

NATIONAL BUREAU
report



NATIONAL BUREAU OF ECONOMIC RESEARCH, INC. NEW YORK, N. Y. 10016

THE BUSINESS CYCLE TODAY

When the National Bureau launched its Fiftieth Anniversary Colloquium Series last September with a discussion of the business cycle, Bureau analysts were not prepared to designate the 1969-1970 economic slowdown as a recession. Now, six months later, a sufficient quantity of data has accumulated, and the verdict is submitted in the supplement to this *National Bureau Report*. The supplement article, which is an official publication of the National Bureau and as such has been approved by the Bureau's Board of Directors, was prepared by Solomon Fabricant. Professor Fabricant, a former Research Director of the Bureau, is currently a member of the NBER Senior Research Staff and Professor of Economics at New York University.

NBER
Opinion:
1969-1970
A Recession

THE USE AND ABUSE OF COMPUTERS

During the last decade the high-speed digital computer has become a vital tool for economic research. The hectic years of experimentation with fast-changing computer technology have resulted in substantial progress — and in a considerable expenditure of time, talent, and money. Some of this has involved duplication, especially in the development of computer data and software. At this stage of its development, it is fair to say, there is avoidable inefficiency in the use of the new technology in research centers, governments, and campuses throughout this country — and, in fact, throughout the world.

The National Bureau, which has helped to develop much of the data fed into modern computers, has launched a major project to help to eliminate this inefficiency. The Bureau's effort focuses on three fronts:

*A Research Center for the Development of Computer Technology in Economics and Management Science which will permit experimentation with new computer techniques in a variety of ways, including a time-shared system; the systems programming group who will be at the heart of this effort, at least initially, will be housed in new NBER offices in Cambridge, Massachusetts.

*The Inter-Institutional Conference on the Computer in Economic and Social Research (ICCESR), a new study group with participating experts from many public and private research centers, will meet periodically to share their wisdom and their worries about current computer usage.

*A Conference on Econometrics and Mathematical Economics, a somewhat specialized forum for individuals working along the new frontiers of economic theory and method.

Technological
Revolution
or
Technological
Babylon?

The rationale behind this three-part program was explained by NBER President John R. Meyer in the Bureau's 1970 Annual Report. The "technological revolution" in research, Meyer said, has created "important problems of 'research logistics,' that is, of providing supporting data and methods to do the research." These problems, Meyer suggested, will become more serious as the future unfolds. The reasons include increased use of complex dynamic models; increased reliance on complicated cross-sectional micro data banks; and the development of new statistical methods to handle the new data forms. All three trends — in part created by computers — will require computers in their evolution, according to Meyer.

The following paragraphs describe in somewhat more detail how the Bureau's computer projects will operate and what they are expected to achieve.

A Computer
Utility

The Research Center for the Development of Computer Technology in Economics and Management Science. This Center will serve economics and related research and will help to generate new computer techniques for a broad class of academic and other non-profit users. A resident staff in the new National Bureau's Cambridge office will soon be assembled to direct the initial efforts.

The National Science Foundation has approved in principle a five-year budget plan for the project of \$5.5 million. A two-year NSF grant for \$1.5 million has already been awarded.

The Center will start out as the creation and responsibility of the National Bureau, administered by a Policy and Operations Committee. This Committee, which will function at the outset as a subcommittee of the Bureau's Board of Directors, will be comprised of several Bureau Directors;

representatives of the projected user community; and computer scientists. The administrative organization is designed to allow the Center to achieve complete independence from the Bureau within several years, if this should be desirable.

The Inter-Institutional Conference on the Computer in Economic and Social Research (ICCESR). This project encompasses a broad range of activity including several workshops each year and annual conferences, the first to be held in Mexico next fall.

The Conference is expected eventually to enlist the continuing support of a few hundred individuals or institutions — private and public — interested in helping to rationalize current computer usage. Program coordinator for ICCESR is M.I. Nadiri, a member of the NBER Senior Research Staff and Professor of Economics at New York University.

