## THE INSTITUTE OF ECONOMICS

### OF

## THE BROOKINGS INSTITUTION

The Carnegie Corporation of New York in establishing the Institute of Economics declared:

"The Carnegie Corporation, in committing to the Trustees the administration of the endowment, over which the Corporation will have no control whatsoever, has in mind a single purpose—namely, that the Institute shall be conducted with the sole object of ascertaining the facts about current economic problems and of interpreting these facts for the people of the United States in the most simple and understandable form. The Institute shall be administered by its Trustees without regard to the special interests of any group in the body politic, whether political, social, or economic."

**PUBLICATION NO. 49** 

## THE BROOKINGS INSTITUTION

The Brookings Institution—Devoted to Public Service through Research and Training in the Social Sciences—was incorporated on December 8, 1927. Broadly stated, the Institution has two primary purposes: The first is to aid constructively in the development of sound national policies; and the second is to offer training of a super-graduate character to students of the social sciences. The Institution will maintain a series of co-operating institutes, equipped to carry out comprehensive and inter-related research projects.

The responsibility for the final determination of the Institution's policies and its program of work and for the administration of its endowment is vested in a self-perpetuating Board of Trustees. The Trustees have, however, defined their position with reference to the investigations conducted by the Institution in a by-law provision reading as follows: "The primary function of the Trustees is not to express their views upon the scientific investigations conducted by any division of the Institution, but only to make it possible for such scientific work to be done under the most favorable auspices." Major responsibility for "formulating general policies and co-ordinating the activities of the various divisions of the Institution" is vested in the President. The by-laws provide also that "there shall be an Advisory Council selected by the President from among the scientific staff of the Institution and representing the different divisions of the Institution."

#### **BOARD OF TRUSTEES**

WHITEFOORD R. COLE	Ve
NORMAN H. DAVIS	Joi
FREDERIC A. DELANO	Нл
CLARENCE PHELPS DODCE	Joi
Jerome D. Greene	LE
DAVID F. HOUSTON	LE
MORTON D. HULL	Bo
UARRY RECOVERED	\$\$7.41

VERNON KELLOGG John C. Merriam Harold G. Moulton John Barton Payne Lessing Rosenthal Leo S. Rowe Bolton Smith

HARRY BROOKINGS WALLACE

#### **OFFICERS**

FREDERIC A. DELANO, Chairman LEO S. ROWE, Vice-Chairman HENRY P. SEIDEMANN, Treasurer HAROLD G. MOULTON, President LEVERETT S. LYON, Executive Vice-President

## ADVISORY COUNCIL (1933-34)

ARNOLD B. HALL LEVERETT S. LYON CHARLES O. HARDY EDWIN G. NOURSE LEO PASVOLSKY

# SILVER

AN ANALYSIS OF FACTORS AFFECTING ITS PRICE

# SILVER

# An Analysis of Factors Affecting Its Price

BY Y. S. LEONG

# WASHINGTON, D. C. THE BROOKINGS INSTITUTION

1934

## Copyright, 1933, by THE BROOKINGS INSTITUTION

Set up and printed. Published August, 1933. Second Edition, January, 1934

All rights reserved, including the right of reproduction in whole or in part in any form.

X61;2:7.1.N3 G4 79270

Printed in the United States of America by George Banta Publishing Company Menasha, Wisconsin Each investigation conducted under the auspices of The Brookings Institution is in a very real sense an institutional product. Before a suggested project is undertaken it is given thorough consideration, not only by the Director and the staff members of the Institute in whose field it lies, but also by the Advisory Council of The Brookings Institution. As soon as the project is approved, the investigation is placed under the supervision of a special Committee consisting of the Director of the Institute and two or more selected staff members.

It is the function of this Committee to advise and counsel with the author in planning the analysis and to give such aid as may be possible in rendering the study worthy of publication. The Committee may refuse to recommend its publication by the Institution, if the study turns out to be defective in literary form or if the analysis in general is not of a scholarly character. If, however, the work is admittedly of a scholarly character and yet members of the Committee, after full discussion, can not agree with the author on certain phases of the analysis, the study will be published in a form satisfactory to the author, and the disagreeing Committee member or members may, if they deem the matter of sufficient importance, contribute criticisms for publication as dissenting footnotes or as appendices.

After the book is approved by the Institute for publication a digest of it is placed before the Advisory Council of The Brookings Institution. The Advisory Council does not undertake to revise or edit the manuscript, but each member is afforded an opportunity to criticize the analysis and, if so disposed, to prepare a dissenting opinion.

## DIRECTOR'S PREFACE

The drastic fall in the market price of silver during recent years has brought to the fore again the "silver question," which was so continuously agitated in the United States from the seventies to the end of the nineties. There has been much pressure from various groups who entertained strong beliefs as to what the country might do for silver or as to what silver might do for the country. This agitation has not resulted in definitive legislation by Congress but it has been acceded to to the extent of empowering the President to accept silver in international debt payments and to shift our currency system back to a bimetallic base.

From both the political and the economic side the silver question is highly controversial. There is a sharp clash of interests-industrial, regional, national, and international. Contending views, though put forward with great positiveness, have generally lacked broad foundation in established facts about the commodity under discussion. The present volume neither lays down nor takes up the gauge of battle on the monetary question as related to silver. It attempts rather to supply the necessary store of reliable, related, and co-ordinated facts as to the production and use of silver which determine its economic position. Such factual materials and analysis of their relations and meaning are essential to any true understanding of what might or what should be done about silver as an element in our monetary system. It is hoped that this objective approach to the problem may serve to stimulate more fruitful thinking, better understanding, and intelligent action on the part of the public.

The members of the staff of the Institute of Economics

# DIRECTOR'S PREFACE

who served with the Director on the committee co-operating with the author in the preparation of this volume were Charles O. Hardy and Harold G. Moulton.

> Edwin G. Nourse Director

Institute of Economics July 1933

x

# AUTHOR'S ACKNOWLEDGMENTS

The author makes grateful acknowledgment for the aid and counsel of his many friends in connection with the preparation of this study. He is deeply indebted to Professors H. Parker Willis, Wesley C. Mitchell, and James W. Angell, of Columbia University for the time generously given in reading and criticizing the manuscript. Valuable assistance was rendered by the officials and staff members of various bureaus of the federal government. Acknowledgment is especially due to Mr. Herbert M. Bratter of the Bureau of Foreign and Domestic Commerce, who not only read the manuscript more than once and offered constructive criticisms and helpful suggestions, but who kindly placed data which he had collected at the author's disposal; to Mr. Charles W. Merrill of the Bureau of Mines, who read and criticized Chapter II and the section in Chapter I dealing with the industrial consumption of silver; and to Assistant Director M. M. O'Reilly and Mr. S. B. Frantz of the Bureau of the Mint, who furnished information through which an evaluation of the statistical data gathered by the Mint was made possible. While this study was considerably improved by the invaluable assistance, suggestions, and counsel of those mentioned above, the author wishes to state that he alone is to be held responsible for the conclusions expressed.

