Summary and Future Scope

Summary

The world is changing rapidly nowadays. Needs of people are updating more rapidly with the accelerating pace of technological changes. In such scenario, demand for the products may not be constant most of the time in the market. Also demand cannot be increasing always. In today’s world, technologies as well as fashion styles are changing. Therefore, when a new product enters the market by a branded company, demand increases very fast for the product initially. After some time, it becomes steady and then it disappears quickly when newer version of the product flows to the market. Trapezoidal demand behaves like this, which is analyzed in the thesis.

It is shown that inventory system achieves more profit when players of supply chain take joint decision than independent decision. Also, players in the supply chain should be offered some credit period for the payment. It is proved that the offer of credit period enhances the demand and hence the total profit is improved. Inventory models with effect of deterioration of items have been studied. To reduce deterioration, preservation technology investment is incorporated. Finally, the benefits of recycling of used products are advocated for environmental concerns.
Future Scope

In future, it is worth incorporating imperfect production processes, fuzziness of model parameters, stochastic demand, floor space constraint, capital investment constraint etc.

Production of multi-items may also be a good idea. One can analyze different deterioration rates of units in buyer and supplier’s warehouses or different preservation technologies to get more beneficial analysis.