

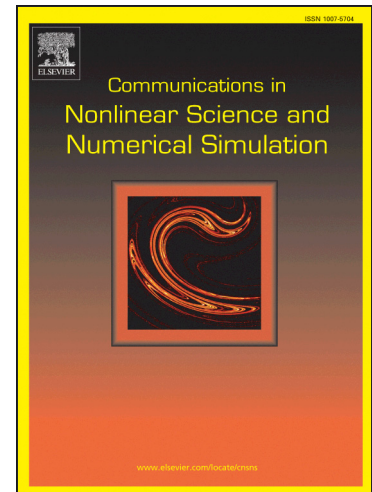
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Complex Dynamics of a MC-MS pricing model for a risk-averse supply chain with after-sale investment

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Abstract: In this paper, we investigate the pricing strategy of the manufacturers and that of a common retailer, including their after-sale investment in a risk-averse supply chain. As the demand is not always for sure, the supply chain follows Manufacturers Cooperating (MC) and Manufacturers Stackelberg (MS). The main objective of the paper is to investigate the influence of the decision parameters such as the after-sale investment, wholesale price adjustment speed and risk preference on the stability and utilities of the risk-averse supply chain. The dynamic phenomena, such as the bifurcation, chaos and sensitivity to initial values are analyzed with 2D-bifurcation diagrams, double largest Lyapunov exponent and basins of attraction. The

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