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THE INFLUENCE OF GREEN MARKETING AND GREEN ADVERTISING ON GREEN BRAND IMAGE AND PURCHASE INTENTION OF ELECTRIC CARS IN INDONESIA

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ABSTRACT : The study aimed at testing the effect of green marketing and green advertising on green brand image and purchase intention. The type of research used is causal associative research with a quantitative approach. The data collection method used a sample survey method. The number of respondents in the study was one hundred respondents and the sampling technique used in this study used convenience sampling. The analysis tool used is Path Analysis using SmartPLS. The results of the analysis show that: First, the better the green marketing, the better the Green Brand Image created by Electric Cars. Second, the better the Green Marketing, it does not affect the level of purchase intention of electric cars. Third, the better the green advertising, the better the Green Brand Image created by electric cars. Fourth, the better the influence of Green Advertising, it does not affect the level of Purchase Intention of electric cars. fifth, the better the influence of the Green Brand Image, the higher the level of Purchase Intention for electric cars.

KEYWORDS : Green Marketing, Green Advertising, Green Brand Image, Purchase Intention

I.   INTRODUCTION

Environmental sustainability is crucial in the modern economy, and green marketing, which focuses on sustainable production and consumption, has become a necessity in modern business strategies. Green marketing is an essential element in the principle of sustainable living, and it is a key factor in global climate change efforts.

The increasing use of fossil fuels has led to a significant increase in global carbon emissions, with transportation contributing significantly to global energy consumption. To combat climate change and develop sustainable energy sources, global communities must transition from fossil fuels to renewable energy sources and adopt alternative energy sources.

Indonesia is aiming to become a global leader in sustainable mobility, with the government implementing lithium battery production as a key component of sustainable mobility. The development of sustainable mobility is an innovative modern era, and the development of sustainable mobility is a key focus for countries like Europe, China, and the United States.

In conclusion, Sustainable development is essential for the future of the environment and human health. According to [1], green marketing is a company management strategy to market its products while still paying attention to environmental sustainability and green advertising is used as a medium to promote products from green advertising. If the green advertising strategy is communicated properly and appropriately, this will help entrepreneurs easily stimulate environmentally friendly brands in the minds of consumers, forming awareness of environmentally friendly products, without causing negative consequences for individuals and the environment.

Although there are several literature reviews on factors that influence consumer intentions ([2], [3], and [4])none have adopted the methodology used in this study. This study complements the previous literature because it analyzes the antecedents of intention to purchase electric vehicles based on three main categories, namely green marketing, green advertising mediated by green brand image.It is suspected that there are many factors that influence consumer purchasing intentions for a product, but to cover the gaps in previous research, this research will focus only on the variables of Green Marketing, Green Advertising which will be mediated by Green Brand Image. Based on the existing research gap, this is taken into consideration to conduct research with

the title "The Effect of Green Marketing and Green Advertising on Green Brand Image and Purchase intention of Electric Cars in Indonesia".

## II.	LITERATURE REVIEW

### 2.1	Purchase Intention

According to [5]purchase intention is consumer behavior that appears in response to objects that show the customer's desire to buy. Purchase intention is a purchase preference in an initial process that involves feelings that arise after receiving a stimulus or stimulus from the product or service they see, then this stimulus causes a feeling of excitement and a desire to have so that it makes them interested in buying products and services within a certain period of timeadopting from the opinion of [6] ;[7]in [8], the indicators used are as follows:

1.	Planning to buy an electric car soon.
2.	Intend to drive an electric car
3.	Strive to be able to drive an electric car
4.	Recommend others to buy an electric car when they plan to buy a car.

### 2.2	Green Marketing

[9]define green marketing as "All activities designed to generate and facilitate any exchange intended to satisfy human needs or wants, such that the satisfaction of these needs and wants occurs, with minimal detrimental impact on the natural environment".The green marketing indicators used in this study are 4P's of green marketing mix (green products, green prices, green place/distribution and green promotion).

