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PREDICTING ELECTRIC CAR PURCHASE INTENTIONS AMONG INDONESIA'S MILLENNIALS

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ABSTRACT

Indonesia is a major energy-consuming country and is under pressure to improve its energy efficiency as well as reduce its carbon emissions. Electric cars, as an energy-efficient transport innovation, have the potential to alleviate environmental problems. This study aims to investigate Indonesian millennials' purchase intentions for electric cars by using an extended framework of the theory of planned behavior (TPB). We derived the model through structural equation modeling of a sample of 425 respondents in Indonesia. The findings of this model indicate that consumer attitude, subjective norms, and perceived behavioral control have significant positive influences on the purchase intention of electric cars. Furthermore, our results indicated that environmental concerns have a significant effect on attitude, subjective norm, and purchase intention for electric cars, but not perceived behavioral control. This study contributes to enriching the understanding of the intention to purchase an electric car among millennials in Indonesia.

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1. INTRODUCTION

Rapid economic growth in the last several decades has not only brought affluence to the global society, but it has also had a negative impact. One of them is the adverse effects on environmental deterioration (Smyth et al., 2009). The worldwide society is becoming increasingly conscious of environmental degradation caused by the damaging impacts of industrialization and urbanization on the environment (Chen & Hung, 2016). According to a research conducted by the International Energy Agency (IEA), carbon dioxide emissions are recognized as one of the primary causes of climate change, with the transportation sector accounting for two-thirds of total emissions. Furthermore, automobiles accounted for the greatest amount of energy usage. As a result, the agency proposed that fuel economy may enhance vehicle energy efficiency and significantly cut carbon emissions (IEA, 2020). Consumers have a critical role in climate change since their purchases have an impact not only on the economy and society, but also on the environment.

In Indonesia, a developing country with the world's fourth-largest population, the car industry is a major contributor to national economic growth. Increased automotive production in Indonesia impacts excessive energy use and environmental sustainability. In 2016, transportation was second only to the housing sector in terms of energy consumption (28.65%), with private automobiles playing an important role. Indonesia's fossil fuel reserves are deemed unsustainable, lasting up to 12 years (oil), 82 years (coal), and 33 years (gas) (natural gas). As a result, transportation is a major priority in the government's CO2 emission reduction initiatives.

In 2015, Indonesia pledged to cut CO2 emissions by up to 29%, or 303 million tons, by 2030 (Wijaya et al., 2017). Changing the transportation industry's energy source may reduce CO2 emissions, reduce dependency on oil, and mitigate climate change.

Changes in consumer behavior have occurred from the rise of environmental challenges in recent years. Consumers are becoming increasingly aware of and worried about their surroundings, as well as their own actions that may have a detrimental influence on the environment (Kilbourne et al., 2009). Consumers should be held accountable for environmental deterioration caused by their purchasing habits. The easiest strategy to reduce environmental damage is to purchase ecologically friendly or green products (Laroche et al., 2001). Electric vehicles (EVs) or full-cell cars are examples of ecologically friendly or green products in the transportation sector (Aziz et al., 2015). This study used electric cars as a research object that represents ecologically friendly automotive items.

According to the ASEAN Automotive Federation (AAF) research in 2020, Indonesia is one of the world's top automotive manufacturers, with more than 500,000 sales in 2020, and is rated second in the ASEAN market (AAF, 2020). On the other hand, Statistics Indonesia (BPS) said that the number of conventional automobiles in 2019 was around 15.5 million, representing a 5% increase over the previous year (BPS, 2019). Aside from that, the Association of Indonesia Automotive Industries (GAIKINDO) says that total electric car wholesales in Indonesia reached 1,900 units during the first half of 2021. This number combines hybrids, plug-in hybrid electric vehicles (PHEVs), and battery electric vehicles (BEV). Total sales of this electric car have already increased by 53.97 percent from the previous year. However, the adoption of electric vehicles in Indonesia is regarded as modest. The poor figures of electric car usage and acceptance in Indonesia may raise various doubts, but they are undeniably a fascinating phenomena. Why is the use of electric vehicles still lagging significantly behind that of conventional vehicles? Are electric vehicles not competitive enough when compared to conventional vehicles? Can't electric automobiles stand out and pique the curiosity of Indonesian consumers? Are electric automobiles not spectacular enough to persuade Indonesian motorists to convert from conventional to more environmentally friendly vehicles? Or, do car owners have preferences when it comes to adopting electric cars? The list just goes on and on. The game has evolved dramatically, and it is necessary to connect the missing dots.

