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The Influence of Innovation, Brand Image and Green Product Awareness on Interest in Buying Electric Vehicles with Trust as Intervening Variables

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Abstract: *Research purposes to analyze the influence of innovation, brand image, and green product awareness on consumer confidence and buying interest in electric cars, as well as the influence of trust on buying interest. Research methods This method uses a quantitative approach and causality research type, with a sample of 135 electric vehicle users in Surabaya selected using the Total Sampling technique. Data was collected using an online questionnaire and analyzed using The Structural Equation Model (SEM) and Partial Least Square (PLS) with SmartPLS software. Results The analysis shows that innovation and awareness of green products have a significant effect on trust and purchase interest, while brand image does not have a significant effect on trust, but does have a significant effect on purchase interest. Trust also has a significant effect on buying interest, while innovation and brand image do not have a significant effect on buying interest through trust, but awareness of green products has a significant effect on buying interest through trust.*

Keyword: *Innovation, Brand Image, Purchase interest, trust.*

INTRODUCTION

Fuel prices are increasingly expensive and reserves are limited and difficult to control in the future, together with environmental issues that are of global concern as revealed in Education for Sustainable Development (EfSD), encouraging the development of electric cars that are environmentally friendly and energy efficient. In Indonesia, electric car sales numbers have the potential to increase with the Government Borne Value Added Tax (PPN DTP) incentive for purchasing electric vehicles, as regulated in Minister of Finance Regulation Number 38 of 2023. This incentive tightens competition between electric car manufacturers, so it is important to determine factors that can increase consumer buying interest in electric cars.

To increase interest in buying electric cars, consumer confidence needs to be strengthened. Trust, which is based on confidence in the expertise and sincerity of a business partner (Kotler & Keller, 2018; Sullivan & Kim, 2018), has been proven to have a positive influence on purchase intention (Mahliza, 2020; Ihsan & Indayani, 2022; Lukiyana & Anjani, 2022), although several studies show different results (Pakpahan & Ryan, 2022).

The main factors that can increase trust include innovation, brand image and awareness of green products. Innovation and brand image have a positive effect on brand trust (Pratiwi & Hasin, 2020; Ramadhani & Nurhadi, 2022), while awareness of green products increases consumers' green trust (Alamsyah & Febriani, 2020; Junarsin et al., 2022).

Environmental concern has a significant positive effect on interest in buying green products, such as electric cars. Hernomo (2021) shows that environmental concern increases the intention to purchase green products.

Product innovation has a positive and significant effect on purchasing interest. Research by Maulana & Alisha (2020), and Tanuwijaya et al. (2022) show that innovations that meet consumer needs increase purchasing interest.

Brand image has a significant positive effect on purchase intention. Research by Benhardy et al. (2020), Haitao (2022), and Rahmawati & Yayak (2021) show that a good brand image increases purchase intentions, because consumers remember the value of the product.

Awareness of green products has an impact on interest in purchasing environmentally friendly products, influenced by price, value and quality. Mensah's research (2021), Lestari et al. (2021), and Hernizar et al. (2019) show that safe and harmless green products increase purchasing interest.

To increase interest in buying electric cars, trust factors and buying interest need to be considered. Although previous research shows varying results, this study aims to further investigate the influence of these factors.

This research aims to analyze various factors that influence consumer confidence and buying interest in electric cars. Some of the main objectives are to determine the influence of innovation, brand image, and awareness of green products on consumer trust. Apart from that, this research also aims to analyze how innovation, brand image and awareness of green products influence consumer buying interest, both directly and through trust. Finally, this research wants to know the effect of trust on consumers' buying interest in electric cars.

METHOD

This research uses a quantitative causality method for electric vehicle customers in Surabaya, with a sample of 68 users determined through Total Sampling. Primary and secondary data were collected through questionnaires. The variables studied were innovation, brand image, green product awareness, trust, and purchase intention. Data analysis was carried out using The Structural Equation Model (SEM) and hypothesis testing using Partial Least Square (PLS) with SmartPLS.