### 2.3	Green Advertising

Wu and Choo in [10] argue that green advertising is an advertisement for a product or brand that claims about the environment, where there are several variations such as simple claims to environmental friendliness starting from the production process, product, and product.
Green Advertising indicators used in this study are [11] :
1.	Green advertising is valuable to society
2.	Green advertising leads people to be more socially responsible.
3.	Green advertising shows consumers that the company is addressing consumer concerns about environmental issues.
4.	Green advertising can strengthen the company's image.

### 2.4	Green Brand Image

According to [12] defines green brand image as the perception that arises in the minds of consumers of certain brands that are committed and care about environmental sustainability. the indicators in this study are:
1.	Credibility in maintaining a good commitment to the environment.
2.	Good brand reputation for the environment
3.	Brand success in protecting the environment
4.	Brand concern for the environment
5.	The promise that the brand has can be trusted in preserving the environment

## III.	METHODS

### 3.1	Data Analysis Procedure

The data analysis used in this study is as follows:
### 3.1.1	Descriptive Analysis
#### 1	Overview of Respondents

Table 1 Respondent Distribution

No	Gender	Frequency	Percentage (%)
1.	Laki-Laki	47	47%
2.	Perempuan	53	53%
Jumlah		**100**	**100%**
No	**Age**	**Frequency**	**Percentage (%)**
1	17-30	79	79%
2	26-34	1	1%
3	31-40	10	10%
4	41-50	9	9%
5	>50	1	1%
Jumlah		**100**	**100%**

No	Domicile	Frequency	Percentage (%)
1	Jawa	14	14%
2	Sumatera	3	3%
3	Kalimantan	0	0%
4	Sulawesi	1	1%
5	Papua	0	0%
6	Bali & Nusa Tenggara	82	82%
Jumlah		**100**	**100%**
No	Work	Frequency	Percentage (%)
1	Mahasiswa/Mahasiswi	33	33%
2	Tenaga Pengajar (Guru/Dosen)	1	1%
3	PNS (Pegawai Negeri Sipil)	15	15%
4	Pengusaha	6	6%
5	TNI/Polri	1	1%
6	Karyawan Swasta	27	27%
7	Lainnya	17	17%
Jumlah		**100**	**100%**
No	Monthly Income	Frequency	Percentage (%)
1	1.000.000-4.900.000	56	56%
2	5.000.000-9.900.000	23	23%
3	10.000.000-14.900.000	8	8%
4	15.000.000-19.900.000	9	9%
5	>20.000.000	4	4%
Jumlah		**100**	**100%**
No	Latest Education	Frequency	Percentage (%)
1	SMA/Sederajat	54	54%
2	D3/S1	39	39%
3	S2/S3	7	7%
Jumlah		**100**	**100%**

3.1.2 Instrument Testing

Reliability test is used to measure the consistency or fixity of the entire research questionnaire. Reliability can be measured using the Cronbach Alpha's statistical test. A variable is said to be reliable if it has an α value> 0.5% [13]. The higher the Cronbach Alpha value, the better the reliability level. The reliability test was carried out with the help of SPSS For Windows.

Table2Reliability Test Results

Variable	N	Cronbanch Alpha	Composite Reliability	Rule of Thumb	Description
Green Marketing	10	0,844	0.943	> 0,70	**Reliable**
Green Advertising	4	0,896	0.907		**Reliable**
Green Brand Image	5	0,942	0.880		**Reliable**
Purchase Intention	4	0,937	0.944		**Reliabel**

3.2 Data Analysis Techniques and Hypothesis Testing
### 3.2.1 Measurement Model (Outer Model Evaluation)

In order to test the items used and to get answers to the expected conditions, a validity test is required. Convergent validity of the measurement model with reflective indicators is assessed based on the correlation between item score and construct score calculated using PLS. Discriminant validity in the structural equation model equation is an indicator reflective measurement model which is assessed based on the Fornell-Larcker criteria, checking the cross-loading value and the Average Variance Extracted (AVE) value.Reliability is basically the extent to which the results of a measurement can be trusted. If the results of repeated measurements

produce relatively the same results, the measurement is considered to have a good level of reliability. Indicator reliability and internal consistency are reliability tests. Indicator reliability is tested using composite reliability, which is a block of indicators that measure a construct based on internal consistency [14].