Improving
Information
Dissemination

In February last year the Conference held its first workshop, a day of seminars on computer databanks: their evolution, availability, and coverage. Discussion concentrated almost exclusively on time-series data. At a second workshop in October, attention switched to cross-sectional data. The two-day meeting, held at Washington's Brookings Institution, focused on "The Use of Microdata Sets in Economic Analysis." The next workshop, which is scheduled for June 4, 1971, at the Urban Institute in Washington, D.C., will focus on the use of computers to improve the communication of research findings among scientists (Sanford Berg, NBER Research Associate is chairman.)

The first annual ICCESR conference will be held next fall in Cuernavaca, Mexico. Some sixty-five social scientists doing quantitative research, drawn from the western hemisphere, will be invited to join the five-day meetings scheduled for October 25 to 29, 1971. The subject of the meetings is "The Role of the Computer in the Social and Economic Development of Latin America." Serving as cochairman of the October meetings will be Yale University Professor Richard Ruggles, a member of the NBER Senior Research Staff; Victor Urquidi of the Colegio de Mexico; Roberto Cortes of Argentina's DeTella Institute; and Isaac Kerstenetsky of Brasil's Vargas Foundation. The Colegio de Mexico will handle all local arrangements: transportation, hotels, translation services, reproduction of formal papers and discussion summaries.

A second conference, which will focus on a critical examination of the Census Bureau's Current Population Survey, is now in the planning stage. Professor James Smith, Pennsylvania State University, is chairman.

The ICCESR program is supported by a \$200,000, five-year grant from the IBM Corporation; \$75,000 from IBM's World Trade Corporation; and \$40,000 from NSF.

Planning
for
Progress

Conference on Econometrics and Mathematical Economics (CEME). This study series, which held its first meeting late last year, brings together leading scholars in econometrics and mathematical economics. Their goal is to facilitate the flow of information, thereby speeding progress and reducing replicative research efforts.

The program focuses on a series of small, specialized seminars at major research centers and universities, directed by resident experts. Occasionally all Conference members will meet together to review critically past developments and to discuss new developments in theory or methodology.

Topics, chairmen, and locations of seminars now planned include "Comparison of Existing Econometric Models," Professor Laurence Klein, University of Pennsylvania; "General Equilibrium Models," Professor Kenneth Arrow, Harvard University; and "Decentralized Economic Planning and Programming," Professor Roy Radner, University of California, Berkeley.

CEME's operations are directed by an eight-man steering committee chaired by Gary Fromm of Data Resources, Inc. Financial support of \$40,000 for the program comes from a National Science Foundation grant.

SYNOPTICON FOR ECONOMICS

The Annals of Economic and Social Measurement, a new periodical scheduled to make its debut early in 1972, will contain articles generated by or relevant to Bureau, or Bureau financed, research. Primary emphasis will be placed on publishing articles evolving from NBER's computer initiatives. Participants in ICCESR and CEME workshops and conferences and researchers affiliated with the Computer Center will be encouraged to contribute papers detailing their research findings.

Plans for *The Annals* are still in the formative stage. Further information will be available in future editions of the *National Bureau Report*.

NEW GRANTS

COLLABORATIVE TRAINING AND RESEARCH

Postdoctoral economists from Asia, Africa, or Latin America will soon be able to participate in Bureau research under a \$225,000 grant recently awarded to the NBER by the Rockefeller Foundation. This grant also affords an opportunity for one or two NBER economists to spend a year abroad at a university in a developing country. The five-year program, which compliments the Bureau's existing research fellow program, will place special emphasis on attracting economists now affiliated with the Rockefeller Foundation's University Development Program.

LAW AND ECONOMICS

What are the determinants of the returns and costs to persons engaged in illegal activities? How effective are various public and private expenditures (totaling upwards of \$6 billion according to the President's Commission on Law Enforcement and the Administration of Justice) in combating crime? What are the deterrent effects of existing laws and judicial procedures on illegal behavior? Can the consequences of additional legislation in this area be predicted? With the assistance of a two-year \$201,900 grant from the National Science Foundation, a new program, Research in Law and Economics, headed by Gary S. Becker (NBER Senior Research Staff and Professor of Economics, The University of Chicago), will begin to assemble data to examine quantitatively these and related questions. Other participants in the project include: William Landes, NBER Research Associate and Professor of Economics at Columbia University, Isaac Ehrlich, Research Associate and Assistant Professor at the Graduate School of Business, The University of Chicago, and Richard Posner, Professor of Law at The University of Chicago Law School.

