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Environmental Knowledge, Awareness, Attitude Toward Purchase Intention, Mediated by Infrastructure Readiness & Price Affordability of Electric Vehicle (EV): Case in Indonesia

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Abstract: *The study investigates the impact of electric vehicle (EV) technology on Indonesia's automotive industry and economy, emphasizing EVs' role in emission reduction. Factors affecting EV uptake, including purchasing behavior and environmental awareness, are analyzed, contributing to the theory of planned behavior. Data from 136 respondents were collected through surveys, revealing positive correlations between environmental awareness, knowledge, attitude, and purchase intent. Price affordability emerges as an intervening variable. The study offers insights for the gradual integration of EVs into Indonesia's automotive sector, highlighting initiatives by both manufacturers and the government, such as introducing EV options and implementing regulations related to energy, charging infrastructure, and taxation. This research underscores the importance of addressing consumer perceptions and market dynamics to facilitate the transition toward electric mobility in Indonesia.*

Keywords: *Affordability; Automotive Industry; Customer Adoption; Electric Vehicle (EV); Environmental Awareness; Purchase Intention*

Introduction

The current climate has encouraged people to embrace eco-friendly practices, such as reducing their use of single-use plastics and switching to reusable shopping bags made from materials other than plastic. The automotive industry is also being impacted by the environmentally conscious trend, as manufacturers have begun to introduce, produce, and sell Full Electric Vehicles (FEVs) in an effort to help the environment. The transportation sector has recognized fully electric vehicles (HEVs) as a significant technological advancement that can reduce future emissions and energy consumption, given that the majority of vehicles (GVs) are currently propelled by gasoline (Helmers and Marx, 2012). Transportation innovations like fully electric vehicles reduce petroleum use and greenhouse gas (GHG) emissions, and renewable energy sources reduce pollution, increase efficiency, and require less maintenance (Aziz and Oda, 2017).

Indonesia has persistent pollution levels above thresholds, causing harm. Education, awareness, and community attitudes are needed to raise environmental awareness. This process can begin by promoting proper waste disposal and environmental preservation through targeted campaigns. Along with adopting industrialized nation methods. In addition, Indonesia is interested in transportation, particularly electric vehicles. This is to reduce air pollution by reducing emission and exhaust fumes. According to the Air Quality Index (2022), Jabodetabek, which includes Jakarta, Bogor, Depok, Tangerang, and Bekasi on Java Island, has an average index score of 90 to 170, indicating moderate to unhealthy concerns compared to other Indonesian states. This emphasizes the importance of environmental sustainability awareness. Government support is needed through regulations that require producers and companies to prioritize environmentally friendly product production (Huda *et al.*, 2019). According to Ismail and Mulyaman, (2021), an effective method of safeguarding the environment while minimizing disruptions to mobility is through the utilization of Electric Vehicles. Moreover, the study reveals that the Indonesian population is inclined towards adopting environmentally friendly automobile

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products, specifically Electric Vehicles (EVs), for both personal and public transportation purposes. This is due to the belief held by individuals that the adoption of environmentally friendly automobile products will result in a reduction of Green House Gas (GHG) emissions and pollution, hence contributing to environmental preservation (Aziz and Oda, 2017). Note that this belief does not necessarily reduce personal mobility.

