indicators for measuring service quality are (a) physical evidence, (b) reliability, (c) responsiveness, (d) assurance, and (e) empathy.

According to [Spencer in Astuti \(2020\)](#), competency indicators are character, motives, self-concept, and knowledge of skills. According to [Noe in Lianasari & Ahmadi \(2022\)](#), Spencer and Emyah's competency dimension theory can measure knowledge, skill, and attitude with knowledge indicators. It is concluded that the competency indicators in this study are 1) knowledge and ability according to the field of duty and 2) willingness and initiative.

According to [Mulyadi in Gugo \(2023\)](#), information technology indicators suit operational, control and monitoring, planning and decision-making, communication, and inter-organizational roles. It is concluded that the indicators of technology utilization in this study are unity with namely 1) social factors, 2) user feelings, 3) complexity, 4) task suitability, and 5) conditions that facilitate.

2. RESEARCH METHOD

Time and Place

This research was carried out at the Karimun Regency Fisheries Service for five months, from March to July 2024.

Method

The method used in this research is a quantitative approach. The variables operated using five variables, namely: 1) competence (X1); 2) work discipline (X2); 3) utilization of technology (X3); 4) service quality (Z); and 5) community satisfaction (Y). The fishing community in Karimun Regency totals 10,607 people. Then, for the minimum sample, use a calculation formula using the Slovin formula ([Nalendra et al., 2021](#)) as follows:

$$n = \frac{N}{1 + (N \times e^2)}$$

Description:

n = Sample Size

N = Population

e^2 = Error Percentage

Considering the character of the respondents, who are fishermen who are less familiar with the questionnaire system, and considering the efficiency of the research process while still prioritizing the accuracy of research results, the researcher determined the sample size with a confidence level of 93%, with a calculation result of 200.23 (rounded to 201 respondents). Then, a survey was conducted of the 201 respondents using a questionnaire containing 75 statements.

Data Analysis

This study uses PLS (Partial Least Square) analysis. This was chosen because it is more straightforward with accurate results ([Duryadi, 2021](#)).

3. RESULT AND DISCUSSION

Respondent Demographics

The description of the 201 sampled respondents was distinguished by age group, gender, and last education. Based on the age group, 40.2% were between 19 and 35 years, 33.9% were between 36 and 45 years, and 20.5% were over 56 years. Male gender was 97.6%, while female respondents were only 2.4%. Respondents with the last education of junior high school were 31.5%, high school was 29.1%, elementary school was 28.3%, bachelor's degree was 8.7%, and never had formal school was 2.4%.

Validity and Reliability Test

The results of the outer model test showing the outer loading value using smart

PLS can be seen in the following Figure 1.

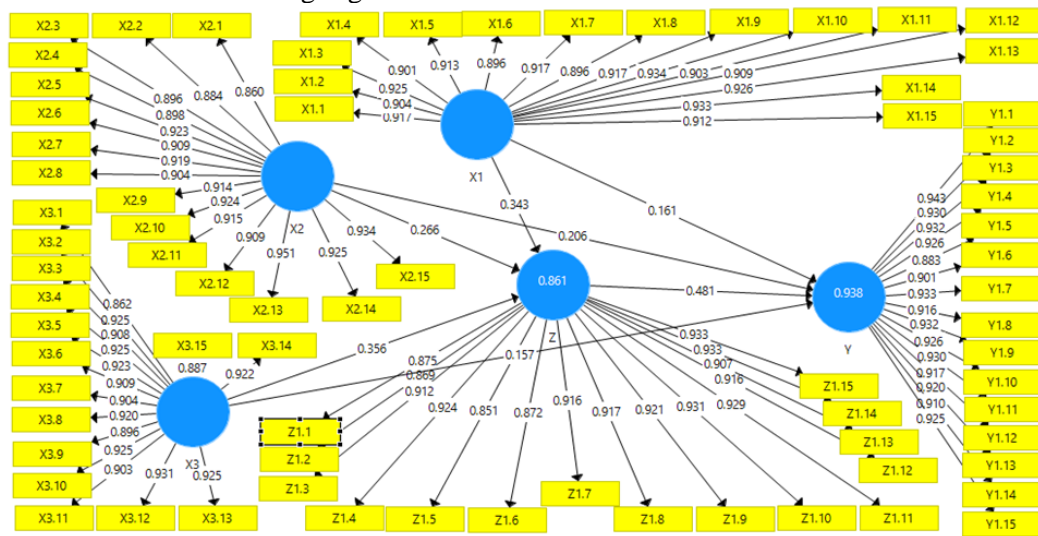


Figure 2. Outer model test results

Table 1. Construct reliability and validity

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
X1	0.986	0.986	0.987	0.835
X2	0.985	0.986	0.987	0.830
X3	0.985	0.986	0.987	0.830
Y	0.987	0.987	0.988	0.849
Z	0.985	0.985	0.986	0.823

