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: Report of the Committee On Recent Economic Changes

Chapter Author: Leo Wolman

Chapter URL: http://www.nber.org/chapters/c5505

Chapter pages in book: (p. -15 - -1)

PLANNING AND CONTROL OF PUBLIC WORKS

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

FOREWORD

In May 1929, the Committee on Recent Economic Changes of the President's Conference on Unemployment published its report on post-war developments in American economic life, particularly those since the recovery from the depression of 1920–21. At the suggestion of President Hoover, and with the assistance of the National Bureau of Economic Research and the Department of Commerce, the committee undertook, in July 1929, an examination of the planning and control of public works and their relation to employment. The report now made public is, like its predecessor, the result of the collaboration of a large number of agencies, governmental and private.

In connection with its various activities, the committee desires particularly to thank the Carnegie Corporation of New York and the Rockefeller Foundation for the funds which have made possible its investigations. It wishes to acknowledge also the services of Dr. Leo Wolman, Dr. Edwin F. Gay, and Dr. Wesley C. Mitchell, of the National Bureau of Economic Research (Inc.), for the basic survey and the fact finding report; the United States Departments of Commerce, of Agriculture, of Labor, of the Treasury and of the Post Office for data on public construction of various kinds; and the states and municipalities for coöperation in providing information.

The services of Hon. Robert P. Lamont, Secretary of Commerce, and those of the Division of Building and Housing and of the new Division of Public Construction set up in the Department of Commerce have been especially noteworthy. Dr. John M. Gries, and Messrs. James S. Taylor and John R. Riggleman have made very valuable contributions. The committee is also indebted to Dr. Alanson D. Morehouse, I. Mansfield Spasoff, Robinson Newcomb, Thomas M. Curran, J. C. Leukhardt, R. M. Gates, A. B. Fridinger, and Frank Johnson, of the Department of Commerce; Thomas C. Coleman, Office of the Supervising Architect, Treasury Department; Colonel Thomas M. Robins, Corps of Engineers; T. Warren Allen, Bureau of Public Roads; Colonel Lewis H. Tripp, United States Veterans Bureau; Captain Y. S. Williams, Aide to the Secretary of the Navy; General L. H. Bash, chief, Construction Division, Quartermaster Corps, United States Army; Colonel U. S. Grant, 3d, Director of Public Buildings and Public Parks, Washington, D. C.

Generous coöperation and advice have been received from the agents of the Federal Government and from local public officials throughout the country. Without the assistance of the F. W. Dodge Corporation, the Engineering News-Record, the United States Bureau of the Census, and many departments of the governments of New York State and New York City, basic materials and estimates would not have been available. To these many individuals and to T. S. Holden, Vice President of the Statistical Division of the F. W. Dodge Corporation; C. B. Louden, of the Statistical Division of the F. W. Dodge Corporation; Thomas P. Smith, Examiner of the Board of Estimate and Apportionment, New York City; A. M. Welch, Manager of Business News Department, Engineering News-Record; Robert R. Updegraff, Scarsdale, N. Y.; Prof. Baker Brownell, of Northwestern University; J. Scott Nicholls, Supervisor of Accounts and Auditor of Revenue, Department of Audit and Control, New York State; H. O. Schermerhorn, engineer of bridges and grade crossings, Department of Public Works, New York State; G. C. Ahles, senior assistant engineer, Division of Highways, Department of Public Works, New York State: H. S. Fairbank, chief engineer, Department of Agriculture, Bureau of Public Roads; R. Ridgway, chief engineer, Board of Transportation, New York City; Thaddeus Merriman, chief engineer, Board of Water Supply, New York City, the committee expresses its appreciation.

Dr. Leo Wolman and the National Bureau of Economic Research (Inc.) are solely responsible for the fact-finding survey herewith published; the Committee is solely responsible for the conclusions drawn from these facts and from other information put before it, which conclusions it presents in the following brief report.

REPORT OF THE COMMITTEE

SECTION I

The Principle and Technique of Economic Balance.—In the report of the committee on Recent Economic Changes, completed on February 28, 1929, attention was directed to the principle and technique of economic balance. It was recognized that private initiative, under conditions of relatively free competition, tends to establish an equilibrium among economic forces. But in practice this tendency, unrestrained, tends to produce alternate periods of depression and marked prosperity, and within each period to show a "spotty" condition as capital, enterprise, and labor unevenly concentrate.