The public's apprehension regarding affordable prices and sufficient infrastructure generates a purchasing inclination due to the benefits that users can exploit, such as reduced maintenance expenses, annual taxes that are nominal, absence of odd-even regulations, and access to subsidies. However, there are several barriers to the development of Full-Electric Vehicles (FEVs) in Indonesia. Firstly, there is a need for significant investment in the development of charging stations (known as SPKLU) that utilize high DC with fast charging technology. Secondly, there is a need to establish standards and criteria for these recharging stations (SPKLU), as well as ensuring the availability of strategic locations for their installation which currently only available at specific points located in Jakarta. In addition, it is important to mention that the expenses linked to Full-Electric Vehicles are still unaffordable. Moreover, there is a widespread misconception among people when it comes to Electric Vehicles (EVs). It is supported by Asaad (2020) who studied Unfinished Recharging Station (SPKLU) model. The study found that the high cost of fully electric vehicles (EVs) compared to gasoline-powered vehicles (GVs) drives buyers' decisions. In addition, the current maximum range per charge is inadequate. Thirdly, the issue of battery periodic maintenance should be addressed. Additionally, the restricted availability of public charging stations poses a significant challenge. Furthermore, the lack of confirmed mechanics that specialize in electric-based vehicles has been identified as a concern (Buranelli de Oliveira *et al.*, 2022). Moreover, gasoline-powered vehicles continue to maintain a dominant position and exhibit growth in the automotive market. Consequently, there are distinct categories of cars, such as Low-Cost Green Cars (LCGC), which cater to the lower segments of the market by offering affordability in terms of both price and maintenance. This presents a significant obstacle for electric vehicles (EVs) to establish dominance in the automotive market, despite the numerous advantages they offer (Jang, Kim and Lee, 2018). The challenges faced by Electric Vehicles (EVs), particularly in Indonesia, encompass various factors such as the economic situation, individuals' skill limitations in relation to EVs, the ongoing development of below-average technology, government regulations, environmental concerns, high costs, and inadequate infrastructure readiness (Åhman and Nilsson, 2008; Foxon and Pearson, 2008). Indonesia's automotive industry holds the distinction of being the largest market, and within this industry, Electric Vehicles (EVs) have gained significant popularity. Nevertheless, the aforementioned factors have influenced individuals' inclination towards adopting EVs as a means of transportation (Prasetio *et al.*, 2019; Maghfiroh *et al.*, 2021).

Gaikindo, (2021) report 1,900 Indonesian electric vehicle sales in June 2021, with 33% battery electric vehicles. Out of 705 sales in 2019, 685 were hybrids and 20 plug-in hybrids. Additionally, 0.07% of car sales were electric. It shows that the Indonesian electric vehicle sector is still developing. The Indonesian government is committed to exploiting the automobile industry's growing technology advances, notably for environmentally friendly vehicles. The growing awareness of environmental issues and the urgent necessity to switch to battery-electric vehicles motivate this dedication. According to the Ministry of Finance of Indonesia's, the government aims to reduce CO2 emissions by 41% by 2030. The Indonesian government has helped create recharge stations, or SPKLU (Stasiun Pengisian Listrik Kendaraan Umum), around 924 recharge stations in the archipelago. (Kemenkeu.go.id, 2021), The current situation falls significantly short of the anticipated outcome when contrasted to the broader context of the entire nation.

According to Prasetio *et al.*, (2019), the limited number of charging stations indicates that Indonesia's electric vehicle infrastructure is considered to be in its early stages of development. People start to rethink getting electric cars because this lack of capability doesn't meet the global standard for recharging stations. Consumers' ability to spend money on electric vehicles can be affected by factors like price, after-sale service, and lack of information about these vehicles. In addition to this, the study aims to investigate the relationship between environmental knowledge, environmental attitude, and environmental awareness on purchase intention within the automotive industry in Indonesia. Consequently, two research questions emerge. Firstly, to what extent do environmental knowledge, environmental attitude, and environmental awareness influence purchase intention? Secondly, does environmental attitude have an impact on purchase intention, with the mediating factors of infrastructure readiness and price affordability? The attainment of the study objective, which is to investigate the relationship between Environmental Knowledge, Environmental Attitude, and Environmental Awareness on consumer behavior, can be facilitated by obtaining answers to the research question. By successfully attaining the research objectives, the study provides the contributions in both theoretical and practical aspects. This study elucidates the theoretical component of the planned behavior theory, with a particular focus on its application to consumer behavior in the automobile sector, specifically in the context of Full Electric Vehicles (EVs) in Indonesia. In the context of practical implications, this study provides valuable insights for the government, automobile manufacturers, and stakeholders regarding customer behavior towards Full-Electric Vehicles (EVs) in Indonesia.

Literature Review & Hypothesis Development

The environmental knowledge is the process of developing, understanding and appreciating the skills and attitudes that are significant in the relationship between people, culture and the physical environment with the goal of understanding their desires and value with the environment that is connected to their intention to purchase a product (Sosa-Nunez and Atkins, 2016). Thus, the objective of environmental knowledge aims to connect people, nature and environmental problems like pollution, renewable energy, technology advancement, infrastructure readiness and urban & rural planning (Safari et al., 2018) including, green product of transportation i.e., Electric Vehicle.

