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Service Quality Modeling for Housing Procurement Project by Sharia Construction Management and Green Building Principles

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ABSTRACT

The services quality of housing procurement by contractors and developers creates many problems and conflicts between parties involved in the project. Unsatisfactory work result for user so that need evaluation based on voice of user. This research aims to develop a prediction model of performance and service quality of contractor/developer on housing procurement projects. The review of this research study is based on the principles of sharia construction management and green building. The result obtains 1 dependent variable which is the service quality of house procurement and eight independent variables include Assurance, Responsiveness and Reliability, Performance, Aesthetics, Easiness, Durability, Islamic Design, and Eco-friendly. The analysis result get the influence of eight service variables which represented by value of R Square = 0,984, meaning variation of service quality of house procurement by contractor/developer can be explained by regression equation equal to 98,4% and 1,6% explained by other variables outside from the equation model. Value R of 0.950 means that the influence of the eight service variables is very strong. The model can be used as a tool to predict evaluation performance and service quality of housing procurement projects.

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INTRODUCTION

The development of construction projects in Indonesia was followed by a wide range of issues relating to the construction of physical facilities, especially the building. Most of these problems that caused construction project is environment destruction. These problems lead to conflicts both among humans and the environment. Allah swt said that in the Qur'an, "Had It appears the damage on land and sea because of what the hands of men, that God may feel to them party of (due to) their actions, so they come back (to the right path)." (QS. Ar Rum: 41).

Construction projects condition in Indonesia since 1997 was decreased caused economic crissist and to become exist since 2000 until this current. Many contractor develop their company can be success in all projects. Many contractor company affiliated being a developer in the field of property add competition to encourage firms to compete for increasing its presence in the construction project. The construction company (contractor) do a lot of innovations and breakthroughs in managing the organization of the company, began to managerial offices, public relations, marketing, to implementation and physical implementation in the field (Sedayu, 2010: 47). The competitions often add a lot of issues that cause detriment to the client. Entrepreneurs do construction financial management often Islamic law, in which the construction projects in favor of the contractor but the disadvantage for the customer. Management used is not based on sharia, but many liberal and capitalistic-based. As is known, the economic system that dominates in Indonesia is a liberal and capitalistic economic system. Revrisond Baswir describes the position of a company's earnings report, which is based accounting capitalistic. The existence of labor will determine the position of the profit or loss of the company, but the opposite is true, labor costs are treated as expenses and grouped together with the accounts of other production cost price (Siddiqi, 1991: 87). The degree of inequality between leaders and employees only occurs in capitalist and socialist economy, as the Prophet warned in a hadith that the waiter we are our brothers (Abusinn, 2008). Procurement issues for the public housing projects

need to get treatment and solution. Management systems and existing services should refer to the principles of Islamic law and according to the principles of Green Building.

This study aimed to create prediction model of service quality and performance of the developer/contractor in the construction project held in Griya Amorf Sawojajar Malang City, East Java with an overview of Islamic law and the Green Building aspects. The problem scope of this research on the construction phase and technical requirements relating to the project. The overview of the study about the principles of green building and sharia construction management.

RESEARCH METHOD

The method and analysis step contain of:

a. Validity and Reliability Test

This step to deteminate instrument for survei. The research instrument to be distributed to 30 respondents for test. Beside that, to know validity should use validity test. Validity test is used to know the validity of questioner to respondents. The number of respondents are 30 persons (Sugiyono, 2009). This test as correlation test by use product moment from Pearson equation: $$r_{xy} = \frac{N\sum XY - (\sum X)(\sum Y)}{\sqrt{\left[\{N\sum X^2 - (\sum X)^2\}\{(N\sum Y^2) - (\sum Y)^2\}\right]}}$$

Where :
rxy=Correlation coeficient for all items
X =Respondents score for each item
Y=Score total for each respondents in all items
ΣX =Number of score in distribution X
ΣY=Number of score in distribution Y
ΣX2=Number of square of each score X
ΣY2= Number of square of each score Y
N =Number of subjects

In this research, an instrument is difined has strong correlation if the correlation value more bigger than 0,6 (Sugiyono, 2009). Reliability test aim to know that data collector can show the level of accuracy, stability, and consistency in define phenomena in different time. To examine the internal consistency by using consistency coefficient (Alpha Cronbach). Alpha Cronbach eaquation that used in this reliability test as follows:
Where :
r1 = Instrument consistency
k = Number of question iteml
Σσb2 = Number of variance
σb2 = Total variance

The instrument will be reliable if the consistency coefficient has value above 0,60 (Sugiyono, 2009). The both test include validity and reliability test by using SPSS 20. Measurement scale in preliminary survei include:

- 1 = Not satisfactory
- 2 = Less satisfactory
- 3 = Quite satisfactory
- 4 = Satisfactory
- 5 = Very satisfactory

b.Multiple Linear Regression Analysis

The Multiple Linear Regression Analysis to be used to know the influences between research variables to service quality of housing procurement. Multiple Linear Regression need requirement test that called Classical Assumption Test contain normality test, linearity test, multicolinerity test, autocorrelation test, heteroscedasticty, and Partial Influence Test. This research includes eight independent variables and one dependent variables. Figure 2. show the relationship between eight independent variables with dependent variable.

