

# **IMPACT OF BACKORDERING ON INTEGRATED PRODUCTION AND DISTRIBUTION PLANNING IN SUPPLY CHAIN MANAGEMENT**

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## **ABSTRACT**

A mathematical formulation of the problem has been developed that assumes limited stocking facilities at retail outlet. To make the full benefit of the capacity available, the model makes use of the available storage capacity and also exploits the opportunity for backordering so as to maximize overall net profit. Only as a last option, the excess demands which cannot be satisfied are also lost at some relevant opportunity cost. The model proposed is tested on sample problems. The variations of these problems clearly exhibit the capability of the model to take advantage of stocking and backordering.