Studies in Income and Wealth

VOLUME TWELVE

Conference on Research in Income and Wealth

NATIONAL BUREAU OF ECONOMIC RESEARCH
NEW YORK
Studies in
Income and Wealth

VOLUME TWELVE
OFFICERS
1949
C. Reinold Noyes, Chairman
H. W. Laidler, President
Harry Scherman, Vice-President
George B. Roberts, Treasurer
W. J. Carson, Executive Director
Martha Anderson, Editor

DIRECTORS AT LARGE
D. R. Belcher, American Telephone & Telegraph Co.
Oswald W. Knauth, New York City
Simon Kuznets, University of Pennsylvania
H. W. Laidler, Executive Director, League for Industrial Democracy
Shepard Morgan, New York City
C. Reinold Noyes, New York City
George B. Roberts, Vice-President, National City Bank
Beardsley Ruml, New York City
Harry Scherman, President, Book-of-the-Month Club
George Soule, Bennington College
N. I. Stone, Consulting Economist
J. Raymond Walsh, WMCA Broadcasting Co.
Leo Wolman, Columbia University
T. O. Yntema, Vice President—Finance, Ford Motor Co.

DIRECTORS BY UNIVERSITY APPOINTMENT
E. Wight Bakke, Yale Gottfried Haberler, Harvard
C. C. Balderston, Pennsylvania Clarence Heer, North Carolina
Arthur F. Burns, Columbia R. L. Kozelka, Minnesota
G. A. Elliott, Toronto Paul M. O'Leary, Cornell
H. M. Groves, Wisconsin T. W. Schultz, Chicago
R. B. Warren, Institute for Advanced Study

DIRECTORS APPOINTED BY OTHER ORGANIZATIONS
Percival F. Brundage, American Institute of Accountants
Thomas C. Cochran, Economic History Association
Frederick C. Mills, American Statistical Association
S. H. Ruttenberg, Congress of Industrial Organizations
Murray Shields, American Management Association
Boris Shishkin, American Federation of Labor
Warren C. Waite, American Farm Economic Association
Donald H. Wallace, American Economic Association

RESEARCH STAFF
Arthur F. Burns, Director of Research
Geoffrey H. Moore, Associate Director of Research
Moses Abramovitz F. F. Hill
Harold Barger Thor Hultgren
Morris A. Copeland Simon Kuznets
Daniel Creamer Clarence D. Long
David Durand Ruth P. Mack
Solomon Fabricant Frederick C. Mills
Milton Friedman Raymond J. Saulnier
Millard Hastay L. H. Seltzer
W. Braddock Hickman George J. Stigler
Leo Wolman
Prefatory Note

This volume of *Studies in Income and Wealth* is the first to be devoted entirely to national wealth. It presents the papers delivered at the January 1948 meetings of the Conference on Research in Income and Wealth together with the comments of participants.

Grateful acknowledgment is made of the services of Morris A. Copeland who organized the meetings; of the editing committee, Elwyn T. Bonnell (Chairman), Morris A. Copeland, and Simon Kuznets; and of Martha Anderson and Lillian Epstein, who saw the volume through the press.

EXECUTIVE COMMITTEE

*Solomon Fabricant, Chairman*

**Morris A. Copeland**  
**Martin R. Ginsbrugh**  
**Selma F. Goldsmith**  
**Everett E. Hagen**  

**George Jaszi**  
**Simon Kuznets**  
**Wassily Leontief**  
**Lillian Epstein, Secretary**
Since the present volume is a record of conference proceedings, it has been exempted from the rules governing submission of manuscripts to, and critical review by, the Board of Directors of the National Bureau. It has, however, been reviewed and accepted for publication by the Director of Research.

