



### Research Article

## People's Purchase Intention Toward Electric Cars

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**Abstract.** The aim of this research is to determine the influence of the variables trust, environmental knowledge, gender, perceived behavioral control, and subjective norms on the intention to purchase electric vehicles. This study shows that trust has a significant positive influence on purchase intentions, and people who have high trust in electric vehicle brands are more likely to buy electric vehicles. Environmental knowledge also has a positive impact on purchase intentions, because people who have high environmental knowledge are more likely to buy environmentally friendly electric vehicles. Gender does not have a significant effect on purchase intention, but perceived behavioral control and subjective norms have a significant positive effect on purchase intention. The findings of this research indicate that marketing strategies that consider trust, environmental knowledge, and subjective norms can increase electric vehicle purchase intentions. This research will

contribute to the development of more effective marketing strategies for electric vehicle brands.

**Keywords:** People's, Purchase, Electric Cars

## INTRODUCTION

In this study examining the interest in buying an electric car, several factors were found such as Theory of Planned Behavior (TPB) is a psychological model that explains how attitudes, subjective norms, and perceived behavioral control affect an individual's intention to engage in certain behaviors, which are felt in trust, environmental knowledge, subjective norms, gender, and perceived behavioral control, TPB theory is widely used to understand consumer behavior, including the adoption of electric vehicles (K. Zhang et al., 2018).

However, previous research only explains behavioral control to be the main factor that contributes positively and subjective norms get the second position that provides positive results. The results also revealed an insignificant relationship between attitude towards the behavior and acceptance of sharing, this is in line with relevant research (Ikram, 2022). this approach takes into account factors that influence buying interest, such as trust, environmental knowledge, subjective norms, gender, and behavioral control.

This study incorporates the constructs of Attitude, Perceived Behavioral Control, Subjective Norms, Moral Norms, Environmental Concern, and a unique consumer 'profile' dimension consisting of experience, education, and gender, as well as the moderating variable 'price sensitivity' (Buhmann et al., 2024). The study consisted of 200 responses collected through an online survey, and utilized a partial least squares structural equation model.

## Literature Review

### Environmental Knowledge and Trust

in his research, defined environmental knowledge as a person's basic knowledge of what they can do to help protect the environment that facilitates their behavioral commitment to the environment. (Wayan et al., 2021). Environmental knowledge and trust play an important role in influencing consumer behavior, particularly in the context of sustainable consumption and pro-environmental behavior. Environmental knowledge refers to an individual's understanding of environmental issues, while trust relates to the belief or reliance on certain entities or information, such as eco-friendly claims or environmental performance (Hossain, 2022).

This study is the first attempt to test the mediating role of trust in green claims in the relationship between skepticism toward green advertising or knowledge and perceived ecological intentions. (Sio et al., 2022)

environmental knowledge and beliefs are important factors that shape consumer attitudes, intentions and behaviors towards green products and practices. Understanding the linkages between environmental knowledge and trust can help

businesses, policymakers and marketers develop strategies to promote sustainable consumption and encourage green consumer choices.

### **Environmental Knowledge and Perceived Behavior Control**

Environmental knowledge and perceived behavioral control are two important factors that influence consumer behavior, especially in the context of sustainable consumption and pro-environmental behavior. Theory of Planned Behavior (TPB) focuses on constructing theories related to individual motivational factors as determinants of the likelihood of performance of certain behaviors (Montano et al., 2002). TPB theory rests on the foundation assumption that the best predictor of a behavior is intention, which is determined by attitudes towards and social normative perceptions of the behavior.

This research understands green customer behavior as measured by customer readiness or intention to buy green goods. Some environmental experts state that producers will eventually switch to better products. (Dewi & Ariani, 2023)

environmental knowledge and perceived behavioral control are important factors that shape consumer attitudes, intentions and behaviors toward green products and practices. Understanding the interplay between these factors can help businesses, policymakers and marketers develop strategies to promote sustainable consumption and encourage green consumer choices.

