

ARTICLES

- DAVID J. COOPER AND JOHN H. KAGEL
Are Two Heads Better Than One? Team versus Individual Play in Signaling Games
- JOHN DUFFY AND ERIC O'N. FISHER
Sunspots in the Laboratory
- CHARLES R. PLOTT AND KATHRYN ZEILER
The Willingness to Pay–Willingness to Accept Gap, the “Endowment Effect,” Subject Misconceptions, and Experimental Procedures for Eliciting Valuations
- DARON ACEMOGLU, SIMON JOHNSON, AND JAMES ROBINSON
The Rise of Europe: Atlantic Trade, Institutional Change, and Economic Growth
- RODRIGO R. SOARES
Mortality Reductions, Educational Attainment, and Fertility Choice
- ALBERTO ALESINA, IGNAZIO ANGELONI, AND FEDERICO ETRO
International Unions
- TIMOTHY BESLEY AND MAITREESH GHATAK
Competition and Incentives with Motivated Agents
- MARCO BATTAGLINI
Long-Term Contracting with Markovian Consumers
- JAMES DOW, GARY GORTON, AND ARVIND KRISHNAMURTHY
Equilibrium Investment and Asset Prices under Imperfect Corporate Control
- RONALD W. MICHENER AND ROBERT E. WRIGHT
State “Currencies” and the Transition to the U.S. Dollar: Clarifying Some Confusions
- DAVID HUMMELS AND PETER J. KLENOW
The Variety and Quality of a Nation’s Exports
- MARIO J. CRUCINI, CHRIS I. TELMER, AND MARIOS ZACHARIADIS
Understanding European Real Exchange Rates
- MATTEO IACOVIELLO
House Prices, Borrowing Constraints, and Monetary Policy in the Business Cycle
- GILLES SAINT-PAUL
Some Evolutionary Foundations for Price Level Rigidity

SHORTER PAPERS: R. Burgess and R. Pande; J. G. Montalvo and M. Reynal-Querol; H. Cai and D. Treisman; E. Saez and M. R. Veall; A. Faure-Grimaud and R. Inderst; A. Prat; C. N. McKinney, M. Niederle, and A. E. Roth; Y. Lengwiler; G. W. Harrison, E. Johnson, M. M. McInnes, and E. E. Rutström; C. A. Holt and S. K. Laury.

JUNE 2005

THE AMERICAN ECONOMIC ASSOCIATION

Founded in 1885

EXECUTIVE COMMITTEE Elected Officers and Members

President

DANIEL MCFADDEN
University of California at Berkeley

President-elect

GEORGE A. AKERLOF
University of California at Berkeley

Vice-Presidents

ROBERT E. HALL
Stanford University
ROBERT J. SHILLER
Yale University

Members

ELLEN R. MCGRATTAN
Federal Reserve Bank of Minneapolis
MAURICE OBSTFELD
University of California at Berkeley
JANET CURRIE
University of California at Los Angeles
OLIVIA S. MITCHELL
University of Pennsylvania
JUDITH A. CHEVALIER
Yale University
ALAN B. KRUEGER
Princeton University

Ex Officio Members

MARTIN S. FELDSTEIN
Harvard University and NBER
PETER A. DIAMOND
Massachusetts Institute of Technology

Appointed Members

Editor, The American Economic Review

ROBERT A. MOFFITT
Johns Hopkins University

Editor, The Journal of Economic Literature

ROGER H. GORDON
University of California at San Diego

Editor, The Journal of Economic Perspectives

ANDREI SHLEIFER
Harvard University

Secretary-Treasurer

JOHN J. SIEGFRIED
Vanderbilt University

OTHER OFFICERS

Editor, Resources for Economists

WILLIAM GOFFE
State University of New York at Oswego

Managing Director, EconLit

DRUCILLA EKWURZEL
American Economic Association Publications, Pittsburgh

Executive Director

WILLIAM W. DAMON
Vanderbilt University

Counsel

TERRY CALVANI
The Competition Authority, Dublin, Ireland

ADMINISTRATORS

Administrative Director

EDDA R. LEITHNER

Director of Publication Services

DRUCILLA EKWURZEL

Convention Manager

MARLENE HIGHT

• Typeset by CPC DPS-Ephrata Division, Pennsylvania, U.S.A.

• Printed at Banta Company, Menasha, Wisconsin, U.S.A.

