

The Effect of the Quality of Human Resources and Management of Information System on the Quality of Public Service: Study on e-ID Public Service in Indonesia

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ABSTRACT

A good public service is when the people are able to access the services with simple and easy procedures, fast, precise and satisfactory mechanisms. The quality of public services can be influenced by several factors, including the quality of human resources (HR) and management of the information systems. E-government service for example, is one of the major challenges in Indonesia, particularly in Lumajang Regency, Jawa Timur Province, as the service quality is not maximized and many public services are conducted without adequate personal competence from the relevant institutions. This study aims to determine to what extent of the influence of the quality of human resources and management of information systems on the quality of public services in Lumajang East Java. This research employed explanatory research to test the causal relationship hypothesis between two or more variables. This study showed that multiple regression analyses showed that quality and human resources and management of information system simultaneously and significantly have effect on the improving quality of public services, especially in service of e-KTP (e-ID) in Lumajang.

Keywords: *quality of public services, human resource, information system*

1. INTRODUCTION

Public service is one key task for the state apparatus as the state servants and public servants. They are required to increase their ability provide good public services, and it is determined by the capability of the government in improving the work discipline of each personnel in giving services, one of the government officials who are all regional work unit in the area of local governments, especially throughout the district offices. For that there are several factors which may affect the quality of public service. The quality of public services can be influenced by several factors, including the quality of human resources (HR) and management of information systems. The quality of human resources and management of information systems are some of the factors that affect the quality of public services. With the support of qualified and resourceful personnel and supported by the management of information systems within an organization, it is expected that excellent public service to the society can be realized (Hardiyansyah, 2011).

It is important to realize that the development of information system management requires more skills, more than just the expertise of computer experts. The involvement of everyone in the organization, particularly the involvement of top management, is imperative if the information system management is established, developed and used to play the role as expected. With this information system management, by using computerization, then the staffs used to carry out the administrative tasks and routines can be utilized by transporting and educating them to perform activities that are more productive and that require higher thinking.

In relation to the hardware and software used in the computerized system within the organization, the condition of the current human resources does not have enough knowledge to take advantage of the sophisticated information technology. The other obstacle is the lack of funding for the implementation of information technology. In the use of e-Government, for example, one of the obstacles in implementing e-government in Indonesia is the limited number of personnel who have personal competence and capability that is qualified in the field of information and communication technology. The quantity and quality of human resources in the government institutions for information and communication technology has been inadequate. The issue related to human resource availability with certain standard of competence in the field of information and communication technology is much more difficult to deal with rather than the technology itself. In many government offices, civil servants mostly did not graduate from technology education background. This condition inhibits the process for public services. One of the most obvious examples of the public services is the slow service process in the making of the Electronic Identity Card (e-ID).

The study observed the process of public services in Indonesia, particularly in Lumajang Regency, Jawa Timur Province, in relation to the e-ID services which has been not maximized in the process. It is certainly hamper the development of quality public services to the people who use the management of information systems to support the quality of human resources. Public services in the making of Electronic Identity Card (e-ID) in Lumajang have been problematic both technical and non-technical constraints, ranging from very complicated bureaucracy and too many procedures to issues related to electronic equipment which imply to low quality services.

Another issue is time-consuming process to make the e-ID, although the predetermined rules that the process can be only finalized within 1 to 2 days, but in reality the newly ID is completed within weeks or even months. In addition to these problems many citizens who are not informed about the procedure of e-ID so that many people do not understand eventually may use "alternative services" by brokers or even unwilling to proceed the e-ID. Likewise with transparency e-ID service, the fee is often unclear that substantial costs incurred by society than it should be due to certain corrupt parties who take advantage through extortion.

For public sector organizations in Indonesia, especially in Lumajang, the need for qualified personnel competence becomes an emerging requirement as the organization or the institution should carry out e-government system. In current conditions, it seems still that public services cannot meet the expectations due to lack of support from adequate competence of the personnel in charge of the works. It is worse as the provision of these public services should be carried out through information and communication technology. Therefore, the authors are interested in doing research about the effect of human resource quality and information systems management on the public services in the local government of Lumajang.

