TAM-TPB THEORY IN EXAMINING THE RELATIONSHIP FACTORS AFFECTING GREEN PURCHASE INTENTION FOR ENVIRONMENTALLY FRIENDLY ELECTRIC VEHICLES IN CENTRAL JAVA

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Abstract

The study aims to analyze the factors that influence Green Purchase Intention Environmentally Friendly Electric Vehicles in Central Java with TAM-TPB Theory . For En. The variables studied in this research include Perceived Usefulness, Perceived Ease of Use, Attitude, Perceived Behavior Control, Subjective Norms, Green Perceived Risk, Green Perceived Value, and Green Product Knowledge. The method used in this study is Structural Equation Modelling (SEM) with 100 respondents. From this research, there are nine hypotheses, of which five partial hypotheses are accepted, and four partial hypothesis are rejecte.

Keywords: *TAM, TPB, Green Purchase Intention, Electric Vehicles***.**

INTRODUCTION

Air pollution, which is a significant problem in major cities, particularly in Indonesia is caused by the use of conventional fuel-powered vehicles. To minimize the impact of climate change and air pollution, an energy transition is needed. Indonesia has committed to reducing greenhouse gas (GHG) emissions, and the government has set a target to achieve net zero GHG emissions or Zero Environmental Pollutant by 2060 or earlier. Therefore, in an effort to encourage an energy transition towards sustainable clean energy use, the government issued Presidential Regulation No. 79 of 2023 on the Acceleration of the Battery Electric Vehicle (BEV) Program for electric transportation. This has also received a positive response from the automotive industry, which is working to introduce and develop environmentally friendly and sustainable transportation.

The presence of electric vehicles provides a refreshing alternative to society, especially given the increasing dependence on petroleum, whose consumption continues to rise every year. Electric powered vehicles are a solution for transportation that meets the criteria needed to reduce the rising carbon emissions resulting from the use of fuel powered vehicles. The advantages of using electric environmental impacts through the use of renewable energy sources, as electric vehicles produce far less air pollution and nearly zero emissions compared to

conventional vehicles. The graph below shows Battery Electric Vehicle (BEV) sales in Indonesia form January 2022 to August 2023.

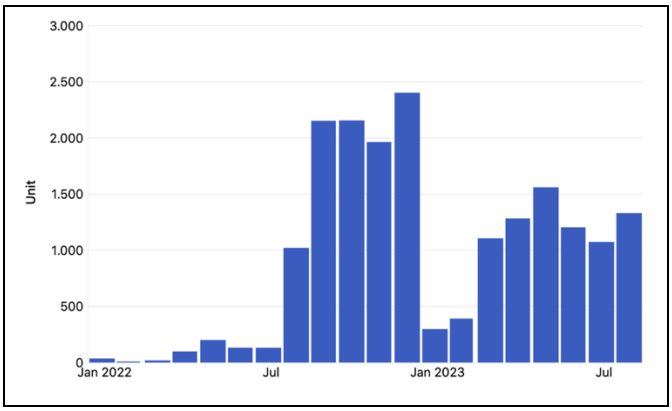

Figure 1. Monthly Wholsale Sales Volume of Electric Cars in Indonesia
(January 2022 – August 2023)
Source: Databoks (2023)

Based on Figure 1, the monthly wholesale sales volume of electric cars in Indonesia fluctuates, with rises and falls. As of September 2023, the Ministry of Transportation recorded an electric vehicle population of 81,525 units, comprising 62,815 motorcycles, 320 three-wheelers, 18.300 passenger cars, 80 buses, and 10 cargo vehicles. Despite this large number, most electric vehicles are still priced relatively high compared to fuel-powered vehicles, primarily due to limited technology and infrastructure, indirectly affecting people's intentions to purchase them.

(Candra 2022) states that the current price of electric cars is too high, with limited availability of electric car charging stations and low incentives from the government, which discourages people from buying electric vehicles. Although the government has implemented a 0% tax on electric vehicles, this has not reduced their prices significantly, as they remain high and unaffordable for most Indonesians (Veza, et al. 2022). Several automotive companies have participated in environmental awareness campaigns aimed at increasing public awareness of environmentally friendly products, thereby encouraging the intentions to purchase environmentally friendly products (Green Purchase Intention). According (Rehman 2018), people who are concerned and aware of environmental issues will consciously begin to change their consumption patterns. Meanwhile (Thomas 2018) states that psychological factors are important in shaping pro-environmental behavior. Several empirical studies show that beliefs, norms, social influence and environmental self-image are factors that influence pro-environmental behavior patterns. The intention to purchase environmentally friendly products is conceptualized as an individual's likelihood and willingness to prioritize products with environmentally friendly features over other traditional products in their purchasing

considerations. (Kumar, R 2020) mentions that economic, environmental, and pro-social factors influence customer preferences for electric vehicles. In Indonesia, the market interest in electric vehicles is influenced by various factors including cultural, geographical, standard of living, and infrastructure development levels. These factors create a gap in the development of interest in electric vehicles in Indonesia as a developing country compared to developed countries (Ridwan 2023).

(Davis 1989) mentions that a theory that can measure public intention to buy electric vehicles is the Technology Acceptance Model (TAM). This theory develops a model of interest in adopting technology, which is influenced by two key indicators: perceived usefulness and perceived ease of use. Meanwhile, research conducted by (Permana 2023) includes social influence and control factors, which help explain consumer behavior toward technology usage, representing the Theory of Planned Behavior (TPB).

