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**The Influence of Ease of Use, Trust, and Information Quality on  
the Decision to Use Online Hydrological Data at the  
Sulawesi II River Basin Agency**

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**ABSTRACT**

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This study aims to analyze the influence of trust, ease of use, and information quality on the decision to use online hydrological data at the Sulawesi II River Basin Agency. The sampling method was carried out through accidental sampling at the Sulawesi II River Basin Agency office in Gorontalo. Multiple linear regression analysis indicates that ease of use and trust insignificantly affect the decision to use hydrological data, while information quality has a significant positive influence. These results underscore the importance of information quality in influencing decisions regarding the use of online public services.

*Ease of Use, Trust, Information Quality, Decision to Use*

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**INTRODUCTION**

The rapid advancement of technology has significantly transformed the communication landscape between the government and society. Nowadays, the public has the opportunity to participate in the governance process, one of which is through their contribution in assessing the government's performance in terms of public services (Rosana, 2010). Evaluations provided by the public serve as drivers for the government to provide optimal public services, in line with the spirit of transparency demanded in the current era of reform and globalization. To respond to this call, the government has enacted various regulations, such as Law No. 14 of 2008 concerning Public Information Disclosure, Government Regulation No. 61 of 2010 concerning the Implementation of Law 14/2008, and Minister of Home Affairs Regulation No. 3 of 2017 regarding Guidelines for the Management of Information and Documentation Services of the Ministry of Home Affairs and Regional Governments. These regulations aim to improve the management and quality of information services in response to community needs.

Quality services are closely related to the implementation of public services. Public services can be conceptualized as services provided by the government, either in the form of providing public goods or public services. In principle, public services are the primary responsibility of the government that must be implemented and realized (Permatasari, 2020). Public services according to (Yuningsih, 2016) are a series of actions aimed at meeting service needs in accordance with applicable laws for all citizens and residents. These services include the provision of goods, services, and/or administrative services provided by public agencies.

According to PKP2A LAN 2012, the role of the government is not only for its internal interests but also to provide services to the public and create conditions that support every member of society in developing their potential and creativity to achieve common goals. There are five patterns of public services that can be distinguished, namely: (1) Functional Technical Service Pattern, where services are tailored to the tasks, functions, and authorities of government agencies; (2) One-Stop Service Pattern, where one government agency provides single services based on the authority of other related agencies; (3) One-Roof Service Pattern, which is carried out integrally by government agencies in accordance with their authority; (4) Centralized Service Pattern, where one government agency acts as a coordinator for services of other related agencies; and (5) Electronic Service Pattern (e-service), which uses information and communication technology to provide online services to adapt to the needs and capacities of the public.

In relation to public services, service quality is an important indicator that can determine the success of fulfilling aspects of public services. According to (M et al., 2021), service quality refers to the ability of an institution to provide the desired needs of consumers and be responsible for ensuring satisfaction with those services.

The implementation of Information Technology in government plays a significant role in facilitating various aspects of public services through electronic service patterns or e-service/online service. The use of information technology has the potential to overcome existing work culture challenges and improve it into a working system that is more in line with expectations, namely public services that are more open, transparent, accountable, and oriented towards the interests of the community. In the context of the growing demand for satisfaction with public information services alongside the rapid advancement of information technology, the transformation of public information services into online forms has become a necessity, while still observing compliance with regulations regarding public information services.

Online-based public information services have two main objectives: (1) to provide complete information about institutions or regions to support economic progress, regional development, and improve service process performance; and (2) to optimize the use of resources such as time, energy, budget, and other facilities (Hasibuan, 2007). However, the development of online-based information services is also faced with several obstacles and challenges, as mentioned by (Sosiawan, 2008), namely: (1) constraints in regulations and guidelines for the operation of local government websites, as well as budget allocations that have not been prioritized; (2) lack of qualified or minimally skilled and managerial human resources in managing online-based public information services; (3) uneven penetration of hardware markets and communication and information technology service providers to regions, resulting in inadequate infrastructure; and (4) low levels of public literacy related to the use of online-based public information services, especially among the lower-middle class.