The committee pointed out that the forces which bear upon our economic relationships have always been sensitive. From the prime processes of making and marketing to the facilitating functions of finance, all parts of our economic structure are interdependent and easily affected. And therein lies the danger; that through failure to recognize the inexorable operation of economic principles, or through private greed or lack of public understanding of the far-reaching influence of unsocial individual actions, this balance will be disturbed, greatly to our economic detriment.

It becomes increasingly clear that steady employment, the factor upon which our economic welfare is so largely dependent, is in turn dependent upon a growing and widely diffused skill in coördinating and steadying all the manifold and sensitive business processes which pivot about the consuming home, processes which serve its necessities and minister to the broadening life of the individual and the family.

A perfectly even flow of economic activities is not practically attainable, but an increasing degree of economic stability is undoubtedly the goal toward which the world is now working.

The survey of our own country's economic developments since 1922, already published by the committee, clearly demonstrated the value of maintaining, year in and year out, a reasonable economic balance which enables the intricate machinery of our industrial and commercial life to function smoothly.

Recent experiences have reinforced the committee's conviction of the necessity of studying more intensively the factors which make for the maintenance of economic balance.

A Continuing Study of Economic Factors.—The committee regards the comprehensive survey which accompanied its first report primarily as a point of departure. It is an initial step in a continuing study.

The changes affecting economic welfare were there described and, when possible, statistically measured. Now the most active and influential factors in that progress should be segregated and subjected to analysis, with the hope of contributing to a practical, workable technique designed to promote a reasonable balance of economic forces. With this in view, the committee is carrying on investigations along several broad lines and plans to present its findings from time to time as progress warrants.

Two inquiries, somewhat more detailed, were taken in hand by the committee shortly after the conclusion of the work upon its first report on recent economic changes in the United States. One of these was an exploration into the broad field of price relationships. The other was a preliminary examination of public construction as an element in any program of economic stability. In view of recent events, this examination has been rapidly pushed forward. The fact-finding survey of this subject, prepared by the National Bureau of Economic Research, with the coöperation of the United States Department of Commerce, accompanies this report.

SECTION II

The Stabilizing Influence of Public Construction.—If the sources for current information as to expenditures for public works and for budgeted future projects could be materially improved, and if Federal, State, and municipal authorities were prepared to act in concert, as the factors which affect the course of economic events indicate an approaching depression, the accumulation, on a national scale, of even relatively small and scattered margins of public construction which might wisely and with promptness be expedited, added to the amount of public construction hitherto available for acceleration would make up a sum ordinarily sufficient to be an appreciable factor in restoring reasonable economic balance.

But obviously, it is only one factor. The business community can not expect to operate without restraints of its own or to counterbalance careless excesses by undue reliance solely on public construction. In its proper place, however, as one among a number of steadying influences, and at its proper time, the acceleration of public construction may well become useful. This is the conclusion which emerges from consideration by the committee of the information put before it.

National Influence of Public Works.—On public construction about \$3,500,000,000 is expended each year and about 900,000 men are directly employed, according to the survey by the National Bureau of Economic Research and the Department of Commerce. The general trend is still rising.

These public expenditures on permanent improvements in the United States represent from 35 to 40 per cent of the total volume of expenditures for all private and public construction. Because of the difficulty of making satisfactory estimates of the total expenditures for repairs and maintenance, which are increasing from year to year, and of the total outlay of towns and townships, it is probable that these figures understate the total outlay on public works in this country.

Along with the increase in the American standard of living characteristic of this period, has been a continued increase in public works. The future programs of American governments reflect the pressing physical requirements of our communities, their rising standards and the increased coördination of all their parts. Participation by the people as a whole in many of the benefits of increased productivity, which of itself has varied as between different groups and geographical areas, has been one of the marked characteristics of American economic life.

