

12824

National Bureau of
Economic Research.
on the business cycle

Dhananjayrao Gadgil Library



GIPE-PUNE-012824

STUDIES IN

Income and Wealth

VOLUME THREE

Officers

GEORGE SOULE, Chairman
DAVID FRIDAY, President
W. L. CRUM, Vice-President
SHEPARD MORGAN, Treasurer
W. J. CARSON, Executive Director
MARTHA ANDERSON, Editor

Directors at Large

CHESTER I. BARNARD, *President,*
New Jersey Bell Telephone Company
HENRY S. DENNISON, *Dennison Manufacturing Company*
GEORGE M. HARRISON, *President,*
Brotherhood of Railway and Steamship Clerks
OSWALD W. KNAUTH, *President, Associated Dry Goods Corporation*
HARRY W. LAIDLER, *Executive Director,*
The League for Industrial Democracy
L. C. MARSHALL, *The American University*
GEORGE O. MAY, *Price, Waterhouse and Company*
SHEPARD MORGAN, *Vice-President, Chase National Bank*
GEORGE E. ROBERTS, *Economic Adviser, National City Bank*
BEARDSLEY RUMMLER, *Treasurer, R. H. Macy and Company*
GEORGE SOULE, *Director, The Labor Bureau, Inc.*
N. I. STONE, *Consulting Economist*

Directors by University Appointment

WILLIAM L. CRUM, <i>Harvard</i>	H. M. GROVES, <i>Wisconsin</i>
E. E. DAY, <i>Cornell</i>	WALTON H. HAMILTON, <i>Yale</i>
GUY STANTON FORD, <i>Minnesota</i>	HARRY ALVIN MILLIS, <i>Chicago</i>
F. P. GRAHAM, <i>North Carolina</i>	WESLEY C. MITCHELL, <i>Columbia</i>
A. H. WILLIAMS, <i>Pennsylvania</i>	

Directors Appointed by Other Organizations

FREDERICK M. FEIKER, *American Engineering Council*
DAVID FRIDAY, *American Economic Association*
LEE GALLOWAY, *American Management Association*
MALCOLM MUIR, *National Publishers Association*
WINFIELD W. RIEFLER, *American Statistical Association*
MATTHEW WOLL, *American Federation of Labor*

Research Staff

WESLEY C. MITCHELL, *Director*
ARTHUR F. BURNS FREDERICK R. MACAULAY
SOLOMON FABRICANT FREDERICK C. MILLS
MILTON FRIDMAN LEO WOLMAN
SIMON KUZNETS RALPH A. YOUNG
EUGEN ALTSCHUL, *Associate*

RELATION OF THE DIRECTORS
TO THE WORK 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 Bureau is carried on in strict conformity with this object.

2. To this end the Board of Directors shall appoint one or more Directors of Research.

3. The Director or Directors of Research shall submit to the members of the Board, or to its Executive Committee, for their formal adoption, all specific proposals concerning researches to be instituted.

4. No study shall be published until the Director or Directors of Research shall have submitted to the Board a summary report drawing attention to the character of the data and their utilization in the study, the nature and treatment of the problems involved, the main conclusions and such other information as in their opinion will serve to determine the suitability of the study for publication in accordance with the principles of the Bureau.

5. A copy of any manuscript proposed for publication shall also be submitted to each member of the Board. If publication is approved each member is entitled to have published also a memorandum of any dissent or reservation he may express, together with a brief statement of his reasons. The publication of a volume does not, however, imply that each member of the Board of Directors has read the manuscript and passed upon its validity in every detail.

6. The results of an inquiry shall not be published except with the approval of at least a majority of the entire Board and a two-thirds majority of all those members of the Board who shall have voted on the proposal within the time fixed for the receipt of votes on the publication proposed. The limit shall be forty-five days from the date of the submission of the synopsis and manuscript of the proposed publication unless the Board extends the limit, upon the request of any member the limit may be extended for not more than thirty days.

7. A copy of this resolution shall, unless otherwise determined by the Board, be printed in each copy of every Bureau publication.

(Resolution of October 25, 1926, revised February 6, 1933)

STUDIES IN

Income and Wealth

VOLUME THREE

BY THE CONFERENCE ON RESEARCH
IN NATIONAL INCOME AND WEALTH

NATIONAL BUREAU OF ECONOMIC RESEARCH

NEW YORK · 1939

Copyright, 1939, by National Bureau of Economic Research, Inc
1819 Broadway, New York, N Y All Rights Reserved

X: 31.73
GJ
12824

Printed and bound in the United States of America
by H. Wolff, New York

PREFACE

THIS third volume of the series, *Studies in Income and Wealth*, is in significant contrast to the preceding two. Every paper in this volume is concerned with problems centering about the division of a national total—of either wealth or income—into meaningful constituents. The first three papers—by C. L. Merwin, Jr., Charles Stewart, and Enid Baird and Selma Fine—deal with the division of the total among groups of income recipients or wealth holders classified by size of income or amount of wealth owned. The fourth, by R. W. Goldsmith, is an attempt to estimate the portion of total income that is saved rather than used to purchase goods currently consumed. Clark Warburton's paper is a review of the available allocations of income by the kinds of goods and services that make up the total income stream, and a plea for better measures in this field. R. R. Nathan considers the problems involved in allocating the total income of the nation among political units, the states, and P. H. Wueller, the usefulness of such an allocation for the purpose of measuring relative capacities of the states as a guide in distributing federal grants.

The papers in *Volumes One* and *Two*, on the other hand, were devoted primarily to problems centering about the meaning and measurement of total national wealth and income. None took as its specific and main problem the allocation of a total among its constituent elements, although all the papers reiterate the need for breakdowns of the totals and clearly recognize that the possibility of evaluating the components is largely responsible for the usefulness of the estimates of the totals. But even those papers and comments that deal almost exclusively with segments of the totals—for example, the series of papers on income de-

rived from government or the discussion of measuring inventory gains or losses—were concerned with these segments not primarily because they were important in their own right but rather because they presented baffling problems of estimation that needed to be solved to improve the adequacy of the totals.

This shift in emphasis is both understandable and desirable. The preceding volumes have by no means reconciled the divergent opinions concerning the constitution of national income, or of that as yet little quantified total, national wealth, and the probability that further discussion of these points in later volumes will be needed is fully recognized. But they have served the function of laying bare the nature of and reasons for the divergencies, of setting forth the border areas where disagreement is sharp, and of making explicit the assumptions concerning them. We can now formulate, as we could not so clearly before, three major questions about the constitution and measurement of national income on which there is a fundamental division of opinion: first, whether capital gains and losses should be included in the income total; second, whether the net value product of illegal enterprises should be included in the income total; third, how the services rendered by government should be valued.

Capital gains and losses reflect changes in the value of assets on hand at the beginning of the year that arise from unanticipated changes in their quantity or quality. Such alterations in the valuation of assets may result from price changes alone, or from actual physical changes in durable goods (for example, through fire losses) or from changes in our knowledge of them (for example, through discovery of mineral resources). Quantitatively, capital gains and losses due purely to price changes are much the most important aspect of the problem; consequently, this summary is restricted to gains and losses of this type. Divergent views as to whether they should be included in national income have probably been responsible for wider discrepancies between estimates of year-to-year variation in national income than have divergent views on any other class of items. Three positions as to the proper treatment of such capital gains and losses have been held. One position is that they should be excluded from income in both 'current' and 'constant' prices; a

second, that they should be included in income in current prices but should be eliminated when income is adjusted for price changes; and the third, that income in both current and constant prices should include capital gains and losses, in whole or in part.