INFLATION AND FINANCIAL MARKETS

On December 18, 1970, the Life Insurance Association of America awarded the NBER a \$269,500 grant for a study of Effects of Inflation on Financial Markets. The study, expected to run two to three years, will be directed by Senior Research Staff member Phillip Cagan and will benefit from the participation of Stanley Diller (NBER and Columbia University), Thomas Sargent (University of Pennsylvania) and John Lintner (Harvard University).

GENERAL SUPPORT

Richard King Mellon Charitable Trusts

In 1965 the Richard King Mellon Foundation made a contribution to the Bureau's general support with a \$125,000 grant for a five-year period. NBER is gratified that the Richard King Mellon Charitable Trusts elected in December, 1970, to contribute general support for the Bureau's program with a \$75,000 grant which is being paid in \$25,000 installments over a three-year period.

The Scherman Foundation

The general program support which The Scherman Foundation has generously provided the Bureau for many years was renewed with a \$25,000 contribution in April 1971.

HIGHLIGHTS OF ACTIVITIES OF NBER ECONOMISTS*

JOHN R. MEYER – President

- Participated in a conference, "The Future of Foundations: Their Institutional Role in American Society," sponsored by the Kettering Foundation, November 11-13, 1970, in Dayton, Ohio.
- Elected to the Executive Committee of the American Economics Association for a two-year term beginning December 1970.
- Presented a paper, "The Future and Its Implications for Regional Transportation Planning," at a RAND Corporation Conference on Regional Transportation Planning, January 25-27, 1971, in Santa Monica, California.
- Delivered a series of lectures on transportation at the invitation of the Israeli Ministry of Transport and Communications, March 18-28, 1971, in Tel Aviv, Israel. Presentation also made to the Econometrics Seminar at the Hebrew University in Jerusalem.

VICTOR R. FUCHS – Vice President-Research

- Delivered a paper, "The Cost of Medical Care: The Supply Side of the Equation," at a meeting of The University of Chicago, Center for Health Administration Studies, November 6, 1970.
- Addressed a National Health Insurance Conference on "A Framework for Determining the Costs of Alternative Plans for Health Insurance," at the Leonard Davis Institute of Health Economics, University of Pennsylvania, November 12, 1970.
- Presented a paper, "Why Men Earn More Than Women," at the Graduate Economics Club, Yale University, New Haven, Connecticut, December 2, 1970.
- Prepared two papers, "Male-Female Differentials in Hourly Earnings," and "Expenditures for Physicians' Services in the U.S." (Marcia J. Kramer, NBER Senior Research Analyst, coauthor), presented at the Allied Social Science Associations meeting, Detroit, Michigan, December 28-30, 1970.

*This issue of the *National Bureau Report* reviews activities of the NBER and its personnel from mid-October, 1970 through mid-April, 1971.

- Spoke on Health Care Policy at the New Democratic Coalition Issues Conference, in New York City, February 7, 1971.
- Delivered a lecture on "What Can We Learn from Foreign Experiences?" at a symposium on "Alternative Traditions of Medical Care," University of Pennsylvania, March 3, 1971.

F. THOMAS JUSTER – Vice President-Research

- Chaired Session I and presented a paper, "Agenda for Future Research: The Measurement of Social and Economic Performance," at Session II of American Economic Association and American Statistical Association meetings devoted to New Directions in National Bureau Research, in Detroit, Michigan, December 30, 1970. These sessions were organized by the AEA and ASA in commemoration of the Bureau's Fiftieth Anniversary and the papers presented will be published by NBER.
- Attended a Conference on Social Indicators sponsored by the Social Science Research Council (in conjunction with SSRC of Great Britain) at the Ditchley Foundation, Ditchley Park, England, April 2-4, 1971.
- Spoke on "A New Look at Short-Range Forecasting Techniques," at a National Association of Business Economists seminar, Chicago, Illinois, April 8, 1971.
- Appointed as a consultant to the Cartter Panel – Technical Task Force charged by the College Scholarship Service of the College Entrance Examination Board to conduct research in student financial aid problems, April 1970.
- Appointed to the Advisory Committee on Market Price Behavior in Consumer Credit formed to assist the National Commission on Consumer Finance in developing data to analyze the performance of consumer credit markets on a state-by-state and leading metropolitan area basis.