While industrial, agricultural, and commercial activity has been "spotty," the broad social advantages of our accelerated activity have flowed out over the land. The highway building programs throughout the Nation have not been limited to the intensely active areas; good roads have been extended in all directions, serving the whole population. The same might be said for educational advantages, hospital and health facilities, personal mobility made possible by low-priced motor cars, swift and dependable transportation and communication, and numerous other facilities and services making for comfort and well-being, beyond the elemental requirements of food, clothing and shelter. Among these consequences of higher living standards increased public construction has an important place.

Public roads in 1929, the largest single element in public construction, cost more than \$1,500,000,000. On roads more than onethird of the public works outlay of the Federal Government was expended, and on roads and shipbuilding more than one-half was spent. The leading expenditures of the state governments were on road-building, grade crossings and on public buildings. American municipalities spent their moneys largely for permanent improvements, notably on transportation facilities in the form of subways, bridges, viaducts, street extensions and widenings, on public buildings, on general schools and hospitals, and on systems of water supply and sewage disposal. These works are scattered through every State in the Union and the activity stimulated by them is widely distributed.

Today the principal spending agencies are behind in their programs for permanent improvements. It is impossible to make a statistical estimate of the public expenditure on public works in the next few years, but it would appear that communities whose growth continues must make programs of construction requiring substantial outlays for traffic relief, water supply, sewage disposal, and hospital and educational facilities. Though per capita debt burdens have increased in recent years sampling studies of the margins of unused borrowing power indicate no financial embarrassment on the part of most of our governmental units.

There are great public works to be built, there is money to do it, and in this country where future projects of permanent public improvements are so fixed and well defined, it is unnecessary to resort to makeshifts for additional work. Never have programs of poor relief or charity colored, to any appreciable extent, the American policy toward public works in relation to unemployment and advocates of long range planning favor active prosecution of projects which are economically desirable at the most desirable time. From the standpoint of the tax payers who provide the funds and from that of labor which may be employed upon the work, noneconomic reasons for public construction have not been favored. Public Construction Normally Slow in Reaction.—That declines in public works started during periods of depression have continued even after general business has revived, is indicated by studies of the National Bureau of Economic Research. In recent months, however, this tendency has been measurably counteracted and public construction has been increased. Contracts awarded for public works and public utilities in the first four months of 1930 showed an increase of 30 per cent over the corresponding period of 1929. This is striking evidence of acceleration.

Left to themselves contracts for public construction are not highly sensitive to the cyclical movements in business. Having started to decline during periods of depression, public works have continued to decline sometimes all the way through the revival of the next cycle. To offset this natural tendency, to turn the course of public construction from a depressing to a stimulating influence, is of the very essence of the usefulness of public works as a balancing economic factor. And it is in promptly and comprehensively expediting work on projects already planned, rather than in initiating new undertakings, that the key to the problem lies.

The "Timing" Factor.—The amount of public construction which it is possible to push forward in order to influence employment and the trend of business in a period of recession is less important than the timing of the acceleration. The psychological effect of advancing public construction at the right time suggests that here is to be found an important factor in the problem of maintaining a reasonable economic balance. If properly timed, as the pendulum of employment starts to swing in an unfavorable direction, the influence of the prompt expedition of public works is effective out of all proportion to its size. Timeliness multiplies the effectiveness of each project accelerated.

Prompt action, before conditions become serious, can be assured only as there is developed a practical method of gauging the economic situation, so that unfavorable trends which threaten adversely to influence the economic balance may be anticipated and compensating factors influenced earlier than would be the case if natural forces were left to act in their own time and way. Skilled use of the time factor must, therefore, enter into a program of planning for stabilization.

An unplanned form of emergency relief for unemployment, public construction has long been tried and found in great measure

wanting. Nor does it appear practicable or necessary on any *large* scale to withhold expenditure on public construction during years of prosperity in order to accumulate a reserve of work during business depressions. The skillful timing in the use of a comparatively small margin of public construction is far more important. In this lies the real advantageous opportunity for practical influence upon the economic balance.

Slow acting, and properly so, are the restraints on public bodies made to safeguard bond issues and appropriations and the expenditures of public money. To conform to this legitimate rigidity, and at the same time to help to preserve the economic balance in times of threatened depression, it is necessary to have both mobility and protection. The timing of public works must be adjusted to these two principles.

