

This PDF is a selection from a published volume from the National Bureau of Economic Research

Volume Title: A New Architecture for the U.S. National Accounts

Volume Author/Editor: Dale W. Jorgenson, J. Steven Landefeld, and William D. Nordhaus, editors

Volume Publisher: University of Chicago Press

Volume ISBN: 0-226-41084-6

Volume URL: <http://www.nber.org/books/jorg06-1>

Conference Date: April 16-17, 2004

Publication Date: May 2006

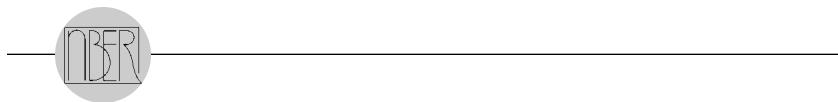
Title: Front matter, A New Architecture for the U.S. National Accounts

Author: Dale W. Jorgenson, J. Steven Landefeld, William D. Nordhaus

URL: <http://www.nber.org/chapters/c0131>

---

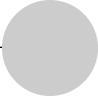
## **A New Architecture for the U.S. National Accounts**



**Studies in Income and Wealth**

**Volume 66**

**National Bureau of Economic Research  
Conference on Research in Income and Wealth**



---

# **A New Architecture for the U.S. National Accounts**

---

Edited by

**Dale W. Jorgenson,  
J. Steven Landefeld, and  
William D. Nordhaus**

**The University of Chicago Press**

Chicago and London

---

DALE W. JORGENSEN is the Samuel W. Morris University Professor at Harvard University. J. STEVEN LANDEFELD is director of the Bureau of Economic Analysis of the U.S. Department of Commerce. WILLIAM D. NORDHAUS is the Sterling Professor of Economics at Yale University and a research associate of the National Bureau of Economic Research.

---

The University of Chicago Press, Chicago 60637  
The University of Chicago Press, Ltd., London  
© 2006 by the National Bureau of Economic Research  
All rights reserved. Published 2006  
Printed in the United States of America  
14 13 12 11 10 09 08 07 06 1 2 3 4 5  
ISBN: 0-226-41084-6 (cloth)

Library of Congress Cataloging-in-Publication Data

Conference on a New Architecture for the U.S. National Accounts  
(2004 : Washington, D.C.)

A new architecture for the U.S. national accounts / edited by Dale W.

Jorgenson, J. Steven Landefeld, and William D. Nordhaus.

p. cm. — (Studies in income and wealth ; v. 66)

“National Bureau of Economic Research, Conference on Research  
in Income and Wealth”—Ser. t.p.

Proceedings of the Conference on New Architecture for the U.S.  
National Accounts, held April 16–17, 2004 in Washington, D.C.

Includes bibliographical references and index.

ISBN 0-226-41084-6 (pbk : alk. paper)

1. National income—United States—Accounting—Congresses.

2. Finance, Public—Econometric models—Congresses. 3. National  
income—Accounting—Mathematical models—Congresses I. Jorgens-  
son, Dale Weldeau, 1933– II. Landefeld, J. Steven. III. Nordhaus,  
William D. IV. Conference on Research in Income and Wealth.  
V. Title. VI. Series.

HC106.3 .C714 vol. 66

[HC110.I5]

330 s—dc22

[339.373]

2005053859

⊗ The paper used in this publication meets the minimum requirements of  
the American National Standard for Information Sciences—Permanence  
of Paper for Printed Library Materials, ANSI Z39.48-1992.

---

## National Bureau of Economic Research

### Officers

Michael H. Moskow, *chairman*  
Elizabeth E. Bailey, *vice-chairman*  
Martin Feldstein, *president and chief executive officer*  
Susan Colligan, *vice president for administration and budget and corporate secretary*

Robert Mednick, *treasurer*  
Kelly Horak, *controller and assistant corporate secretary*  
Gerardine Johnson, *assistant corporate secretary*

### Directors at Large

Peter C. Aldrich	Martin Feldstein	Laurence H. Meyer
Elizabeth E. Bailey	Jacob A. Frenkel	Michael H. Moskow
John H. Biggs	Judith M. Gueron	Alicia H. Munnell
Andrew Brimmer	Robert S. Hamada	Rudolph A. Oswald
John S. Clarkeson	George Hatsopoulos	Robert T. Parry
Don R. Conlan	Karen N. Horn	Richard N. Rosett
George C. Eads	Judy C. Lewent	Marina v. N. Whitman
Jessica P. Einhorn	John Lipsky	Martin B. Zimmerman

