CHAPTER X

THE PROBLEM OF CONTROL

The use of public works as a measure for reducing the volume of unemployment is not a modern invention. In England, on the continent of Europe, and in the United States, variants of this device have been employed for centuries by local and central governments. With the passage of time, both the theory and practice of such attempts to reduce the volume of unemployment have become more complex. In the contemporary economic world, a public works program is no longer regarded as a simple method for creating some additional employment, but is conceived to be also the means of stabilizing business, under some circumstances, and of stimulating it, under others. Any of these approaches to the problem soon encounters profound and troublesome theoretical difficulties that cannot be easily resolved. A satisfactory theory of public works control must be at the same time an adequate explanation of business cycles, capable of accounting for variations in the levels of business activity over long and short periods of time. How far economic science is from the clean-cut solution of this one of its most fundamental problems is too well known to require further consideration here. The purposes of this discussion can, therefore, be best served by stating the problem, in its various forms, and by estimating the results, so far as that is possible, of attempts to reduce unemployment or to stabilize business by controlling the volume of expenditures on public construction.

Historically, increased appropriations for public works were generally invoked, during periods of depression and unemployment, as the obvious and direct means of creating work for the unemployed. While there has been long and continuous experience with this device, there is no evidence that a substantial proportion of the unemployed were ever absorbed in the process. However considerable public expenditures for this purpose were, they were always too small to produce an appreciable effect on the prevailing levels of unemployment. These measures, also, in the form in
which they have been universally practiced, have given rise to
new and unanticipated evils that have done much to discredit this
particular solution of the unemployment problem. The additional
public works were usually created ad hoc; and were conceived and
executed without previous planning. Their administration involved
great waste and led often to the demoralization of the labor em-
ployed on these public enterprises. Coupled as they frequently
were with poor relief, they absorbed the defects and evils of poor
law administration. The researches of Sidney and Beatrice Webb
into the history of this device in England disclose conclusions of
such universal importance that they deserve to be quoted in full.
Writing of the investigation of the operations of the Poor Law
from 1886 to 1905, the Webbs state that the reports of the spe-
cial investigators for the Poor Law Commission of 1905-1909
"reveal the local authorities, at first reluctant to spend the rate-
payers' money, gradually yielding to the pressure exerted by public
opinion, by the House of Commons and by the Local Government
Board, and striving to devise any form of useful work on which to
employ the local unemployed. The old expedients are again em-
ployed. The local authorities again revert to hand labor on the
roads, instead of sweeping and repairing by horsepower or steam-
driven machines. They lay out more new parks and recreation
grounds, and effect costly sewerage schemes and street improve-
ments. But one after another they find it as impossible as before
to adhere to the idea that 'the wages paid should be less than the
wages ordinarily paid for similar work.' Any such attempt to dis-
criminate in wages between the ordinary municipal staff and the
extra men taken on as 'the unemployed' not only produced disgust
and angry rebellion, but also, when piece work was made the basis,
led to respectable and well-conducted men earning less than they
needed for bare subsistence. . . ." There was "renewed swamping
of the lists (of unemployed) not by men from permanent situa-
tions, but by men who had been at no time more then intermit-
tently employed. . . . This meant, as before, only a series of
short jobs for each man, with the result not only of positively
increasing all the evils of casual labor, but also of creating a per-
manent dependence on an endless succession of these artificially
manufactured municipal jobs, which it was impossible to main-

Sidney and Beatrice Webb, English Poor Law History: Part II: The Last
Hundred Years, 1929, Volume II, pp. 653 ff.
tain indefinitely. Moreover, as it was found impracticable to pay lower rates than were normally earned by the lowest grades of unskilled laborers, who swarmed into the relief works, there seemed nothing to be done but to restrict the jobs to a few days in the week, or to one week at a time, for each man taken on, during the whole course of the winter. And every local authority in succession once more discovered, as their predecessors of the 18th and 19th centuries had done, that every such attempt to ‘set the poor on work,’ even at the lowest possible wage, and even where safeguarded by systems of piece-work remuneration, was prodigiously costly. Every piece of work took longer to perform than had been expected, and involved considerably more expense than it was on any computation worth. Nor did it all go to the unemployed. To supply the materials, provide the horses and carts and other necessary plant, and pay officers for the direction and supervision of the work, to be carried out by unskilled, inefficient and not very strenuous labor, proved ruinously expensive. . . . Finally it came to be recognized, even among the workmen, that it was impossible, in this artificial manufacture of municipal work, to avoid anticipating the ordinary employment of the permanently engaged staff of laborers, or that of the contractors, so that the very employment of the Unemployed was creating, for the future, even more Unemployment.

