

# **A mathematical model for cost optimization of Information Facilitated Product Recovery Systems (IFPRS)**

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## **Abstract**

This paper is an attempt adopting mathematical formulation to improve the overall productivity of the recovery chain. Here, a recovery scenario is modeled subject to time and type of product to be processed. The proposed model demonstrates a reduction in overall cost of the product recovery chain.

## **Keywords**

Information facilitated product recovery system (IFPRS), Performance Improvement, Mathematical modeling.

## **Biographies**

**Ashish Dwivedi** is a Research Scholar at Department of Management Studies, Indian Institute of Technology Delhi, Delhi, India. He is currently working in the field of product recovery systems (PRS), sustainable manufacturing, information and synergy modeling in PRS. He has completed his M.Tech (specialization Computer Aided Design and Manufacturing) from MNNIT Allahabad, India. To date, he has published 3 international journal papers and presented papers in several international conferences.

**Jitender Madaan** is an Associate Professor at Department of Management Studies, Indian Institute of Technology Delhi, Delhi, India. Dr. Jitender Madaan received his B.Tech Degree in Production and Industrial Engineering from M.B.M Govt. Engg College, Jodhpur (JNV University), India, and obtained his M. Tech in Manufacturing System Engg. from Department of Mechanical Engg. MREC (Now MNIT), Jaipur and PhD in Mechanical Engineering from the Indian Institute of Technology (IIT) Delhi, India. Prior joining IIT Delhi, Dr. Madaan has many years of working experience in other universities including IIT Roorkee; GGSIP University Delhi. His current research interests are Reverse Logistics and Supply Chain Management, Sustainable Operations Management, Production Management, information and governance effectiveness, Systems Modelling and Simulation, etc. To date, Dr. Madaan has published over 4 book chapters, over 25 refereed international journal papers and 48 peer reviewed international conference papers. He is a reviewer of several international journal of repute.