EDWARD K. SMITH

- Appointed to the Study Group on Utilization of Resources of the Commission on Government Procurement. The Commission was created by the Congress in 1969 to study all aspects of Federal purchase of goods and services.

PHILLIP CAGAN – Senior Research Staff

- Participated in a Federal Reserve consultants' meeting on monetary policy in the cyclical recovery of 1971 held in Washington, D.C. on March 5, 1971.

- Appointed to the editorial board of the *American Economic Review*.
- Spoke on “Monetary Policy Choices in the First Year of Recovery,” at the American Statistical Association, New York Area Chapter, Forecasting Conference, New York City, April 23, 1971.

SOLOMON FABRICANT – Senior Research Staff

- Completed “Inflation and the Lag in Accounting Practice,” published in *Accounting in Perspective, Contributions to Accounting Thought by Other Disciplines*, South-Western Publishing Co., 1971.

JOHN F. KAIN – Senior Research Staff

- Presented a paper, “Open or Closed Suburbs: Corporate Location and the Urban Crisis,” at the panel session on Economic and Social Implications of Urban Decentralization of the Annual Conference of the Suburban Action Institute, New York City, December 17, 1970.
- Chaired session on Urban Growth and Development at the American Economic Association meetings, Detroit, Michigan, December 28, 1970.
- Chaired session on Transportation at the Econometric Society meetings, Detroit, Michigan, December 29, 1970.
- Delivered a paper, “The NBER Urban Simulation Model and Urban Economics in the 1970’s” at the American Economic Association and American Statistical Association meetings devoted to New Directions in National Bureau Research, Detroit, Michigan, December 30, 1970.
- Prepared paper, “Housing Market Discrimination, Homeownership, and Savings Behavior,” presented at Atlanta University, Atlanta, Georgia, during meetings held February 13-15, 1971, and also presented at Florida State University, Tallahassee, Florida, February 16, 1971.
- Addressed the Organization for Economic Cooperation and Development on “The Impact of the Motorcar on Society: A Study Design,” in Paris, France, March 15, 1971.
- Presented the keynote speech, “Transportation Problems of Metropolitan Areas,” in panel discussion of “The Urban Dilemma” at the Second Annual Urban Affairs Conference, North Carolina A & T State University, Greensboro, North Carolina, March 24, 1971.
- Presented a series of seminars based on papers, “Housing Market Discrimination, Homeownership, and Savings Behavior,” and “The

NBER Urban Simulation Model and Urban Economics in the 1970's," at the University of Western Ontario, London, Canada, March 31-April 2, 1971.

- Delivered a paper, "The NBER Urban Simulation Model: An Overview" at the Southeastern Regional Science Association Meetings, Washington, D.C., April 15-16, 1971.

JOHN W. KENDRICK – Senior Research Staff

- Lectured on productivity concepts, measurement, analysis and projections at the University of Copenhagen, November 2-4, 1970.
- Elected Vice President of the Southern Economic Association, November, 1970.
- Spoke on "Postwar Productivity Trends in the U.S., 1948-1969," at the Twentieth Semiannual Meeting of the Manufacturing Chemists Association, New York City, November 24, 1970; and at the Economic Development Center, Vanderbilt University, December 11-12, 1970.
- Program Chairman of the Business and Economic Statistics Section of American Statistical Association meetings, Detroit, Michigan, December 27-30, 1970.

IRVING B. KRAVIS – Senior Research Staff

- Presented a paper, "The Current Case for Import Limitations," to the President's Commission on International Trade and Investment, November 1970.
- Prepared paper, "Trade as a Handmaiden of Growth: Similarities between the Nineteenth and Twentieth Centuries," published in the *Economic Journal*, December 1970.