### **Environmental Knowledge and Subjective Norms**

Environmental knowledge and subjective norms are two important factors that influence consumer behavior, particularly in the context of sustainable consumption and pro-environmental behavior. norms, and confirmed a significant positive relationship between green food purchase intention and its three antecedents (Ham et al., 2015). Furthermore, the regression analysis revealed two important theoretical insights that descriptive norms are statistically significant predictors of green food purchasing behavior and combining social aspects and descriptive norms increases the explained variance in intentions.

Attitudes influence pro-environmental behavior based on the TPB theory Perceived behavioral control has a significant impact on commitment across a range of actions The results of this study suggest differently that Human attitudes are strong predictors of subsequent events, This idea also applies to the study of environmental behaviors (Tamar et al., 2021).

Environmental knowledge and subjective norms are important factors that shape consumer attitudes, intentions and behaviors towards green products and practices. Understanding the interplay between these factors can help businesses, policymakers and marketers develop strategies to promote sustainable consumption and encourage green consumer choices.

### **Gender and Trust**

The relationship between gender and trust is complex and multifaceted. Research shows that men tend to be more trusting than women, and women are more

trustworthy than men. These differences in trust behavior are observed in a variety of contexts, including economic and social interactions (Wu et al., 2020).

the relationship between gender and trust is complex and influenced by various factors. Although men tend to be more trusting than women, women are more trustworthy than men. Neural signatures of gender differences in interpersonal trust suggest that men are more prone to risk-taking and goal-directed behavior, while women focus more on social cognition and cooperation. Understanding these differences can provide insights into the development of trust-based relationships and the role of gender in shaping economic and social interactions. (Emperatriz et al., 2022).

### **Gender and Perceived Behavior Control**

The relationship between gender and perceived behavioral control is complex and multifaceted. Research shows that men tend to perceive higher levels of psychological and behavioral control than women, throughout their developmental years and particularly during the entrepreneurial stage (Vamvaka et al., 2020).

the relationship between gender and perceived behavioral control is complex and influenced by multiple factors. While men tend to perceive higher levels of psychological and behavioral control than women, the differences are seen in various contexts and are influenced by age, ethnicity and other factors (Guo & You, 2023). Understanding these differences can provide insight into the development of trust-based relationships and the role of gender in shaping consumer behavior.

### **Gender and Subjective Norms**

The relationship between gender and subjective norms is complex and multifaceted. Research shows that gender differences in perceived family involvement and subjective norms influence intentions to adopt organic food. Men tend to feel a higher level of psychological and behavioral control than women, which may influence their attitudes and behaviors towards certain products or practices. (Johnson, 2016)

the relationship between gender and subjective norms is complex and influenced by various factors. While men tend to have stronger subjective norms towards organic food consumption, women are more concerned with the pleasure of others and may be influenced by different social pressures. (Ying et al., 2023). Understanding these differences can provide insight into the development of marketing strategies and the role of gender in shaping consumer behavior.

### **Trust and Purchase Intention**

The relationship between trust and purchase intention is very important, where trust plays an important role in influencing consumers' willingness to make purchases. Research consistently shows that trust has a strong positive impact on purchase intentions, with consumers more likely to make a purchase when they trust the seller or brand. (Mahliza & Buana, 2020).

trust is an important factor in influencing purchase intention, with direct and indirect impacts on consumer behavior (M. Zhang et al., 2023). Marketers can

leverage trust to increase purchase intent by building trust through various means, including online service landscapes, offline brand trust, and online brand trust.