# Y. S. LEONG

хi

# **CONTENTS**

	PAGE
Director's Preface	ix
Author's Acknowledgments	xi
INTRODUCTION	1
CHAPTER I	
THE DEMAND FOR SILVER	7
I. The Monetary Demand for Silver	7
A. The Coinage of Silver	7
B. Silver in Circulation	12
C. The Silver Holdings of the Banks of Prin-	
cipal Countries	21
D. Summary	26
II. The Industrial Demand for Silver	29
III. India's Demand for Silver for Other Than	
Monetary Use	40
IV. China's Demand for Silver	47
CHAPTER II	-
THE PRODUCTION OF SILVER	58
I. Mine and Refinery Production of Silver	58
II. Silver as a Main Product and as a By-Product	71
III. The Future of Silver Production	84
CHAPTER III	
THE PRICE OF SILVER	87
I. The Price of Silver and the Prices of Other	
Commodities	87
II. The Price of Silver and the Principal Silver-Pro-	
ducing Countries	96
III. The Price of Silver and the Principal Silver-	
Consuming Countries	102
A. China	103
B. India	113
<b>C.</b> Summary	120
CHAPTER IV	
	121
SUMMARY AND CONCLUSION	121

# CONTEŇTS

	PAGE
Note on the Silver Provisions in the Farm Relief	
Аст оf 1933	130
Note on the London Agreement on Silver and on	
THE SILVER PURCHASE POLICY OF THE UNITED	
STATES	136

## STATISTICAL DATA

I. Changes in the Fineness of Silver Coins of Speci-	
fied Countries with the Dates of the Original	
and Present Decrees	141
II. Standard Silver Dollars and Silver Certificates in	
the Treasury, in the Banks, and in Circula-	
tion in the United States, June 30, 1900-32	142
III. Metallic Holdings of Banks of Issue of Specified	
Countries, 1900-31	144
IV. Metallic Composition of the Paper Currency	
Reserve of India, 1901-32	148
V. Gold and Silver Held by the Banks in the United	
States, 1900-29	149
VI. Gold and Silver Coin Held by Banks in Great	
Britain and Ireland, 1907-31	150
VII. Index Numbers of the Physical Volume of Im-	
ports and Exports for China, 1900-31	151
VIII. Index Numbers of Wholesale Prices of Non-	
Ferrous Metals in the United States, 1900-	
32	152
IX. Index Numbers of the Purchasing Power of	
Gold, Silver, and Non-Ferrous Metals in the	
United States, 1900-32	153
X. Imports and Exports of Merchandise and	
<b>T</b> reasure of China, 1900-32	154
XI. Index Numbers of the Physical Volume of Im-	
ports and Exports for British India, 1904-31	156
XII. Private Imports and Exports of Merchandise	
and of Treasure by British India, 1900-32	157
XIII. Private and Government Imports and Exports	
of Silver of British India, 1900-32	158

## xiv

# **CONŤENTS**

xv

CONTENTS	xv
	PAGE
XIV. Average Monthly Prices of Silver in New York, 1910-33	159
XV. Mine Production of Silver of the World and	
the Principal Producing Countries, 1900-33	160
Selected Bibliography	161
INDEX	167

### SELECTED BIBLIOGRAPHY

American Bureau of Metal Statistics, Year Book, New York. Barbour, Sir David, Theory of Bimetallism, Cassell and Co.,

- Ltd., London, 1885.
- Bratter, Herbert M., "Silver—Some Fundamentals," Journal of Political Economy, June, 1931.

—, "Should We Turn to Silver?" Public Policy Pamphlets No. 6, edited by Harry D. Gideonse, University of Chicago, 1933.

-----, Silver Market Dictionary, Commodity Exchange, Inc., New York, 1933.

- Carothers, Neil, *Fractional Money*, Wiley and Sons, New York, 1930.
- Chinese Maritime Customs, Statistical Department of the Inspectorate General of Customs, *Returns of Trade and Trade Reports*, Shanghai.

-----, Foreign Trade of China, Shanghai.

- ——, Monthly Returns of the Foreign Trade of China, Shanghai.
- Chinese Ministry of Industry, Commerce, and Labor, Bureau of Industrial and Commercial Information, Project of Law for the Gradual Introduction of a Gold Standard Currency System in China, together with a Report in support thereof (a report submitted to the Minister of Finance by the Commission of Financial Experts, November 11, 1929) Shanghai, 1929.
- Darwin, Leonard, "The Stability of Gold and Silver Prices in Recent Years," Journal of the Royal Statistical Society, June, 1899, pp. 348-72, London.
- Economist, The, "The Silver Situation," March 28, 1931, pp. 661-64, London.
- Elliston, Herbert B., "The Silver Problem," Foreign Affairs, April, 1931, pp. 441-56, New York.
- Sibbs, Henry H., "The Fall in Silver and the Closing of the French Mint," *Economic Journal*, March, 1891, p. 145, London.

161

Giffen, Sir Robert, The Case Against Bimetallism, Bell and Sons, London, 1892.

- Graham, Frank D., "The Fall in the Value of Silver and Its Consequences," *Journal of Political Economy*, August, 1931, pp. 425-70, Chicago.
- Great Britain, Annual Report of the Deputy Master and Comptroller of the Royal Mint, H. M. S. O., London.

------, Royal Commission on Indian Currency and Finance, Report of the Royal Commission on Indian Currency and Finance, Appendices to the Report, Minutes of Evidence Taken in India, Cmd. 2687, H. M. S. O., London, 1926.

Gregory, T. E., The Silver Situation, Problems and Possibilities, Manchester University Press, Manchester, 1932.

- Handy and Harman, Review of the Silver Market (annual), New York.
- Ho, Franklin L., "Revised Index Numbers of the Quantities and Prices of Imports and Exports and of the Barter Terms of Trade in China, 1867-1930" (in Chinese), *Quarterly Journal of Economics and Statistics*, March, 1932, Tientsin.
- India, Annual Reports of the Controller of the Currency, Calcutta.

----, Department of Commercial Intelligence and Statistics, Accounts Relating to the Sea-borne Trade and Navigation of British India (annual and monthly), Calcutta.

- International Chamber of Commerce, Report on Silver Problem, Washington, 1931.
- International Financial Conference, *Memoranda of Experts* ("Memorandum of the Fluctuations in the Price of Silver and Their Causes: the Effect upon the Exchanges of Silver-Using Countries and the Reaction upon Trade and Prices in the World as a Whole," by G. Findlay Shirras), Brussels, 1920.
- Jamieson, G., "Effect of the Fall in the Value of Silver on Prices of Commodities in China," Journal of the Royal Statistical Society, December, 1893, pp. 646-69, London.
- Jevons, H. S., The Future of Exchange and the Indian Currency, Oxford University Press, London, 1922.