1. Convergent Validity

Convergent validity of the indicator reflexive measurement model is assessed based on the correlation between item score/component score and construct score calculated by PLS. An individual reflexive measure is said to be high if it correlates more than 0.70 with the construct to be measured. However, for research in the early stages of developing a measurement scale, a loading factor value of 0.50 to 0.60 is considered sufficient [15]. From the results of the first test output, it was obtained that the indicator of the individual performance construct with a loading whose value was negative, namely Y3 and the indicator of the Incentive construct with a loading whose value was below 0.50-0.60, namely GRM4 so that this indicator was not included because it was invalid. Then the model will be updated again and the results are as below.

Figure1PLS Alghorithm Stage 2 Result Display
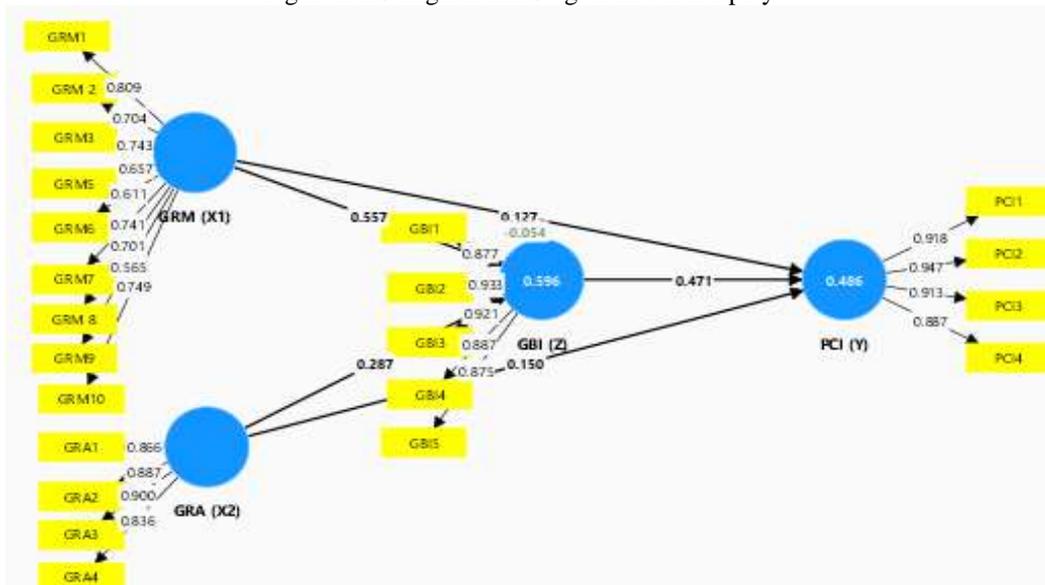
The loading factor value after the GRM4 variable indicator is eliminated can be shown in the following table:

Table 3Outer Loading II Indicator Validity for variables X1, X2, Y, Z

NO	Green Marketing (X1)	Outer Loading
1	Electric Cars use environmentally friendly energy and resources	0,809
2	Electric Cars pose less danger to health	0,704
3	The level of environmental damage caused by Electric Car products is less.	0,742
5	I am willing to pay more for environmentally friendly products because they are worth the quality.	0,657
6	Electric Cars already have many refueling access points that can reduce environmental damage.	0,611
7	Distribution channels of electric cars can reduce impacts such as pollution and excessive energy.	0,741

