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## The Implementation of E-Government Service Quality “Inaportnet” At Tanjung Priok Port Authority Jakarta

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### ABSTRACT

The objective of this research is to analyze the effect of e-government service quality on the customer satisfaction of Inaportnet System users served by Port Authority Office of Tanjung Priok Jakarta. There are four dimensions to analyze the customer satisfaction with e-government service quality as follows: efficiency, trust, reliability and supporting facilities. The method used is quantitative research with sample to be taken is  $n = 70$  selected respondents. The data is analyzed by using linear regression analysis technique.

The results of the research are: first, there is a positive correlation between efficiency and customer satisfaction which has significant and strong relationship; second, there is a positive correlation between trust and customer satisfaction which has significant and strong relationship; third, there is a positive correlation between reliability and customer satisfaction which has significant and strong relationship; fourth, there is a positive correlation between supporting facilities and customer satisfaction which has significant and strong relationship; fifth, there is a positive correlation among efficiency, trust, reliability and supporting facilities and customer satisfaction which has significant and strong relationship.

The conclusion of this research is that the Inaportnet customer satisfaction of Tanjung Priok Port of Jakarta could increase as the effect of improvements in efficiency, trust, reliability and supporting facilities of e-government service quality.

**Keywords:** e-government, service quality, shipping business, and Inaportnet.

### INTRODUCTION

The current logistic performance of Indonesia has been paid serious attention by the government and private. The performance is frequently measured using some statistical standards/benchmarks, such as dwelling time, contribution of logistic cost to GDP, and Logistic Performance Index (LPI).

One effort considered to be able to enhance the logistic performance of Indonesia quickly and cheaply is the improvement in *soft infrastructure*, i.e. providing the platform of information technology for logistic communities to exchange data and information in an integrated way. This is what developed countries have done in their logistic process. It is not a new idea; one of the realizations that has been in progress and frequently mentioned is Indonesian National Single Window (INSW) which has two pillars, namely Tradenet and Portnet.

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Thus, Indonesia Port Net, which is subsequently abbreviated as Inaportnet, is one of the INSW portals as part of the efforts to actualize the National Logistic System or *Sistem Logistik Nasional* (Sislognas) which has global competitiveness. Inaportnet is an open and neutral electronic portal to facilitate the exchange of data and information on the port services in quick, secure, and neutral ways and easy to be integrated with related government agencies, port business entities, and business players in logistic industry for increasing the competitiveness of Indonesian logistic communities.

The users of Inaportnet are government agencies and port business entities as well as business players in logistic industry in Indonesia that take advantage of port services such as shipping lines/agents, freight forwarders, Container Freight Station (CFS), Custom brokerage (PPJK), importers and exporters, container depots, warehouses, and inland transportation.

By implementing the policy on electronic portal system of port services, the stakeholders of Tanjung Priok port will surely implement the integrated online system starting from early stages first. It needs a process and takes time to access the Inaportnet system, for example, how to obtain the access, how to open the access, how to implement the system so that there will be no obstacles, how to respond, and how to run the applications one by one.

Some obstacles and barriers exist while starting to use the Inaportnet system in the main port of Tanjung Priok. This is particularly faced by shipping companies, where it is very difficult to change their mindset. It is actually easier to use Inaportnet system because with the online system the employees of shipping companies or stakeholders do not need to go to the Port Authority office, just sitting in front of a computer and stay at the office.

Shipping companies also still have orientation and mindset that in addition to making report or notification of ship news or notification of ship's arrival to the port authority office, they also make notification of ship's arrival to PT. Pelindo II. Thus, the SOP in the Inaportnet system does not run well. The SOP which should be run has destructed the system itself so it seems that the use of Inaportnet system is very difficult and also complicated.

The evaluation on the implementation of Inaportnet has been done several times considering many stakeholders are involved and many shipping and stevedoring companies carry out activities in the area of Tanjung Priok port. The problem that emerges after using Inaportnet system can be considered as a goodness of implementing the SOP itself and as an input to improve the Inaportnet system performance or service quality.

The implementation of E-Government service through Inaportnet is the government's public service for sea transportation users and ultimately for the satisfaction of port service users. The satisfaction may come true if the provided services are in accordance with or better than the predetermined service standard.

To measure the website service quality, especially the websites of governmental institutions which have implemented E-Government, E-Government Service Quality or E-GovQual can be used. There are four dimensions to analyze the satisfaction of service users with the e-government service quality as follows: efficiency, trust, reliability and supporting facilities.

