

This PDF is a selection from an out-of-print volume from the National Bureau of Economic Research

Volume Title: Planning and Control of Public Works

Volume Author/Editor: Leo Wolman

Volume Publisher: NBER

Volume ISBN: 0-87014-016-7

Volume URL: <http://www.nber.org/books/wolm30-1>

Publication Date: 1930

Chapter Title: Front matter to "Planning and Control of Public Works"

Chapter Author: Leo Wolman

Chapter URL: <http://www.nber.org/chapters/c5504>

Chapter pages in book: (p. -31 - -16)

PLANNING AND CONTROL OF PUBLIC WORKS

REPORT OF THE COMMITTEE ON RECENT ECONOMIC CHANGES
OF THE
PRESIDENT'S CONFERENCE ON UNEMPLOYMENT

INCLUDING THE REPORT OF
LEO WOLMAN
OF THE
NATIONAL BUREAU OF ECONOMIC RESEARCH, INC.

FIRST EDITION

C. C. N. Y. LIBRARY
SCHOOL OF BUSINESS
TWENTY THIRD STREET

NEW YORK
NATIONAL BUREAU OF ECONOMIC RESEARCH, INC.
1930

X

336.39

C76p

Copyright, 1930, by
THE COMMITTEE ON RECENT ECONOMIC CHANGES OF THE PRESIDENT'S
CONFERENCE ON UNEMPLOYMENT

All rights reserved

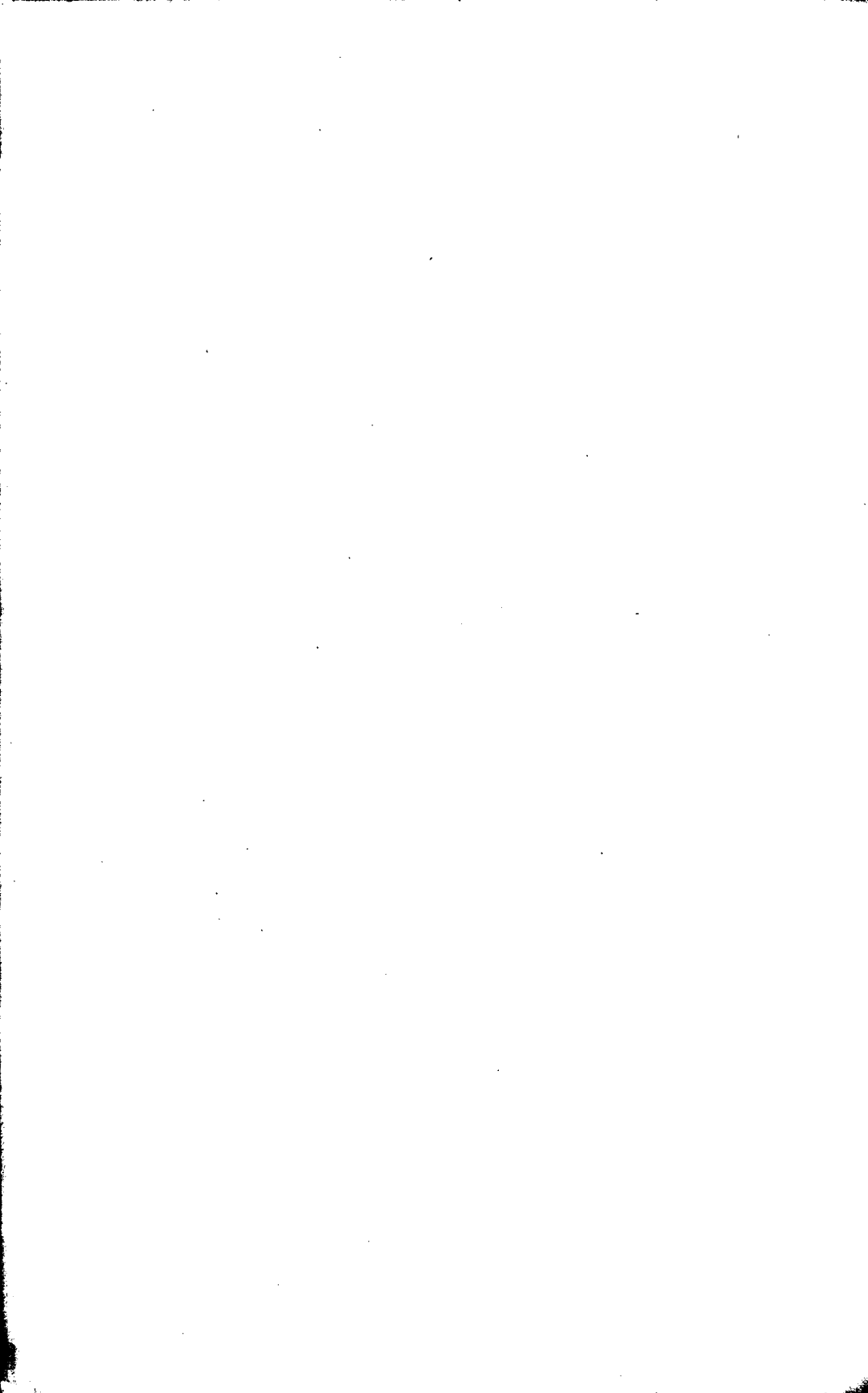
First printing, June, 1930

PRINTED IN THE UNITED STATES OF AMERICA BY
J. J. LITTLE & IVES CO., NEW YORK

**PUBLICATIONS OF THE NATIONAL BUREAU OF
ECONOMIC RESEARCH, INCORPORATED**

No. 17

**PLANNING AND CONTROL OF
PUBLIC WORKS**



National Bureau of Economic Research, Inc.

Publications in the order of their issue

INCOME IN THE UNITED STATES

By WESLEY C. MITCHELL, WILLFORD I. KING, FREDERICK R. MACAULAY AND OSWALD W. KNAUTH

Volume I. A summary of an investigation of the Amount and Distribution of Income in the United States, 1909-1919. 152 pages, (Fifth printing.) \$1.58.

Volume II. A report giving in full the methods and estimates on which the results shown in Volume I are based. 440 pages, (Second printing,) \$5.15.

DISTRIBUTION OF INCOME BY STATES IN 1919

By OSWALD W. KNAUTH

The share of each state in the national income. 32 pages, (Out of print.)

BUSINESS CYCLES AND UNEMPLOYMENT

By the staff of the Bureau with 16 collaborators.

Results of an investigation made for the President's Conference on Unemployment. 405 pages, \$4.10.