The disagreement with respect to income in current prices hinges on a difference of opinion as to which concept is most useful. Those who favor the exclusion of capital gains and losses think that national income in current prices will be most useful if it is a measure of the value of a flow of commodities and services rather than a measure of the flow of monetary values. They would define national income in current prices as the current value of the goods and services consumed plus the current *value of the change* in the community's stock of capital and thus would exclude both realized and unrealized capital gains and losses arising from price changes. Some of those who hold the opposing view argue, on the other hand, that national income in current prices has primarily a monetary significance—that logically it should be defined as equal to the 'values' consumed by or accrued to the credit of the individuals constituting the community. This would mean that national income would be defined as equal to the value of the goods and services consumed plus the *change in the value* of the community's stock of capital and thus would include both realized and unrealized capital gains and losses. Others support the same position for somewhat different reasons. Although granting that capital gains and losses do not add to the total value of the flow of commodities and services during a period, they maintain that such gains and losses do affect the share of the total to which component groups in the community can lay claim, and hence should be included at least when problems dealing with the distribution of national income are considered.

The practical aspect of the question, namely, whether capital gains and losses can be objectively measured, though outstandingly important, does not contribute unambiguously to a solution. Some types of capital gains and losses, such as those arising in connection with real estate and investments, are to a considerable extent separable in the accounting data used for income estimates; their inclusion in national income means adding

items, the measurements of which may be inaccurate. However, other types of capital gains and losses, such as those arising in connection with inventories, are included in the raw data on which income estimates rest and can be eliminated only by subtracting estimates of them from a presumably more nearly accurate total.

The disagreement with respect to income in constant prices arises from divergent views as to the price changes for which correction should be made. One view is that 'income in constant prices' should be defined as equivalent to an index of the physical volume of commodities and services produced. This would require correction for changes in specific prices that would of necessity eliminate all capital gains and losses, at least in a closed economy. Deflation by a general price index is then merely an indirect method of approximating an index of physical volume, and any failure thereby to eliminate capital gains and losses is to be counted an error. The other view is that it is desirable to correct solely for changes in the 'general level of prices' or in 'purchasing power', but not for changes in specific prices. According to this view, deflation by a general price index yields, conceptually, the desired figure and not an approximation; failure thereby to eliminate all capital gains and losses is considered a correct and proper result. All parties to the controversy agree on the importance of measuring capital gains and losses; the division of opinion is on the advisability of including the resultant estimate in the national income total.

A second major issue in connection with the definition of total national income is whether to include the net value product of illegal enterprises. Those who would include activities such as bootlegging during the prohibition era urge as a principal reason for so doing that inclusion only of legal items would invalidate comparisons of income estimates for periods during which the legal status of any important type of activity has changed. They note also that illegal enterprises employ tangible national wealth and human labor as legal enterprises do and that the net-value-product formula is equally applicable to their accounts. Those who advocate the exclusion of the products of illegal enterprises have urged that the line between legal and illegal enterprises represents the judgment of the community as to which enter-

prises are economically productive and that if national income is to be defined in terms of an objective distinction between economically 'productive' enterprises and others, the legality basis is the most satisfactory one for making such a distinction. A second point made against the inclusion of illicit activity is the unreliability of the accounting data that pertain to it.

The valuation of the share of national income derived from government is a third issue on which there is fundamental disagreement. This issue can be conveniently considered in terms of the two main constituent items of the gross-value-product of government: (1) the value of services to ultimate consumers and to other enterprises and (2) the value of additions to the tangible assets of government. The treatment of the latter item is not in dispute; it is agreed that it should be valued in the same way as additions to the assets of non-government enterprises, namely, on the basis of cost, or outlays. Disagreement on the valuation of current services arises because these services are, in the main, not 'sold' on the market for a 'price' but are made available without specific payment. Yet they clearly contribute to national income.

It has been urged, on the one hand, that total tax receipts are the closest analogue to the revenue from sales of a business enterprise and that tax receipts should, therefore, be taken as representing the value of such services. On the other hand, those who object to this view would substitute an imputed value for government services. Whether tax receipts or an imputed valuation of government services is used to determine the gross-value-product of government, there is general agreement that to obtain the corresponding net value product it is necessary to subtract payments to non-government enterprises for products used in producing the current services.

Proponents of the 'tax receipts' basis argue that net income originating in the private sector of the economy is typically measured by receipts minus payments to other industries for goods currently consumed and that consistency requires that current government services be measured in similar fashion. They grant that even in dealing with the private sector of the economy there are items, other than additions to the assets of enterprises, that cannot be valued on the basis of actual receipts,

notably farm products consumed on farms and net rental value of houses occupied by their owners. These, however, may be valued at prices at which comparable items are actually sold; but this method is not considered practicable for most government services because closely comparable services are rarely sold on the market.

Proponents of an imputed valuation for government services frequently rely upon an estimate of the cost of or outlays upon such services to obtain an imputed value. They urge in favor of such a procedure as a substitute for tax receipts that tax receipts are a mere money flow, the year-to-year changes which have no necessary relation to year-to-year changes in the value of government services. They further urge that if year-to-year (or month-to-month) comparisons of government net-value-product are to be made, an imputed valuation is necessary if misleading results are to be avoided.

Whichever view is accepted, there remain five important questions regarding income derived from government that have caused a good deal of discussion. The first three have to do with the distributive shares into which the net-value-product of government can be divided. (1) Are such payments as those to relief-work employees properly distributive shares or are they really to be classed with direct-relief payments as redistributions of income? (2) What part, if any, of government-interest payments belongs to the primary distribution of income, and what part represents a redistribution of income? (3) What distributive share for government, if any, corresponds to additions to or withdrawals from surplus for corporations? (4) Is it feasible and necessary definitely to apportion the value of government services as between services to other enterprises and services to ultimate consumers? One view is that such a segregation of government services is not feasible without making violent assumptions that render the resulting estimates worthless; that in most government activities, services to individuals and to business are inextricably interwoven. Against this view stands an actual statistical attempt at such a segregation and the contention that any estimate of national income necessarily implies segregation. (5) Can the net-value-product of government be determined without knowledge of the incidence of taxes? Some have contended

that it is necessary to distinguish between those taxes which fall upon ultimate consumers and those taxes which come out of business profits or some other distributive share in order to estimate the net value product of government.

This summary of divergent opinions is obviously not intended to be exhaustive with respect to the considerations advanced on the three items discussed, the items on which there is disagreement, or the contents of the preceding volumes. Problems of measuring income in kind from owned consumer goods and property income derived from financial enterprises, two items of considerable quantitative importance, and the usefulness of the end products of statistical estimation have been discussed at some length by the contributors to the volumes. Similarly, the treatment and definition of such items as gifts, occupational expense, income from abroad, entrepreneurial withdrawals and 'business savings'—especially with respect to unincorporated enterprises; and the meaning and techniques of deflation have been the subject of discussion, controversy, and disagreement. Finally, there has been a divergence of opinion on the value of giving wealth inquiries a prominence more nearly equal to that given income inquiries. The most extended discussion of wealth measurement was incidentally an argument that income measurement is more worth while than wealth measurement. While on many of these points the degree of clarification achieved has been greater, on others it has been far less than on the three items just considered. The purpose here is not to present this discussion in detail but rather to delineate in broad strokes the major boundary disputes with which the preceding volumes have been largely, though by no means entirely, preoccupied.

