Reverse Supply Chain for Remanufacturing with Uncertain Demand and Return Product Yield

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Abstract

Many countries are mandating remanufacturing as a means of sustainability. Remanufacturing brings in the problem of uncertain yield for the OEM, unlike new parts input. Under this and a random demand, we design a supply chain contract that also takes into account the manufacturing lead times which can be short and long. We consider two popular types of contracts, namely a push or a pull contract. We obtain the optimal supply chain contracts depending on the contract type and the information the OEM has about the random yield rate. We compare the results of different scenarios and develop managerial insights.

Biographies

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