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The Application of Electronic Government to the Quality of Public Services

A Case Study of the Population and Civil Registry Office Ambon

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ABSTRACT

The application of information and communication technology in the public sector in order to improve the quality service to the public is indispensable. Since the government is required to implement good governance and improve the quality of public services, it has become a driving force in the application of electronic government as a system that uses information technology in government agencies, including the Population and Civil Registry Office Ambon. Therefore, this research aims to determine the effect of the application of electronic government to the quality of public services at the Population and Civil Registry Office Ambon. The method used in the research is simple linear regression analysis. In addition, the retrieval technique used a census technique in which 35 populations were sampled in this research. Those people derived from consumers who have received services from the Population and Civil Registry Office Ambon. Furthermore, the result of this research indicated that there is a significant effect between the application of e-government and improving the quality of public services at the Population and Civil Registry Office Ambon, it is proven by significant results by comparing the amount of the t-count value of 8.363 and the t-table value of 1.684 ($t\text{-count } 8.363 > t\text{-table } 1.684$). In addition, e-government contributes 67.9% to the quality of public services while the rest 32.1% is affected by other variables.

Keywords: e-Government, Public Sector, The Quality of Public Services

INTRODUCTION

Advances in information and communication technology offer the potential for efficiency, speed of information delivery, affordability, and transparency, and government is no exception in this globalization era. Moreover, during this autonomy era, it is required to realize good governance. Electronic Government (e-Government) is an initiative of the government to develop electronic-based government services by using information technology. The application of e-government can create online or computerized public services. Providing services without the intervention of public institution employees and reducing the long queue system for a simple service. The existence of this online system allows the public to spend their time doing other activities to increase productivity, both at the regional and national levels.

The application of e-Government in Indonesia is in accordance with Presidential Instruction No. 3/2003 on National Policy and Strategy for e-Government Development, the policy emphasizes that the government must be able to use information technology advances to improve the ability to process, manage, channel and distribute information and public services. The development of e-Government systems is different for each region due to its own characteristics, development conditions, prosperity, economic profile, skilled human resources, technological literacy among the population, bureaucratic efficiency, and municipal policy capacity (Meitasari et al., 2023). The application of e-Government in the Population and Civil Registry Office Ambon is one of the examples. The Population and Civil Registry Office Ambon was formed based on Ambon Mayor Regulation No. 38/2016 concerning Organization and Work Procedures of Ambon City Offices. This institution is responsible for drafting and implementing policies in the field of population and civil registration.

Information technology in government, in particular, is intended to increase public service quality, openness, and accountability for governmental organizations. The government has improved internal management effectiveness and indirectly modified how the system operates to improve the quality of public services (Utama, 2020). Moreover, Indonesia needs the consistent master plan for e-Government with the direction of national growth from both a long-term and short-term aspects of government, including politics, culture, management, economics, anthropology, philosophy, religion, agriculture, industry, trade, defense and security, and so on (Salsabila & Purnomo, 2018).

According to Huda & Yunas (2016), the goal of various long-term strategic plans for e-Government development in Indonesia is to modernize ICT-based governance systems through the use of e-government in order to increase service quality and decrease the number of public visits to service offices. Then, the role of Central Government is crucial in increasing the use of e-government in the society.

In addition, providing the counselling is necessary for better understanding of the community about the benefits of information technology implementation (Erhan et al., 2017). The information technology was used by government institutions to improve government performance in government relations with other governments (G2G); government with the citizen (G2C); government with business (G2B); and other related groups. Using internet-based information technology applications and other digital tools managed by the government for the purpose of conveying information from the government to the community, business partners, employees, business entities, and other institutions online and offline.

Since the government is required to implement good governance and improve the quality of public services, it has become a driving force in the application of electronic government as a system that uses information technology in government agencies, including the Population and Civil Registry Office Ambon. Therefore, this research aims to determine the effect of the application of electronic government to the quality of public services at the Population and Civil Registry Office Ambon.