### Directors by University Appointment

George Akerlof, *California, Berkeley*  
Jagdish Bhagwati, *Columbia*  
Ray C. Fair, *Yale*  
Michael J. Brennan, *California, Los Angeles*  
Glen G. Cain, *Wisconsin*  
Franklin Fisher, *Massachusetts Institute of Technology*  
Saul H. Hymans, *Michigan*  
Marjorie B. McElroy, *Duke*

Joel Mokyr, *Northwestern*  
Andrew Postlewaite, *Pennsylvania*  
Uwe E. Reinhardt, *Princeton*  
Nathan Rosenberg, *Stanford*  
Craig Swan, *Minnesota*  
David B. Yoffie, *Harvard*  
Arnold Zellner (Director Emeritus),  
*Chicago*

### Directors by Appointment of Other Organizations

Richard B. Berner, *National Association for Business Economics*  
Gail D. Fosler, *The Conference Board*  
Richard C. Green, *American Finance Association*  
Arthur B. Kennickell, *American Statistical Association*  
Thea Lee, *American Federation of Labor and Congress of Industrial Organizations*  
William W. Lewis, *Committee for Economic Development*

Robert Mednick, *American Institute of Certified Public Accountants*  
Angelo Melino, *Canadian Economics Association*  
Jeffrey M. Perloff, *American Agricultural Economics Association*  
John J. Siegfried, *American Economic Association*  
Gavin Wright, *Economic History Association*

### Directors Emeriti

Carl F. Christ  
Lawrence R. Klein  
Franklin A. Lindsay

Paul W. McCracken  
Peter G. Peterson  
Eli Shapiro

Arnold Zellner

## **Relation of the Directors to the Work and Publications of the National Bureau of Economic Research**

1. The object of the NBER is to ascertain and present to the economics profession, and to the public more generally, important economic facts and their interpretation in a scientific manner without policy recommendations. The Board of Directors is charged with the responsibility of ensuring that the work of the NBER is carried on in strict conformity with this object.
2. The President shall establish an internal review process to ensure that book manuscripts proposed for publication DO NOT contain policy recommendations. This shall apply both to the proceedings of conferences and to manuscripts by a single author or by one or more co-authors but shall not apply to authors of comments at NBER conferences who are not NBER affiliates.
3. No book manuscript reporting research shall be published by the NBER until the President has sent to each member of the Board a notice that a manuscript is recommended for publication and that in the President's opinion it is suitable for publication in accordance with the above principles of the NBER. Such notification will include a table of contents and an abstract or summary of the manuscript's content, a list of contributors if applicable, and a response form for use by Directors who desire a copy of the manuscript for review. Each manuscript shall contain a summary drawing attention to the nature and treatment of the problem studied and the main conclusions reached.
4. No volume shall be published until forty-five days have elapsed from the above notification of intention to publish it. During this period a copy shall be sent to any Director requesting it, and if any Director objects to publication on the grounds that the manuscript contains policy recommendations, the objection will be presented to the author(s) or editor(s). In case of dispute, all members of the Board shall be notified, and the President shall appoint an ad hoc committee of the Board to decide the matter; thirty days additional shall be granted for this purpose.
5. The President shall present annually to the Board a report describing the internal manuscript review process, any objections made by Directors before publication or by anyone after publication, any disputes about such matters, and how they were handled.
6. Publications of the NBER issued for informational purposes concerning the work of the Bureau, or issued to inform the public of the activities at the Bureau, including but not limited to the NBER Digest and Reporter, shall be consistent with the object stated in paragraph 1. They shall contain a specific disclaimer noting that they have not passed through the review procedures required in this resolution. The Executive Committee of the Board is charged with the review of all such publications from time to time.
7. NBER working papers and manuscripts distributed on the Bureau's web site are not deemed to be publications for the purpose of this resolution, but they shall be consistent with the object stated in paragraph 1. Working papers shall contain a specific disclaimer noting that they have not passed through the review procedures required in this resolution. The NBER's web site shall contain a similar disclaimer. The President shall establish an internal review process to ensure that the working papers and the web site do not contain policy recommendations, and shall report annually to the Board on this process and any concerns raised in connection with it.
8. Unless otherwise determined by the Board or exempted by the terms of paragraphs 6 and 7, a copy of this resolution shall be printed in each NBER publication as described in paragraph 2 above.

