

ABSTRACT

The purpose of this study is to provide ARIMA modelling results to generate sales stock predictions for the next 1 month at Anugerah Store. This is being done to address issues related to stock shortages for high-demand brands and stock piling for low-demand brands, given that previous sales predictions were based solely on assumptions. The data analysed consists of monthly sales history data from Anugerah Store from January 2022 to December 2024, with some columns containing zero sales data. Based on the analysis results, the optimal parameters were found to be ARIMA(2, 0, 1) for the HAP brand, ARIMA(2, 0, 2) for the Kencana Ungu brand, and ARIMA(2, 0, 2) for the Sesawi brand. An evaluation was conducted using the RMSE and MAPE metrics for each model, showing results of 3.76 RMSE and 57.54% MAPE for the HAP brand, 1.80 RMSE and 25.00% MAPE for the Kencana Ungu brand, and 2.83 RMSE and 150.00% MAPE for the Sesawi brand.

Keywords: *ARIMA, ADF Test, Sales Forecasting, RMSE, MAPE.*