SALES FORECAST FOR AGGREGATE PLANNING: CASE STUDY OF AN INDUSTRIAL PRODUCTS COMPANY IN MEXICO

Ignacio Alvarez Placencia
Universidad Popular Autónoma del Estado de Puebla A.C., 17 Sur 901, Barrio de Santiago, 72410, Puebla, Mexico, ignacio.alvarez@upaep.edu.mx (corresponding author)
Diana Sánchez-Partida
Universidad Popular Autónoma del Estado de Puebla A.C., 17 Sur 901, Barrio de Santiago, 72410, Puebla, Mexico, diana.sanchez@upaep.mx
José-LuisMartínez-Flores
Universidad Popular Autónoma del Estado de Puebla A.C., 17 Sur 901, Barrio de Santiago, 72410, Puebla, Mexico, joseluis.martinez01@upaep.mx
Patricia Cano-Olivos
Universidad Popular Autónoma del Estado de Puebla A.C., 17 Sur 901, Barrio de Santiago, 72410, Puebla, Mexico, patricia.cano@upaep.mx

Abstract: This case study presents the analysis through the use of sales estimation tools for planning demand for aggregate level as a finished product in a leading industrial products company in the market in Mexico. First, it aligned the demand plan and the supply plan, recommending the best execution scenario to increase operational efficiency and reduce the cost of operating the supply chain to increase the company's productivity and stay competitive. Then, after analyzing the behavior of the demand for selected products, the authors determined as the main affectation the inadequate precision of the method forecasting and the lack of an aggregate forecasting strategy that allows reducing the variation. Due to this, the most significant effort was concentrated on determining a better-forecasting model and the decision to aggregate the demand based on three relevant criteria: the demand pattern based on the Soft, Intermittent, Erratic or Irregular quadrant, the best method of the forecast for each product and the time in quarters. As a result, a reduction between 20% and 46% in the forecast variation can be obtained from the above.