(Resolution adopted July 6, 1948 and revised November 21, 1949)
Contents

Introduction, by Morris A. Copeland 1

PART I
PROBLEMS IN THE MEASUREMENT OF WEALTH

Measuring National Wealth in a System of Social Accounting, by R. W. Goldsmith 23

A Two Levels of Social Accounting 24
1 Functions of social accounting 24
2 National business accounting 26
3 National economic accounting 28

B Derivation of the National Balance Sheet 35
1 Classification of constituent accounting units 35
2 Consolidation 37
3 Definition of national wealth 42

C Five Problems in National Business Accounting 45
1 Intangible assets 45
2 Government assets and debt 47
3 Human capital 49
4 National wealth and national income 49
5 Comparability of national wealth estimates 52

D Valuation of Assets, Liabilities, and Equity in the National Balance Sheet under Business Accounting 55
1 The basic problem 55
2 Reproducible tangible assets 57
3 Nonreproducible tangible assets 63
4 Claims and liabilities 67
5 Intangibles 70
6 Equities 71

E Functions of National Balance Sheets and National Wealth Estimates 73
<table>
<thead>
<tr>
<th>CONTENTS</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uses of National Wealth Estimates and the Structure of Claims, by A. G. Hart</td>
<td>81</td>
</tr>
<tr>
<td>A Uses and Misuses of Estimates of Wealth and Claims</td>
<td>82</td>
</tr>
<tr>
<td>1 The swing toward wealth estimates</td>
<td>82</td>
</tr>
<tr>
<td>2 Misuses of wealth and claims estimates</td>
<td>82</td>
</tr>
<tr>
<td>3 The backlog of uses</td>
<td>83</td>
</tr>
<tr>
<td>4 Mechanical vs. motivating relationships</td>
<td>83</td>
</tr>
<tr>
<td>5 Aggregates vs. component estimates</td>
<td>85</td>
</tr>
<tr>
<td>B The Structure of Claims and Economic Motivation</td>
<td>86</td>
</tr>
<tr>
<td>1 The balance sheet and motives</td>
<td>86</td>
</tr>
<tr>
<td>2 Valuation patterns</td>
<td>87</td>
</tr>
<tr>
<td>3 Grouping of units</td>
<td>90</td>
</tr>
<tr>
<td>4 Effects of heterogeneity</td>
<td>91</td>
</tr>
<tr>
<td>C The Unsatisfactory State of Knowledge about Wealth</td>
<td>93</td>
</tr>
<tr>
<td>1 The blanks in the tables</td>
<td>93</td>
</tr>
<tr>
<td>2 Weakness in the theory of assets</td>
<td>94</td>
</tr>
<tr>
<td>3 Lack of evidence on motivation</td>
<td>95</td>
</tr>
<tr>
<td>4 Need for an economic-unit focus</td>
<td>95</td>
</tr>
<tr>
<td>D The Structure of Claims</td>
<td>96</td>
</tr>
<tr>
<td>1 Transactor groups</td>
<td>97</td>
</tr>
<tr>
<td>2 Table layout</td>
<td>98</td>
</tr>
<tr>
<td>3 The short term structure</td>
<td>99</td>
</tr>
<tr>
<td>4 The long term debt structure</td>
<td>100</td>
</tr>
<tr>
<td>5 The equity structure</td>
<td>100</td>
</tr>
<tr>
<td>6 Minimum requirements of wealth estimates</td>
<td>101</td>
</tr>
<tr>
<td>7 Research agenda for claims</td>
<td>101</td>
</tr>
<tr>
<td>A Note on Negotiable Claims: Who Owns and Who Owe What, by M. A. Copeland</td>
<td>105</td>
</tr>
<tr>
<td>A The Moneyflows Project</td>
<td>106</td>
</tr>
<tr>
<td>B The National Loanfund Accounts</td>
<td>108</td>
</tr>
<tr>
<td>C Loanfunds and the National Balance Sheet</td>
<td>124</td>
</tr>
<tr>
<td>D Conclusions</td>
<td>134</td>
</tr>
<tr>
<td>Comment</td>
<td>137</td>
</tr>
<tr>
<td>Martin Bronfenbrenner</td>
<td>137</td>
</tr>
<tr>
<td>E. E. Hagen</td>
<td>142</td>
</tr>
<tr>
<td>Franco Modigliani</td>
<td>144</td>
</tr>
</tbody>
</table>
PART II
WEALTH ESTIMATES FOR VARIOUS SECTORS