### Perceived Behavior Control and Purchase Intention

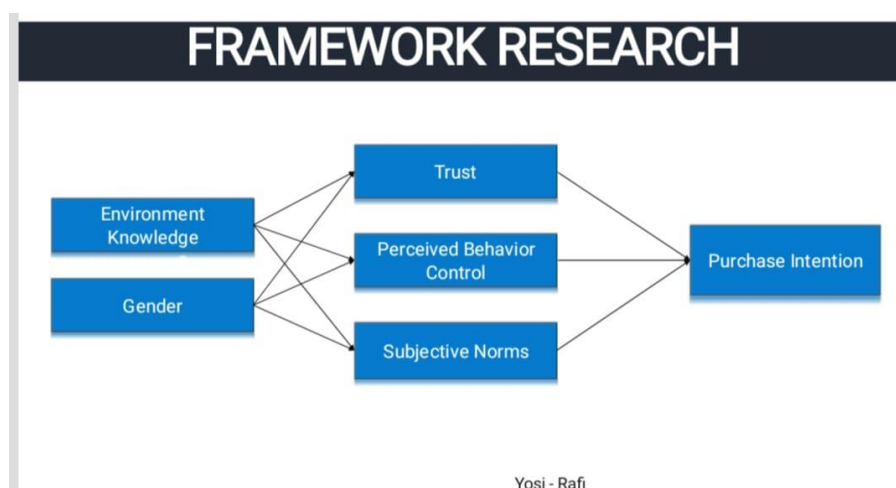
The relationship between perceived behavioral control and purchase intention is a significant relationship, where perceived behavioral control plays an important role in influencing consumers' willingness to make purchases. (Simarmata et al., 2019). Research consistently shows that perceived behavioral control has a positive impact on purchase intention, with consumers more likely to make a purchase when they feel they have control over the situation.

perceived behavioral control is an important factor in influencing purchase intention, with direct and indirect impacts on consumer behavior. Marketers can leverage perceived behavioral control to increase purchase intentions by building self-efficacy and perceived ease of use. (Norm & Behavioral, 2020)

### Subjective Norms and Purchase Intention

The relationship between subjective norms and purchase intention is a significant relationship, where subjective norms play an important role in influencing consumers' desire to make purchases (Control, 2020). Research consistently shows that subjective norms have a positive impact on purchase intentions, where consumers are more likely to engage in purchases when they feel that their peers or reference groups approve of the behavior.

subjective norms are an important factor in influencing purchase intention, both directly and indirectly on consumer behavior (Budiman & Wijaya, 2014). Marketers can leverage subjective norms to increase purchase intentions by creating social pressure and influencing consumers' perceptions of what others think about certain behaviors.



## Methodology

This research method includes several important steps. First, we collected data through questionnaires and interviews. Questionnaires were designed to obtain an overview of a large population, and interviews were designed to obtain more detailed information on the research topic. The collected data was then analyzed using various statistical techniques such as descriptive analysis, inferential analysis, parametric analysis, and non-parametric analysis. The validity and reliability of the indicators used to measure a particular concept were then assessed to ensure the reliability of the measurement.

Path analysis is used to understand the relationship between the variables studied. The results show that there is a significant influence between competence, satisfaction, and trust. Finally, we used indirect effect analysis to examine how certain variables influence trust through their impact on satisfaction. Hence, this methodology involves various steps from data collection to detailed statistical analysis to gain a comprehensive understanding of the research topic.

## Data Collection

Quantitative data collection through questionnaire distribution is the process of designing, distributing, and analyzing questionnaires to collect numerically measurable data from respondents. Once the survey is created, it is distributed to the respondents and they are asked to answer the questions. The collected data will be analyzed using statistical methods to obtain relevant and accurate information regarding the research topic. This approach allows researchers to use empirical data to gain an in-depth understanding of the phenomenon they are studying.

This approach allows researchers to use empirical data collected through surveys to gain a deeper understanding of the phenomenon being studied. This allows the researcher to draw more informed conclusions and gain better and more accurate insight into the research topic.

