ABSTRACT

This project is concerned with designing a tool to manage service levels and maximize profits of vendor-managed-inventory products, as an Electronics Company Case Study. Thus, this study is about increasing customer service levels to produce customer satisfaction, solve shortage problems, increasing revenues, and improve the efficiency of the current vendor-managed-inventory program.

This research applies the 'newsboy problem' in which a decision maker sets up an appropriate service level to meet an uncertain demand for VMI products, subject to maximizing profit and minimizing opportunity loss for not meeting demand and stabilizing the holding cost for excess stock.

Based on an analysis of current environment data, the researcher found that the present forecast is always lower than actual demand from the customer .This issue causes low service levels, and cannot implement a recovery shipment plan as material lead time and product lead time are long .This provides an opportunity for competitors to enter this market.

The result of applying the solution is an appropriate customer service level and optimal quantity that the company should buy and produce to achieve maximize profit. The service level from the solution is higher than the current one. It also increases the number of orders for which that the company can meet customer demand.

In summary, the newsboy method can improve customer service levels and the estimated quantity that the company should order to get maximize profit. It helps the company to improve customer satisfaction through order responsiveness .It also helps the company to improve relationships with customers and provides an opportunities to get more orders and to be a key supplier.