ABSTRACT

The development of electric vehicles in Indonesia is expected to reduce emissions and support the Sustainable Development Goals (SDGs) 2030. However, the public tends to be reluctant to switch from existing technologies, making it important to understand their preferences when choosing among available charging methods. This study analyzes public preferences for charging methods, namely battery charging and battery swapping, using Garvin's eight dimensions of quality as the evaluation variables.

This research employs a quantitative method with a survey approach. Data were collected through an online questionnaire distributed to 111 respondents who are electric motorcycle users in East Java. The data were analyzed using validity tests, reliability tests, inferential analysis, and logistic regression to identify significant factors influencing user preferences. The results indicate that performance and durability significantly affect users' choices of charging methods.

The charging battery method has an odds ratio of 1.348 times higher in terms of performance and 0.766 times higher in durability compared to swapping battery. The regression model has an accuracy of 64.0%, with user preference predictions for charging battery reaching 78% and swapping battery 48.1%. This study is expected to help manufacturers improve battery quality and encourage the government to accelerate the development of more efficient charging infrastructure to support the broader adoption of electric vehicles.

Keywords: charging battery, electric vehicle, garvin's dimensions, logistic regression, swap battery.