

三階供應鏈之協調機制研究 = A study of coordination mechanisms for three-echelon supply chain system

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摘要

隨著供應鏈管理受到重視的程度日益增加，企業也越來越注重上中下游之間的合夥關係，以達到互惠互利的原則。因此，各家供應商要如何透過制定協商機制以期獲得供應鏈整體利潤的最大化便成了一個重要的議題。本研究探討的決策環境為：由一個零售商、一個配銷商及一個製造商所組成之三階供應鏈的協調機制，研究如何去制定價格與訂購數量之決策，以期使系統利潤最大化。本研究乃依據競局理論Stackelberg game的架構來做探討，製造商為領導者 (leader)，在考慮配銷商的訂購數量後，接著宣佈自身訂定的價格；下一階層的配銷商為跟隨者 (follower)，依據上游領導者宣佈的價格，及考慮下游零售商的訂購數量後，再來訂定配銷商價。因而需藉由協商機制決策以訂定上中下游廠商之價格及訂購數量，使供應鏈之整體通路獲得利潤最大化，讓供應鏈體系可以維持一種均衡的狀態。在線性價格敏感需求模型假設下並以數值分析技術，求得各成員的價格與訂購數量，使整條供應鏈通路達到協調與利潤最大化之目標。

關鍵詞：三階供應鏈；Stackelberg game；協調機制

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