Several key factors driving the public to use online services include convenience, trust, and information quality. Ease of use is related to simplicity, ease of learning, and ease of understanding. Trust in the decision-making process is also an important factor; individuals will use information technology systems if they believe the system is easy to use (Fred, 1989). Conversely, if individuals feel that the information technology system is difficult to use, they tend to be reluctant to use it.

The second factor is trust, which is the consumer's willingness to trust a brand with all its risks because of the promises made by the brand to provide positive results for consumers (Lau & Lee, 1999:340). A set of beliefs that individuals have about a particular brand is called brand image. Consumer trust can vary depending on product characteristics that match personal experiences, as well as influenced by phenomena such as selective perception, selective meaning change, and the ability to selectively recall information (Kotler, 2008).

The third factor is information quality, which plays a crucial role in providing comfort and satisfaction to consumers. Quality information enables consumers to obtain relevant information about various products they are interested in. According to Aimsyah (2003), the value of information is determined by four main characteristics, namely accuracy, timeliness, completeness, and relevance. The development of information systems within an organization depends heavily on the types of activities carried out and the types of decisions made by information users (Scott, 1996).

The Sulawesi II River Basin Agency (BWS) is a government body responsible for managing water resources in river basins covering planning, infrastructure development, operation, and maintenance. Its main task is to maintain and utilize water resources and control potential water disasters in rivers, coasts, dams, lakes, ponds, reservoirs, and shrimp ponds. In addition, BWS Sulawesi II is also responsible for irrigation management, swamps, groundwater, raw water, and urban drainage. As part of its services, BWS Sulawesi II provides hydrological data to the public and relevant parties who need this information. To improve accessibility and speed in obtaining information, BWS Sulawesi II has launched an online data service that can be easily accessed by the public. This research aims to identify the influence of three main factors, namely trust, ease of use, and information quality, on the decision to use online hydrological data services at the Sulawesi II River Basin Agency. In the context of online-based information services, these factors are key in determining adoption and usage by the public. Therefore, this research will discuss the implications of these three factors on the decision to use online public information services at the Sulawesi II River Basin Agency.

## RESEARCH METHODE

In this study, the focus is solely on the entire community in need of hydrological data services provided by the Sulawesi II River Basin Agency (BWS) in Gorontalo. Thus, this research considers all groups of people accessing these services to gain a comprehensive understanding of their needs and perceptions of the services. The sampling technique is conducted through accidental sampling, where sample selection is based on whoever the researcher encounters at the Sulawesi II River Basin Agency office in Gorontalo who uses hydrological data services. Samples are chosen if individuals encountered by chance are deemed suitable as relevant data sources for the study.

A multiple linear regression quantitative analysis model is used to examine the influence of independent variables in addressing the research problem and testing the proposed hypotheses. The formulation of the multiple linear regression analysis refers to the framework presented by Sumarsono (2004) and is used as a guide in identifying the relationship between the studied variables:

$$Y = b_0 + b_1X_1 + b_2X_2 + b_3X_3$$

Where:

Y = Dependent variable of usage decision

X1 = Independent variable of ease of use

X2 = Independent variable of trust

X3 = Independent variable of information quality

bo = Constant

b1, b2, b3 = Regression coefficients

## RESULT AND DISCUSSION

### Hypothesis Testing Results Simultaneously

To test the simultaneous influence of the variables Ease of Use, Trust, and Information Quality on the Decision to Use Online Hydrological Data at the Agency, an F-statistic (F-test) was used. If the calculated F-value > the tabulated F-value, then H0 is rejected, and Ha is accepted. Conversely, if the calculated F-value < the tabulated F-value, then H0 is accepted, and Ha is rejected. The results of hypothesis testing simultaneously can be seen in the following Table 1.