EMPLOYMENT, HOURS, AND EARNINGS IN PROSPERITY AND DEPRESSION

By WILLFORD I. KING

Gives details of investigation summarized in *Business Cycles and Unemployment* to which it is a companion volume. 147 pages, (Out of print.)

THE GROWTH OF AMERICAN TRADE UNIONS, 1880-1923

By LEO WOLMAN

Membership year by year; fluctuations with business cycles; women in trade unions; working population. 170 pages, \$3.

INCOME IN THE VARIOUS STATES

By MAURICE LEVEN AND WILLFORD I. KING

Gives total and per capita income for each state, in 1919, 1920 and 1921 with special tables showing the income of farmers, wage earners, and persons of large means. 306 pages, \$5.

BUSINESS ANNALS

By WILLARD L. THORP AND WESLEY C. MITCHELL

A descriptive summary of business conditions in United States, England, and 15 other countries, for periods of 36 to 136 years. 384 pages, (Second printing) \$4.

MIGRATION AND BUSINESS CYCLES

By HARRY JEROME

A statistical study of the shortage and surplus of labor in the United States in relation to immigration and emigration. 256 pages, \$3.50.

BUSINESS CYCLES: THE PROBLEM AND ITS SETTING

By WESLEY C. MITCHELL

Here Dr. Mitchell explains the numerous processes involved in business cycles; shows how our present economic organization was evolved; describes how to use statistics in the study of business cycles and how to use business annals; and concludes with a working concept of business cycles. 512 pages, \$6.50.

THE BEHAVIOR OF PRICES

By FREDERICK C. MILLS

First results of an investigation of the movements of commodity prices, individually and by groups. 598 pages, \$7.

TRENDS IN PHILANTHROPY

By WILLFORD I. KING

A study of a typical American city. 78 pages, \$1.75.

RECENT ECONOMIC CHANGES

By EDWIN F. GAY, WESLEY C. MITCHELL, AND OTHERS

A report of conditions in the United States, 1922-1923, made by a special staff of the National Bureau of Economic Research, Inc., for the Committee on Recent Economic Changes, Herbert Hoover, Chairman. 2 volumes, \$7.50 per set.