8	I know that electric cars promote environmentally friendly products through digital marketing.	0,701
9	I know the environmental messages that electric cars convey in every promotion.	0,565
10	Electric cars always campaign for environmental love and care about social problems.	0,749
NO	**Green Advertising (X2)**	**Outer Loading**
1	Green advertising is valuable to society	0,866
2	Green advertising leads people to be more socially responsible.	0,888
3	Green advertising shows consumers that the company is addressing consumer concerns about environmental issues.	0,9
4	Green advertising can strengthen the company's image	0,836
NO	**Green Brand Image (Z)**	**Outer Loading**
1	Electric Cars have credibility in maintaining a high commitment to the environment	0,88
2	Electric cars have a good brand reputation for environmental sustainability	0,933
3	Electric Cars successfully have environmentally friendly brand performance	0,918
4	Electric Cars are well known for their brand image that cares about the environment	0,885
5	The promise that electric cars have can be trusted with a brand image in preserving the environment	0,875
NO	**Purchase Intention (Y)**	**Outer Loading**
1	If given the opportunity, I intend to buy an electric car	0,919
2	Jika saya mengganti kendaraan saya, saya berniat menggunakan mobil listrik	0,946
3	If I change my vehicle, I intend to use an electric car If given the opportunity, I estimate I should buy an electric car in the future	0,913
4	I will most likely recommend other people to buy an electric car when they plan to buy a car.	0,888

2. **Discriminant Validity**

The results of the discriminant validity analysis can be seen in the cross loading in the SmartPLS output in Table 4 Cross Loading Results.

Table4Cross Loading Results.

	GBI (Z)	GRA (X2)	GRM(X1)	PCI (Y)
GBI1	0.877	0.581	0.754	0.581
GBI2	0.933	0.571	0.684	0.640
GBI3	0.921	0.576	0.659	0.661
GBI4	0.887	0.533	0.582	0.537
GBI5	0.875	0.616	0.632	0.602
GRA1	0.492	0.866	0.551	0.360
GRA2	0.512	0.887	0.529	0.403
GRA3	0.600	0.900	0.653	0.562
GRA4	0.606	0.836	0.470	0.503
PCI1	0.518	0.437	0.473	0.918
PCI2	0.682	0.510	0.567	0.947
PCI3	0.585	0.515	0.479	0.913
PCI4	0.662	0.492	0.617	0.887
GRM1	0.670	0.443	0.809	0.507
GRM2	0.557	0.413	0.704	0.375
GRM3	0.600	0.900	0.653	0.562
GRM5	0.606	0.836	0.470	0.503
GRM6	0.381	0.287	0.657	0.411
GRM7	0.398	0.416	0.611	0.379
GRM8	0.564	0.382	0.741	0.423
GRM9	0.481	0.489	0.701	0.454
GRM10	0.365	0.538	0.565	0.341

From the table above, it can be seen that the correlation between indicators and their variables / constructs is higher than the correlation of indicators with other constructs, this shows that the latent construct predicts the indicators in its block better than the indicators in other blocks. This result is reinforced by the latent variable correlations output value according to table 5 below:

Table5 Output Latent Variable

	GBI (Z)	GRA (X2)	GRM (X1)	PCI (Y)
GBI (Z)	1.000	0.641	0.739	0.674
GRA (X2)	0.641	1.000	0.634	0.535
GRM (X1)	0.739	0.634	1.000	0.588
PCI (Y)	0.674	0.535	0.588	1.000

Another method for assessing discriminant validity is by comparing the square root of the AVE of each construct with other constructs in the model. The results of this AVE root show the results of the Forrnel-larcker criterium output according to table 6 below.