LITERATURE REVIEW

Electronic Government

The most widely referenced term e-Government is derived from a World Bank publication, which states that the use of information technology or public institutions that aim to improve governance and society can be more efficient, effective, and productive (Mariano, 2018). Moreover, e-Government is one of the applications of information technology to realize more professional government services and support the industrial revolution 4.0 (Rahmadany, 2021). e-Government is the use of information technology by local, central, and federal governments to support government operations, public engagement and the provision of government services. These interactions include applications, payments and other information services through the world wide web.

E-Government Information System is a combination of information technology, software, hardware, and government that serves as a manager, communication networks, and data sources that are compiled using relevant regulations, offering information and services aimed at the community, and managed by the government. The development of e-Government in Indonesia has regressed compared to some countries in the Southeast Asian. Indonesia is ranked 116 out of 193 countries in 2016 (Menpanrb, 2020). The position dropped 10 ranks. This fact is a serious problem for Indonesia in the midst of efforts to improve the quality of public services that have been implemented by the government (Masyhur, 2017). The policy of e-Government development in Indonesia has actually begun with the issuance of Presidential Instruction No. 3/2003 on e-Government

Development Strategy. There are several main government strategies such following below:

1. Development of a service system that is reliable, trustworthy, and affordable to the community;
2. Structuring the management system and work processes of the central government and local governments holistically;
3. Optimal utilisation of information technology;
4. Increased participation of the business world and development of the telecommunications and information technology industry;
5. Development of human resources in government and improvement of public e-literacy;
6. Systematic implementation of development through realistic and measurable steps.

In addition, there are several disadvantages in the application of e-Government as stated in the Presidential Instruction, such following below:

1. The services provided through the government website have not been supported by effective management systems and work processes because the availability of regulations, procedures and limited human resources have limited the penetration of computerization into the management systems and work processes of the government;
2. Inadequate strategy and budget allocated for e-Government development in each institution;
3. Standardization of information security, authentication, and various basic applications that enable interoperability between sites;
4. The approach taken is not strong enough to address the gap in people's ability to access the internet.

Public Services

Bureaucratic performance can be identified through the quality of public services. Public service is described as a process where people are served, serve, and the type of service provided (Meitasari et al., 2023). In addition, public services contain substantial matters that are different from services provided by the private sector. Many problems such as slow, expensive and convoluted services make the community continue to demand changes in improving the public service system. A good service system is a system that is in accordance with existing standards and mechanisms to ensure that in the service process there are no irregularities and if they occur, they will be visible and recognized (Maulani, 2020). Public services as mentioned require state apparatus to work professionally, that is accountability and responsibility. Unfortunately, there is a potentially severe market failure in the supply of services to society (broadly construed to encompass equity and efficiency), which justifies government engagement in production, financing, or

regulation (Aritonang, 2017). Therefore, it needs to be supported by improving the quality of public services as mandated in the Decree of the Minister of Administrative Reform No. 63/Kep/M.PAN/7/2003 concerning general guidelines for public service management as an improvement of the Decree of the Minister of Administrative Reform No. 81/1995 concerning guidelines for public service management. The regulation contains the quality of public services that should be provided in a simple, safe and open process (Mariano, 2018). In Indonesia, public services is becoming an increasingly strategic policy issue since its improvements are often stagnant. Moreover, the impact of public service is very broad, because it involves economic, social, political, cultural and other aspects of life (Sudrajat, 2023).

The Relation among Research Variables

In general, e-Government is a solution for the government to use technology in conducting all government activities, both those related to intergovernmental relations and those related to the community in public services. The existence of an electronic system in government activities is used to improve the efficiency of government work which has been considered not maximised. The development of this system is expected to reduce time and costs so that all government activities are maximised and have good quality work as well. There are three concepts in digital-based public services, which are support capacity, and value (Sellfia et al., 2021). When using technology in an organisation, Charles Perrow classified technology into 4 types based on the knowledge required to operate the technology, such as routine technology, craft technology, engineering technology, and non-routine technology (Hamdani & Ramdhani, 2019). In order to develop contact between the State and individuals, businesses, and other government entities while enabling access to government documents and information, eGovernment as an internet application assists the government to provide services to the public.

