

A Simple Nonlinear Economic Models of Market Price; The Case of the Cobweb

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We are studying how the presence of nonlinear terms in the supply and demand model changes the price behavior of the system. Our analysis focuses on discrete dynamical systems. We start with a simple linear supply and demand model of two markets interacting. Afterwards, we add nonlinear terms and observe the results. We hypothesize that the presence of nonlinearity in the supply and demand model, with two interrelated markets, will exhibit chaotic price behavior. Furthermore, we expect that the system will become chaotic via period-doubling bifurcations, and that all orbits will converge to a strange attractor.