Experience in recent months seems to show that even in the face of present legal requirements much can be done where a determined effort is made. But more might be done in the future if the problem were more completely explored with the double purpose of advancing both the financial mobility of states and municipalities and the safeguards and security of the tax-paying citizens.

The committee suggests that the American Bar Association appoint a committee to examine the legal questions involved in present procedure and to make recommendations for dealing with this dual problem.

Planning and Acceleration.—Long-range planning and budgeting are necessary if the full value of public works as a stabilizing influence is to be developed. At present there are many obstacles in the way of pushing public projects with such speed as is possible on private work, especially during the steps preliminary to contract-letting. Fortunately, the recent trend toward city and regional planning makes the task an easier one than it would have been even a few years ago. City planning commissions, bureaus of municipal research, and special committees appointed by the heads of local governments, city, county, and state, have contributed to this development. Comprehensive physical planning of public works within each city and region is a clear and evident need. This enables sites to be acquired in advance and plans to be made well ahead of the actual start of the work, so that when an emergency comes discretionary projects can go ahead with assurance that they are properly located and well adapted for the purpose for which they are intended, and without the delays that might ensue if the relative merits of different locations and alternative plans for structures had to be debated, or else decided arbitrarily on the basis of hasty consideration.

Long-range budgeting of capital expenditures, in which the programs of the several local government departments are harmonized, is another feature of planning which has not yet been adapted as widely as it should be, though the committee finds that a number of city planning commissions, bureaus of municipal research, and special committees appointed by heads of local governments, county, and state, have participated in preparing such programs.

Even without conscious planning some degree of balancing adjustment already exists, since certain types of construction activities tend to decline with the tightening money market. An increase in the cost of securing capital, in competition with other demands for capital, tends automatically to be a check on public construction. And, conversely, in an easier money market after a recession has set in, some kinds of private and of public construction tend to increase before the rise of general business activity. But this compensatory tendency cannot, as a rule, act with sufficient promptness. Deliberate acceleration of public works remains desirable at times.

Successful preparation for this in the future will require careful investigation of all the factors involved in connection with the various departments of state, county, and municipal governments throughout the country. This will require the working together of local officials and of interested citizens, either as individuals or through their local civic or commercial organizations. In many cases, the experience gained in attempting to expedite public construction work during recent months will serve as a guide in removing obstacles that might impede similar attempts in the future.

It remains, now, to improve the central sources of current information regarding public construction in order to provide the necessary data on which timely action can be based in threatened emergencies. It may be possible to measure month by month the number of workers employed directly in the public service or indirectly on contract, extending to the Government itself the plan already developed for uniform monthly reports from private industry to Federal and State bureaus of labor statistics. There should be regular reports on the expenditures for public construction projects for the principal spending agencies. The Division of Public Construction, recently set up by the Federal Government in the Department of Commerce, is a promising agency for the purpose.

With a nation-wide improvement, properly safeguarded and flexible, in the financial and administrative organization of governmental agencies, and with information as to their current operations centrally located, a long step will have been taken toward the use of public construction as a steadying influence. The moderate elasticity in spending power which any reasonable budgeting system must provide will yield, by accumulating on a national scale the relatively small margins of each unit, a sum ordinarily sufficient to be an effective factor in the maintenance of economic balance.

SECTION III

A Program of Exploration and Appraisal.—As has been indicated, the committee regards the preliminary survey of public construction which accompanies this report as but one of the steps in bringing together the material from which it is hoped there may be set-up a "technique of balance," the need for which was developed in its original report.

The planning and control of public construction seems to be an important step, not as a large scale measure of emergency relief, but, in the group of active balancing factors, that one which is closely related to the movement of interest rates and to the volume of employment.

It is with this group of active or positive factors that the committee is most concerned. It believes that one by one, successively, they may be explored and appraised until their nature and their influence on the course of economic events are better understood. The relations of these influencing factors to each other and to the whole economic system are highly complex and the analysis and presentation of them cannot, without danger, be over-simplified. But it is the hope of the committee that, step by step, it may bring together and clarify our knowledge of the more significant processes now operating in our economic life.

