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اَبُو سَيِّدِي تِكْنُوْلُوجِي مَارَا
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TEKNOLOGI
MARA**

**COMPARING THE PARAMETER ESTIMATION FOR KIJANG
EMAS**

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ABSTRACT

Nowadays, particularly after the unforeseen events of the pandemic triggered by covid-19, most people around the globe are beginning to grow an interest in gold because it offers a sustainable store of value. The Malaysian Kijang Emas is Malaysia's official gold bullion coin and is minted by Malaysia's Royal Mint . In comparison, the Kijang Emas has 999.9 millesimal fineness or 24 karat gold purity. Hence, this research can assist investors on the gold price whether it rises or declines as it makes it easier for them to predict the best moment to invest in gold. This can be achieved by fulfilling both the study objectives which are to figure out the best ARIMA model to predict the price of gold and to determine the best estimation of parameters using the Maximum Likelihood Method (MLE) and the Ordinary Least Square Method (OLS). The selected models after using the Box-Jenkins methodology are ARIMA(1,1,1), ARIMA(2,1,1), ARIMA(3,1,1), ARIMA(4,1,1) and ARIMA (5,1,1). Therefore, in order to select the best model for both approaches, the researcher must compare the value of the AIC and the BIC. By choosing not only the smallest value of AIC and BIC, but also taking into consideration the definition of parsimony rules, ARIMA (2,1,1) is chosen as the best model. And in the meantime, the best parameter estimation can be estimated using the Maximum Likelihood Method (MLE) and the Ordinary Least Square Method (OLS) by determining the value of the Root Mean Squared Method (RMSE). Since the value of RMSE between OLS and MLE is 147.6981 and 128.0901 respectively, MLE will therefore be used as the best method for estimating the price of gold in this analysis, since it has a lower value of RMSE.

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