Green perceived Risk indicates consumers negative perceptions of all actions taken. This perception of risk results in an increased likelihood of consumer purchase, as consumers become more capable of anticipating potential risks or losses associated with the product, thereby lowering the risk of product failure in the eyes of consumers (Kubrowati 2017). Green Perceived Risk is a consumer's perception of concern over the losses or risks they might experience when using or adopting an environmentally friendly product. Research conducted by (Mahendra, et al. 2024), (Keni, et al. 2020) and (Kubrowati 2017) indicates that green perceived risk has negative significant effect on green purchase intention. The results of these studies are supported by the ideas of (March 2006), who conclude that risk has a moderating effect on consumers, as they are more likely to try avoid mistakes rather than to benefit from utility in their purchases.

Another factor influencing Green Purchase Intention is Green Perceived Value, or the purchasing behavior toward environmentally friendly products, which has now become a habit in developing countries, including Indonesia (Huda 2018). The perception of a product that promotes an environmentally friendly image is still considered poor by society (Kubrowati 2017) because people believe that environmentally friendly products are perceived to have low value, high prices, or fail to fulfill their environmental promises. Therefore, the assessment of green perceived value plays an important role in the environment. Research conducted by (Haairudinor and Fayad 2024), (Mahendra, et al. 2024), and (Keni, et al. 2020) indicates that green perceived value has a positive and significant effect on green purchase intention. The higher the green perceived value felt by consumers, the more positively it impacts their intention to buy environmentally friendly green products.

Green Product Knowledge, according to (Ottman 2011), refers to products that are sustainable over the long term and are not harmful to health or the surrounding environment, including environmentally friendly vehicles. Research conducted by (Wu, et al. 2018) and (Wang, Ma and Bai 2018) indicates that Green Product Knowledge has a positive and significant influence on Green Purchase Intention. However, research conducted by (Wiranto and Adialita 2020) suggest that Green Product Knowledge does not influence Green Purchase Intention.

Although many studies have been conducted to explore the factors influencing the intention to purchase electric vehicles, there is still limited research on why consumers prefer certain vehicles over others or why they choose fuel powered vehicles over electric ones. Therefore, this study aims to analyze the purchase intention of consumers with high environmental awareness (Green Purchase Intention) toward eco-friendly electric vehicles using an approach based on two theories: the Technology Acceptance Model (TAM), which predicts the factors affecting the acceptance of a system and the Theory of Planned Behavior (TPB) which predicts planned behavior toward using a system. Additionally, this study includes three variables: The First Green Perceived Risk, which measures the perceived risk concerns associated with the intention to purchase an electric vehicle, the second is green perceived value, which assesses the public's perception regarding the intention to buy eco-friendly electric vehicle; and the third Green Product Knowledge which evaluates the extent to which people understand how to use electric vehicle and their benefits for environment.

THEORITICAL FRAMEWORK AND HYPOTHESES

Here is the theoretical framework in this study:

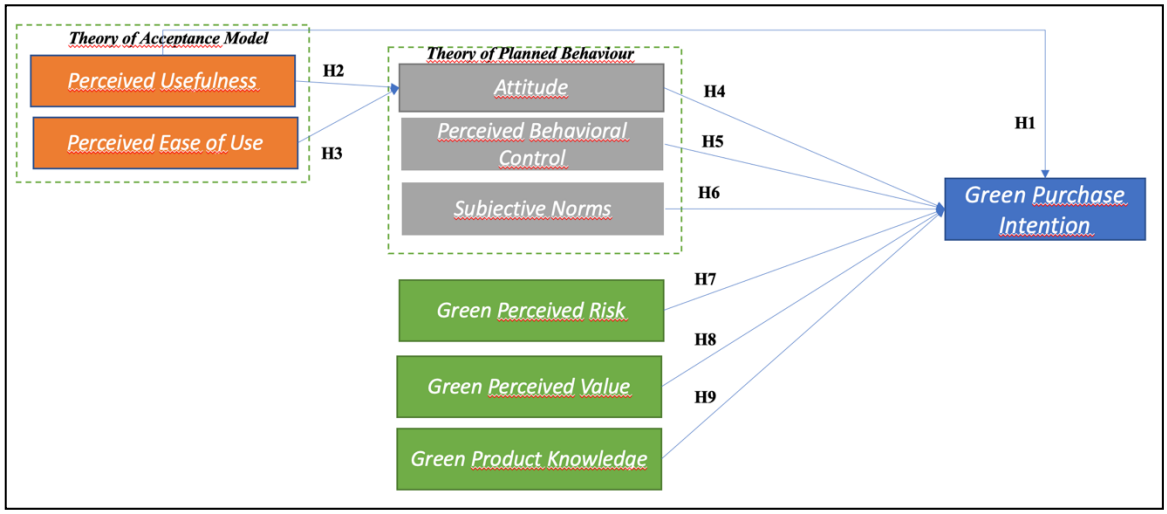

Figure 2. Theoritical Framework

Source: (Gao, S. and Guo 2019), (Permana 2023), (Ridwan, P. Y 2023) (Alwahidin and Muhin, J 2022)

HYPOTHESES DEVELOPMENT

The effect of Technology Acceptance Model (TAM) on Attitude and Green Purchase Intention for Environmentally Friendly Electric Vehicles