These boundary disputes clarified, at least to the extent that the alternative boundaries are fairly clearly marked, the natural next step is a more detailed survey and study of the character of the area staked out. This study is clearly important in its own right; in addition, it is an essential step before further agreement on the exact boundaries can be expected. Differences of opinion largely center on the usefulness and feasibility of the several concepts, and such differences can be removed only by putting the concepts to a pragmatic test. Conversely, the clarification of the

nature of the boundary disputes is an exceedingly helpful preliminary for a careful exploration of the territory.

The seven papers in this volume proceed to a more detailed examination of the area staked out. They deal with three types of allocation of the national total: among groups classified by size of income or wealth, among the various components of saving and expenditures, and among states. Each type of allocation is considered separately. But their ultimate usefulness will depend very largely on the extent to which they can be interrelated. Thus it is clear from Dr. Wueller's paper and the discussion to which it gave rise that income estimates by states need to be supplemented by distributions of income by size. In the National Resources Committee estimates, one aspect of which is discussed by Miss Baird and Miss Fine, a first step has been made in this direction by the preparation of income distributions for broad geographic regions. The savings estimates presented by Dr. Goldsmith are admittedly exceedingly rough, but it is evident that as more refined estimates become possible it will be desirable to break down those components that admit of it not only by geographic units but also by income class. The allocation of income among various types of consumer's goods and capital formation, discussed by Dr. Warburton, relates partly to consumers' expenditures, and to that extent can and should be cross-classified with distribution of income by size among families in different areas; and partly to investment, and to that extent should be combined with a territorial breakdown.

The discussions in this volume of the three major types of allocation of income and wealth totals carry forward the work on what has been called the second phase in the investigation of national income. However, a wide field for this type of inquiry still remains. We need additional types of breakdowns, some of which we can now list, others of a kind that problems not yet in the forefront of discussion will doubtless require. Thus for many problems, state breakdowns of national income are insufficient, as suggested in the discussion of Dr. Wueller's paper, estimates by size of community within states seem clearly called for. Dr. Warburton's paper and Dr. Copeland's comment on it emphasize the need for estimates by types of commodities and services

more detailed and more adequate than any now available. Many other types of breakdowns could be noted, but those enumerated will perhaps suggest the range of the problem.

The exploration of the problems indicated raises many conceptual questions only briefly if at all touched on in the preceding volumes. The papers by Messrs. Merwin, Goldsmith, Nathan, and Wueller discuss some of these. Still others are suggested by the attempts to obtain distributions of income by size. It is not clear, for example, that definitions appropriate for estimates of national income are equally appropriate for individual income. The desirability of excluding transfers, such as gifts, from national income does not necessarily imply the desirability of excluding them from individual income in constructing distributions of income by size. The situation is similar with such items as capital gains and receipts from illegal activities.

It is thus to be expected that future papers will return to conceptual problems of the sort to which the earlier volumes were so largely devoted, but with the important difference that the treatment of the constituent parts will receive far greater consideration. To many, those especially who hold an unequivocal and dogmatic view of the essential economic concepts and relations, the conceptual phases of our discussion, with the manifest divergence of opinions, may appear superfluous and confusing. To others, the empirical phases of our studies may seem additions of uncertain importance to the conceptual discussion that can formulate the issues so much more sharply and clearly than they can be measured in quantitative terms. To us, both phases seem indispensable in the development of the study of national income and wealth to a level where it will yield efficient tools for economic analysis and social planning.

With one exception, the papers in this volume were submitted to and discussed at the fourth meeting of the Conference on Research in National Income and Wealth held in April 1939 at New York City. The report by Miss Baird and Miss Fine was submitted later but was circulated for comment among the participants in the Conference prior to publication. The editing of

the volume, by Milton Friedman, was reviewed by the other two members of the editorial committee, W. W. Hewett and O. C. Stine.

Executive Committee

M A COPELAND	HAROLD GROVES
W. L CRUM	R R NATHAN
HILDEGARDE KNEELAND	O C STINE
SIMON KUZNETS, <i>Chairman</i>	
MILTON FRIEDMAN, <i>Secretary</i>	

CONTENTS

Part One

AMERICAN STUDIES OF THE DISTRIBUTION OF WEALTH AND INCOME BY SIZE

C. L. MERWIN, JR.

I American Studies of the Distribution of Wealth	4
1 Historical and methodological review	4
2 Purpose of the studies	21
3 Statistical adequacy of the studies	24
4 Recapitulation of wealth distribution studies	29
II American Studies of the Distribution of Income	30
1 History and methods	30
2 Purposes of studies	54
3 Statistical evaluation	60
4 Recapitulation of income distribution studies	72
III Conclusion	73
Bibliography	77
Discussion	
I Simon Kuznets	85

Part Two

INCOME CAPITALIZATION AS A METHOD OF ESTIMATING THE DISTRIBUTION OF WEALTH BY SIZE GROUPS

CHARLES STEWART

I The Alternative Methods	99
1 The estate-multiplier method	99
2 Distribution of probated estates	101
3 Direct census of wealth	101

II Refinement of the Income-Capitalization Method	102
1 Contributions of Ingalls and King	102
2 Typical problems of the capitalization approach	103
3 Distribution of income-yielding property	104
4 Lehmann's correlation of dividend income and net estates	107
III Annual Estimates of the Distribution of Wealth in the United States, for the Higher Brackets, 1922-1936	108
1 Description of the method	108
2 Some difficulties of the method	110
3 Estimates of wealth, 1922-1936	112
4 Comparison of the estimates	121
IV A Concluding Statement	127
Discussion	
I Milton Friedman	129
1 Difficulties inherent in the method	131
2 Inclusion of 'capital gains' in income reported on income tax returns	139
3 Conclusions	140
II W. L. Crum	141
III Fritz Lehmann	142
IV Charles Stewart	144

Part Three

THE USE OF INCOME TAX DATA IN THE NATIONAL RESOURCES COMMITTEE ESTIMATE OF THE DISTRIBUTION OF INCOME BY SIZE

ENID BAIRD AND SELMA FINE

I Statement of the Problem	149
II Purpose of this Paper	150
III Essential Differences between Consumer Purchases Data and Income Tax Data	151
1 The year covered	152
2 The definition of net income	153
3 The reporting units for which data were compiled	158
IV Available Tabulations of the Income Tax Data	161

CONTENTS

xix

V Steps Involved in Combining and Adjusting the Income Tax Data	163
1 Sequence of various adjustments	163
2 Combining returns for family units	165
3 Dividing community property returns	165
4 Pairing incomes of husbands and wives making separate returns	167
5 Adjusting for capital gains, various types of deduction, and tax-exempt interest	173
6 Adjusting to 1935-36 basis	180
7 Adjusting for nonreporting and understatement of incomes	183
8 Adding income of supplementary earners	187
9 Adding imputed value of non-money income	189
VI Correction of Preliminary Income Distribution based on Consumer Purchases Data	190
VII Summary of Results of Various Adjustments	192
1 Changes in aggregate income	192
2 Changes in frequency distribution	197
3 Suggestions for improved results	197
Discussion	
I A. J. Goldenthal	204
1 Combining returns of husbands and wives	204
2 Adjustments for differences in income concepts	209
3 Nonreporting and understatement of incomes	212