“We cannot imagine a more conclusive test of the value of provision for the Unemployed by way of municipal relief works of the most varied kinds, in many different towns, under all sorts of administrators and in the most diverse circumstances, than that afforded—in succession to the previous experience between 1836 and 1880 and to that of the widespread and repeated series of experiments of 1886-1905, by the operations between 1906 and 1909, under the Unemployed Workmen Act.”

Even in Germany, since the end of the World War, elaborate plans for providing relief work to the unemployed failed to produce striking results. With funds contributed by the Poor Law authorities, or in the form of loans from the federal and state governments to the municipalities, or loans and subsidies from the unemployment insurance funds, the German experiments ran into difficulties not unlike those of the English. The improvised public works could absorb only a small proportion of the unemployed. Where it was attempted to prevent wasting money by discovering
"productive" or "value-creating" public relief works, it was found after a while that Germany was "beginning to experience difficulty in finding suitable value-creating relief works." Where, again, the unemployed were put to work on relief jobs at low rates of pay, the unemployed person "would remain on the job" or "do good work only when he received a bonus . . . with the result that his pay had to be raised above the relief rate." 89 As one acute and experienced observer puts it, "For nine years after the Armistice, German ideas of relieving the able-bodied unemployed were influenced by two abstract principles: firstly, that monetary relief should only be given on proof of need, and secondly, that it should be conditional on the performance of work. The practical abandonment of these two doctrines in Great Britain was looked upon as imprudent, but, in the event Germany has been compelled to come round to something very like the British attitude. The means test was always invidious and, under a federal system, led to wide variations in the methods of assessing needs and benefits. . . . The second principle broke down because it was never possible to provide relief works for more than a small minority of the applicants and that only at great cost. The numbers so employed in recent years have varied between 127,000 in July 1927 and 40,000 in December 1928. In April 1929 about 66,000 or 4.5 per cent of all persons in receipt of benefit, were on relief work. Owing to the seasonal nature of most of the work, the numbers always fall away in winter, when unemployment is at its worst." 90

A further attempt by the public agencies of Germany to relieve unemployment by creating work was abandoned in 1927 when loans to private industries for this purpose were discontinued. Of this experiment, it has been said that . . . "there were numerous problems. . . . A factory might close down in order to apply for a loan to reemploy its workers, or, a firm might receive a loan for the purpose specified and thereby cause others to demand the same treatment. Choice between the numerous requests was difficult. Often it was impossible to know which cases were justified in applying for funds and which ones were misusing the privilege. The money was loaned by the government on low rates of interest,

89 Mollie Ray Carroll, Unemployment Insurance in Germany, The Brookings Institution, Washington, D. C., 1929, Chapters IV and IX.
so that there was incentive to apply for it. Further danger lay in
continuation of the grant after the firm had ceased to need it.
Another evil lay in the possibility of loaning money to firms with
inefficient methods or lacking a market for their goods. There was
danger, too, of use of political power to secure special concessions.
Experience with subsidies to private firms was for the most part
unsatisfactory. . .” 91

It is clear from past experience with unpremeditated emer-
gency programs of public works that they all suffer from inherent
difficulties. A sudden increase in public construction, not safe-
guarded by careful advance planning, inevitably produces large
and unavoidable wastes. Public enterprise, no more than private
business, is equipped to handle swift expansions in its work-force.
Faced with the necessity of finding work for a substantial labor
force, governments have frequently initiated public works of
doubtful value to the community. Where, moreover, the problem
is one of finding work for a million or more unemployed, as is so
frequently the case during a modern industrial depression, it is
plainly impossible for modern governments to expand their facili-
ties rapidly enough to supply jobs, directly or indirectly, for as
few as one-half of the unemployed, much less for all of them.
Public construction, first of all, requires only certain types of
labor. The unemployed usually are recruited from all industries.
The cost of training these diverse types of workers would not only
be prohibitive, but their adoption of new occupations would
quickly produce serious and permanent dislocations in the labor
market. The recruiting of an adequate supervisory force would
involve consequences no less serious. An expanded program of
public construction of this sort would require large purchases of
tools and new equipment, which would be scrapped or laid aside
once changed conditions necessitated a reduction in the volume of
public works.92

