

Analysis of E-Government Service Quality with Modification E-Govqual Approach in Jakarta Evolution Electronic Licensing Application

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Abstract— *Electronics Government (E-Government) also called e-gov, digital government, online government is the use information technology by the government to provide information and services for its citizens, business affairs, and other matters related to the government. This is one of the systematic service users by users to help simplify the licensing application process so that it can be done anywhere. Through the e-govqual method approach on overall service quality in the Jakarta Evolution electronic licensing application, the goal is to help improve which variables are considered weak so that service quality can be immediately followed up on improvement so that users are expected to provide a more positive value. There are 6 (six) independent variables and 1 (one) dependent variable service quality: ease of use, trust, functionality of the interaction, reliability, content and appearance of information, citizen support on overall user satisfaction. This study uses a modified e-govqual method by conducting validity tests, reliability tests, multiple linier regression analysis, t-test and f-test on the results of a questionnaire to 200 respondents. The results of this study showed that the quality of service with parameters assessed 67.1% affect user satisfaction in the Jakarta Evolution electronic licensing application, and the correlation coefficient value is 81.9%. It is concluded that the quality of e-government services on our satisfaction in the Jakarta Evolution electronic licensing application can be said to be good.*

Keywords— *E-Government; E-Govqual; Multiple Linear Regression; Jakarta Evolution Electronic Licensing Application.*

I. INTRODUCTION

In improving the quality of public service, it can be said to be successful if it is measured by the quality that ensures the needs of the community and the process of providing services goes well. Various problems in the bureaucracy can be found everywhere so it is necessary to improve regulation that can minimize the implementation of public services.

The role of information technology to the government currently plays an important role in helping the process of systematically administering public services so that it will be easier for the community to carry out the process of submitting targeted services wherever they are with clear SOPs of course so that the understanding provided will be easy to follow.

Based on the regulation of the minister of administrative reform of republic Indonesia number 23 of 2017 concerning the implementation of public service malls based on article 1, that public service malls, hereinafter referred to as MPP, are places where activities or activities of providing public services or goods, services and/or administrative services are carried out

which are expansion of functions. Integrated services, both central and local governments, as well as services for state-owned enterprises/private enterprises in providing fast, easy affordable, safe, and comfortable services.

Jakarta is the center of government as wells as the center of economy and business, the national economy is there. The government's target in increasing Ease of Doing Business is to provide convenience.

The DKI Jakarta Provincial government has an MPP public service center under the DKI Jakarta Provincial Investment and One Stop Service, and has services points in each area starting from the city/district administration, district, and ward. Currently, it has an electronic licensing application. Called Jakarta Evolution where services users can access online through the website jakevo.jakarta.go.id, and continues to develop and integrate systems with various related agencies/other institution to service.

The purpose of analysing the quality of e-Government services with the modified e-Government approach is to determine the value of the e-Government service quality parameters on user satisfaction in the Jakarta Evolution electronic licensing application, to determine the coefficient value based on the level of strength of the correlation between service quality variables and satisfaction. Users, to find out the results of hypothesis testing whether there is a positive and insignificant effect on user satisfaction on the services quality variable, and to find out whether three are weak variables that will immediately be repaired.

II. LITERATURE REVIEW

A. Government and e-Government

Government is the power to govern a country (regions) or the highest body that governs a country (such as the cabinet is a government). The government in a broad sense is having the authority to the maintain the peace and security of the country as well as outside. [1]

The term e-government describes the electronic handling of administrative and democratic processes in the context of government activities through information and communication technology to support public tasks efficiently and effectively. [2]

B. Service Quality

Opinions about the dimensions for measuring service quality expressed by Parasurman and Kotler are formulated to combine the two opinions, namely: [1]

1. Services facilities to support service delivery
2. Reliability of effective and efficient service system methods
3. Guarantee of security and privacy (personal) for service products
4. Affordable and fair proportion of service product and services
5. Empathy or the level intense and mutual respect and respect between service providers and the public served

Public services can be interpreted as providing services (serving) the needs of people or communities in the organization, all in accordance with the basic rules and procedures applied. [3]

C. One Stop Service

Presidential regulation of the republic of Indonesia number 97 of 2014 concerning the implementation of one- stop integrated services based on article 1, one-stop integrated services, hereinafter abbreviated as PTSP, is an integrated service in a single process starting from the application stage to the stage of completion of service products through one door.