INTERNATIONAL MIGRATIONS, VOL. I, STATISTICS

Compiled by Imre Ferenczi of the International Labour Office, Geneva, and edited by Walter F. Willcox for the National Bureau of Economic Research. Fifty-one countries represented. 1,112 pages, \$10.

THE NATIONAL INCOME AND ITS PURCHASING POWER

By WILLFORD I. KING 394 pages, \$5.

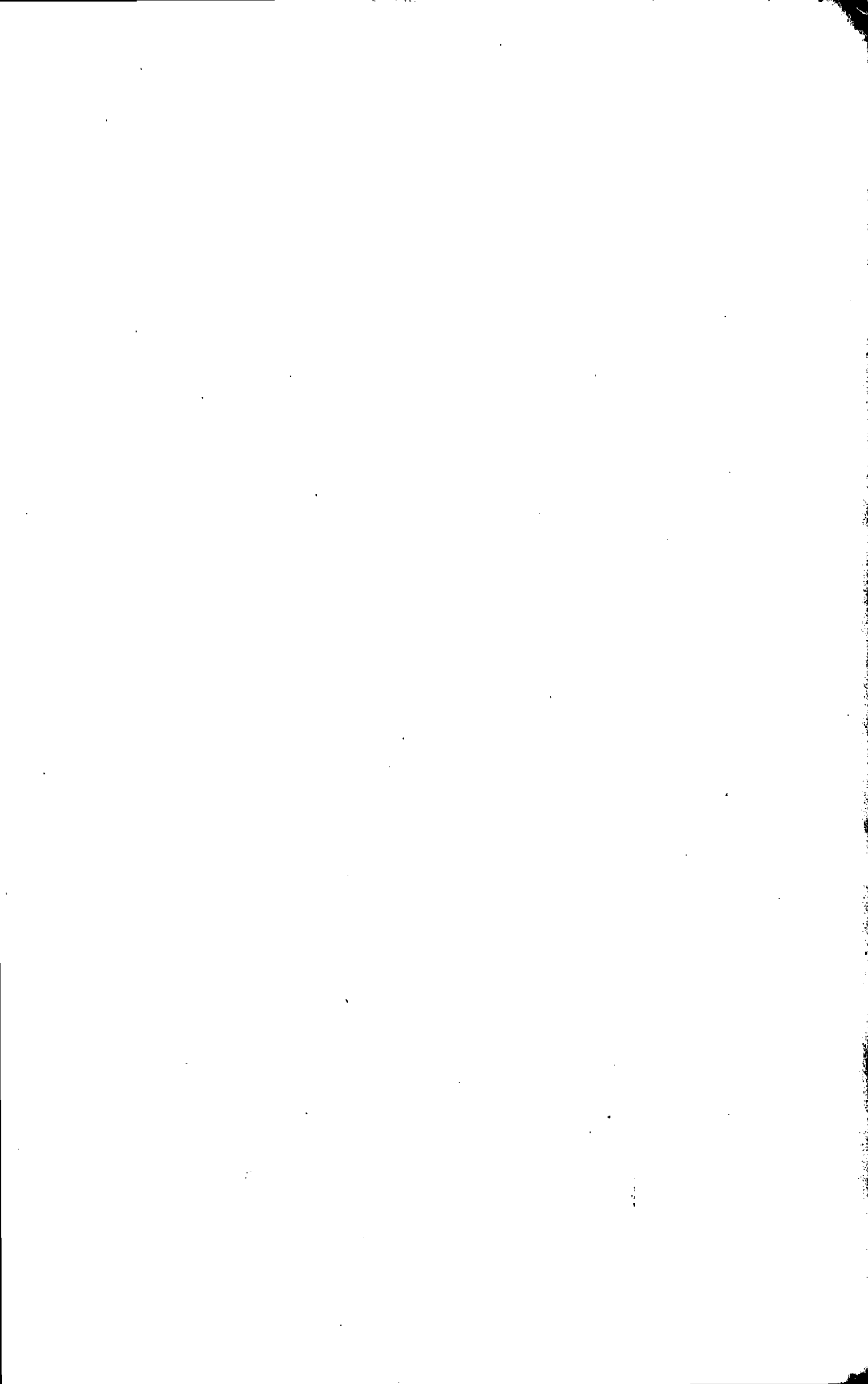
CORPORATION CONTRIBUTIONS TO ORGANIZED COMMUNITY WELFARE SERVICES

By PIERCE WILLIAMS AND FREDERICK E. CROXTON

347 pages, \$3.