91 Mollie Ray Carroll, op. cit., p. 39.
92 The United States Secretary of War commenting on the plan for a public
works reserve wrote on April 7, 1928, as follows: “The public works under
the charge of this office which would be affected by the proposed legislation are
those for the improvement of rivers and harbors and for flood control. For carrying
out the bulk of river and harbor work special equipment is necessary. The amount
of this equipment available throughout the country, including that privately owned,
is not a great deal more than is necessary for work under the present scale of appro-
priation. If the appropriation should be doubled for a short period, it would be
The recognition of some of these problems has led those who look to the expansion of public construction as the source of appreciable additional employment to propose the creation by governments of reserves of public works. By the terms of this proposal, a planned program of public works would consist of contraction in the volume of public construction during a period of full employment and expansion, from the reserves set aside in the past, during periods of dull business and slack employment. "What is in view is not only the putting in hand of work when unemployment has become great, useful as that is; the larger idea is the deliberate reservation of work, until such time as unemployment becomes great. It is a refusal to employ at one time in order to employ at another." 88

Implicit in the notion of a public works reserve there is a program for the stabilization or regularization of business. The underlying assumption of all such plans must be that public construction should be reduced when industry is advancing at too rapid a rate, and accelerated when the tempo of industrial activity has slackened. In substance this type of control over public expenditures for construction is analogous to the attempts of central banks to control the volume of credit and through that the volume of business activity. Both methods contemplate the avoidance of inflationary practice; and both, in order to be effective, must come to an arbitrary decision regarding the proper rate of expansion of business activity, of industrial output, of bank credit, or of whatever criterion of inflation may be chosen. How difficult such a choice in the administration of a central banking system is, is well known; and there is no reason to believe that the choice and decision will be any easier for the public works authorities of a country. If, moreover, the amount of public construction withheld from current programs is substantial, say at the rate of one billion dollars a year, the withdrawal may well have the effect of precipitating or hastening a decline in business that might otherwise necessary, before it could be spent, for the Government or contractors to acquire a large amount of additional equipment. When the appropriation reverted to its normal size, this additional equipment would be idle with heavy carrying charges . . . ." Calendar 862, U. S. Senate, 70th Congress, 1st Session, Report No. 836, p. 3.

not have been inevitable. It might also be urged, with reason, that the burden of avoiding inflation cannot be imposed upon the public authorities, without producing serious consequences in private business. "Private industry ought not to be induced to think that in the boom it can work all the overtime it likes, make all the money it can, and discard on to public authorities the effects of this in the bad times which follow. A strong sense of responsibility among employers generally is the most desirable thing to create; and advocacy of public schemes should be qualified by the caution that, both as regards amount and as regards the feasibility of delay in allocating contracts, we do not know how far they will carry us."  

Although the volume of public works usually, but not necessarily, expands with the expansion in general industrial activity, the conditions of rising levels of business often impose limits on the increase of public expenditures. Tightness in the labor market, arising out of the requirements of private industry for help, tends to restrain public officials from expanding their programs. Where business activity is again accompanied by rising prices for materials and equipment, public operations are occasionally delayed until more favorable prices prevail. Where, as is often the case, a rising tide of business and industry causes a rise in money rates and a drop in bond prices, governments, which must resort to borrowings for the financing of their various construction operations, may and do withhold their bond issues until money rates have eased and bond prices have risen and thus create what may be properly described as a natural reserve of public works.

In the United States, and probably in other countries as well, considerations of practical exigency would make most difficult the wholesale postponement of public construction. The testimony is overwhelming that nearly all local and state governments in this country are always far behind in their programs of permanent improvements. The bulk of American expenditures on public works is employed in the construction of schools, hospitals and prisons; in extending the means of transportation by the building of roads, bridges, tunnels, and subways; in ministering to the health of the

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95 D. H. Macgregor, op. cit., p. 49.
citizens of the country by providing adequate water supply and sewage systems; and in attempting to reduce the growing hazards of accidents by the elimination of grade crossings. The facilities for all these purposes are in general so far below the physical requirements of the prevailing situation, that it would be hard, if not impossible, to persuade public authorities to hold back one or more projects to meet a future eventuality of general unemployment.

