

The Influence of Government Communication Intensity and the Role of Mass Media Regarding Net Zero Emission on Motorcyclist Media Literacy in Serang City

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Abstract – Emissions contributed by human activities have become very large, especially in terms of the use of motorized vehicles, which remain the preferred mode of transportation for Indonesian citizens, particularly those in Serang City. This research is a quantitative associative research study conducted from February to June 2024. The sampling procedure used was NonProbability which is Accidental sampling, taking 100 respondents who use motorcycles in Serang City, and collecting primary data through a questionnaire survey. Regression analysis and hypothesis testing using T-statistics and F-statistics were used to determine the research results. The research found that the results of the F test indicate that the Sig. value is 0.000, which is less than 0.05, and the calculated F value is 12.460, which is greater than 3.09. It can be stated there is a simultaneous effect between government communication intensity (X1) and the role of mass media (X2) on media literacy (Y). The Serang City government needs to actively emphasize the importance of achieving net zero emission, especially in Serang City itself. By involving the role of mass media, which has become an important source of information for daily life, media can influence public understanding and guide public opinion to participate in achieving net zero emission.

Keywords: *Communication Intensity, Mass Media Role, Media Literacy, Net Zero Emission*

1. INTRODUCTION

The year 2023 was the hottest year I have experienced during my time in Serang. This was due to extreme climate change, specifically the El Niño anomaly and the Indian Ocean Dipole (IOD) anomaly. Additionally, pollution and various emissions generated by human activities have also contributed to the rising temperatures on Earth. Backgrounded by the signing of the Paris Agreement in 2016 and encouraged Indonesia to actively contribute by enacting law number 16 of 2016 regarding the Paris Agreement on climate change. This serves as a form of Indonesia's commitment to ensuring that the amount of carbon emissions released by human activities does not exceed or at least balances the amount of emissions that can be absorbed back by the Earth and its surroundings. According to data from the Energy Institute in 2021, Indonesia ranked sixth among emitters in the energy sector with a total of 691.97 million tons of CO₂. According to Climate Transparency in 2022, the transportation sector ranked second for the largest carbon emissions contributor at 25%.

The Traffic Corps of the National Police in 2023 recorded a total of 153,400,392 units, of which 127,976,339 units are motorcycles. This number dominates the island of Java (including Banten) with a percentage of 59.7%. The city of Serang itself had 404,829 motorcycle units in 2020, but this figure has decreased by more than 50% in 2022, leaving only 192,853 units. In this era of rapid technology, even small matters can go viral and attract people's attention. This is evidenced by the usage of the WhatsApp social media application reaching 25%, followed by other social media applications. However, a significant number of people still use print media and television as news sources.

The role of mass media can serve as a platform to shape and instill certain thinking patterns in society. Quoted by Sobur (2001, p. 30), "... because media has the capacity as a means of legitimization. The media (mass) like educational, religious, artistic, and cultural institutions, are part of the state's power tools that work ideologically to influence society over the prevailing regime." This is the perfect opportunity for the mass media to voice the efforts toward net-zero emissions so

that the public can also participate in this effort; however, unfortunately, the Serang city government seems to pay insufficient more attention on the efforts toward net-zero emissions, particularly for motorcycle riders, as motorcycles are still the preferred mode of transport in Indonesia, especially in Serang City. However, despite the government's active role in disseminating information through mass media, which is abundant and continuously circulating, it does not automatically lead the public to follow government instructions if they do not recognize the importance of reading or accessing government news and information. However, it cannot be denied that the low interest or awareness among the public regarding the importance of net-zero emissions efforts may stem from the insufficient information provided by the Serang city government.

In fact, information related to this issue is often reported more by NGOs/NGOs. For instance, Greenpeace Indonesia has been actively engaging in environmental advocacy since 2007 on social media, encouraging the wider community to care for nature and encouraging the public to be concerned about the environment unfortunately, there are often negative reactions from the community toward these movements. Based on the negative comments found on Greenpeace Indonesia's posts, it indicates that media literacy among some segments of the Indonesian population is still low.

2. LITERATURE REVIEW

Government Communication Intensity

According to Devito (2009), communication intensity is defined as "the level of depth and breadth of the messages exchanged when communicating with others." Furthermore, deep communication intensity is characterized by honesty, openness, and mutual trust, which can elicit responses in the form of behaviour and actions (Gunarsa, 2004)

On the other hand, government communication is a form of human communication that occurs within the context of government organizations. The flow of message transmission and reception takes place through a network where the relationships are interdependent, governed by formal rules. The messages conveyed and received encompass not only information but also the dissemination of ideas, instructions, or feelings (Malone, 1997:170) related to government actions and policies. These communicants can be government officials within the organization and the business world, as well as the public and non-governmental organizations for external communications, and vice versa. Therefore, government communication is a crucial function for managing staff and managing people.