D. Research Methods and Data Collection Methods

Research is a rule-abiding activity in an effort to find the truth and/or solve problem in science, technology and/or art. Meanwhile, the research method is a scientific method or technique to obtain data with a specific purpose and use. Scientific characteristics, namely rational, empirical and systematic. [4]

Data collection is one of the important stages in research. Data collection methods consist of: observation method, interview method, questionnaire method, and documentary method (documentation). [4]

Linkert scale is a scale that can be used to measure a person's attitudes, options, and perceptions about a particular object or phenomenon. [4]

Test the research instrument is intended to test the validity and reliability of the question items. Test the validity of the research instrument, is a test carried out to determine the validity/accuracy/accuracy of a question item in measuring the variables studied. The reliability test of the research instrument is a test conducted to determine the reliability (level of confidence) of a question item in measuring the variables studied. [4]

Data analysis is defined as an effort to process data into information, so that the characteristics or properties of the data can be easily understood and used to answer the problem formulation. [4]

E. SPSS Statistics

Statistical Product and Service Solutions (SPSS) is an application program that functions to analyze statistics from a data management system in a graphical environment using descriptive menus and simple dialog boxes so that it is easy to understand how to operate. [5]

III. RESEARCH METHODOLOGY

A. Literature Study

This research was conducted by looking at the system that was running on the Jakarta Evolution electronic licensing application at the office of investment and one stop integrated services of the special capital region of Jakarta in conducting online services used by application in applying for permits.

The submission flow, the applicant registers if he does not have an account for activation, then the applicant submits the required permit application, fills out the form along with the requirements, then the file will be verified by the officers if it is appropriate, it will continue for the process of issuing a decision letter.

B. Data Collection

Determining the number of samples the author calculates the population of users on the Jakarta evolution electronic licensing application, to find out the number of samples the author uses the calculation formula developed by slovin [7]

$$n = \frac{N}{1 + Ne^2}$$

n= sample

N= population

e= estimated error rate

Questionnaire was made using google forms to be distributed to respondents online through social media in conducting this research.

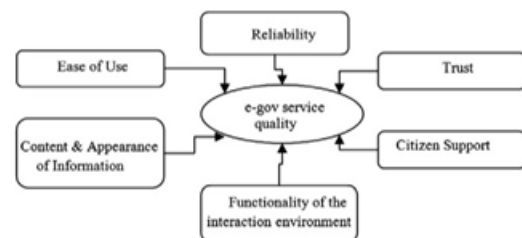


Figure 3.1 variable e-Govqual

The dependent variable is the overall which is used as user satisfaction. The following table 3.1 shows the e-govqual method according. [14][15]

TABLE 3.1 Modification e-Govqual Method

Variable	Instrument
Ease of Use	Website Structure Easy to remember URL Customized search function sitemap Ability to customize and personalize information
Trust	Keeping secrecy Access control Do not share personal information with others Use of personal data
Functionality of The Interaction Environment	Adequate response format Automatic calculation of forms There is online help in the form Reuse of community information
Reliability	Internet access must be affordable for the general public Ability to perform the promised service accurately Delivery service on time Loading/transaction speed Browser system compatibility

Content & Appearance of Information	Images must be in color, graphics, animation and web pagesize Accuracy and conciseness of data and information Regularly updated information and issues Information must be clear and understandable Completeness of data and information All link should work The online form is concise and easy to complete
Citizen Support	User friendly guide Solution to problem Questions answered adequately Knowledge and courtesy of employees Employees who convey trust and confidence in service Frequently asked questions Issue and news discussion platform
Overall	Overall website rating

The answer choices used in the respondent's questionnaire were using Linkert scale.

TABLE 3.2 Respondent's Answer Score

Score	Information
4	Strongly Agree
3	Agree
2	Do Not Agree
1	Strongly Disagree

C. Research Testing

Data testing was carried out by collecting questionnaire data and then conducting validity tests, reliability test and multiple linear regression statistical analysis, by using the SPSS application.