Copies of available reports may be obtained upon application accompanied by remittance to

NATIONAL BUREAU OF ECONOMIC RESEARCH, Inc.
51 Madison Avenue, New York



FREE LIBRARY OF PHILADELPHIA

CONTENTS

	PAGE
REPORT OF THE COMMITTEE ON RECENT ECONOMIC CHANGES	
Foreword	xvii
The Principle and Technique of Economic Balance	xix
The Stabilizing Influence of Public Construction	xx
Program of Exploration and Appraisal	xxvi
REPORT OF THE NATIONAL BUREAU OF ECONOMIC RESEARCH, INC.	
INTRODUCTION	1
CHAPTER I	
THE EXPENDITURES OF CITIES	7
The Growth of American Cities	7
The Purposes of City Expenditures on Public Construction	13
CHAPTER II	
PUBLIC WORKS IN NEW YORK CITY	18
Procedure and Financing of Public Works	20
Capital Outlays on Public Improvements	23
The Forms of Temporary Borrowing	25
The Forms of Long Term Borrowing	26
Sources and Nature of Expenditures on Permanent Improvements	27
The City's Debt	34
Tax and Debt Limits	34
The Debt Limit of New York City	37
The Purchase of Supplies and Equipment	40
Purchasing Agencies in New York City	42
Future Projects	47
The Numbers Directly Employed on Public Works	52
The Total Numbers Employed by New York City	53
Control	54
CHAPTER III	
THE GOVERNMENT OF NEW YORK STATE	57
The Public Works Expenditures of the New York State Government	57
Expenditures in the Area of New York State	66
The Initiation of Public Works by the New York State Government	67
Debt-Incurring Procedure	68
The Financing of Public Works	71
Unexhausted Bond Issue Authorizations	80
Future Projects	80
The Planning and Control of Permanent Improvements	81
The Numbers Employed on Public Works	87
CHAPTER IV	
FEDERAL CONSTRUCTION	88
The Procedure of Federal Expenditures on Public Works	92
Future Projects	100

	PAGE
The Numbers Employed on Federal Public Works	101
Control	101
CHAPTER V	
PUBLIC AND PRIVATE CONSTRUCTION	104
Public Construction	108
Geographical Distribution of Public Works	109
The Numbers Directly Employed on Public Construction	109
The Methods of Estimating the Total Volume of Public Works	115
Estimate of the Total Volume of Public Construction	123
Estimate of Total Volume of Public and Private Construction	126
CHAPTER VI	
ROAD BUILDING	127
CHAPTER VII	
THE FINANCING OF PUBLIC CONSTRUCTION	135
Purposes of Bond Issues	137
Municipal Tax Receipts and Bond Issues	142
Constitutional Debt Limits	147
CHAPTER VIII	
FUTURE PROJECTS	150
Existing Indices of Probable Future Undertakings	150
Increased Expenditures of American Cities	152
Probable Future Expenditures in Selected American Municipalities	153
CHAPTER IX	
PLANNING AND PROCEDURE	159
The Prerequisites for the Control of Public Construction	159
The Attitude of Public Officials	160
Some Obstacles to Control Inherent in the Nature of Local Govern- ments	161
Diversity of Procedure	164
The Development of a Planned Public Economy	166
CHAPTER X	
THE PROBLEM OF CONTROL	168
The Theory of Public Works as a Method of Reducing Unemployment Foreign Experience	168 169
The Theory of Control by a Public Works Reserve	172
Difficulties of Creating Reserves	173
Acceleration of Public Construction	175
The Prosperity Reserve in the United States	176
The Theory of Control	177
Fluctuations in Public Construction	179
The Volume of Public Works in the First Four Months of 1929 and 1930	180 180
APPENDIX	183
INDEX	247