- Kann, E., "How Much Silver is There in China? An Investigation of the Present Status," *Chinese Economic Journal*, April, 1931, Shanghai.
- -----, The Currencies of China, Kelly and Walsh, Ltd., Shanghai, 1926.
- Kemmerer, Edwin Walter, Modern Currency Reforms, Macmillan, New York, 1916.
- Kirk, John H., "Silver: A Study on Monetary Stability," Economic Journal, September, 1931, pp. 385-94, London.
- Laughlin, J. Laurence, History of Bimetallism in the United States, Appleton, New York, 1897.
- Lawrie, H. N., "Gold and Silver," The Mineral Industry (annual).
- League of Nations, Interim Report of the Gold Delegation of the Financial Committee (Document No. C. 375. M. 161. 1930. II.), Geneva.
- Leavens, Dickson H., "Graphic Facts about Gold and Silver," Finance and Commerce, August 12, 1931, Shanghai.
- -----, "Silver and the Business Depression," Harvard Business Review, April, 1931, pp. 330-38, Cambridge.
- Leong, Y. S., "An Estimate of the Amount of Money Held by the Banks and of the Amount of Money in General Circulation in the United States," *Journal of Political Econ*omy, April, 1930, pp. 164-93.
  - ------, "Indexes of the Physical Volume Production of Producers' and Consumers' Goods," Journal of the American Statistical Association, March, 1932, pp. 21-36.
- Montagu and Company, Samuel, Weekly Bullion Letters, London.
- Nicholson, J. S., "The Effects of the Depreciation of Silver with Special Reference to the Indian Currency Experiment," *Economic Journal*, March, 1894, pp. 59-69, London.
- Pinnick, A. W., Silver and China; An Investigation of the Monetary Principles Governing China's Trade and Prosperity, Kelly and Walsh, Ltd., Shanghai, 1930.
- Rawles, William P., The Nationality of Commercial Control of World Minerals, American Institute of Mining and Metallurgical Engineers, New York, 1933.

Remer, C. F., "International Trade between Gold and Silver Countries: China, 1885-1913," *Quarterly Journal of Economics*, August, 1926, pp. 597-643, Cambridge.

Roosevelt, F. D., "Coinage of Silver," Presidential Proclamation No. 2067, Government Printing Office, Washington, 1933.

Salter, Sir Arthur, "The Silver Problem," Political Science Quarterly, September, 1931, pp. 321-34, New York.

- Shirras, G. Findlay, "Gold and British Capital in India," Economic Journal, December, 1929, pp. 629-36, London.
- ------, Indian Finance and Banking, Macmillan, London, 1920.

"...., "Some Effects of the War on Gold and Silver," Jour-

nal of the Royal Statistical Society, July, 1920, pp. 572-606, London.

Spalding, William F., Dictionary of World Currencies and Foreign Exchanges, Pitman, London, 1928.

Taussig, Frank W., International Trade, Macmillan, New York, 1927.

----, The Silver Situation in the United States, American Economic Association, Baltimore, 1892.

United States Congress, 71 Cong. 2 sess., Commercial Relations with China, Hearings before Senate Committee on Foreign Relations, Pts. 1-4, Government Printing Office, Washington.

------, 72 Cong. 1 sess., The Effect of Low Silver, Hearings before House Committee on Coinage, Weights, and Measures, Pts. 1-4, Government Printing Office, Washington.

----, 71 Cong., Senate Report 1716, 1931, Government Printing Office, Washington.

United States Department of Commerce, Bureau of the Census, *Census of Manufactures* (biennial), Government Printing Office, Washington.

<sup>------,</sup> Foreign Investments in China, Macmillan, New York, 1933.

Uses of Silver Since 1914," by Leland Rex Robinson), Government Printing Office, Washington, 1923.

----, Bureau of Foreign and Domestic Commerce, *Trade* Information Bulletin No. 457 ("The Bombay Bullion Market," by Don C. Bliss), 1927.

—, Bureau of Foreign and Domestic Commerce, *Trade* Information Bulletin No. 682 ("The Price of Silver," by Herbert M. Bratter), 1930.

- ------, Bureau of Foreign and Domestic Commerce, *Trade* Information Bulletin No. 742 ("The Silver Market in 1930," by Herbert M. Bratter), 1931.
  - -----, Bureau of Foreign and Domestic Commerce, *Trade* Promotion Series No. 27 ("Currency, Banking, and Finance in China," by Frederic C. Lee), 1926.
- -----, Bureau of Foreign and Domestic Commerce, *Trade* Promotion Series No. 139 ("The Silver Market," by Herbert M. Bratter), 1932.

-----, Bureau of Mines, *Mineral Resources of the United* States (annual), Government Printing Office, Washington.

——, Bureau of Mines, *Economic Paper 8* ("Summarized Data of Silver Production," by Charles White Merrill), 1930.

, Bureau of Mines, *Economic Paper 10* ("Economic Relations of Silver to Other Metals in Argentiferous Ores," by Charles White Merrill), 1930.

United States Department of State, Treaty Information Bul-

## SILVER

letin No. 47, Government Printing Office, Washington, 1933.

- United States Treasury Department, Bureau of the Mint, Annual Reports of the Director of the Mint, Government Printing Office, Washington.
- ------, Bureau of the Mint, Monetary Systems of the Principal Countries of the World, 1912 and 1916.
- Walker, F. A., International Bimetallism, Holt, New York, 1896.
- Warren, George F. and Pearson, Frank A., Prices, Wiley and Sons, New York, 1933.
- Willis, H. Parker, A History of the Latin Monetary Union, University of Chicago Press, 1901.
  - ------, "Silver," New Republic, March 11, 1931, pp. 92-94, New York.
- White, Benjamin, Silver, Its History and Romance, 2d ed., Waterlou and Sons, London, 1920.
- Wochenbericht des Instituts für Konjunkturforschung, "The Silver Problem," February 18, March 4, and March 11, 1931, Berlin.
- Wu, Tayeh, "A Statistical Analysis of the Fluctuations in Silver Prices, 1883-1931" (in Chinese), *Quarterly Journal of Economics and Statistics*, March, 1932, Tientsin.