Well, it can be concluded that the intensity of government communication refers to the depth of information, messages, or ideas—including instructions—conveyed by the government with the intention and purpose of regulating and informing what actions need to be taken, as well as assessing the impacts that result thereafter. Aspects of Government Communication Intensity: Frequency of communication; Duration used for communication; Attention given during communication.; Regularity in communication; Level of breadth of messages communicated and the number of people involved in the communication; Level of depth of messages during communication.

Role Mass Media

Louis Althusser, as referenced in Muslim (2013) and quoted by Sobur (2001, 30), once wrote that "the media, in relation to power, occupies a strategic position, especially because the media has the ability to serve as a means of legitimacy. The media (mass media), like educational, religious, artistic, and cultural institutions, is part of the state's apparatus of power that operates ideologically to influence society under the prevailing regime (ideological state apparatus)".

Based on the potential roles it can play, the media is a significant force that cannot be underestimated. In fact, the media can be positioned as an information institution and can also be viewed as a determining factor in the process of socio-cultural and political change. Mass media plays a role in encompassing various perspectives that can influence individuals, cultures, and society as a whole.

The framing theory emphasizes that mass media not only provides information about issues but also offers an interpretative framework for understanding them. The way individuals or society comprehend an issue or event is by using various presentation techniques such as facts, emphasis, and interpretation.

In the framing model, Pan and Kosicki identify four structural dimensions: syntax, script, thematic, and rhetorical.

- 1) Syntax observes opinions and statements from events (headlines, clickbait, statements).
- 2) Script examines news reports structured in the form of a story (5W 1H).
- 3) Thematic refers to the perspective in expressing an event as a sentence that will eventually form the overall text (paragraph structure).
- 4) Rhetorical emphasizes the images or graphics of an event (data)

Media Literacy

According to Hobbs (1996), “media literacy is the process of accessing, critically analyzing media messages, and creating messages using media tools”. Referring to Hobbs' theory (1996), the researcher employs an analysis based on the individual competence framework. Individual competence is the ability of an individual to use and leverage media messages through various media. This ability is viewed through personal competence and social competence. Personal competence refers to a person's ability in using media and analyzing media content. Personal competence consists of two criteria:

- 1) Technical skill is the technical ability to use media. In other words, it means a person can operate media and understand the instructions provided within that media.
- 2) Critical understanding is the cognitive ability to use media, including the ability to comprehend, analyze, and evaluate media content.

Furthermore, social competence is the capacity of a person to communicate and build relationships through media, as well as the ability to produce media content. Social competence is defined by one criterion, which is communicative abilities: the ability of a person to establish social relations and participate in the community through media

3. METHODS

This research employs an associative quantitative approach conducted from February to June 2024. The sampling procedure uses non-probability sampling techniques, specifically Accidental sampling, involving 100 motorcycle user respondents in Serang City. With a significance level of $\alpha = 0.05$, calculated using SPSS version 25. The data collected consist of primary data obtained through a questionnaire on the intensity of communication by the Serang city government and the role of mass media in relation to the media literacy of motorcycle riders regarding net-zero emissions. Regression analysis and hypothesis testing using T-test and F-test will be conducted to determine the results of the research calculations.

4. RESULTS AND DISCUSSIONS

4.1. Results

The results of the regression analysis show that the value of Media Literacy (Y) = 15.706 (constant) + 0.033 (coefficient) Government Communication Intensity + 0.242 (coefficient) Mass Media Role. The constant value is positive at 15.706, indicating a positive relationship between the independent variables and the dependent variable. This suggests that if the independent variables, namely Government Communication Intensity (X2) and Mass Media Role (X1), have a value of 0% or do not change, the Media Literacy (Y) value will remain positive at 15.706.

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1					
	(Constant)	15.706	2.317	6.778	.000
	X1TOTAL	.033	.048	.088	.485
	X2TOTAL	.242	.078	.387	.003

a. Dependent Variable: YTOTAL

(Source: data processed by the researcher 2024)

1. The coefficient value of Government Communication Intensity is positive at 0.033. The positive sign indicates a direct influence of the independent variable on the dependent variable. This means that if the Government Communication Intensity (X) experiences an increase of 1, then Media Literacy (Y) will experience an increase of 0.033.
2. The coefficient value for the Role of Mass Media is positive at 0.242. The positive sign indicates a direct relationship between the independent variable and the dependent variable. This means that if the Role of Mass Media (X) increases by 1, then Media Literacy (Y) will increase by 0.242.