LIST OF TABLES IN THE TEXT

	PAGE
Table 1. The Growth and Distribution of the Outstanding Debt of New York City, 1830-1928	8
Table 2. Public Construction Contracts Awarded in 14 Selected Cities, Combined, 1919-1928	11
Table 3. Assessed Valuation of Property Subject to General Property Tax in Selected Cities, 1919-1928	16
Table 4. Expenditures on Public Construction in New York City, 1919-1928	21
Table 5. Expenditures on Public Construction, Classified by Comprehensive Types and Different Methods of Financing in New York City, 1919-1928	28
Table 6. Expenditures on Public Construction Financed by Bond Issues in New York City, 1919-1928: Special Revenue Bond Fund Account	29
Table 7. Expenditures on Public Construction Financed by Bond Issues in New York City, 1919-1928: Corporate Stock, Serial Bond and Assessment Bond Fund Accounts	30
Table 8. Expenditures on Public Construction Financed by Bond Issues in New York City, 1921-1928: Tax Note Fund Accounts	32
Table 9. Expenditures on Public Construction Financed Out of Special Accounts in New York City, 1919-1928	33
Table 10. Bonds and Tax Notes Issued on Account of Expenditures for Permanent Improvements by New York City, 1910-1929	35
Table 11. Purpose of New Debt Contracted Yearly by New York City, 1925-1929	36
Table 12. Total Indebtedness, Debt Incurring Power and Unreserved Debt Margin in New York City, 1920-1929	39
Table 13. Total Bonded and Temporary Indebtedness and Constitutional Margin of Debt Incurring Capacity in Selected Cities in New York State, 1925-1927	41
Table 14. Tax Budget Appropriations Out of Current Revenue for Public Works and for Supplies, Equipment and Materials, in New York City, 1919-1929	44
Table 15. Value of Contracts Awarded and Work Done by New York City Board of Water Supply, 1906-1928	50
Table 16. Estimated Number of Employees on Public Works in New York City, Fall of 1929	52
Table 17. Expenditures on Public Construction by New York State Government, 1919-1928	58
Table 18. Expenditures on Public Construction by New York State Government, 1919-1928: From the General Fund and from Special Funds	61

LIST OF TABLES IN THE TEXT

	PAGE
Table 19. Total Expenditures on Public Construction in New York State, 1925-1928	66
Table 20. Long Term Bond Issues by New York State Government Giving Interest Rates and Basic Yields, 1921-1928	69
Table 21. Total Expenditures on Permanent Improvements by New York State Government, 1908-1928	74
Table 22. Expenditures for Highway Construction by New York State Government, 1895-1928	76
Table 23. Expenditures for Buildings by New York State Government, 1908-1928	78
Table 24. Condition of Unexhausted Bond Issues Authorized by New York State Government, at End of Fiscal Year 1928	80
Table 25. Course of Employment on State Highways in New York State, 1923-1929	85
Table 26. Expenditures on New Construction and on Repairs and Maintenance by the Federal Government, 1919-1929	88
Table 27. Expenditures on New Construction by the Federal Government in 1929 and in Period 1919-1929	90
Table 28. Expenditures on New Construction by Leading Departments of the Federal Government, 1929	91
Table 29. Expenditures on Roads by the Federal Government, 1919-1929	91
Table 30. Expenditures on Repairs and Maintenance by Leading Departments of the Federal Government, 1919-1929	92
Table 31. Authorizations for Highway Construction Made by Federal Legislation During the Fiscal Years 1917-1931	95
Table 32. Expenditures for Federal Aid Payments to States for Cooperative Highway Construction and for Forest Road Construction Made by the Department of Agriculture During the Fiscal Years 1920-1929	96
Table 33. Number of Employees Engaged on Civil Work by the Corps of Engineers of the War Department, 1920-1929	102
Table 34. Estimated Total Construction Contracts Awarded in the United States, 1919-1930	105
Table 35. Estimated Total Construction Contracts Awarded in the United States, 1928 and 1929	106
Table 36. Dodge Estimates of Total Construction Contracts Awarded, Including New Buildings Under \$5000 and Remodelling and Alterations, 1928, 1929 and 1930	107
Table 37. Public Construction Contracts Awarded in 36 States, 1923-1929	110
Table 38. Public Construction Contracts Awarded in 27 Northeastern States, 1919-1929	111
Table 39. Engineering Construction Contracts Awarded for Public Works in the United States, 1919-1929	119
Table 40. Comparisons of Different Estimates of Expenditures on Public Construction by New York State and New York City, 1919-1928	121
Table 41. Total Construction Contracts Awarded, 1919-1929	123
Table 42. Estimated Total Public Construction in the United States, 1923-1928	125