Part Four

THE VOLUME AND COMPONENTS OF SAVING IN THE UNITED STATES 1933-1937

R. W. GOLDSMITH
WITH THE ASSISTANCE OF
WALTER SALANT

I Definitions	220
II Four Methods of Measuring Saving	220
1 Balance sheet and income account methods	221
2 Sample and overall methods	222
3 Comparability of methods	223

4	Methods used in this study	224
5	Previous attempts to measure saving	224
III	Some Special Problems of Measurement	225
1	Standard of measurement	225
2	Revaluation items	226
3	Depreciation	229
4	Demarcation of current expenses	230
5	Treatment of international transactions	231
6	Duplications	232
IV	The Components of the Saving Estimates	232
1	Component series	232
2	Sources and character data	233
3	Deficiencies of material	234
V	The Total Volume and Components of Saving, 1933-1937	236
1	Total net saving	236
2	Components of net saving, 1933-37	238
3	Gross saving	240
VI	Comparison with other Estimates of Saving and Investment	241
1	Net saving	241
2	Gross saving	243
	Appendix Statistical Sources and Methods	244
I	Change in Currency and Deposits in Banks and Postal Savings System held by Individuals	244
II	Individuals' Equity in Building and Loan Associations	249
III	Individuals' Equity in Insurance and Pension Reserves	251
1	Legal reserve life insurance companies	253
2	Fraternal orders	254
3	U. S. Government life insurance fund	254
4	Social Security funds and accounts	255
5	Other treasury funds	255
6	Adjusted service certificate fund	255
7	State and municipal trust funds	255
IV	Change in Individuals' Equity in Security Holdings	256
1	Computation of net change in securities outstanding	258
2	Cash sales of new domestic corporate and foreign securities	260
3	Cash retirements of domestic corporate and of foreign securities	262
4	Computation of change in holdings of domestic non-individuals	265

CONTENTS

xxi

5 Computation of change in domestic individuals' borrowings on securities	271
V Change in Individuals' Equity in Nonfarm Dwellings	273
1 Computation of net construction of one to four family nonfarm dwellings	274
VI Change in Individuals' Equity in Automobiles	277
VII Change in Individuals' Equity in Durable Consumers' Goods other than Houses and Automobiles	278
VIII Business Saving of Farmers	279
IX Corporate Saving	284
X Saving of State and Local Governments	285
XI Saving of the Federal Government	290
Discussion	
I Gerhard Colm	294
II M. A. Copeland	295
III E. L. Dulles	300
IV A. G. Hart	301
V Walter Salant	305
1 The distinction between investment and consumption expenditure	305
2 The data relevant to the analysis of income	309
VI R. W. Goldsmith and Walter Salant	311

Part Five

THREE ESTIMATES OF THE VALUE OF THE NATION'S OUTPUT OF COMMODITIES AND SERVICES A COMPARISON

CLARK WARBURTON

I Scope, Objectives, Categories, and Time Coverage	320
1 Scope and objectives of the three investigations	320
2 Categories	321
3 Time coverage	323
4 Category adjustments necessary for comparison	323
5 Scope and focus of comparisons made in this paper	323
II Comparisons of the Three Sets of Estimates	324
1 Totals for consumers' outlay and for gross and net capital formation	325

2 Consumers' outlay for perishable commodities, semi-durable and durable commodities, and services	327
3 Consumers' outlay for various types of commodities and services	329
4 Gross and net capital formation	331
III Conclusion	337
Discussion	
I A. G. Hart	381
II Simon Kuznets	381
1 Comparison of national income estimates	382
2 Comparison of estimates of services not embodied in new commodities	386
3 Comparison of other components	388
4 General observations	389
III M. A. Copeland	390
IV Clark Warburton	391

Part Six

SOME PROBLEMS INVOLVED IN
ALLOCATING INCOMES BY STATES

R. R. NATHAN

I Purposes of State Income Estimates	402
1 Market analysis	402
2 Economic welfare	405
3 Taxation	406
4 Productivity	407
II Concepts of Income	408
III Allocation of Net Value of Product	409
IV Methods of Measurement	414
1 Wages and salaries	414
2 Entrepreneurial income	416
3 Dividends and interest	418
4 Other items	422
V Inclusions and Exclusions	425
VI Interpretation of State Income Estimates	427
Discussion	
I Simon Kuznets	430

Part Seven

INCOME AND THE MEASUREMENT OF
THE RELATIVE CAPACITIES OF THE STATES

P. H. WUELLER

Text	437
Discussion	
I Gerhard Colm	450
II E. L. Dulles	453
III H. M. Groves	454
IV Gordon Keith	455
V J. L. Martin	456
VI Hans Neisser	461
VII Milton Friedman	463
VIII P. H. Wueller	467
Indexes	471

AUTHOR INDEX

- Ascoli, Max, 20, 78, 107
- Bader, Louis, 42, 80
- Baird, Enid, 67
- Bernstein, Blanche, 149
- Berridge, W. A., 78, 84
- Bitterman, H. J., 439
- Black, J. D., 80
- Blough, J. R., 227, 440
- Bowley, A. L., 61, 63, 80
- Burns, A. F., 47, 64, 65, 80
- Burr, S. S., 81, 234
- Bye, R. T., 97
- Campion, Harry, 98, 100
- Carver, T. N., 80
- Chawner, L. J., 54, 83
- Chism, L. L., 440
- Clark, H. F., 78
- Collins, J. A., 83
- Colm, Gerhard, 97, 108, 111, 126, 127, 233, 300, 304, 311, 313, 463, 464, 467
- Cone, F. M., 180
- Copeland, M. A., 45, 78, 97, 222, 226, 227, 313, 397
- Corey, Lewis, 103, 104, 107, 125; *see also* Subject Index
- Crum, W. L., 14, 20, 45, 48, 78, 80, 100, 146, 242
- Currle, Laughlin, 303, 311
- Daniels, G. W., 100
- Davie, M. R., 78
- Dickinson, F. G., 225, 228
- Doane, R. R., 18-20, 23-4, 27-8, 30, 78, 80, 103, 107, 121, 126; *see also* Subject Index
- Dulles, E. L., 233, 311, 313, 463, 464, 469
- Eakin, Franzy, 225, 228
- Ebersole, J. F., 81, 234
- Emery, A. T., 38
- Epstein, R. C., 81
- Ezekiel, Mordecai, 225, 241
- Fabricant, Solomon, 219, 228, 279, 281, 289, 333, 380
- Ferris, A. J., 33, 34, 78, *see also* Subject Index
- Fine, Selma, 67
- Fisher, Irving, 75, 297
- Flynn, R. A., 78, 84
- Friedman, Milton, 20, 66, 136, 141, 144, 145, 146, 227, 467, 468, 469
- Galer, R. S., 12
- Garey, L. F., 81
- Gebhart, J. C., 353
- Gilboy, E. W., 242
- Groves, H. M., 227, 463, 464, 466, 467, 468
- Haberler, Gottfried, 219, 296
- Hale, R. L., 81
- Hanes, J. W., 184
- Hart, A. G., 235, 240, 251, 313-5, 396
- Helferrich, Karl, 102
- Henderson, Yandell, 78
- Hewett, W. W., 227
- Hill, J. A., 49, 81
- Hinckley, R. J., 439
- Holmes, G. K., 3, 5-6, 11, 21-2, 24, 29, 48, 81, 83; *see also* Subject Index

