ABSTRACT

Management of production inventories represents a major interest of production and operations managers. The nature of purchases made, volume and variety of purchases, the degree of specialization needed to make the purchases, especially of items which have a high quality control factor, etc all go to determine the organization for purchase.

The investment in production inventories comprises a substantial share of the firm's assets. Effective control of these inventories can lead to significant cost savings, ineffective inventory control often results in excessive stock investment or material shortages. This dissertation presents and analyses the different methods for determining acquisition or production or ordering lot sizes in SSIs inventory systems for a single level product. The research described in this dissertation is concerned with the determination of the quantity and timing of production orders to replenish inventories in a single level manufacturing systems.

The research analyses the findings of 96 case studies of industries in Amravati. The various lot sizing methods have been analyzed. The computer software programs regarding interactive investment programs, inventory report of an industry manufacturing various products, maximum credit policy, production and sales analysis of a company manufacturing different categories of products and items manufactured and sold, price increment and quantity increment, handling inventory with various numbers and quantities, and modifying an already existing inventory report are the software programs which have been developed for the industrialists in Amravati to optimize inventory control.

The dissertation concludes with a summary of research findings, discussions and conclusions. Recommendations for further research are also presented.