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The Role of Government's Social Media to Enhance Environmental Awareness

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Abstract

Environmental awareness is an important aspect to create a clean environment. One of the best alternatives to encourage society to have environmental awareness is by promoting and introducing the importance of carbon mitigation and energy saving through campaigns on the government's social media. This paper aims to test empirically to what extent the determinant of information in government campaigns on so cial media affects the quality of information on the government's social media. The determinants of information used in this paper are relevant, reliable, timely, and complete. This research is a quantitative descriptive approach where the data is obtained through questionnaire distribution to Facebook, Twitter, and Instagram users from July to December 2022. The data is analyzed by multiple regression model using SPSS. To address this, there are 205 questionnaires collected in this research. The findings show that relevant and complete have effects on the quality of information while reliable and timely do not have effects on the information quality. In addition, the practical implication of the research is also discussed in this paper.

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INTRODUCTION

The development of information technology occurs particularly in the development of the internet through social interaction. Based on data from the Indonesia Internet Service Providers Association, internet usage in Indonesia until the second quarter of 2020 rose to 73.7%, or equivalent to 196.7 million users. Nearly 200 million users out of the Indonesian population of 266.9 million according to the Central Statistics Agency (BPS). With the increasing use of the internet, the flow of information exchange can occur in seconds, one of which is through innovation in social interaction, namely social media. The number of users of the social media application in Indonesia reached 140 million users as of last July 2021 with the number of Facebook users in Indonesia ranked third in the world meanwhile, the user of Twitter has a total of 15,7 million users as of July 2021.

Currently, social media is not only for communicating and establishing relationships with new people but also as a means of disseminating information. Social media is one of the means for the government to provide fast and easy services so that people are more active in supervising to utilize public services. The use of social media in government has become the main trend of e-government practice. The important role offered by social media are the flow and availability of information from the government, the use of information technology to create and provide innovative government services, the impact of information technology on government and public relations, and the increasing importance of policy and information technology in practice democracy (Criado, et.al, 2013). Since the beginning of the World Health Organization's warning of the Corona Virus, the government's use of social media for e-government practices has been seen to be less than optimal, as evidenced by the Indonesian government's tendency to show a non-serious response and reject the possibility of the virus hit Indonesia (Junaedi, 2021).

Therefore, the dissemination of information by the government regarding the entry of the virus into Indonesia was late to be accepted by the public, and the government was considered to be lacking in utilizing its social media. Hence the importance of information delivered timely so that there is no unwanted impact. Related to the increase in the spread of the virus, the government implemented community activities restriction enforcement (PPKM) level 3 to level 4 in Java and Bali from July 26 to August 2, 2021. This information spread very quickly on social media. The government must pay attention to the information circulating on social media so that the situation is not used by unauthorized parties. Social media plays a significant role in influencing the public during the Covid-19 pandemic because the public themselves tends to prioritize information from social media (Ahmad & Murad, 2020).

In terms of environmental issues, the government's social media has an important role to encourage the environmental awareness of users. Through campaigns and shared information, the government's social media will influence social media users to enhance and care about the environment even more. The method is assured as the most effective and efficient way to increase environmental awareness. However, some of the information shared on social media has the possibility to mislead and create viral reactions. This is due to the inability of the public to choose the information which results in the emergence of rumors and panic that creates long-term effects (Romney & Steinbart, 2014). The existence of relevant information helps the public to avoid misinformation. Relevance is information that reduces uncertainty, improves decision-making, and confirms and confirms or improves previous expectations (Romney & Steinbart, 2014). Facing the abundance of information, the government must be able to provide reliable information, where the information can be trusted because it is free from misrepresentation. Information is included as high quality if it is accurate, timely, relevant,

and complete (Georitman, 2021).

Therefore, there are two objectives of this research, the first one is to find out whether relevant, reliable, timely, and complete affects the quality of information on the government's social media. The second objective is to know how the findings from this research can enhance environmental awareness on the government's social media. The novelty of this research lies in the government's social media on Facebook official, Instagram, and Twitter. Previous research only focuses on the government website, while this research fills the gap to find novelty in the government's social media.

The theory of decision usefulness covers the requirements of the information quality that is useful in decisions that will be taken by users. The usefulness of quality information decisions contains components that need to be considered by presenters of quality information so that the existing coverage can meet the needs of decision-makers who will use it. This study adopts decision usefulness theory where this approach focuses on users and their information needs. Based on this theory, social media users look for some information from social media that they trust and feel safe to share the information to their community. Thus, the information should have characteristics. It states that the determinants of the quality information are relevant (in accordance with the needs or can be useful to make decisions), reliable (free form errors or biases), timely (available at the time decision makers use), and complete (no things reduced in conveying the information) (Romney & Steinbart, 2014).