• Copyright © 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005 by the American Economic Association. Permission to make digital or hard copies of part or all of American Economic Association publications for personal or classroom use is granted without fee provided that copies are not distributed for profit or direct commercial advantage and that copies show this notice on the first page or initial screen of a display along with the full citation, including the name of the author. Copyrights for components of this work owned by others than AEA must be honored. Abstracting with credit is permitted. The author has the right to republish, post on servers, redistribute to lists and use any component of this work in other works. For others to do so requires prior specific permission and/or a fee. Permissions may be requested from the American Economic Association, 2014 Broadway, Suite 305, Nashville, TN 37203.

• No responsibility for the views expressed by authors in this *Review* is assumed by the editors or the publishers, The American Economic Association.

Correspondence relating to advertising, business matters, permissions to quote, back issues, subscriptions, and changes of address, should be sent to the American Economic Association, 2014 Broadway, Suite 305, Nashville, TN 37203. Change of address notice must be received at least six (6) weeks prior to the publication month. A membership or subscription paid twice is automatically extended for an additional year unless otherwise requested.

THE AMERICAN ECONOMIC REVIEW (ISSN 0002-8282), June 2005, Vol. 95, No. 3. The *AER* is published five times a year (March, May, June, September, December) by the American Economic Association, 2014 Broadway, Suite 305, Nashville, TN 37203. Annual fees for regular membership, of which 30 percent is for a year's subscription to this journal, are: \$64.00, \$77.00, or \$90.00, depending on income. A membership also includes subscriptions to *The Journal of Economic Literature* and *The Journal of Economic Perspectives*. In countries other than the U.S.A., add \$30.00 for extra postage. Information on becoming a member can be found on the last page of this journal. Periodical postage paid at Nashville, TN and at additional mailing offices. POSTMASTER: Send address changes to the *American Economic Review*, 2014 Broadway, Suite 305, Nashville, TN 37203.

WILLIAM ALLEN BROCK

DISTINGUISHED FELLOW

2004

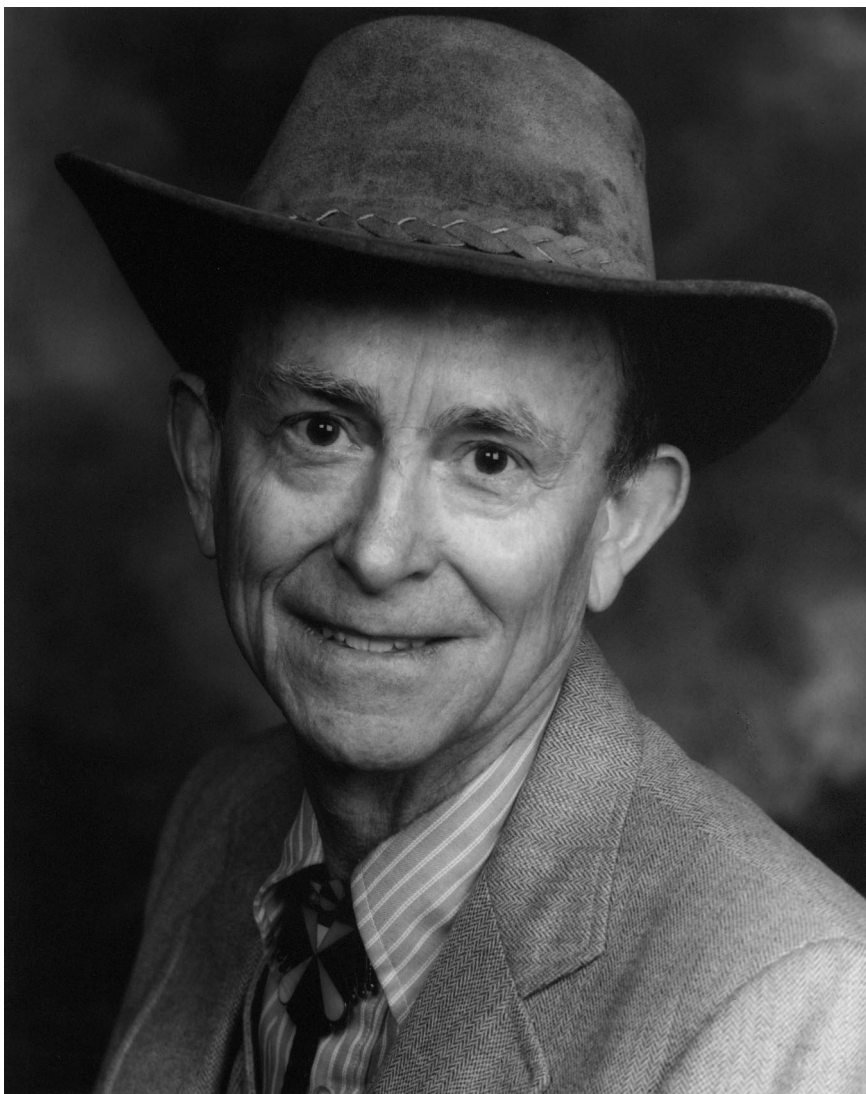
William Brock has been a prolific contributor to research on economic dynamics. He received a Ph.D. in mathematics from the University of California at Berkeley in 1969, where he wrote his dissertation under the guidance of David Gale. He has served on the faculties of the University of Rochester, the University of Chicago, Cornell University, and the University of Wisconsin-Madison. His dissertation and early work were on optimal growth theory. His proof of the existence of a growth program that is maximal with respect to the catching-up criterion was an especially notable contribution. Other important contributions were his proofs of the turnpike theorem, and of the existence of a stationary program for a single sector stochastic growth model, with Leonard J. Mirman. This work was followed by a large number of significant papers on the stability of stochastic growth paths and of optimal control systems.