As the above statement and, indeed, as its whole program of exploration presupposes, the committee believes that unbalanced

xxvi

economic relationships are susceptible to modifying influence if their nature is more clearly understood and some basis of measurement, or continuous gauging of those factors which are premonitory, is devised so that future trends may be more accurately anticipated.

In its frequent use of the terms "stabilization" and "technique of economic balance," the committee desires to guard the readers of this report against a possible misconception. A perfectly adjusted balance is not only considered practically unrealizable; it might even, if attained, tend to impede progress.

It was early recognized that the most the committee can hope to accomplish, is to enlarge the foundation for an appraisal mechanism which may assist the public in gauging the importance of the various forces in operation, so that it may take steps to set in motion, during times of threatened economic stress, forces which may tend to modify excesses. It was further recognized that even so broad a program as this must accommodate itself to the actualities of life.

A "Zone of Tolerance."—One of these actualities is the necessity of recognizing what may be termed a "zone of tolerance" within which the action and reaction of the most active economic forces has to be considered normal, and even healthy,

Only when some factor, or combination of factors, threatens to carry the situation beyond the boundaries of this theoretical "zone of tolerance," and it becomes apparent that we shall presently be seriously out of balance economically, if no counter influences are set up, should steps be taken to modify the influences of an overweighted or one-sided development.

Further Inquiries.—The committee is planning a further exploration into the effects of varying interest rates or capital costs upon the chief types of construction. It is also undertaking an examination of that fundamental incentive, the "lure of profits," as manifested during the last 10 years in American economic life.

A more immediate step, however, is a study of price relationships, of the changing levels in the basis of exchange of the work of one man or group of men for the work of another man or group. This survey, comparing statistically these shifting levels over successive periods, is bound up with the everyday concerns of our people and their welfare. It is expected that the results of this survey will appear before the end of this year. Like the present report, it will take its place in the step-by-step analysis which the committee is making, in the hope that with better and more general understanding of economic forces, and the laws of their operation, American business may develop increasing self-control.

The ultimate aim of the committee's program of exploration and appraisal, to the end that employment may be more stable and adequate income more assured, is the intelligent and reasonable stabilization of business, mainly by the business community itself, aided by public administrators and an informed and responsive public opinion.

ARCH W. SHAW, Chairman

RENICK W. DUNLAP WILLIAM GREEN JULIUS KLEIN JOHN S. LAWRENCE MAX MASON GEORGE MCFADDEN EUGENE MEYER Adolph C. Miller Lewis E. Pierson John J. Raskob Louis J. Taber Daniel Willard Clarence M. Woolley Owen D. Young

EDWARD EYRE HUNT, Secretary

PLANNING AND CONTROL OF PUBLIC WORKS

by

LEO WOLMAN of the

NATIONAL BUREAU OF ECONOMIC RESEARCH, INC.

National Bureau of Economic Research, Inc.

Incorporated under the Membership Corporation Laws of the State of New York, January 29, 1920

ITS ORGANIZATION AND PURPOSES

THE National Bureau of Economic Research was organized in 1920 in response to a growing demand for exact and impartial determinations of facts bearing on economic, social, and industrial problems.

It seeks not only to find facts and make them known, but to determine them in such manner and under such supervision as to make its findings carry conviction to Liberal and Conservative alike.

Entire control of the Bureau is vested in a Board of Directors, representing universities, learned and scientific societies, financial, industrial, agricultural, commercial, labor, and technical organizations.

Rigid provisions in the Charter and By-Laws guard the Bureau from becoming a source of profit to its members, directors, or officers and from becoming an agency for propaganda. No report of the Research Staff may be published without the approval of the Directors, and any Director who dissents from any finding approved by a majority of the Board may have such dissent published with the majority report.

The members of the Board of Directors are as follows:

DIRECTORS AT LARGE

OSWALD W. KNAUTH, Executive Vice-President, R. H. Macy and Company, New York. H. W. LAIDLER, Executive Director, League for Industrial Democracy, President. T. W. LAMONT, Member of the firm of J. P. Morgan and Company, New York. L. C. MARSHALL, Institute for the Study of Law, Johns Hopkins University. GEORGE O. MAY, Member of the firm of Price, Waterhouse and Company, New York. ELWOOD MEAD, Commissioner of Reclamation, Washington, D. C. GEORGE SOULE, Director, The Labor Bureau, Inc. N. I. STONE, Industrial Consultant, New York. MATTHEW WOLL, Vice-President, American Federation of Labor.