A third variant of the theories of the control of public works overlooks the creation of reserves of work and plans the exercise of control by increasing the expenditures on public construction at the beginning of an industrial depression or during its course. Advocates of such a program do not look to the expanded volume of construction as a means of absorbing all or even a majority of the unemployed. They do not also conceive new public projects as measures for testing the willingness or capacity of the unemployed to work. They would restrict the new public enterprises to productive projects, or such as would be expected to contribute to the productivity of industry generally; and they would purge the administration of all wasteful and uneconomic practices. So conceived, the occasional acceleration of public construction would constitute a stimulus to business and would lead, if done on a large scale, to the progressive diffusion of employment. The best statement of this position is that made by the English economists, H. D. Henderson and J. M. Keynes: "The fact that many work-people who are now unemployed would be receiving wages instead of unemployment pay would mean an increase in effective purchasing power which would give a general stimulus to trade. Moreover, the greater trade activity would make for further trade activity; for the forces of prosperity, like those of depression, work with a cumulative effect. When trade is slack there is a tendency to postpone placing orders, a reluctance to lay in stocks, a general hesitation to go forward or take risks. When, on the other hand, the wheels of trade begin to move briskly, the opposite set of forces comes into play, a mood favorable to enterprise and capital extensions spreads through the business community, and the expansion of trade gains accordingly a gathering momentum."

In reply to this point of view, it has been held that the state cannot increase the opportunities for additional employment with-

out drawing on the available supplies of credit. Such a procedure
would be tantamount to diverting credit from private to public
use and the workers from private to public employment without
increasing the total number of available jobs. "Employment de-
"pends on demand, which depends on consumers' outlay, which in
turn is limited by the means of payment available. If the expa-

This argument rests partly on the assumption of the existence
of a fixed pool of credit available for the uses of business and
industry. In a period of depression, however, "the rapidity of cir-
culation is low, because people cannot find profitable outlets for
their surplus funds and they accumulate idle balances. If the Gov-
ernment comes forward with an attractive gilt-edged loan, it may
raise money, not merely by taking the place of other possible capi-
tal issues, but by securing money that would otherwise have
remained idle in balances." Furthermore, "industry has ex-

In this tentative form, the theory of control must needs be
left. Frequent attempts have been made in this country to
achieve control for one or another of these purposes, by legislative
provisions. Of the many measures so proposed, among the most
recent and most typical are the Jones Bill introduced in the United
States Senate on January 11, 1928, and a bill introduced in the

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"R. G. Hawtrey, Public Expenditures and the Demand for Labor, Economica,
Henry Clay, op. cit., p. 131.
Hawtrey in Clay, op. cit., p. 131.
Clay, op. cit., p. 129.
For a comprehensive review of the theoretical bases of this problem see,
Georg Bielschowsky, Business Fluctuations and Public Works, Quarterly Journal of
Economics, Feb., 1930, p. 286.
Cycles and Unemployment," National Bureau of Economic Research, New York,
1923, p. 247.
legislature of Massachusetts in January 1930 by Mr. Eliot Wadsworth. The Jones Bill,\textsuperscript{102} entitled “A bill to create a prosperity reserve and to stabilize industry and employment by the expansion of public works during periods of unemployment and industrial depression,” provides for the authorization by Congress of appropriations amounting to $150,000,000 for use in road building, river and harbor works, flood control, and public building, on condition, however, that “no appropriation shall be made pursuant to the authorization contained in this Act until such time as the President finds and communicates to the Congress that the volume, based upon value, of contracts awarded for construction work in the United States, has fallen 10 per cent for a three-month period below the average of the corresponding three-month periods of the preceding three years.” The Massachusetts bill designed to “provide reserves of municipal credit for use in times of depression” authorizes a city or town to incur indebtedness, beyond the constitutional limitations, “not exceeding one half of one per cent of its valuation . . . provided, however, that such additional indebtedness shall be available only upon authorization of the Governor for all cities and towns of the Commonwealth, and for a period of six months from the date of such authorization, and bonds issued thereunder shall run for not more than ten years, and the municipal ordinance authorizing the loan shall certify that the date on which the work involved shall start is within the six months’ period stated, or the bonds shall be void and unsalable.”

