Analyzing Factors Affecting Purchase Intention of Electric Vehicle in Indonesia; Moderation Role of Personal Innovativeness on Those Factors

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Abstract. Electric vehicles as a sustainable innovation have the potential to reduce CO2 emissions and fossil fuels consumption, it is expected to reduce greenhouse gas emissions caused by burning fossil energy. However, the reality is that until 2021 sales of electric vehicles in Indonesia have not reached the desired target. This study identified the factors that influence consumer intentions to adopt electric vehicles in Indonesia using the Combined Theory Acceptance Model-Theory of Planned Behavior (C-TAM-TPB). The result is perceived usefulness does not directly affect the purchase intention of electric vehicles but can affect indirectly together with perceived of ease of use and price value through attitudes. Attitudes, subjective norms, perceived behavioral control, environmental self-image, price value, and personal innovativeness positively as well as can decrease perceived risk to intention to buy electric vehicles in Indonesia.

Keywords: electric vehicle; consumer behaviour; Theory Acceptance Model, Theory of Planned Behaviour, purchase intention

I. Introduction

Environmental degradation has become a problem that has been noticed in recent years. This is caused by the continuous and uncontrolled emission of harmful atmospheric pollutants through various human activities. Consumption of fossil fuels is one of the main reasons (Asadi et al., 2021). The use of fossil energy is mostly consumed by the transportation sector as fuel oil (BBM) and its needs increase by an average of 4.7% per year until 2050 (Sugiyono, et al., 2019). In 2016, the transportation sector took up an 80.7% niche in consuming fuel for private vehicles, both cars and motorcycles (Yudiartono et al., 2018). The transportation sector is also the second largest contributor to Indonesia's greenhouse gas (GHG) emissions (157 million tons CO2 or 27%) after the industrial sector (215 million tons CO2 or 37%) in 2019 (Climate Transparency Report, 2020).

The Jokowi government is quite serious about increasing the use of electric vehicles in Indonesia, as evidenced by the signing of "Presidential Decree No. 55 of 2019 concerning the Acceleration of the Battery-Based Electric Vehicle Program". Through this Presidential Regulation, by 2025 Indonesia targets 20% of the total national production of motorized vehicles to be electric vehicles. This Presidential Decree also states that buyers of electric motorized vehicles such as cars and motorcycles are subject to an incentive for the Transfer of Motorized Vehicle Names Tax (BBN-KB), namely by providing a discount of around 75% to electric motorcycle owners to stimulate people's desire to switch, buy and use vehicles. electricity (JDIH BPK RI, 2019).

The government hopes that the various initiatives that have been carried out can stimulate conventional vehicle users to switch, buy, and use electric vehicles. But the current condition is still inversely proportional to the target. Until 2021, sales of electric vehicles in Indonesia from factories to dealers have only reached 685 units with the Hyudai Kona brand, which is the most sought after by consumers, selling 360 units (Febriani, 2022). Therefore, it is important to know people's preferences or expectations for electric vehicles (Rezvani et al., 2015), considering that these products are still new in Indonesia and the use of electric vehicles in Indonesia is still at the initiation stage.

Technology acceptance model (TAM) has been used to explain perceived ease of use and perceived usefulness in influencing behavioral intentions (Davis, Bagozzi, & Warshaw, 1989). Although TAM has described whether the public accepts an innovation, it is still not sufficient to explain consumer behavior. On the other hand, TPB has been used to investigate the impact of behavioral intentions from three factors namely, attitude, perceived norms, and perceived behavior control (Ajzen, 2002). These two theories tend to produce a more consolidated model when integrated into C-TAM-TPB. The findings of Taylor and Todd (1995) show that the C-TAM-TPB model can explain the goodwill behavior of experienced and inexperienced users.

This study adopts variables from the research of Vafaei-Zadeh et al. (2022) which adds additional variables to the C-TAM-TPB framework that can describe the context of the newly formed market such as environmental self-image, perceived risk, infrastructure barrier, and price. values. They found that

attituded, subjective norm, perceived behavioral control, perceived value, price risk, infrastructure barrier, environmental self-image had an influence on the purchase intention of electric vehicles in Gen Y in Malaysia. Even so, Vafaei-Zadeh et al. (2022) mention that there are limitations in their research, one of which is that there are still other factors that can influence consumers' intention to buy electric vehicles.

