考量權重策略下之即時性存貨路徑問題 = A real-time inventory routing problem with weight strategy

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摘 要

近年來因為石油危機與供不應求的因素，導致油價屢屢創下新高，在眾多行業裡衝擊最大的莫過於每次運作都需大量石油的運輸業，而如何在減少運輸總成本的同時又要滿足顧客需求，成了運輸業供應系統最關注的議題，而在供應鏈管理裡減少成本，分為兩方面，一方為供給角度目標在降低配送成本，另一方則為需求的角度則是可以減少存貨和缺貨的成本。在供應鏈裡的運籌管理中有一議題，包含存貨及路徑的管理跟控制兩部份稱之為存貨路徑問題(IRP, Inventory Routing Problem)，存貨路徑問題目的為，配送成本跟總存貨成本達到最小，這與運輸業供應系統的目標相當類似，故本研究將利用存貨路徑問題做為解題的基礎，可是一般的學者在研究存貨路徑問題時，並不會考慮權重差異，以及在現實上需求者的需求是隨著時間改變而變動，而不是有固定比率。所以本研究將考慮在只有單一倉庫時利用一部運輸工具供應多個需求據點下，利用本研究所提出考慮零售商權重(weight)不同時的啟發式配送法則，決解具有即時性(real- time)的存貨路徑問題，並以系統模擬(System Simulation)來驗證本研究提出的配送法則所得到的供應總成本比傳統配送法則總成本低。本研究的貢獻在於將存貨路徑問題變為動態並加入權重差異，使之更符合現實，並用模擬求得存貨路徑問題之啟發解。

關鍵詞 : 存貨路徑問題、系統模擬、即時性、權重

目錄

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