

VOLUME 23, NUMBER 3, APRIL 2019

MACROECONOMIC DYNAMICS



EDITOR: WILLIAM A. BARNETT

CAMBRIDGE
UNIVERSITY PRESS

MACROECONOMIC DYNAMICS

Editor: William A. Barnett, University of Kansas, Department of Economics, 356 Snow Hall, 1460 Jayhawk Boulevard, Lawrence, KS 66045–7523, USA, and The Center for Financial Stability, 1120 Avenue of the Americas, 4th Floor, New York, NY 10036, USA.

Coeditors: George Evans (*University of Oregon*), Roger Farmer (*University of Warwick and NIESR*), Oded Galor (*Brown University and Hebrew University of Jerusalem*), Cars Hommes (*University of Amsterdam, The Netherlands*), Iourii Manovskii (*University of Pennsylvania*), Lee Ohanian (*UCLA*), Gilles Saint-Paul (*Paris School of Economics, France*), Apostolos Serletis (*University of Calgary, Canada*), Tony Smith (*Yale University*), Stephen Turnovsky (*University of Washington*), Francesco Zanetti (*University of Oxford, UK*)

Book Review Editors: Michele Boldrin, Department of Economics, Washington University, One Brookings Drive, St. Louis, MO 63130, and Universidad Carlos III, Madrid; Gregory D. Hess, President's Office, Wabash College, W. Wabash Avenue, Crawfordsville, IN 47933.

Special Issues Editors: Stephen Turnovsky, Department of Economics, Box 353330, University of Washington, Seattle, WA 98195; Lee Ohanian, Department of Economics, UCLA, 2261 Bunche Hall, 405 Hilgard Avenue, Los Angeles, CA 90024.

Editorial Information System Manager: Stephen E. Spear, Graduate School of Industrial Administration, Carnegie Mellon University, Pittsburgh, PA 15213.

Local Area Network Manager: Nathan Haley, Lawrence, Kansas.

Editorial Associate: Melinda Barnett, University of Kansas.

Advisory Editors:

Jean-Pascal Bénassy (*CEPREMAP, Paris*), Willem Buiter (*London School of Economics and Political Science, London*), Francis X. Diebold (*University of Pennsylvania*), Steven Durlauf (*University of Chicago*), Douglas Gale (*New York University*), Giancarlo Gandolfo (*Accademia Nazionale dei Lincei, Rome*), Roger Guesnerie (*DELTA, Paris*), Takatoshi Ito (*Columbia University*), Timothy Kehoe (*University of Minnesota*), Finn Kydland (*Carnegie Mellon University*), Lung-Fei Lee (*Ohio State University*), Adrian Pagan (*Sydney University, Australia*), Robert Townsend (*Massachusetts Institute of Technology*), Mark Watson (*Princeton University*), Kenneth West (*University of Wisconsin*), Michael Woodford (*Columbia University*), Randall Wright (*University of Wisconsin, Madison*)

Associate Editors:

Laurence Ales (*Carnegie Mellon University*), Gaetano Antinolfi (*Washington University*), Marianna Belloc (*Sapienza University of Rome, Italy*), Pierpaolo Benigno (*LUISS Guido Carli, Rome*), Joydeep Bhattacharya (*Iowa State University*), Volker Böhm (*University of Bielefeld, Germany*), Benjamin Born (*Frankfurt School of Finance & Management, Germany*), Hafedh Bouakez (*HEC Montreal, Canada*), Raouf Boucekkinne (*Université Catholique de Louvain, Belgium*), Jeffrey Campbell (*Federal Reserve Bank of Chicago*), Shankha Chakraborty (*University of Oregon*), Marcelle Chauvet (*University of California at Riverside*), Christophe Deissenberg (*University d'Aix-Marseille II*), Juan Dolado (*European University Institute, Italy*), Huberto Ennis (*Federal Reserve Bank of Richmond*), Alvaro Escribano (*Universidad Carlos III de Madrid, Spain*), Emilio Espino (*Universidad Torcuato de Tella, Argentina*), Luisa Fuster (*Universidad Carlos III de Madrid, Spain*), Antonio Guarino (*University College, London*), Thorvaldur Gylfason (*University of Iceland*), Niels Haldrup (*Aarhus University, Denmark*), John Hassler (*Stockholm University*), Moshe Hazan (*Tel-Aviv University*), Per Hjerstrand (*Research Institute of Industrial Economics, Sweden*), Kevin Huang (*Vanderbilt University*), Fredj Jawadi (*University of Lille, France*), Leo Kaas (*Goethe University, Germany*), Takashi Kamihigashi (*Kobe University, Japan*), John Keating (*University of Kansas*), Todd Keister (*Rutgers University*), Moritz Kuhn (*University of Bonn*), Blake LeBaron (*Brandeis University*), Alfredo Medio (*University of Udine, Italy*), Qinglai Meng (*Oregon State University*), Jianjun Miao (*Boston University*), Kurt Mitman (*Stockholm University*), Kaushik Mitra (*University of Birmingham, UK*), Omer Moav (*The Hebrew University of Jerusalem*), Cyril Monnet (*University of Bern, Switzerland*), Patrick Pintus (*Université de la Méditerranée & GREQAM, France*), Markus Poschke (*McGill University, Canada*), Julien Prat (*CNRS, CREST, France*), Francisco Ruge-Murcia (*McGill University, Canada*), Argia M. Sbordone (*Federal Reserve Bank of New York*), Eric Sims (*University of Notre Dame*), Gerhard Sorger (*University of Vienna, Austria*), Stephen Spear (*Carnegie Mellon University*), George Tavlas (*Bank of Greece*), Farshid Vahid (*Monash University, Australia*), Nicolaas Vriend (*Queen Mary, University of London*), Ronald Wendner (*University of Graz, Austria*), Hosny Zoabi (*New Economic School, Moscow, Russia*)

MACROECONOMIC DYNAMICS

Volume 23, Number 3, April 2019

Contents

ARTICLES

- Technology Adoption During the Process of Development: Implications
for Long-Run Prospects
Verónica Mies 907
- The Role of US-Based FDI Flows for Global Output Dynamics
Florian Huber, Manfred M. Fischer, and Philipp Piribauer 943
- The Misspecification of Expectations in New Keynesian Models:
A DSGE-VAR Approach
Stephen J. Cole and Fabio Milani 974
- Smoothing-Based Initialization for Learning-to-Forecast Algorithms
Michele Berardi and Jaqueson K. Galimberti 1008
- Monetary and Macroprudential Policies Under Fixed and Variable
Interest Rates
Margarita Rubio 1024
- The Welfare Cost of Excess Volatility in Incomplete Markets
with Sunspots
Minwook Kang 1062
- Financial Sector Interconnectedness and Monetary Policy
Transmission
Alessandro Barattieri, Maya Eden, and Dalibor Stevanovic 1074
- Environmental Policy and Growth When Environmental Awareness
is Endogenous
Karine Constant and Marion Davin 1102
- Financial Shocks, Job Destruction Shocks, and Labor Market
Fluctuations
Francesco Zanetti 1137
- Optimal Fiscal and Monetary Policy, Debt Crisis, and Management
**Cristiano Cantore, Paul Levine, Giovanni Melina,
and Joseph Pearlman** 1166

Continued

Continued

Bubbles, Crashes, and the Financial Cycle: The Impact of Banking Regulation on Deep Recessions Sander van der Hoog and Herbert Dawid	1205
The Role of Education Signaling in Explaining the Growth of the College Wage Premium Yu Zheng	1247
<i>MDY BOOK REVIEW</i>	
Prosperity for All: An Assessment of the “Farmerian” Remedies to Prevent Financial Crises and Reduce Unemployment Marco Guerrazzi	1287
<i>NOTES</i>	
A Note on the Implications of Automation for Economic Growth and the Labor Share Klaus Prettner	1294
150 Years of the Oil Price–Macroeconomy Relationship Apostolos Serletis and Elaheh Asadi Mehmandosti	1302

