Referee Report on MS 704

"Cobweb Theorems with Production Lags and Price Forecasting"

The classical cobweb model is generalized in two major directions to permit production lags and different models of expectations regarding the evolution of prices over the future. A key insight is that increasing production lags does not necessarily promote stability of the corresponding market clearing prices.

Loglinear demand and supply schedules are assumed. Expectations impact the model's supply side, but are absent on the demand side. The models are not, in this sense, designed as rational expectations stories in the sense of Muth. However, the authors study a wide range of alternative expectations assumptions including adaptive and exponential smoothing ones as well as moving averages. Static expectations are also admissible. Given a production lag structure, the time path of prices in the deterministic settings are found as polynomial functions of the zeroes of the characteristic equation's solution. The authors use this polynomial structure to identify the dynamics properties, such as damped oscillatory motion of prices, by studying the complex and real roots of the characteristic equation. Rouche's Theorem from complex variables also plays a prominent role. The authors employ numerical methods to motivate their results and prove all their theorems. The also develop an analysis of limit distributions of prices under a stochastic disturbance hypothesis. The finding that increasing production lags may work against stability of the market clearing prices seems robust within their expectations setups.

The paper is certainly technically correct. The authors provide some new tools to cobweb theory and some techniques may also prove useful in other problems. The authors appear to have resolved several issues in the traditional literature on cobweb models. On these grounds alone, the paper is publishable even though it's major weakness is that rational expectations are not a point of focus nor is a micro-structure model presented to justify the reduced form demand and supply functions. Put differently, I liked the technical side of the article.