## Analysis/Pembahasan

Table 1 MV Deskriptives

	Mean	Median	Min	Max	Standard Deviation	Excess Kurtosis	Skewness	Number of Observations Used
EK <sub>1</sub>	4,991	5,000	1,000	6,000	1,109	3,874	-1,797	113,000
EK <sub>2</sub>	5,044	5,000	1,000	6,000	0,972	4,941	-1,789	113,000
EK <sub>3</sub>	4,619	5,000	1,000	6,000	1,257	0,885	-1,168	113,000
GDR <sub>1</sub>	4,956	5,000	1,000	6,000	1,051	3,061	-1,487	113,000
GDR <sub>2</sub>	4,938	5,000	1,000	6,000	1,075	3,963	-1,738	113,000
GDR <sub>3</sub>	4,912	5,000	1,000	6,000	1,149	3,449	-1,706	113,000
PBC <sub>1</sub>	4,867	5,000	1,000	6,000	1,101	3,313	-1,627	113,000
PBC <sub>2</sub>	4,832	5,000	1,000	6,000	1,182	2,675	-1,559	113,000
PBC <sub>3</sub>	5,080	5,000	1,000	6,000	0,923	2,837	-1,255	113,000
PI <sub>1</sub>	4,858	5,000	1,000	6,000	1,088	2,357	-1,385	113,000

PI <sub>2</sub>	4,947	5,000	1,000	6,000	1,038	4,492	-1,771	113,000
PI <sub>3</sub>	4,929	5,000	1,000	6,000	0,993	3,773	-1,560	113,000
SN <sub>1</sub>	4,761	5,000	1,000	6,000	1,192	1,938	-1,400	113,000
SN <sub>2</sub>	4,814	5,000	1,000	6,000	1,187	2,527	-1,533	113,000
SN <sub>3</sub>	4,814	5,000	1,000	6,000	1,179	2,847	-1,634	113,000
TRS <sub>1</sub>	5,018	5,000	2,000	6,000	0,764	1,386	-0,754	113,000
TRS <sub>2</sub>	4,982	5,000	1,000	6,000	1,056	4,343	-1,793	113,000
TRS <sub>3</sub>	4,991	5,000	1,000	6,000	0,991	4,137	-1,641	113,000

The given table shows descriptive statistics for several variables labeled EK<sub>1</sub> to TRS<sub>3</sub>.

The variables are known as mean, median, minimum, maximum, standard deviation, extreme kurtosis, reciprocal, and the number of observations used. These statistics were calculated for each variable using 113,000 observations.

**Table 2** inner model

Wa	Latent Variable 5	environment knowledge	perceived behavior control	purchase intention	subjective norms	trust
Latent Variable 5			1,000		1,000	1,000
environment knowledge			1,000		1,000	1,000
perceived behavior control				1,000		
purchase intention						
subjective norms				1,000		
trust				1,000		

The importance of t-values in research is that they allow us to determine whether observed differences between sample means are statistically significant, that is, whether they are unlikely to have occurred by chance. The t value is calculated by comparing the difference between the sample mean and the hypothesized population mean with the standard error of the sample mean. This comparison is used to determine whether the observed differences are significant based on the t distribution and degrees of freedom.

**Table 3** outer loading

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( O/STDEV )	P Values
EK <sub>1</sub> <- environment knowledge	0,904	0,900	0,033	27,411	0,000
EK <sub>2</sub> <- environment knowledge	0,877	0,872	0,040	22,129	0,000
EK <sub>3</sub> <- environment knowledge	0,810	0,808	0,053	15,162	0,000
GDR <sub>1</sub> <- Latent Variable 5	0,917	0,913	0,032	29,054	0,000
GDR <sub>2</sub> <- Latent Variable 5	0,957	0,956	0,013	76,085	0,000
GDR <sub>3</sub> <- Latent Variable 5	0,917	0,919	0,026	35,035	0,000
PBC <sub>1</sub> <- perceived behavior control	0,908	0,906	0,030	30,606	0,000