In the late 1970s, Brock undertook a new project in political economy. Together with Stephen Magee and other collaborators, he modeled the determination of tariffs in a democratic country as the outcome of a dynamic game among politicians, interest group lobbyists, and the electorate. This work is summarized in *Black Hole Tariffs and Endogenous Policy Theory: Political Economy in General Equilibrium*, written with Stephen Magee and Leslie Young.

In the 1980s, Brock developed an interest in chaotic deterministic systems and their application to economics and finance. He made major contributions to the development of statistical tests for the presence of a chaotic deterministic process generating a time series. This work is summarized in *Nonlinear Dynamics, Chaos, and Instability: Statistical Theory and Economic Evidence*, written with David A. Hsieh and Blake LeBaron.

From the late 1990s until recently, he has applied optimal control theory to environmental management issues. His paper, "Management of Eutrophication for Lakes Subject to Potentially Irreversible Change," written with Stephen Carpenter and Donald Ludwig, was an important early contribution.

William Brock's contributions to intertemporal economics and nonlinear dynamics have been clever, deep, and varied, and reflect a driving interest in economic policy and in the interaction of the political and economic processes that form it.



William A. Brook

THE AMERICAN ECONOMIC REVIEW

Editor

ROBERT A. MOFFITT

Co-Editors

B. DOUGLAS BERNHEIM

JEREMY BULOW

DAVID CARD

JUDITH CHEVALIER

MARK GERTLER

RICHARD ROGERSON

Managing Editor

JANE EMILY VOROS

Assistant Managing Editor

MICHELLE DeBLASI

Board of Editors

ANDREW ATKESON

ABHIJIT BANERJEE

MARK BILS

A. CRAIG BURNSIDE

COLIN CAMERER

ANNE C. CASE

STEPHEN COATE

JANICE C. EBERLY

CHARLES ENGEL

ROBERT C. FEENSTRA

DANIEL FRIEDMAN

SIMON GILCHRIST

JOHN C. HEATON

BENJAMIN E. HERMALIN

HILARY HOYNES

THOMAS N. HUBBARD

PETER N. IRELAND

PATRICK KEHOE

PETER J. KLENOW

RACHEL E. KRANTON

JOHN LEAHY

THOMAS LEMIEUX

JONATHAN LEVIN

JOHN A. LIST

GIOVANNI MAGGI

ENRIQUE G. MENDOZA

GILBERT E. METCALF

STEPHEN MORRIS

THOMAS J. NECHYBA

CARMEN M. REINHART

FRANK SCHORFHEIDE

PETER SCHOTT

LONES SMITH

STEVEN TADELIS

M. SCOTT TAYLOR

CHRISTOPHER UDRY

DANIEL R. VINCENT

JOHN WILLIAMS

June 2005

VOLUME 95, NUMBER 3

Articles

Are Two Heads Better Than One? Team versus Individual Play in Signaling Games

David J. Cooper and John H. Kagel 477

Sunspots in the Laboratory

*John Duffy and
Eric O'N. Fisher* 510

The Willingness to Pay–Willingness to Accept Gap, the “Endowment Effect,” Subject Misconceptions, and Experimental Procedures for Eliciting Valuations

Charles R. Plott and Kathryn Zeiler 530

The Rise of Europe: Atlantic Trade, Institutional Change, and Economic Growth

*Daron Acemoglu, Simon Johnson, and
James Robinson* 546

Mortality Reductions, Educational Attainment, and Fertility Choice

Rodrigo R. Soares 580

International Unions

*Alberto Alesina,
Ignazio Angeloni, and Federico Etro* 602

Competition and Incentives with Motivated Agents

Timothy Besley and Maitreesh Ghatak 616

Long-Term Contracting with Markovian Consumers

Marco Battaglini 637

Equilibrium Investment and Asset Prices under Imperfect Corporate Control

*James Dow,
Gary Gorton, and Arvind Krishnamurthy* 659

State “Currencies” and the Transition to the U.S. Dollar: Clarifying Some Confusions

