

Universiti Teknologi MARA

**Comparison between Fuzzy Time Series
and Box-Jenkins Method to Forecast the
Paddy Production in Malaysia**

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STUDENT'S DECLARATION

I certify that this report and the research to which it refers are the product of my own work and that any ideas or quotation from the work of other people, published or otherwise are fully acknowledged in accordance with the standard referring practices of the discipline.



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ABSTRACT

Paddy is the main cultivation in Malaysia. This study was conducted to predict the paddy production in Malaysia using Fuzzy Time Series (FTS) and Box Jenkins Methodology and which method is more accurate to make predictions. The data used are secondary and were obtained from the Paddy Production Survey Report Department of Agriculture Malaysia from 1980 to 2019. The objective of this study is to compare between Fuzzy Time Series and Box Jenkins method of paddy production in Malaysia, to forecast the rice consumption in Malaysia using the best method between Fuzzy Time Series and the Box Jenkins method. Furthermore, R studio software has been used to calculate the Box Jenkins method. The error measure was calculated in this study which is Mean Square Error (MSE) for comparison which method gives the lowest value. The result shows that the Fuzzy Time Series method gives the lowest value of MSE which is 11826508360 as compared to Box Jenkins that is 23798176345.

Keywords: paddy production, Fuzzy Time Series, Box Jenkins method, R studio, MSE

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