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区分仓库与货架库存需求影响效应的零售商库存决策

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Retailer's Inventory Decision for Items with Shelf-and Stock-Level-Dependent Demand Differences

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摘要 既往有关库存水平影响需求条件下的库存问题研究中,通常对终端库存水平是否存在货架与零售商仓库库存水平的区别未作深入探讨。本文的研究认为,现实中许多零售商拥有仓库,其现有库存水平包括仓库库存和货架库存两部分,而影响需求的仅为与货架展示能力相关的库存,因此有必要对二者的需求影响效应进行区分。在明确这一区别的前提下,本文首先建立了供应商管理库存情况下库存水平影响需求问题的一般库存模型,给出零售商的最优订货策略;并考虑货架的容量限制,给出零售商启用仓库的判断条件。由于仓库库存仅在能够影响货架展示能力的条件下才能够影响消费需求,本文还进一步讨论了在零售商拥有仓库时,区分货架与仓库的库存水平影响需求条件下的最优库存与订货决策。这对于经营不同特征商品的零售商在进行是否需要拥有仓库,以及拥有仓库条件下的库存决策具有很好的参考价值。

关键词： 库存水平影响需求   货架库存   库存策略

Abstract： Inventory models for items with stock-level dependent demand usually don't differentiate shelf inventory and warehouse inventory levels further. It is suggested in this paper that most retailers own warehouses in reality, hence the current inventory level is composed of warehouse inventory and shelf inventory. Since only shelf inventory affects demand, it is necessary for us to distinguish these two types of inventory. In this context, firstly, a general inventory model is established for items with stock-level-dependent demand under VMI scenario and the retailer's optimal order policy is gwen. Then the shelf capacity constraint is taken into account and the conditions under which the retailers will start using warehouse are shown. The optimal inventory and order decisions for items with shelf-and stock-level-dependent demand differences when a retailer has warehouse are also discussed. The research results provide valuable references for retailers making decision on whether to enable a warehouse for different items or not, and will also benefit retailers on how to make inventory policy when they own warehouses.

引用本文:

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