Relevant information has a significant positive effect on the quality of accounting information, this shows that the more relevant the information produced, the better the quality of accounting information produced. The effectiveness of the accounting information presented as a basis for making decisions is determined by the quality of the presentation. In line with the theory of quality information if the information is relevant, reliable, complete, timely, and understandable.

H1: Relevant information has a significant positive influence on the quality of information on government social media

Reliable information has a positive effect on the quality of accounting information because the information provided is free from errors and bias or misleading information. Reliability has a positive effect on the quality of accounting information. In line with the theory of quality information if the information is relevant, reliable, complete, timely, understandable, verifiable, and accessible. Therefore, the more reliable the information on the government's social media, the better the information quality is produced.

H2: Reliable information has a significant positive influence on the quality of information on government social media.

Timely information has a significant positive effect on the quality of accounting information. The influence of timeliness is very important in decision making so the higher the timeliness, the higher the quality of the information. This statement is in line with the theory stating that quality information is if information is accurate, timely, relevant, and complete.

H3: Timely information has a significant positive influence on the quality of information on government social media.

From the research conducted previously, complete information has a positive effect on the information quality because it provides complete information, containing important aspects behind each main item of information contained.

H4: Complete information has a significant positive influence on the quality of information on government social media

METHODS

Research Design and Sampling Technique

This research design is a quantitative and descriptive method with the sampling technique using purposive sampling. The respondents of the survey are the users of Twit-

ter and Facebook. The criteria of respondents for this purposive sample are (1). Users and have accounts on Facebook and Twitter, (2). Have accessed the Indonesian government's Facebook, Instagram, and Twitter social media from July to December 2022, and (c). are 18-50 years old. The data is collected through a survey using Google Forms. The questionnaires use a Likert scale with the highest score being 5 which indicates strongly agree and 1 which indicates strongly disagree.

Operational Variables and Measurement

The variables and indicators of the research are described as follows: (1) Relevant: the suitability of the problem faced, the requirement of the suitability, assistance in solving problems, orientation to general needs, and decision-making basis; (3) Reliable: based on actual evidence and documents, free from error, free from economic, social, and political elements, the suitability of the intention, supported by complete evidence; (4) Timely: the availability when needed, updated information, fast response when needed, accelerating in decision making, predefined time size; (5) Complete: availability according to need, clear and detailed, accessibility, real and whole, meet the quality and the quantity; (6) Information quality: the extent to which information meets the requirements and expectations of all those who need it which will reduce uncertainty, support decision, and encourage more effective and efficient planning of work activities that comprise relevant, reliable, timely, and complete.

The data is analyzed by multiplier linear regression model using SPSS. Before the research is analyzed, the validity test, reliability test, and classical assumption test which comprises of normality test, multicollinearity test, and heteroscedasticity test have been conducted. All the tests are fulfilled to perform the next level of regressions test.

RESULTS AND DISCUSSION

The number of questionnaires distributed is 218 and returned is 205. The respondent was mostly women amounting to 171 people (83.4%) and men amounting to 34 people (16.6%). Respondents were grouped based on the last education of most respondents were Bachelor's degree which amounted to 101 people (49.3%) followed sequentially, by Diploma three amounted to 74 people (36.1%), High school which amounted to 23 people (23%), Master degree is amounted to 5 people (2.4%) and 2 people (1.0%). Meanwhile, those grouped based on the age of the most respondents were aged 18-25, 169 people (82.4%), followed sequentially, namely, ages 26-35, 24 people (11.7%), ages 36-45 total 8 people (3,9%) and age 46-50 total 4 people (2.0%).

Based on the Table 1, it is known that the relevant variable (X1) has a maximum value of 25, a minimum of 6, an average value of 17.37, and a standard deviation of 3.219. The reliable variable (X2) has a maximum value of 25, a minimum of 7, an average value of 16.33, and a standard deviation of 3.81.

Table 1. Descriptive Statistics Results

	N	Min	Max	Mean	Std. Dev
Relevant (X_1)	205	6	25	17.37	3.219
Reliable (X_2)	205	7	25	16.33	3.810
Timely (X_3)	205	9	25	17.89	3.454
Complete (X_4)	205	10	25	18.48	3.220
Information Quality (Y)	205	5	20	15.52	2.975

The timely variable (X3) has a maximum value of 25, a minimum of 9, an average value of 17.89, and a standard deviation of 3.454. The complete variable (X4) has a maximum value of 25, a minimum of 10, an average value of 18.48, and a standard deviation of 3.22. Meanwhile, the information quality variable (Y) has a maximum value of 23, a minimum of 5, an average value of 15.52, and a standard deviation of 2.975.