DIRECTORS BY UNIVERSITY APPOINTMENT

THOMAS S. ADAMS, Professor of Political Economy, Yale University, Chairman of the Board.
JOHN R. COMMONS, Professor of Economics, University of Wisconsin.
EDWIN F. GAY, Professor of Economic History, Harvard University, Director of Research.
HARRY ALVIN MILLIS, Professor of Economics, Columbia University, Director of Research.
JOSEPH H. WILLITS, Professor of Industry, Wharton School of Finance and Commerce, University of Pennsylvania.

DIRECTORS BY APPOINTMENT OF OTHER REPRESENTATIVE ORGANIZATIONS

HUGH FRAYNE, American Federation of Labor. DAVID FRIDAY, American Economic Association. LEE GALLOWAY, American Management Association. DEE GALLOWAY, American management Association.
GEORGE E, ROBERTS, American Bankrers Association.
M. C. RORTY, American Statistical Association.
A. W. SHAW, National Publishers' Association.
GRAY SILVER, Américan Farm Bureau Federation.
ROBERT B. WOLF, American Engineering Council.

O. W. KNAUTH, Recording Secretary.

G. R. STAHL, Executive Secretary.

RESEARCH STAFF

EDWIN F. GAY, Director HARRY JEROME WILLFORD I. KING SIMON KUZNETS FREDERICK R. MACAULAY FREDERICK C. MILLS WESLEY C. MITCHELL, Director WILLARD L. THORP RALPH J. WATKINS WALTER F. WILLOX PIERCE WILLIAMS DIRCCE WILLIAMS LEO WOLMAN

FREDERICK E. CROXTON

RESOLUTION

ON THE RELATION OF THE DIRECTORS TO THE

ECONOMIC WORK OF THE BUREAU

- 1—The object of the Bureau is to ascertain and to present to the public important economic facts and the interpretation thereof in a scientific and impartial manner, free from bias and propaganda. The Board of Directors is charged with the responsibility of ensuring and guaranteeing to the public that the work of the Bureau is carried out in strict conformity with this object.
- 2—The Directors shall appoint one or more directors of research chosen upon considerations of integrity, ability, character, and freedom from prejudice, who shall undertake to conduct economic researches in conformity with the principles of the Bureau.
- 3—The director or directors of research shall submit to the members of the Board, or to its executive committee when such is constituted and to which authority has been delegated by the Board, proposals in respect to researches to be instituted; and no research shall be instituted without the approval of the Board, or of its executive committee.
- 4—Following approval by the Board, or its executive committee, of a research proposed, the director or directors of research shall as soon as possible submit to the members of the Board, by written communication, a statement of the principles to be pursued in the study of the problem and the methods to be employed; and the director or directors of research shall not proceed to investigate, study, and report in detail, until the plan so outlined has been approved by the Board or the executive committee thereof.
- 5—Before the publication of the results of an inquiry the director or directors of research shall submit to the Board a synopsis of such results, drawing attention to the main conclusions reached, the major problems encountered and the solutions adopted, the nature of the sources from which the basic facts have been derived, and such other information as in their opinion shall have a material bearing on the validity of the conclusions and their suitability for publication in accordance with the principles of the Bureau.
- 6—A copy of any manuscript proposed to be published shall also be submitted to each member of the Board, and every member shall be entitled, if publication be approved, to have published also a memorandum of any dissent or reservation he may express, together with a brief statement of his reasons therefor, should he so desire. 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.
- 7—The results of any 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; such limit shall be 45 days from the date of the submission of the synopsis and manuscript of the proposed publication, except that the Board may extend the limit in its absolute discretion, and shall upon the request of any member extend the limit for a period not exceeding 30 days.
- 8—A copy of this memorandum shall, unless otherwise determined by the Board, be printed in each copy of every work published by the Bureau. Adopted Oct. 25, 1926.