Having environmental knowledge means having environmental awareness and environmental attitude. People aware and understand the important of the ecosystem of the environment for their life. In addition, people act to safeguard the environment for sustainable life. Such act to protect the environment as switching of using plastic bag to paper bags that could reusable (Hirsh, 2014; Lee, 2014). On the other hand, substitute Gasoline-powered Vehicles (GVs) with renewable energy (non-gasoline) is also part to protect the environment from air pollution (International Energy Agency, 2017; Tu and Yang, 2019). It is in line with Snowden, (2014) that people who are paying attention to environmental sustainability may gravitate towards green products that directly benefit the environment such as minimizing pollution or CO2 emissions. In addition, they are important drivers of demand for a wide range of products, as well as concern about environmental deterioration that is harmful to consumers' health and well-being (Sarigöllü, 2009).

According to Mohiuddin *et al.*, (2018) environmental knowledge, awareness and attitude will be inclined to choose an Electric Vehicle and contributes to protecting, nurturing and sustaining the environment and can have a significant impact by encouraging future generations to practice ethical eco-friendly management and consumption. Protecting activities originate from individuals that can have an impact on the environment, such as pollution-prevention strategies that minimize hazardous substances in the

production process to reduce pollutant emissions or the accessibility of pollution prevention and control methods that focus more on environmental management is necessary to achieve a stable emission of pollutants on a given scale in specific nations or countries (Li, 2018).

Nurturing environments are those who feel safe and protected as a result of individual climate change and sustainability action (Pront-van Bommel, 2016). Effective measures have a significant impact on our planet, such as saving energy, switching to an electric vehicle, and utilizing reusable bags (United Nations, 2023). Sustaining contribution is one that preserves natural resources for the benefit of both the present and the future generations while preserving the ecological balance of our world (Langer and Mcrae, 2014).

There are three pillars of sustainability namely firstly social sustainability which includes workplace, health and safety secondly economic sustainability which includes generating money and sustaining long-term business growth. Thirdly, environmental sustainability includes efforts to cut down on, measure and monitor carbon emissions as well as adoption of cutting-edge technology like cloud and IoT makes processes paperless and controllable (Microsoft, 2023). Since Electric Vehicles recently have become one of the options to minimize Gasoline-powered Vehicles, proper infrastructure should be provided, such as fast charging station. Numbers of fast charging station should station in many locations. It is because to help the driver re-charge the power of their vehicle for daily needs. Furthermore, having proper charging station in many locations shows the readiness to produce Electric Vehicles (FEV) in large scale therefore purchase intention of the people to have Electric vehicle will increase as causing of their concern to the environment (Lee, 2014, Maichum et al., 2016). Additionally, price affordability also major factor to increase purchase intention. Combination of infrastructure readiness and price affordability lead to purchase intention. thus, infrastructure readiness, price affordability and purchase intention are variable of the study. In addition to this, it leads to four hypotheses of the study.

H1: Environmental Knowledge has a significant positive effect on Environmental Awareness.

H2: Environmental Awareness has a significant positive effect on Environmental Attitude.

H3: Environmental Attitude has a significant positive effect on Purchase Intention intervened by Infrastructure Readiness.

H4: Environmental Attitude has a significant positive effect on Purchase Intention intervened by Price Affordability

