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ANALYSIS OF THE EFFECTIVENESS OF ONLINE ADVERTISING ON THE LEVEL OF BRAND AWARENESS AT PT TOKOPEDIA INDONESIA (Case Study on PT Tokopedia Users at DKJ Jakarta)

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ABSTRACT

Indonesia has experienced rapid growth in the e-commerce sector in recent years, there have been significant changes in increasing internet penetration, the growth of the middle class, and changes in consumer behavior that increasingly rely on online transactions. This study aims to determine the effect of the effectiveness of online advertising on the level of brand awareness at PT Tokopedia Indonesia for users in DKJ Jakarta. The method used in this research is quantitative method with a sample of 100 Tokopedia users using non-probability sampling technique. This study uses a google form in the form of a questionnaire distributed via social media, researchers apply a cross-sectional design to observe and analyze data from a population or sample at a certain point in time used, namely The result of the research is that online advertising is very effective in increasing Tokopedia brand awareness. The more often someone sees Tokopedia advertisements, the more likely they are to remember the brand. Demographic characteristics affect the level of brand awareness. Young users, women, and those with higher education tend to be more familiar with the Tokopedia brand. Repetition of advertising messages (frequency of viewing) is very important. The more often someone sees an ad, the stronger their memory of the brand.

Keywords: *Effectiveness, Online Advertising, Brand Awareness*

INTRODUCTION

Indonesia has experienced rapid growth in the *e-commerce* sector over the past few years, with significant changes in internet penetration, the growth of the middle class, and changes in consumer behavior that increasingly rely on online transactions. This is reflected in the economy SEA 2021 report which shows that Indonesia has succeeded in becoming the largest online trading center in Southeast Asia[1]. This rapid growth has given birth to various *e-commerce* platforms, one of which is Tokopedia

[1] Bain & Company. (October 13, 2024). *E-Conomy SEA 2021*. Retrieved from https://economysea.withgoogle.com/intl/id_id/home/

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which has successfully positioned itself as one of the major players in the domestic market.

Tokopedia, as one of the e-commerce pioneers in Indonesia, has successfully positioned itself as a market leader. This platform not only provides a place for MSMEs to sell their products, but has also become an inevitable part of the transformation of Indonesian people's lives[2]. To maintain its position and continue to grow, Tokopedia consistently carries out various marketing efforts, one of which is through online advertising. Utilizing various digital platforms, Tokopedia effectively reaches a wide and diverse target audience. Starting from attractive video ads on Youtube to beautiful banner ads on various websites and applications.

Tokopedia continues to innovate in presenting relevant and interesting marketing messages. In addition, Tokopedia is also active in utilizing social media as a means to interact directly with consumers, build *brand awareness,* and encourage engagement. Through creative and interesting campaigns, Tokopedia has succeeded in creating a strong emotional bond with its consumers. Thus Tokopedia is not just an online buying and selling platform but also a part of Indonesian culture. Online advertising has become one of the most effective marketing tools in the digital era. By leveraging various digital platforms, companies can target very specific audiences, measure campaign effectiveness in real-time, and optimize marketing budgets. For Tokopedia, online advertising becomes an important means to through effective marketing campaigns, we can increase brand awareness and build a strong reputation, and drive business growth.

A strong brand is a very valuable asset for a company. A strong brand can create customer loyalty, differentiate products or services from competitors, and increase the competitiveness of the company. In the context of increasingly fierce business competition, building and maintaining brand awareness is becoming increasingly important.

Although Tokopedia has made various marketing efforts through online advertising, it is still necessary to conduct regular evaluations to measure the effectiveness of the campaigns that have been carried out. This study aims to determine the relationship between the level of Tokopedia brand awareness and user purchasing

[2] PT Tokopedia. (December 1, 2023). *Sejarah PT Tokopedia*. Retrieved from https://www.tokopedia.com

behavior, in addition to knowing the difference in the level of Tokopedia brand awareness between different demographic groups (Age, Gender, and Education Level) after being exposed to online advertisements, as well as knowing the effect of the frequency of online ad views on memory in Tokopedia users.