166

## INDEX

Argentiferous ores. See separate ores Austria-Hungary, silver coinage discontinued in, 9 Barter terms of trade, China's, effect of decline in export prices relative to import prices on, 110 dislocation of gold-silver exchanges and, 111 effect of inflow of invisible items on, 51 conditions of demand and changes in, 112 method of measuring, 51n unfavorable to countries exporting raw materials, 112-13, 119-20 Bibliography, 161-66 Bimetallism, Farm Relief Act and, 130-35 gold standard substituted for, 1-3 world price level and, 63 Bliss, D. C., 40n, 47n Bratter, Herbert M., 26n, 27n, 115n British India. See India By-product silver, production of and relation to silver supply and price, 71-84, 126-27 Canada, capital control of silver production of, 68, 70 import-export prices of, com-pared with those of India, Shanghai, and United States, 108-13 industrial consumption of silver in, 34-39 national economy of, impor-

tance of silver to, 98-99, 102, 128 value of principal minerals produced in, 98-99 Capital control of world silver production, 68-71 Cassel, Gustav, 65n Chemical industry, use of silver by, 33-39, 121-22 China, balance of payments of, 49-51, 122 barter terms of trade of. See under Barter terms of trade gold exchange standard proposed for, 54-56 silver money in circulation in, trend of, 19-21 silver purchases and foreign trade of, effect of price of silver upon, 54-55 exchange dislocations and their effect upon, 103-09 future of, 56-57, 123 importance of, 52, 124 imports and exports of merchandise and treasure, 154-55 imports and exports of silver, 11, 20-21, 49, 52-53 imports of merchandise, relation to silver and gold imports and exports, 48-49 imports of silver and gold, 49, 52-53 index numbers of physical volume of imports and exports, 151 invisible items as factors in balance of payments, 49-51, 123

terms of trade, affected by

world demand for raw products, 110-13

- silver standard in, desirability of retaining, 93n
- silver prices in, compared with gold prices in United States, 93n
- silver stocks, 53-54, 87
- Copper-silver ores, importance of to silver production and market, 72, 74, 75, 76-77, 82-83, 84, 85
- Crum, W. L., 92n

Debasement of silver coins, 9n, 10, 13, 21, 125, 141 Demand for silver, Chinese, 47-57, 123 classification of, 7 Farm Relief Act and, 130-35 future of, 26-28, 39-40, 121-27 Indian (British), for other than monetary use, 40-47, 122 for industrial use, in five principal consuming countries, 29 future of, 39-40, 121-22 in Canada and United States, 34-40 in United States, 29-34 for monetary uses, bank reserve and till purposes, 21-26, 121 coinage purposes, 2-6, 7-12, 26-27, 121, 122 future of, 26-28, 121 silver money in circulation, 12-21, 27, 121 Demonetization of silver, by important countries, 9, 10, 13, 121 effect of, on silver market and price, 2-6, 91, 10, 121 sales from, 2, 9n, 123 Depression, relation of low silver price to, 87, 120

Dry and siliceous ores, importance

of to silver production and market, 74

- Electroplating industry, consumption of silver by, 32-33, 34, 35, 38
- Farm Relief Act of 1933, 130-35
- Farm product prices, trend of, compared with silver price, 87-89
- Fineness of silver coins, changes in, for specified countries, 141
- Foreign trade, effect of dislocated exchange upon, barter terms of, 110-13
- Foreign trade of China and United States compared, 105
- France,
  - demonetized silver in 1928, 10 discontinued coinage of silver in 1920, 9
  - increased use of silver coins during World War, 9
  - industrial consumption of silver in, 29
  - silver holdings of Bank of France, 22-23
- General commodity prices, trend of compared with silver price, 87-89, 96
- Germany, demonetized silver in 1873, 2 discontinued coinage of silver because of World War, 9 increased silver coinage in recent years, 27n sales of silver by, 2n Gandhi, Mahatma, 119n
- Gold,
- China's net imports of, 48-49, 52-53 hoarded in India, 41-44
- holdings of central banks, 142-
  - 47

India's exports of since 1931, 117

- imports of into India and their relation to export trade ballance, 41-45
- as monetary commodity for stabilizing prices compared with silver, 63-67
- purchasing power of compared with that of silver and nonferrous metals, 89-96
- -silver ratio, 5, 103-11 Fold-silver ores, importance of to silver production and market, 76-77, 82-83
- fold standard,
- comparative stability of prices under the silver standard and, 63-67
- substituted for bimetallism, 1-3 Fovernment Price Enquiry Com-
- mittee, 19 Jraham, F. D., 106n, 111n, 115n Jreat Britain,
- capital control of world silver production by, 68, 70-71
- circulation of silver money in, trend of, 13-14
- gold and silver coin held by banks in (including Ireland), 150
- increased use of silver coins during World War, 9
- industrial consumption of silver in, 29
- purchase of silver under Pittman Act, 5, 10
- reduced fineness of silver coin, 10
- silver holdings of Bank of England, 23-24, 150
- Grenell, L. H., 401
- Handy and Harman, 29, 35n, 36n, 59n, 62n, 86n, 103n
- Ho, Franklin L., indexes of Chinese imports and exports of, 106
- Hoarding, 7, 10, 20, 26

Index numbers,

- import-export prices for Shanghai, United States, Canada and India, 109
- physical volume,
  - of imports and exports for China, 106, 151
  - of imports and exports for British India, 156
  - of imports and exports for the United States, 106
  - of United States exports to China and United States imports from China, 106
- purchasing power of gold, silver, and non-ferrous metals, 153
- seasonal variations in India's silver imports, 46n
- wholesale prices,
- in Calcutta, 116
- in North China, 93n
- in United States, 93n
- of non-ferrous metals in United States, 152
- of raw materials and of finished goods in the United States, 113
- India, British,

foreign trade of,

- effect of decline of silver price upon, 113-20
- export trade balance, relation of silver and gold imports to, 41-45
- import-export prices of, compared with others, 108-13
- index numbers of physical volume of imports and exports of, 156
- private and government imports and exports of silver, 47, 156
- private and government imports and exports of merchandise and treasure, 157 seasonal factors influencing

private imports of silver, 46-47 hoarding. of gold exceeds that of silver, 117 source of demand for silver in, 40-41 national economy of, effect of low silver price upon, 113-20 silver in paper currency reserve of, 23-24, 148 silver coinage in, 2, 9, 10 silver stock of, 87 Industrial consumption of silver, 29-40, 121-22 Industrial demand for silver. See under Demand for silver International trade. See Barter terms of trade Jenison, H. A. C., 74 Jordan, L., 40n Julihn, C. E., 62n Kann, E., 11, 1920, 53n, 87n Kemmerer, E. W., 54n Kerschman, H. K., 40n Kiessling, O. E., 62n King, W. I., 97n Kitchen, Joseph, 13n, 65n Latin Monetary Union, 2 Laughlin, J. L., 2n Lead Production in United States, 62 Lead-silver ores, importance of to silver production and market, 74, 76-77, 81-82, 83, 84, 86 Merrill, C. W., 33n, 38n, 59n, 60n, 62n, 64n, 72n, 79n Metallic holdings of 18 central banks, 144-47 Mexico, capital control of production of silver in, 68, 70

minerals produced in, value of, 99-101

- national economy of, importance of silver to, 99-101, 102, 128-29
- production of silver in, 58-61, 76-78, 79, 80, 81-84, 85-86.
- Mine production of silver. See under Production of silver
- Mineral Inquiry, 70n
- Monetary demand for silver. See under Demand for silver