The Agricultural Segment of the National Balance Sheet,
by R. J. Burroughs

A Concepts
1 The ownership unit
2 Asset items
   a Real estate
   b Livestock
   c Machinery and motor vehicles
   d Crops
   e Household equipment
   f Bank deposits
   g Currency
   h United States Savings Bonds
   i Investment in cooperatives
3 Claims items
   a Real estate mortgages
   b Non-real estate debt
   c Proprietary equities

B Balance Sheet with Physical Assets in Constant Prices
1 Physical assets
   a Real estate
   b Other physical assets
2 Financial assets
3 Liabilities

C Reconciliation of Income Statement with Balance Sheet
D Articulating the Balance Sheet of Agriculture with the National Balance Sheet

Land Utilization Data as Background Information for the National Balance Sheet and Approximations of the Value of Forest Lands, by L. A. Reuss

A Sources of Data

B Definitions

C The Land Area
   1 Land in farms and not in farms
   2 Land ownership
   3 Public land in farms and ranches
   4 Character and use of public land

D Approximations of the Value of Forest Land

E Nonforested Pasture and Range Land outside of Farms

F Other Nonfarm Land

Memorandum

Subsoil Wealth, by H. Foster Bain, et al

A Copper

B Gold Reserves
   1 Profit method
   2 Nationalistic method

C Coal

D Petroleum and Natural Gas

E Iron Ore

F Conclusions

Compiled Balance Sheet of Manufacturing Enterprises, by M. R. Gainsbrugh and Lucie Krassa

A Changes in the Price Level and the Meaning of Book Values
## CONTENTS

**B Summary of Findings**

1. Balance sheet items, 1929 and 1939: 286

**APPENDIX**

A. Affiliations with Subsidiaries: 306

B. Relative Importance of Corporate and Noncorporate Enterprises: 310

C. Method of Computations
   1. Data for all corporations: 311
   2. Changes in industrial classification: 313
   3. Deconsolidation and reclassification of the data for 1929 and 1944: 313
   4. Noncorporate enterprises: 319
   5. Deduction of data for Alaska and Hawaii: 320
   6. Computation of the estimates for 1946: 321

### Tangible Assets of Public Utilities, by D. A. Kosh

A. Regulation and Public Utility Value: 326

B. Thesis: 328

C. Fair Rate of Return: 330

D. 'Fair Value' as a Measure of Public Utility Assets
   1. Capitalization of income: 333
   2. Current market price: 338
   4. Original cost: 343
   5. Measurement of capital consumption: 344
   6. Value of utilities that cannot earn a fair return: 351
   7. The claims approach to valuation: 353

E. Allocation: 356

F. Value Comparisons: 359

G. Summary: 361

H. Subjects for Future Consideration: 366

**APPENDIX**

A. Extent of Industry Coverage and Source of Basic Data: 369

B. Scope of Aggregates: 376
The Nonfarm Business Inventory Component, by G. M. Cobren

A Scope of the Estimates
B The General Problem of Valuation
   1 Scope of the cost elements included in the inventory account
   2 Costing procedures
C Statistical Sources
D Conclusion