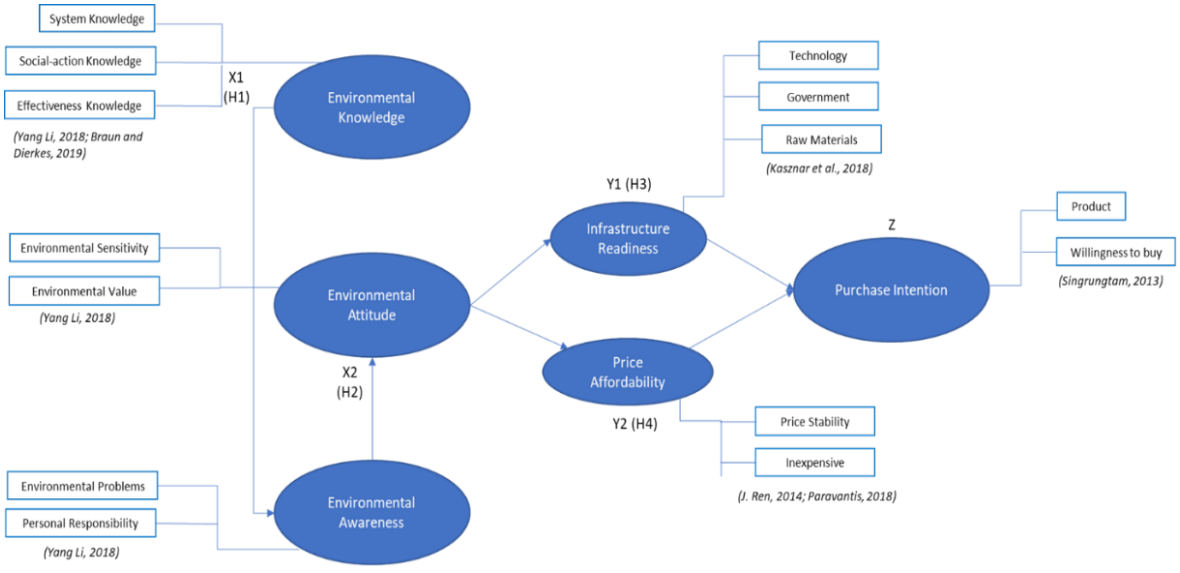

Figure 1. Conceptual Framework

Figure 1 is the conceptual framework of the study

Method

This study employs a quantitative methodology and is based on cross-sectional data. Consequently, the sample for this study consists solely of respondents who are potential buyers of Electric Vehicles and have expressed an intention to make a purchase. The unit of analysis in this study comprises individuals residing in the Jabodetabek area (Jakarta, Bogor, Depok, Tangerang, Bekasi) who possess knowledge about Electric Vehicles (EVs) and have an intention to use EVs. The age range of the participants falls between 20 and 59 years. The study employed a purposive sample method due to the researchers' knowledge and understanding of electric vehicles. Consequently, a restricted number of individuals who fulfilled the requirements and expressed a desire to purchase electric vehicles were selected for inclusion in the study. As a result, a total of 250 participants who satisfy the study's requirements were included. The data was obtained through a survey questionnaire created using Google Forms, which was then sent by email and several social media platforms such as WhatsApp, Line, and Instagram. The surveys were distributed to a sample of 250 participants who had knowledge about Electric Vehicles and also have the potential to become purchasers of such vehicles.

Measurement Variable and Questionnaire Development

The study encompasses six variables, specifically environmental knowledge, environmental awareness, environmental attitude, infrastructure readiness, pricing affordability, and purchasing intention. All characteristics were assessed using a standardized five-point Likert scale, ranging from strongly disagree (1) to strongly agree (5). Nevertheless, the sources of measurement vary across different variables. Firstly, environmental knowledge refers to process of developing, understanding and appreciating people's skills and attitudes (Sosa-Nunez and Atkins, 2016). Measurement of environmental knowledge adopted from study (Li, 2018) and (Braun and Dierkes, 2019). There are three items to measure environmental knowledge namely, system knowledge, social action knowledge and effectiveness knowledge. Respondent were asked to evaluate agree or disagree that having environmental knowledge relate to intend to have green product automotive. Secondly, Environmental awareness refers to natural environment problems and linked to people's actions (Frantz and Mayer, 2014). Measurement of environmental awareness adopted from study (Li, 2018) and there are two items to measure environmental knowledge i.e., environmental problem and personal responsibility. Respondent were asked to evaluate agree or disagree that having environmental awareness relate to intend to have green product automotive. Thirdly, Environmental attitude refers to as personal human feelings about the environment that are either positive or negative (Brick and Lewis, 2016). Measurement of environmental attitude adopted from Yang Li, (2018) and there are two items to measure environmental attitude namely environmental sensitivity and environmental value. Respondent were asked to evaluate agree or disagree that having environmental attitude relate to intend to have green product automotive. Fourth, infrastructure readiness refers to the estimate the minimal infrastructure requirements to ensure that recharging stations are available like gas stations (Bakker and Jacob Trip, 2013). Measurement of infrastructure readiness adopted from (Kasznar *et al.*, 2021). There are three items to measure infrastructure readiness namely technology, government and raw materials. Respondent were asked to evaluate agree or disagree that infrastructure readiness relate to intend to have green product automotive. Fifth, price affordable refers to the financial incentives such as vehicle price subsidies are also a tactic to achieve higher Full-Electric Vehicles adoption (Sierzchula et al., 2014) with the items of measurement namely price stability, inexpensive. Respondent were asked to evaluate agree or disagree price affordable relate to intend to have green

product automotive and finally, Purchase intention refers to the characteristics, prestige and social status especially if the item is expensive, can reflect their values and take on a symbolic significance for the owner (Bennett and Vijaygopal, 2018). It consists with two items of purchase intention namely, product and willingness. Respondent were asked to evaluate agree or disagree concern about green environment affect to purchase intention.