Nankai Institute of Economics, index of wholesale prices in North China, 93n

- Nankai Weekly Statistical Service, 51n
- National Bureau of Economic Research, 97
- Non-ferrous metals, price index of, 87-89, 152 purchasing power trend of, 89-94
- Old silver. See Secondary silver
- Ornaments, as source of demand for silver in India, 40-41
- Pearson, F. A., 65n
- Peru,
- capital control of silver production of, 68, 70
- mine production of silver in, 58-61, 63, 76-78, 79, 82, 83, 85 minerals produced in, value of, 101-02
- national economy of, importance of silver to, 101-02, 128-29
- Photographic industry, use of silver by, 33-39, 121-22

Pittman Act, 5, 10

- Plated silverware industry, use of silver by, 32, 34-38, 122
- Presidential proclamation of Dec. 21, 1933, 136-38

Price of silver,

- average monthly in New York, 1910-33, 159
- Chinese demand for silver and other foreign goods affected

by changes in, 54-55, 56-57, 104-05 course of, compared with other price levels, 87-96, 128 demonetization and, 2, 10 effects of decline in, alleged, 87 upon silver-consuming countries, 102-20, 127 upon silver-producing countries, 96-102, 128-29 Farm Relief Act and, 130-35 gold exchange standard proposed for China, effect upon, Indian demand for silver affected by changes in, 9, 26 London agreement and, 136-38 Presidential proclamation and, 137-38 silver production affected by changes in, 3-5, 73-84, 85-86 trade recovery and, 129 Production of silver, Farm Relief Act and, 131-32, 134-35 future of, 84-86, 123-27 mine, by countries, 1900-33, 160 capital control of, 68-71 compared with world output of all commodities and of gold, 63-68 cost of, 73-75, 78-84 as main product and by-product, 71-84 silver price and its effect upon, 3-5, 73-84, 85-86 trend of, 58-63 national economies of principal producing countries, affected by, 96-102 refinery, distribution of, by countries, 68-69 Purchasing power of silver compared with that of gold and

non-ferrous metals, 89-96, 128, 153

- Refinery production of silver, 68-69
- Rawles, William P., 70n
- Remer, C. F., 51n
- Ridgway, R. H., 64n
- Robinson, L. R., 12n, 14n
- Scandinavian Monetary Union, 2
- Secondary silver, increased use of in manufacturing, 29-31, 39-40, 121, 122, 123
- Selective silver mining, 80-84
- Shanghai, import-export prices of, compared with those of Canada, India, and United States, 108-13
- Sherman Act, repeal of, 2
- Shirras, G. F., 18, 19, 117n
- Silver, prospects for, 124-29, 130-35
- Silver coins,
  - changes in the fineness of, 139
- Silver-gold commercial ratio, 5
- Silver-gold exchange ratio, effect of, on Chinese foreign trade, 103-11
- Silver holdings of banks of issue, 21-28, 144-47
- Silver money in circulation, trend of,
  - in China, 19-21
  - in Great Britain, 13-14
  - in India, 18-19
  - in neutral countries, 14
  - in the United States, 14-18
  - summary on, 27
  - during World War and reconstruction period, 12-13

Silver situation in United States, 2n, 130-35, 136-38

- Silver standard,
- proposed abandonment of by China, 3, 54-55
  - silver market affected by abandonment of, 2-3
- stability of prices under, 92n
- Smith, L. A., 62n

# SILVER

- Stabilization of prices, relative merits of gold and silver as monetary commodities for, 63-67
- Sterling silverware industry, use of silver by, 32-33, 34-38, 122
- Substitution of base metal for silver coins, 12-13
- Taussig, F. W., 2n, 111n
- Tin-silver ores, importance of to silver production and market, 76-77

United States,

- capital control of world production of silver by, 68, 70-71
- circulation of silver money in, 14-18
- coinage of silver in, 8
- foreign trade of, compared with China's, 105-07
- gold holdings of banks in, 147 import-export prices of, 108-13 industrial consumption of silver in, 29-40
- national economy of, importance of silver to, 96-98, 102, 128
- non-ferrous metals in, index numbers of wholesale prices of, 152

- production of silver in, 58-63, 69, 71-78, 79, 81-82, 85-86
- purchases of silver by, under London agreement and Presidential proclamation of 1933, 137-38
- purchasing power of gold, silver, and non-ferrous metals in, 153
- sales of silver to Great Britain under Pittman Act, 5, 10
- silver dollars and certificates in, distribution of, 142-43
- silver holdings of banks in, 23, 24-25, 149
- value of principal minerals produced in, 96-98
- United States Senate Commission on Gold and Silver Inquiry, 40n, 74
- Warren, G. F., 65n
- Wilcoxen, L. C., 65n
- Willis, H. P., 2n
- World silver production. See Production of silver
- Zinc-silver ores, importance of to silver production and market, 73, 76-77, 82-83, 84

## 172

# PUBLICATIONS OF THE BROOKINGS INSTITUTION\*

INSTITUTE OF ECONOMICS SERIES

- (1.) GERMANY'S CAPACITY TO PAY. By Harold G. Moulton and Constantine E. McGuire. 384 pp. 1923. \$2.50.
- (2.) RUSSIAN DEBTS AND RUSSIAN RECONSTRUCTION. By Leo Pasvolsky and Harold G. Moulton. 247 pp. 1924. \$2.50.
- (3.) MAKING THE TARIFF IN THE UNITED STATES. By Thomas Walker Page. 281 pp. 1924. \$3.
- (4.) American Agriculture and the European Market.
  - By Edwin G. Nourse. 333 pp. 1924. \$2.50.
- (5.) SUGAR IN RELATION TO THE TARIFF. By Philip G. Wright. 312 pp. 1924. \$2.50.
- (6.) MINER'S WAGES AND THE COST OF COAL. By Isador Lubin. 316 pp. 1924. Out of print.
- (7.) THE REPARATION PLAN. By Harold G. Moulton. 325 pp. 1924. \$2.50.
- (8.) THE FRENCH DEBT PROBLEM.
  - By Harold G. Moulton and Cleona Lewis. 459 pp. 1925. \$2.
- (9.) THE RUHR-LORRAINE INDUSTRIAL PROBLEM. By Guy Greer. 328 pp. 1925. \$2.50.
- (10.) THE CASE OF BITUMINOUS COAL. By Walton H. Hamilton and Helen R. Wright. 310 pp. 1925. \$2.50.
- (11.) INTEREST RATES AND STOCK SPECULATION.
  - By Richard N. Owens and Charles O. Hardy. 221 pp. rev. ed. 1930. \$2.50.
- (12.) THE FEDERAL INTERMEDIATE CREDIT SYSTEM. .... By Claude L. Benner. 375 pp. 1926. Out of print.
- (13.) THE TARIFF ON WOOL.
  - By Mark A. Smith. 350 pp. 1926. \$2.50.

