Dynamic panel data models:
a guide to micro data methods and practice*

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Abstract. This paper reviews econometric methods for dynamic panel data models, and presents examples that illustrate the use of these procedures. The focus is on panels where a large number of individuals or firms are observed for a small number of time periods, typical of applications with microeconomic data. The emphasis is on single equation models with autoregressive dynamics and explanatory variables that are not strictly exogenous, and hence on the Generalised Method of Moments estimators that are widely used in this context. Two examples using firm-level panels are discussed in detail: a simple autoregressive model for investment rates; and a basic production function.

Key words: Panel data – Dynamic models – Generalised method of moments

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