RESULTS AND DISCUSSION

Structural Model Analysis

Model analysis using Partial Least Square (PLS) using the Smart PLS program is explained as follows:

OuterModel

Outer Model often also called (outer relation or measurement model) specifies the relationship between the variables studied and the indicators.

1) Validity test

a. Convergent Validity

Based on the research results, it can be seen that all measurements on each variable are declared valid as a measuring tool for this construct, overall the indicator items have a convergent validity value of > 0.5.

b. Discriminant Validity

The research results show that all constructs have good discriminants, with indicator correlations with the constructs being higher than with other constructs. Discriminant validity is measured through cross loading and Average Variance Extracted (AVE) values, where the AVE values for all variables exceed 0.5, indicating indicator convergence in each construct.

2) Reliability Test

a. Composite Reliability

A construct is considered reliable if the composite reliability value exceeds 0.60 (Nunnally, in Ghozali, 2015). This research shows that all constructs meet these criteria, showing adequate internal consistency in measuring latent variables.

b. Cronbach Alpha

Cronbach Alpha measures internal consistency between variable scales. The research results show a Cronbach Alpha value of 0.6, indicating that all variables have high reliability.

InnerModel

Structural model (inner model) describes the causal relationship between latent variables that have been built based on the substance of the theory. On test *structural model (inner model)* using procedural assistance *Bootstrapping* on SMART PLS. The following is the Structural Model of the Bootstrapping process, namely:

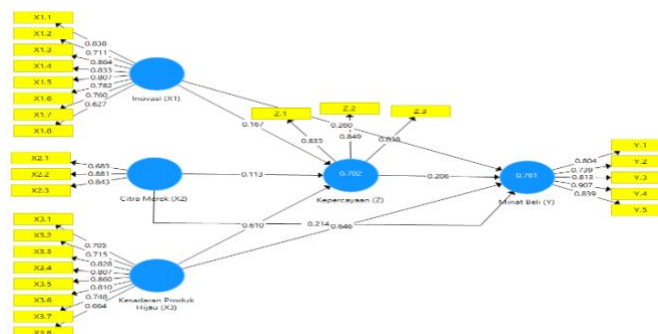


Figure 2 Partial Least Squares Structural Model

Based on the picture above, it is known that Trust (Z) is influenced by Innovation (X1), Brand Image (X2) and Green Product Awareness (X3). Apart from that, Purchase Interest (Y) is also influenced by Innovation (X1), Brand Image (X2), Green Product Awareness (X3) and Trust (Z) which is shown in the equation below:

$$Z = 0.167 X1 + 0.113 X2 + 0.610 X3$$

$$Y = 0.260 X1 + 0.214 X2 + 0.646 X3 + 0.206 Z$$

PLS model assessment begins by evaluating the R-Square value for the dependent latent variable. Changes in the R-Square value show the influence of the independent latent variable on the dependent latent variable. The R-Square value of 0.67 indicates a strong model, 0.33 a moderate model, and 0.19 a weak model. The PLS output is shown in Table 4.13.

Table 6 R-Square

	R Square
Trust (Z)	0.702
Purchase Interest (Y)	0.761

Source: Appendix 6, Processed Data

Based on Table 6, the variables Innovation (X1), Brand Image (X2), and Green Product Awareness (X3) which influence Trust (Z) have an R^2 value of 0.702, indicating an influence of 70.2% which is in the strong category. The variables Innovation (X1), Brand Image (X2), Green Product Awareness (X3), and Trust (Z) which influence Purchase Intention (Y) have an R^2 value of 0.761, indicating an influence of 76.1% which is also in the strong category. In addition, the Predictive Relevance test is carried out to assess how good the observation value is, with the suitability of the structural model seen from the Q^2 value.

