

考慮運輸設備容量限制情況下之整合性存貨模式之研究

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摘要

近年來，企業與單一供應商建立良好的長期關係，並從中獲取實質利益與競爭優勢。整合性存貨模式優點為買方與賣方密切合作，長期採購合約約定賣方少量多次的小批量運送產品，進而達到高品質、低存貨、交貨頻繁、短前置時間與緊密合作的關係。傳統的許多存貨模式假設裝載容量被忽略的；然而許多實際的情況並非如此。在許多真實的環境中，裝載容量限制是確實存在的，因此，決定存貨政策時，考慮裝載容量限制應更加適當。本文是研究考慮裝載容量限制時之整合性存貨模式。本研究旨在針對前置時間內需求量服從常態分配的前提下，提出一個整合性存貨模式，使得買方與賣方所發生總存貨成本最小化，並發展模式最適解的演算法，同時得出訂購量與交貨次數最適解。

關鍵詞：供應鏈、及時化採購、整合性存貨模式、容量限制

A Study of the Integrated Inventory Models with Carrying Capacity Constraint.

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ABSTRACT

In recent years, companies have found that there are substantial benefit and competitive advantage from establishing a long-term sole-supplier relationship with supplier. The benefits of integrated inventory model include high quality, small lot sizes, frequent deliveries, reduction in lead time, decrease in inventory levels and close supplier ties. Traditionally, most of the literatures dealing with inventory problem assume carrying capacity was ignored. However, this may not be realistic. In fact, in all cases, carrying capacity constraints are incurred. Thus, it is more appropriate to take the carrying capacity constraints into account in determining the optimal ordering policy. This research presents the integrated inventory models with carrying capacity constraint. The purpose of this research is to develop the integrated inventory models for minimizing the total joint annual costs incurred by the vendor and the purchaser. An algorithmic procedure is established to find the optimal order quantity and number of deliveries simultaneously for the case of normally distributed lead time demand.

Keywords: Supply Chain, Just-In-Time Purchasing, Integrated Inventory Models, Carrying Capacity Constraint

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