---

# Contents

---

Prefatory Note	ix
<b>Introduction</b>	1
Dale W. Jorgenson, J. Steven Landefeld, and William D. Nordhaus	
<b>1. Blueprint for Expanded and Integrated U.S. Accounts: Review, Assessment, and Next Steps</b>	13
Dale W. Jorgenson and J. Steven Landefeld	
<b>2. The Architecture of the System of National Accounts: A Three-Way International Comparison of Canada, Australia, and the United Kingdom</b>	113
Karen Wilson	
<b>3. Principles of National Accounting for Nonmarket Accounts</b>	143
William D. Nordhaus	
<b>4. A Framework for Nonmarket Accounting</b>	161
Katharine G. Abraham and Christopher Mackie	
<b>5. The “Architecture” of Capital Accounting: Basic Design Principles</b>	193
Charles R. Hulten	
<b>6. Integrating Industry and National Economic Accounts: First Steps and Future Improvements</b>	215
Ann M. Lawson, Brian C. Moyer, Sumiye Okubo, and Mark A. Planting	

7.	<b>Aggregation Issues in Integrating and Accelerating the BEA's Accounts: Improved Methods for Calculating GDP by Industry</b>	263
	Brian C. Moyer, Marshall B. Reinsdorf, and Robert E. Yuskaage	
	<i>Comment:</i> W. Erwin Diewert	
8.	<b>Integrating Expenditure and Income Data: What to Do with the Statistical Discrepancy?</b>	309
	J. Joseph Beaulieu and Eric J. Bartelsman	
9.	<b>An Integrated BEA/BLS Production Account: A First Step and Theoretical Considerations</b>	355
	Barbara M. Fraumeni, Michael J. Harper, Susan G. Powers, and Robert E. Yuskaage	
	<i>Comment:</i> Carol Corrado	
10.	<b>The Integration of the Canadian Productivity Accounts within the System of National Accounts: Current Status and Challenges Ahead</b>	439
	John R. Baldwin and Tarek M. Harchaoui	
11.	<b>Integrated Macroeconomic Accounts for the United States: Draft SNA-USA</b>	471
	Albert M. Teplin, Rochelle Antoniewicz, Susan Hume McIntosh, Michael G. Palumbo, Genevieve Solomon, Charles Ian Mead, Karin Moses, and Brent Moulton	
12.	<b>Micro and Macro Data Integration: The Case of Capital</b>	541
	Randy A. Becker, John Haltiwanger, Ron S. Jarmin, Shawn D. Klimek, and Daniel J. Wilson	
	<b>Panel Remarks</b>	611
	Thomas L. Mesenbourg, U.S. Census Bureau	
	Kathleen P. Utgoff, Bureau of Labor Statistics	
	Larry Slifman, Board of Governors of the Federal Reserve System	
	Katharine G. Abraham, University of Maryland and National Bureau of Economic Research	
	J. Steven Landefeld, Bureau of Economic Analysis	
	Contributors	625
	Author Index	629
	Subject Index	633

---

## Prefatory Note

---

This volume contains the proceedings of the Conference on Research in Income and Wealth on “A New Architecture for the U.S. National Accounts.” The conference was held at the Board of Governors of the Federal Reserve System in Washington, D.C., on April 16–17, 2004. Funds for the Conference on Research in Income and Wealth are provided by the Bureau of Labor Statistics, the Bureau of Economic Analysis, the Federal Reserve Board, and the Bureau of the Census; we are indebted to them for their support. We are also grateful to Dale W. Jorgenson, J. Steven Landefeld, and William D. Nordhaus, who served as conference organizers and editors of the volume. We thank the National Bureau of Economic Research staff and the University of Chicago Press editors for their assistance in organizing the conference and editing the volume.

The editors of this volume, who also served as the organizing committee for the conference on “A New Architecture for the U.S. National Accounts,” are grateful to Carl Beck and Denis Healy of the National Bureau of Economic Research (NBER) conference staff for their excellent work in organizing the conference. In preparing the proceedings for publication we have benefited greatly from the expert assistance of Helena Fitz-Patrick, coordinator of book publishing at the NBER, and Catherine Beebe of the editorial staff of the University of Chicago Press. We are very grateful to two anonymous referees for their comments on the individual contributions. Finally, we would like to express our gratitude to the authors for helping us produce the volume in a timely fashion.

Executive Committee, July 2005

Charles R. Hulten (Chair), University of Maryland  
John M. Abowd, Cornell University

Susanto Basu, University of Michigan  
Ernst R. Berndt, Sloan School of Management, MIT  
Carol A. Corrado, Board of Governors of the Federal Reserve  
Robert C. Feenstra, University of California, Davis  
John Greenlees, Bureau of Labor Statistics  
John C. Haltiwanger, University of Maryland  
Michael J. Harper, Bureau of Labor Statistics  
Ron Jarmin, Bureau of the Census  
John Bradford Jensen, Institute for International Economics  
Lawrence Katz, Harvard University  
J. Steven Landefeld, Bureau of Economic Analysis  
Brent Moulton, Bureau of Economic Analysis  
Mark J. Roberts, Pennsylvania State University  
Matthew Shapiro, University of Michigan  
David W. Wilcox, Board of Governors of the Federal Reserve