Forecast Based on an Empirical Probability Function with an Adjusted Error Using Propagation of Error

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Abstract : This paper addresses a cutting edge method of business demand forecasting, based on an empirical probability function when the historical behavior of the data is random. Additionally, it presents error determination based on the numerical method technique 'propagation of errors'. The methodology was conducted characterization and process diagnostics demand planning as part of the production management, then new ways to predict its value through techniques of probability and to calculate their mistake investigated, it was tools used numerical methods. All this based on the behavior of the data. This analysis was determined considering the specific business circumstances of a company in the sector of communications, located in the city of Bogota, Colombia. In conclusion, using this application it was possible to obtain the adequate stock of the products required by the company to provide its services, helping the company reduce its service time, increase the client satisfaction rate, reduce stock which has not been in rotation for a long time, code its inventory, and plan reorder points for the replenishment of stock.
Keywords : demand forecasting, empirical distribution, propagation of error, Bogota
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