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*Economic Research: Retrospect and Prospect*

# ECONOMIC GROWTH

*Fiftieth Anniversary Colloquium V*



NATIONAL BUREAU OF ECONOMIC RESEARCH  
NEW YORK 1972

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## Economic Growth

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**Relation of National Bureau Directors to Publications  
Reporting Proceedings of the Fiftieth Anniversary Colloquia**

Since the present volume is a record of colloquium proceedings, it has been exempted from the rules governing submission of manuscripts to, and critical review by, the Board of Directors of the National Bureau.

*(Resolution adopted July 6, 1948, as revised  
November 21, 1949, and April 20, 1968)*

## **Prefatory Note**

This volume of the Fiftieth Anniversary Series contains the proceedings of the Economic Growth Colloquium, which was held at the Bank of America Center in San Francisco, California, on December 10, 1970. We are indebted to those members of the Bureau's Board of Directors who served on the committee to plan and coordinate the session: Moses Abramovitz, Percival F. Brundage, Solomon Fabricant, Frank W. Fetter, Walter D. Fisher, David L. Grove, Harold G. Halcrow, John R. Meyer, Douglass C. North, Robert M. Solow, and Joseph H. Willits. In addition, the splendid assistance received from Bureau director Walter E. Hoadley merits our special appreciation. He obtained the facilities and contributed substantial time and effort to ensuring the success of the Economic Growth Colloquium. Finally, we are grateful to Ester Moskowitz, Hedy D. Jellinek, and Ruth Ridler, who prepared the manuscript for publication.

F. THOMAS JUSTER



## Fiftieth Anniversary Colloquium Series

To commemorate its fiftieth anniversary the National Bureau of Economic Research sponsored a series of colloquia to explore the effects of pending and anticipated policy issues on future research priorities for areas of long-standing Bureau concern. As a basis for the panel and audience discussions, economists specializing in the subject area prepared papers in which they reviewed relevant research advances through time and presented their opinions for the direction of future effort. These papers, and in some instances edited transcripts of panelists' comments, appear as part of the National Bureau's Fiftieth Anniversary publications series. Papers developed for the colloquia and publications series and participants in the program included:

### THE BUSINESS CYCLE TODAY September 24, 1970—New York City

#### Moderators:

Morning session: Paul A. Samuelson  
Afternoon session: F. Thomas Juster

#### Presentations:

- |   |  |
|---|--|
| "Dating American Growth Cycles"   | <i>Ilse Mintz</i>                      |
| "The 'Recession' of 1969-1970"  | <i>Solomon Fabricant</i>               |
| "The Cyclical Behavior of Prices"   | <i>Geoffrey H. Moore</i>               |
| "Forecasting Economic Conditions: The Record and the Prospect"  | <i>Victor Zarnowitz</i>                |
| "Econometric Model Simulations and the Cyclical Characteristics of the U.S. Economy"  | <i>Victor Zarnowitz</i>                |
| "A Study of Discretionary and Nondiscretionary Monetary and Fiscal Policies in the Context of Stochastic Macroeconometric Models" | <i>Yoel Haitovsky and Neil Wallace</i> |

**Panelists:**

Morning session: Otto Eckstein, Henry C. Wallich

Afternoon session: Bert G. Hickman, Arthur M. Okun

**FINANCE AND CAPITAL MARKETS**

October 22, 1970—New York City

**Moderator:** Robert V. Roosa

**Presentation:**

“Finance and Capital Markets”

*John Lintner*

**Panelists:** William J. Baumol, Sidney Homer, James J. O’Leary

**A ROUNDTABLE ON POLICY ISSUES AND RESEARCH  
OPPORTUNITIES IN INDUSTRIAL ORGANIZATION**

November 5, 1970—Chicago, Illinois

**Moderator:** Victor R. Fuchs

**Presentations:**

“Industrial Organization: Boxing the Compass”

*James W. McKie*

“Antitrust Enforcement and the Modern Corporation”

*Oliver E. Williamson*

“Issues in the Study of Industrial Organization in a Regime of Rapid  
Technical Change”

*Richard R. Nelson*

“Industrial Organization: A Proposal for Research”

*Ronald H. Coase*

**PUBLIC EXPENDITURES AND TAXATION**

December 2, 1970—Washington, D.C.

**Moderator:** Walter W. Heller

**Presentation:**

“Quantitative Research in Taxation and Government Expenditure”

*Carl S. Shoup*

**Panelists:** James M. Buchanan, Richard R. Musgrave

**ECONOMIC GROWTH**

December 10, 1970—San Francisco, California

**Moderator:** R. Aaron Gordon

**Presentation:**

“Is Growth Obsolete?”