The questionnaire was initially derived from existing literature. The questionnaire incorporates both English and Indonesian languages in its questions to mitigate potential misunderstandings, with the exception of the respondent's background information, which is only in Indonesian. The questionnaire is structured into seven distinct components, specifically: respondent profile, environmental knowledge, environmental awareness, environmental attitude, infrastructure readiness, pricing affordability, and purchasing intention. Data was analysed using Smart PLS 3 as well as test the hypothesis. This is because the smart PLS 3 able analyse the data with tiny sample as well as non-normal distribution. However, the study conducted descriptive analysis to measure the distribution of respondent in the study. Furthermore, it is cleaning process to ensure the reliability of data entering. Classical assumptions are used to ensure that the data free from error

Result and Discussion

Profile of Respondents

The respondent profile aims to depict the characteristics of the individuals who took part in the study. The study sample consists of 136 participants, selected from a total of 250 individuals who meet the inclusion criteria and live in the Jabodetabek area. Table 1 presents the profile of the respondents. The result shows that people who have age 20-29 is dominant and most intention toward Electric vehicles. It indicates Generation Y (Millennials) have an intention towards Electric vehicles exist in Indonesia compare to others generation. As Jakarta as the capital city of the Indonesia (56) is the most focus on development Electric Vehicle, following Tangerang (53) as the closest state to Jakarta while Bogor (3), Depok (3) and Bekasi (18) are the state which less in development Electric Vehicle. The majority who concern about automotive is male (98) while female (38).

Table 1. The Respondent Profile

Age	**Frequency**
20-29	57
30-39	42
40-49	21
50-59	16
Residence	
Jakarta	56
Bogor	3
Depok	3
Tangerang	53
Bekasi	18
Gender	
Male	98
Female	38
Education Background	
Phd	2
Master	20
Undergraduate	93
Diploma	2
Highschool - equivalent	19
Profession	
Household	1
Student	33
Employee	82
Business Owner	16
Others	4
Income per/month	
< Rp10,000,000	33
Rp10,000,001 – 30,000,000	50
Rp 30,000,000 – 50,000,000	36
> Rp 50,000,000	13
Wealth	
< Rp100,000,000	29
Rp100,000,001 – 500,000,000	55
Rp 500,000,001 – 1,000,000,000	31
> Rp1,000,000,000	21

This is because male has better understand about the automotive compare to the female. The education shows how well respondent understand and aware about green

Table 2. Reliability and Validity

Variable	Cronbach 's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Environmental Attitude (EAT)	.843	.895	.681
Environmental Awareness (EAW)	.907	.936	.785
Environmental Knowledge (EKN)	.940	.961	.893
Infrastructure Readiness (IRE)	.871	.904	.653
Price Affordability (PAF)	.940	.961	.892
Purchase Intention (PIN)	.907	.936	.785

environment and lead to have green product including intend to have Electric vehicle, as they look after the environment. Respondent who undergraduate (93) is dominant following master degree (20), thus high school – equivalent is 19 and Diploma and PhD are 2 respondents. It indicates respondent's education background is quite high and they have awareness about green environment and green products. Education relates to the profession, respondents who have profession as an employee is higher (82) than others profession such as, student (33), business owner (16), others (4) and household (1). Furthermore, majority income of respondent roughly in the range Rp10,000,001 – 30,000,000 (50). Income and wealth show how well economic of the respondent to afford Electric Vehicle as their transportation.

Validity and Reliability

Result of validity and reliability shows that the outputs exceed the accepted norm, which is Cronbach's Alpha and Composite Reliability is ≥ 0.7 thus, all of the variables are valid and reliable. Furthermore, the value of AVE of each variable is greater than ≥ 0.5. it shows that the variables meet the requirements. Result of Discriminant validity indicates that variables EAT-EAW, EKN-PAF and EAM-EKN are exceed that ≤ 0.900 (Henseler et al., 2015) which mean those variables have discriminant validity concern. Therefore, it excluded.