Related to this, Wisdom et al. (2013) found that individual characteristics such as personal innovativeness are one of the factors that influence behavioral intentions, especially for new technologies or innovations. Research conducted by He et al., (2018) found that personal innovativeness can indeed influence the purchase intention of electric vehicles in China. However, Tu and Yang (2019), found that personal innovativeness did not have an impact on attitudes that led to the behavioral intention of buying electric vehicles. Therefore, the researcher in this thesis adds the personal innovativeness variable as one of the factors that can influence the consumer's electric vehicle purchase intention.

Based on the described background, the authors are interested in conducting research that focuses on the factors that can influence the purchase intention of electric vehicles in Indonesia. This research will be aimed at Indonesian consumers aged 21-55 years who already have knowledge of electric vehicles in Indonesia so that they can relate to the factors that have been discussed previously. Age over 21-55 years was chosen because individuals in this range are eligible to purchase vehicles on a leasing basis. This research is then expected to contribute both academically and practically regarding the variables studied in it.

II. Literature Review

Theory of Combine-Technology Acceptance Model-Theory of Planned Behavior (C-TAM-TPB)

Taylor & Todd (1995) claim that while TAM remains a quick and easy model for predicting actual user intentions towards technology, it does not consider social or cognitive factors such as subjective norms and perceived behavior control. These two factors are very important factors to understand the acceptance of technology from a psychological perspective. Subjective norm specifically examines a person's beliefs related to IT applications and is judged by a network of important people around them, while perceived behavioral control considers the influence of individuals' abilities to control their own behavioral intentions.

Therefore, to complement the social factors that do not exist in the TAM model, Taylor & Todd (1995) combine them with attributes that exist in the TPB to become C-TAM-TPB. The C-TAM-TPB model is considered ideal for this research because when TAM focuses on factors that are on the technology side, the attributes of TPB can examine factors related to user characteristics. Compared to TAM and TPB, C-TAM-TPB includes more factors than the original model. This model has been widely used to predict the behavioral intention of users towards technology products (Taylor & Todd, 1995).

Innovation Diffusion Theory

The adoption of a new innovation does not occur simultaneously in social systems; it is a process by which some people are more likely to adopt an innovation than others. Rogers (1962) found that people who adopt an innovation early have different characteristics than people who adopt an innovation later. Based on the level of innovation adoption Rogers (1983) categorizes individuals in the social system into five categories, namely (1) innovators (2) early adopters (3) early majority (4) late majority (5) laggards. Therefore, DOI is widely seen by researchers to see the process of adopting new technology that continues to grow.

Determinants of Interest in Using Electric Vehicles

Perceived Usefulness

Chen, (2016) clarified the idea of perceived usefulness where when consumers find that the use of environmentally friendly products can improve the quality of life of their users, it can affect their intention to adopt the product. Regarding electric vehicles, research by Wang et al. (2018) found that perceived usefulness is a positive predictor of a person's attitude towards the intention to adopt an electric vehicle in China. Vafaei-Zadeh et al., (2022) argue that perceived usefulness has a positive impact on attitudes to buying electric vehicles, but it is not significant for intention to buy electric vehicles in Generation Y in Malaysia. Therefore, the researchers developed a hypothesis

H1 Perceived usefulness positively affects intention to buy a vehicle electricity

H2 Perceived usefulness positively affects attitude



Figure 1. Research Model

Perceived Ease of Use

Chen. (2016) stated, unlike perceived usefulness which significantly affects intention to buy (INT), sometimes perceived ease of use has less impact or no effect at all on INT. However, related to the ease of use felt by users of electric cars, users tend to believe that electric vehicles are easy to use and learn. The discovery by Wu et al. (2019) states that perceived ease of use has a positive impact on attitude. This is confirmed by Vafaei-Zadeh et al. (2022) which states that perceived ease of use is the strongest determinant of a person's attitude. Based on this the next hypothesis **H3** Perceived ease of use positively affects attitude

Attitude

Based on the results of research conducted by Wang et al.(2018) in Beijing stated that consumers who have a positive attitude towards the use and purchase of electric vehicles are more willing to buy electric vehicles. The discovery by Vafaei-Zadeh et al. (2022) also stated that attitude has the strongest positive impact on the intention to adopt electric vehicles in Generation Y in Malaysia. Therefore, the researcher builds the following hypothesis.