Based on the background that has been described previously, some issues being examined include: (1) to what extent the effect of the quality of human resources on the quality of public services in Lumajang; (2) to what extent the effect of management of information system on the quality of public services in Lumajang; (3)

to what extent the effect of the quality of human resources and management of information systems on the quality of public services in Lumajang.

2. REVIEW OF RELATED LITERATURE

Public service is an act of the provision of goods and services to the public by the government as part of its responsibilities to the public, either given directly or through partnerships with private sector and society, and it is provided based on the type and characteristic and the needs of the community, the ability of communities and also the markets (LAN 2010: 15). Government as a public service provider agency should provide public services to the community. The public services that should be provided are divided into three categories, namely: a) administrative services, for example: making Identity Card (ID), the land certificate, birth certificate, etc.; b) goods services, for example: telephone network, electricity supply, water supply; and c) services, for example: high and secondary education, health care, etc. (Hardiyansyah, 2011: 23).

Every public service should have a standard of operation of public service, as a guarantee of certainty for providers in the realization of its duties and functions and for the recipient of the services in the process of filing the petition. According to Hardiyansyah (2011: 28), the standard for public service is a measure that is standardized in administering public services as guidelines that should be obeyed and implemented by service providers and serve as guidelines for the recipients of the service in the application process, as well as a means of public control and/or recipient of the service on the performance of the service providers.

Basically, the main goal to be achieved in the implementation public service by the government is to establish quality service, or excellent service, to the community. Excellent service is a form of quality service which is highly coveted by the service recipients (Saleh, et. al, 2011: 122). Therefore, the main purpose of the public service is to give satisfaction to the community, the services provided should be really excellent, and it should be measured by specific indicators (Sinambela, 2008: 43).

In achieving the goals of the organization, there are several factors to consider, one of them is the human factor. The human factor can be a stimulating factor as well as becoming aninhibiting factor for the organizations towards the efficient goal and economical goal (Siagian, 1999: 105). The success of an organization of public services cannot be separated from the role of human resources involved in the organization. Therefore, human resources working on public services of the organizations are not only required for the expertise and skills in technical and procurement of the underlying legislation, but more importantly, the better mental attitude and good behavior, honest, and responsible.

The rapid growing public services should be balanced with public service reform in accordance with the times and adapted to the needs of the society. Pranalia (2013: 33) arguedthat public service reform has increased through the use of information and communication technologies, so that public services become more transparent, accountable, effective and efficient. From this moment, the term e-government is introduced. One application of e-government which has been applied in Indonesia is the making of e-ID card. e-ID is apparently an identity card based on information technology that looks like a credit card. Inside the e-ID, there is a chip used to record and contain all data about the cardholder, ranging from the name, place and date of birth, blood type, name of mother and siblings, as well as relevant other data. All this information is included in the card, and people only need one card to access all of them, for example, to issue a letter of police record, paying taxes, and other licensing matters.

3. RESEARCH METHOD

This research employed explanatory research in order to test the hypothesis of causal relationship between two or more variables. Researchers measured the factors that may affect the quality of public services in some government offices located in District of Lumajang East Java. In this study, each variable has indicator that can be measured by using numbers for further statistic testing. After that, researchers performed analysis towards the variables that affect the quality of public services at the mentioned offices.

This research was carried out in several sub-districts government offices in Lumajang. There were twenty sub-district government offices, while the population in this study is all residents of Lumajang aged from 17 years above, those who are required to have an ID card according to the regulations. Based on the data obtained, total population in Lumajang was 858,598 people.

The researchers took samples and carries out direct surveys to the qualified society to have ID cards. Researchers also observed the implementation of public services related to the population administration program which was conducted in the district offices in the area of Lumajang

Once the population and samples were determined, the next step was to determine the size of the sample. Researchers determined the samples in 19 sub-districts in Lumajang of which the residents aging at least 17 years old amounted to 858,598 people. The sample size was then calculated to determine the number of samplusing the formula developed by Isaac & Michael (Sugiyono, 2011: 87) as follows:

$$s = \frac{\lambda^2 \cdot N \cdot P \cdot Q}{d^2(N - 1) + \lambda^2 \cdot P \cdot Q}$$

Where:

λ^2 with dk=1, ordinary error level 1%, 5%, 10%

P = Q = 0,05 ; d = 0,05; s = total samples

By using the formula above, of 21 districts in the district of Lumajang with error level of 5%, it was obtained the samples of 19 districts. In order to know the number of respondents involved in this study was determined by using the following Slovin's formula.