PBC <sub>2</sub> <- perceived behavior control	0,915	0,913	0,024	37,672	0,000
PBC <sub>3</sub> <- perceived behavior control	0,781	0,774	0,082	9,551	0,000
PI <sub>1</sub> <- purchase intention	0,949	0,947	0,014	66,323	0,000
PI <sub>2</sub> <- purchase intention	0,921	0,918	0,025	36,593	0,000
PI <sub>3</sub> <- purchase intention	0,939	0,939	0,029	32,400	0,000
SN <sub>1</sub> <- subjective norms	0,930	0,928	0,021	44,967	0,000
SN <sub>2</sub> <- subjective norms	0,925	0,924	0,032	29,292	0,000
SN <sub>3</sub> <- subjective norms	0,924	0,923	0,020	47,053	0,000
TRS <sub>1</sub> <- trust	0,852	0,848	0,056	15,134	0,000
TRS <sub>2</sub> <- trust	0,900	0,896	0,032	28,459	0,000
TRS <sub>3</sub> <- trust	0,947	0,945	0,014	67,279	0,000

The table above shows the t-statistics and p-value for each variable. The t value indicates how big the difference is between the sample mean and the population mean, and the p value indicates the likelihood that the difference occurred by chance. A very small p value (less than 0.05) indicates that the difference did not occur by chance and is statistically significant

**Table 4** path coefficient

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( O/STDEV )	P Values
Latent Variable 5 -> perceived behavior control	0,565	0,577	0,103	5,491	0,000
Latent Variable 5 -> subjective norms	0,632	0,606	0,179	3,530	0,000
Latent Variable 5 -> trust	0,917	0,904	0,153	6,001	0,000
environment knowledge -> perceived behavior control	0,378	0,364	0,110	3,451	0,001
environment knowledge -> subjective norms	0,299	0,322	0,190	1,575	0,116
environment knowledge -> trust	-0,050	-0,037	0,149	0,336	0,737
perceived behavior control -> purchase intention	0,403	0,398	0,171	2,362	0,019
subjective norms -> purchase intention	0,550	0,540	0,104	5,293	0,000
trust -> purchase intention	-0,008	0,007	0,168	0,050	0,960

The table above shows the t-statistics and p-value for each variable. The t value indicates how big the difference is between the sample mean and the population mean, and the p value indicates the likelihood that the difference occurred by chance. A very small p value (less than 0.05) indicates that the difference did not occur by chance and is statistically significant



**Table 5** Specific Indirect Effects

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( O/STDEV )	P Values
Latent Variable 5 -> perceived behavior control -> purchase intention	0,228	0,230	0,115	1,991	0,047
environment knowledge -> perceived behavior control -> purchase intention	0,153	0,145	0,078	1,951	0,052
Latent Variable 5 -> subjective norms -> purchase intention	0,347	0,324	0,109	3,189	0,002
environment knowledge -> subjective norms -> purchase intention	0,164	0,178	0,116	1,413	0,158
Latent Variable 5 -> trust -> purchase intention	-0,008	0,013	0,156	0,050	0,960
environment knowledge -> trust -> purchase intention	0,000	-0,004	0,025	0,017	0,986

This table shows how several independent variables (latent variable 5 and environmental knowledge) indirectly influence the dependent variable (purchase intention) through mediating variables (perceived behavioral control, subjective norms, and trust).

## CONCLUSION

This study shows that trust in electric vehicle brands has a significant positive effect on purchase intention, and higher environmental knowledge increases the likelihood of purchasing environmentally friendly electric vehicles. Although gender has no significant effect, perceived behavioral control and subjective norms have a significant positive effect on purchase intention. Marketing strategies that consider trust, environmental knowledge, and subjective norms can increase the purchase intention of electric vehicles. Therefore, this study contributes to the development of more effective marketing strategies for electric vehicle brands.

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