Young Generation's Perception on Electric Car's Design

Chandrasa Soekardi
Mechanical Engineering Department
Mercu Buana University,
Jakarta, Indonesia 11650
chandrasa.soekardi@mercubuana.ac.id

Puji Prabowo
Entrepreneurship Department, BINUS Business School Undergraduate Program
Bina Nusantara University, Jakarta, Indonesia 11480
puji.prabowo@binus.ac.id

Abstract

The growth of the electric car business in Indonesia continues to increase with many brands offering electric cars as an alternative in the choice of car vehicles. The purpose of this study was to obtain data about the design of electric cars in Indonesia that are attractive to young people today. This study uses a qualitative approach. The research was conducted in the city of Bandung, involving 112 respondents. Data was taken using open-ended questions which were processed using 2 coding stages, then cross-case analysis stages, using qualitative data analysis software. The results of the study indicate that there are factors that are the reason for the young generation in choosing the design of electric cars that currently exist in Indonesia. The data also shows that there are many electric car models that are an option for the young generation. This research provides data from the field that is useful for the development of research related to electric cars. In addition, for the industry this research is useful to provide a real picture of electric car models that attract the young generation.

Keywords
Electric car, young generation, car design, environmentally friendly

1. Introduction
Electric car design is an evolutionary form of traditional car models that still use fossil fuels. By using batteries as the main source, electric car designs can protect the environment from damage. Electric cars are an option (Abbasi, 2021; Jayasingh, 2021). At present the development of electric cars in terms of performance and efficiency continues to improve, and the increase in usage continues to increase (Dnishev and Alzhanova, 2016). With its development, electric cars can be an option for people who are concerned about the environment.

In order for consumers to increase their desire to buy electric cars, manufacturers must build trust by providing the best information so that their brand is trusted better (Zang et al., 2022). In this research, the aim is to find out about the perceptions of the younger generation regarding the electric car's design as an important attribute of the product. From previous research (Wijekoon and Sabri, 2021) there is a product attribute classification that is important in marketing. To influence how customers can be interested in buying environmentally friendly products, in this case, electric cars. This research can provide benefits to electric car manufacturers in Indonesia in preparing key points in messages to be conveyed in advertisements.

2. Literature Review
Overall, electric car design is a very positive development in the automotive world. Streamlined, aerodynamic and modern design and advanced technology offer users a better driving experience. In addition, this model also has a lower environmental impact, making it a better choice for environmentally conscious consumers (Cheron and Zins, 1997; Matsumoto et al, 2021). The importance of providing proper information about the advantages and benefits of using it can increase the desire of consumers to buy their products (Yang et al, 2020; Zheltukhina et al, 2020). Then,

with the development of electric cars that are developing, there needs to be a marketing strategy about what message will be conveyed.

From the research conducted, manufacturers have focused on the environmental and social impacts resulting from electric cars to attract consumers' interest in buying products (Tih et al, 2016). An important parameter in electric cars is variation in models, which is an important component of innovation by companies in producing electric cars (Avadikyan and Llerena, 2010). However, at present, with a small variety of electric car models, it can influence the decision to make a purchase (Kumar and Alok, 2020). This is important as a marketing strategy in building consumer convenience (Agaton et al., 2019). With the development of electric cars in the automotive industry, a strategy is needed to understand the needs of consumers in the future. How the perception of the younger generation towards electric cars is one of the important things to know. This can help manufacturers provide choices and make consumers interested in various choices before making a decision before buying an electric car.

3. Methodology

This study aims to determine the young generation's perception of electric car designs that already exist in the Indonesian market. This study uses an online survey with a qualitative approach. The research was conducted in the city of Bandung, involving 112 respondents. Data was taken using open-ended questions which were processed using 2 coding stages, then cross-case analysis stages, using qualitative data analysis software. Then, the coded data was analyzed using the existing variable data to obtain interesting findings.

4. Data Collection

Data was collected through an online survey form, using open-ended questions as a tool for data collection. Data were obtained from 112 respondents in the city of Bandung, Indonesia. Respondents are students aged 18-20. The data collected is in the form of respondents' perceptions of the design of electric cars on the market today. In addition, respondents gave their opinions regarding brands that have attractive designs. The questions asked were the design of electric cars from which brands were attractive to respondents, then whether respondents were interested in electric cars and whether respondents lived a green lifestyle. The most important question is what factors are of interest to the design of electric cars in Indonesia today.

5. Results and Discussion

From the results of the study, respondents gave their opinions on brands that had electric car designs that caught their attention. Of the several brands mentioned, 3 brands received the most data. Hyundai Ioniq, Wuling EV and Tesla are the brands chosen by the respondents. The first is the Hyundai Ioniq brand. According to one respondent, “the model is very cool and modern and can fully charge in just 1 hour. Prices are also relatively affordable. If I was going to buy an electric car, of course I would choose this.” Apart from the sophistication of the design, according to the respondent, it has an elegant side, "besides being sophisticated, the design of the car is quite elegant and looks premium". In addition, the design of the Hyundai Ioniq 5 looks simply but looks luxurious and elegant on the exterior and interior.