The Technology Acceptance Model (TAM) Theory is an adaptation of The Theory of Reasoned Action (TRA), specifically designed for user adoption of information system. This theory aims to provide a foundation for examining external factors that influence user's beliefs, attitudes, and intentions. According to TAM, an individual's behavioral intention in influenced by the user's attitude toward a product, which is then affected by the perceived usefulness of the product. The perception of usefulness is seen as an perceived usefulness of the product. The perception of usefulness is seen as an ease of use and a benefit, based on the specific user's level, thereby enhancing their ability to achieve desired outcomes. Perceived usefulness and perceived ease of use are two predictors of Attitude for a product (Gao, S. and Guo 2019). (Kian, et al. 2017) stated that perceived usefulness measures the extent to which a person believes that using a particular technology can improve their performance. The research conducted by (Rehman 2018), (Gao, S. and Guo 2019), (Aamer Al-Aflak and Gawshinde 2024) indicates a positive and significant influence of perceived usefulness the first variable in Technology Acceptance Mode) Theory on Green Purchase Intention. Meanwhile perceived usefulness has a positive and significant relationship with attitude, and similarly, perceived ease of use also has a positive and significant relationship with attitude (Ridwan, P. Y 2023) (Permana 2023), (Gao, S. and Guo 2019).

H1 : Perceived Usefulness have a positive and significant on Green Purchase Intention for Environmentally Friendly Electric Vehicles among the Community in Central Java

H2 : Perceived Usefulness have a positive and significant on Attitude for Environmentally Friendly Electric Vehicles among the Community in Central Java

H3 : Perceived Ease of Use have a positive and significant on Attitude for Environmentally Friendly Electric Vehicles among the Community in Central Java

The effect of Planned Behavior Theory (TPB) on Green Purchase Intention for Environmentally Friendly Electric Vehicles

The Theory of Planned Behavior (TPB) is a model widely used to predict behavioral intentions in adopting a new system (Sang 2015). The theory proposed by Fishbein and Ajzen in the Theory of Planned Behavior (TPB) explains that a person's intention to behave is determined by three factors: 1) Attitude, 2) Perceived Behavioral Control, and Subjective Norms. Attitude Is defined as the degree of an individual's feelings toward accepting or rejecting an object or behavior, which can be measured through a procedure that places the

individual on evaluative scale. The second factor, Perceived Behavioral Control is defined as the perceived ease difficulty of performing a particular behavior. This perception of behavioral control reflects how a person understand that the behavior they exhibit is a result of their own self-control. Subjective Norms refer to the influence of an individual's environment in either accepting or rejecting a particular behavior, prompting the individual to exhibit behavior that is deemed acceptable by those in their surroundings. According to (Ridwan, P. Y 2023), (Permana 2023), (Gao, S. and Guo 2019), (Alwahidin and Muhin, J 2022), the three variables within the Planned Behavior Theory (TPB) each have a positive and significant relationship with green purchase intention.

H4 : Attitude have a positive and significant on Green Purchase Intention for Environmentally Friendly Electric Vehicles among the Community in Central Java

H5 : Perceived Behavioral Control have a positive and significant on Attitude for Environmentally Friendly Electric Vehicles among the Community in Central Java

H6 : Subjective Norms have a positive and significant on Attitude for Environmentally Friendly Electric Vehicles among the Community in Central Java

The effect of Green Perceived Risk (GPR) on Green Purchase Intention for Environmentally Friendly Electric Vehicles

(Dowling and Staelin 1994) define perceived risk as the negative perception regarding uncertainty and adverse consequences in purchasing a product or service. In the green context, referring to the research by (Peter and Ryan 1976), (Chen, Y and Chang, C 2013) propose the construct of green perceived risk, which is defined as the expectation of negative environmental impacts caused trend of environmental consciousness, consumers now have greater environmental concerns, thereby increasing perceived risk toward a product or service. According to (Halim and Kempa 2016), the indicators of green perceived risk are: 1) There may be low performance from environmentally friendly products, 2) The performance of environmentally friendly products not match their eco-friendly design, 3) Using environmentally friendly products may lead to losses, 4) Using environmentally friendly products might have negative impact on the environment, 5) Using environmentally friendly products could give a negative reputation to the user.

H7 : Green Perceived Risk have a positive and significant on Attitude for Environmentally Friendly Electric Vehicles among the Community in Central Java

The effect of Green Perceived Value (GPV) on Green Purchase Intention for Environmentally Friendly Electric Vehicles

Perceived Value is defined as the process of overall evaluation and assessment by consumers of the benefits gained from the product or service utilized (Patterson, P and Spreng,

R. A 2017). According to (Tjiptono 2008), green perceived value has the following indicators: 1) Emotional value, which refers to the utility derived from feelings or positive affect or emotions triggered by consuming product, 2) Social value, which refers to the utility gained from the product's ability to enhance the consumer's social concept, 3) Quality / Performance, which refers to the utility obtained from perceptions of expected quality and performance, 4) Price / value of money, which refers to the utility of the product due to reductions in short term and long term costs.

H8 : Green Perceived Value have a positive and significant on Attitude for Environmentally Friendly Electric Vehicles among the Community in Central Java

The effect of Green Product Knowledge (GPK) on Green Purchase Intention for Environmentally Friendly Electric Vehicles

In the search for information, product knowledge is essential before making a decision. Therefore, consumer knowledge about green product knowledge contains information about a product that will be remembered by consumers (Ojiaku 2018). Meanwhile, according to (Chaudhuri. and Hoolbrook 2001), green product knowledge is defined as environmentally friendly products, and it is often found that these products are effective in limiting negative effects on the surrounding environment. High concern about environmental damage and consumer understanding of environmentally friendly products will encourage consumers to purchase green products. Green Purchase Intention is the intention to buy and the actual purchase made by consumers after they become aware of the environmentally friendly attributes of a product. The indicators of Green Purchase Intention according to (Ferdinand 2006) consist of: 1) Transactional interest, which refers to the tendency for someone to purchase a product, 2) Referential interest, which refers to the tendency for someone to recommend the product to others, 3) Preferential interest, which describes an individual's primary preference for that product, 4) Explorative interest, which describes the behavior of someone who constantly seeks information about the product. The indicators of green product knowledge is: 1) Product knowledge, 2) Purchase Knowledge, 3) Usage Knowledge.

