البحث رقم (5)

عنوان البحث	**نموذج تعاون جديد ذو كفاءة لسلاسل الامداد متعددة المراحل** **A new efficient collaboration model for multi-echelon supply chains**
المؤلفون	**أحمد شعبان**، فرانشيسكو كوستانتينو، جوليو دي جرافيو، ماسيمو ترونشي **Ahmed Shaban**, Francesco Costantino, Giulio Di Gravio, and Massimo Tronci
تفاصل النشر	Expert Systems with Applications, 128, August 2019, 54-66. DOI: 10.1016/j.eswa.2019.03.026, ISSN: 0957-4174
تاريخ النشر	أغسطس 2019

التصنيف	Google Scholar Citations (December 3, 2020)	JCR IF (2019)	Web of Science (2019)	Scopus CiteScore (2019)
ISSN: 0957-4174	6	5.452	Q1	Q1

Extensive research has shown that collaboration has substantial impact on supply chains performance. However, most of previous research has focused on information sharing-based collaboration models that require considerable effort to be implemented, such as information exchange supply chain (IESC). This paper introduces a new efficient collaboration model (IS-OUT) for multi-echelon supply chains. The IS-OUT model relies upon the ordering mechanism of the classical order-up-to policy (OUT). In traditional supply chains (TSC), although OUT replenishment orders include two pieces of information: demand forecast and inventory position balance, they are transferred to upstream echelons as single-quantity orders. In IS-OUT, the order information is transferred to the upstream echelons as two component parts of information to provide better coordination in supply chains. In this paper, the mathematical formulation of IS-OUT is presented, and simulation is adopted to compare the performance of TSC, IS-OUT, and IESC under special conditions and assumptions, considering various performance metrics. Although the results indicate that IESC model offers higher performance mostly than IS-OUT, IS-OUT outperforms or at least is comparable with IESC under a few conditions. Since IS-OUT model is easier to implement than IESC, IS-OUT provides a compromise between extent and information sharing requirements, and performance efficiency. The results should help a decision maker to select the model that optimizes its operating environment.