The result of the normality test indicates that Kolmogorov-Smirnov has a significant value is 0.200 > 0.05, so the data distribution in this regression model has been normally distributed.

The result of the heteroscedasticity test using the Spearman rank where all variables consisting of relevant, reliable, timely, and complete do not experience heteroscedasticity because the significance value is >0.05 so the results of the heteroscedasticity test above indicate that there is no heteroscedasticity in this study.

Table 2. Normality Test Results One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		205
Normal Parameters, b	Mean	0.0000000
	Std. Devi	2.38627392
Most Extreme Differences	Absolute	0.047
	Positive	0.047
	Negative	-0.044
Test Statistics		0.047
asymp. Sig. (2-tailed)		.200c,d

a. Test distribution is Normal.
b. Calculated from data.
c. Significance Correction.
d. This is a lower bound of the true significance

Table 3. Multicollinearity Test Results

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Relevant	0.424	2.357
	Reliable	0.408	2.450
	Timely	0.376	2.663
	Complete	0.389	2.567

Table 4. Heteroscedasticity Test Results

			Unstandardized Residual
Sperman's Rho		Correlation Coefficient	0.073
	Relevant	Sig. (2-tailed)	0.297
		N	205
		Correlation Coefficient	-0.001
	Reliable	Sig. (2-tailed)	0.985
		N	205
		Correlation Coefficient	0.092
	Timely	Sig. (2-tailed)	0.19
		N	205
		Correlation Coefficient	0.031
	Complete	Sig. (2-tailed)	0.66
		N	205

Table 5. Multiple Linear Regression Test Results

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.567	1.059		4.314	0
	Relevant	0.179	0.08	0.193	2.221	0.027
	Reliable	-0.040	0.069	-0.052	-0.582	0.561
	Timely	0.112	0.08	0.13	1.406	0.161
	Complete	0.352	0.084	0.381	4.193	0

Based on the multiple linear regression equation, it can be seen how the relationship and influence of each independent variable on the dependent variable. From these equations it can be interpreted:

The constant value of the multiple linear regression equation is 4.576, this shows that if the independent variable consisting of relevant (X1), reliable (X2), timely (X3), and complete (X4) is 0 (zero) then the dependent variable is quality. information (Y) will be worth 4,576.

The regression coefficient value of the relevant variable (X1) is 0.179 which states that for every increase in one unit of the relevant variable, the quality of information will increase by 0.179 with the assumption that other independent variables are considered constant (fixed).

The regression coefficient value of the reliable variable (X2) is -0.040 which means that for every increase of one unit of reliable variable, the quality of information will decrease by -0.040 assuming other variables are considered constant (fixed).

The regression coefficient value of the timely variable (X3) is 0.112 which states that for every increase in one unit of the variable

on time, the quality of information will increase by 0.112 assuming other variables are considered constant (fixed).

The complete variable regression coefficient value (X4) is 0.352 which means that for every increase in one unit of the complete variable, the quality of information will increase by 0.352 with the assumption that other variables are considered constant (fixed). The coefficient of determination (R2) test was carried out with the aim of testing how much the model's ability to explain the variation of the dependent variable was. The results of the coefficient of determination test can be seen in Table 6.

It can be seen that the R2 value is 0.356 or 35.6% which indicates that the contribution of the variables X1 (relevant), X2 (reliable), X3 (timely), and X4 (complete) to the Y variable (quality of information) is 35 .6% and the remaining 64.4% is influenced by other variables not examined in this study.

It can be concluded that the results of the t-test are as follows: First, test the effect of relevant information on the quality of information obtained by the value of t-count (2.221) and a significance value of 0.027<0.05. These results indicate that Ho is rejected and H1 is accepted, then partially relevant information has a significant positive effect on the quality of information.

Second, test the effect of reliable information on the quality of information obtained by the value of t-count (-0.582) and a significance value of 0.56>0.05. The results show that Ho is accepted and H2 is rejected, so partially reliable information has no significant positive effect on the quality of information.

Third, Test the effect of timely information on the quality of information obtained by the value of t-count (1.406) and a significance value of 0.161>0.05. The results show that Ho is accepted and H3 is rejected, so partially timely information does not significantly affect the quality of information.

Fourth, Test the effect of complete information on the quality of information obtained by the value of t-count (4.193) and a significance value of 0.000<0.05. The results show that Ho is rejected and H4 is accepted, partially complete information has a significant positive effect on the quality of information.