H9 : Green Product Knowledge have a positive and significant on Attitude for Environmentally Friendly Electric Vehicles among the Community in Central Java

Here is the theoretical framework in this study:

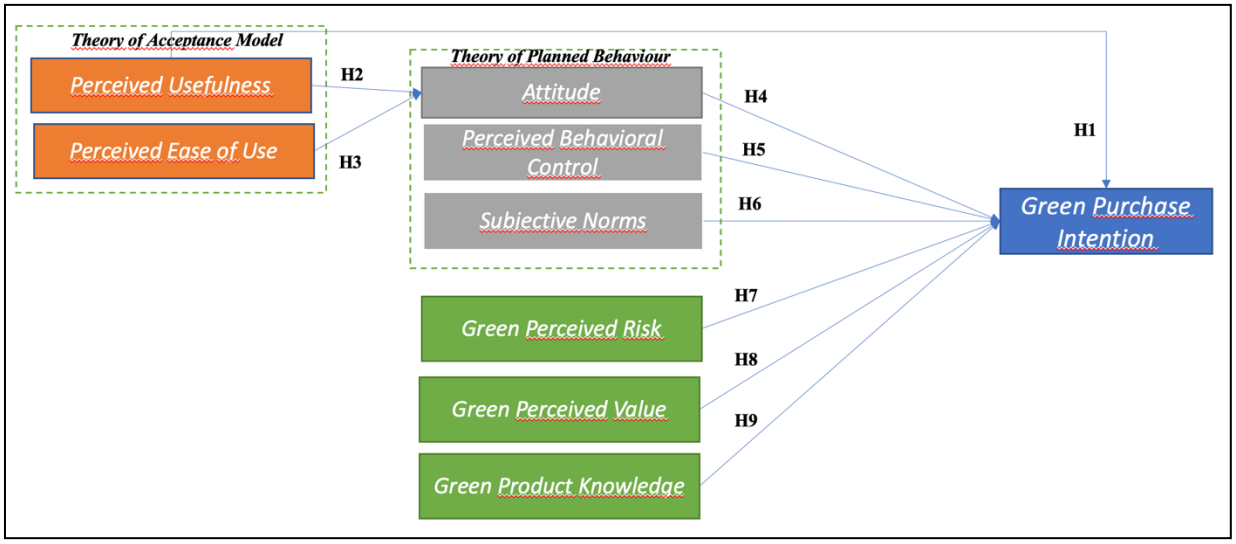

Figure 2. Theoritical Framework

Source: (Gao, S. and Guo 2019), (Rehman 2018) (Ridwan, P. Y 2023)(Permana 2023), (Alwahidin and Muhin, J 2022), (Budiman and Andriani, N 2021), (Mahendra, et al. 2024)

RESEARCH METHODS

Type of Data

This study uses a descriptive quantitative, which test theories by measuring research variables numerically and analyzing the data using statistical procedures. A descriptive quantitative approach is applied in this research, which involves numerical data used to obtain information and describe various phenomena, with the goal of identifying the influence or relationship between two or more variables, leading to a conclusion. According to (Sugiyono 2018), the quantitative method is used to study a specific population and sample.

Population and Sample

In research methodology, the term population is commonly used to refer to a group or set of objects that are the target of the research (Siregar 2010). The population is a generalization area that consists of subject/objects with specific qualities and characteristics determined by the researcher for study. In this study, the population used in the people of Central Java Province.

The study uses a non-probability sampling procedure. According to (Sugiyono 2018) in non-probability sampling techniques, not all members of the population have an equal chance of being selected, or in other words, this method is used when the number of elements in unknown or cannot be individually identified. (Daniel 2011) mentions that research using purposive

sampling, a type of non-probability sampling technique, allows researchers to deliberately selects elements that meet certain inclusion and exclusion criteria to participate in the study. Therefore, according to general guidelines, the minimum sample size used is five or more that the number of indicators being analyzed. In this study, there 16 indicators, so a minimum of 16 x 5 or 80 samples, is needed. However, since this study uses Chi-Square testing with a Structural Equation Model (SEM) model, which is very sensitive to the proportion of sample size, the sample size in this study will follow the criteria proposed by (Hair 2010), using the Maximum Likelihood Estimation (MLE) technique, where the minimum sample size is 100 samples.

Data Collection and Data Analysis Methods

The data collection methods in this study use questionnaires and literature review. Descriptive analysis is used to examine the characteristics of the respondents collected in this research. To measure the validity and reliability of the distributed questionnaire, validity and reliability tests are employed. Futhermore, the method for analyzing data and testing hypotheses in this study uses Partial Least Square (PLS).

RESULT AND DISCUSSION

General Description of Respondents

The result from distribution of the questionnaire in this study obtained 100 respondents residing in Central Java Province.