#### **Theoretical Bases E-Government**

According to Bernd W. Wirtz and Peter Daiser (2015), *electronic government* is the use of information and communication technologies in the governmental transformation which aims mainly at improving accessibility, effectiveness and responsibility. According to Driss Kettani and

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Bernard Moulin (2014), *E-Government* is a method to promote the responsiveness of governmental institutions to the demand of growing society, including the increasing access to public services, public institution efficiency and tighter security measures.

### **Assessment Method of E-Government Service Quality**

*E-Govsqual* or *E-Government Service Quality* is a dimensional frame to assess the service quality as a result of some researches on *E-Government* quality. (Papadomichelaki & Mentzas, 2011:) proposes six main criteria known as *E-Government* service quality dimensions. However, in the journal *e-GovQual: A multiple-item scale for assessing e-government service quality*, the data collection is carried out twice. With the first data collection, Papadomichelaki & Mentzas eliminate the dimensions of *ease of use*, *content and appearance of information*, and *functionality of the interaction environment* which are considered as one dimension, namely efficiency.

Thus, the indicator variables of e-government service quality assessment are independent variables of efficiency ( $X_1$ ), trust ( $X_2$ ), reliability ( $X_3$ ) and supporting facilities ( $X_4$ ). The satisfaction of port service users is as the Y variable.

#### **Efficiency ( $X_1$ )**

Efficiency: The ease of using the site and the quality of information it provides (7 evaluation criteria). More analytically, this dimension takes into account the clear and easy way to follow structure of the site (Clear Structure), the effectiveness of the site's search engine (Search Engine), how well the site's map is organized (Site Map), how well the site can be customized to an individual user's needs (Customization), whether the information displayed in the site is appropriately detailed (Info Detail), whether the information provided by the site is fresh (Info Up To Date), and whether there is enough information on how to complete the forms provided by the site (Form Help Information).

#### **Trust ( $X_2$ )**

Trust: The degree to which the citizen believes the site is safe from intrusion and protects personal information (4 evaluation criteria). This dimension refers to the degree that the acquisition of username and password in the site is secure (Secure Username - Password), the amount of personal data required for authentication on the e-government site (Personal Data Minimum Provision), whether the data provided by users in the site are archived securely (Data Provided Safety) and whether the data provided by the citizens are used only for the reason they were submitted on the first place (Data Provided Use).

#### **Reliability ( $X_3$ )**

Reliability: The feasibility and speed of accessing, using, and receiving services of the site (6 evaluation criteria). More detailed, this dimension comprises the speed of downloading forms from the E-Government site (Form Fast Download), whether the site is available and accessible whenever the citizens need it (Site Availability), the extent to which the site performs the service successfully upon first request (Service Successful), whether the services provided by the site are in time (Perform Service In Time), how fast the site's pages are downloaded (Site Fast Download), and whether the e-government site works properly with any default browser (Browser Compatibility).

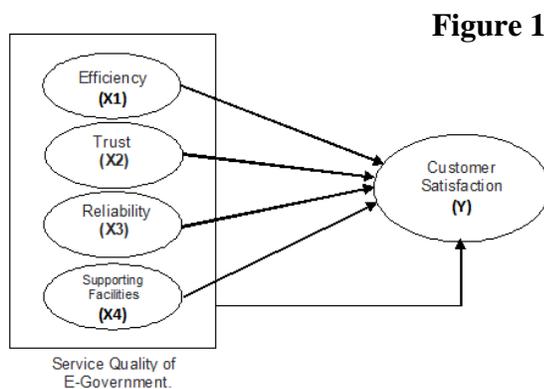
### Supporting Facilities (X4)

Citizen Support: The ability to get help when needed (4 evaluation criteria). This final dimension deals with the interaction of the citizens with the employees of the site's Help Desk while experiencing some difficulties in their interaction with the e-government site. It refers to the interest shown by the employees in solving the citizens' problems (Help Desk Interest), whether the employees give prompt replies to users' inquiries (Help Desk Prompt Reply), whether the employees have the knowledge to answer the users' questions (Help Desk Knowledge), and whether the employees are able to convey trust and confidence (Help Desk Trust).

### Customer Satisfaction

Kotler (2005) states that satisfaction is a someone's feeling of like/dislike with a product after comparing the performance of the product with his or her expectation. According to Supranto (2006), satisfaction is the degree of someone's feeling after comparing the perceived performance (result) with his or her expectation.