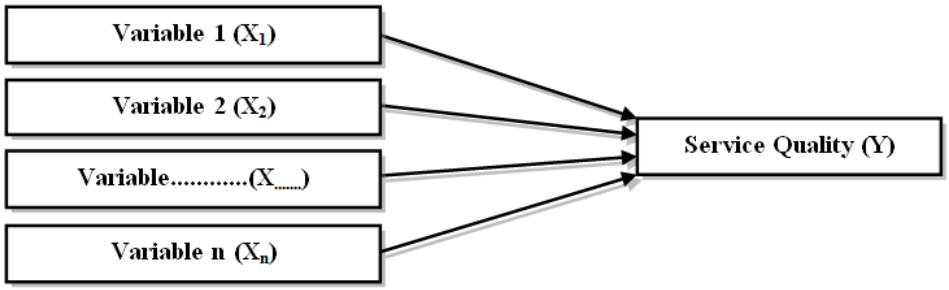

Figure 2. The Relationship between Service quality of housing procurement

c. Data Analyzing Technic

Multiple Regression Models with this equation: Y = a1X1 + a2X2 + ...+ anXn + e

Where:

Y =Dependent variable
a0 = Intercept
a1, a2, a3=Independent coefficient
X1= Independent variable 1
X2= Independent variable 2
Xn= Independent variable n

RESULTS AND DISCUSSION

a. Voice of User Collecting Result

Preliminary survey result to 30 respondents (house owner) is shown in **Table 1**.

Table 1. Services Factor Classification

Notation	Service Variables
X_1	Assurance in aggreement, payment, design, document, force majure condition,building destruction, interuption and intimidation
X_2	Responsiveness and reliability of developers in providing attention, to solve many problems, good in service and communication, know all information, polite and friendly, and construction process finish on time
X_3	Performance of facility and utiliy at housing and region, and performance of construction and non construction materials
X_4	Aesthetics suitable with design, cost, and material specification that is determinated and agreed
X_5	Easiness in information, inspection and evaluation, service, coordination with developers, construction company, and banking
X_6	Durability in construction and non-construction material and material specication suitable with criteria
X_7	Eco-friendly in design, material, alternative energy from wind and solar cell, no negative area or space, natural lighting and air circulation, orientation, and spatial organization
X_8	Islamic Design in women and men spactial separation, toilet orientation and location, building material, and has prayer place
Y	Service Quality of housing procurement project with all service items from contractor/developer to user

b. The Result of Validity and Reliability Test

An instrument correlates strongly when the correlation above the value of 0.6 (Sugiyono, 2009), so that the instrument is valid. To rate the reliability of the instrument with the provision that if the coefficient alpha value (Cronbach alpha coefficient) above the value of 0.60 (Sugiyono, 2009), the instrument called reliable. The validity and reliability test result of the instrument are shown in Table 2. The testing process performed with SPSS 20.0.

Table 2. Validity and Reliability Test Result

Research Variables	Validity Test (Correlation Value)	Reliability Test (alpha value)	Decision
Assurance (X_1)	All items > 0,6	0,968 (>0,6)	Valid and Reliable
Responsibility and Reliability (X_2)	All items > 0,6	0,979 (>0,6)	Valid and Reliable
Performance (X_3)	All items > 0,6	0,983 (>0,6)	Valid and Reliable

Aesthetics (X_4)	All items > 0,6	0,977 (>0,6)	Valid and Reliable
Easiness (X_5)	All items > 0,6	0,984 (>0,6)	Valid and Reliable
Durability (X_6)	All items > 0,6	0,991 (>0,6)	Valid and Reliable
Islamic Design (X_7)	All items > 0,6	0,952 (>0,6)	Valid and Reliable
Eco-friendly (X_8)	All items > 0,6	0,921 (>0,6)	Valid and Reliable
Service Quality (Y)	All items > 0,6	0,987 (>0,6)	Valid and Reliable