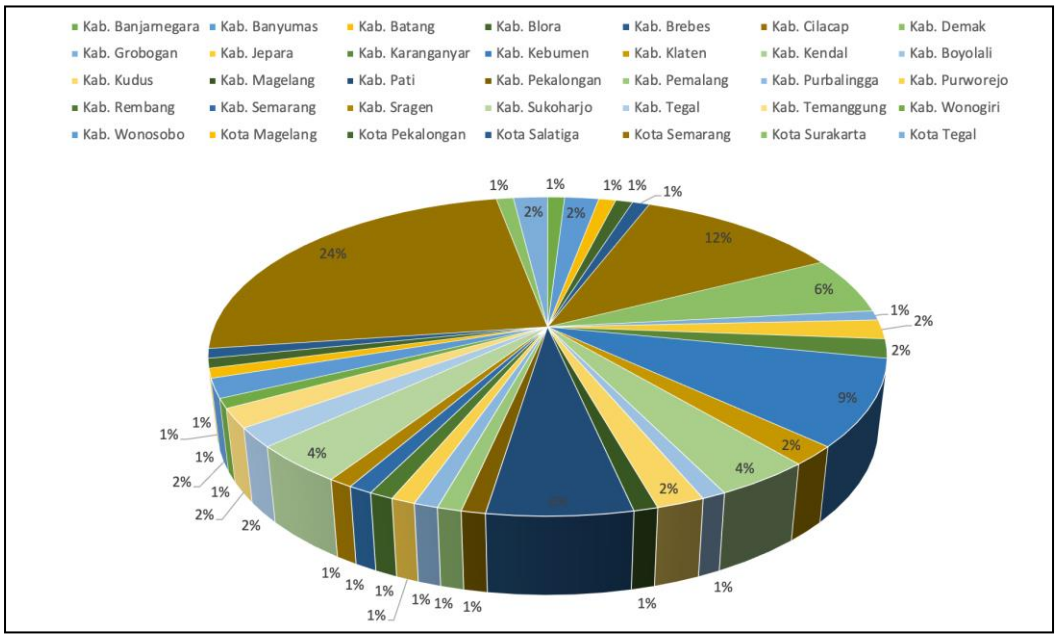

Figure 2. Respondents from each region in Central Java

Source: Primary data processed, 2024

Table 1. Descriptive Analysis of Respondent

No	Description	Frequency	Percentage
1	**Gender:**	100	100%
	Male	40	40%
	Female	60	60%
2	**Age:**	100	100%
	20 – 30 years	60	60%
	31 – 40 years	22	22%
	41 – 50 years	5	5%
	51 – 60 years	12	12%
	Above 60 years	1	1%
3	**Education Level:**	100	100%
	SD – SMP	1	1%
	SMA / SMK / MAN	28	28%
	Vocational Higher Education (D1/D2/D3/D4)	35	35%
	Higher Education Non Vocational (S1/S2/S3)	36	36%
4	**Work:**	100	100%
	Student/College student	25	25%
	ASN (PNS/PPPK)	24	24%
	Private Sector / BUMN	31	31%
	Others	20	20%

Source: Primary data processed, 2024

Based on Table 1 about the descriptive analysis of the respondents, it shows that the composition of the 100 respondents consist of 40 male (40%), and 60 female (60%). Based on the age range, 60 respondents (60%) are between the age of 20-30 years, with the lowest frequency being respondents aged over 60 years (1%). Next, looking at the education level, most of the respondents in this study have a higher vocational education with 35 people (35%), and the lowest is elementary to middle school education with 1 person (1%). From the employment perspective, the highest frequency was filled by respondents with private sector / BUMN background, totaling 31 people (31%), followed by students / collage students with 25 people (25%).

Validity and Reliability Test

The use of Convergent validity and discriminant validity in research model analysis aims to evaluate convergent validity of reflective constructs. This study considers the loading factor of indicators and the Average Variance Extracted (AVE) with a loading factor threshold above 0,5. Another measure to established convergent validity at the construct level is the Average Variance Extracted (AVE). The criterion is defined as the average of the squared loadings of the indicators associated with the construct. An AVE value of 0,5 or higher indicates that the construct explains more than half of the variance of its indicators (J. F. Hair 2017). Discriminant validity is measured using heterotrait - monotrait ratio (HTMT). An HTT value Meanwhile, discriminant validity is measures using the heterotrait - monotrait ratio 0,90 indicates a lack of discriminant validity (J. F. Hair 2017).

Next criterion that needs to be evaluated is Internal Consistency Reliability. The criteria for internal consistency are Cronbach's Alpha and Composite Reliability. The acceptable threshold values for Cronbach's alpha and composite reliability in this study are above 0,7 (I. Ghozali 2014). The following are the result of the validity and reliability test for each construct:

Table 2. The Result of Validity Convergent and Reliability Test

Variable	Indicator	Loading Factor	Cronbach 's Alpha	Composite Reliability	AVE
Perceived Usefulness (PU)	PU1	0,739	0,773	0,855	0,597
	PU2	0,665			
	PU3	0,842			
	PU4	0,832			
Perceived Ease of Use (PEU)	PEU1	0,788	0,821	0,883	0,656
	PEU2	0,871			
	PEU3	0,873			
	PEU4	0,695			
Attitude (A)	A1	0,825	0,850	0,899	0,619
	A2	0,854			
	A3	0,852			
	A4	0,791			
Perceived Behavioral Control (PBC)	PBC1	0,882	0,835	0,900	0,751
	PBC2	0,827			
	PBC3	0,889			
Subjective Norms (SN)	SN1	0,899	0,856	0,912	0,776
	SN2	0,836			
	SN3	0,906			