- Horton, D. C., 282
 Hoyt, E. E., 39
- Ingalls, W. R., 12, 14, 78, 102, 103, 107
- Jackson, R. H., 18, 19, 28, 81
 Jewkes, J., 98
 Johnson, N. O., 45, 48, 81
- Karsten, K. G., 81
 Keith, Gordon, 463, 464, 467, 468
 Keller, E. A., 78
 Key, V. O., 439
 Keynes, J. M., 296
 Kinder, F. S., 81
 King, W. I., 10-7, 20, 22-3, 25, 26-7, 29-30, 31, 35-7, 38-45, 48, 54, 56, 57, 62, 63-4, 73, 76, 78, 79, 81, 82, 83, 101, 103, 104, 107, 108, 112, 125, 127, 145, 146, 183, *see also* Subject Index
 Knauth, O. W., 37, 38, 56, 63, 79, 183
 Kneeland, Hildegarde, 51, 54, 67, 149
 Knibbs, G. H., 101, 132
 Krost, Martin, 303, 311
 Kuznets, Simon, 4, 75, 79, 97, 121, 136, 219, 227, 242, 243-4, 281, 304, 319-41, 365-70, 378-80, 381, 390-7, 444, *see also* Subject Index
 Kyrk, Hazel, 39
- Lederer, Walter, 225
 Lehmann, Fritz, 20-1, 78, 99, 103, 107, 108, 111, 126, 127, 129-31, 137, 304; *see also* Subject Index
 Leontief, W. W., 225
 Leroy-Beaulieu, Paul, 61
 Leven, Maurice, 39, 42, 43-4, 45-7, 57-8, 63, 64-6, 73, 79, 84, 183, 185, 224, 319, 353; *see also* Subject Index
 Lord, J. S., 3, 83
 Lorenz, M. O., 11, 20, 79, 82, 101, 133
 Lough, W. H., 225, 319-41, 361-4, 389, 395; *see also* Subject Index
- Macaulay, F. R., 37-8, 42, 45, 56, 63, 66, 73, 76, 79, 183, 185, *see also* Subject Index
 Makower, H., 226
 Marget, A. W., 227
 Marschak, Jacob, 225, 226
 Martin, E. M., 97, 226
- Martin, J. L., 401, 450, 463, 464, 467, 469
 May, G. O., 227, 289
 Mayo-Smith, Richmond, 79
 Means, G. C., 80
 Merwin, C. L., Jr., 101, 103, 161, 165, 169, 185
 Mitchell, W. C., 37, 38, 56, 63, 79, 183
 Moulton, H. G., 39, 45, 57, 65, 79, 84, 183, 224, 319
- Nathan, R. R., 180, 401, 442, 445
 Nearing, Scott, 79
 Newcomer, Mabel, 79, 205, 440
 Nystrom, P. H., 39
- Olcott, M. T., 84
- Palmer, E. Z., 82
 Perrot, G. St. J., 82
 Persons, W. M., 82
 Peterson, G. M., 81, 234
 Powers, LeGrand, 82
- Reed, L. S., 42, 43, 57, 64, 79
 Roberts, G. E., 81
 Robertson, D. H., 296
 Roosevelt, F. D., 59
- Seligman, E. R. A., 447
 Shoup, Carl, 381
 Simons, H. C., 227, 443
 Spahr, C. B., 6-9, 21-2, 24-5, 26, 29, 31-3, 54, 60-1, 73, 79, 101, *see also* Subject Index
 Staehle, Hans, 48, 82
 Steiner, J. F., 354
 Stewart, Charles, 20, *see also* Subject Index
 Streightoff, F. H., 34-5, 37, 55, 61, 73, 79, 84, *see also* Subject Index
 Sydenstricker, Edgar, 37, 82, 83
- Taylor, A. E., 355
 Terborgh, George, 219, 242, 243-4, 278, 279, *see also* Subject Index
 Tresckow, W., 17, 30, 82
 Trumbower, H. M., 36, 79
 Tucker, R. S., 47-50, 58-9, 66, 82, *see also* Subject Index
- Vose, Reuben, 79

AUTHOR INDEX

473

- Waite, W. C., 39
- Warburton, Clark, 39, 45, 57, 65, 79, 84,
183, 209, 219, 224, 225, 227, 241, 296,
319-96; *see also* Subject Index
- Watkins, G. P., 6, 62, 82, 84
- Wedgwood, Josiah, 100, 102
- Wendzel, J. T., 437
- White, Edward, 50, 83
- Whitney, S. N., 18, 83
- Wickens, D. L., 54, 84, 383
- Willoughby, W. F., 353, 372
- Winslow, E. A., 78, 84
- Wright, C. D., 11, 101
- Wueller, P. H., 437, 444, 468
- Yaple, Maxine, 105, 106, 107, 108, 110,
125, 126, *see also* Subject Index
- Yntema, D. B., 79, 83, 84
- Young, A. A., 26, 62, 83

SUBJECT INDEX

(see also Table of Contents)

- Automobiles
 - depreciation, 277, 278
 - individuals' equity, 277-8
 - instalment debt, 277, 278
- Balance sheet method of measuring saving, 221-2, 223, 225, 295-6, 299-300
- Banks
 - currency in, 244-9
 - deposits in, 244-9, 302-3, 313-5
 - deposits in closed banks, 248, 249, 303, 315
- Bibliography, income and wealth distributions, 77-84
- Brookings Institution's distribution of income by size, 45-7, 57-8, 64-6, 70-3
- Building and loan associations, individuals' equity in, 249-51
- Business saving, *see* Saving, business
- Capacities of states, relative, 435-70
 - affected by impact of federal taxes on income, 443-5
 - concept of income used in measuring, 443
 - measured
 - by income, 446, 448, 450, 452, 454, 455-6
 - through use of model tax systems, 440-1, 450-1, 455-6
- Capacity
 - general, defined, 446
 - regional concept of income in measuring, 461-3
 - see also* Economic and Fiscal capacity
- Capacity index
 - adjustments to income necessary in constructing, 446-7, 460-1, 465-6
 - based on per capita income, 446
 - basis for variable ratio matching grants, 447
- Capital formation, gross and net total, 325-6
 - by type, 334-7, 378-80
- Capital gains, adjustment of income tax data for, 173-80, 209-12
- Capital goods, value of production, 371-7
- Census method of estimating distribution of wealth, 101-2
- Commodities, consumers' outlay for estimates by
 - Kuznets, 325-31, 332, 341, 365-70
 - Lough, 325-31, 332, 341, 361-4
 - Warburton, 325-31, 332, 341-60
- perishable, 327, 341
- semidurable and durable, 327, 341
- total, 341
- transportation, 332
- by type, 329-31
- Community property returns, 165-7
- Constant ratio matching grants, 438, 440
- Consumers' outlay, total, 325-6, 339-40, 341
- Consumption expenditure differentiated from investment, 305-9
- Corey's method of estimating distribution of wealth, *see* Wealth, distribution by size
- Corporate savings, allocation by states, 422-3

SUBJECT INDEX

475

Currency

- in banks, 244-9
- in Postal Savings System, 244-9

Debt, instalment

- automobiles, 277, 278
- household goods, 279

Debt, short term, 303-4, 315

- Deductions, adjustment of income tax data for, 173-80, 195

Deposits

- in banks, 244-9, 302-3, 313-5
- in closed banks, 248, 249, 303, 315
- in Postal Savings System, 244-9

Depreciation

- automobiles, 277, 278
- government property, 289-90
- household goods, 278, 279
- nonfarm dwellings, 275, 276