Source: Primary Data processed in 2024 (Smart PLS Output)

Figure 1 shows that all variables have a value > 0.7 . So, they have met the criteria (Duryadi, 2021). It is shown that all variable values in the reliability test, both Cronbach's Alpha and composite reliability, have values above 0.7, and AVE has a value > 0.5 . Thus, it is concluded that the variables tested are valid and reliable so that structural model testing can be carried out (Duryadi, 2021).

Results of Inferential Analysis with Structural Model (Inner Model)

The R Square or determinant coefficient value (the magnitude of the influence) and q^2 predictive relevance, or how good the observation value is, can be seen in Table 2.

Table 2. R Squares

	R Square	R ² Adjusted
Quality of service (Z)	0.938	0.937
Community satisfaction (Y)	0.861	0.859

Table 2 shows that the R Square value of education is 0.937, meaning that the endogenous

variable of service quality is 93.7%, determined by the variables of competence, work discipline, and utilization of technology, while other factors outside the variables studied determine 6.3%. The R Square value of public satisfaction is 0.859, meaning that the endogenous variable of public satisfaction is 85.9%, determined by the exogenous variables of competence, work discipline, utilization of technology, and service quality, while other factors influence 14.1%.

Table 3. Model fit/model goodness of fit (NFI value)

	Saturated Model	Estimated Model
SRMR	0.030	0.030
d_ULS	2.649	2.649
d_G	13.420	13.420
Chi-Square	9590.300	9590.300
NFI	0.711	0.711

From the data, the NFI value is shown as 0.711 or 71.1%, exceeding 0.67 or 67%, so it can be concluded that the model's goodness is strong. So, after going through the above requirements, it can be concluded that the model

can be continued to the next test, namely the hypothesis test, according to Duryadi (2021). If the correlation coefficient value of variable X to Y with a T-statistic value $T\text{-statistic} > 1.96$ and a P-value value of less than <0.05 , it is concluded to be significant (Table 4).

All original sample values are positive. The determination value of competence (X1) towards community satisfaction (Y) is 0.161. The determination value of work discipline (X2) towards community satisfaction (Y) is 0.206.

The determination value of technology utilization (X3) towards community satisfaction (Y) is 0.157. The service quality (Z) determination value towards community satisfaction (Y) is 0.481. The determination value of competence (X1) towards service quality (Z) is 0.343. Work discipline (X2) 's determination value towards service quality (Z) is 0.266. The determination value of technology utilization (X3) towards service quality (Z) is 0.356.

Table 4. Path coefficient

	Original sample (O)	Sample Mean (M)	Standard deviation	T Statistics	P Values
X1 -Y	0.161	0.150	0.065	2.475	0.014
X2 -Y	0.206	0.199	0.092	2.241	0.025
X3 -Y	0.157	0.158	0.074	2.120	0.035
Z -Y	0.481	0.498	0.117	4.114	0.000
X1 -Z	0.343	0.340	0.091	3.765	0.000
X2 -Z	0.266	0.279	0.118	2.241	0.025
X3 -Z	0.356	0.345	0.092	3.866	0.000

Table 5. Specific indirect effects

	Original sample (O)	Sample mean (M)	Standard deviation	T Statistics	P Values
X1 - Z -Y	0.165	0.168	0.057	2.872	0.004
X2 - Z -Y	0.128	0.142	0.073	1.740	0.083
X3 - Z -Y	0.171	0.171	0.060	2.862	0.004

Table 5 shows that all original sample values are positive. The determination value of competence (X1) in the mediation of service quality (Z) on community satisfaction (Y) is 0.165 with a P-value of 0.004. The determination value of work discipline (X2) in the mediation of service quality (Z) on community satisfaction (Y) is 0.128, with a P-value of 0.083. The determination value of technology utilization (X3) in the mediator of service quality (Z) on community satisfaction (Y) is 0.171, with a P-value of 0.004.

