'Lucas' In The Laboratory
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ABSTRACT

This paper reports on experimental tests of an instantiation of the Lucas asset pricing model with heterogeneous agents and time-varying private income streams. Central features of the model (infinite horizon, perishability of consumption, stationarity) present difficult challenges and require a novel experimental design. The experimental evidence provides broad support for the qualitative pricing and consumption predictions of the model (prices move with fundamentals, agents smooth consumption) but sharp differences from the quantitative predictions emerge (asset prices display excess volatility, agents do not hedge price risk). Generalized Method of Moments (GMM) tests of the stochastic Euler equations yield very different conclusions depending on the instruments chosen. It is suggested that the qualitative agreement with and quantitative deviation from theoretical predictions arise from agents' expectations about future prices, which are almost self-fulfilling and yet very different from what they would need to be if they were exactly self-fulfilling (as the Lucas model requires).

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