Ronald W. Michener and Robert E. Wright 682

The Variety and Quality of a Nation's Exports

David Hummels and Peter J. Klenow 704

Understanding European Real Exchange Rates

*Mario J. Crucini, Chris I. Telmer, and
Marios Zachariadis* 724

House Prices, Borrowing Constraints, and Monetary Policy in the Business Cycle	<i>Matteo Iacoviello</i>	739
Some Evolutionary Foundations for Price Level Rigidity	<i>Gilles Saint-Paul</i>	765

Shorter Papers

Do Rural Banks Matter? Evidence from the Indian Social Banking Experiment	<i>Robin Burgess and Rohini Pande</i>	780
Ethnic Polarization, Potential Conflict, and Civil Wars	<i>José G. Montalvo and Marta Reynal-Querol</i>	796
Does Competition for Capital Discipline Governments? Decentralization, Globalization, and Public Policy	<i>Hongbin Cai and Daniel Treisman</i>	817
The Evolution of High Incomes in Northern America: Lessons from Canadian Evidence	<i>Emmanuel Saez and Michael R. Veall</i>	831
Conglomerate Entrenchment under Optimal Financial Contracting	<i>Antoine Faure-Grimaud and Roman Inderst</i>	850
The Wrong Kind of Transparency	<i>Andrea Prat</i>	862
The Collapse of a Medical Labor Clearinghouse (and Why Such Failures Are Rare)	<i>C. Nicholas McKinney, Muriel Niederle, and Alvin E. Roth</i>	878
Heterogeneous Patience and the Term Structure of Real Interest Rates	<i>Yvan Lengwiler</i>	890
Risk Aversion and Incentive Effects: Comment	<i>Glenn W. Harrison, Eric Johnson, Melayne M. McInnes, and E. Elisabet Rutström</i>	897
Risk Aversion and Incentive Effects: New Data without Order Effects	<i>Charles A. Holt and Susan K. Laury</i>	902
Auditors' Report/Audited Financial Statements		905

Information on how to submit a manuscript is available online:
<http://www.aeaweb.org/aer/submissions.html>

It is the policy of the *American Economic Review* to publish papers only if the data used in the analysis are clearly and precisely documented and are readily available to any researcher for purposes of replication. Details of the computations sufficient to permit replication must be provided. The Editor should be notified at the time of submission if the data used in a paper are proprietary or if, for some other reason, the requirements above cannot be met.

American Economic Association Application for Membership 2005

Federal I.D. No. 36-2166945

☐ Applying for a new membership ☐ Renewing my membership; membership number (if known) _____
First Name and Initial _____ Last Name _____
Address Line 1 _____
Address Line 2 _____
Address Line 3 _____
City _____ State/Country _____ Zip/Postal Code _____
Telephone _____ Fax No. _____
E-mail Address _____ ☐ Do not post e-mail address on Internet.
Fields of Specialization (list 2 only): Primary Field (ED1) _____ Secondary Field (ED2) _____
Include my name on e-mail list to receive: ☐ Announcements ☐ Survey ☐ Commercial Advertising

Membership Dues - Dues include three journals: AER, JEL, & JEP. Journals available in print form and/or CD-ROM. Also available online for personal use. Sign up at <http://www.aeaweb.org/e-pubs>. It is the Association's policy not to refund dues.

Regular Member

With annual income of:

- ☐ \$43,000 or less (08) \$64
☐ \$43,000-58,000 (09) \$77
☐ Above \$58,000 (10) \$90

☐ Student Member (06)

(registered student include \$32

written verification)

- ☐ Foreign Postage \$30
(Country other than U.S.A.)

☐ Family Member (03) \$13

(additional membership--
no publications)

Journal delete option; may

select only 1: *AER JEL*

JEP OR All three

☐ Deduct (\$9)

Access to JSTOR through

e-PUBS for personal use (EK-J)

☐ Add \$15

Amounts Paid:

Regular/Student Dues \$ _____

Family Member _____

Foreign Postage _____

Less (1) journal delete(____) _____

Access to JSTOR _____

Print + CD _____

@ \$15 each _____

TOTAL PAID \$ _____

MULTIPLE YEAR OPTION

Pay for two years \$ _____

Pay for three years \$ _____

(not available for student
memberships)

Please circle journal format desired. Print only requires no entry.