Dividends, allocation by states, 418-22

- Doane's distribution of wealth by size, 18-20, 23-4, 27-8, 30, 121-6

Dwellings, nonfarm

- depreciation, 275, 276
- individuals' equity, 273-7
- institutional holdings, 276
- mortgages, 277
- net construction, 274-7

Economic capacity

- contrasted to fiscal, 463-5, 467-8
- defined, 464

Entrepreneurial income, allocation by states, 416-8

Equalization grants, 439

- Estate-multiplier method of estimating distribution of wealth, 99-101

Family units, distribution of income for, 198-201

Farm real estate held by institutions, 283, 284

Farmers' saving, 279-84

Federal grants to states, 435-70

Ferris' distribution of income by size, 34

Fiscal capacity

- contrasted to economic, 463-5, 467-8
- defined, 440
- measured by model tax system, 440-1, 450-1, 455-6

Government saving, *see* Saving, government

Grants

- constant ratio matching, 438, 440
- equalization, 439
- to equalize income, 466-7, 469-70
- federal, percentage of state revenues, 437
- non-matching, 438
- as 'pump primer', 453
- to states, federal, 435-70
- variable ratio block, 447
- variable ratio matching, 438, 440
- based on capacity index, 447-9
- based on model tax system, 454-5
- used in state-local subventions, 438-40

Holmes' distribution of wealth by size, 5-6, 21-2, 24, 29

Household goods

- depreciation, 278, 279
- individuals' equity, 278-9
- instalment debt, 279

Imputed value of non-money income, adjustment of income tax data for, 189-90, 195-6

Income

- definitions by National Resources Committee and income tax compared, 153-8
- impact of federal taxes on, 443-5
- as measure of relative state capacity, 446, 448, 450, 452, 454, 455-6
- national
 - defined, 408
 - estimates compared, 382-6, 391-7
- paid out
 - defined, 408, 442
 - use in measuring relative state capacity, 443
- payments to individuals, defined, 409
- per capita
 - basis for capacity index, 446
 - limitations of estimates, 429
 - measure of relative state capacity, 446, 448, 452, 455-6
 - priority of claims against, 458-60

- Income—Cont*
 produced
 defined, 408, 442
 difficulty of allocation among states, 442-3
 regional concept in measuring capacity, 461-3
 relation to taxation, 458
 saving in analysis of, 309-11
Income account method of measuring saving, 221-2, 223, 295-6
Income, allocation by states, 399-434
 concepts of income underlying use, 402-8
 corporate savings, 422-3
 dividends and interest, 418-22
 entrepreneurial income, 416-8
 gifts, inheritances, and insurance benefits, 424
 limitations, 427-9
 net value of product, 409-14
 relief payments, 423-4
 rents, 422
 sources of income included in various concepts, 425-7
 uses, 402-8, 431-4
 wages and salaries, 414-6
Income-capitalization method of estimating distribution of wealth, *see* *Wealth, distribution by size*
Income, distribution by size, 30-77, 85-93
 basis for estimates by
 Brookings Institution, 45-7
 King, 35-7, 38-42
 Leven, 42-5
 Macaulay, 37-8
 National Resources Committee, 50-4
 Spahr, 31-3
 Streightoff, 34-5
 Tucker, 47-50
 as basis for government activities, 92-3
 bibliography, 77-84
 estimates by
 Ferris, 34
 Spahr, 33
 family units, 198-201
 income tax data used in constructing, *see* *Income tax data*
- Income distribution—Cont*
 problems in constructing, 76-7
 purpose of estimates by
 Brookings Institution, 57-8
 King, 54-6
 Leven, 57
 Macaulay, 56
 National Resources Committee, 59
 Spahr, 54-5
 Streightoff, 55
 Tucker, 58-9
 reasons for lack of data, 74-6, 85-91
 statistical evaluation of estimates by
 Brookings Institution, 64-6
 King, 62, 63-4
 Macaulay, 63
 National Resources Committee, 67-70
 Spahr, 60-1
 Streightoff, 61-2
 Tucker, 66-7
 summary of studies, 70-3
Income of supplementary earners, adjustment of income tax data for, 187-9, 195
Income tax data, use of in constructing distribution of income by size, 147-214
 adjustment for
 capital gains, 173-80, 209-12
 deductions, 173-80, 195
 imputed value of non-money income, 189-90, 195-6
 income of supplementary earners, 187-9, 195
 nonreporting, 183-5, 196, 212-3
 tax-exempt interest, 173-80, 195
 understatement, 183-4, 185-7, 195, 212-3
 changes in aggregate income resulting from adjustments, 192-7
 community property returns allocated, 165-7
 conversion from calendar year to fiscal year base, 180-3
 for family units, 198-201
 order of adjustments, 163-5
 reporting units covered, 158-61
 returns for family units combined, 165

SUBJECT INDEX

477

- Income tax data—*Cont.*:
 - returns of husbands and wives re-
porting separately combined,
167-73, 204-9
- Individual saving, *see* Saving, indi-
vidual
- Insurance and pension reserves, indi-
viduals' equity in, 251-5
- Interest, allocation by states, 418-22
- Investment
 - differentiated from consumption ex-
penditure, 305-9
 - gross
 - Kuznets, 244
 - Terborgh, 244
 - net
 - Kuznets, 242-3
 - Terborgh, 242
 - in relation to saving, 219-20, 296-9,
305-11
- King's distribution of
 - income by size, 35-7, 38-42, 54-6, 62,
63-4, 73
 - wealth by size, 10-7, 22-3, 26-7, 29-30,
121-6
- Kuznets' estimates of
 - capital formation, 339-40, 378-80
 - consumers' outlay, 325-34, 339-41,
365-70
 - gross investment, 244
 - national product, 339-40
 - net investment, 242-3
- Lehmann method of estimating dis-
tribution of wealth, *see* Wealth,
distribution by size
- Leven's distribution of income by size,
42-5, 57, 64-6, 73
- Loans to farmers
 - mortgages, 281-2
 - short term, 283
- Lough's estimates of consumers' outlay,
325-34, 339-41, 361-4
- Macaulay's distribution of income by
size, 37-8, 56, 63, 73
- Model tax system
 - basis for variable ratio matching
grants, 454-5
- Model tax system—*Cont.*:
 - compared with existing systems,
457-9, 468-9
 - criticized, 441
 - priority of claims against income un-
der, 456-7
 - use in measuring fiscal capacity,
440-1, 450-1, 455-6
- National product and its components,
317-97
 - concepts underlying estimates, 320-4
 - estimates, 339-40
 - estimates compared, 381-90, 391-7
- National Resources Committee's dis-
tribution of income by size, 50-4
59, 67-70, 70-3
 - use of income tax data, 147-214
- Nonfarm dwellings, *see* Dwellings, non-
farm
- Non-matching grants, 438
- Nonreporting, adjustment of income
tax data for, 183-5, 196, 212-3
- Population, general need proportional
to, 445-6, 451-2
- Postal Savings System, currency and de-
posits in, 244-9
- Private economy compared with public,
441, 457
- Probated estates method of estimating
distribution of wealth, 101
- Relief payments, allocation by states,
423-4
- Rents, allocation by states, 422
- Residual method of estimating services,
see Services not embodied in new
commodities
- Saving, 215-315
 - in analysis of income, 309-11
 - components of estimates, 232-4
 - cyclical variability, 304
 - deficiencies of material used in esti-
mating, 234-6
 - depreciation allowances, 229-30
 - uplications in estimates, 232
 - estimates' sources and methods, 244-
293