Green Perceived Risk (GPR)	GPR1	0,639	0,786	0,847	0,529
	GPR2	0,727			
	GPR3	0,825			
	GPR4	0,700			
	GPR5	0,538			
Green Perceived Value (GPV)	GPV1	0,880	0,870	0,911	0,719
	GPV2	0,844			
	GPV3	0,849			
	GPV4	0,818			
Green Perceived Knowledge (GPK)	GPK1	0,728	0,819	0,875	0,639
	GPK2	0,704			
	GPK3	0,869			
	GPK4	0,880			
Green Purchase Intention (GPI)	GPI1	0,833	0,840	0,893	0,677
	GPI2	0,821			
	GPI3	0,895			
	GPI4	0,734			

Source: Primary data processed, 2024

Based on Table 2, the result of Convergent Validity and Reliability Test shows that each loading factor value for the variable indicators exceeds 0,5, indicating that each indicator for each variable in this study produces valid results. This is clarified by another measure used to establish convergent validity at the construct level, which is the Average Variance Extracted (AVE) with a value grater than 0,50. Furthermore, based on Cronbach's alpha and Composite Reliability, each variable has a value above 0,70, indicating that the constructs have good reliability.

Table 2. The Result of the Hetrerotrait – Monotrait Ratio (HTMT) Discriminant Validity Test

Variable	A	GPI	GPK	GPR	GPV	PBC	PU	SN
A								
GPI	0,857							
GPK	0,653	0,790						
GPR	0,443	0,434	0,302					
GPV	0,888	0,844	0,753	0,303				
PBC	0,814	0,681	0,594	0,375	0,742			
PEU	0,840	0,583	0,474	0,283	0,682	0,813		
PU	0,831	0,853	0,629	0,386	0,860	0,730	0,700	

SN	0,847	0,787	0,663	0,365	0,821	0,775	0,608	0,754

Source: Primary data processed, 2024

Based on the results of the Heterotrait-Monotrait Ratio (HTMT) Discriminant Validity test in Table 2, it shows that all HTMT values are below 0,9, indicating that all variables in this study pass the discriminant validity test. Therefore, the indicators in these variables show valid. In this study, the Cronbach's alpha and Composite Reliability values are above 0,7 thus it can be concluded that the data obtained is reliable.

Inner Model Analysis

(Santosa 2018) mentions that inner model testing is used to examine the relationship between dependent and independent variables. Below are the results of the inner model testing using SmartPLS4 software.

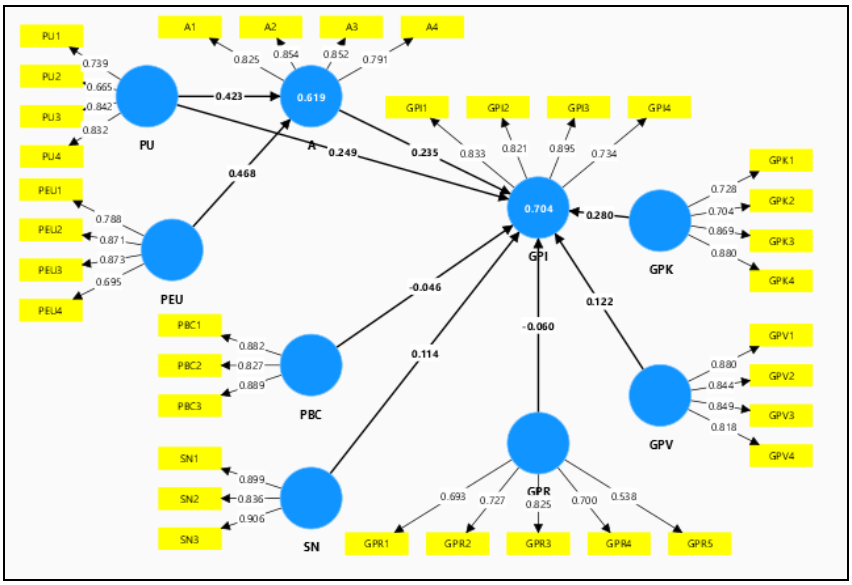

Figure 3. Inner Model Test Results

Source: Primary data processed, 2024

Based on Table 3, the results of R Square show that the R Square value for Attitude is above 0,6, indicating that the relationship model has a moderate nature (I. Ghozali 2014), Meanwhile, the R Square value for GPI is above 0,7, which means that the relationship model is strong.

Table 3. The Result R Square (Inner Model)