There have been few research that look at the link between electric vehicles and Indonesian customers. As a result, studying consumer behavior regarding electric cars is important and would contribute to broader knowledge. In attempt to improve the market acceptance of electric cars and provide references for future research. The purchase intention of environmentally friendly items is a high priority among scholars and practitioners nowadays (Chan & Lau, 2012). Focusing on customers' preferences and decision-making processes toward electric vehicles, in particular, is crucial to marketing green products in general and electric vehicles in particular (Cherrier et al., 2011). For marketers, it is necessary to gain insight from what influences consumers' purchase intentions (Paul et al., 2016). The knowledge gained from consumers' buying decisions and preferences revealed a great deal about their behavior. As a result, the aim of this research is to determine Indonesian customers' purchase intentions for electric vehicles.

Many prior research have highlighted features of consumer groups who are concerned about the environment or wish to act in an environmentally responsible manner (Lindenberg & Steg, 2007; Lin, 2010; Harrison et al., 2005; Vermeir & Verbeke, 2008). According to Schmeltz (2012)'s research, the millenial generation is more concerned with maintenance and has a good attitude toward environmental preservation. Millennials have a greater awareness of the

environment than prior generations since they were educated about it as youngsters.A millenial generation, according to Kotler and Amstrong (2008), is a population group born between 1978 and 2000, whereas Howe et al., (2000) the millenial generation was born between 1982 and 2000, but Kim et al., (2008) asserted that the millenial generation was born between 1982 and 2005. While no definite cutoff dates have been established by experts, it is usually considered that the Millennial Generation is comprised of people born between the 1980s and the early 2000s.

The millennials are known as the "green generation" because they grew up in the midst of environmental degradation and care for the environment was instilled in them since they were kids (Johansson & Persson, 2019), and they think that human action is responsible for global climate change (Ottman, 2011). According to Hanson-Rasmussen and Lauver (2018), compared to other generations, millennials are considered to be at the forefront of environmental concerns through the sustainable movement. However, despite their environmental literacy, millennials struggle to change their attitudes and intents toward greater pro-environmental behavior (Gaudelli, 2009). Other research contradict such broad generalizations, claiming that millennials are deeply concerned about the environment. However, not with their conduct, particularly their green-friendly lifestyle and consumption habits (Diamantopoulos et al., 2003). According to Smith and Brower (2012), the use of eco-friendly products by the millennial generation has not been well examined and explored. Few studies have looked at how the millennial age varies in terms of green consumerism, specifically their desire for electric cars (Coşkun & zbük, 2019). Nonetheless, communicating "green" messaging is difficult for marketers. Because of the significance millennials place on the environment and the necessity for academics to investigate their purchasing behavior toward electric cars.

In Indonesia, the millennial generation is pretty large in number. According to IDN Research Institute (2020), the millennial generation will number 63.5 million out of 179 million people in Indonesia by 2020. This indicates that millennials will make up 35% of the Indonesian population. However, research on green products among young consumers in underdeveloped countries, including Indonesia, is relatively sparse (Khare, 2015). There has been insufficient academic study conducted in Indonesia on millenials' purchase intentions for green products and electric cars.

The Theory of Planned Behavior (TPB)

According to TPB, an individual's behavioral intention may be predicted based on internal and external elements, which is an extension of the Theory of Reasoned Action. TPB balances the potential predictors of human behavior to forecast and understand it. The process of developing and reinforcing cognitive inclinations and motivations is referred to as "behavior intention". Understanding the customer's purpose is crucial in consumer behavior research. The more determined you are to carry out the plan, the more likely it is that it will really take place (Kraft et al., 2005). In Azjen's TPB model (1991), consumers' behavioral intentions are influenced when they have a positive attitude toward the behavior, they feel their conduct is accepted by their social circle, and the action is still viable to carry out.

TPB, with its three main variables: attitude, subjective norm, and perceived behavioral control, has consistently been widely used to research behavior and intentions for environmentally friendly products in a variety of fields of study, including: green products (Maichum et al., 2017), energy saving (Lopes et al., 2019), reducing vehicle travel (Liu et al., 2017), organic food (Shin et al., 2018), and the adoption of electric cars (Moons & de Pelsmacker, 2012; Lane & Potter, 2007).