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

Where:

n = total samples

N = total population

E = error tolerance

By using the formula above, of 19 districts in the District of Lumajang, amounting to 858,598 people with error level of 5%, total sample was obtained amounted to 400 respondents (≈ 399.6). The respondents were officers or employees in the district offices and also the residents with qualifications of holding ID card in these districts. The method to obtain the data in this study included: (1) observation; (2) interview; and (3) questionnaire.

4. RESULTS

There are 21 sub-districts in Lumajang Regency, consisting of 205 villages, 1,737 communities and 7,027 neighborhoods. The projection of population of Lumajang in 2014 based on population census in 2010 amounted to 1,026,378 people, consisting of 500,904 males and 525,474 females. The highest number of population is 86,485 in Sub-district of Lumajang, while the smallest number is Sub-District of Gucialit as many as 23,395 people. Population density in Lumajang reaches 573 people/km². The area with highest density is Sub-district of Lumajang (2,858 people/km²), while the lowest population density is in the Sub-district of Senduro of 189 people/km². The majority of community in Lumajang are followers of Islam as much as 97.98%, followed by 0.97% Catholic, Hinduism of 0.6%, Protestant 0,39%, and 0,00% Buddhist. The population in Lumajang can also be categorized on other characteristics, such as age.

Table 1. Total population in District of Lumajang based on age and sex

Age group	Male (people)	Female (people)	TOTAL (people)
0-4	37,317	32,895	70,212
5-9	43,529	44,087	87,616
10-14	48,287	43,930	92,217
15-19	34,512	35,102	69,614
20-24	31,507	38,885	70,392
25-29	39,071	36,731	75,801
30-34	37,518	39,305	76,823
35-39	38,219	42,879	81,098
40-44	40,974	47,976	88,950
45-49	34,262	34,891	69,153
50-54	34,362	39,411	73,773
55-59	27,349	24,329	51,679
60-64	21,639	22,648	44,287
65+	32,358	42,406	74,764
Total	500,904	525,474	1,026,378

Source: Lumajang in Number 2015

Table 2. Statistics of Lumajang Inhabitants based on Education Background

Characteristics	Category	Frequency (f)	Percentage (%)
Education background	Primary, junior high school	34	8.5
	Senior high school	228	57
	D3 (Diploma), D4	9	2.25
	S1 (<i>Sarjana's</i> degree), S2 (Master's Degree)	129	32.25
Total		400	100

According to Table 2, more than 50% of the respondents in this study have graduated from senior high schools.

Table 3. Statistics of Lumajang Inhabitants based on Age

Characteristics	Category	Frequency (f)	Percentage (%)
Age	17 – 30	143	35.75
	31 – 40	50	12.5
	> 40	207	51.75
Total		400	100

The biggest percentage of population in this research was 40 year old respondents amounted to 51.75 %.

Table 4. Statistics of Lumajang Inhabitants based on Gender

Characteristics	Category	Frequency (f)	Percentage (%)
Gender	Male	277	69.25
	Female	123	30.75
Total		400	100

Most of the respondents were male amounted to 69.25 %, while the other 30.75% was female respondents.

Variable of Quality of Human Resources (X1).

All indicators of quality of human resources are in good category. Based on the descriptive analysis of the variable of quality of human resources, in general quality of intellectual aspect has the best value. This indicates that the intellectual quality of the employees on the quality of human resources of sub-district offices of public services in Lumajang can be said to be best compared to the physical and spiritual quality.

Variable of Management of Information System (X2).

All indicators of management of information systems is in good categories. Based on the descriptive analysis of variable of management of information systems, in general indicator of the hardware has the best value. This shows that hardware of the IT system which is utilized in carrying out public services in all sub-district offices in Lumajang, and it can be said that this indicator is the best compared with the other indicators namely software, procedures, database system and users.

Variable of Quality of Public Services (Y).