Table 6 Forrnel-larcker criterium results

	GBI (Z)	GRA (X2)	GRM (X1)	PCI (Y)
GBI (Z)	0.899			
GRA (X2)	0.641	0.873		
GRM (X1)	0.739	0.634	0.701	
PCI (Y)	0.674	0.535	0.588	0.917

Specifically, the square root of each construct's AVE should be above the highest correlation with the other constructs. Another approach to evaluating the results of the Fornell-Larcker criterion is to determine whether the AVE is greater than the squared correlation with other constructs. Thus, when viewed from the table, all variables have met the rule of thumb of the required Fornell Larcker Criterion value [16].
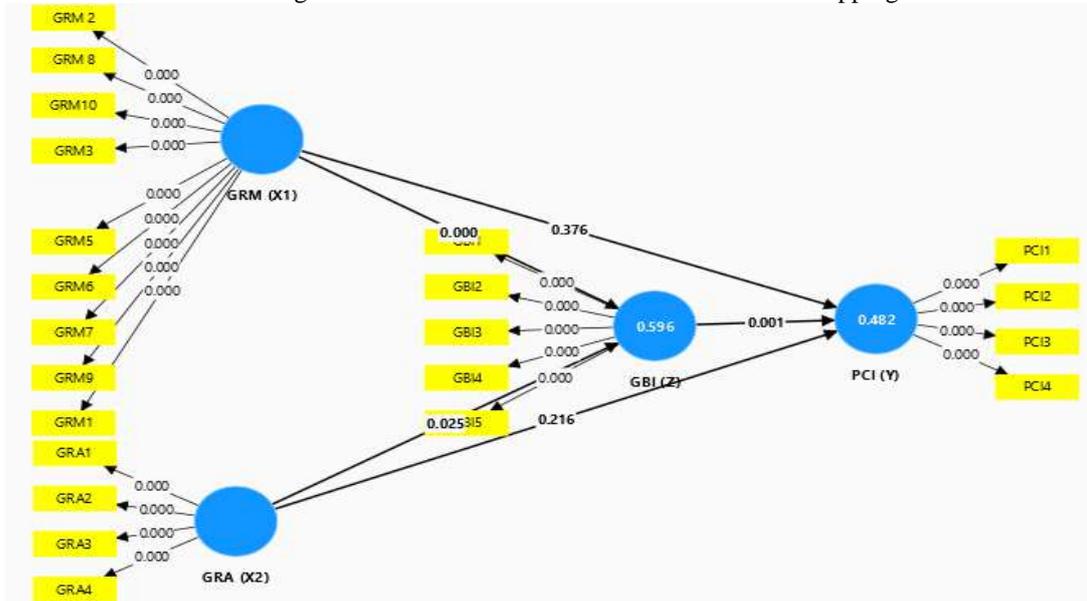
IV.   RESULTS

4.3 **Structural Model / Inner Model**

The inner model can be evaluated by looking at the r-square (indicator reliability) for the dependent construct and the t-statistic value of the path coefficient test. The higher the r-square value, the better the prediction model of the proposed research model.

4.3.1 Comparison of Direct and Indirect Effects Between Variables

Figure 2 Path Coefficient Model with PLS Boothstrapping

4.3.2 Hypothesis Test

Table 7 Results of Path Coefficients

Influence between Variables	t Statistik	Weight Significance	P Values	Sig 5%	Description
Green Marketing to Green Brand Image	4,959	>1,96	0,000	<0,05	Sig
Green Marketing to Purchase Intention	0,905	<1,96	0,366	>0,05	Not Significant
Green Advertising to Green Brand Image	2,283	>1,96	0,023	<0,05	Sig
Green Advertising to Purchase Intention	1,246	<1,96	0,213	>0,05	Not Significant
Green Brand Image to Purchase Intention	3,254	> 1,96	0,001	<0,05	Sig

Based on the table above, it shows that 3 hypotheses are accepted, and 2 hypotheses are rejected. The accepted hypothesis states that the independent variable has a positive and large influence on the dependent variable. However, the rejected hypotheses state that the relationship between the variables is not statistically significant.

4.3.3 Mediation Effect Test

the mediation effect in the analysis using PLS according to [17] first, testing the effect of exogenous variables on endogenous variables and is significant if the t-statistic value> 1.96.