\* The parentheses indicate that the volume itself does not carry the number since it was given subsequent to publication.

- (14.) THE CATTLE INDUSTRY AND THE TARIFF. By Lynn Ramsay Edminster. 331 pp. 1926. \$2.50.
- (15.) THE COAL MINERS' STRUGGLE FOR INDUSTRIAL STATUS.
  - By Arthur E. Suffern. 462 pp. 1926. \$2.50.
- (16.) TAX-EXEMPT SECURITIES AND THE SURTAX. By Charles O. Hardy. 216 pp. 1926. \$2.
- (17.) WORLD WAR DEBT SETTLEMENTS. By Harold G. Moulton and Leo Pasvolsky. 448 pp. 1926. \$2.
- (18.) FINANCING THE LIVESTOCK INDUSTRY. By Forrest M. Larmer. 327 pp. 1926. \$2.50.
- (19.) ITALY'S INTERNATIONAL ECONOMIC POSITION. By Constantine E. McGuire. 588 pp. 1926. \$3.
- (20.) Worker's Health and Safety: A Statistical Program.
  - By Robert Morse Woodbury. 207 pp. 1927. \$2.50.
- (21.) THE INTERNATIONAL ACCOUNTS. By Cleona Lewis. 170 pp. 1927. \$2.
- (22.) INDUSTRIAL PROSPERITY AND THE FARMER. By Russell C. Engberg. 286 pp. 1927. \$2.50.
- (23.) THE LEGAL STATUS OF AGRICULTURAL CO-OPERA-TION.
  - By Edwin G. Nourse. 555 pp. 1927. \$3.
- (24.) American Loans to Germany.
  - By Robert R. Kuczynski. 378 pp. 1927. \$3.
- (25.) THE BRITISH COAL DILEMMA. By Isador Lubin and Helen Everett. 370 pp. 1927.
  \$2.50.
- (26.) THE TARIFF ON ANIMAL AND VEGETABLE OILS. By Philip G. Wright. 347 pp. 1928. \$2.50.
- (27.) A WAY OF ORDER FOR BITUMINOUS COAL. By Walton H. Hamilton and Helen R. Wright. 365 pp. 1928. \$2.50.
- (28.) ECONOMIC NATIONALISM OF THE DANUBIAN STATES. By Leo Pasvolsky. 609 pp. 1928. \$3.
- (29.) THE BALANCE OF BIRTHS AND DEATHS. Vol. I, Western and Northern Europe.

By Robert R. Kuczynski. 140 pp. 1928. Out of print.

## LIST OF PUBLICATIONS

- (30.) LABOR AND INTERNATIONALISM. By Lewis L. Lorwin. 682 pp. 1929. \$3.
- (31.) THE MEXICAN AGRARIAN REVOLUTION.
  - By Frank Tannenbaum. 543 pp. 1929. \$3.
- (32.) THE TARIFF ON IRON AND STEEL.
  - By Abraham Berglund and Philip G. Wright. 240 pp. 1929. \$3.
- (33.) THE ST. LAWRENCE NAVIGATION AND POWER PROJ-ECT.

By Harold G. Moulton, Charles S. Morgan, and Adah L. Lee. 675 pp., 1929. \$4.

- (34.) RAILROAD PURCHASING AND THE BUSINESS CYCLE. By John E. Partington. 309 pp. 1929. \$3.
- (35.) HAND-TO-MOUTH BUYING: A STUDY IN THE ORGANI-ZATION, PLANNING, AND STABILIZATION OF TRADE.
  - By Leverett S. Lyon. 487 pp. 1929. \$4.
- (36.) UNEMPLOYMENT INSURANCE IN GERMANY. By Mollie Ray Carroll. 137 pp. 1929. \$2.50.
- (37.) INTERNATIONAL CONTROL OF RAW MATERIALS. By Benjamin Bruce Wallace and Lynn Ramsay Edminster. 479 pp. 1930. \$3.50.
- (38.) BIRTH REGISTRATION AND BIRTH STATISTICS IN CANADA.
  - By Robert Kuczynski. 219 pp. 1930. \$3.
- (39.) BULGARIA'S ECONOMIC POSITION.
  - By Leo Pasvolsky. 409 pp. 1930. \$3.
- THE CO-OPERATIVE MARKETING OF LIVESTOCK. By Edwin G. Nourse and Joseph G. Knapp. 486 pp. 1931. \$3.50.
- 41. BANKERS' PROFITS FROM GERMAN LOANS. By Robert R. Kuczynski. 228 pp. 1932. \$1.75.
- 42. THE CUBAN SITUATION AND OUR TREATY RELA-TIONS.

By Philip G. Wright, 208 pp. 1931. \$2.50.

43. The BALANCE OF BIRTHS AND DEATHS. Vol. II, Eastern and Southern Europe.

By Robert R. Kuczynski. 170 pp. 1931. \$2.

- JAPAN: AN ECONOMIC AND FINANCIAL APPRAISAL. By Harold G. Moulton with the collaboration of Junichi Ko. 645 pp. 1931. \$4.
- 45. CREDIT POLICIES OF THE FEDERAL RESERVE SYSTEM. By Charles O. Hardy. 374 pp. 1932. \$2.50.
- 46. WAR DEBTS AND WORLD PROSPERITY.
  - By Harold G. Moulton and Leo Pasvolsky. 498 pp. 1932. \$3.
- 47. Advertising Allowances: A Phase of the Price-Making Process. By Leverett S. Lyon. 125 pp. 1932. \$1.
- 48. TEN YEARS OF FEDERAL INTERMEDIATE CREDITS. By Frieda Baird and Claude L. Benner. 416 pp. 1933. \$2.75.
- 49. SILVER: AN ANALYSIS OF FACTORS AFFECTING ITS Price.

By Y. S. Leong. 172 pp. rev. ed. 1934. \$2.

- 50. THE AMERICAN FEDERATION OF LABOR: HISTORY, POLICIES, AND PROSPECTS.
  - By Lewis L. Lorwin. 573 pp. 1933. \$2.75.
- 51. THE BRITISH ATTACK ON UNEMPLOYMENT. By Isador Lubin and A. C. C. Hill, Jr. (In press.)
- 52. CURRENT MONETARY ISSUES. By Leo Pasvolsky. 192 pp. 1933. \$1.50.
- 53. THE ECONOMICS OF FREE DEALS: WITH SUGGES-TIONS FOR CODE-MAKING UNDER THE N.R.A. By Leverett S. Lyon. 228 pp. 1933. \$1.50.