RESEARCH METHODS

This study wants to determine the extent of the influence of online advertising on brand awareness in Tokopedia application users. This study analyzes data collected at a certain time using quantitative methods, data regarding this frequency can view online advertisements and the level of brand awareness collected through an online questionnaire with the help of *google form.* Data analysis will be carried out to identify the problem formulations that have been expressed in the background with the following conceptual framework :

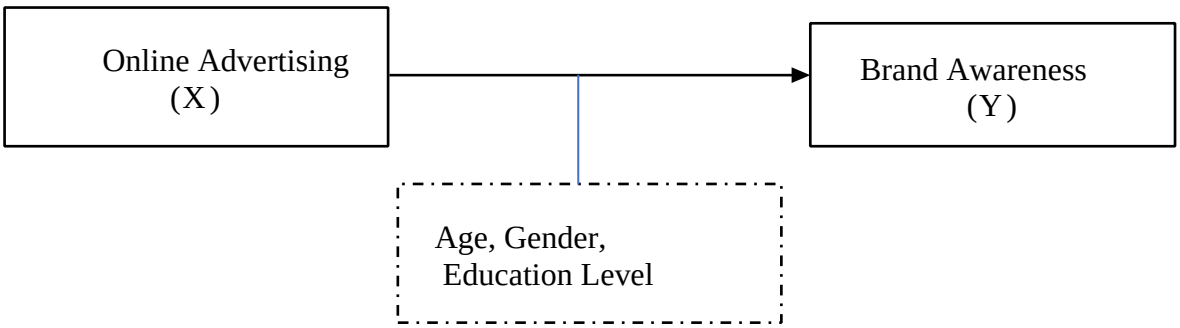

Figure 1 Conceptual Framework

In this study, researchers applied a *cross-sectional* design to observe and analyze data from a population or sample at one specific point in time, so as to provide an accurate picture of the current conditions[3]. In addition, this research is designed by collecting from respondents using *google forms* or questionnaires distributed through social media. The population in the research to be carried out is loyal users of the Tokopedia application with 125 million in Indonesia[4]. Based on data collected from bisnis.com in 2024, 30% - 40% of Tokopedia application users are residents of DKI Jakarta. Thus, it can be assumed that the population of Tokopedia application users in Jakarta is 50 million users. The sample used in this study was 100 respondents with calculations carried out using *non-probability sampling* techniques because the

[3] Sugiyono. *Metode Penelitian Kuantitatif dan R&D.* Bandung: Alfabeta, 2008.

[4] Ahdiat, A. (September 25, 2024,). *Jumlah pengguna Tokopedia tahun 2024 di Indonesia*. Retrieved from https://databoks.katadata.co.id/

population was too large so the slovin formula was used to determine the sample. The following is the slovin formula:

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

where:
n = Sample size
N = Population size
e = Margin of error

Using the above formula, we can determine that the ideal sample size is

$$\boldsymbol{n} = \frac{50.000.000}{1 + (50.000.000 \times 0{,}10^2)} = 99{,}9 \approx 100$$

From the calculation using the Slovin formula with a margin of error tolerance of 10%, a sample of 100 respondents was obtained in this study (Sugiyono, 2008). The answers of the 100 respondents will be analyzed using a Likert scale, which is a scale to make it easier for respondents to answer each question item, and in this study there are five Likert scales, namely:

Scale	**Value**
(SS) strongly agree	5
(S) Agree	4
(N) Neutral	3
(TS) Disagree	2
(STS) Strongly Disagree	1

Table 1 Likert Scale

In the data analysis technique, the first step that will be taken is the validity test as a measuring tool for the validity and invalidity of each item answered by the respondent with the following validity instrument assessment:

r-count > r-table	Valid
r-count < r-table	Invalid

Table 2 Instrument Validity Assessment

Furthermore, a reliability test is carried out to determine the reliability of a questionnaire, and in this case it will use SPSS (*Statistical Product and Service Solution*) *software* version 25.0. The data is said to be reliable if the answers of each respondent are reliable or feasible for each part of the statement, following the Cronbach Alpha coefficient assessment table:

$$\alpha > 0{,}7 \textbf{ Reliable} \qquad \alpha < 0{,}7 \textbf{ Not Reliable}$$

Table 3 Reliability Assessment

Next, a normality test can be carried out which can then be carried out a simple linear regression test to determine or predict the independent variable X with the dependent variable Y.. With bivariate analysis techniques with simple linear regression models:

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

Where:

Y: Brand Awareness
α: Constant
β: Coefficient of Variable X
X: Online Advertising

Furthermore, a correlation test can be carried out using a simple correlation test, namely

Pearson Product Moment is:

$$r = \frac{n(\sum XY) - \sum X \sum Y}{\sqrt{[n\sum X^2 - (\sum X)^2][n\sum Y^2 - (\sum Y)^2]}}$$

In decision making, it is expected that the value of r is not more than the price, namely -1<r<+1. If the value of r = 1 means that the correlation will be perfectly negative, if r = 0 then there is no correlation, and if r = 1 means a strong correlation or relationship.

RESULTS AND DISCUSSION

Descriptive Analysis

Tokopedia users in Jakarta DKJ who are the object of this research involving 100 samples who are active Tokopedia users with the criteria that at least twice a week open the Tokopedia application. The questionnaire was distributed randomly via social media to collect the required data. Based on the survey results through social media, the

following are the characteristics of respondents based on the frequency of use of the Tokopedia application, age, gender, and education level.