### Framework of Thinking



The synthesis of efficiency (X1), trust (X2), reliability (X3), supporting facilities (X4) of E-Government service and customer satisfaction (Y) is that if we want to enhance the customer satisfaction (Y), then the quality of the synthesis of efficiency (X1), trust (X2), reliability (X3) and supporting facilities (X4) of E-Government service should be improved. Furthermore, the coefficients above can give description in the form of correlation.

### Hypotheses

Based on the theories and framework of thinking stated above, then the research hypotheses are formulated as follows:

- H1 That efficiency (X1) influences customer satisfaction (Y).
- H2 That trust (X2) influences customer satisfaction (Y).
- H3 That reliability (X3) influences customer satisfaction (Y).
- H4 That supporting facilities (X4) influence customer satisfaction (Y).
- H5 That efficiency (X1), trust (X2), reliability (X3) and supporting facilities (X4) simultaneously influence customer satisfaction (Y).

### RESEARCH METHOD

The number of Inaportnet service user population who have been registered in the Inaportnet system is as many as 233 persons from various companies and government agencies. Based on slovin formula, with the number of population as many as 233 persons and the precision at 10% of the tolerable or expected mistakes in sample taking 10% or 0.1, the calculation is as follows:

$$n = \frac{233}{233 \cdot (10\%)^2 + 1} = 69,969 = 70$$

So, the sample to be taken is as many as 70 respondents.

The data collection can be done using the following techniques: (1) questionnaire, distributing list of close questions; (2) interview, asking some questions directly to the respondents; (3) observation, directly observing and recording the symptoms related to the research variables; (4) literature study, studying various readings, books, scientific papers, journals, documents and reports related to the research variables.