LIST OF TABLES IN THE TEXT

	PAGE
Table 43. Estimated Total Public and Private Construction in the United States, 1923-1928	126
Table 44. Income and Funds Available for State Highway and Bridge Work, 1923-1928	130
Table 45. Income and Funds Available for Local Highway and Bridge Work, 1923-1928	131
Table 46. Mileage and Cost of Federal Aid Roads, 1919-1929	133
Table 47. Net Annual Increase in Amount of Municipal Bonds Outstanding in the United States, 1914-1928	138
Table 48. Purpose of Municipal Bond Issues in the United States, 1924-1928	138
Table 49. Tax Receipts and New Bond Issues of American Cities, 1905-1929	143
Table 50. Assessed Valuations, Bonding Capacity and Bonding Margins, San Diego City, California, 1917-1926	154
Table 51. Borrowing Capacity and Estimated Costs of Improvements, Indianapolis, Indiana, 1930-1940	155
Table 52. Construction Contracts Awarded in the First Four Months of 1929 and 1930	180

LIST OF CHARTS

	PAGE
Chart 1. The Growth and Distribution of the Outstanding Debt of New York City, 1830-1928	9
Chart 2. Public Construction Contracts Awarded in 14 Selected Cities, Combined, 1919-1928	12
Chart 3. Total Public Construction Contracts Awarded in 17 Selected Cities, 1919-1928	14
Chart 4. Expenditures on Public Construction in New York City, 1919-1928	22
Chart 5. Total Indebtedness, Debt Incurring Power, and Unreserved Debt Margin in New York City, 1920-1929	40
Chart 6. Monthly Contracts Awarded for Subway Construction in New York City, 1913-1929 and Average Numbers of Men Employed Thereon, 1925-1929	53
Chart 7. Contract Payments for Construction of Water Supply Systems in New York City and Average Numbers of Men Employed Thereon, Monthly, 1918-1929	54
Chart 8. Expenditures on Public Construction by New York State Government, 1919-1928	59
Chart 9. Annual Issues of Long Term Bonds and Temporary Borrowing by New York State, 1919-1928	70
Chart 10. Expenditures on Public Construction by New York State Government, 1919-1928: From Special Funds	72
Chart 11. Expenditures on Different Types of Public Construction by New York State Government: From General Revenue and from Borrowing	73
Chart 12. Appropriations for Building, Balances Available from Previous Years, Construction Contracts Awarded and Completed, New York State Government, 1924-1929	82
Chart 13. Relation Between Total Value of Building Contracts Awarded Since January 1, 1924, and Contracts Completed Since January 1, 1925, New York State Government	83
Chart 14. Expenditures on New Construction and on Repairs and Maintenance, by the Federal Government, 1919-1929	89
Chart 15. Estimated Total Volume of Public and Private Construction in the United States, 1923-1928	109
Chart 16. Public Construction Contracts Awarded in 27 States by Major Classes, 1919-1929	112
Chart 17. Fluctuations of Selected Types of Construction Contracts Awarded in 27 States, Monthly, 1919-1929	113
Chart 18. Total Public Construction Contracts Awarded in Selected Districts of the United States, 1919-1929	114

LIST OF CHARTS

	PAGE
Chart 19. Total State and Local Road and Bridge Disbursements Throughout the United States, 1904-1928	127
Chart 20. Total Income, Funds Available and Expenditures for State Highways and Bridges Throughout the United States, 1923-1928	128
Chart 21. Purposes of Expenditures for State Highways and Bridges in the United States, 1923-1928	128
Chart 22. Sources of Funds Available for State Highways and Bridges in the United States, 1923-1928	128
Chart 23. Total Income, Funds Available and Expenditures for Local Highways and Bridges Throughout the United States, 1923-1928	129
Chart 24. Purposes of Expenditures for Local Highways and Bridges in the United States, 1923-1928	129
Chart 25. Sources of Funds Available for Local Highways and Bridges in the United States, 1923-1928	129
Chart 26. Total Federal Aid for Road Construction Compared With Total Cost of Such Projects and With Total Road and Bridge Expenditures of All Kinds, 1919-1929	132
Chart 27. Municipal Bond Yields and Municipal Bond Issues in the United States, 1900-1929	136
Chart 28. Net Annual Increase in Amount of Municipal Bonds Outstanding in the United States, 1914-1928	139
Chart 29. Purpose of Municipal Bond Issues in the United States, 1924-1928	140
Chart 30. Purposes of Municipal Bond Issues Throughout the United States, Excluding Municipalities in New York State, 1924-1928	141
Chart 31. Yearly Volume of Bonds Issued by New York City for Permanent Improvements, 1900-1929	142
Chart 32. Yearly Amount of Bond Issues and Tax Receipts of Cities in the United States, 1905-1929	144
Chart 33. Comparison of Tax Receipts and Long Term Bond Issues of Selected Cities, 1900-1929	145
Chart 34. Comparison of Tax Receipts and Bond Issues for All Purposes of New York City, 1900-1928	147

