ABSTRACT

Battery electric vehicle (BEV) is a form of transportation that has eco-friendly fuel so that it can help to reduce greenhouse gas emissions. The use of this alternative transportation can participate in supporting the 13th goal of Sustainable Development Goals (SDGs) related to climate change. However, wholesales of electric cars BEV model in Indonesia only control around 1,7% of the total automotive market share based on data released by GAIKINDO in 2023. Therefore, this research discusses sales forecasting for each brand that produces electric cars BEV model and has wholesales recorded at GAIKINDO. The aim of this research is to determine sales projections using the least square method, reliability of forecasting models with F test, and analyze the level of accuracy of sales forecasting results by calculating MAPE (Mean Absolute Percentage Error) value of each brand.

This research uses quantitative methods with descriptive research types based on time series data from the GAIKINDO association analysis unit. The involvement of researchers in the research is forecasting by looking at the pattern of sales trends of each brand studied and not intervening the data. The sample taken in this research is the wholesales of BEV for the period March – December 2023 by GAIKINDO.

Based on the results of research for the eleven brands studied, it was found that the sales forecasting model for the Lexus brand was considered feasible and reliable enough to be used as a sales projection of electric cars BEV model in Indonesia with the highest level of relationship compared to other brands at 58,32% for the period March – September 2023. Then, brands with the least square method sales forecasting accuracy level that have a MAPE value of ≤50% for the period November – December 2023 are Hyundai, Wuling, and BMW. The suggestions for further research are to do sales forecasting with methods, objects, data, and other time periods. The next research can also make adjustments to the extreme points of the actual data.

Keywords: *Sales forecasting, battery electric vehicle, electric cars, least square method*