The following is an explanation of the results of the research hypotheses carried out if:

1. Variable ease of use (H₁) positive and significant effect to the variable user satisfaction
2. Variable trust (H₂) positive and significant effect to the variable user satisfaction
3. Variable functionality of the interaction environment (H₃) positive and significant effect to the variable user satisfaction
4. Variable reliability (H₄) positive and significant effect to the variable user satisfaction
5. Variable content and appearance of information (H₅) positive and significant effect to the variable user satisfaction
6. Variable citizen support C positive and significant effect to the variable user satisfaction
7. Variable ease of use, trust, functionality of the interaction environment, reliability, content and appearance of information, citizen support (H₇) simultaneously to the variable user satisfaction

IV. RESEARCH RESULT AND DISCUSSIONS

This research, there are 6 independent variables and 1 dependent variable, with 200 respondents and 23 question items, respondents based on gender, domicile, age, occupation and education

TABLE 4.1 Jakarta Evolution User Population

Office	Amount
Dinas	150
Tingkat Wilayah	250
Amount	400

The number of samples in this study is known as follows:

$$n = \frac{N}{1 + Ne^2}$$

$$n = \frac{400}{1 + 400(0.05)^2}$$

$$n = 200$$

TABLE 4.2 Variable e-Govqual in Research

No.	Item	Validity Reliability	Multiple Linier Regression	Hypothesis
1.	Ease of use	EOU	X1	H1
2.	Trust	TRS	X2	H2
3.	Functionality of the Interaction	FIF	X3	H3
4.	Environment	RLB	X4	H4
5.	Reliability	CAI	X5	H5
6.	Content and Appearance of Information	CSP	X6	H6
7.	Citizen Support	OVR	Y	H7
	Overall			

A. Validity Test

Concluded that the results of the validity test with the number of service quality respondent data on the Jakarta Evolution electronic licensing application as much as 200 (N), declared 100% Valid.

TABLE 4.3 Validity Test Results

No	Item	r Hitung	r Tabel	Status
1	EOU1	0.862	0.138	Valid
2	EOU2	0.732	0.138	Valid
3	EOU3	0.833	0.138	Valid
4	EOU4	0.849	0.138	Valid
5	TRS1	0.777	0.138	Valid
6	TRS2	0.526	0.138	Valid
7	TRS3	0.710	0.138	Valid
8	TRS4	0.734	0.138	Valid
9	FIF1	0.843	0.138	Valid
10	FIF2	0.843	0.138	Valid
11	FIF3	0.735	0.138	Valid
12	FIF4	0.811	0.138	Valid
13	RLB1	0.854	0.138	Valid
14	RLB2	0.802	0.138	Valid
15	RLB3	0.844	0.138	Valid
16	RLB4	0.707	0.138	Valid
17	CAI1	0.755	0.138	Valid
18	CAI2	0.718	0.138	Valid
19	CSP1	0.767	0.138	Valid
20	CSP2	0.826	0.138	Valid
21	CSP3	0.800	0.138	Valid
22	CSP4	0.853	0.138	Valid
23	OVR1	1.000	0.138	Valid

B. Reliability Test

The results of the test are known to be Cronbach's alpha of 0.947. If the value of Cronbach alpha > 0.60, then the question item is declared reliable. The results of the reliability test on 200 respondents on service quality in the Jakarta Evolution electronic licensing application with 23 question items were

declared reliable because Cronbach’s alpha value was $0.947 > 0.60$.

TABLE 4.4 Reliability Test Results

Cronbach’s Alpha	Cronbach’s Alpha Based on Standardized Items	N of Items
0.947	0.948	23

C. Multiple Linier Regression Analysis

Regression analysis of research data to prove whether the hypothesis has an effect on the independent variable (X) and the dependent variable (Y).

Y= Jakarta Evolution electronic licensing application User Satisfaction

X= Jakarta Evolution electronic licensing application Service Quality

TABLE 4.5 Multiple Linier Regression Test Result

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.962	.235		-4.096	.001
	X1	.039	.029	.109	1.352	.178
	X2	.011	.034	.026	.329	.743
	X3	.065	.029	.177	2.259	.025
	X4	.127	.024	.361	5.230	.001
	X5	.015	.044	.020	.333	.740
	X6	.080	.029	.224	2.773	.006

a. Dependent Variable: Y

$$Y = \alpha + b_1X_1 + b_2X_2 + e$$

$$Y = -0.962 + 0.039X_1 + 0.011X_2 + 0.065X_3 + 0.127X_4 + 0.015X_5 + 0.080X_6$$

Constant value is -0.962, meaning that is no change in the service quality variable in the value of X1, X2, X3 X4, X5, X6, are 0 (zero), then the satisfaction is -0.962.

The regression coefficient value service quality meaning that if the service quality variable X1, X2, X3 X4, X5, X6 increases by 1% and the constant is 0 (zero), the variable of service provided contributes positively.

R Square value of 0.671 this value means that the dependent variable (Y) user satisfaction in influenced by the independent variable (X) service quality of 0.671 in percent of 67.1%, the remaining 32.9% is influenced by other variables outside of this research variable.