H4 Attitude positively affects intention to buy an electric vehicle

Subjective Norm

Consumers' perceptions of their beliefs on certain behaviors significantly impact individual behavior, especially if the particular behavior supports the environment and is in line with their choices (Li et al., 2020). The results of research conducted by Semejin et al. (2019) stated that subjective norm is a significant determinant of consumers' intention to buy environmentally friendly products. SN also has a positive effect on the purchase of electric vehicles in India (Shalender and Sharma, 2020). Asadi et al. (2021) found that SN positively affects the intention to buy electric vehicles in Malaysia. Therefore, the next hypothesis is

H5 Subjective norm positively affects intention to buy an electric vehicle

Perceived Behavioral Control

Research conducted by Huang and Ge (2019) found that perceived behavior control has an influence on consumers' desire to buy electric vehicles. The results of research in India also show that there

is a positive relationship between PBC and a person's purchase intention of electric vehicles (Jaiswal et al., 2021) Based on the above, the researcher builds the following hypothesis

H6 Perceived behavioral control positively affect intention to buy electric vehicles for consumers

Price Value

Degirmenci & Breitner. (2017) stated that price value positively affects attitudes to adopting electric vehicles so that it becomes an important factor for the diffusion of electric vehicles in Germany. Vafaei-Zadeh et al. (2022) in their research found that price value is the second strongest factor that positively influences Generation Y on the intention to buy an electric vehicle in Malaysia and concludes that price value is an important factor in the intention to buy an electric vehicle. Based on this, the hypothesis is formulated as follows

H7 Price value positively affects attitude

H8 Price Value positively affects the intention to buy an electric vehicle

Percieved Risk

Perceived risk is a person's perception of the uncertainty that may be faced when driving an electric vehicle. Perceived risk is widely believed to be one of the obstacles for an innovative technology to be adopted by consumers (Qian & Yin, 2017). Since the development of electric vehicles is still in its early stages, electric vehicle technology is still considered immature. Especially in battery technology as a technology for storing energy in electric vehicles, battery mileage may not meet consumer expectations (Xu et al., 2019). The higher the perceived risk, the lower the purchase intention (Qian & Yin, 2017). Previous research found that perceived risk has a negative impact on consumer desire to adopt electric vehicles (He et al., 2018; Vafaei-Zadeh et al., 2022; Wang et al., 2018). Therefore, the next hypothesis is **H9** Perceived risk negatively affects intention to buy an electric vehicle

Environmental Self Image

Heffner et al., (2007) stated, most consumers believe that if they have an electric vehicle, it can represent an image of environmentalism that will be appreciated and appreciated by others. This was confirmed by Vafaei-Zadeh et al. (2022) through their findings where Environmental Self Image has a positive and significant impact on the purchase of electric vehicles. Therefore, the researcher developed the following hypothesis:

H10 Environmental self-image positively affect intention to buy electric vehicle

Infrastructure Barrier

Past research has found that the unavailability of adequate charging infrastructure is one of the main barriers to the spread of electric vehicle adoption (Nocera & Cavallaro, 2016). Inadequate charging infrastructure reduces user flexibility and convenience which makes driving electric vehicles unattractive (Sierzchula et al., 2014). Therefore, this study makes the following hypotheses:

H11 Infrastructure barrier negatively affects intention to buy electric vehicle

Personal Innovativeness

Janson (2011) found that adopters of electric vehicles showed a higher level of innovativeness than non-adopter and states that personal innovativeness can directly influence consumers' intention to buy electric vehicles. He et al. (2018) concluded that this finding may be because individuals with a high level of personal innovativeness can easily inagine the benefits of electric vehicle innovation.

H12a Personal innovativeness positively affect intention to buy electric

Vehicle

H12b Personal innovativeness weakens the negative effect of perceived risk on Intention to buy an electric vehicle.

III. Research Method

Data Collection and Participants

The study was conducted using a cross-sectional study to answer research questions and the answers were obtained from 537 respondents through online questionnaires using Google Form. The population selected in this study were all individuals who were aware about electric vehicle and have not bought electric vehicle. Study participants were aged 21-55 years old. The range was selected to fit with regulations imposed by banks or leasing companies for vehicle loans, which is a minimum of 21 years and

a maximum of 60 years when the loan is paid off. In this study, A Likert scale of 1–5 was used, where a score of 1 and 5 denotes the opinion of "strongly disagree" and "strongly agree."