**Table 1.**  
**Results of the First Hypothesis Testing Simultaneously**  
 ANOVA<sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	133.437	3	44.479	20.729	.000 <sup>b</sup>
	Residual	81.539	38	2.146		
	Total	214.976	41			

a. Dependent Variable: Y

b. Predictors: (Constant), X3, X1, X2

Source: Data Processing Results, 2022

The results of the first hypothesis testing simultaneously, as shown in Table 1, obtained a calculated F-value of 20.729 using a confidence interval of 95% or alpha ( $\alpha$ ) = 0.05. From the F-distribution table, the tabulated F-value (Ftable) is 2.8522. Comparing the calculated F-value with the tabulated F-value, we find that the calculated F-value (46.717) > Ftable (2.637). The decision is therefore to reject the null hypothesis (Ho) and accept the alternative hypothesis (Ha), meaning that simultaneously, the variables Ease of Use (X1), Trust (X2), and Information Quality (X3) significantly influence the Decision to Use Online Hydrological Data (Y) at the Sulawesi II River Basin Agency.

The ability of the variables Ease of Use (X1), Trust (X2), and Information Quality (X3) to explain their influence on the Decision to Use Online Hydrological Data (Y) at the Sulawesi II River Basin Agency is shown in Table 2 below.

**Table 2.**  
**Coefficient of Determination (R2)**

<b>Model</b>	<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>
1	.788 <sup>a</sup>	.621	.591	1.465

Source: Data Processing Results, 2022

Table 2 shows that the coefficient of determination (R2) is 0.621 or 62.1%. This means that the ability of the independent variables, namely Ease of Use (X1), Trust (X2), and Information Quality (X3), explains their influence on the Decision to Use Online Hydrological Data (Y) at the Sulawesi II River Basin Agency by 62.1%. The remaining 37.9% represents unexamined variables.

### Partial Hypothesis Testing Results

To test the partial influence of the variables Ease of Use (X1), Trust (X2), and Information Quality (X3) on the Decision to Use Online Hydrological Data (Y) at the Sulawesi II River Basin Agency, a t-statistic (t-test) is used. If the calculated t-value > the tabulated t-value, then H0 is rejected and Ha is accepted. Conversely, if the calculated t-value < the tabulated t-value, then H0 is accepted and Ha is rejected. The results of hypothesis testing partially can be seen in the following Table 3.

**Table 3.**  
**Results of Partial Hypothesis Testing**

<b>Model</b>		<b>Unstandardized Coefficients</b>		<b>Standardized Coefficients</b>		<b>T</b>	<b>Sig.</b>
		<b>B</b>	<b>Std. Error</b>	<b>Beta</b>			
1	(Constant)	1.852	2.115			.876	.387
	X1	.054	.215	.037		.253	.802
	X2	.181	.192	.168		.940	.353
	X3	.864	.192	.677		4.503	.000

Source: Data Processing Results, 2022

Based on Table 3 above, the multiple linear regression equation in this study is as follows:

$$Y = 1,852 + 0,037 X_1 + 0,168X_2 + 0,677X_3$$

Where:

1.  $b_0 = 1.82$  means that if Ease of Use (X1), Trust (X2), and Information Quality (X3) are all zero or absent, then the Decision to Use Online Hydrological Data will be constant at the level of 1.82 units.
2.  $b_1 = 0.037$  means that for every one-unit increase in the Ease of Use variable, the Decision to Use Online Hydrological Data will increase by 0.037 units from its original value.
3.  $b_2 = 0.168$  means that for every one-unit increase in the Trust variable, the Decision to Use Online Hydrological Data will increase by 0.168 units from its original value.
4.  $b_3 = 0.677$  means that for every one-unit increase in the Information Quality variable, the Decision to Use Online Hydrological Data will increase by 0.677 units from its original value.
5. All of this assumes that other factors remain constant.

The results of the partial hypothesis testing as presented in Table 3 show the calculated t-values for each independent variable in this study. These calculated t-values for each independent variable will be compared with the tabulated t-value using a confidence interval of 95%, or  $\alpha = 0.05$  ( $0.05/2 = 0.025$ ), resulting in a tabulated t-value of 2.021.