Attitude

According to Ajzen (1991), attitude is the amount of an individual's appraisal of a behavior that is beneficial or not beneficial, or that offers advantages but has no positive influence on them. Attitude can reflect a person's overall appraisal of a behavior, product, or thing under investigation (Bonne et al., 2007). This is why attitude is such an important component in marketing, because attitude in TPB may reveal how customers respond to or see a product from a certain aspect from their particular point of view. According to Kang et al., (2006), attitude is the primary variable in the TPB for analyzing individuals' behavior and intentions. Schmalfuß et al., (2017) revealed that attitude has a significant influence on the purchasing of environmentally friendly cars. Thananusak et al., (2017), on the other hand, observed that the cost component of electric automobiles, which are characterized as costly, resulted in the withdrawal of a favorable attitude toward getting the vehicles. More study is being undertaken on the issue as a result of the previously mentioned variation in the influence of attitude on behavioral intention to purchase electric autos. Based on our review of the literature, we proposed:

H1 : Attitude affects purchase intention towards electric car positively.

Subjective Norms

Subjective norm is an individual's sense of social pressure from other individuals or groups significant to him or her who desire or expect him or her to act in a specific way (Ajzen, 1991). In the context of green consumption, Zukin and Maguire (2004) discovered that social norms have a significant effect on green consumption and are the foundation of many consumption theories and models. Individuals are motivated to "perform that behavior" in the context of electric car purchase intention when they think that their social circle or people around them are turning towards decarbonizing the transportation system through the deployment of environmentally friendly cars. A higher subjective norm may indicate a greater chance of engaging in such activity (Han & Kim, 2010).Several prior studies have found that the perceived norm has a favorable effect on behavioral intention (Han et al., 2010; Castanier et al., 2013; Dean et al., 2011; Teng et al., 2013; Paul et al., 2016). According to Ng et al., (2018), impacts or pressures from social peers in the context of choosing environmentally efficient automobiles are ambiguous and unconvincing. Therefore, subjective norm is an important factor in encouraging purchase intention for electric cars and we proposed that:

H2 : Subjective norm affects purchase intention towards electric car positively.

Perceived Behavioral Control

The third variable, according to the Theory of Planned Behavior, is perceived behavioral control (PBC). According to Ajzen (1991), perceived behavioral control refers to the ability to manage certain activities. The efforts and risk involved in enforcing a behavior are referred to as perceived behavioral control. This belief is split into two parts. One example is proving the availability of required resources for a task, such as money, time, and other resources. The second section indicates one's confidence in one's ability to do this task (Ajzen, 1991; Taylor & Tod, 1995). Many studies have shown that an individual's confidence in their ability to govern their behavior has a positive relationship with purchase intention (White Baker et al., 2007; Taylor & Tod, 1995). We present the following hypothesis based on our conversation.

Furthermore, perceived behavioral control has been connected to green consumption purchase intent, including green hotels (Chen & Tung, 2014), organic foods (Tarkiainen & Sundqvist, 2005), green items (Maichum et al., 2016), green furniture (Xu et al., 2020), and electric automobiles (Tanwir & Hamzah, 2020; Yan et al., 2019).

H3 : Perceived behavioral control affects purchase intention towards electric car positively.

Environmental Concern

Environmental concern is defined as a strong commitment to environmental conservation (Crosby et al., 1981), and it encompasses both people's awareness of environmental issues and their desire and support to address them (Hu et al., 2010). Environmental concern is a powerful incentive for people to change their current behavior and engage in more environmentally beneficial activities (Bamberg, 2003; Daziano & Bolduc, 2011). Environmental concern, on the other hand, has an indirect influence on some environmentally beneficial acts through other factors (Ajzen & Fishbein, 1980). According to Chen and Tung (2014), environmental concern is a critical component that influences purchase intention through its effect on attitude, subjective norm, and perceived behavioral control. On the other hand, Hartmann and Apaolaza-Ibáez (2012) discovered that environmental concern had an effect on purchase intention both directly and indirectly through the creation of a positive attitude toward green energy. Paul et al. (2016) demonstrated a significant direct and indirect effect of environmental concern on green purchase intention via the mediation of TPB predictor variables. Environmentally aware people may also influence the green purchase intentions of others via social pressure on family, relatives, classmates, and acquaintances, which can increase the sense of control by lessening perceived resource, opportunity, and time constraints (Paul et al., 2016). Based on the literature review above, the hypotheses are proposed as follows:

H4 : Environmental concern affects attitude positively.
H5 : Environmental concern affects subjective norm positively.
H6 : Environmental concern affects perceived behavioral control positively.
H7 : Environmental concern affects purchase intention towards electric car positively.

