

## Mathematics &gt; Probability

# Consistency properties of a simulation-based estimator for dynamic processes

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This paper considers a simulation-based estimator for a general class of Markovian processes and explores some strong consistency properties of the estimator. The estimation problem is defined over a continuum of invariant distributions indexed by a vector of parameters. A key step in the method of proof is to show the uniform convergence (a.s.) of a family of sample distributions over the domain of parameters. This uniform convergence holds under mild continuity and monotonicity conditions on the dynamic process. The estimator is applied to an asset pricing model with technology adoption. A challenge for this model is to generate the observed high volatility of stock markets along with the much lower volatility of other real economic aggregates.

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