M. I. NADIRI – Senior Research Staff

- Presented a paper, "A Review of Productivity and Production Function Studies and their Uses," before an Economics Seminar on Advanced Techniques and Their Applications, sponsored by the Bell Telephone Laboratories on November 5, 1970.
- Participated in "Time Series and Distributed Lags Seminar" NBER, January 25, 1971.

ANNA J. SCHWARTZ – Senior Research Staff

- Participated in a three session Seminar on Financial Institutions at the Center for Tomorrow, The Ohio State University, March 3, 1971.

VICTOR ZARNOWITZ – Senior Research Staff

- Participated in a Seminar on Evaluation of Econometric Models, at the University of Michigan, Ann Arbor, Michigan, November 6, 1970.
- Participated in The University of Chicago television programs “Business Forecast 1971” broadcast on WLS-TV, Channel 7, Chicago, Illinois, December 17 and 18, 1970.
- Presented a paper, “New Plans and Results of Research in Economic Forecasting,” at joint session of American Economic Association and American Statistical Association meetings, Detroit, Michigan, December 30, 1970.

V. K. CHETTY – Research Fellow

- Participated in “Times Series and Distributed Lags Seminar,” NBER, January 25, 1971.

ROBERT EISNER – Research Associate

- Elected to the Executive Committee of the American Economic Association for a two-year term beginning December 1970.
- Appointed AEA representative to the National Research Council, Division of Behavioral Sciences, December 1970.
- Presented a paper, “Socioeconomic Accounting: Comment,” at meetings of American Economic Association, Detroit, Michigan, December, 1970.

ROBERT J. GORDON – Research Associate

- Presented “Large-Scale Econometric Models, Policy Multipliers, and the Problem of Forecasting” to a meeting of consultants at the Federal Reserve Board, Washington, D.C., November 20, 1970.
- Delivered a paper, “Inflation in 1970: A Horizontal Phillips Curve?” before the third meeting of the Brookings Panel on Economic Activity, Washington, D. C., December 4, 1970.

- Presented a paper, “Recent Developments in the Measurement of Price Indexes for Fixed Capital Goods,” at the American Statistical Association meeting, Detroit, Michigan, December 29, 1970.

MICHAEL GROSSMAN – Research Associate

- Awarded the Friedman Prize by Department of Economics, Columbia University, for Ph.D. dissertation, “The Demand for Health: A Theoretical and Empirical Analysis.”

MICHAEL LANDSBERGER – Research Associate

- Presented a paper, “Some Properties of the Estimate of the Variance, Covariance Matrix for an Indirect Reduced Form Estimator,” at the Econometric Society meeting, December 29, 1970.

CHRISTOPHER SIMS – Research Fellow

- Organized and chaired “Time Series and Distributed Lags Seminar,” at the NBER, January 25, 1971.

FINIS WELCH – Research Associate

- Appointed Executive Officer of the Ph.D. economics program at the Graduate Center, City University of New York.

DAVID M. GORDON – Research Analyst

- Edited *Problems in Political Economy – An Urban Perspective*, published by D.C. Heath, Lexington, Massachusetts, 1971.
- Addressed a seminar on the empirical analysis of labor market stratification and its implications for poverty and underemployment at The Brookings Institution, Washington, D. C., March 23, 1971.
- Addressed a seminar on the use of microdata sources for analysis of urban poverty and underemployment, Urban Institute, Washington, D. C., March 24, 1971.
- Addressed a seminar on the competition among theories of poverty and underemployment, University of Maryland, March 24, 1971.
- Prepared paper, “Class and the Economics of Crime,” which will appear in *Political Economy: Radical and Orthodox Approaches*, edited by James Weaver for publication by Allyn and Bacon in 1972.

MASANORI HASHIMOTO – Research Analyst

- Delivered a paper, “Effects of Minimum Wages on Employment and Unemployment” (Jacob Mincer, Senior Research Staff, coauthor), at the Econometric Society meetings, Detroit, Michigan, December 28, 1970.

GREGORY K. INGRAM – Research Analyst

- Participated as a discussant of three papers presented under the auspices of the Econometric Society on modal split models in transportation at the Allied Social Science Association meetings, Detroit, Michigan, December 29, 1970.