Hypothesis Testing

Structural model is used to test the hypothesis. Furthermore, to anticipate the presence of causality, T-statistical test parameters were determined by the bootstrapping procedure (Abdillah and Hartono, 2015). In addition, the criteria should be met. The result shows that the relationship between IRE ->PIN does not meet the criteria which p-value 0.118 and standard deviation lower that 1.96 (1.568) while the others relationship between variables are met the criteria. Furthermore, intervening variable of IRE does not affect to EAT and PIN. Table 2 shows path coefficient of the variable.

Furthermore, result of Goodness of Fit Index (GFI) shows that all the variables that constructed its fits because variables values exceed than ≥ 0.90. Table 4 shows the valuation of Goodness of Fit Index (GFI). The result indicates that the relationship between EKN, EAW and EAT are positive correlated. Furthermore, the relationship between EA and

Table 3. Result of Hypothesis

Variable	STDEV	T-test	p-value
Environmental Attitude -> Infrastructure Readiness	.066	8.690	0.000
Environmental Attitude -> Price Affordability	.068	9.767	0.000
Environmental Awareness -> Environmental Attitude	.042	18.737	0.000
Environmental Knowledge -> Environmental Awareness	.051	14.835	0.000
Infrastructure Readiness -> Purchase Intention	.080	1.646	0.100
Price Affordability -> Purchase Intention	.079	5.758	0.000
Environmental Attitude -> Infrastructure Readiness -> Purchase Intention	.051	1.495	0.136
Environmental Attitude -> Price Affordability -> Purchase Intention	.065	4.619	0.000

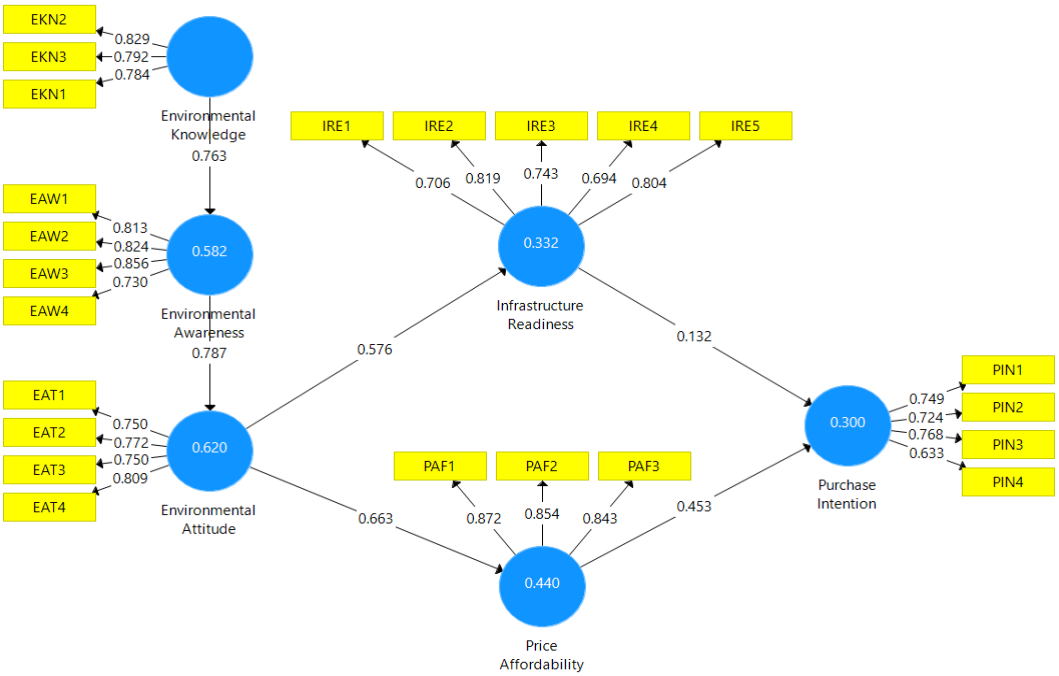

Figure 2. Result of Structural Equation Model (SEM)

PIN – Infrastructure Readiness and also EA and PIN Price Affordability are also positive correlated. Table 5 is summary for hypothesis testing.