No measures of this kind have been enacted into the law of this country either by Congress or by the State Legislatures.

Whether a wise policy for the control of public works is that of retardation and the setting up of reserves for future use or that of acceleration for the purposes of stimulating business, it is clear that the control must rest upon sound economic foundations. In this country the future projects of public permanent improvements are so vast and well-defined as to make it unnecessary to resort to makeshifts in the search for additional work. Although bonded indebtedness and local tax rates have risen at a very rapid rate since 1920, probably faster than the assessed valuation of property, there is little evidence that temporary expansion of public construction, even on a large scale, would create financial embarrassment. In this, as in other proposals for economic control, the

\textsuperscript{102} S. 2475, 70th Congress, 1st session, as amended April 18, 1928.
problems are largely administrative. Aside from the uses of control over public expenditures in the interests of business revival or regularization, nearly all local and central governments in the United States would benefit vastly from a more planned economy than they now have. In the purchase of supplies and equipment, the typical municipality often has much to gain from the unification and centralization of its purchasing agencies. In the laying out of streets, the planning of public buildings and the like the benefits of prior and deliberate consideration of the projects are bound to be substantial. Making, likewise, adequate preparations for the financing of the multitudinous projects now undertaken by American governments and deciding on the method and time of the financing are elements in public finance where, past experience has shown, the margin between sound and unsound practice is wide and treacherous. For the effective solution of these problems of public economy, federal, state, and local governments require the appropriate agencies of planning and control. In many places such agencies, in the guise of budget commissions, city and regional planning commissions, bureaus of governmental research, or voluntary committees of citizens, have become more or less an organic part of the government and in this capacity serve the functions here outlined.

Many instances are already on record in which local governments have resorted to planned budgets of expenditures for permanent improvements. In Cincinnati, where such a program has been in operation for three years, expenditures are planned for a period of five years and the machinery has become available for exercising considerable control over the prevailing volume of public works. In the last report of the Cincinnati Bureau of Governmental Research, proposals are made which, when adopted, are likely to widen considerably the area of control over all types of construction. It is proposed, for example, that the financial analysis of the joint bond program of the county, school district and City of Cincinnati “include a broader and more significant picture of economic trends in the metropolitan area”; that “the programs of future governmental activities be based upon exhaustive surveys”; and that “the programming ultimately have a broader base” since the institutional programs of private organizations in the field of health, welfare and recreation are intimately related with those of the city, county and school district and since “the track exten-
sions and utility installations of utility corporations bear directly
on road construction programs of city and county govern-
ments.” 104 The use of the budget procedure and the resultant
long-range planning of public works is being rapidly adopted
through the country. While the pioneering activities in this direc-
tion were undertaken by more or less formal agencies, like bureaus
of governmental research or planning commissions, considerable
progress toward the same goal has come in recent years from the
efforts of voluntary local committees interested at the same time
in the economical administration of public affairs and in the sta-
bilization of industry. The Community Conference Board of Roch-
ester, New York; the committee recently appointed by the
Governor of New York State; and the Philadelphia Committee
which recently issued its program for The Regularization of Em-
ployment and the Decrease of Unemployment in Philadelphia
are examples of only a few of the voluntary agencies that have in
the past decade been organized for the consideration of these
problems in this country.

Where, then, these procedures for control have become avail-
able, acceleration in the program of public construction may be
regarded as a practicable measure. In the administration of such
control, the crucial problem is obviously that of properly timing
the increase in public expenditures. The profound significance of
the time element is revealed in an analysis of the fluctuations in
contracts awarded for public works and public utilities as compared
with the movement of contracts awarded for other types of con-
struction as well as with fluctuations in general business conditions
in the country. This study, made by Wesley C. Mitchell and Simon
Kuznets of the National Bureau of Economic Research, appears to
show that, in the period from 1919 to 1924, contracts awarded for
public works and public utilities were not highly sensitive to
cyclical movements in business. Thus, in the cycle 1919-1921 con-
tracts for public works and public utilities turned down at reces-
sion, and continued to decline all the way through the revival of
the next cycle. But of the other groups, residential, commercial
and industrial building, only industrial contracts showed the same
type of behavior, although they ceased declining during the last