## INSTITUTE FOR GOVERNMENT RESEARCH SERIES

### Studies in Administration

(1.) THE SYSTEM OF FINANCIAL ADMINISTRATION OF GREAT BRITAIN.

By W. F. Willoughby, W. W. Willoughby, and S. M. Lindsay. 362 pp. 1917. \$3.

(2.) THE BUDGET: A TRANSLATION.

By René Stourm. 619 pp. 1917. \$4.

(3.) THE PROBLEM OF A NATIONAL BUDGET. By W. F. Willoughby. 220 pp. 1918. Out of print.

## LIST OF PUBLICATIONS

- (4.) THE MOVEMENT FOR BUDGETARY REFORM IN THE STATES.
  - By W. F. Willoughby. 254 pp. 1918. \$3.
- (5.) THE CANADIAN BUDGETARY SYSTEM.
  - By H. C. Villard and W. W. Willoughby. 379 pp. 1918. \$3.
- (6.) Organized Efforts for the Improvement of Methods of Administration in the United States.

By Gustavus A. Weber. 391 pp. 1919. \$3.

- (7.) TEACHERS' PENSION SYSTEMS IN THE UNITED STATES. By Paul Studensky. 460 pp. 1920. \$3.
- (8.) THE FEDERAL SERVICE: A STUDY OF THE SYSTEM OF PERSONNEL ADMINISTRATION OF THE UNITED STATES GOVERNMENT.
  - By Lewis Mayers. 607 pp. 1922. \$5.
- (9.) THE REORGANIZATION OF THE ADMINISTRATIVE BRANCH OF THE NATIONAL GOVERNMENT.
  - By W. F. Willoughby. 298 pp. 1923. Out of print.
- (10.) THE DEVELOPMENT OF NATIONAL ADMINISTRATIVE ORGANIZATION IN THE UNITED STATES.
  - By Lloyd M. Short. 514 pp. 1923. \$5.
- (11.) THE STATISTICAL WORK OF THE NATIONAL GOVERN-MENT.
  - By Laurence F. Schmeckebier. 574 pp. 1925. \$5.
- (12.) MANUAL OF ACCOUNTING AND REPORTING FOR THE Operating Services of the National Government.

By Henry P. Seidemann. 399 pp. 1926. \$5.

- (13.) THE NATIONAL GOVERNMENT AND PUBLIC HEALTH. By James A. Tobey. 423 pp. 1926. \$3.
- (14.) THE NATIONAL BUDGET SYSTEM, WITH SUGGESTIONS FOR ITS IMPROVEMENT.

By W. F. Willoughby. 343 pp. 1927. \$3.

(15.) THE DEPARTMENT OF JUSTICE OF THE UNITED STATES.

By Albert Langeluttig. 318 pp. 1927. \$3.

(16.) THE LEGAL STATUS AND FUNCTIONS OF THE GEN-ERAL ACCOUNTING OFFICE.

By W. F. Willoughby. 193 pp. 1927. \$3.

- (17.) THE PROBLEM OF INDIAN ADMINISTRATION. By Lewis Meriam and Associates. 872 pp. 1928. \$5.
- (18.) THE DISTRICT OF COLUMBIA: ITS GOVERNMENT AND Administration.
  - By Laurence F. Schmeckebier. 943 pp. 1928. \$5.
- (19.) THE DEVELOPMENT OF GOVERNMENTAL FOREST CONTROL IN THE UNITED STATES. By Jenks Cameron. 471 pp. 1928. \$3.
- (20.) MANUAL OF ACCOUNTING, REPORTING, AND BUSINESS PROCEDURE FOR THE TERRITORIAL GOVERN-MENT OF HAWAII.
  - By Henry P. Seidemann. 570 pp. 1928. \$5.
- (21.) THE GOVERNMENT AND ADMINISTRATION OF GER-MANY.
  - By Frederick F. Blachly and Miriam E. Oatman. 770 pp. 1928. \$5.
- (22.) GROUP REPRESENTATION BEFORE CONGRESS. By E. Pendleton Herring. 309 pp. 1929. \$3.
- (23.) REGISTRATION OF VOTERS IN THE UNITED STATES. By Joseph P. Harris. 390 pp. 1929. \$3.
- (24.) THE GOVERNMENT AND ADMINISTRATION OF THE District of Columbia: Suggestions for Change.
  - By Laurence F. Schmeckebier and W. F. Willoughby. 187 pp. 1929. \$2.
  - 25. FINANCIAL CONDITION AND OPERATION OF THE NA-TIONAL GOVERNMENT, 1921-1930.

By W. F. Willoughby. 234 pp. 1931. \$3.

- 26. STATE CENTRALIZATION IN NORTH CAROLINA. By Paul V. Betters (editor). 261 pp. 1932. \$2.
- 27. Election Administration in the United States. By Joseph Harris. (In press.)

## Principles of Administration

(1.) Principles Governing the Retirement of Public Employees.

By Lewis Meriam. 477 pp. 1918. Out of print.

(2.) PRINCIPLES OF GOVERNMENT PURCHASING. By Arthur G. Thomas. 275 pp. 1919. \$3. (3.) PRINCIPLES OF GOVERNMENT ACCOUNTING AND RE-PORTING.

By Francis Oakey. 561 pp. 1921. Out of print.

- (4.) PRINCIPLES OF PUBLIC PERSONNEL ADMINISTRATION. By Arthur W. Procter. 244 pp. 1921. \$3.
- (5.) PRINCIPLES OF PUBLIC ADMINISTRATION. By W. F. Willoughby. 720 pp. 1927. \$5.
- (6.) PRINCIPLES OF JUDICIAL ADMINISTRATION. By W. F. Willoughby. 662 pp. 1929. \$5.