Data Analysis

First, a pilot test was conducted on 30 respondents and processed using SPSS 26 software to measure the validity and reliability of the research instrument. This research will use Structural Equation Modeling (SEM) for data processing. In research that uses SEM, models are usually built to test hypotheses derived from a theory (Malhotra & Dash, 2016). One of the steps taken with SEM is used to generate correlations or relationships between the items being measured or the variables being tested (Malhotra & Dash, 2016). Analysis of the measurement model with SEM can be done using confirmatory factor analysis (CFA).

IV. Result And Discussion

Respondent profile

The profile of respondents of this research is as followed

Table 1. Respondent Demographic Data					
Demographic Feature	Frequency	Percent			
Gender					
Male	320	60%			
Female	217	40%			
Age Range					
21 to 25 years old	50	9%			
26 to 34 years old	300	56%			
35 to 44 years old	161	30%			
>44 years old	26	5%			
Education Level					
Senior High School	51	9%			
Diploma	91	17%			
Bachelor's Degree	302	56%			
Master's Degree	91	17%			
Doctoral Degree	3	1%			
Domicile					
Jabodetabek	318	59%			
Non-Java Island	66	12%			
Java Island outside of Jabodetabek	153	29%			
Income					
<5 million IDR	51	9%			
5–15 million IDR	331	62%			
15–25 million IDR	103	19%			
25–35 million IDR	30	6%			
>35 million IDR	22	4%			

Outer Model Analysis

The outer model analysis aims to test the construct validity and instrument reliability. The validity test was conducted to determine the ability of the research instrument to measure what it should measure (Cooper et al. 2006). Reliability test is used to measure the consistency of respondents in answering the question items in the questionnaire or research instrument. This Study used SmartPLS 3.3.9 software to analyze the data.

Convergent Validity

In accordance with the initial stages of testing using PLS, a measurement test, the indicator will be considered valid if the AVE value is above 0.5 or the loading value is above 0.5 (hair et al., 2017). Based on the results in table 2, it can be concluded that the validity score of each variable is considered valid because while it has one variable below 0.5, the outer loading of the variable has a loading value of more than 0.5. Therefore, it can be concluded that the convergent validity in this study is considered good.

Reliability

The requirement for a statement item on a variable to be declared reliable is composite reliability score is more than 0.7 (hair et al., 2017) The result from table 2 showed that all the constructs in this study met the requirements of good reliability by obtaining a composite reliability value above 0.70. So, it can be concluded that all this research's construct is reliable

Variabel	Indicat	Loadin	Composite	Average Variance Extracted
Attituda	Oľ	<u>g</u>	Reliability	(AVE)
Autude		0.798	0.898	0.393
	ATT2	0.770		
	ATT4	0.772		
	ATT5	0.750		
		0.760		
Environmental Self Image	FSI1	0.704	0.930	0.770
Environmental ben image	ESI2	0.904	0.750	0.170
	ESI3	0.868		
	ESI4	0.855		
Infrastructure Barrier	IB1	0.642	0.882	0.601
	IB2	0.771	0.002	
	IB3	0.839		
	IB4	0.769		
	IB5	0.840		
Intention to Buy electric Vehicle	INT1	0.877	0.928	0.722
	INT2	0.863		
	INT3	0.871		
	INT4	0.846		
	INT5	0.787		
Perceived Behavioral Control	PBC1	0.740	0.852	0.536
	PBC2	0.740		
	PBC3	0.797		
	PBC4	0.727		
	PBC5	0.650		
Perceived Ease of Use	PEU1	0.774	0.841	0.517
	PEU2	0.577		
	PEU3	0.791		
	PEU4	0.699		
Perceived Risk	PR1	0.912	0.932	0.774
	PR2	0.871		
	PR3	0.890		
	PR4	0.845		
Perceived usefulness	PU1	0.568	0.812	0.467
	PU2	0.700		
	PU3	0.748		

	PU4	0.628		
	PU5	0.753		
Personal Innovativeness	PI1	0.836	0.838	0.634
	PI2	0.711		
	PI3	0.836		
Price Value	PV1	0.833	0.882	0.652
	PV2	0.810		
	PV3	0.761		
	PV4	0.824		
Subjective Norm	SN1	0.785	0.919	0.588
	SN2	0.738		
	SN3	0.770		
	SN4	0.787		
	SN5	0.770		
	SN6	0.818		
	SN7	0.810		
	SN8	0.645		

Inner Model Analysis

The analysis of the inner model or structural model is done by looking at the relationship between the construct variables. This test is seen through the results of the coefficient of determination, as well as path coefficients and parameter coefficients. When the significant relationship between the variables is known, then it can be concluded that the hypothesis related to the variables used in this study can be concluded. Hypothesis testing is done by bootstrapping on Smart PLS 3.3.