Application Usage	Frequency	Percentage
2 times	39	39%
More than 2 times	61	61%

Table 4 Frequency of Tokopedia Application Users in a week

From table 1 above, it can be explained that in using the Tokopedia application per week, 39 respondents use the application twice a week and 61 respondents use the application more than twice a week so it can be concluded that 61% of Tokopedia Application users open the application more than twice a week.

Furthermore, the characteristics of respondents based on age are as follows:

Age	Frequency	Percentage
15 - 20 years	26	26%
21 - 25 years	29	29%
26 - 30 years	18	18%
31 years and above	27	27%

Table 5 Characteristics of Respondents Based on Age

Based on Table 2, the characteristics of respondents based on age, namely 29% are 21-25 years old, 27% are over 31 years old, 26% are 15-20 years old and 18% are 26-30 years old. So it can be concluded that based on age, of the 100 respondents 29% are aged 21-25 years which is a productive age for using social media and or using *marketplace* applications, one of which is Tokopedia. Furthermore, characteristics based on gender, namely:

Age	Frequency	Percentage
Male	45	45%
Female	55	55%

Table 6 Characteristics Based on Gender

From Table 6 above, it can be explained that the number of men and women out of 100 respondents is 45 for men and 55 for women, it can be concluded that in this study there are more respondents with female gender and if a comparison is made, then 9: 11 for characteristics based on gender in this study.

Furthermore, the characteristics based on the level of education of the respondents are:

Age	Frequency	Percentage
HIGH SCHOOL	48	48%
Bachelor	48	48%
Master	4	4%

Table 7 Characteristics based on education level

Based on Table 4, it can be concluded that the education level of 100 respondents, namely 4% are Masters graduates, 48% are high school graduates, and 48% are also Bachelor graduates. So it can be concluded that out of 100 respondents 96 people are high school and undergraduate graduates.

Validity, Reliability, Normality Test

In this study, there are 5 statement items from variable X, namely online advertising and 5 statements from variable Y, namely brand awareness and based on the results of calculations using the SPSS Version 25.0 application, it can be explained in the following table:

Variables	Item Statement	Pearson Correlation	R-*table*	Description
Online Advertising (X)	X1	0,669	0,164	Valid
	X2	0,829		
	X3	0,718		
	X4	0,749		
	X5	0,645		
Awareness Brand (Y)	Y1	0,702		
	Y2	0,800		
	Y3	0,661		
	Y4	0,596		
	Y5	0,680		

Table 8 Validity Test

Based on Table 8 above, it can be explained that if the *Pearson Correlation* value is greater than the R-Table, it can be concluded that the data is valid and can be used for the next test, namely the reliability test, the following are the reliability test results

Variables	Item Statement	*Cronbach's Alpha*	Measure Value	Description
Online Advertising (X)	X1	0,831	0,60	Worth
	X2	0,813		
	X3	0,821		
	X4	0,822		
	X5	0,831		

Awareness Brand (Y)	Y1	0,842		
	Y2	0,822		
	Y3	0,812		
	Y4	0,823		
	Y5	0,842		

Table 9 Reliability/Feasibility Test Results

From Table 9 above, it can be explained that each statement item is feasible / reliable because the *Cronbach's Alpha* value is greater than the measuring value of 0.60 so that it can be used for the next test, namely the normality test. The following are the results of the normality test from the analysis using SPSS 25 with the *One-Sample Kolmogorov Smirnov Test,* it can be seen that the Sig (2-tailed) value is 0.200 and this value is more than 0.05 so that through the *One-Sample Kolmogorov Smirnov Test test*, the data used can be concluded to be normal and can be continued for further testing.

Simple Regression Test

Based on the calculations that have been carried out on SPSS 25, there are the results of the coefficient of the simple linear regression equation contained in table 8 below:

Model	**Under Standardized Coefficients**		**Standardized Coefficient**		
	B	**Std. Eror**	**Beta**	**t**	**sig.**
Constant	4,968	1,392		3,570	0,000
Online Advertising	0,708	0,077	0,680	9,173	0,000

Table 10 Coefficient of Simple Linear Regression Equation

From the table above, the simple linear regression equation is as follows:

$$Y = 4.968 + 0.708\ X$$

It can be seen that the equation above can be explained that the online advertising coefficient gets a value of 0.708 which means that if the brand awareness of the Tokopedia Indonesia application is getting higher, it will be directly proportional or PT Tokopedia's online advertising will continue to increase from various factors so that every value of online advertising increases by 1 then automatically the brand awareness of PT Tokopedia Indonesia also increases, researchers calculate the dimensional

correlation between the independent variable and the dependent variable. The calculation results are shown in table 11 and table 12 below:

Model	SS	df	MS	F
Regression	562,202	1	562,202	84,143
Residuals	654,788	98	6,682	
Total	1216,990	99		

Table 11 Correlation/Relationship Test of Online Advertising and Awareness

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0,680	0,462	0,456	2,585

Table 12 Model Summary

Based on Table 9, it can be seen that the calculated F value obtained is 84.143 with the F table value is 3.972, so that F count is greater than F table or 84.143> 3.972 which means that there is a significant positive influence between online advertising and the level of brand awareness of Tokopedia application users. Furthermore, in table 10 it can be shown that how much influence between the two variables, from the table it known that online advertising has an influence on brand awareness of 46.2% and the remaining 53.8% is influenced by other factors outside of online advertising.