Table 6. Coefficient of Determination Test Results Model Summary

	R	R^2	Adjusted R^2	Std. Error	Durbin-Watson
1	.597a	0.356	0.344	2.410	2.220

a. Predictors: (Constant), Complete, Relevant, Reliable, Timely
b. Dependent Variable: Information Quality

Table 7. Partial Test Results Coefficients [a]

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	4.567	1.059		4.314	0.000
Relevant	0.179	0.080	0.193	2.221	0.027
Reliable	-0.040	0.069	-0.052	-0.582	0.561
Timely	0.112	0.080	0.130	1.406	0.161
Complete	0.352	0.084	0.381	4.193	0.000

a. Dependent Variable: Information Quality

Table 8. Simultaneous Test Results ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	643.513	4	160.878	27.699	.000b
	Residual	1161.64	200	5.808		
	Total	1805.15	204			

a. Dependent Variable: Information Quality

b. Predictors: (Constant) Relevant, Reliable, Timely, Complete

Based on the Table 8, it is known that the simultaneous test produces a calculated F of 27.699 with a significance of 0.000 <0.05. So, it can be concluded that the relevant, reliable, timely, and complete variables simultaneously influence the quality of information.

The information spread out from the Indonesian government's Facebook, Instagram, and Twitter has shown that it is relevant because the information submitted is in accordance with what is needed and the problems faced from July to December 2021. The results of this study are in line with the results of research where relevant information has a significant effect on the quality of information. In accordance the theory explains several factors of the quality of information, including relevant, reliable, complete, timely, understandable, verifiable, and accessible. Meanwhile, information is said to be qualified if the information is relevant, accurate, timely, and complete.

Reliable variables do not significantly affect the quality of information, because the information presented does not provide reliable information. However, the results of this study are not in line with Syaifulloh (2016) which states that reliable information has a significant influence. on the quality of information. Reliable information is that the information produced must be in accordance with the facts. This shows that the more reliable the information produced, the better the quality of the information produced. This statement is in accordance with the theory of quality information.

The information submitted is not timely because there is still a delay in the information provided by the Indonesian government's social media Facebook and Twitter from July to December 2022. This research is in line with Utami (2018) who stated that timely information has no significant effect on the quality of accounting information. The timely variable has a significant influence on the quality of information. How important is the timeliness of information is necessary to maintain and improve the timeliness of information.

Complete information has a positive effect on the quality of information on social media Facebook and Twitter from July to December. It has provided complete, clear, and detailed information. Utami (2018) and Suryadharma (2017) state that the complete variable significantly affects the quality of information because the information contains important, useful, and detailed aspects. Hence, complete information will affect the quality of information because it is useful for parties in decision-making.

To enhance environmental awareness through social media campaigns can be carried out by obtaining the trust of users on social media, such as Twitter and Facebook. Trust is achieved if the quality information on social media has performed relevant, reliable, timely, and complete information. No hoax information is shared thus, information must be filtered before sharing. A recent study states that through social media, users have paid more attention to environmental awareness.

CONCLUSION

The research aims to test empirically whether relevant, reliable, timely, and complete, have an influence on the information quality. The results show that relevant and complete have a significant influence on government social media especially on Facebook, Instagram, and Twitter. While reliable and timely information does not have a significant positive effect on the quality of information on the Indonesian government's Facebook and Twitter. The finding will impact the enhancement of environmental awareness since there are many users who have consumed social media to obtain information and communication. Due to the research findings, researchers also conclude the practical implication in the last section. This research contributes to the novel findings where social media have been rapidly used to engage information not only from B2B or B2C but also from the government to society. Moreover, little is known to conduct research on the government's social media, most researchers focus on the government's website.

From the research conducted, there are four practical implications of the findings to environmental awareness: (1) Information Dissemination, as social media platform is an efficient means of sharing information and giving immediate feedback, environmental awareness can be achieved through government social media campaigns; (2) Global Reach, social media platforms transcend geographical boundaries and can reach a global audience. Thus, environmental awareness through government social media to cover a wider scope audience; (3) Corporate Accountability, since social media platforms can be accessed by anyone, it will lead to transparency and will facilitate public issues related to environmental practice; (4) Policy InfluenceSocial media platforms become important tools for public advocacy campaigns to make policy. The government can obtain input to form policies and regulations related to environmental awareness.

The practical implication can be used as policy and guidelines for the government to create and do campaigns about environmental awareness. The government can set how the information shared on social media will encourage users and youth to be more aware of the environment. For example, energy consumption, electricity waste, and many others.

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