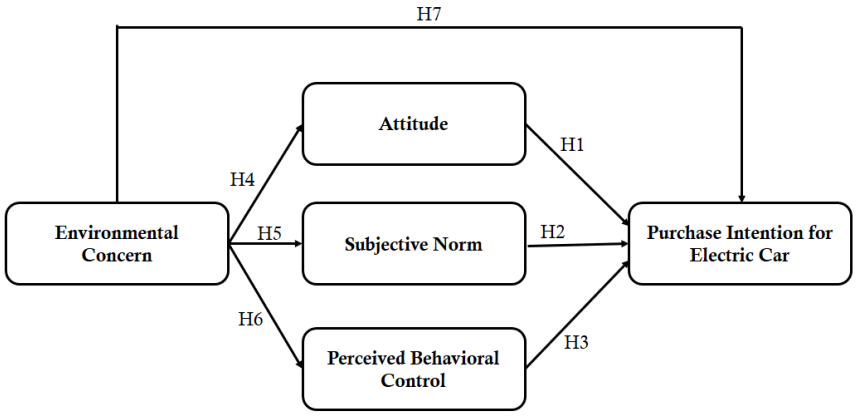

Figure 1. Research Model

2. METHOD

This study's data originated from structured surveys targeted at the millennial generation, which was born between 1982 and 2000 (Howe et al., 2000), with respondents expected to be between the ages of 22 and 40 in 2022. According to Chan (2001), the green environment under consideration is exceedingly difficult for toddlers to understand because of the complexity of thought it incorporates into decision making. As a consequence, millennials (aged 22–40) provided the best sample for this research. Furthermore, multiple studies have shown that those with less education have a harder difficulty grasping the subject at hand than those with a higher education (Paul et al., 2016; Han et al., 2010; Han & Kim, 2010).

The questionnaire were distributed via online social media platforms, namely social networks for Indonesian car owners. A total of 30,000 persons belonged to one of these social groups. A sample size of 300 or more is suggested by Nunnally and Bernstein (1994), whereas Charter (1999) recommends a sample size of 400 for a sufficiently correct calculation of the Cronbach's coefficient. Between November 2021 and January 2022, the data was gathered, and a total of 425 valid responses were obtained, well above the necessary number of at least 400 for structural equation modeling (SEM). Furthermore, the sample size was determined using a 95% confidence level and a 5% margin of error. The designed questionnaire may be completed in 5-10 minutes.

3. RESULT AND DISCUSSION

According to the descriptive statistics in Table 1, the majority of respondents were females (51.76 %), aged 28–30 years (26.35 %), married (63.76 %), undergraduate (50.35 %), domiciled in Jakarta (31.76 %), with a family size of 2–3 persons (49.41 %), a full-time job (51.76 %), and a monthly income range of 5,000,000–10,000,000 IDR per person (1 USD = 14.387 IDR as of January 27).

Table 1. Sample Characteristics (n = 425)

Variable	Category	Frequency	Percentage
Gender	Male	205	48.24
	Female	220	51.76
Age	22-24 years	20	4.71
	25-27 years	93	21.88
	28-30 years	112	26.35
	31-33 years	71	16.71
	34-36 years	73	17.18
	37-40 years	56	13.18

Variable	Category	Frequency	Percentage
Marital Status	Single	129	30.35
	Married	271	63.76
	Divorced/Widowed	25	5.88
Education	High School	126	29.65
	Undergraduate	214	50.35
	Postgraduate	85	20.00
Domicile	Jakarta	135	31.76
	Bogor	75	17.65
	Depok	71	16.71
	Tangerang	62	14.59
	Bekasi	42	9.88
	Others	40	9.41
Family Size	1 person	58	13.65
	2-3 persons	210	49.41
	4-5 persons	115	27.06
	More than 5 persons	42	9.88
Employment Status	Full-time job	220	51.76
	Part-time job	47	11.06
	Business	111	26.12
	Student	6	1.41
	Housewife	32	7.53
	Unemployed	9	2.12
Personal income-monthly (IDR)	Less than 5.000.000	46	10.82
	5.000.000-10.000.000	136	32.00
	10.000.001-15.000.000	117	27.53
	15.000.001-20.000.000	86	20.24
	More than 20.000.000	40	9.41