### RESULTS AND DISCUSSION

#### Data Description

Figure 2 Frequency of Variable X1

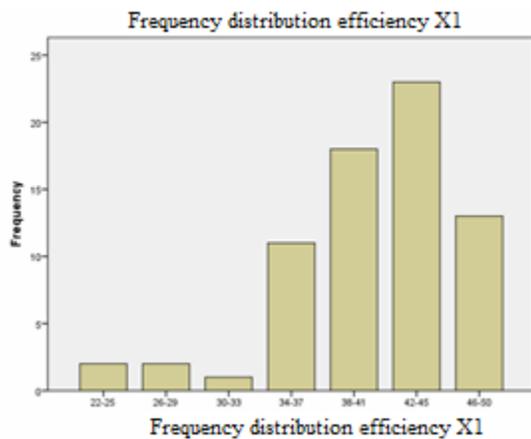


Figure 3 Frequency of Variable X2

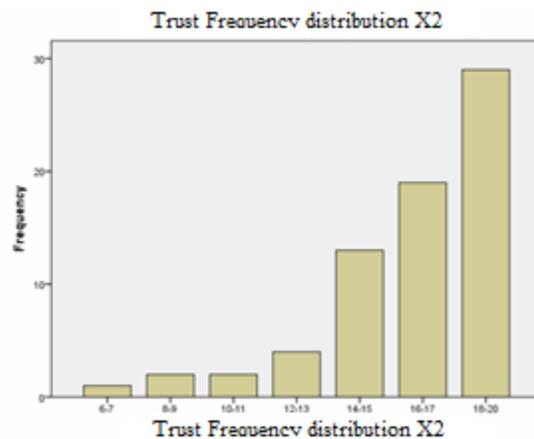


Figure 4 Frequency of Variable X3

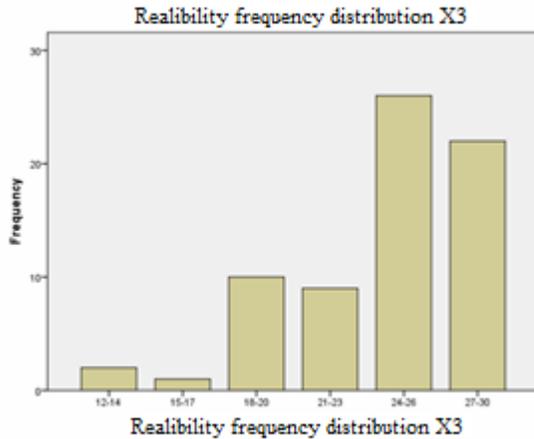


Figure 5 Frequency of Variable X4

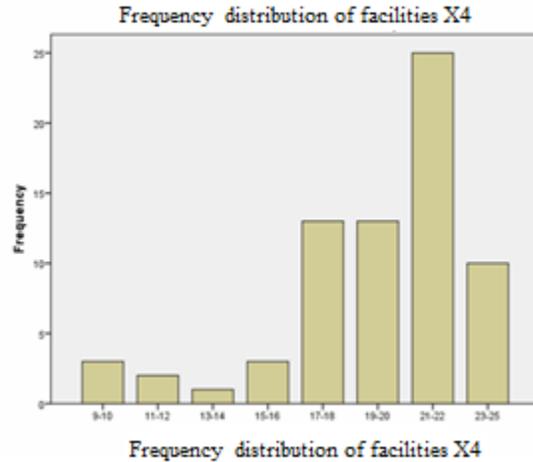


Figure 6 Frequency of Variable Y



### Results of Validity Test

From the results of validity test on each point of question to the variable of e-Government Service Quality (X) and Customer Satisfaction (Y), it is obtained that all the points of questions to variable X and Y have  $r_{\text{statistic}} > r_{\text{table}}$  (0.361). Thus, it can be said that all the points of questions are valid.

### Result of Normality Test

Normality test is carried out on the residual value in order to know whether the standardized residual value in the regression model is distributed normally or not. Based on the results of normality test using SPSS software with the method of One-Sample Kolmogorov-Smirnov Test, it results in the value of Sig = 200 or it can be said that the value of Sig = 200 >

0.05 or the residual value may be normally distributed.

**Reliability Test**

Table 1 Results of Reliability Test

No.	Name of Variable	Cronbach Value
1.	Efficiency (X1)	0.924
2.	Trust (X2)	0.893
3.	Reliability (X3)	0.833
4.	Supporting Facilities (X4)	0.859
5.	Customer Satisfaction (Y)	0.915

The reliability test on the instrument is carried out using Alpha Cronbach formula. Based on the test results as seen in the above table, all the variables can be said reliable, where the cronbach value of all the variables is > 0.60.

**Linearity Test on the Regression Line**

Table 2 Statistical Results of Regression Analysis

No.	Name of variable	Value of F	Significance
1.	Efficiency (X1)	0.992	0.482
2.	Trust (X2)	0.926	0.517
3.	Reliability (X3)	1.844	0.055
4.	Supporting facilities (X4)	1.411	0.188

It is seen in the above table that the values in the column of Significance for each variable of X are bigger than 0.05 thus  $H_0$  is accepted. In the other word, the regression line of influence between variable X and the variable of Customer Satisfaction (Y) is linear.

**Hypothetical Test**

Table 3 Coefficient of Correlation R & Determination  $R^2$

No.	Name of variable	R	$R^2$
1.	Regression Linear Simple: Efficiency (X1)	0.744	0.554
2.	Trust (X2)	0.766	0.586
3.	Reliability (X3)	0.724	0.524
4.	Supporting facilities (X4) Multi-regression: Efficiency (X1), Trust (X2), Reliability (X3) & Supporting Facility (X4)	0.894	0.800
6.		0.932	0.869

Based on the table of regression analysis above, it can be explained that the coefficient value of correlation (R) is ranging from 0.7 to 0.9 meaning the influence of variable X on the variable of Customer Satisfaction (Y) is strong/very strong and positive.

**Table 4 t Test & F Test**

No.	Name of variable	t	F
1.	Simple Linear: Efficiency (X1)	9.190	84.460
2.	Trust (X2)	9.819	96.405
3.	Reliability (X3)	8.645	74.735
4.	Supporting facilities (X4)	16.485	271.761
1.	Multi-linear: Efficiency (X1)		107.376
2.	Trust (X2)		
3.	Reliability (X3)	4.412	
4.	Supporting Facilities (X4)	3.466	
	Pendukung (X4)	1.956	
		4.633	

The calculation of  $t_{table}$  with df 65 at  $\alpha$  (0.05) obtains  $t_{table}$  as many as 1.669. From the above table it can be explained that  $t_{statistic}$  of all variables  $> 1.669$ , so **Ho is rejected and Ha is accepted.**

The calculation of  $F_{table}$  with df numerator 5 and denominator 61 at  $\alpha$  (0.05) is 2.35. The above table shows that the regression model for all variables X is significant to the Service users satisfaction variable (Y).