Perrow also stated that routine technology often leads to hierarchy, standardisation, specialisation, formalisation and highest decision-making. In other words, organisational structures are more mechanistic. On the other hand, non-routine technology often leads to documents, buildings and others that are collected to create and maintain network stability; how work processes change through network interaction, and how certain configurations can lead to technological inefficiency. Based on Perrow's statement that routine technology is more directed towards activities within an organisation and non-routine technology is related to the process of processing documents in terms of services, it means that there is a connection with communication between the organisation as a service provider and the community as a person served through technology as an interaction platform.

Another case with Stephen P. Robbins who relates technology to organisational structure only. Robbins states that the category of organisational technology has two things, such as (1) a clear relationship between the classification

of technology and organisational structure; and (2) organisational effectiveness is related to the compatibility between technology and organisational structure (Rondonuwu, 2017). Meanwhile, according to Neuby (2016), the whole of human inventions or established procedures that change, improve, or produce new commodities and services offered by organizations is referred to as organizational technology. Moreover, technology can decrease efficiency and effectiveness without competent management, rules, and support. The public expects all organizations, including public, nonprofit, or private to provide services using the most recent technology.

RESEARCH METHODOLOGY

This research is quantitative research. The use of quantitative research methods with a descriptive approach has the aim of explaining events that have taken place through numbers that have meaning (Meitasari et al., 2023). The method used in the research is simple linear regression analysis. Linear regression is a statistical procedure for calculating the value of a dependent variable from an independent variable. Linear regression measures the association between two variables (Kumari & Yadav, 2018). This analysis is used to determine the effect between the independent and dependent variables (Sugiyono, 2019). The formulation of the analysis proposed by Sugiyono is as follows:

$$Y = \alpha + \beta X + e$$

Description:

X : e-Government Variable

Y : The Quality of Public Services Variable

α : Intercept coefficient (Constant)

β : Regression direction coefficient

e : Interrupter error

In addition, the retrieval technique used a census technique in which 35 populations were sampled in this research. Those people derived from consumers who have received services from the Population and Civil Registry Office Ambon. In addition, there were criteria for sampling, such as (1) residential location in Ambon City; and (2) male and female gender with a minimum age of 17 years old.

RESULT AND DISCUSSION

The Research Result

Validity Test

Testing the validity in this research using the Product Moment correlation technique by correlating the score of each item with the total score of the Corrected Item-Total Correlation value. Based on the validity test results in Table 1, it is indicated that the correlation coefficient value (r_{count}) is greater than the correlation value (r_{table}), it can be concluded that all statement items used in this research are valid, so these statements can be used for further analysis in this research. The following is a description of the validity test in Table 1 below:

Tabel 1. The Result of Validity Test

Variable	Item	Correlation Product Moment	$R_{\text{tabel}} (\alpha=0,05)$	Description
e-Government (X)	P1	0.765	0.334	Valid
	P2	0.584		Valid
	P3	0.875		Valid
	P4	0.442		Valid
	P5	0.529		Valid
	P6	0.728		Valid
	P7	0.758		Valid
	P8	0.772		Valid
	P9	0.593		Valid
	P10	0.664		Valid
	P11	0.726		Valid
The Quality of Public Service (Y)	P1	0.878	0.334	Valid
	P2	0.553		Valid
	P3	0.704		Valid
	P4	0.775		Valid
	P5	0.878		Valid
	P6	0.829		Valid
	P7	0.704		Valid
	P8	0.628		Valid
	P9	0.436		Valid

Source: Processed Data using SPSS (2023)

Reliability Test

The method that is often used in the SPSS programme is the Cronbach Alpha method. Cronbach Alpha is a parameter used to describe the correlation or relationship between the scale created and all existing variable scales. The instrument used in the variable is considered reliable if it has a Cronbach Alpha greater than 0.60 (Hair Jr, J. F., Sarstedt, M., Hopkins, L., & Kuppelwieser, 2014).

Based on the reliability test results of the variables used in this research, it can be presented in the following table:

Table 2. The Result of Reliability Test

Variable	Cronbach Alpha	r _{table}	Description
e-Government (X)	0,882	0.60	Reliable
The Quality of Public Services (Y)	0,871	0.60	Reliable

Source: Processed Data using SPSS (2023)

Based on the reliability test results in the table above, it can be seen that the reliability score achieved for each variable is greater than 0.60, which means that the instrument used is reliable, therefore the items are suitable for use as measuring instruments.