Tabel 4. Goodness of Fit

Variable	AVE	R^2	GoF
Environmental Knowledge (EKN)	.643		
Environmental Awareness (EAW)	.651	.578	.952
Environmental Attitude (EAT)	.544	.617	.947
Infrastructure Readiness (IRE)	.571	.327	.919
Price Affordability (PAF)	.733	.435	.944
Purchase Intention (PIN)	.519	.290	.909

Environmental awareness and attitude are positively and significantly correlated. Since environmental awareness involves cognitive processing, people understand and integrate environmental stimuli. However, environmental awareness can affect natural resources and sustainability. Attitude, as a manifestation or implementation by individuals, is crucial to this interaction. Additionally, environmental knowledge and awareness are crucial to generating, supporting, and fostering awareness. As highlighted by (Hirsh, 2014) the process of acquiring knowledge and skills, being well-informed, has fostered an increased consciousness of the natural surroundings, leading individuals to develop a sense of concern and actively engage in efforts aimed at safeguarding the environment. Environmental attitude and price affordability operate as intervening variables, exerting a positive and statistically significant influence on purchase intention. This finding suggests that individuals are more inclined to take action, such as acquiring an electric vehicle, when they possess a favorable environmental attitude and perceive the price to be affordable. Yuniza *et al.*, (2021) observed that the cost of the large battery, which amounts to approximately 600 million rupiahs, exceeds the average disposable income of individuals in Indonesia, which is around 300 million rupiahs. Consequently, the offered price is deemed exorbitant. In this context, price refers to the monetary value individuals are willing to pay in order to acquire an electric vehicle, while attitude pertains to the purchasing behavior associated with this decision. Finally, the impact of environmental

attitude on purchase intention is both positive and statistically insignificant when considering

Tabel 5. Summary Hypothesis Testing

Hypothesis	Assumption	Result
H1: Environmental Knowledge has a significant positive effect on Environmental Awareness	+	Supported
H2: Environmental Awareness has a significant positive effect on Environmental Attitude	+	Supported
H3: Environmental Attitude has a significant positive effect on Purchase Intention intervened by Infrastructure Readiness	+	Not Supported
H4: Environmental Attitude has a significant positive effect on Purchase Intention intervened by Price Affordability	+	Supported

Infrastructure Readiness as an intervening variable. This is due to the fact that individuals also consider future infrastructure advancements, such as the availability and efficiency of charging stations, as well as the time required for recharging electric vehicles. It is worth noting that the convenience of refueling a conventional vehicle with gasoline typically takes ten minutes or less (Asaad, 2020). The Jabodetabek area currently exhibits a disproportionately high prevalence of electric vehicles due to ongoing incremental development efforts by the government and other pertinent stakeholders.

The Theory of Planned Behavior (TPB) states that attitude, subjective norms, and perceived behavioral control shape knowledge, awareness, and attitude, which affect purchasing intention. Concerning knowledge and awareness, including the ability to assess and scrutinize the pros and cons of using Electric Vehicles (EVs) and Internal Combustion Engines (ICEs) in both short-term and long-term scenarios, such as intensive maintenance or spare component availability (Rezvani, Jansson and Bodin, 2015). The hypothesis stated that consumer understanding of eco-friendly product issues directly affects their EV purchase. (Egbue and Long, 2012; Carley *et al.*, 2013). Once consumers are aware, cost allocation, test drive experience, driving range, maintenance requirements, and annual tax implications influence their perspectives. New innovations require preparation. Consumers and buyers must consider infrastructure factors including charging stations, advanced technologies, and skilled maintenance. Infrastructure planning increased buying intention, the study found. This impact was statistically negligible. (Carley *et al.*, 2013) suggest that people may view the hassle of charging their daily-used car outside their homes as minor. Subjective norm is applied when external influences, such as product comparison before buying, change an individual's perspective (Ajzen, 1991). In regions other than Indonesia, such as Europe or the Middle East, weather patterns, climate variables, societal settings, and behavioral regulations may have prevented significant findings. Individuals' actions, prices, aesthetics, and successes are important, and their spending may indicate worth (Axsen and Kurani, 2013). Despite the many benefits of electric vehicles, price is a key factor in attitude and buying intention. Behavioral aims include reducing emissions and actively safeguarding the environment (Safari *et al.*, 2018). To enjoy the benefits of electric vehicles (EVs) in Jakarta, users must pay a certain amount. Benefits include exemption from the odd-even regulation, a lower annual tax, a non-progressive tax structure, and low energy and maintenance costs. However, proper electric vehicle (EV) infrastructure like charging stations does not affect consumers' buying intentions. This is because people can charge