The partial hypothesis testing results indicate that the ease of use variable (X1) has a calculated t-value of  $0.253 <$  the tabulated t-value (2.021), thus the decision is to reject  $H_a$  and accept  $H_0$ . This means that the Ease of Use variable (X1) has a positive but not significant impact on the Decision to Use Online Hydrological Data (Y) at the Sulawesi II River Basin Agency.

The Trust variable (X2) has a calculated t-value of  $0.940 <$  the tabulated t-value (2.021), thus the decision is to reject  $H_a$  and accept  $H_0$ . This means that the Trust variable (X2) has a positive but not significant impact on the Decision to Use Online Hydrological Data (Y) at the Sulawesi II River Basin Agency.

The Information Quality variable (X3) has a calculated t-value of  $4.03 >$  the tabulated t-value (2.021), thus the decision is to accept  $H_a$  and reject  $H_0$ . This means that the Information Quality variable (X3) has a positive and significant impact on the Decision to Use Online Hydrological Data (Y) at the Sulawesi II River Basin Agency.

When comparing the data above, it can be concluded that the Information Quality variable has a more dominant influence on the Decision to Use Online Hydrological Data at the Sulawesi II River Basin Agency. This aligns with the statements of some respondents that Information Quality is a priority and a primary requirement for hydrological data users because the accuracy of the data is crucial for decision-making.

## **Discussion**

### **The Influence of Ease of Use on the Decision to Use Online Hydrological Data**

From this research, it is found that ease of use has a positive but not significant influence on the decision to use online hydrological data at the Sulawesi II River Basin Agency. The convenience provided by the hydrological data website service should ideally be an advantage felt by the data users because they can easily access the required data anytime and anywhere. The ease of the system, clear and understandable service instructions, and no extra effort needed to access the data are attractive features for users to utilize the data service, even though other parties also provide the same data. Therefore, with this ease, the decision to use online hydrological data at the Sulawesi II River Basin Agency will increase, although not significantly. This aligns with research conducted by Naomi (2016), where the results show that ease of use influences purchasing decisions.

### **The Influence of Trust on the Decision to Use Online Hydrological Data**

From this research, it is found that trust has a positive but not significant influence on the decision to use online hydrological data at the Sulawesi II River Basin Agency. Trust is the primary foundation in an electronic transaction, especially when it involves data. Therefore, the data displayed or loaded on the website must correspond to the actual situation. Additionally, if the data and information presented match the data needed by the data users, the decision to use that data will increase. This is consistent with research by Pudjihardjo & Wijaya (2015), which concludes that trust variables influence purchasing decisions through social media marketing in the Shapeharve online shop.

### **The Influence of Information Quality on the Decision to Use Online Hydrological Data**

From this research, it is found that information quality has a positive and significant influence on the decision to use hydrological data at the Sulawesi II River Basin Agency. This means that an increase in information quality will increase the decision to use online hydrological data. In addition to ease of use and trust in data and information presented by an application/website, information quality is a crucial factor influencing the decision to use online hydrological data. Accurate and valid data, updated and comprehensive, are measures of quality data or information. Especially concerning hydrological data, which is often used for research data, reference data in project planning, and also used by farmers in planning planting schedules, the accuracy and validity of data are essential considerations for deciding to use the data. Thus,



the better the quality of information presented, the higher the decision to use online hydrological data at the Sulawesi II River Basin Agency. This aligns with research by H Rizki et al. (2015), which states that information quality variables significantly influence online purchasing decisions. With quality information, including relevance, accuracy, and easily understandable information, consumers are prompted to make decisions.

## CONCLUSION

From the research findings, it can be concluded that, partially, ease of use and trust do not have a significant influence on the decision to use online hydrological data at the Sulawesi II River Basin Agency. However, information quality, partially, has a positive and significant influence on the decision to use online hydrological data. Simultaneously, ease of use, trust, and information quality have a positive and significant influence on the decision to use online hydrological data at the Sulawesi II River Basin Agency. Moreover, information quality is the variable that has a dominant influence on the decision to use online hydrological data at the Sulawesi II River Basin.

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