T-calculated

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1	(Constant)	15.706	2.317	6.778	.000
	X1TOTAL	.033	.048	.702	.485
	X2TOTAL	.242	.078	3.088	.003

a. Dependent Variable: YTOTAL

(Source: data processed by the researcher 2024)

The results of the hypothesis analysis using the t-test and F-test are as follows:

- a. T-calculated: The significance value for the influence of variable X1 on variable Y is $0.485 > 0.05$ and the t-calculated value is $0.702 < t\text{-table } 1.984$, thus it can be concluded that H_0 is accepted and H_1 is rejected, which means that the variable X1 (Government Communication Intensity) has no significant effect on variable Y (Media Literacy).
- b. The significance value for the influence of X2 on Y is $0.003 < 0.05$ and the t-calculated value is $3.088 > 1.984$, thus it can be concluded that H_0 is rejected and H_2 is accepted, which means that the variable X2 (Mass Media Role) has a significant effect on variable Y (Media Literacy) in a partial manner.

F-calculated

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	174.294	2	87.147	12.460	.000 ^b
	Residual	678.456	97	6.994		
	Total	852.750	99			

a. Dependent Variable: YTOTAL

b. Predictors: (Constant), X2TOTAL, X1TOTAL

(Source: data processed by the researcher 2024)

From the results of the F test above, it was obtained that the significance value for the simultaneous or combined influence of X1 and X2 on Y is $0.000 < 0.05$ and the F-calculated value is $12.460 > F\text{-table } 3.09$. Therefore, it can be concluded that H_0 is rejected or H_a is accepted, which means that there is a positive and significant relationship simultaneously or in combination between variable X1 and variable X2 on Y.

4.2. Discussions

Government Communication Intensity and Media Literacy

The analysis of the government communication intensity variable yielded a t-calculated value of $0.702 < t\text{-table } 1.984$ and a significance probability of $0.485 > 0.05$. Thus, it can be concluded that Government Communication Intensity (X1) does not have a significant effect on Media Literacy (Y) when considered separately. This means that the frequency of communication conducted by the government does not affect media literacy. The coefficient of Government Communication Intensity

is a positive value of 0.033. The positive sign indicates a one-way impact between the independent variable and the dependent variable. This means that if Government Communication Intensity (X) increases by 1, Media Literacy (Y) will increase by 0.033. However, in reality, there is no correlation with the media literacy of the public.

Role of Mass Media on Media Literacy

The analysis of the role of mass media variable showed a t-calculated value of $3.088 > t\text{-table } 1.984$ and a significance probability of $0.003 < 0.05$. Therefore, it can be concluded that the Role of Mass Media (X2) has a significant effect on Media Literacy (Y) when considered separately. This indicates that the role of mass media indeed influences media literacy, supporting the framing theory by Pan & Kosicki. In particular, it affects the thematic structure and rhetorical structure, which influences understanding and media literacy among the public.

Government Communication Intensity and the Role of Mass Media on Media Literacy

The intensity of government communication and the role of mass media both significantly influence the media literacy of motorcycle riders in the city of Serang. This aligns with the results from the F test analysis, which revealed a significance value of $0.000 < 0.05$ and an F-calculated value of $12.460 > 3.09$. Therefore, it can be concluded that the hypothesis is accepted. This means that there is an influence of Government Communication Intensity (X1) and the Role of Mass Media (X2) on Media Literacy (Y). In other words, the higher the intensity of government communication and the role of mass media, the greater the increase in media literacy. The intensity of government communication in the city of Serang and the role of mass media, together, can influence the media literacy of the citizens of Serang, thereby helping to achieve the goal of reaching net zero emissions.

5. CONCLUSION

Based on the resource, It can be concluded that there is a significant influence between variable X1 (Government Communication Intensity) and X2 (Role of Mass Media) on variable Y (Media Literacy). This means that the intensity of government communication and the role of mass media affect the enhancement of media literacy among motorcycle riders in the city of Serang concerning Net Zero Emission. In other words, the media literacy of motorcycle riders will improve more if the intensity of government communication and the role of mass media are increased.

SUGGESTIONS

1. The government of the city of Serang should actively promote the importance of achieving net zero emissions, particularly within Serang itself. This should involve the role of mass media, which has become a crucial source of information for the public. By engaging mass media, it can help influence understanding and shape public opinion to participate in the achievement of net zero emissions.
2. The government of the city of Serang should actively promote the importance of achieving net zero emissions, particularly within Serang itself. It is essential to involve the role of mass media, which has become an important source of information for the community. By leveraging mass media, the government can help influence understanding and shape public opinion to encourage participation in the achievement of net zero emissions.

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