Consumers' Tangible Assets, by Lenore A. Epstein

A Scope and Concepts
   1 Concepts
      a Ownership units
      b Consumers' tangible assets
      c Value
      d The 'life' of consumer goods
   2 Type of data needed
B Evaluation
   1 Methods and limitations of previous estimates for goods other than automobiles
      a Census estimates, 1922 and earlier
      b Two projections of the 1922 estimate
      c Ingalls' guess for 1929
      d Doane's two estimates
      e NRPB estimate for 1935
      f Household equipment on farms
   2 Methods of previous estimates for automobiles
   3 Description and appraisal of data available for evaluating consumers' tangible assets
      a Basic data
      b Department of Commerce series on expenditures
      c Family survey data
   4 Tentative estimates of the value of consumers' tangible assets, 1929, 1939, 1946
      a Consumer goods other than automobiles
      b Automobiles operated for personal use
CONTENTS

C Recommendations for Data Collection
1 Data on stocks and useful life 454
2 Annual data on expenditures 458
3 Price information 459


A Scope and Coverage 462
B Summary 465
1 Government assets and liabilities 465
2 Methods and problems 469
C Claims and liabilities 473
1 Basis of valuation 476
2 Limitations of data 476
3 Claims by type 478
4 Liabilities by type 481
5 Claims and stocks, by obligor groups 483
D Physical Assets, Excluding Military 486
1 Basis of valuation 487
2 Limitations of data 491
3 Reproducible assets 491
4 Nonreproducible assets 495
E Military Physical Assets 501
1 Basis of valuation 502
2 Limitations of data 503
3 Reproducible assets 504
4 Nonreproducible assets 506
Appendix: Sources and Methods 507

Government-owned Nonmilitary Capital Assets since 1900,
by Solomon Fabricant, assisted by R. E. Lipsey 527
A Coverage 528
B Basic Data 530
C Valuation 531
D Comparison with Total National Wealth 535
<table>
<thead>
<tr>
<th>CONTENTS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>E  Roads, Streets, and Related Items</td>
<td>536</td>
</tr>
<tr>
<td>F  Comparison with Other Estimates</td>
<td>537</td>
</tr>
<tr>
<td><strong>Foreign Investment Aspects of Measuring National Wealth,</strong></td>
<td></td>
</tr>
<tr>
<td><em>by R. L. Sammons</em></td>
<td>549</td>
</tr>
<tr>
<td>A  Geographic Coverage</td>
<td>551</td>
</tr>
<tr>
<td>B  Assets vs. Claims</td>
<td>552</td>
</tr>
<tr>
<td>C  Problems of Valuation</td>
<td>554</td>
</tr>
<tr>
<td>1  Cost vs. market value</td>
<td>555</td>
</tr>
<tr>
<td>2  Fluctuations in market value</td>
<td>556</td>
</tr>
<tr>
<td>D  Analytical Notes</td>
<td>557</td>
</tr>
<tr>
<td>1  Comparison with balance-of-payments data</td>
<td>557</td>
</tr>
<tr>
<td>2  Geographic distribution</td>
<td>558</td>
</tr>
<tr>
<td>3  Industrial distribution</td>
<td>559</td>
</tr>
<tr>
<td>Appendix: Sources</td>
<td></td>
</tr>
<tr>
<td>Detail Tables</td>
<td>562</td>
</tr>
<tr>
<td>Bibliography</td>
<td>562</td>
</tr>
<tr>
<td><strong>Comment</strong></td>
<td></td>
</tr>
<tr>
<td>Solomon Fabricant</td>
<td>568</td>
</tr>
<tr>
<td>E. W. Morehouse</td>
<td>569</td>
</tr>
<tr>
<td>Reply by Mr. Kosh</td>
<td>575</td>
</tr>
<tr>
<td><strong>INDEX</strong></td>
<td>579</td>
</tr>
</tbody>
</table>
National Bureau of Economic Research

Conference on Research in Income and Wealth

Studies in income and wealth. v. 1-12
1937-1950
v. diagrs. 24 cm.
Vols. 1-4 issued by the conference under an earlier name: Conference on Research in National Income and Wealth.
1. National Bureau of Economic Research. II. Title.
HC106.3.C714