104 Cincinnati Bureau of Governmental Research, Report No. 15, The Joint Bond
Program, County, School District, City of Cincinnati, Annual Financial Analysis,
May, 1929.
period of business contraction. Again in the cycle, 1921-1924, public works and utilities began to decline early and continued to decline mildly through the first phase of the next revival. In this cycle, both commercial and residential building revived earlier. During the cycle 1924-1927, however, when there had been a large and persistent increase in the volume of public works, the revival of public works and utilities preceded the revival of general business.

**TABLE 52. — CONSTRUCTION CONTRACTS AWARDED IN THE FIRST FOUR MONTHS OF 1929 AND 1930**

<table>
<thead>
<tr>
<th>General Class</th>
<th>First Four Months</th>
<th>Per Cent Increase (+) or Decrease (-)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1929 (In thousands)</td>
<td>1930 (In thousands)</td>
</tr>
<tr>
<td>Commercial buildings</td>
<td>$322,215</td>
<td>$277,198</td>
</tr>
<tr>
<td>Industrial buildings</td>
<td>243,268</td>
<td>184,219</td>
</tr>
<tr>
<td>Educational buildings</td>
<td>107,705</td>
<td>110,754</td>
</tr>
<tr>
<td>Hospitals and institutions</td>
<td>29,565</td>
<td>65,237</td>
</tr>
<tr>
<td>Public buildings</td>
<td>49,125</td>
<td>43,735</td>
</tr>
<tr>
<td>Religious and memorial buildings</td>
<td>28,106</td>
<td>34,043</td>
</tr>
<tr>
<td>Social and recreational projects</td>
<td>48,909</td>
<td>45,899</td>
</tr>
<tr>
<td>Total non-residential buildings</td>
<td>$828,893</td>
<td>$761,085</td>
</tr>
<tr>
<td>Total residential buildings</td>
<td>721,247</td>
<td>366,029</td>
</tr>
<tr>
<td>Total buildings</td>
<td>$1,550,140</td>
<td>$1,127,114</td>
</tr>
<tr>
<td>Public works and utilities</td>
<td>347,750</td>
<td>452,910</td>
</tr>
<tr>
<td>Total construction ($5,000 and up)</td>
<td>$1,897,890</td>
<td>$1,580,024</td>
</tr>
</tbody>
</table>

Source: F. W. Dodge Corporation, Statistical Division.
* The data cover 37 states.

From this tentative analysis it is clear that the proper timing of expansions in public construction programs may well have palpable effects on the course of general business. The experience of the winter of 1929-1930 affords some evidence also that it is possible to overcome administrative difficulties, to accelerate projects already planned, and to hasten the planning and execution of new ones. In the operations of the departments of the federal government, there are many illustrations of changes in procedure that
have advanced construction considerably ahead of the normal schedule. Thus the Supervising Architect of the Treasury Department has increased his staff of architects, engineers, and draftsmen to facilitate the program of public building. It is estimated that federal expenditures for buildings and ground improvements, which amounted to $31,000,000 in 1928 and $45,000,000 in 1929, will have increased in 1930 to roughly $65,000,000. The Department of Justice has been engaged in facilitating the clearing of titles to sites for government buildings and in expediting condemnation proceedings, with the result of a substantial increase in the number of condemnations. The Veterans’ Bureau called for bids on hospitals earlier than had been originally planned. The Secretary of Agriculture made allotments of Federal Aid Highway funds to the states several weeks earlier than usual. By legislative enactment, the Federal Aid Highway funds were increased from $75,000,000 to $125,000,000 a year during 1931, 1932 and 1933.

No satisfactory appraisal of the effects of various measures of acceleration can be made until some months after the close of 1930, when the statistical record of the whole of that year will have become available. The latest figures to be had as the report passes through the press cover only the first four months of 1930. In comparison with the first four months of 1929, these figures show an increase of thirty per cent in the contracts awarded for public works and utilities. During this same period all other types of construction showed a decline of twenty-seven per cent, residential building being the principal factor in the decrease.