Determination of Employee Competence towards Community Satisfaction

The determination value of competence (X1) in the mediation of service quality (Z) on community satisfaction (Y) is 0.165 with a P-value of 0.004. The determination value of work discipline (X2) in the mediation of service quality (Z) on community satisfaction (Y) is 0.128, with a P-value of 0.083. The determination value of technology utilization (X3) in the mediator of service quality (Z) on community satisfaction (Y) is 0.171, with a P-value of 0.004.

Determination of Work Discipline towards Community Satisfaction

The correlation coefficient value of work discipline on community satisfaction has a T-statistic value of 2.241 and a P-value of 0.025. With a T-statistic value of 2.241, it means more than (>1.96), and a P-value value of 0.025, it means less than (<0.05). It is concluded that there is a direct and significant determination of work discipline on community satisfaction in the work area of the Karimun Regency Fisheries Service.

Determination of Technology Utilization on Community Satisfaction

The correlation coefficient value of technology utilization on community satisfaction has a T-statistic value of 2.120 and a P-value of 0.035. With a T-statistic value of 2.120, it means more than (>1.96), and a P-value value of 0.035, it means less than (<0.05). It is concluded that technology utilization directly and significantly affects community satisfaction in the work area of the Karimun Regency Fisheries Service.

Determination of Service Quality towards Public Satisfaction

The correlation coefficient value of technology utilization on community satisfaction has a T-statistic value of 2.120 and a P-value of 0.035. With a T-statistic value of 2.120, it means more than (>1.96), and a P-value value of 0.035, it means less than (<0.05). It is concluded that technology utilization directly and significantly affects community satisfaction in the work area of the Karimun Regency Fisheries Service.

Determination of Employee Competence in Service Quality

The correlation coefficient value of competence to service quality is T-Statistic 3.765 and P-Value 0.000. A T-statistic value of 3.765 means more than (>1.96), and a P-value value of 0.000 represents less than (<0.05). It is concluded that there is a direct and significant determination of employee competence in the service quality of the Karimun Regency Fisheries Service.

Determination of Work Discipline on Service Quality

The correlation coefficient value of work discipline on service quality is T-Statistic 2.241 and P-Value 0.025. A T-statistic value of 2.241 means more than (>1.96), and a P-value of 0.025 means less than (<0.05). It is concluded that there is a direct and significant determination of work discipline on the service quality of the Karimun Regency Fisheries Service.

Determination of Technology Utilization on Service Quality

The correlation coefficient value of technology utilization on service quality has a T-statistic value of 3.866 and a P-value value of 0.000. With a T-statistic value of 3.866, it means more than (>1.96) and a P-value value of 0.000 means less than (<0.05). It is concluded that technology utilization directly and significantly impacts the service quality of the Karimun Regency Fisheries Service.

Determination of Employee Competence towards Community Satisfaction Through Service Quality

The value of competence towards public satisfaction through service quality has a T statistic of 2.872 and a P-value of 0.004. With T-Statistic, 2.872 means more than (>1.96), and P-

Value 0.004 means less than (<0.05). It is concluded that there is an indirect and significant determination of employee competence toward public satisfaction through the service quality of the Karimun Regency Fisheries Service. If X to Y is directly significant, and X to Y (indirectly) through (Z) is essential, then Z is a perfect mediation variable (complete mediation) (Duryadi, 2021). This means that service quality can mediate the determination of employee competence toward public satisfaction.

Determination of Work Discipline towards Community Satisfaction Through Service Quality

The value of work discipline on community satisfaction through service quality is shown by a T statistic of 1,740 and a P-value of 0.083. With T-Statistic, 1,740 means less than (<1.96), and P-Value 0.083 means more than (>0.05). It is concluded that there is no indirect and insignificant determination of work discipline on community satisfaction through the quality of service of the Karimun Regency Fisheries Service. If X to Y is directly significant, and X to Y (indirectly) through (Z)) is not substantial, then Z is a partial mediation variable (Duryadi, 2021). This means that service quality can only mediate part of the determination of work discipline on community satisfaction.