Table 8 Results of Path Coefficients

Influence between Variables	t Statistik	Weight Significance	P Values	Sig 5%	Description
Green Marketing to Purchase Intention	2,726	>1,96	0,007	<0,05	Sig
Green Advertising to Purchase Intention	1,668	<1,96	0,096	>0,05	Not Significant

Based on the table above, it can be concluded that:
1. The relationship between Green Marketing on Purchase Intention is positive and significant where the t-statistic value is 2.726 and> 1.96.

2.   The relationship between Green Advertising on Purchase Intention is negative and insignificant where the t-statistic value is 1.668 and <1.96.

3.   In further testing, the effect of mediating variables on endogenous variables is significant at t-statistics> 1.96

Table 9 Results of Path Coefficients

Influence between Variables	t Statistik	Weight Significance	P Values	Sig 5%	Description
GRA->GBI->PCI	1,668	<1,96	0,096	>0,05	Not Sig
GRM->GBI->PCI	2,726	>1,96	0,007	<0,05	Sig

Based on the comparison between the path coefficients of exogenous and endogenous variables versus the relationship between exogenous and endogenous variables through mediating variables, it can be concluded that green brand image does not fully mediate the effect of green advertising on Purchase Intention. However, from the results of the significant direct effect of green marketing, it can be stated that green brand image fully mediates the effect of green marketing on purchase intention.

4.3.4 Coefficient of Determination (R2)

The R Square value actually illustrates how much the ability of the independent variable to explain the dependent variable can be seen in the following table:

Table10 Output R Square

No	Variable	R square
1	Green Brand Image	0,596
2	Purchase Intention	0,482

The effect of green marketing variables through green brand image on purchase intention is 59.6% and the remaining 40.4% is influenced by other variables not examined in this study. the direct variable effect on purchase intention is 48.2% and the remaining 51.8% is influenced by other variables not examined in this study. Looking at the direct relationship between green marketing and green advertising, the Rsquare value is 48.2%, while the indirect relationship between green marketing and green advertising on purchase intention through green brand image has an R square value of 59.6%, meaning that the relationship between green marketing and green advertising through the mediation of green brand image has a better influence on purchase intention than the direct influence of green marketing and green advertising.

V. DISCUSSION

Based on the research results, the following conclusions can be given:

1.   The results of this study indicate that Green Marketing has a significant effect on Green Brand Image, it can be stated that hypothesis 1 is supported. These results indicate that the better the green marketing, the better the Green Brand Image created by electric cars.

2.   The effect of Green Marketing on Purchase Intention, shows that Green Marketing has an insignificant effect on Purchase Intention, it can be stated that hypothesis 2 is rejected. This shows that the better the effect of Green Marketing, does not affect the level of Purchase Intention of electric cars.

3.   The results of this study indicate that green advertising has a significant effect on Green Brand Image, it can be stated that hypothesis 3 is supported. These results indicate that the better the green advertising, the better the Green Brand Image created by electric cars.

4.   The effect of Green Marketing on Purchase Intention, shows that Green Advertising has an insignificant effect on Purchase Intention, it can be stated that hypothesis 4 is rejected. This shows that the better the effect of Green Advertising, does not affect the level of Purchase Intention of electric cars.

5.   The effect of Green Brand Image on Purchase Intention, the results of this study indicate that Green Brand Image has a significant effect on Purchase Intention, it can be stated that hypothesis 5 is supported. This shows that the better the effect of Green Brand Image, the higher the level of electric car Purchase Intention.

VI.CONCLUSION

a.   This study adds evidence that green marketing and green advertising have no effect on purchase intention

b.   Green marketing has no influence on consumer purchase intention. However, if green marketing is implemented by a brand, consumer perceptions of the brand are also good. In addition, the application of green marketing can also help minimize environmental damage.

c. Good utilization of the Green Brand Image created by the company can influence consumer purchasing interest. Measurement of the Green Brand Image attribute variable using these five indicators, Green Brand Image has been able to increase purchase interest.

VII. ACKNOWLEDGEMENTS

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