ABSTRACT

The ancient way of predicting future events with the aim of obtaining information on the next period so that we can take precautions both now and in the future is known as forecasting. According to research conducted by Assidiq and colleagues, the best forecasting method is fuzzy time series. There are many variants of fuzzy time series, but the Cheng variant is more commonly used than Markov chain. This study aims to compare the performance of fuzzy time series cheng and fuzzy time series markov chain methods on divorce data in Purwokerto based on mean absolute percentage error (MAPE). The orientation of this research is to compare fuzzy time series cheng and fuzzy time series markov chain. This research utilizes Purwokerto divorce data from 2016 to 2020. Since the divorce case data increased significantly compared to previous years, forecasting with divorce is a suitable combination for pandemic conditions. Based on the smallest MAPE value, comparison with Purwokerto divorce data shows that fuzzy time series markov chain is superior to fuzzy time series Cheng. The fuzzy time series MAPE value for Cheng is 32.86 percent. The fuzzy time series markov chain, on the other hand, is 29.07%. With MAPE values between 20 to 50 percent, both approaches can still be used for forecasting. There were a total of 190 cases predicted using the fuzzy time series Markov chain in January 2023 (n=100).

Keywords: fuzzy time series cheng, fuzzy time series markov chain, MAPE, forecasting, divorce