CONTENTS OF THE APPENDIX

APPENDIX A

	PAGE
Table 1. Public Construction Contracts Awarded in Albany, New York, 1919-1928	183
Table 2. Public Construction Contracts Awarded in Birmingham, Alabama, 1923-1928	184
Table 3. Public Construction Contracts Awarded in Boston, Massachusetts, 1919-1928	185
Table 4. Public Construction Contracts Awarded in Buffalo, New York, 1919-1928	186
Table 5. Public Construction Contracts Awarded in Chicago, Illinois, 1919-1928	187
Table 6. Public Construction Contracts Awarded in Cleveland, Ohio, 1919-1928	188
Table 7. Public Construction Contracts Awarded in Detroit, Michigan 1919-1928	189
Table 8. Public Construction Contracts Awarded in Houston, Texas, 1925-1928	190
Table 9. Public Construction Contracts Awarded in Indianapolis, Indiana, 1919-1928	191
Table 10. Public Construction Contracts Awarded in Newark, New Jersey, 1919-1928	192
Table 11. Public Construction Contracts Awarded in New Haven, Connecticut, 1919-1928	193
Table 12. Public Construction Contracts Awarded in New Orleans, Louisiana, 1923-1928	194
Table 13. Public Construction Contracts Awarded in New York, New York, 1919-1928	195
Table 14. Public Construction Contracts Awarded in Philadelphia, Pennsylvania, 1919-1928	196
Table 15. Public Construction Contracts Awarded in Rochester, New York, 1919-1928	197
Table 16. Public Construction Contracts Awarded in St. Louis, Missouri, 1919-1928	198
Table 17. Public Construction Contracts Awarded in St. Paul, Minnesota, 1919-1928	199

APPENDIX B

Notes to Tables 5-9, Chapter II, pp. 28-33	200
--	-----

APPENDIX C

Notes to Chapter II: Financial Procedure in New York City	202
---	-----

APPENDIX D

	PAGE
Estimated Number of Officials and Employees of the Government of New York City During the Year 1929	207

APPENDIX E

Brief Chronology of the Catskill Mountain Water Supply	209
--	-----

APPENDIX F

Notes to Table 17, Chapter III, p. 58	212
---	-----

APPENDIX G

Table 1. Total Federal Expenditures for New Construction by Controlling Organizations, 1919-1929	214
Table 2. Total Federal Construction Expenditures for Repairs and Maintenance by Controlling Organization, 1919-1929	218
Table 3. Total Federal Expenditures for New Construction by Geographical Divisions, 1919-1929	222

APPENDIX H

Table 1. Public Construction Contracts Awarded in Chicago District (The Central West), 1919-1929	223
Table 2. Public Construction Contracts Awarded in New York District (New York State and Northern New Jersey), 1919-1929	224
Table 3. Public Construction Contracts Awarded in Pittsburgh District, 1919-1929	225
Table 4. Public Construction Contracts Awarded in Atlanta District (Southeastern States), 1923-1929	226
Table 5. Public Construction Contracts Awarded in Philadelphia (Middle Atlantic States), 1919-1929	227
Table 6. Public Construction Contracts Awarded in Boston District, (New England States), 1919-1929	228
Table 7. Public Construction Contracts Awarded in Texas District, 1925-1929	229
Table 8. Public Construction Contracts Awarded in Minneapolis District, (The Northwest), 1919-1929	230

APPENDIX I

Table 1. Municipal Bond Yields, 1900-1929: Standard Statistics Index Yields of 15 Municipal Bonds and Basis at Which New York City Long Term Bonds Were Issued	231
Table 2. Amount of Long and Short Term Bonds Issued by Cities in the United States, 1905-1929	236
Tables 3-A and 3-B. Tax Receipts and New Issues of Long-Term Bonds in Selected Cities, 1900-1929	238

APPENDIX J

Tabular Summary of Available Laws as to Allowable Bond Issues in Per Cent of Taxable Bases, and Issuance of Water Works Bonds in Excess Thereof	242
---	-----