Simple Linear Regression Analysis

Hypothesis testing using inferential statistical analysis combined with simple linear regression analysis techniques. Based on the calculation of simple linear regression analysis using the SPSS ver 22 programme, the following results were obtained as presented in Table 3:

Table 3. The Result of Simple Linear Regression Analysis

Variable	Unstandardized Coefficients	t _{count}	Sig.	Description
Constant	9.066			
e-Government (X)	0.629	8.363	0.000	Sig.

Source: Processed Data using SPSS (2022)

Based on the results of the regression analysis in the table above, the description of simple regression equations can be compiled as follows:

$$Y = 9.066 + 0.629X$$

Description:

1. The constant value (α) is 9.066; it means that if the independent variable, e-government (X) is equal to 0, then the quality of public services is positive at 9.066.
2. The regression coefficient value of 0.629 indicates that the e-government variable has a positive effect on the quality of public services, it means that the greater/better e-government will cause an improvement in the quality of public services at 0.629 or 62.9%.
3. The R square value is 0.679. It means that the e-government variable (X) contributes 0.679 or 67.9% to the quality of public services (Y), while the rest 32.1% is affected by other variables.

T-Test

The T-test is used to test the partial effect of the independent variable on the dependent variable, by comparing the t_{count} value with the score of the $\alpha = 0.05$, free degree = 34.

Testing Criteria:

H_0 is rejected if $t_{\text{count}} < t_{\text{table}}$

H_0 is accepted if $t_{\text{count}} > t_{\text{table}}$

Based on the test results, the t_{count} value is 8.363 while the t_{table} value is 1.684, thus the $t_{\text{count}} > t_{\text{table}}$ means that H_0 is rejected, it means that the e-government variable (X) has a significant effect on the public service quality variable (Y). It indicates that partially the hypothesis stating that there is an effect of e-government on the quality of public services can be accepted.

The Research Discussion

e-Government is one of the innovations in government activities that is useful for improving the quality of public services in government. The concept of e-Government at the Population and Civil Registry Office Ambon aims to improve the 3 concepts of e-Government, which are government to government in order to increase the efficiency of the apparatus in conducting government activities with the assistance of technology as a medium of communication between governments in order to reduce the time and costs that are usually incurred if the process is conducted manually; government to business is the relationship between the government and business sector, the advantage of good development in this relationship is a more transparent relationship between the government and interest groups (business sector) in order to minimise irregularities in government projects; government to citizen is the relationship between the government and the community. The Population and Civil Registry Office Ambon applies this concept in serving population administration applicants in Ambon City by utilising technology as an intermediary for public service activities between the government and the community. This service technology is used to minimise fraud committed by apparatus or people who want to take care of population administration instantly.

Based on the findings of this research, the t_{count} value is 8.363 while the t_{table} value is 1.684, thus the $t_{\text{count}} > t_{\text{table}}$ means that H_0 is rejected, it means that the e-government variable (X) has a significant effect on the public service quality variable (Y). It indicates that partially the hypothesis stating that there is an effect of e-government on the quality of public services can be accepted. Therefore, it can be concluded that the application of e-government has a positive and significant effect on improving the quality of public services at the Population and Civil Registry Office Ambon.

CONCLUSION AND SUGGESTION

Conclusion

Based on the findings of this research, the t_{count} value is 8.363 while the t_{table} value is 1.684, thus the $t_{\text{count}} > t_{\text{table}}$ means that H_0 is rejected, it means that the e-government variable (X) has a significant effect on the public service quality variable (Y). Then, the e-government variable (X) contributes 0.679 or 67.9% to the quality of public services (Y), while the rest 32.1% is affected by other variables.

Suggestion

There are several suggestions that can be provided by the researcher, such as (1) increased socialization of e-Government conducted by the Population and Civil Registry Office Ambon is conducted so that more people are technology literate because it will make all government activities for the community more efficiently applied, and for the ease of time and cost both for those who serve and the community as the one being served. Improving facilities and infrastructure that support technological-based e-Government activities is done to facilitate population administration activities, both the ease of communication between applicants and related authorities conducted with technological media; (2) further research can be conducted by observing the limitations of this research which can be used as a source of information for further research development.

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