NEW PUBLICATIONS

THE TECHNOLOGY FACTOR IN INTERNATIONAL TRADE

Raymond Vernon, editor
Price: \$15.00, 503 pp.
Published: December 10, 1970

In the last decade or so, economists struggled to understand, define, and measure technology as an element in economic growth. A discipline that for so long had found it sufficient to think in terms of three productive factors – land, labor, and capital – has begun to see some utility in treating technology as a factor deserving separate analysis. This Universities-National Bureau Conference volume describes how international trade theory has been adapted and modified to reflect economists’ new notions about technology.

EDUCATION, INCOME, AND HUMAN CAPITAL

W. Lee Hansen, editor Price: \$10.00, 320 pp. Published: Novemb
Price: \$10.00, 320 pp.
Published: November 17, 1970

How should this country measure educational achievement? By achievement test scores or, perhaps, by more subtle yardsticks like a student’s self-respect?

If a set of objectives were agreed upon, how would the goals be most efficiently achieved? Better teachers, more stable homes, and improved classroom facilities all may seem important. But what other inputs belong on the list and what mix would maximize the educational objectives of the ghetto, the rich suburb, the entire U.S.?

Economists don't seem to have the answers. Nor, it appears, does anyone else. But the twenty-one experts who contributed to this conference volume are convinced that despite confusion about the process of education, there is no doubt about the economic value of the end product — an educated man or woman. The new publication explores numerous areas of research where economists are chipping away and making some definitive contributions.

THE ANALYSIS OF PUBLIC OUTPUT

Julius Margolis, editor
Price: \$12.50, 425 pp.
Published: January 28, 1971

A new branch of public finance — public economics — is the subject of this Universities-National Bureau conference volume. The collected papers show how economic analysis can be applied to the formulation and implementation of public programs. Contributors deal with four basic aspects of public economics: the theory of market failure and remedial public action; the distributional effect of public decisions; inter-governmental fiscal relations; and a general analytical approach to specific policy problems.

NEW SERIES ON HOME MORTGAGE YIELDS SINCE 1951

Jack M. Guttentag and Morris Beck
Price: \$10.00, 373 pp.
Published: January 28, 1971

Residential mortgages are the single most important capital market instrument; yet they are the most poorly documented in regard to yields and to other terms of transaction, according to the authors.

Because existing statistical data on mortgage yields are inadequate for refined analytical use, Guttentag and Beck compiled new data on this important segment of the capital market. The authors describe their series and present some analyses of the data's behavior. Technical problems involved in collecting, interpreting and using the new data are discussed.

THE OWNERSHIP INCOME OF MANAGEMENT

Wilbur G. Lewellen
Price: \$7.50, 22 pp.
Published: March 24, 1971

Traditional economic analysis of industrial behavior is based on the proposition that business managers seek to maximize profits. In recent years,

years, various studies have challenged this view. Lewellen, a professor at Purdue University, attempts to determine whether the personal goals of management in publicly held corporations match the profit maximizing desires of the firms' shareholders. He finds that the corporate environment contains executive payoff functions that lead to profit maximizing decisions — consistent with the theory, "What is good for the company is good for the executive."

THE RESPONSIVENESS OF DEMAND POLICIES TO BALANCE OF PAYMENTS: POSTWAR PATTERNS

Michael Michaely
Price: \$10.00, 317 pp.
Published: March 24, 1971

A rigorous search for the "rules of the game" applied to international payments problems in recent years leads to an important conclusion: policies to regulate aggregate demand in the major trading countries have been largely inconsistent with the stability requirements of today's international monetary system, which is based on relatively fixed exchange rates. This is the major conclusion emerging from Michaely's analysis of the patterns of domestic economic policy followed by the United States and eight other leading world trade nations.

His study focuses on the movement of major monetary and fiscal policy variables that affect aggregate demand. By observing how these policy instruments respond — or fail to respond — to changes in a nation's balance-of-payments position, the author, a professor at The Hebrew University in Jerusalem, attempts to establish patterns of domestic policy conduct in each of the countries studied. With the aid of these individual analyses, the over-all pattern of the postwar international system is delineated.