Based on calculations carried out using SPSS 25.0 with paired samples t-test analysis, it is found that the t value in Table 9 is 3.570 with the t table (0.05; 98) which is 1.984 so that t count> t table or 3.570> 1.984 and it can be concluded that there is a significant positive effect between online advertising has an influence on the brand awareness of PT Tokopedia Indonesia users.

There are three core discussions, namely the relationship between the level of Tokopedia brand awareness and user purchasing behavior, in addition to differences in the level of Tokopedia brand awareness between different demographic groups (Age, Gender, and Education Level) after being exposed to online advertisements, and knowing the effect of the frequency of online ad views on memory in Tokopedia users.

Relationship between Brand Awareness and Purchasing Behavior

Based on the results of the analysis conducted, there is strong evidence of a positive and significant effect of online advertising on the level of brand awareness of Tokopedia application users. The calculated F value which is much greater than the F table indicates that the regression model used can significantly explain the variation in the level of brand awareness. In addition, the coefficient of determination (R-squared) value of 46.2% indicates that about 46.2% of the total variation in the level of brand awareness can be explained by the online advertising variable. This finding is in line with marketing theory which states that exposure to advertising is one of the important factors in building brand awareness.

Differences in Brand Awareness between Demographic Groups

Based on the data presented, there is a fairly even distribution in the demographic characteristics of respondents, such as age, gender, and education level. This indicates that the sample used in this study is representative enough to describe Tokopedia users in DKI Jakarta. Most of the respondents are between 21-25 years old, which is a productive age group and often the main target of digital markets. This shows that Tokopedia has successfully attracted young users. The percentage of female respondents is slightly higher than that of males. This indicates that Tokopedia is also quite popular among women, who may have different online shopping preferences compared to men. Most of the respondents have a high school or bachelor's degree. This indicates that Tokopedia users have a fairly high level of education, which is in line with the characteristics of e-commerce users in general.

Implications to brand awareness from demographics (age, education level, and gender) with regression analysis data can be concluded that younger users (15-25 years old) may have a higher level of brand awareness due to more frequent exposure to social media and online advertising. Differences in product preferences and shopping behavior between men and women may affect their level of brand awareness of Tokopedia. Users with higher education levels tend to be more critical in choosing products and services, so they may have a higher level of brand awareness and be more selective in choosing *e-commerce* platforms.

Effect of Online Ad Serving Frequency

Based on the analysis that has been carried out regarding the effect of the frequency of online ad views on memory in Tokopedia users. Based on the results of the

regression analysis, strong empirical evidence is found regarding the positive effect of the frequency of online ad views on Tokopedia brand memory in users. The more often users are exposed to Tokopedia online advertisements, the higher their level of memory of the brand. This suggests that repeated exposure to advertisements can increase brand awareness and information retention in consumers' memories. This finding is in line with learning theory which states that repetition of information can strengthen memories. In other words, the more often a person sees or hears an information, the more likely it is that the information will be remembered.

CONCLUSIONS

Based on the analysis that has been done, it can be concluded that: Online advertising has a significant influence on the level of Tokopedia brand awareness. The more often users are exposed to advertisements, the higher their awareness of the brand. This shows that online advertising is an effective tool for building brand awareness. The demographic characteristics of Tokopedia users affect the level of brand awareness. Users who are younger, female, and have a higher level of education tend to have a higher level of brand awareness of Tokopedia. This indicates that Tokopedia needs to develop more specific marketing strategies for each demographic segment. The frequency of online ad views also has a significant effect on Tokopedia's brand recall. The more often users see ads, the better they remember the brand. This suggests that repetition of advertising messages is an effective strategy to improve information retention in consumers' memories. In this study there are still shortcomings so it is recommended that further researchers can continue research with a wider sample of Tokopedia users, for example with a population of Tokopedia users on the island of Java and the sample can be calculated using a sampling method that is suitable in a large population. In addition, it can also develop factors that affect brand equity with a case study on Tokopedia employees, then for the interview technique used, it can use or be further developed with a direct field survey if the sample used is not too large to be able to observe the conditions around so that more detailed information and data will be obtained and can reduce data that may be subjective.

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