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A Profit And Loss Analysis For Make-To-Order Versus Make-To-Stock Policy—a Supply Chain Case Study

Sameer Kumar, Daniel A. Nottestad & John F. Macklin

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Abstract

The make-to-order (MTO) or make-to-stock (MTS) decision is important for contract manufacturers supporting product supply chains. This case study provides an integrated profit and loss investment analysis for MTO versus MTS policy while also quantifying factory cost. The use of discrete-event simulation integrated with Excel provides a proactive decision support application to predict lead time and profitability of an extruded part within a manufacturing supply chain at 3M Company headquartered in Maplewood, Minnesota. The analysis presented predicts the conditions where a make-to-stock policy is better than a make-to-order policy in terms of operating income for a single SKU (product) in a large multinational manufacturing company acting as a contract manufacturer. We define an inventory to order quantity

(IOQ) ratio and use this metric with scenario analysis to maximize operating income. The IOQ ratio showcased in this study is applicable for supply chains with predictable customer demand.

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Notes

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