Determination of Technology Utilization on Public Satisfaction Through Service Quality

The value of technology utilization on community satisfaction through service quality with T statistic 2.862 and P-Value 0.004. With T-Statistic, 2.862 means more than (>1.96), and P-Value 0.004 means less than (<0.05). It is concluded that technology utilization indirectly and significantly affects community satisfaction through the service quality of the Karimun Regency Fisheries Service. If X to Y is directly significant, and X to Y (indirectly) through (Z) is essential, then Z is a perfect mediation variable (complete mediation) (Duryadi, 2021). This means that service quality can mediate the determination of technology utilization on community satisfaction.

4. CONCLUSION

Employee competence, work discipline, and utilization of technology directly and

significantly affect public satisfaction and service quality. Furthermore, service quality directly affects public satisfaction in the Karimun Regency Fisheries Service. Meanwhile, service quality acts as a perfect mediating variable for indirect and significant determination between employee competence

and technology utilization towards public satisfaction through service quality. The absence of indirect and insignificant determination between work discipline and public satisfaction through service quality means that service quality acts as a partial mediation.

REFERENCES

- Astuti, R.P. (2021). *Pengaruh Patient Family Education terhadap Tingkat Kecemasan Keluarga Pasien di Instalasi Gawat Darurat Rumah Sakit Akademik Universitas Gadjah Mada Yogyakarta*. Poltekkes Kemenkes Yogyakarta.
- Atmaja, J. (2018). Kualitas Pelayanan dan Kepuasan Nasabah terhadap Loyalitas pada Bank BJB. *Jurnal Ecodemica*, 2(1): 49-63.
- Duryadi, D. (2021). *Metode Penelitian Empiris Model Path Analisis Menggunakan Smart*. Penerbit Yayasan Prima Agus Teknik dan Universitas STEKOM, Semarang
- Firmansyah, A.C., & Rosy, B. (2021). Pengaruh Kualitas Pelayanan Publik terhadap Kepuasan Masyarakat. *Journal of Office Administration: Education and Practice*, 1(2): 82-93.
- Gugo, H. (2023). Pengaruh Kompetensi dan Profesionalisme terhadap Kinerja Pegawai dengan Teknologi Informasi sebagai Variabel Mediasi pada Pegawai Dinas Perhubungan Kota Surabaya Bidang Prasarana Transportasi. *Manajemen Dewantara*, 7(3): 560-572
- Lianasari, M., & Ahmadi, S. (2022). Pengaruh Kompetensi dan Lingkungan Kerja terhadap Kinerja dengan Motivasi Kerja sebagai Variabel Intervening. *Fokus Bisnis Media Pengkajian Manajemen dan Akuntansi*, 21(1): 43-59
- Nalendra, A.R.A., Rosalinah, Y., Priadi, A., Subroti, I., Rahayuningsih, R., Lestari, R., Kusamandari, S., Yuliasari, R., Astuti, D., Latumahina, J., Purnomo, M.W., & Zede, V.A. (2021). *Statistika Seri Dasar dengan SPSS*. Penerbit Media Sains Indonesia.
- Nurâ, I., & Ediwijoyo, S.P. (2020). Analisis Kepuasan Masyarakat terhadap Pelayanan Publik Berdasarkan Indeks Kepuasan Masyarakat di Kantor Kecamatan Ayah Kabupaten Kebumen. *Jurnal E-Bis*, 4(2): 276-286.
- Roberto, A., Kadir, A., & Angelia, N. (2019). Analisis Kepuasan Masyarakat dalam Pelayanan Kepala Desa Medan Estate Kecamatan Percut Sei Tuan. *Jurnal Ilmu Pemerintahan, Administrasi Publik, dan Ilmu Komunikasi (JIPIKOM)*, 1(1): 35-41.
- Widiyanto, G.G.T. (2018). *Pengaruh Citra Merek, Kualitas Layanan dan Harga terhadap Kepuasan Pelanggan Go-Ride (Survei pada Mahasiswa Fakultas Ilmu Administrasi Universitas Brawijaya Angkatan 2016/2017 dan 2017/2018)*. Universitas Brawijaya.
- Zhen, F., Qin, X., Jiang, Y., & Chen, H. (2019). Effects of Community Communication Technology (ICT) Usage on Community Satisfaction: Case Study in Nanjing, China. *Chinese Geographical Science*, 29: 834-847.