To obtain data for the research, an online self-administered survey was done. The survey was designed around a closed-ended questionnaire with two portions. The first portion, which consisted of preliminary questions about respondents' characteristics, included the following: gender, birth year, age, family size, employment, income, residence, and education. The second half comprised of essential questions about the variables investigated in this study, which were questions about attitude, subjective norm, perceived behavioral control, environmental concern, and purchase intention for electric automobiles. Measurement variables (given in Table 2) examined for each concept in this investigation were either chosen or modified from prior studies. There were a total of five constructions utilized. First, attitude about electric vehicles were examined using six measures drawn from prior studies (Tanwir & Hamzah, 2020; Han et al., 2010; Chen & Tung, 2014; Kim & Han, 2010). Second, the four validated questions were utilized to assess subjective norms derived from these investigations (Han et al., 2010, Chan & Lau, 2002; Tanwir & Hamzah, 2020). Third, five questions based on Xu et al., 2020; Paul et al., 2016; Kim & Han, 2010) were used to assess perceived behavioral control. Fourth, five separate items were used to assess environmental concern, as provided by Chen and Tung (2014; Paul et al., 2016; Xu et al., 2020). Finally, four elements from the survey were used to assess purchase intent for electric vehicles (Chang & Chen, 2008; Chen & Tung, 2014; Rejikumar, 2016). The questionnaire employed a 5-point Likert scale, with responses ranging from 1 (strongly disagree) to 5 (strongly agree) (strongly agree). This scale asks respondents to rate how strongly they disagree or agree with a series of comments about a certain issue.

Table 2 summarizes the descriptive statistics for questionnaire items, including mean values for attitude, subjective norm, perceived behavioral control, environmental concern, and intention to purchase an electric car, all of which were exceptionally high and reasonably positive. Due to the rarity of electric cars in Indonesia, the mean value of attitude was low in comparison to the other categories, at 2.555.

Table 2. Descriptive statistics of the questionnaire items

Constructs/Questionnaire Items		Mean	Standard Deviation
Attitude towards purchasing electric cars		2.555	1.264
ATT1:	For me, purchasing electric car is favorable	2.536	1.197
ATT2:	For me, purchasing electric car is desirable	2.329	1.431
ATT3:	For me, purchasing electric car is pleasant	2.647	1.152
ATT4:	For me, purchasing electric car is wise	2.656	1.155
ATT5:	For me, purchasing electric car is meaningful	2.456	1.450
ATT6:	For me, purchasing electric car is positive	2.701	1.197
Subjective norm		3.389	1.225
SN1:	The majority of individuals who matter to me believe I should get an electric car.	3.414	1.191
SN2:	Most of the people who matter to me would prefer that I buy an electric car.	3.334	1.214
SN3:	People whose opinions I value would prefer that I buy electric car.	3.431	1.240

SN4:	Most of the people that matter to me would agree if I bought an electric car.	3.379	1.257
Perceived Behavioral Control		3.378	1.209
PBC1:	I believe I will be able to acquire an electric car.	3.398	1.201
PBC2:	I have the expertise and the time to buy an electric car.	3.348	1.235
PBC3:	I am certain that if I so choose, I will be able to acquire an electric car.	3.402	1.184
PBC4:	There will very certainly be several possibilities for me to acquire an electric car.	3.395	1.189
PBC5:	It is totally up to me whether or not to get an electric car.	3.344	1.234
Environmental Concern		4.242	0.974
EC1:	I am really concerned about the situation of our environment.	4.296	0.912
EC2:	Environmental issues, in my opinion, have become increasingly severe in recent years.	4.275	0.955
EC3:	I am willing to cut back on my consumption in order to help safeguard the environment.	4.219	1.049
EC4:	Nature's equilibrium is extremely fragile and easily disrupted.	4.167	0.938
EC5:	Individuals, I believe, bear responsibilities for environmental protection.	4.252	1.014
Purchase intention		3.661	1.139
PI1:	I am willing to purchase electric cars	3.713	1.121
PI2:	I try to purchase electric cars	3.680	1.099
PI3:	I plan to purchase electric cars	3.602	1.118
PI4:	I will make an effort to purchase electric cars	3.647	1.216

The statistical package for social sciences (SPSS) 23.0 and analysis of moment structures (AMOS 19.0) software were used to complete the study's aims and test hypotheses. SPSS 23.0 was used to conduct preliminary data analysis and to ascertain the sample's demographic characteristics for descriptive analysis. Cronbach's coefficient was used to determine the reliability of the measuring items. AMOS 19.0 was used to assess the measurement's applicability for validating reliability, convergent and divergent validity, and then SEM was employed to investigate predicted correlations across study components.