SUBSCRIPTION INFORMATION: *Macroeconomic Dynamics* (ISSN 1365-1005) is published eight times a year in January, March, April, June, July, September, October, and December. Cambridge University Press, One Liberty Plaza, New York, NY 10006, or outside the USA, Canada, and Mexico: Cambridge University Press, University Printing House, Shaftesbury Road, Cambridge CB2 8BS, UK. Claims for missing issues should be made immediately after receipt of the next issue. Periodicals postage at New York, NY and additional mailing offices. Postmaster: send address changes in the USA, Canada, and Mexico to: *Macroeconomic Dynamics*, Cambridge University Press, One Liberty Plaza, New York, NY 10006, USA. Send address changes elsewhere to: *Macroeconomic Dynamics*, Journals Dept., Cambridge University Press, University Printing House, Shaftesbury Road, Cambridge CB2 8BS, UK. Annual subscription rates for Volume 23, 2019: Institutional rate is (print and electronic) \$1480.00 in the USA, Canada, and Mexico, £894.00 + VAT elsewhere. Institutional rate (electronic only) \$1080.00 in the USA, Canada, and Mexico, £659.00 + VAT elsewhere. Institutional rate (print only) \$1371.00 in the USA, Canada, and Mexico, £813.00 + VAT elsewhere. Individual rate (print and electronic) \$302.00 in the USA, Canada, and Mexico, £172.00 + VAT elsewhere. Individual rate (print only) \$293.00 in the USA, Canada, and Mexico, £168.00 + VAT elsewhere. Students (print only) \$149.00 in the USA, Canada, and Mexico, £56.00 + VAT elsewhere. For members of the Econometric Society, the Society for the Advancement of Economic Theory, the Society for Nonlinear Dynamics and Econometrics, the Society for Computational Economics, and the Society for the Promotion of Economic Theory the rate is \$117.00 in the USA, Canada, and Mexico, £73.00 + VAT elsewhere. Institutional access is via IP address range(s) or domain name(s); individual subscriber access is via a username and password. Prices include postage; airmail is extra.

© 2019 Cambridge University Press. Photocopying information for users in the USA: The Item-Fee Code for this publication indicates that copying for internal or personal use beyond that permitted by Section 107 or 108 of the US Copyright Law is authorized for users duly registered with the Copyright Clearance Center (CCC) Transactional Reporting Service, provided that the appropriate remittance of \$18.00 per article is paid directly to: CCC, 222 Rosewood Drive, Danvers, MA 01923. Specific written permission must be obtained from the publisher for all other copying. The Item-Fee Code for this journal is 1365-1005/19 \$18.00.

ISI Tearsheet Service, 3501 Market Street, Philadelphia, PA 19104, USA is authorized to supply single copies of separate article for private use only. Article reprints are available from the authors. For orders of 50 or more reprints, contact Cambridge University Press.

Macroeconomic Dynamics is indexed in EconLit; The Journal of Economic Literature (e-JEL and JEL on CD); ISI: Current Contents/Social & Behavioral Sciences; Social Sciences Citation Index; Research Alert; Mathematical Reviews; MathSciNet; Zentralblatt für Mathematik.

EDITORIAL POLICY

Macroeconomic Dynamics publishes research of the highest theoretical, empirical or quantitative sophistication. Papers of high quality are welcomed from all areas of advanced macroeconomics and allied fields, so long as the research is founded in a rigorous scientific approach. Major advances in macroeconomics without immediate policy applications also are accepted, if they show potential for application in the future. Occasional book reviews, software reviews, announcements, conference proceedings and interviews are published.

An **electronic version of the journal** is published just prior to the paper version at cambridge.org/mdy. Access to the full-text articles of the electronic version will be limited to institutional subscribers of the hard copy version of the journal, with access available to all online users at that institution's registered domain. Tables of Contents, abstracts, searching and alerting services will remain free of charge. To view the full text of *Macroeconomic Dynamics*, you will need to use the Adobe Acrobat Reader software. If you do not have a copy already, you can get it free of charge. Just follow the link from our Cambridge Core home page, download it, and install it as a plug-in helper application for your browser.