Saving—Cont.

gross

defined, 220

estimates compared, 243-4

volume, 240-1

inclusion of durable consumers'

goods, 230

international transactions, 231-2

method of estimation used, 224

methods of measuring

balance sheet, 221-2, 223, 225,

295-6, 299-300

income account, 221-2, 223, 295-6

overall, 222-3

sample, 222-3, 224-5

net

components, 238-40

defined, 220

estimates compared, 241-3

volume, 236, 237

relation to investment, 219-20, 296-9,

305-11

revaluation items, 226-8

sources and character of data, 233-4

standard of measurement, 225-6

Saving, business

components, 233

corporate, 284-5

estimates: sources and methods,

279-85

of farmers, 279-84

volume, 237

Saving, government

components, 233

estimates: sources and methods, 285-

93

federal, 290-3

state and local, 285-90, 302, 313

volume, 237

Saving, individual

components, 232-3

direct and indirect, 239

estimates: sources and methods, 244-

79

inclusion of Social Security funds,

233, 294-5, 300-1, 311-3

nature of, 304

structure of indirect, 240

volume, 237

Securities

borrowings on, 258, 271-3

corporate and foreign, cash retirements, 262-5

holdings of domestic non-individuals,

258, 265-71, 303

foreign holdings, 257-8, 265

individuals' equity in, 256-73

new domestic and foreign, cash sales,

260-2

outstanding, 257, 258-60

Separate returns of husbands and wives

combined into family units, 163-

73, 204-9

Services not embodied in new commod-

ities, consumers' outlay for

estimates by

Kuznets, 328-9, 331-2, 333, 341

Lough, 328-9, 331-4, 341, 361-4

Warburton, 328-9, 331-4, 341, 342-

60

residual method of estimating, 331-4,

337-8, 387-8, 389-90, 395

total, 328-9, 341

by type, 331-4

Social Security funds, inclusion in indi-

vidual saving, 233, 294-5, 300-1,

311-3

Spahr's distribution of

income by size, 31-3, 54-5, 60-1, 73

wealth by size, 6-9, 21-2, 24-5, 29

States, income, *see* Income, allocation

by states

Stewart's distribution of wealth by size,

108-12, 113-20, 121-6, 129-30,

139-41, 142-6

Streightoff's distribution of income by

size, 34-5, 55, 61-2, 73

Taxation, relation to income, 458

Taxes, federal, impact on income, 443-5

Tax-exempt interest, adjustment of in-

come tax data for, 173-80, 195

Terborgh's estimates of investment

gross, 244

net, 242

Tucker's distribution of income by size

47-50, 58-9, 66-7, 73

SUBJECT INDEX

479

- Understatement, adjustment of income
tax data for, 183-4, 185-7, 195,
212-3
- Variable ratio block grants, 447
- Variable ratio matching grants, 438-40,
447-9, 454-5
- Wages and salaries, allocation by states,
414-6
- Warburton's estimates of
capital formation, 325-6, 334-7, 339-
40, 378-80
consumers' outlay, 325-34, 339-60
national product, 339-40
output of capital goods, 371-7
- Wealth, distribution by size, 4-29, 85-
93, 95-146
basis for estimates by
Doane, 18-20
Holmes, 5-6
King, 10-7
Spahr, 6-9
Stewart, 108-12, 129-30
as basis for government activities,
73-4, 98-9
bibliography, 77-84
estimates by
Holmes, 6
Spahr, 7, 8, 9
Stewart, 113-20
Yaple, 106
income-capitalization method
Corey, 103
- Wealth distribution—*Cont*
income capitalization method—
Cont
Lehmann, 20-1, 107-8, 110-2, 128,
130-9
problems in the use of, 103-4,
127-8
Yaple, 105-6
- Lehmann method
description, 20-1, 107-8
inherent difficulties discussed, 21,
110-2, 128, 130-5, tested, 135-9
methods of estimating
direct census, 101-2
distribution of probated estates, 101
estate-multiplier, 99-101
income-capitalization, 20-1, 103-8,
110-2, 127-8, 130-9
purpose of estimates by
Doane, 23-4
Holmes, 21-2
King, 22-3
Spahr, 21-2
Stewart, 129, 144-6
reasons for lack of data, 74-6, 85-91
statistical evaluation of estimates by
Doane, 27-8
Holmes, 24
King, 26-7
Spahr, 24-5
Stewart, 139-41, 142-4, 146
summary of estimates, 121-6
summary of studies, 29-30
- Yaple's distribution of wealth by size,
105-6, 121-6

PUBLICATIONS OF THE NATIONAL BUREAU OF ECONOMIC RESEARCH

- 1 INCOME IN THE UNITED STATES, W. C. MITCHELL, W. I. KING
F. R. MACAULAY AND O. W. KNAUTH, • Volume I (1921) Summary 152 pp
- 2 Volume II (1922) Details 440 pp. \$5.15
- 3 DISTRIBUTION OF INCOME BY STATES IN 1919 (1922)
O. W. KNAUTH 30 pp., \$1.30
- *4 BUSINESS CYCLES AND UNEMPLOYMENT (1923)
By the NATIONAL BUREAU STAFF and sixteen COLLABORATORS 405 pp
- *5 EMPLOYMENT, HOURS AND EARNINGS, UNITED STATES, 1920-
22 (1923) W. I. KING 147 pp
- 6 THE GROWTH OF AMERICAN TRADE UNIONS, 1880-1923 (1924)
LEO WOLMAN 170 pp., \$2.50
- 7 INCOME IN THE VARIOUS STATES ITS SOURCES AND DIS-
TRIBUTION, 1919, 1920 AND 1921 (1925) 306 pp., \$3.50
MAURICE LEVEN
- 8 BUSINESS ANNALS (1926) 380 pp., \$2.50
By W. L. THORP, with an introductory chapter, Business Cycles as
Revealed by Business Annals, by W. C. MITCHELL
- 9 MIGRATION AND BUSINESS CYCLES (1926) 256 pp., \$2.50
HARRY J. GROME
- 10 BUSINESS CYCLE THE PROBLEM AND ITS SETTING (1927)
WESLEY C. MITCHELL 489 pp., \$5.00
- *11 THE BEHAVIOR OF PRICES (1927) F. C. MILLS 598 pp
- 12 TRENDS IN PHILANTHROPY (1928) W. I. KING 78 pp., \$1.00
- 13 RECENT ECONOMIC CHANGES (1929) 2 vol., 950 pp., \$7.50
By the NATIONAL BUREAU STAFF and fifteen COLLABORATORS
- 14 INTERNATIONAL MIGRATIONS
Volume I, Statistics (1929), compiled by IMRF FERENCZI of the Inter-
national Labour Office, and edited by W. F. WILLCOX 1,112 pp., \$7.00
- 18 Volume II, Interpretations (1931), ed. by W. F. WILLCOX 715 pp., \$5.00
- *15 THE NATIONAL INCOME AND ITS PURCHASING POWER (1930)
W. I. KING 394 pp
- 16 CORPORATION CONTRIBUTIONS TO ORGANIZED COMMU-
NITY WELFARE SERVICES (1930) 347 pp., \$2.00
PIERCE WILLIAMS and F. E. CROXTON
- 17 PLANNING AND CONTROL OF PUBLIC WORKS (1930)
LEO WOLMAN 260 pp., \$2.50
- *19 THE SMOOTHING OF TIME SERIES (1931) 172 pp
FREDERICK R. MACAULAY
- 20 THE PURCHASE OF MEDICAL CARE THROUGH FIXED
PERIODIC PAYMENT (1932) PIERCE WILLIAMS 308 pp., \$3.00
- *21 ECONOMIC TENDENCIES IN THE UNITED STATES (1932)
FREDERICK C. MILLS 639 pp
- 22 SEASONAL VARIATIONS IN INDUSTRY AND TRADE (1933)
SIMON KUZNETS 455 pp., \$4.00
- 23 PRODUCTION TRENDS IN THE UNITED STATES SINCE 1870
(1934) A. F. BURNS 363 pp., \$3.50
- 24 STRATEGIC FACTORS IN BUSINESS CYCLES (1934) 238 pp., \$1.50
J. MAURICE CLARK

