



Guest Editorial

Progress and challenges in econometrics

This special issue has been compiled to commemorate and celebrate the 50th anniversary of the Econometric Institute of the Erasmus University Rotterdam. The Institute was founded in 1956 by Henri Theil and Jan Tinbergen, and it marked the beginning of undergraduate teaching programs in econometrics at universities in the Netherlands. With the leading role of Rotterdam, where from the beginning there has been a focus of research in econometrics, universities in Amsterdam, Groningen, Tilburg and Maastricht followed and established teaching programs that had courses in mathematics, statistics and economics. Until the present day, the Econometric Institute at Erasmus University delivers undergraduate students who find their way to employers rather quickly as well as graduate students who enter academia. Indeed, a substantial number of well-known econometricians these days, either theoretical or applied, have their roots in Rotterdam.

To celebrate this unique occasion of a teaching and research program that has existed for so long in a rather constant format, the editors of the *Journal of Econometrics* gave us the opportunity to put together a special issue that contains reflections, new methodology and challenging future outlooks in the wide field of econometrics. The authors are a mix of leading econometricians and young talented ones.

Indeed, in the past 50 years econometrics has evolved into an exciting scientific field where rigorous analysis of economic problems has led to a better understanding of their nature and causes and to a more effective policy advice in various areas. A selective list of areas where econometrics is an indispensable tool includes risk and return in the long run at financial markets, effectiveness of marketing strategies, optimal training programs for the labor market and effective international monetary policy for targeting and controlling inflation rates.

The outline of this special issue is as follows. The issue starts with personal reflections of Clive Granger and Arnold Zellner on their respective areas of expertise: Forecasting and Bayesian Information Processing rules. Given their very substantial contributions to econometrics, Clive Granger and Arnold Zellner did receive an honorary doctorate degree at Erasmus University in June 2006.

The other papers in this issue all address areas in which current or past members of the Econometric Institute played a significant role in their development.

As Henri Theil's name is mainly associated with the method of *two-stage least squares*, which may be interpreted as a special case of *instrumental* variable estimation, we next collect papers on the topic of *weak instruments*, with contributions of Donald Andrews and

James Stock, Charles Nelson and Richard Starz, and, Lennart Hoogerheide, Frank Kleibergen and Herman K. van Dijk.

The next set of papers considers *financial* time series data, which are known to show signs of *non-stationarity and time-varying variance*. The authors of these studies are Peter C.B. Phillips, next, Torben Andersen, Tim Bollerslev and Dobrislav Dobrev, and next, Dick van Dijk and Martin Martens.

Besides applications in finance, macroeconomics and labor economics, there is a substantial interest in *marketing* to apply, but also to develop, econometric models. Witness of recent contributions in this area are the two papers by Peter E. Rossi, Jaehwan Kim and Greg M. Allenby and by Dennis Fok, Philip Hans Franses and Richard Paap.

The last part of this special issue is dedicated to modern econometric methods that are applied in *labor, finance and international economics*, where the last paper addresses the strong link between *theoretical economics* and *applied econometrics*. These four papers are authored by John Geweke and Michael Keane, by Todd Clarke and Kenneth D. West, by Hashem Pesaran and by Peter P. Wakker, Mohammed Abdellaoui and Caroline Barrios.

We are grateful to all authors for writing special quality papers for this special issue of the Journal at the occasion of a very special event. All authors were caught in tight schedules, but each one of them was very willing to cooperate. Additional to the authors, we also benefitted from the excellent and quick help of many anonymous reviewers. Finally, we thank our secretarial staff member, Aletta Henderiks, for her never ending willingness to support our endeavor.

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