CYCLICAL ANALYSIS OF TIME SERIES: SELECTED PROCEDURES AND COMPUTER PROGRAMS

Gerhard Bry and Charlotte Boschan
Price: \$8.00, 230 pp.
Published: May 7, 1971

This study deals with some programmed approaches to business cycle research as they are used at the NBER. It describes a programmed selection of cyclical turning points in time series, currently under development, as well as the Bureau's standard business cycle analysis and recession-recovery analysis. The analytical approaches are sketched, the statistical measures are

described, and the problems typically encountered in the interpretation of these measures are discussed.

Illustrative output tables are provided in the appendixes to each chapter. Descriptions of the various computer programs, their scope, available options, and limitations are available on request in the form of mimeographed supplements, which also contain technical instructions and caveats essential for the practical implementation of the programs. The programmed approaches eliminate some of the barriers that in the past have restricted the use of the techniques described.

PLAUDITS FOR NBER PUBLICATIONS

Education, Income and Human Capital, Income and Wealth Conference volume 35, edited by W. Lee Hansen was cited as "one of the outstanding books in Industrial Relations published in 1970." This citation appeared in *Selected References* 156, March 1971, published by the Industrial Relations Section, Princeton University, Princeton, New Jersey.

"Economics — A Half Century of Research 1920-1970," NBER's *Fiftieth Annual Report*, published in September 1970, received a Certificate of Achievement as an outstanding example of printing at the Twenty Ninth Exhibition of Printing sponsored by the Printing Industries of Metropolitan New York, Inc.

PERSONNEL CHANGES AND APPOINTMENTS AT NBER

STANLEY DILLER rejoins the Bureau's senior research staff (after a year and a half hiatus with the SEC) to participate in the "Effects of Inflation on Financial Markets" study. He is a member of Columbia University's Graduate School of Business faculty and author of *The Seasonal Variation of Interest Rates* (NBER, 1970).

NAOYA TAKEBE, a researcher at the Japan Economic Research Council, is spending one year at the Bureau, participating in several ongoing projects, to familiarize himself and eventually his colleagues in Japan with NBER's research techniques.

DAVID DENOON, formerly the Program Economist for USAID in Indonesia, joined NBER's administrative staff in March as Special Assistant to the President for Project Development. A graduate of Harvard (AB, 1966) and the Woodrow Wilson School, Princeton University (MPA, 1968), he will be spending two days a week at the Bureau. At present, his work is primarily focused on projects developing in the Bureau's International

Studies Program. Mr. Denoon devotes the remainder of his week to completing his doctoral dissertation prospectus.

GERALD RONKIN, formerly a financial analyst with the Avco Corp., was recently appointed Administrative Assistant to Vice President Edward K. Smith. Mr. Ronkin received his BS from the Carnegie Institute of Technology and his MBA from Columbia University.

SOMA GOLDEN, Assistant to the President, resigned to pursue her free-lance writing interests.

NANCY STEINTHAL has assumed responsibility for future editions of the *National Bureau Report*.

REPRINTS

The following papers by Bureau Staff members are available from the National Bureau in reprint form. Please address requests to the Publications Department.

Chiswick, Barry R., "Earnings Inequality and Economic Development," *Quarterly Journal of Economics*, February 1971.

Kain, John F., "Rejoinder," *Quarterly Journal of Economics*, Vol. LXXXV, February 1971.

Landsberger, Michael, "Some Properties of the Estimates of the Variance, Co-Variance Matrix for an Indirect Reduced Form Estimator," *Discussion Paper No. 190*, University of Pennsylvania, The Wharton School of Finance and Commerce, Department of Economics.

Mincer, Jacob, "The Distribution of Labor Incomes: A Survey with Special Reference to the Human Capital Approach," *Journal of Economic Literature*, Vol. III, Number 1, March 1970.

Nadiri, M.I., "Some Approaches to the Theory and Measurement of Total Factor Productivity," *Journal of Economic Literature*, December 1970.

Solmon, Lewis, "A Note on Equality of Educational Opportunity," *American Economic Review*, Vol. LX, No. 4, September 1970.

_____, "Estimates of the Costs of Schooling in 1880 and 1890," *Explorations in Economic History*, supplement, Vol. 7, No. 4, 1970.