*William D. Nordhaus and James Tobin*

**Panelists:** Moses Abramovitz, Robin C. O. Matthews

**HUMAN RESOURCES**

May 13, 1971—Atlanta, Georgia

**Moderator:** Gary S. Becker

**Presentation:**

“Human Capital: Policy Issues and Research Opportunities”

*Theodore W. Schultz*

**Panelists:** Alice M. Rivlin, Gerald S. Somers

**THE FUTURE OF ECONOMIC RESEARCH**  
April 23, 1971—South Brookline, Massachusetts

**Presentation:**

**"Quantitative Economic Research: Trends and Problems"**

*Simon Kuznets*

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## Foreword

Whether the difference between economic growth as measured by the present U.S. National Income and Product Accounts and economic growth as measured by a welfare-oriented and fully comprehensive set of economic accounts is large or small—indeed, whether welfare-oriented growth has been positive or negative during the last decade or so—has received a great deal of both public and professional attention of late. Some have presented the extreme view that there has been no real economic growth at all in the U.S. economy over the recent past, as the apparent growth in measured product has been eaten away by an increasingly important set of negative growth elements manifested by a massive deterioration in our physical and social environment.

The critics may be right or wrong, but they have certainly made the point that our Income and Product Accounts do not provide a measure of economic and social welfare, and that they may give a seriously misleading picture of the growth in welfare. The appropriate response to the critics, and to the questions they pose, does not lie in verbal and empirically casual counter-arguments. It consists, rather, in an attempt to adjust, modify, and supplement the Income and Product Accounts for the kinds of welfare-producing activities, both positive and negative, that are either not included as part of real product or are included as final rather than intermediate product. The essay by William Nordhaus and James Tobin represents the first serious quantitative attempt to do this, and to provide a comprehensive measure of output that is welfare-oriented rather than production- or activity-oriented.

The latter difference is important. An expansion in real product which takes the form of more police, fire, and other protective services, or greater military hardware and personnel, or a larger fleet of garbage removal trucks clearly represents increased output in the sense that a greater flow of resources are used for these purposes by the community. But if these expanded flows of product do no more than simply maintain existing “stocks” of personal security, national security, and ecological purity, it is hard to see where economic welfare has been

increased by this expanded use of real resources. The problem is thorny, especially on the measurement side, since it is ordinarily far from obvious whether increased product flows of the sort described above have or have not resulted in greater amounts of the ultimate services they are designed to provide. For example, have we really purchased more personal and national security by our expanded outlays?

An identical problem arises with respect to the role of nonmarket activities in the system. An expansion of leisure time is generally regarded as a positive economic and social benefit. An increase in the utility associated with work, including a better-regulated physical environment due to improved heating, lighting, and ventilation, as well as a more attractive work situation itself are surely positive economic benefits. And a change in the composition of nonworking time, away from the drudgery of household chores and toward activities like television viewing, reading, visiting the neighbors, or whatever, is just as much an increase in leisure time as a reduction in the number of hours spent working for pay.

Nordhaus and Tobin make an imaginative attempt to quantify some of the important differences between the concept of goods and services produced in the market and the welfare concept of goods and services available for ultimate consumption satisfactions. Their calculations suggest that the extensively discussed and debated gaps in the accounts data relating to the growth in environmental disamenities (pollution, urban crises, racial disharmony, etc.), while sizable in absolute terms, play a relatively modest role in the total picture when compared with other gaps that are both positive and negative. Not surprisingly, the most important single difference between welfare and production turns out to be in the value of leisure time, although there are very large differences in alternative ways of valuing the growth in available leisure.

It is easy to quarrel with the specifics of the Nordhaus-Tobin quantitative estimate of measured welfare or of its growth over time. But the authors' contribution lies less in their specific measurements (provided in a tentative and qualified form) than in their demonstration of the fact that sensible measurements *can* be made of an output concept more closely associated with welfare than the production concept characterizing our present Income and Product Accounts.

An interesting footnote relates to their analysis of environmental disamenity. First, quantitative estimates of the costs of environmental

deterioration suggest that these costs may not be as large as the more vocal critics of economic growth have usually implied. Second, and more important, Nordhaus and Tobin suggest that the most significant aspect of the environmental problem probably does not lie in the "local" types of disturbances that get so much public attention, such as air and water pollution, crime rates in the cities, etc., but in the potentially catastrophic global ecological disasters that neither the physical sciences nor the social sciences seem to know very much about.

F. THOMAS JUSTER  
*Vice President—Research*



## Economic Growth

