Abstract

Forecasting is the starting point for drawing good strategies facing the demand variability in the increasingly complex and competitive today's markets. This article discusses two methods of dealing with demand variability in seasonal time series using artificial neural networks (ANN). First a multilayer perceptron model for time series forecasting is proposed. Several learning rules used to adjust the ANN weights have been evaluated. Secondly a causal method based on artificial neural networks, using the components of decomposed time series as input variables, has been used. The results show that ANNs yield almost the same accuracy with or without decomposition of the original time series.

Index Terms

Computer Science
Artificial Intelligence
Keywords

Demand Forecasting  Supply Chain  Seasonal Time Series  Causal Method  Artificial Neural Networks (ANN).