Application of Forecasting Methods to Slow Moving Demand Items: A Case Study

Student: FABIO ESTEBAN SIERRA GAYON   Advisor: Dr. Chi-Yang

Institute of Industrial Engineering and Management Yuan-Ze University

ABSTRACT

Slow-moving demand items are so called because they present irregularities in the size of their demand or in the periodicity of their occurrence, so that conventional forecasting methods usually show inaccurate results, dividing them into erratic, intermittent and lumpy demand items. The present study examines the application of forecasting methods in the demand of items of a Colombian research center, which are based on the Exponential Smoothing, but specific for these typologies, such as the Croston method and its modifications, the SBA and the SBJ, as well as with more current models focused on the aggregation and disaggregation of time series (ADIDA and MAPA). Likewise, the accuracy of each of the methods is evaluated through the review of the Mean Absolute Errors (MAE) and Root Mean Squared Errors (RMSE), in order to provide a well-founded recommendation on which type of method is more accurate for a certain type slow-moving demand.