Welch, Finis, "Linear Synthesis of Skill Distribution," *The Journal of Human Resources*, Vol. IV, Number 3, Summer 1969.

MIMEOGRAPHED AND XEROXED PAPERS

The following papers by Bureau staff members are available upon request from the authors. The Bureau does *not* have a supply of these studies.

Eisner, Robert, "New Twists to Income and Product," *Survey of Current Business*, forthcoming.

_____, and Arthur B. Treadway, "Non-Income Income: A Forward," December 1970.

_____, "On Non-Linear Estimates of the Liquidity Trap," *Econometrica*, forthcoming.

_____, Rejoinder to Comments on "Fiscal and Monetary Policy Reconsidered," *American Economic Review*, forthcoming.

_____, "Socioeconomic Accounting: Comment," presented at meetings of American Economic Association, Detroit, December 1970.

_____, "What Went Wrong?" *Journal of Political Economy*, May/June 1971.

Gordon, David M., "Economic Theories of Poverty and Underemployment," January 1971.

Gordon, Robert J., "The Econometrics of Price Determination: Discussion," Report 7060, December 1970.

Hashimoto, Masanori, and Jacob Mincer, "Effects of Minimum Wages on Employment and Unemployment," December 1970. (Please direct requests to M. Hashimoto.)

Juster, F. Thomas, "Agenda for Future Research: The Measurement of Social and Economic Performance," December 1970.

Kain, John F., and John M. Quigley, "Housing Market Discrimination, Homeownership and Savings Behavior," Program on Regional and Urban Economics, Discussion Paper #58, Harvard University, February 1971.

Kain, John F., "How to Improve Urban Transportation at Practically No Cost," Program on Regional and Urban Economics, Discussion Paper #60, Harvard University, May 1970..

_____, "The Impact of the Motorcar on Society: A Study Design," March 1971.

_____, "The NBER Urban Simulation Model and Urban Economics in the 1970's," presented at ASSA convention, December 1970.

Sims, Christopher, "Money, Income, and Causality," March 1970.

Welch, Finis R., "The NBER Approach to Human Resource Problems," December 1970.

_____, "Scale Economies in U.S. Agriculture," November 1970.

Willis, Robert J., and Warren Sanderson, "Economic Models and Fertility Behavior: Some Examples and Implications," presented at ASSA convention, December 1970.

NATIONAL BUREAU REPORT

National Bureau Report is exempted from the rules governing submission of manuscripts to, and critical review by, the Board of Directors of the National Bureau. Each Issue, however, is reviewed and accepted for publication by the Research Committee of the Bureau and a standing committee of the Board.

National Bureau of Economic Research is a private, nonprofit organization founded in 1920 as a center for independent and impartial economic research. In the belief that such research can contribute significantly to the sound treatment of economic problems, it has sought to conduct its activities under conditions that safeguard the scientific nature of the findings and that help make them authoritative and acceptable to persons of different interests and opinions. The National Bureau is supported in part by grants from philanthropic foundations and business associations for particular studies, in part by investment income on capital-sum grants, and in part by unrestricted contributions and subscriptions from companies, banks, labor organizations, foundations, and individuals.

Further information regarding contributions and subscriptions may be obtained from the office of the Vice President – Executive Secretary.

OFFICERS: Arthur F. Burns, *Honorary Chairman*; Theodore O. Yntema, *Chairman*; Walter W. Heller, *Vice Chairman*; John R. Meyer *President*; Thomas D. Flynn *Treasurer*; Douglas H. Eldridge, *Vice President–Executive Secretary*; Victor R. Fuchs, *Vice President – Research*; F. Thomas Juster, *Vice President – Research*; Hal B. Lary, *Vice President – Research*; Robert E. Lipsey, *Vice President – Research*; Edward K. Smith, *Vice President*; Joan R. Tron, *Director of Publications*.

National Bureau Report, with occasional supplements, is issued several times a year by the National Bureau of Economic Research, Inc., 261 Madison Avenue, New York, New York 10016; telephone (212) 682-3190. It is distributed without charge to Bureau contributors, subscribers, and others interested in the field of economic research. Inquiries may be addressed to Mrs. Nancy Steinthal.