So it can be concluded that the Structural Model shows a strong relationship

Hypothesis testing

To answer the research hypothesis, the following test results can be seen:

Influence of Innovation (X1) on Trust (Z)

Innovation has a significant influence on Trust, because the T-statistic value is 2.089 which means it is greater than 1.96 and the P value is 0.037 which is smaller than 0.05. Then the Original Sample value shows a positive value of 0.167 so the variable relationship is positive.

Influence of Brand Image (X2) on Trust (Z)

Brand Image does not have a significant influence on Trust, because the T-statistic value is 1.195 which means it is smaller than 1.96 and the P Value is 0.233 which is greater than 0.05. Then the Original Sample value shows a positive value of 0.113 so the variable relationship is positive.

Effect of Green Product Awareness (X3) on Trust (Z)

Green Product Awareness has a significant influence on Trust, becauseThe T-statistic value is 6.718 which means it is greater than 1.96 and the P value is 0.000 which is smaller than 0.05. Then the Original Sample value shows a positive value of 0.610 so the variable relationship is positive.

Influence of Innovation (X1) on Purchase Intention (Y)

Innovation has a significant influence on Purchase Interest, because the T-statistic value is 3.456 which means it is greater than 1.96 and the P value is 0.001 which is smaller than 0.05. Then the Original Sample value shows a positive value of 0.260 so the variable relationship is positive.

Influence of Brand Image (X2) on Purchase Intention (Y)

Brand Image has a significant influence on Purchase Interest, because the T-statistic value is 2.476 which means it is greater than 1.96 and the P Value is 0.014 which is smaller than 0.05. Then the Original Sample value shows a positive value of 0.214 so the variable relationship is positive.

Influence of Green Product Awareness (X3) on Purchase Intention (Y)

Green Product Awareness has a significant influence on Purchase Interest, because the T-statistic value is 6.082 which means it is greater than 1.96 and the P Value is 0.000 which is smaller than 0.05. Then the Original Sample value shows a positive value of 0.646 so the variable relationship is positive.

Influence of Trust (Z) on Purchase Intention (Y)

Trust has a significant influence on Purchase Interest, because the T-statistic value is 2.133 which means it is greater than 1.96 and the P value is 0.033 which is smaller than 0.05. Then the Original Sample value shows a positive value of 0.206 so the variable relationship is positive.

Influence of Innovation (X1) on Purchase Intention (Y) through Trust (Z)

Innovation does not have a significant influence on Purchase Intention through Trust, because the T-statistic value is 1.442 which means it is smaller than 1.96 and the P value is 0.150 which is greater than 0.05. Then the Original Sample value shows a positive value of 0.034 so the variable relationship is positive.

Influence of Brand Image (X2) on Purchase Intention (Y) through Trust (Z)

Brand Image does not have a significant influence on Purchase Interest through Trust, because the T-statistic value is 0.955 which means it is smaller than 1.96 and the P Value is 0.340 which is greater than 0.05. Then the Original Sample value shows a positive value of 0.023 so the variable relationship is positive.

The Influence of Green Product Awareness (X3) on Purchase Intention (Y) through Trust (Z)

Green Product Awareness has a significant influence on Purchase Interest through Trust, because the T-statistic value is 1.977 which means it is greater than 1.96 and the P Value is 0.049 which is smaller than 0.05. Then the Original Sample value shows a positive value of 0.126 so the variable relationship is positive

CONCLUSION

Based on the analysis, the conclusions of this research are: (1) Innovation has a significant effect on consumer confidence in electric vehicles. (2) Brand image has no significant effect on consumer trust. (3) Awareness of green products has a significant effect on consumer confidence. (4) Innovation has a significant effect on consumer buying interest. (5) Brand image has a significant effect on purchasing interest. (6) Awareness of green products has a significant effect on purchasing interest. (7) Trust has a significant effect on buying interest. (8) Innovation has no significant effect on purchase intention through trust. (9) Brand image has no significant effect on purchase intention through trust. (10) Awareness of green products has a significant effect on purchase intention through trust.

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