

Abstract

Time series modelling and forecasting techniques serve as gauging tools to understand the time-related properties of a given time series and its future course. Most financial and economic time series data do not meet the restrictive assumptions of normality, linearity, and stationarity of the observed data, limiting the application of classical models without data transformation. As non-parametric methods, Singular Spectrum Analysis (SSA) is data adaptive; hence do not necessarily consider these restrictive assumptions as in classical methods. The current study employed a longitudinal research design to evaluate how SSA fits Kenya's monthly industrial inputs price index from January 1992 to April 2022. Since 2018, reducing the costs of industrial inputs has been one of Kenya's manufacturing agendas to level the playing field and foster Kenya's manufacturing sector. It was expected that Kenya's Manufacturing Value Added hit a target of 22% by 2022. The study results showed that the SSA ($L = 12, r = 7$) (MAPE = 0.707%) provides more reliable forecasts. The 24-period forecasts showed that the industrial inputs price index remains high above the index in 2017 before the post-industrial agenda targeting a reduction in the cost of industrial inputs. Thus, the industrial input prices should be reduced to a sustainable level.