ABSTRACT

National Economic Survey (Susenas) data is used by Statistics Indonesia to calculate the poverty rate in Bandung. However, the traditional data collection method of interviewing households one by one is time consuming, expensive, and may not capture a representative sample. Therefore, this research explores the use of Time Series models, specifically AutoArima, Croston, and Exponential Smoothing algorithms to predict the poverty rate in Bandung city. Based on this problem, a prediction is needed to determine the poverty rate in Bandung City. The poverty dataset used is sourced from the Bandung City Data Portal with test data from 2010 to 2018. This research will use 3 error parameters to evaluate the results of the poverty rate in Bandung City, namely MAE, MSE and MASE. Based on the tests conducted, the dataset produces the AutoArima model as the best method with MAE = 0.183, MSE = 0.053, MASE = 0.797, for the Croston model produces an error with MAE = 0.456, MSE = 0.374, MASE = 1.985. Meanwhile, the ExponentialSmoothing model produces an error with MAE = 0.410, MSE = 0.215, MASE = 1.786. From the three tests, it was concluded that the AutoArima model successfully predicted the poverty rate in Bandung City with good results.

Keywords: SAP Financial, Information System