Table 2 shows that the results of validity and reliability of the instrument is valid and reliable, making it feasible and meets the requirements for analysis and subsequent testing.

c. Result of Multiple Linear Regression Analysis

Regression Mode Creating for Service Quality of Housing Procurement

Regression analysis is basically to analyze variants of the regression line. The test is intended to determine the level of significance of the regression line. Perform regression analysis using SPSS will produce some numbers statistics that can be displayed simultaneously, among them the coefficient F, the coefficient of Durbin-Watson, coefficient of significance (P value) and many more statistics, depending on the settings planned results, As mentioned in the previous chapter that multiple regression equation is expressed as follows: $\mathbf{Y = a + a_1X_1 + a_2X_2 + a_3X_3 + a_4X_4 + a_5X_5 + a_6X_6 + a_7X_7 + a_8X_8 + a_2X_2 + e}$

Where, Y = Service Quality of Housing Procurement**,** X_1 = Assurance, X_2 = Responsibility and Reliability, X_3 = Performance, X_4 = Aesthetics, X_5 = Easiness, X_6 = Durability, X_7 = Islamic Design, dan X_8 = Eco-friendly.

Table 3. Multiple Linear Regression Analysis Result

Variable	Unstand.	t-account	t-table	Information
(constant)	14,275			
Assurance (X_1)	8,552	6,655	1,758 (dk = 50 and alpha = 5%)	t count > t table (significant)
Responsibility and Reliability (X_2)	3,441	2,148		t count > t table (significant)
Performance (X_3)	1,098	3,633		t count > t table (significant)
Aesthetics (X_4)	2,875	5,721		t count > t table (significant)
Easiness (X_5)	5,105	8,125		t count > t table (significant)
Durability (X_6)	7,771	4,475		t count > t table (significant)
Islamic Design (X_7)	6,926	6,287		t count > t table (significant)
Eco-friendly (X_8)	4,745	7,901		t count > t table (significant)
R	= 0,950			
R Square	= 0,984			
α	= 0,05			

Information : - Number of data (respondent) = 100
- Dependent variable (Y)

The analysis results obtained the influence of eight service variables that represented by R value Square = 0.984, meaning that variations in the service quality of housing procurement by the developer can be explained by the regression equation at 98.4% while the remaining 1.6% is explained by other factors outside the model equations. The R-value of 0.950 means that the influence of eight service variables is very strong. From the analysis process can be created regression model as follows: $\mathbf{Y = 14,275 + 8,552X_1 + 3,441X_2 + 1,098X_3 + 2,875X_4 + 5,105X_5 + 7,771X_6 + 6,926X_7 + 4,745X_8}$

d. The result of Classical Assumption Test

The calculations result for normality test that obtained by Kolmogorov-Smirnov Test Z has shown for each variable has a value Asymp. Sig. 2 tailed > of an alpha level of 0.05, meaning the data come from populations with normal distribution. Linearity test results indicate that the significance value > 0.05 for the eight factors that the model is a linear regression line. Multicollinearity test calculation results show that significant value is greater than the alpha level of 0.05, thus it can be concluded that among the independent variables does not happen multicollinearity. The analysis results for autocorrelation test obtain the Durbin-Watson value of 1.995. This value is expressed approaching score 2, so we can conclude there is no autocorrelation between observational data. The calculations result or the eight variables obtained significant value greater than the specified alpha level (0.05), it thus does not occur heteroscedastisity. The test results show that the partial influence of eight variables are very strong influence where the t-count> t-table.

CONCLUSION

The research variables that affect the services quality of housing procurement project based on sharia construction management and green building principles include Assurance, Responsibility and Reliability, Performance, Aesthetics, Easiness, Durability, Islamic Design, and Eco-friendly. The result of validity and reliability test to 1 dependent variable and 8 independent variables indicates that the instrument is valid and reliable, so that it can be continued on the next analysis. The analysis result get the influence of eight service variables which represented by value of R Square = 0,984, meaning variation of service quality of house procurement by developer can be explained by regression equation equal to 98,4% while 1,6% explained by other variables outside equation model. The value R of 0.950 means that the influence of the eight variables of service is very strong. The quality of housing procurement services can be predicted using the mathematical model Y = 14.275 + 8.552X1 + 3.441X2 + 1.098X3 + 2.875X4 + 5.105X5 + 7.771X6 + 6.926X7 + 4.745X8. The results of the classic assumption test indicate that the model is very significant to the parameters specified, so the analysis shows that the eight service variables have significantly affect to the service quality of Griya Amorf Sawojajar Malang housing project. The resulting model can be used as a tool to predict performance evaluation and service quality of housing procurement projects.

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