Figure 2. Structural Model

Path Coefficient

The path coefficient value in the structural model (inner model) shows the level of significance. In testing the hypothesis, this study uses one tailed hypothesis testing at an alpha of 5% so that the measurement items used are said to be significant if the T-statistics value is greater than 1.64 and the p-value is less than 0.05. While the parameter coefficients that indicate the direction of influence are by looking at the positive or negative of the original sample ((Hair et al, 2006 in Abdillah Jogiyanto, 2015). The results of hypothesis testing are shown on the table 3

Table 3. Path Coefficient						
_	Path	Original Sample	T Statistics	P Values	Supp orted	
H1	<i>Perceived usefulness</i> \rightarrow intention to buy electrivehicle	c -0.047	0.942	0.173	No	
H2	Perceived usefulness \rightarrow Attitude	0.521	11.406	0.000	Yes	
H3	Perceived ease of use \rightarrow Attitude	0.193	4.228	0.000	Yes	
H4	Attitude \rightarrow intention to buy electric vehicle	0.272	4.361	0.000	Yes	
H5	Subjective norm \rightarrow intention to buy electric vehicle	0.185	3.158	0.001	Yes	
H6	Perceived behavioural control \rightarrow intention to buy electric vehicle	0.115	2.380	0.009	Yes	
H7	<i>Price value</i> \rightarrow Attitude	0.182	4.673	0.000	Yes	
H8	<i>Price Value</i> \rightarrow intention to buy electric vehicle	0.296	7.278	0.000	Yes	
H9	<i>Perceived risk</i> \rightarrow intention to buy electric vehicle	e -0.079	2.342	0.010	Yes	
H10	<i>Environmental self-image</i> →intention to buy electric vehicle	0.070	2.246	0.012	Yes	
H11	Infrastructure barrier \rightarrow intention to buy electric vehicle	-0,088	2.5323 2	0.006	Yes	
H12	Personal innovativeness \rightarrow intention to buy electric vehicle	0.073	2.213	0.013	Yes	

Moderation Effect

	Path	Original Sample	T Statistics	P Values	Supported
H12a	Personal innovativeness weakens the negative effect of perceived risk on intention to buy an electric vehicle.	0.080	2.587	0.005	Yes

Discussion

H1 was rejected, which means perceived usefulness has no significant effect to intention to buy electric vehicles. This result is Similar to the research conducted by Vafaei Zadeh et al. (2022) who found that perceived usefulness was not a direct predictor to predict the intention to buy electric vehicles in Generation Y in Malaysia. But the findings of this study are different from those of other previous studies where when consumers find that the use of environmentally friendly products can improve the quality of life of their users, it can affect their intention to adopt the product (Chen. 2016; Wang et al., 2018; Liu et al., 2018; Thøgersen, 2018).

Perceived usefulness is a variable that reflects a utilitarian factor which is used to measure whether a product can provide benefits to its users (Akdim et al., 2022). The diffusion of electric vehicles in Indonesia is still in its early stages. The price is still relatively expensive and the charging infrastructure with a relatively low ratio (70:1) (IESR 2021) makes respondents in this study feel that adopting a vehicle is not something that is bought by looking at its functional benefits.

H2 and H3 were supported which means Perceived usefulness and Perceived ease of use can positively influence attitude, This is similar to result of these researchs Jaiswal et al. 2021; Vafaei-Zadeh et al., 2022; Wang et al. 2018; Xu et al, 2019;). H4 is also supported which means This finding is in line with Technology acceptance model (Davis 1989) where attitude towards behavior can positively influence intention to buy electric vehicle.

H5 and H6 were supported is in line with result of the study by Asadi et al. (2021), Gunawan et al. (2021), Semejin et al., 2019, Hamzah dan Tanwir. (2021), Huang & Ge. (2019), and Vafaei Zadeh et al.

(2022). This research support Theory Planned Behavior that social and cognitive factors such as social norm, and behavioral control can positively influence intention to buy electric vehicle.