All the indicators of this variable were in good category. Based on the descriptive analysis above, most respondents stated that the quality of public service in the making of e-ID in sub-districts offices in Lumajang has been served properly.

Analysis of Inferential Statistics

Assumption Testing

Heteroscedasticity Testing. Each independent variable has no significant effects on the residual absolute value. It can be inferred that the regression model is formed to meet the assumptions of heteroscedasticity.

Multicollinearity Testing. The value of VIF of both equations have value of less than 10, so that the non-multicollinearity assumptions are met for both equations.

Normality testing. Based on the results of the residual plot in the P-P plot can be seen that the residual points are around the straight line diagonally. This indicates that the residuals spread normally so that the normality assumption is fulfilled

Validity and Reliability of Research Instruments.

Based on the reliability test results, it was shown that the values of Cronbach alpha for the three consecutive variables are as follows namely 0.747, 0.712 and 0.774. Thus, the instruments have fulfilled the validity and reliability testing so that the measurement data obtained by using the instruments can be used for the data analysis.

Results of Multiple Linear Regression Analysis. This analysis means that simultaneously the independent variables consisting of quality of human resources (X1) and management of information systems (X2) significantly affect the dependent variables of quality of public services (Y).

Based on the value of the determinant coefficient *R Square* showed the value of 0.294 or 29.4%. This means that the variable of quality of public services (Y) amounted to 29.4% which is influenced by the quality of human resources (X1) and management of information systems (X2). The remaining 70.6% is influenced by other variables out of the two independent variables being examined in this study.

The multiple linear regression equation model obtained is as follows:

$$Y = -18.790 + 0.478X_1 + 0.859X_2 + e$$

1. Partially, the quality of human resources (X1) has negative significant effect on the quality of public services (Y).
2. Partially, management of information system (X2) significantly affects the quality of public services (Y).
3. Since the influences of coefficient regression on the management of information systems are positive, this indicates that both influences are unidirectional. The better management of information systems will lead to higher the quality of public services.
4. Based on calculation using path analysis, it is known that the influence of quality of human resources and management of information system has increased rather than direct influence.

5. DISCUSSION

The responses from the respondents to the dimensions of the quality of human resources are in good category. This illustrates that the quality of human resources in the implementation of e-ID services should be in good circumstance. Based on the analysis, it can be said that the quality of service of e-ID in Lumajang is good.

Simultaneous Effects

The Effect of Quality of Human Resources and Management of Information System on the Quality of Public Services.

Based on the results of the study, it was shown that there is significant and positive influence of the quality of human resources and management of information systems on the quality of public services. The increasing quality of human resources and management of information systems will improve the quality of public services in Lumajang.

Partial Effects

The Effect of Quality of Human Resources on the Quality of Public Services

The quality of human resources in Lumajang has been good even though it is relatively low as it is compared with government offices in the surrounding region.

The Effect of Management of Information Systems on the Quality of Public Services

The increasing management of the information system will improve the quality of public services in Lumajang. The indirect effects of management of information system on the quality of public services with the mediation of quality of human resources may produce relatively significant influence.

The Effect of Quality of Human Resources on the Quality of Public Service through Management of Information Systems

The calculations show that the total effects from the quality of human resources on the quality of public services through management of information systems are bigger than the direct effects. It is clear that the management of information systems is needed to maintain the quality of human resources in order to meet the expected public services.

The Effect of the Management of Information System on the Quality of Public Service through the Quality of Human Resources

The calculations showed that the total effects from the management of information systems on the quality of public services through the quality of human resources give very dominant influence. Supported with adequate facilities and infrastructure, the data processing system of public information within an organization will be more effective and accurate when it is also supported by the availability of good human resources.

6. CONCLUSION

There are some conclusions of this study. First, the regression coefficient of the effect of the quality of human resources on the quality of public services showed positive value, which indicates both influences are unidirectional. Second, the regression coefficient of the effect of management of information system on the quality of public service is positive, indicating that both effects are unidirectional. Third, based on multiple regression analysis, it is shown that the quality and human resources and management of information system is simultaneously significant on the improving quality of public services, especially in the making of e-ID in Lumajang.

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