Journal	Print	CD only	Print + CD	Print + CD add \$15 ea.
AER	A	B	C	\$15
JEL	D	E	F	\$15
JEP	G	H	I	\$15

IMPORTANT: Allow time for processing of your membership. Immediate access to online journals is not available. Online access is restricted to your personal use.

Checks must be in US dollars drawn on a US bank and must contain proper coding to allow processing through the normal US banking system. Send checks to:

American Economic Association
2014 Broadway, Ste 305
Nashville, TN 37203

Charge to: MasterCard ☐ Visa ☐ American Express ☐

Card Number _____ *CSC Code _____ Expire Date _____

*The CSC Code is a 3 or 4 digit number, which is not part of the credit card number. The CSC number is usually found on the back of the card in the signature area.

Fax # _____ Telephone # _____

Signature _____

Type cardholder's name if different from member's _____

Credit card payments may be faxed to 1-615-343-7590. Fax OR mail. Please do not do both.

ScientificWorkPlace® ScientificWord®

Mathematical Word Processing • L^AT_EX Typesetting • Computer Algebra

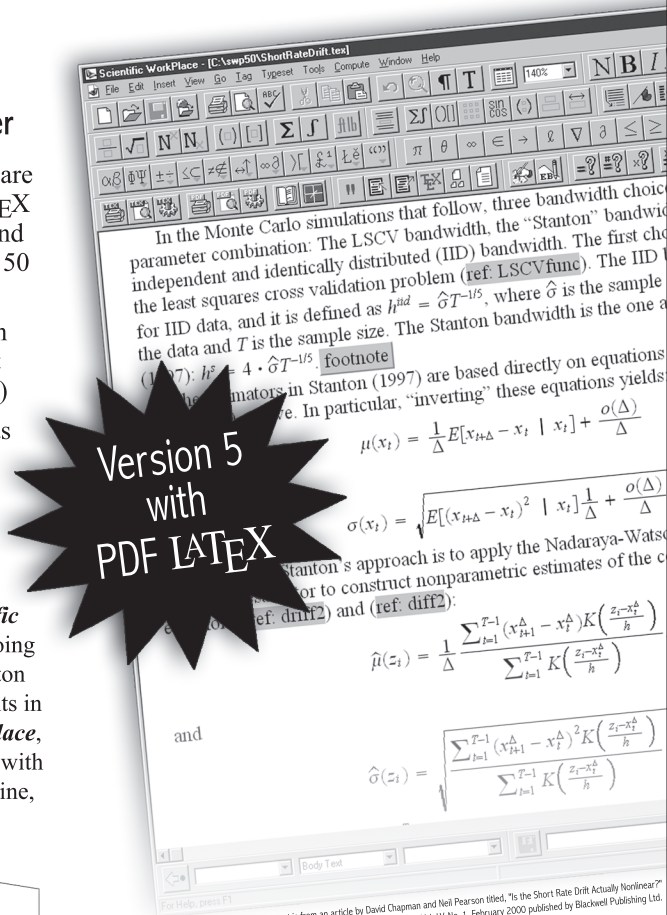
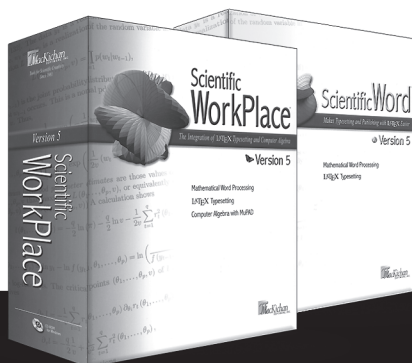
Version 5

Sharing Your Work Is Easier

- ♦ Typeset PDF in the only software that allows you to transform L^AT_EX files to PDF, fully hyperlinked and with embedded graphics in over 50 formats
- ♦ Export documents as RTF with editable mathematics (Microsoft Word and MathType compatible)
- ♦ Share documents on the web as HTML with mathematics as MathML or graphics

The Gold Standard for Mathematical Publishing

Scientific WorkPlace and *Scientific Word* make writing, sharing, and doing mathematics easier. A click of a button allows you to typeset your documents in L^AT_EX. And, with *Scientific WorkPlace*, you can compute and plot solutions with the integrated computer algebra engine, **MuPAD® 2.5**.



Mackichan
SOFTWARE, INC.

Tools for Scientific Creativity since 1981

Email: info@mackichan.com ♦ Toll-free: 877-724-9673 ♦ Fax: 360-394-6039
Visit our website for free trial versions of all our products.

www.mackichan.com/aer