No.	Name of variable	Regression Equation
	Simple Linear:	$\hat{Y} = 0.482 + 0.879$
1.	Efficiency (X1)	$\hat{Y} = 0.628 + 0.837$
2.	Trust (X2)	$\hat{Y} = 1.192 + 0.700$
3.	Reliability (X3)	$\hat{Y} = 1.009 + 0.753$
4.	Supporting Facilities (X4)	$\hat{Y} = 0.628 + 0.837$
5.	Multi-Regression : Efficiency (X1), Trust (X2), Reliability (X3) & Supporting Facilities (X4)	$\hat{Y} = 0.356 + 0.319$ $+ 0.212 + 0.139 +$ $0.411$

Figure 7 Regression Graphic of Variable X1

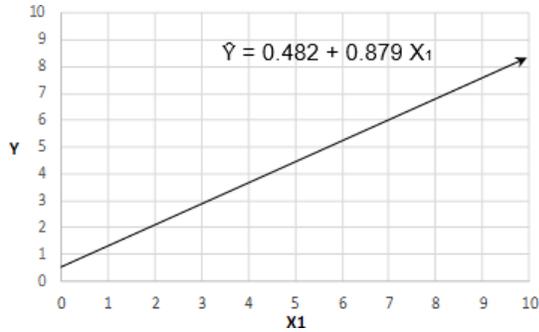


Figure 8 Regression Graphic of Variable X2

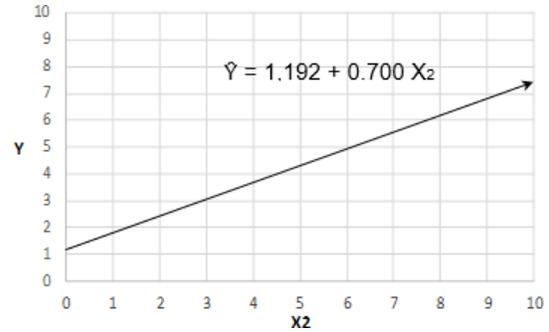


Figure 9 Regression Graphic of Variable X3

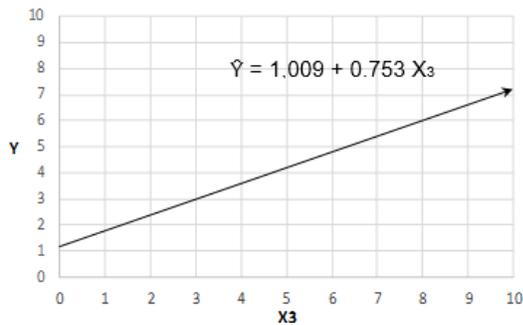
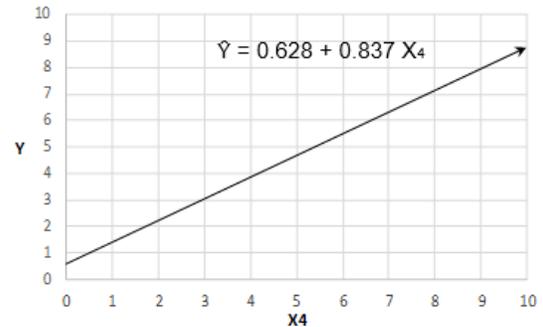


Figure 10 Regression Graphic of Variable X4



## CONCLUSIONS

Based on the results and discussion, it can be concluded as follows.

First, the efficiency quality of Inaportnet service has direct, positive and significant influence on the service user satisfaction and gives indication that the improvement of efficiency quality of Inaportnet service will improve the service user satisfaction.

Second, the trust quality of Inaportnet service has direct, positive and significant influence on the service user satisfaction and gives indication that the improvement of trust quality of Inaportnet service will improve the service user satisfaction.

Third, the reliability quality of Inaportnet service has direct, positive and significant influence on the service user satisfaction and gives indication that the improvement of reliability quality of Inaportnet service will improve the service user satisfaction.

Fourth, the supporting facilities quality of Inaportnet service has direct, positive and significant influence on the service user satisfaction and gives indication that the improvement of supporting facilities quality of Inaportnet service will improve the service user satisfaction.

Fifth, the quality of efficiency, trust, reliability and supporting facilities of Inaportnet service simultaneously have direct, positive and significant influence on service user satisfaction and gives indication that the quality improvements in efficiency, trust, reliability and supporting facilities of Inaportnet service will improve the port service user satisfaction.

## RECOMMENDATIONS

It is recommended that the Office of Tanjung Priok Port Authority Jakarta focuses its attention more on the variable factors of Efficiency (X1), Trust (X2), Reliability (X3) and Supporting facilities (X4) which influence the improvement of port Customer Satisfaction variable (Y), such as evaluating e-government (Inaportnet system), socializing it to the service users in a more intensive way, and increasing the capability of human resources, namely Operator.

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