Abstract

The citizens are start to look for a kind of modern investments, gold dinar investment is the one. The value of gold dinar is tend to stable and doesn't fall because of inflation because it moves with gold value. If there is a system that be able to predict the value of gold dinar, it can help them who are interested to do gold dinar investment. The base of prediction method that being used is using history data from time series data of gold dinar value.

In this final task, a prediction system had developed to predict the value of gold dinar by using the concept of Grammatical Evolution (GE) based on Fuzzy Goverment (FG) and history data of gold dinar value. GE method in this system produced a prediciton function that has the closest pattern with characteristic of gold dinar value history data based on the definition of Backus Naur Form (BNF). The parameters at GE would be controlled by FG, so the value would be dynamic appropriating with the population condition while GE is evoluting to produce an optimal prediction function.

From the observation and testing that had been done using the history data of gold dinar value from the first week on January 2001 to June 2010, the best prediciton is 0.0235548 MAPE (Mean Absolute Percentage Error) value for data scenario 1 testing data and 0.0212738 MAPE value for data scenario 2 testing data.

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Keywords*: Grammatical Evolution, Backus Naur Form, Fuzzy Government, prediction, time series, gold dinar.*