#### Service Monographs of the United States Government

- 1. Geological Survey. 163 pp. 1918. Out of print.
- 2. Reclamation Service. 177 pp. 1919. Out of print.
- 3. Bureau of Mines. 162 pp. 1922. \$1.
- 4. Alaskan Engineering Commission. 124 pp. 1922. \$1.
- 5. Tariff Commission. 71 pp. 1922. \$1.
- 6. Federal Board for Vocational Education. 74 pp. 1922. \$1.
- 7. Federal Trade Commission. 80 pp. 1922. \$1.
- 8. Steamboat-Inspection Service. 130 pp. 1922. \$1.
- 9. Weather Bureau. 87 pp. 1922. \$1.
- 10. Public Health Service. 298 pp. 1923. \$2.
- 11. National Park Service. 172 pp. 1922. \$1.
- 12. Employees' Compensation Commission. 86 pp. 1922. \$1.
- 13. General Land Office. 224 pp. 1923. \$1.50.
- 14. Bureau of Education. 157 pp. 1923. \$1.
- 15. Bureau of Navigation. 124 pp. 1923. \$1.
- 16. Coast and Geodetic Survey. 107 pp. 1923. \$1.
- 17. Federal Power Commission. 126 pp. 1923. \$1.
- 18. Interstate Commerce Commission. 169 pp. 1923. Out of print.
- 19. Railroad Labor Board. 83 pp. 1923. \$1.
- 20. Division of Conciliation. 37 pp. 1923. \$1.
- 21. Children's Bureau. 83 pp. 1925. \$1.
- 22. Women's Bureau. 31 pp. 1923. \$1.
- 23. Office of the Supervising Architect. 138 pp. 1923. \$1.
- 24. Bureau of Pensions. 111 pp. 1923. \$1.
- 25. Bureau of Internal Revenue. 270 pp. 1923. \$1.50.
- 26. Bureau of Public Roads. 123 pp. 1923. \$1.
- 27. Office of the Chief of Engineers. 166 pp. 1923. \$1.
- 28. United States Employment Service. 130 pp. 1923. \$1.

- 29. Bureau of Foreign and Domestic Commerce. 180 pp. 1924. \$1.
- 30. Bureau of Immigration. 247 pp. 1924. \$1.50.
- 31. Patent Office. 127 pp. 1924. Out of print.
- 32. Office of Experiment Stations. 178 pp. 1924. \$1.
- 33. Customs Service. 191 pp. 1924. Out of print.
- 34. Federal Farm Loan Bureau. 160 pp. 1924. \$1.
- 35. Bureau of Standards. 299 pp. 1925. \$2.
- 36. Government Printing Office. 143 pp. 1925. \$1.
- 37. Bureau of the Mint. 90 pp. 1926. \$1.
- 38. Office of the Comptroller of the Currency. 84 pp. 1926. \$1.
- 39. Naval Observatory. 101 pp. 1926. \$1.
- 40. Lighthouse Service. 158 pp. 1926. \$1.
- 41. Bureau of Animal Industry. 190 pp. 1927. \$1.50.
- 42. Hydrographic Office. 112 pp. 1926. \$1.
- 43. Bureau of Naturalization. 108 pp. 1926. \$1.
- 44. Panama Canal. 413 pp. 1927. \$2.50.
- 45. Medical Department of the Army. 161 pp. 1927. \$1.50.
- 46. General Accounting Office. 215 pp. 1927. \$1.50.
- 47. Bureau of Plant Industry. 121 pp. 1927. \$1.
- 48. Office of Indian Affairs. 591 pp. 1927. \$3.
- 49. United States Civil Service Commission. 153 pp. 1928. \$1.50.
- 50. Food, Drug and Insecticide Administration. 134 pp. 1928.\$1.50.
- 51. Coast Guard. 265 pp. 1929. \$1.50.
- 52. Bureau of Chemistry and Soils. 218 pp. 1928. \$1.50.
- 53. Bureau of the Census. 224 pp. 1929. \$1.50.
- 54. Bureau of Biological Survey. 339 pp. 1929. \$2.
- 55. Bureau of Dairy Industry. 74 pp. 1929. \$1.50.
- 56. Bureau of Engraving and Printing. 111 pp. 1929. \$1.50.
- 57. Bureau of Prohibition. 333 pp. 1929. \$2.
- 58. Forest Service. 268 pp. 1930. \$2.
- 59. Plant Quarantine and Control Administration. 198 pp. 1930. \$1.50.
- 60. Bureau of Entomology. 177 pp. 1930. \$1.50.
- 61. Aeronautics Branch: Department of Commerce. 147 pp. 1930. \$1.50.
- 62. Bureau of Home Economics. 95 pp. 1930. \$1.50.

## LIST OF PUBLICATIONS

63. United States Shipping Board. 338 pp. 1931. \$2.50.

64. The Personnel Classification Board. 160 pp. 1931. \$1.50.

65. The Federal Radio Commission. 159 pp. 1932. \$1.50.

66. The Veterans' Administration. (In press.)

### MISCELLANEOUS SERIES

PORTO RICO AND ITS PROBLEMS.

By Victor S. Clark and Associates. 707 pp. 1930. \$5.

STEPHEN J. FIELD: CRAFTSMAN OF THE LAW.

- By Carl Brent Swisher. 473 pp. 1930. \$4.
- THE SPIRIT OF '76 AND OTHER ESSAYS.

By Carl Becker, J. M. Clark, and William E. Dodd. 135 pp. 1927. \$1.50.

Essays on Research in the Social Sciences.

By W. F. G. Swann and others. 194 pp. 1931. \$2.

The Society of Nations: Its Organization and Constitutional Development.

By Felix Morley. 678 pp. 1932. \$3.50.

THE AMERICAN TRANSPORTATION PROBLEM. By Harold G. Moulton and Associates. 895 pp. \$3.

THE ECONOMICS OF AIR MAIL TRANSPORTATION.

By Paul F. David. (In press.)

#### **PAMPHLETS**

No. 1. RECENT GROWTH OF THE ELECTRIC LIGHT AND POWER INDUSTRY.

By Charles O. Hardy. 53 pp. 1929. 50 cents.

- No. 2. FIRST MORTGAGES IN URBAN REAL ESTATE FINANCE. By John H. Gray and George W. Terborgh. 69 pp. 1929. 50 cents.
- No. 3. The Absorption of the Unemployed by American Industry.

By Isador Lubin. 36 pp. 1929. 50 cents.

No. 4. Some Trends in the Marketing of Canned Foods.

By Leverett S. Lyon. 57 pp. 1929. 50 cents.

No. 5. THE FECUNDITY OF NATIVE AND FOREIGN-BORN WOMEN IN NEW ENGLAND.

By Joseph J. Spengler. 63 pp. 1930. 50 cents.

# LIST OF PUBLICATIONS

No. 6. Sources of Coal and Types of Stokers and Burners Used by Electric Public Utility Power Plants.

By William H. Young. 83 pp. 1930. 50 cents.

- No. 7. FEDERAL SERVICES TO MUNICIPAL GOVERNMENTS. By Paul V. Betters, 100 pp. 1931. 50 cents.
- No. 8. REORGANIZATION OF THE FINANCIAL ADMINISTRA-TION OF THE DOMINICAN REPUBLIC.

By Taylor G. Addison. 105 pp. 1931. 50 cents.

No. 9. Advisory Economic Councils.

By Lewis L. Lorwin. 84 pp. 1931. 50 cents.

No. 10. UNEMPLOYMENT INSURANCE IN AUSTRIA. By Mollie Ray Carroll. 52 pp. 1932. 50 cents.