TABLE 4.6 Coefficient of Determination Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.819 ^a	.671	.660	.24040

a. Predictors: (Constant), X6, X5, X3, X4, X2, X1

D. Hypothesis Testing

The results partial test (t Test) of the search for the percentage point distribution t df=1-200, significance 0.05, 6 variables the results t_{table} is 1.97233. Hypothesis test results:

1. The effect the service quality variable of ease of use on user satisfaction (H₁)

Significance value is $0.178 > 0.05$ and value $t_{hitung} < t_{tabel}$ ($1.352 < 1.97233$), then H₁ is rejected, the hypothesis is no effect ease of use service quality on user satisfaction in

Jakarta Evolution electronic licensing application which is partially rejected.

2. The effect the service quality variable of trust on user satisfaction (H₂)

Significance value is $0.743 > 0.05$ and value $t_{hitung} < t_{tabel}$ ($0.352 < 1.97233$), then H₂ is rejected, the hypothesis is no effect trust service quality on user satisfaction in Jakarta Evolution electronic licensing application which is partially rejected.

3. The effect the service quality variable of functionality of the interaction environment on user satisfaction (H₃)

Significance value is $0.025 > 0.05$ and value $t_{hitung} < t_{tabel}$ ($2.259 < 1.97233$), then H₃ is accepted, the hypothesis is an effect functionality of the interaction environment service quality on user satisfaction in Jakarta Evolution electronic licensing application which is partially accepted.

4. The effect the service quality variable of reliability on user satisfaction (H₄)

Significance value is $0.000 > 0.05$ and value $t_{hitung} < t_{tabel}$ ($5.230 < 1.97233$), then H₄ is accepted, the hypothesis is an effect reliability service quality on user satisfaction in Jakarta Evolution electronic licensing application which is partially accepted.

5. The effect the service quality variable of content and appearance of information on user satisfaction (H₅)

Significance value is $0.740 > 0.05$ and value $t_{hitung} < t_{tabel}$ ($0.333 < 1.97233$), then H₅ is rejected, the hypothesis is no effect content and appearance of information service quality on user satisfaction in Jakarta Evolution electronic licensing application which is partially rejected.

6. The effect the service quality variable of citizen support user satisfaction (H₆)

Significance value is $0.006 > 0.05$ and value $t_{hitung} < t_{tabel}$ ($2.773 < 1.97233$), then H₆ is accepted, the hypothesis is an effect citizen support service quality on user satisfaction in Jakarta Evolution electronic licensing application which is partially accepted.

F test results, $f = (6;200-6) = (6;194)$, the coordinates can be seen in the table of presentation points of distribution f for probability= 0.05, resulting in a value of 2.15.

TABLE 4.7 F Test Results

Model	Sum of Squares	Df	Mean Square	F	Sig.	
1	Regression	22.721	6	3.787	65.525	.000 ^b
	Residual	11.154	193	.058		
	Total	33.875	199			

a. Dependent Variable: Y

b. Predictors: (Constant), X6, X5, X3, X4, X2, X1

The hypothesis (H₇) accepted because the variables of service quality are ease of use, trust, functionality of the interaction environment, reliability, content and appearance of information, and citizen support have a positive and significant simultaneous effect on the value of the user satisfaction in Jakarta Evolution electronic licensing application, value $t_{hitung} > t_{tabel}$ ($65.525 > 2.15$) and value significance is $0.0000 < 0.05$.

V. CONCLUSIONS

The results of the study concluded that the quality of e-Government services in Jakarta Evolution electronic licensing application can be said "good" quality, there is a service assessment category table based on the regulation of the minister of state apparatus empowerment and bureaucratic reform of the republic of Indonesia number 30 of 2018., parameters assessed as having an effect on service quality, contained in R Square value of 0.671 or in percent of 67.1% affecting user satisfaction.

The value of the correlation coefficient in this study, the R value of 0.819 or in percent of 81.9%, can be seen based on the level of strength of the correlation between variables. The correlation value is strong, because the coefficient value is between 0.60 to 1000, meaning that there is a strong influence between the quality services and user satisfaction in Jakarta Evolution electronic licensing application.

The results of the hypothesis testing obtained 4 hypotheses were accepted (H_3, H_4, H_6, H_7) and 3 hypotheses rejected (H_1, H_2, H_5).

The authors suggest that the development system Jakarta Evolution electronic licensing application to improve the results the research hypothesis where are variables that are weak in meeting e-Government user satisfaction on the variables of service quality (ease of use, trust, content and appearance of information).

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