	R-Square	R-Square Adjusted
A	0,619	0,611
GPI	0,704	0,682

Source: Processed primary data, 2024

Hyphoteses Testing

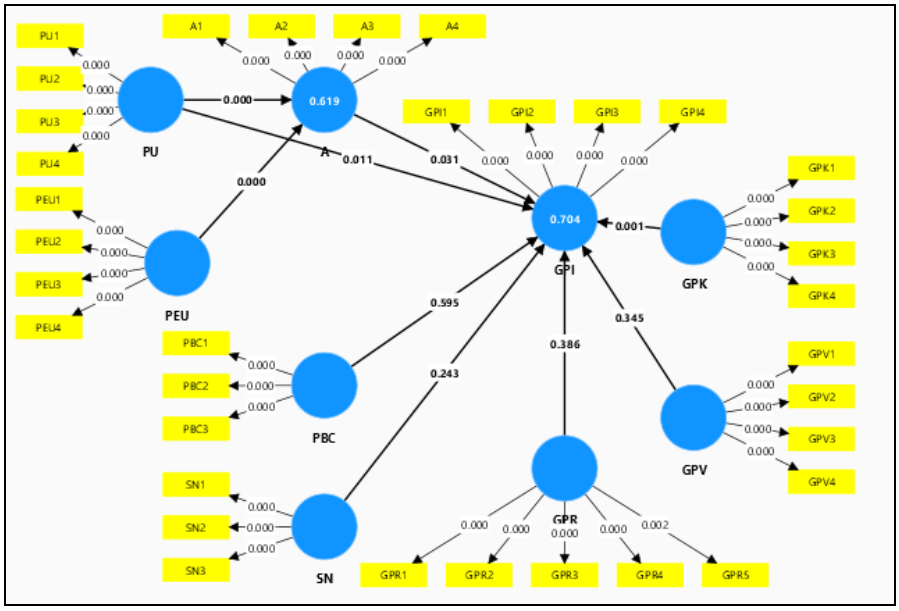

Figure 3. Bootstrapping Test Results

Source: Primary data processed, 2024

Hypothesis	Relationship	Path Coefficient	Std. Deviation	t-value	p-value	Hypothesis Result
H1	PU → GPI	0,249	0,098	2,538	0,011	Accepted
H2	PU → A	0,423	0,078	5,414	0,000	Accepted
H3	PEU → A	0,468	0,084	5,561	0,000	Accepted
H4	A → GPI	0,235	0,231	2,159	0,031	Accepted
H5	PBC → GPI	-0,046	0,086	0,532	0,595	**Rejected**
H6	SN → GPI	0,114	0,098	1,168	0,243	**Rejected**
H7	GPR → GPI	-0,060	-0,066	0,867	0,386	**Rejected**
H8	GPV → GPI	0,122	0,129	0,944	0,345	**Rejected**
H9	GPK → GPI	0,280	0,281	3,222	0,001	Accepted

Perceived Usefulness have a positive and significant on Green Purchase Intention for Environmentally Friendly Electric Vehicles among the Community in Central Java (H1)

The first hypothesis regarding the influence of Perceived usefulness on Green Purchase Intention shows t-statistic value 2,538 > (t-table 1,66) and p-value of 0,011, which is less than 0,05. This indicates that Perceived Usefulness has a positive and significant effect on Green Purchase Intention, and thus this first hypothesis is accepted. The results of this study align with (Aamer Al-Aflak and Gawshinde 2024)(Gao, S. and Guo 2019) (Wang, Ma and Bai 2018), and (Rehman 2018), who stated that Perceived Usefulness affect's on Green Purchase Intention. Perceived Usefulness measures how much a person believes that using a particular technology can improve their performance, such as the use of environmentally friendly electric vehicles, which is assessed through several indicators of Perceived Usefulness according to (Kucukusta, besbes and Legoherel 2015), Easy, useful, fast, and effective. The presence of environmentally friendly electric vehicles can provide ease, usefulness, help accelerate tasks, and be effective, thus becoming determining factors for the people of Central Java in purchasing environmentally friendly electric vehicles.

Perceived Usefulness have a positive and significant on Attitude for Environmentally Friendly Electric Vehicles among the Community in Central Java (H2)

The seconds hypothesis regarding the influence of Perceived Usefulness on Attitude shows a t-statistic value 5,414 > (t-table 1,66) and p-value of 0,000, which is less than 0,05. This indicates that Perceived Usefulness has a positive and significant effect on Attitude, thus this second hypothesis is accepted. The results of this study are consistent with previous research by (Ridwan, P. Y 2023), (Gao, S. and Guo 2019), and (Rehman 2018) who stated that Perceived Usefulness affect's on Attitude. (Permana 2023) mentioned that attitude is a scale developed around a general feeling of whether something is favorable or unfavorable. The indicators attitude include: Having a good idea, having a wise idea, enjoyable purchase for.me, and without coercion. It can be concluded that for most respondents in Central Java, the use of electric vehicles such as motorbikes, cars, and other electric vehicles provides benefits, thereby shaping individual's attitudes in making decisions. Ease, usefulness, and effectiveness in using vehicles can foster a positive and wise attitude, making individuals feel happy and uncoerced in choosing their mode of transportation.

Perceived Ease of Use have a positive and significant on Attitude for Environmentally Friendly Electric Vehicles among the Community in Central Java (H3)

The third hypothesis regarding the influence of Perceived Ease of Use on Attitude shows a t-statistic value of 5.561 > (t-table 1,66) and p-value of 0,000 which is less than 0,05. This indicates that Perceived Ease of Use on Attitude, so this third hypothesis is accepted. The

results of this study are consistent with previous research by (Ridwan, P. Y 2023) (Rehman 2018) (Gusni and Dirgantari 2020) and (Gao, S. and Guo 2019) which state that Perceived Ease of Use affects Attitude. Perceived ease of use the extent to which a person believes that using new technology can make their efforts easier. Indicators in the perceived ease of use variable include: Easy to learn, simple to use, easy to follow instructions, and less requirement of mental effort. It can be concluded that electric vehicles are easy to understand and learn, easy to use, have clear instructions, and require minimal effort to operate. This ease of use leads individuals to have a positive response toward the presence of environmentally friendly electric vehicle in Central Java.