- 25 GERMAN BUSINESS CYCLES, 1924-1933 (1931) 288 pp, \$2 50
C T SCHMIDT
- 26 INDUSTRIAL PROFITS IN THE UNITED STATES (1934)
R C EPSTEIN 678 pp, \$5 00
- 27 MECHANIZATION IN INDUSTRY (1934) 484 pp, \$3 50
HARRY JEROME
- 28 CORPORATE PROFITS AS SHOWN BY AUDIT REPORTS (1935)
W. A PATON 151 pp, \$1 25
- 29 PUBLIC WORKS IN PROSPERITY AND DEPRESSION (1935)
A D GAYER 460 pp, \$3 00
- 30 EBB AND FLOW IN TRADE UNIONISM (1936) 251 pp, \$2 50
LEO WOLMAN
- 31 PRICES IN RECESSION AND RECOVERY (1936) 561 pp, \$4 00
F C MILLS
- 32 NATIONAL INCOME AND CAPITAL FORMATION, 1919-1935
(1937) SIMON KUZNETS 100 pp, 8¼ x 11¼, \$1 50
- 33 SOME THEORETICAL PROBLEMS SUGGESTED BY THE MOVE-
MENTS OF INTEREST RATES, BOND YIELDS AND STOCK
PRICES IN THE UNITED STATES SINCE 1856 (1938)
F R MACAULAY 586 pp, \$5 00
"THE SOCIAL SCIENCES AND THE UNKNOWN FUTURE," a
reprint of the introductory chapter to Dr Macaulay's volume (35 cents,
in orders of 10 or more, 25 cents)
- 34 COMMODITY FLOW AND CAPITAL FORMATION, Volume I
(1938) SIMON KUZNETS 500 pp, 8¼ x 11¼, \$5 00
- 35 CAPITAL CONSUMPTION AND ADJUSTMENT (1938)
SOLOMON FABRICANT 271 pp, \$2 75
- 36 THE STRUCTURE OF MANUFACTURING PRODUCTION, A
CROSS-SECTION VIEW (1939) C A BLISS 234 pp, \$2 50

Financial Research Program

- I A PROGRAM OF FINANCIAL RESEARCH (1937) Vol 1, Report of the
Exploratory Committee on Financial Research, 91 pp, \$1, Vol 2, In-
ventory of Current Research on Financial Problems, 253 pp, \$1 50
- II STUDIES IN CONSUMER INSTALMENT FINANCING
 - 1 PERSONAL FINANCE COMPANIES AND THEIR CREDIT
PRACTICES (1939) 200 pp, \$2 00

Conference on Research in National Income and Wealth

STUDIES IN INCOME AND WEALTH, Vol I (1937), 368 pp, \$2 50,
Vol II (1938), 342 pp, \$3 00, Vol. III (1939), 500 pp, \$3 50, Vols I-III
together, \$7 50

Conference on Price Research

- 1 REPORT OF THE COMMITTEE ON PRICES IN THE BITUMINOUS
COAL INDUSTRY (1938) 144 pp, \$1 25
- 2 TEXTILE MARKETS—THEIR STRUCTURE IN RELATION TO
PRICE RESEARCH (1939) 304 pp, \$3 00
- 3 PRICE RESEARCH IN THE STEEL AND PETROLEUM INDUSTRIES
(1939) 224 pp, \$2 00

Contributors of \$25 or more a year to the National Bureau (deductible from Federal income tax) receive all publications before they are released to the public. Teachers in recognized educational institutions, members of scientific societies or of private non-profit research agencies may become Associates by contributing \$5 annually. No others are eligible. Associates receive 5 issues of the Bulletin and are entitled to buy copies of National Bureau books at a one-third discount.

The Bulletin

Subscription to the National Bureau *Bulletin* (5 issues, \$1). Single copies, 25c except the issues marked 50c.

1936

- 59 INCOME ORIGINATING IN NINE BASIC INDUSTRIES, 1919-1934,
SIMON KUZNETS 50c
- 60 MEASURES OF CAPITAL CONSUMPTION, 1919-1933, SOLOMON
FABRICANT
- 61 PRODUCTION DURING THE AMERICAN BUSINESS CYCLE OF
1927-1933, W. C. MITCHELL and A. F. BURNS 50c
- 62 REVALUATIONS OF FIXED ASSETS, 1925-1934, SOLOMON FABRICANT
- 63 THE RECOVERY IN WAGES AND EMPLOYMENT, LEO WOLMAN

1937

- 64 A PROGRAM OF FINANCIAL RESEARCH
Report of the Exploratory Committee on Financial Research
- 65 NON-FARM RESIDENTIAL CONSTRUCTION, 1920-1936, DAVID L.
WICKENS and RAY R. FOSTER
- *66 NATIONAL INCOME, 1919-1935, SIMON KUZNETS
- 67 TECHNICAL PROGRESS AND AGRICULTURAL DEPRESSION,
EUGEN ALTSCHUL and FREDERICK STRAUSS 50c
- 68 UNION MEMBERSHIP IN GREAT BRITAIN AND THE UNITED
STATES, LEO WOLMAN

1938

- *69 STATISTICAL INDICATORS OF CYCLICAL REVIVALS,
W. C. MITCHELL and A. F. BURNS
- 70 EMPLOYMENT OPPORTUNITIES IN MANUFACTURING INDUS-
TRIES, F. C. MILLS
- 71 HOURS OF WORK IN AMERICAN INDUSTRY, LEO WOLMAN
- 72-73 INCOMES FROM INDEPENDENT PROFESSIONAL PRACTICE,
1929-1936, SIMON KUZNETS and MILTON FRIEDMAN 50c

1939

- *74 COMMODITY FLOW AND CAPITAL FORMATION IN THE
RECENT RECOVERY AND DECLINE, SIMON KUZNETS
- 75 DIFFERENTIALS IN HOUSING COSTS, D. L. WICKENS
- 76-77 THE STATISTICAL PATTERN OF INSTALLMENT DEBT, R. A.
YOUNG and BLANCHE BERNSTEIN 50c

* Out of print.

NATIONAL BUREAU OF ECONOMIC RESEARCH
1819 BROADWAY, NEW YORK

EUROPEAN AGENT: MACMILLAN & CO., LTD.
ST. MARTIN'S STREET, LONDON, W. C. 2

SERVANTS OF INDIA SOCIETY'S LIBRARY
POONA 4.

1. Books drawn from the library may not be retained for longer than a fortnight.
2. Borrowers will be held strictly responsible for any damage done to books while they are in their possession.