

Abstract

Dr. Gamal Haikal

Transforming the Simple Moving Average Forecasting Technique into a Judgmental Bootstrapping Approach

The simple moving average forecasting technique (SMAFT) uses a naïve arithmetic measurement for smoothing time-series data for various situations purposes, such as sales prediction. This paper attempts to rectify the contextual procedure of SMAFT by transforming the method into a judgmental bootstrapping approach, combining the statistical techniques of the \bar{x} chart (x-bar) and the Hurwicz's Criterion. The proposed modeling approach generates a dual forecasting value, presented by the grand mean, $\bar{\bar{x}}$, of the x-bar chart and the expected weighted payoff of the Hurwicz's Criterion, which is used to improve the accuracy of the final forecast. This model will serve the need for a cost effective technique to address routine forecasting, especially for companies with large numbers of items.