Production Planning & Control ›
The Management of Operations
Volume 20, 2009 - Issue 7: Practical Implementation of Production Planning and Control Concepts in SMEs and MTOs

Original Articles

Combining make-to-order and make-to-stock inventory policies: an empirical application to a manufacturing SME

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Pages 559-575 | Accepted 17 Apr 2009, Published online: 15 Sep 2009

Cite this article https://doi.org/10.1080/09537280903034271

Abstract

This article focuses on decoupling point and inventory policy decisions in manufacturing companies supplying products with different demand patterns and customisation levels. In such a context, adopting a pure make-to-order (MTO) approach may severely affect the response time for standard and regular products while, on the other hand, a pure make-to-stock (MTS) policy may result in excess inventory. To overcome this, companies tend to adopt hybrid and dynamic MTO–MTS policies, but decisions are often taken without the support of a rational model. In this article we develop a rational model to support inventory management decisions in a MTO–MTS context and bridge the gap between theory and practice. Starting from a real-life case study, we develop a decision-making approach that employs simple models, methods and tools, thus

making it suitable for practical implementation in small and medium sized enterprises (SMEs). Different product characteristics are analysed in order to develop a framework for choosing the most suitable decoupling point and replenishment policy (such as economic order quantity, EOQ) and for determining the parameters of the chosen policy (such as lot size). The simplicity of the procedure together with the positive results achieved in this first case study implementation suggest that the new framework has the potential to improve the inventory policies adopted by SMEs in a MTO–MTS context and should be refined and developed through further case study research.

Keywords:

make-to-order | make-to-stock | small and medium sized enterprises | implementation | case study

Acknowledgements

The authors wish to thank the (anonymous) referees for their demanding comments that indicated how to obtain, in our view, a sharp increase in the quality of this article.

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