ABSTRACT

SEASONAL ARIMA METHOD TO FORECAST THE NUMBER OF INTERNATIONAL FLIGHT PASSENGERS AT NGURAH RAI AIRPORT

By

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The aim of this study is to find the best time series model for the number of international flight passengers at Ngurah Rai Airport. The first step is testing the stationary data using time series plot and Autocorrelation Function (ACF). Next step identifying the orde of model based on ACF plot and Partial Autocorrelation Function (PACF). Model parameter is estimated by Maximum Likelihood Estimation (MLE). The residual model used to test the assumption of white noise process. Akaike's Information Criterion (AIC) and Schwarz Bayesian Criteria (SBC) used to select the most appopriate model. Result shows that ARIMA $(0,1,1)(0,1,1)^{12}$ is the model which can be used to forecast the number of international flight passengers at Ngurah Rai Airport in the future.

Key words : time series, ARIMA, seasonal ARIMA, ACF, PACF, white noise.