Attitude have a positive and significant on Green Purchase Intention for Environmentally Friendly Electric Vehicles among the Community in Central Java (H4)

The fourth hypothesis regarding the influence of Attitude on Green Purchase Intention shows t-statistic value of 2.159 > (t-table 1,66) and p-value of 0,031, which is less than 0,05. This indicates that Attitude has a positive and significant effect on Green Purchase Intention, so this hypothesis is accepted. The results of this study align with previous research by (Ridwan, P. Y 2023) and (Permana 2023). Attitude serve as the foundation for evaluating a particular object, based on cognition, affective reactions, and behavioral intentions or past behaviors that can influence cognition, affective responses, and behavioral intentions, as well as future behavior. It can be concluded that people in Central Java a have positive attitude in making purchasing decisions for environmentally friendly electric vehicles, considering that when someone wants to buy an electric vehicle, whether a car, motorcycle, or other type, it is not due to coercion from any party, and they are happy to make the purchase.

Perceived Behavioral Control have a positive and significant on Attitude for Environmentally Friendly Electric Vehicles among the Community in Central Java (H5)

The fifth hypothesis regarding the influence of Perceived Behavioral Control on Green Purchase Intention shows that t-statistics value 0,532 < (t-table 1,66) and p-value of 0,557, which is greater than 0,05. This indicates that Perceived Behavioral Control has a positive but not significant effect on Green Purchase Intention, so this hypothesis is rejected. Perceived behavioral control re (Budiman and Andriani, N 2021) refers to an individual's feeling when evaluating behavior along with the obstacles or challenges they have faced in the past. Generally, when Attitude (A) favorable, perceived behavioral control increases, thus strengthening the intention to perform a behavior (Ajzen 1991). However, this study found a different result: when a person's behavioral control in purchasing electric vehicles is low, it does not significantly influence their intention to purchase electric vehicles. The results of this

study are consistent with previous research by (Ridwan, P. Y 2023) and contrast with research conducted with (Budiman and Andriani, N 2021).

Subjective Norms have a positive and significant on Attitude for Environmentally Friendly Electric Vehicles among the Community in Central Java (H6)

The hypothesis test results show that Subjective Norms have a t-value of 1,168 < (t-table 1,66) and p-value of 0,243, indicating that the hypothesis of subjective norms on green purchase intention has a positive but not significant effect. These findings align with (Budiman and Andriani, N 2021), who stated that subjective norms not significant effect on Green Purchase Intention, and contrast with previous studies by (Jain 2020) and (Pop, Z and Alt 2018). It can be concluded that social pressure from the surrounding environment does not impact on individuals intentions to own environmentally friendly electric vehicles in Central Java.

Green Perceived Risk have a positive and significant on Attitude for Environmentally Friendly Electric Vehicles among the Community in Central Java (H7)

In this study, Green Perceived Risk have a t-value 0,867 < (t-table 1,66) with a p-value of 0,386, which exceeds the significant at level of 0,05. This indicates that the hypothesis regarding green perceived risk has a negative and not significant relationship on Green Purchase Intention, so this hypothesis is rejected. These findings contradict previous studies by (Mahendra, et al. 2024) and (Aditi, et al. 2020), which stated that green perceived risk significantly affect on green purchase intention. This may be due to concern among the people of Central Java about electric vehicles, possibly stemming from limited access to electric vehicles charging stations (SPKLU) in Central Java. As evidenced by information from the Central Java ESDM website as of March 30, 2024 there are only 34 SPKLU locations, most of which are located along highways and in urban area, meaning that the coverage has not yet reached all areas of Central Java.

Green Perceived Value have a positive and significant on Attitude for Environmentally Friendly Electric Vehicles among the Community in Central Java (H8)

In this study, Green Perceived Value has a t-value 0,944 < (t-table 1,66) with a p-value of 0,345, which exceeds the significant at level 0,05. This means that the hypothesis of green perceived value has a negative and not significant relationship with green purchase intention, so this hypothesis is rejected, This finding contradicts previous studies by (Mahendra, et al. 2024) and (Aditi, et al. 2020) which indicated that green perceived value significantly impact on green purchase intention. This due to a lack of trust in the community regarding electric vehicles,, resulting in a very low intention to purchase them, even though vehicles would benefit the environment and consumers themselves.

Green Product Knowledge have a positive and significant on Attitude for Environmentally Friendly Electric Vehicles among the Community in Central Java (H9)

In this study , it was found that Green Product Knowledge affected on Green Purchase Intention with t-value of 3,222 > (t-table 1,66) and p-value 0,001, where the p-value is less than the threshold of 0,05, meaning this hypothesis is accepted. The results of this study are consistent with research conducted by (Suprihartini, Herdiansyah and Fahrizal 2022) and the theory which states that a high level of concern about environmental damage and consumer understanding of environmental damage and consumer understanding of environmentally friendly products will encourage consumers to buy green products (Chaudhuri and Hoolbrook 2001). With the level of knowledge and understanding of the public about the benefits of electric vehicles, it will impact environmental sustainability.

CONCLUSION

The results of this study show that Perceived Usefulness (TAM), Attitude (TPB) and Green Perceived Knowledge significantly influence Green Purchase Intention, while Perceived Usefulness (TAM) and Perceived Ease of Use (TAM) affected an individual's attitude in choosing a vehicle, On the other hand, the variables of Perceived Behavioral control (TPB), Subjective norms, Green Perceived Risk, and Green Perceived Value do not impact on Green Purchase Intention. Based on these results, its hoped that this study can be provide an evaluation for the government, particularly in Central Java, regarding policies on environmentally friendly electric vehicles.

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