The loadings of five dimensions were validated using confirmatory factor analysis (CFA): attitude, subjective norm, perceived behavioral control, environmental concern, and intention to purchase an electric car. Convergent and discriminant validity, as well as overall fit to the data, were examined to determine the model's validity and dependability. The most often used method for determining the internal consistency of indicators for each studied construct is to calculate the coefficient alpha for that construct (Chen et al., 2015). Internal validity Cronbach's coefficients were calculated and ranged from 0.804 to 0.898, as shown in Table 3. According to Nunnally and Bernstein (1994), the Cronbach's alpha value should be more than 0.700. As a result, the obtained values indicate that all constructions were internally consistent and dependable.

According to Hair et al. (2010), the factor loading should be more than 0.500 and $p < .05$. As a consequence, all standards were significant, ranging between 0.674 and 0.852. The construct's reliability was assessed using composite reliability measures, which indicate how effectively the construct items capture the hidden notion. Hair et al. (2010) proposed that composite reliability (CR) and average variance extracted (AVE) be used to support the convergent validity of CFA results, and that the estimates of CR and AVE, which quantify the amount of variance explained by a given construct, be greater than 0.700 and 0.500, respectively. As seen in Table 3, the CR and AVE values ranged between 0.839 and 0.917 and 0.565 and 0.649, respectively, exceeding the acceptable limits of 0.700 and 0.500.

Table 3. Reliability and validity of the constructs.

Construct	Question Item	Cronbach's α	Standardized Factor Loading	Composite Reliability	Average Variance Extracted
Attitude towards purchasing electric cars (ATT)	ATT1	0.898	0.805 [a]	0.917	0.649
	ATT2		0.852 ***		
	ATT3		0.800 ***		
	ATT4		0.795 ***		
	ATT5		0.824 ***		
	ATT6		0.754 ***		
Subjective Norm (SN)	SN1	0.804	0.763 [a]	0.839	0.566
	SN2		0.764 ***		
	SN3		0.779 ***		
	SN4		0.701 ***		
Perceived Behavioral Control (PBC)	PBC1	0.843	0.766 [a]	0.866	0.565
	PBC2		0.746 ***		
	PBC3		0.674 ***		
	PBC4		0.831 ***		
	PBC5		0.731 ***		
Environmental Concern (EC)	EC1	0.813	0.748 [a]	0.868	0.569
	EC2		0.797 ***		
	EC3		0.713 ***		
	EC4		0.748 ***		
	EC5		0.762 ***		
Purchase Intention (PI)	PI1	0.805	0.782 [a]	0.857	0.599
	PI2		0.783 ***		
	PI3		0.804 ***		
	PI4		0.725 ***		

Note: *** $p < 0.001$, [a] Values were not calculated because loading was set to 1.000 to fix construct variance.

According to the CFA results, the measuring model displayed good convergent and discriminant validity. The hypothesized method of measurement proved to be both reliable and significant for examining the structural links between the components. A model is said to be significant if the derived goodness-of-fit indices (GFI), adjusted goodness-of-fit indices (AGFI), relative fit index (RFI), and normed-fit index (NFI) are more than 0.900. (Steiger, 2007). For alternative indices, the comparative fit index (CFI) should be more than 0.950, the root mean square approximation error (RMSEA) should be less than 0.080, and the root mean square residual (RMR) should be less than 0.050. (Tabachnick & Fidell, 2018). According to the CFA results, the measurement model fit indices were as follows, as shown in Table 4: The chi-square test result was 311.311 with 89 degrees of freedom (df), p< 0.001, the ratio of the chi-square to the df was 3.498, and we achieved a ratio of chi-square to df between 2 and 5 using Marsh and Hocevar's criteria (1985). 0.942, 0.929, 0.919, 0.929, 0.983, 0.026, and 0.041, respectively, for the GFI, AGFI, RFI, NFI, CFI, RMSEA, and RMR fit indexes. The findings exceeded their respective commonly accepted thresholds of acceptability. As a consequence, the measurement model was a good fit for the data.