The second brand that is often mentioned by respondents is Wuling EV. According to one respondent regarding the design of the Wuling EV car, "The shape of the car is smaller compared to cars in general, so it is more economical in space, the design is simple but elegant and attractive." In addition, other respondents gave their opinion on the design of this electric car, "Wuling Ev has a very unique design, and is also small, comfortable to use in cities, and simple." As for the third brand, there is Tesla. According to respondents, apart from being modern and sophisticated, Tesla is also well known by many people. According to one respondent, "the design looks simple but elegant and luxurious".

Table 1. Interest in Electric Cars

	Interest in Electric Cars					
Codes	**Very Interested**	**Interested**	**Moderate**	**Not Interested**	**Not Very Interested**	**Total**
High-tech	37,5%	31,5%	20,8%	50,0%	0	30,2%
Unique	12,5%	24,1%	16,7%	0	0	19,8%
Modern	18,8%	13,0%	29,2%	0	0	17,7%

Elegant	25,0%	13,0%	12,5%	0	0	14,6%
Capacity	0	11,1%	8,3%	0	0	8,3%
Sporty	0	1,9%	4,2%	50,0%	0	3,1%
Convenience	6,3%	0	4,2%	0	0	2,1%
Idealist	0	3,7%	0	0	0	2,1%
Famous	0	0	4,2%	0	0	1,0%
Timeless	0	1,9%	0	0	0	1,0%
SUM	100,00	100,00	100,00	100,00	0,00	100,00
N = Documents	21	63	24	3	1	224

From table 1, the data shows that the majority of respondents are interested in electric cars. It is clear that high-tech is a factor that makes respondents interested in electric car designs, this data is 30.2%. Furthermore, the attractive factors are unique with 19.8%, followed by modern with 17.7%, and elegant with 14.6%. From the data of respondents who are interested in electric cars, choosing high-tech, unique, modern, elegant, and capacity respectively. Then if you look at the respondents who are very interested in electric cars, the main factors are high-tech with 37.5% and elegant with 25%, followed by modern and unique.

Table 2. Living a Green Lifestyle

	Living a Green Lifestyle 1 - Not undergoing 5 – Very Living					
Codes	**1**	**2**	**3**	**4**	**5**	**Total**
High-tech	0	0	41,2%	20,4%	45,5%	30,2%
Unique	0	0	17,6%	24,5%	9,1%	19,8%
Modern	0	0	11,8%	20,4%	9,1%	17,7%
Elegant	0	0	5,9%	18,4%	27,3%	14,6%
Capacity	0	0	11,8%	8,2%	0	8,3%
Sporty	0	0	2,9%	4,1%	0	3,1%
Convenience	0	0	0	2,0%	9,1%	2,1%
Idealist	0	0	2,9%	2,0%	0	2,1%
Famous	0	0	2,9%	0	0	1,0%
Timeless	0	0	2,9%	0	0	1,0%
SUM	0,00	0,00	100,00	100,00	100,00	100,00
N = Documents	0	0	42	56	12	224

The results of the study in table 2 show the factors that become perceptions on electric car's design and the level of living a green lifestyle from respondents. From the data, it can be seen that the data uses a Likert scale with the number 5 which means living a green lifestyle very much. The data shows that all respondents live a green lifestyle which is divided into moderate, living, and very living with a score of 5. Of the respondents who are moderate in living a green lifestyle, the main factor chosen is high-tech. Whereas in living score 4, Unique is the main factor followed by high-tech, elegant and elegant. Whereas respondents who are very living tend to choose high-tech and elegant as a factor in seeing the design of an electric car.

The data from this research shows that there are important factors that become the perceptions of customers before they buy a product. There are determinants of what things can influence the purchase decision of the customer. This

research is in line with previous studies which focused on the reasons for purchasing environmentally products through product attributes and marketing (Zhang and Dong, 2020; Wijekoon and Sabri, 2021). This study clarifies that product attributes play an important role as one of the classifications in the purchasing process carried out by companies in their marketing.

6. Conclusion

The survey results show that there is a factor for the younger generation to choose electric vehicle designs that currently exist in Indonesia. The data also shows that many electric vehicle models are the choice of the younger generation. This study provides data in this area to help develop research related to electric vehicles. In addition, the study will help the industry get a better picture of the electric vehicle models that young people are interested in. Subsequent research focuses on design details that can affect the convenience of use, purchasing decisions and others.

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Biographies

Chandrasa Soekardi is a Professor in mechanical engineering. He is a lecturer at Mercu Buana University. He is enthusiastic about mechanical engineering, conversion energy, thermodinamika, and electric vehicle.

Puji Prabowo is a creativepreneur lecturer, and also a sociopreneur who has been working for 10 years. He is also a coach for business incubator at Binus University. He is enthusiastic about the entrepreneurial ecosystem, entrepreneurial skills, innovation, creative ideas, and business development.