

Preface to the Second Edition

Since the publication of the first edition of this monograph in 1986, there has been a phenomenal growth of articles dealing with panel data. According to the *Social Science Citation Index*, there were 29 articles related to panel data in 1989. But in 1997 there were 518; in 1998, 553; and in 1999, 650. The increasing attention is partly due to the greater availability of panel data sets, which can better answer questions of substantial interest than a single set of cross-sectional or time series data can, and partly due to the rapid growth in computational power of the individual researcher. It is furthermore motivated by the internal methodological logic of the subject (e.g., Trognon (2000)).

The current version is a substantial revision of the first edition. The major additions are essentially on nonlinear panel data models of discrete choice (Chapter 7) and sample selection (Chapter 8); a new Chapter 10 on miscellaneous topics such as simulation techniques, large N and T theory, unit root and cointegration tests, multiple level structure, and cross-sectional dependence; and new sections on estimation of dynamic models (4.5–4.7), Bayesian treatment of models with fixed and random coefficients (6.6–6.8), and repeated cross-sectional data (or pseudopanel), etc. In addition, many of the discussions in old chapters have been updated. For instance, the notion of strict exogeneity is introduced, and estimators are also presented in a generalized method of moments framework to help link the assumptions that are required for the identification of various models. The discussion of fixed and random effects is updated in regard to restrictions on the assumption about unobserved specific effects, etc.

The goal of this revision remains the same as that of the first edition. It aims to bring up to date a comprehensive analytical framework for the analysis of a greater variety of data. The emphasis is on formulating appropriate statistical inference for issues shaped by important policy concerns. The revised edition of this monograph is intended as neither an encyclopedia nor a history of panel data econometrics. I apologize for the omissions of many important contributions. A recount of the history of panel data econometrics can be found in Nerlove (2000). Some additional issues and references can also be found in a survey by Arellano and Honoré (2001) and in four recent

edited volumes – Matyás and Sevester (1996); Hsiao, Lahiri, Lee, and Pesaran (1999); Hsiao, Morimune, and Powell (2001); and Krishnakumar and Ronchetti (2000). Software is reviewed by Blanchard (1996).

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