Table 4. Measurement model fit Indices

Fit Indices	Criteria	Indicators
Chi-square	p> 0.050	311.311 (p < 0.001)
Chi-square/df (degree of freedom)	<5.000	3.498 (311.311/89)
Goodness of Fit Index (GFI)	>0.900	0.942
Adjusted Goodness of Fit Index (AGFI)	>0.900	0.929
Relative Fit Index (RFI)	>0.900	0.919
Normed Fit Index (NFI)	>0.900	0.929
Comparative Fit Index (CFI)	>0.950	0.983
Root Mean Square Error of Approximation (RMSEA)	<0.080	0.026
Root Mean Square Residual (RMR)	<0.050	0.041

AMOS 26.0 used a maximum likelihood parameter to perform SEM on the predicted conceptual model of this investigation (Figure 2). Significant and adequate goodness-of-fit indices were found, as shown in Table 6: $\chi 2$ = 445.669 (p 0.001), df = 97, $\chi 2$ /df = 4.594, GFI = 0.919, AGFI = 0.901, RFI = 0.983, NFI = 0.956, CFI = 0.951, RMSEA = 0.044, and RMR = 0.038. All of these indices were greater than the specified goodness-of-fit levels for the proposed structural model (Bollen, 1989). This study's suggested conceptual model (Figure 2).

Table 6 demonstrates that the structural model's outcome is positive, and the standardized path coefficient suggests a positive among the structural model's constructs. Six of the seven hypotheses were supported in total. The favorable association between attitude toward buying an electric car and intention to buy an electric car (H1: β1 = 0.481, t = 6.556, p < 0.001) indicated that H1 was supported. According to H2, a positive estimation of the coefficients between subjective norm and purchase intention for an electric car had a significant influence. (H2: β1 = 0.388, t = 8.292, p < 0.001). Thus, H2 was supported. The impact of perceived behavioral control (H3: β1 = 0.528, t = 5.610, p < 0.01) had significant positive effects on purchase intention for electric car, supporting H3. Environmental concern had significant positive effect on attitude towards purchasing electric car (H4: β1 = 0.322, t = 6.738, p < 0.001), subjective norm (H5: β1 = 0.247, t = 3.691, p < 0.05), and purchase intention for electric car (H7: β1 = 0.569, t = 7.812, p < 0.001), but not on perceived behavioral control (H6: β1 = 0.118, t = 0.901). Thus, H4, H5 and H7 were supported, while H6 was not supported.

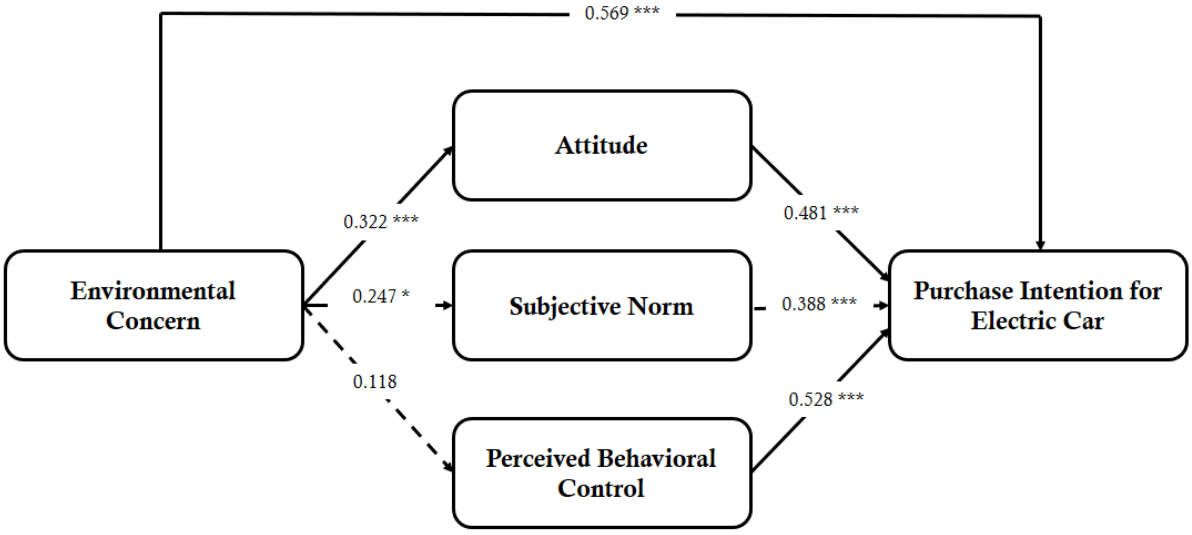

Figure 2. The results of the research model (* p< 0.05; ** p< 0.01; *** p< 0.001).

