CONSUMER PRICE PREDICTION OF INDIAN STATES USING TIME SERIES FORECASTING-CASE STUDY

The behavior of the Indian consumer price index from January 2011 to November 2021 is examined in this article. The Consumer Price Index abbreviated as CPI is used in this work as the standard parameter to measure inflation in India. It serves as the foundation for comparing inflation rates among Indian States and as a proxy for other potential inflationary indicators. The goal of this study is to simulate CPI using several regression time series forecasting models. Consumer Price Indices (CPI) track changes in the average cost of goods and services that households buy for consumption over time. Consumer price index figures are frequently used by governments and central banks for inflation targeting and monitoring price stability as a macroeconomic indicator of inflation. We can comprehend the state of Indian consumption demand and have a good concept of India's future economic performance by quantitatively analyzing and forecasting the consumer price index in the local area. To comprehend the indicator's forecast is essential for understanding the country's social and economic growth. Researchers working in the fields of time series modeling, economic analysis, and investments can benefit from this study. It was feasible to determine the initial time series' characteristics, the presence of yearly seasonality, and the examination of autocorrelation functions. The ARIMA model which is also known as Auto-Regressive Autoregressive Integrated Moving Average, and the Holt's Winter Exponential Smoothing mode were used to simulate the behavior of the consumer price index and forecast for the upcoming months and years. The forecast and time series package was used to create the models that best capture the annual dynamics of the consumer price index across all Indian states. The Holt-Winters model, which has the least amount of error, was used to forecast inflation. Both models were utilized by the study to generate the required forecasts.