H7 and H8 were supported and price value is the highest factor that affects the intention to adopt electric vehicles based on the value of T statistic, so it can be concluded that price value is a very important component in encouraging the desire to buy electric vehicles. The results of this study differ from the findings of Xu et al. (2019), but this finding is in accordance with previous research which stated that price value affects the intention to purchase electric vehicles Vafaei Zadeh et al. (2022).

H9 was supported this is similar to the finding by Vafei Zadeh et al. (2022) and M. Featherman et al. (2021) that stated consumers in their research are aware of the risks in adopting electric vehicles which gives the impression that buying an electric vehicle is a risky behavior.

H10 was supported and similar with finding from Xu, Prybutok, & Blankson. (2019) where environmental self-image influenced respondents' decisions when electric vehicles were expected to reflect their self-image and Vafaei Zadeh et al. (2022) stated that their respondents believe that if they have an electric vehicle, it can represent an image of environmentalism that will be appreciated and appreciated by others.

H11 was supported which means in this study the respondents think that infrastructure barrier was indeed a hindrance. This finding differed from Vafaei Zaddeh et al (2022) that found infrastructure barrier is not significant to influence intention to buy electric vehicle for generation Y in Malaysia.

H12 and H12d was supported and This finding supports the innovation diffusion theory by Rogers (1983) where individuals who have a high level of innovation have a positive attitude towards technology. This finding is also in accordance with research from He et al., (2018) and Vafaei Zadeh et al., (2022) and Palash et al (2022) where personal innovativeness can increase consumers' intention to buy electric vehicles in China and Generation Y in Malaysia and can decreased perceived risk in relationship to intention to buy electric vehicle. In this study, respondents who have a personality who likes to try new technology, seek information about new technology and try it first than their peers will be more internally motivated to own an electric vehicle.

V. Conclusion

Conclusion and Suggestion

Based on the results of the analysis the conclusions obtained in this study are found that while perceived usefulness cannot directly influence intention to buy it can still indirectly affect through attitude together with perceived ease of use and price value. This can be interpreted that the respondents need to be convinced and build the idea first and then make the intention. SN and PBC can positively influence the intention to buy electric vehicle which means the respondents in this study can be stimulated by social and cognitive factors from TPB.

Price value has a positive effect and is the main determining factor on the respondent's desire to buy electric vehicles. This could mean that respondents in this study feel that the price and benefits provided by electric vehicles are balanced because personal innovativeness plays a role in influencing the desire to buy electric vehicles, but stakeholders must remember that diffusion occurs when the technology has been adopted by the late majority. Therefore, the industry must be able to provide product diversification, component availability, and after sales service at prices and locations that can be reached by various levels of consumer income class in Indonesia. The government can also play a role by providing on-the-road selling price subsidies to consumers.

Environmental self-image has a positive effect on the intention to buy electric vehicles in this study. This finding supports the self-image congruency theory which if the perceived product image is in accordance with one's self-image, it will positively affect the acceptance of a product (Sirgy, 1986 in Mohd Suki 2019)

Infrastructure barrier has a negative effect on respondents' willingness to buy electric vehicles, which means for the government and investors need to provide SPKLU that is easily accessible, fast charging speed, and utilize clean renewable energy. This is also intended to reduce the concerns of potential electric vehicle users against the risk of being stranded because they cannot charge their electric vehicles.

Perceived risk has a negative effect on the desire to buy electric vehicles in this study but can be weakened by personal innovativeness. Electric vehicles as new innovation products and also high involvement certainly make respondents really think about the risks that exist in electric vehicles. This is in accordance with the research of Featherman et al. (2021) and Palash et al (2022) where the risk is considered as a negative utility associated by consumers when buying a product or service so that it can inhibit the adoption behavior of the product but Personal innovativess can reduce the perceived risk when adopting a new technology.

Limitations, and Further research.

There are some drawbacks to this study. The scope of electric vehicles in research is still general, which includes electric cars and electric motorcycles, Respondents' criteria are still general, they have not paid attention to the buying power of respondents, Electric vehicle is a national program supported by the government which is given several incentives to encourage its diffusion. However, this study has not included the incentive factor to analyze whether it really can affect the intention to buy an electric vehicle therefore for future studies could include variables such as the incentives given are from the monetary side (tax discount) and the non-monetary side (free from odd-even regulations in Jakarta) and consider buying power as a criteria from the respondents.

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