Table 5. Godness-of-fit indices of the research model

Fit Indices	Criteria	Indicators
Chi-square	p> 0.050	445.669 (p< 0.001)
Chi-square/df (degree of freedom)	<5.000	4.594 (445.669/97)
Goodness of Fit Index (GFI)	>0.900	0.919
Adjusted Goodness of Fit Index (AGFI)	>0.900	0.901
Relative Fit Index (RFI)	>0.900	0.983
Normed Fit Index (NFI)	>0.900	0.956

Comparative Fit Index (CFI)	>0.950	0.951
Root Mean Square Error of Approximation (RMSEA)	<0.080	0.044
Root Mean Square Residual (RMR)	<0.050	0.038

Table 6. Hypotheses results for the structural model

Hypothesis	Path Correlation	Standardized Path Coefficient	t-Value	Results
H1	ATT → PI	0.481 ***	6.556	Supported
H2	SN → PI	0.388 ***	8.292	Supported
H3	PBC → PI	0.528 **	5.610	Supported
H4	EC → ATT	0.322 ***	6.738	Supported
H5	EC → SN	0.247 *	3.691	Supported
H6	EC → PBC	0.118	0.901	Not Supported
H7	EC → PI	0.569 ***	7.812	Supported

Note: * p< 0.05, ** p< 0.01, *** p< 0.001.

This research examined at the TPB model's expanded framework, in which environmental concern is added as a predictor of attitude toward purchasing an electric car, subjective norm, and perceived behavioral control. The purpose was to investigate the purchasing intentions of millennials and those with a high school education for electric cars. According to the results, attitude, subjective norm, perceived behavioral control, and environmental concern may all influence consumers' intention to purchase an electric car. Attitudes, subjective norms, and perceived behavioral control were shown to have a significant positive impact on green product purchase intention. Perceived behavioral control had the greatest impact on a consumer's purchase intention, indicating that perceived behavioral control was the best predictor of purchase intention for an electric car, followed by attitude and, finally, subjective norm. Overall, the findings showed that the TPB model and its measures were suitable for the research population. According to Ajzen (1991), the more positive consumers' views about purchasing activity, the larger the consumer's intents to engage in a behavior within their control.

According to the findings of the hypothesis, attitude, subjective norm, and perceived behavioral control all have a positive influence on millennials' purchase intentions for electric cars. These results support the findings of Maichum et al., (2016), Tu and Yang (2019), Wang et al., (2014), and Yadav and Pathak (2016). Furthermore, the results of this research oppose the findings of Tanwir and Hamzah (2020), who observed that attitude and subjective norm had negative effects on purchase intention. Furthermore, environmental concern was shown to be important and advantageous for attitude, subjective norm, and purchase intention for electric vehicles, which is aligned with the results of Chen and Tung (2014), Wang et al., (2014), Chaudary & Bisai (2018), and Paul et al., (2016). Furthermore, this research reveals that environmental concern has no influence on millennials' perceived behavioral control in Indonesia.

In terms of practical applications, this study contributes to the literacy enrichment of Indonesian consumers, notably the millennial age. Understanding the characteristics of the millennial generation and what influences their purchase intention of electric cars is the foundation for automotive companies conducting in-depth market mapping, developing marketing strategies for their electric car products, and considering the prospectus of this millennial generation for electric car products.

4.CONCLUSION

The results of this research imply that: 1) the degree to which millennials have a desire for an electric car affects their intention to purchase an electric car; 2) social pressure from other millennials in Indonesia influences their intention to purchase an electric car; 3) According to this study, the availability of resources and beliefs of millennials impact significantly on their intention to consider an electric car; and 4) Millennials that have higher environmental concerns have a higher intention to purchase an electric car. This research has several limitations. First, the data was only collected from millennials in Jakarta, Bogor, Depok, Tangerang, and Bekasi. Therefore, further research needs to be conducted to apply this research model with samples from other cities or provinces in Indonesia. Second, this research was conducted specifically to investigate purchase intentions of the millennial generation in Indonesia. Therefore, further research should apply this research model with samples from other generations.

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