their cars at home, which is more convenient and efficient. However, the Indonesian government is steadily building EV infrastructure to match international and national standards. However, price influences buying intention. Since a single electric car costs more than a conventional vehicle, subsidies or price reductions are needed to promote environmental sustainability. (Yuniza *et al.*, 2021) find that government subsidies affect EV pricing. Therefore, such incentives are advised to promote environmental sustainability. In Indonesia, electric vehicles (EVs) cost between Rp. 500 million and Rp. 1 billion, more than gasoline-powered automobiles.

Conclusion

Electric Vehicles (EVs) are considered a major technological advancement in the transportation industry because they effectively decrease future emissions and energy usage. This is especially important considering the widespread use of Gasoline-powered Vehicles (GVs) for transportation. In addition, this model of transportation has the advantage of promoting environmental sustainability by using renewable energy sources that are highly efficient, require minimal maintenance, are eco-friendly, and can reduce pollution levels (Aziz and Oda, 2017). Moreover, the Full-Electric Vehicle (FEV) has garnered significant public attention in Indonesia. This technology is characterized by its ongoing inventive development, which aims to educate and raise public knowledge regarding the potential benefits of owning an electric automobile that relies on a battery as its main power source. Furthermore, it is imperative to evaluate several factors, notably environmental knowledge, environmental attitude, environmental awareness in relation to purchasing intention, as well as the preparedness of the infrastructure and affordability of the pricing. A recent study has revealed a notable lack of general knowledge and understanding regarding Full-Electric Vehicles (FEVs). These vehicles, which rely on battery power, are expected to play a significant role in the transportation industry as a means to address environmental issues. Furthermore, the study incorporates an examination of infrastructure readiness and pricing affordability. The study reveals that the affordability of prices has an indirect beneficial impact on purchase intention due to the perception that the product is pricey and above the ordinary consumer's purchasing capacity for vehicles. The cost of owning a battery-powered car is a crucial factor that individuals must consider and allocate funds for in order to fully experience the advantages of such vehicles. Both the government and manufacturers have a substantial impact on promoting the widespread adoption of Full-Electric Vehicles, mostly by prioritizing the pricing aspect of these vehicles. In order to promote environmental sustainability, it is imperative to consider and ensure the affordability of price subsidies for all social groups. The study finds that cost is the primary determinant of a consumer's inclination to purchase a completely electric vehicle. Furthermore, the consumer's intention to make a purchase is influenced by their attitude, as indicated by their observable behaviors. Given the novelty of FEV (Flexible Electric Vehicle) among Indonesian citizens, it is imperative for manufacturers to engage in collaborative efforts with the government to address these issues and facilitate the widespread adoption of FEVs in Indonesia. In addition, it is crucial for the State Electricity Company (PLN) and other pertinent stakeholders to align themselves with industrialized nations that possess robust legislation pertaining to battery-powered vehicles. In Indonesia, Fuel Efficient Vehicles (FEV) are exempt from progressive taxation, a favorable policy. Additionally, the cost of charging an electric car is comparatively lower than refueling a regular vehicle with gasoline. In order to experience this inclination, individuals must initially traverse the

metaphorical threshold referred to as the "gate," which encompasses the deliberate decision to procure and the readiness to allocate a substantial monetary sum. Given the study does not comprehensively address all aspects, it would be advisable to undertake additional research on topics such as the advantages or privileges associated with full-electric vehicles, as well as the societal factors that distinguish them from other commonly owned vehicles. Future research endeavors may potentially validate the acceptance and developmental prerequisites pertaining to electric vehicles, thereby discerning disparities. Furthermore, it may be plausible to discuss advanced technological innovations, such as Vehicle-2-Grid (V2G) systems, which have already been implemented in other industrially advanced nations. This paper elucidates the correlation between an ecologically sustainable environment and the adoption of electric vehicles, which possess the potential to progressively mitigate air pollution and CO2 emissions, ultimately achieving a state of net zero emissions in the foreseeable future. The discussion centers around the management ramifications of research conducted within the automotive sector. This correlation is further substantiated by the preparedness of the infrastructure and the reasonable pricing of the car, so enabling a significant portion of the population to make a purchase.

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