

A Rational Expectations Approach to Macroeconometrics

Testing Policy Ineffectiveness and Efficient-Markets Models

Frederic S. Mishkin



National
Bureau of
Economic
Research

A Rational Expectations Approach to Macroeconometrics



**A National Bureau
of Economic Research
Monograph**

A Rational Expectations Approach to Macroeconometrics

Testing Policy
Ineffectiveness and
Efficient-Markets
Models

Frederic S. Mishkin



The University of Chicago Press

Chicago and London

The University of Chicago Press, Chicago 60637
The University of Chicago Press, Ltd., London

© 1983 by the National Bureau of Economic Research
All rights reserved. Published 1983
Paperback edition 1983
Printed in the United States of America
90 89 87 86 85 5 4 3

Library of Congress Cataloging in Publication Data

Mishkin, Frederic S.

A rational expectations approach to macro-
econometrics.

(A National Bureau of Economic Research monograph)

Bibliography: p.

Includes index.

1. Rational expectations (Economic theory)
 2. Macroeconomics. 3. Econometrics. I. Title.
- II. Series.

HB172.5.M57 1983 339'.0724 82-20049

ISBN 0-226-53186-4 (cloth)

0-226-53187-2 (paper)

NBER Board of Directors

Officers

Walter W. Heller, *chairman*

Franklin A. Lindsay, *vice-chairman*

Eli Shapiro, *president*

David G. Hartman, *executive director*

Charles A. Walworth, *treasurer*

Sam Parker, *director of finance and administration*

Directors at Large

Moses Abramovitz

George T. Conklin, Jr.

Morton Ehrlich

Edward L. Ginzton

David L. Grove

Walter W. Heller

Franklin A. Lindsay

Roy E. Moor

Geoffrey H. Moore

Michael H. Moskow

James J. O'Leary

Peter G. Peterson

Robert V. Roosa

Richard N. Rosett

Bert Seidman

Eli Shapiro

Stephen Stamas

Lazare Teper

Donald S. Wasserman

Marina v.N. Whitman

Directors by University Appointment

Charles H. Berry, *Princeton*

Otto Eckstein, *Harvard*

Walter D. Fisher, *Northwestern*

J. C. LaForce, *California, Los Angeles*

Paul McCracken, *Michigan*

Daniel McFadden, *Massachusetts Institute of Technology*

Almarin Phillips, *Pennsylvania*

James L. Pierce, *California, Berkeley*

Nathan Rosenberg, *Stanford*

James Simler, *Minnesota*

James Tobin, *Yale*

William S. Vickrey, *Columbia*

Dudley Wallace, *Duke*

Burton A. Weisbrod, *Wisconsin*

Arnold Zellner, *Chicago*

Directors by Appointment of Other Organizations

Carl F. Christ, *American Economic Association*

Robert C. Holland, *Committee for Economic Development*

Stephan F. Kaliski, *Canadian Economics Association*

Albert G. Matamoros, *National Association of Business Economists*

Douglass C. North, *Economic History Association*

Rudolph A. Oswald, *American Federation of Labor and Congress of Industrial Organizations*

Joel Popkin, *American Statistical Association*

G. Edward Schuh, *American Agricultural Economics Association*

Albert Sommers, *The Conference Board*

James C. Van Horne, *American Finance Association*

Charles A. Walworth, *American Institute of Certified Public Accountants*

Directors Emeriti

Arthur Burns

Emilio G. Collado

Solomon Fabricant

Frank Fetter

Thomas D. Flynn

Gottfried Haberler

Albert J. Hettinger, Jr.

George B. Roberts

Murray Shields

Boris Shishkin

Willard L. Thorp

Theodore O. Yntema

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

1. The object of the National Bureau of Economic Research is to ascertain and to present to the public important economic facts and their interpretation in a scientific and impartial manner. The Board of Directors is charged with the responsibility of ensuring that the work of the National Bureau is carried on in strict conformity with this object.

2. The President of the National Bureau shall submit to the Board of Directors, or to its Executive Committee, for their formal adoption all specific proposals for research to be instituted.

3. No research report shall be published by the National Bureau until the President has sent 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 principles of the National Bureau. Such notification will include an abstract or summary of the manuscript's content and a response form for use by those 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, the character of the data and their utilization in the report, and the main conclusions reached.

4. For each manuscript so submitted, a special committee of the Directors (including Directors Emeriti) shall be appointed by majority agreement of the President and Vice Presidents (or by the Executive Committee in case of inability to decide on the part of the President and Vice Presidents), consisting of three Directors selected as nearly as may be one from each general division of the Board. The names of the special manuscript committee shall be stated to each Director when notice of the proposed publication is submitted to him. It shall be the duty of each member of the special manuscript committee to read the manuscript. If each member of the manuscript committee signifies his approval within thirty days of the transmittal of the manuscript, the report may be published. If at the end of that period any member of the manuscript committee withholds his approval, the President shall then notify each member of the Board, requesting approval or disapproval of publication, and thirty days additional shall be granted for this purpose. The manuscript shall then not be published unless at least a majority of the entire Board who shall have voted on the proposal within the time fixed for the receipt of votes shall have approved.

5. No manuscript may be published, though approved by each member of the special manuscript committee, until forty-five days have elapsed from the transmittal of the report in manuscript form. The interval is allowed for the receipt of any memorandum of dissent or reservation, together with a brief statement of his reasons, that any member may wish to express; and such memorandum of dissent or reservation shall be published with the manuscript if he so desires. Publication does not, however, imply that each member of the Board has read the manuscript, or that either members of the Board in general or the special committee have passed on its validity in every detail.

6. Publications of the National Bureau issued for informational purposes concerning the work of the Bureau and its staff, or issued to inform the public of activities of Bureau staff, and volumes issued as a result of various conferences involving the National Bureau shall contain a specific disclaimer noting that such publication has not passed through the normal review procedures required in this resolution. The Executive Committee of the Board is charged with review of all such publications from time to time to ensure that they do not take on the character of formal research reports of the National Bureau, requiring formal Board approval.

7. Unless otherwise determined by the Board or exempted by the terms of paragraph 6, a copy of this resolution shall be printed in each National Bureau publication.

(Resolution adopted October 25, 1926, as revised through September 30, 1974)

To My Father

Contents

	<i>Acknowledgments</i>	xi
1.	Introduction	1
Part I Econometric Theory and Methodology		
2.	The Econometric Methodology	9
	<i>Appendix 2.1</i> Identification and Testing	27
	<i>Appendix 2.2</i> An Annotated Computer Program	32
3.	An Integrated View of Tests of Rationality, Market Efficiency, and the Short-Run Neutrality of Aggregate Demand Policy	44
Part 2 Empirical Studies		
4.	Are Market Forecasts Rational?	59
5.	Monetary Policy and Interest Rates: An Efficient Markets–Rational Expectations Approach	76
	<i>Appendix 5.1</i> Estimates of the Forecasting Equations	97
	<i>Appendix 5.2</i> Additional Experiments Using the Two-Step Procedure	103
6.	Does Anticipated Aggregate Demand Policy Matter?	110