SURVEY AND ANALYSIS OF THE PUBLIC CONSTRUCTION PROGRAMS OF STATE AND LOCAL GOVERNMENTS IN KANSAS

by

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INTRODUCTION

Purpose

The purpose of this thesis was to relate the effect of public construction activity to general economic conditions in the period following the end of World War II.

The construction of public works by governmental units has an important influence on the national income of the United States. If an expansion of public construction activity occurs simultaneously with an expansion of private business activity or if public construction activity is contracted at the same time that private business activity contracts, fluctuations in total business activity will be intensified. Extreme fluctuations in business activity result in large numbers of workers being unemployed during periods of inactivity and cause serious disturbances and dislocations in our economic system.

To the extent that expenditures by governmental units for public works can be manipulated and timed so that such construction offsets reductions in private business activity, fluctuations in total business activity will thereby be reduced.

The national government of the United States is pledged to a policy of manipulating expenditures for public works in such a way as to compensate for reductions in private business activity. By the Full Employment Act of 1946 the national government is pledged to a policy of providing aid in "creating and maintaining in a manner calculated to foster and promote free competition and

free enterprise and the general welfare, conditions under which there will be afforded useful employment opportunities, including self-employment for those able, willing, and seeking to work, and to promote maximum employment, production, and purchasing power." It is the function of the economic council provided for in this law to make suggestions for legislation intended to encourage the maintenance of more or less stable economic conditions and to attempt to foster practices that will result in "maximum employment."[1]

State and local governmental units also undertake considerable amounts of public construction. The functions performed by these governmental units require the construction of many roads, bridges, schools, airports, hospitals, public buildings, and other public works. Since each of these governmental units is a political entity for certain purposes, each unit relates its construction program to its own needs and resources.

Only a portion of the construction undertaken by governmental units is of such a nature that it can be postponed, held in reserve, and put into action with the onset of a recession or depression. Many projects constructed by governmental units meet a specific need and must be constructed within certain periods regardless of the effect on business activity. The replacement of needed facilities destroyed by fire is an example of construction that frequently cannot be delayed for long periods of time. Other

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[1]James Harvey Dodd and C.W. Hasek, Economics: Principles and Applications (Cincinnati: South-Western Publishing Company, 1948), p. 711.

projects are of such a nature that they can be postponed, held in reserve, and manipulated in such a way as to stabilize business activity.

If construction activity by governmental units is not undertaken at such times that it will offset fluctuations in private business activity, fluctuations in total business activity will be accentuated.

In the period immediately following the end of World War II the economy of the United States experienced a period of great expansion of business activity. One of the purposes of this thesis was to determine whether public construction in this period following World War II was expanded at the same time that private business activity was expanded, thus contributing to the expansion that occurred in total business activity.

This expansion in total business activity was accompanied by a rise in the general price level. Another purpose of this thesis was to determine the extent to which public construction in Kansas in the period following World War II contributed to the rise in the general price level by increasing the demand for scarce materials and labor.

In the early months of 1949 the United States economy experienced a period of recession. Another purpose of this thesis was to analyze the volume of public construction which was in the planning stage and to attempt to determine the amount of such construction that might have been manipulated to stabilize business activity in the event that this recession had led into a prolonged depression of serious proportions.

Another purpose of this thesis was to determine whether or not public officials in Kansas were making any conscious effort to plan public construction programs so that such construction could be timed to offset fluctuations in private business activity and thus to stabilize economic conditions.

Scope

A survey and analysis of the public construction programs of all governmental units in the United States would entail a study far beyond the scope of a thesis for a master's degree. When the Federal government in 1945 undertook a survey of the post-war plans of state and local governments for public construction, the staffs of the central office, the nine regional offices and the many district offices of the Federal Works Agency were devoted to carrying out that project.

The survey undertaken in this thesis was limited to public construction by state and local governmental units in Kansas in the period following World War II.

Construction activity in Kansas by the Federal government was not included in the survey. The Federal government is a centralized agency, and information on its construction activity could undoubtedly be easily accumulated. On the other hand, each state and local governmental unit undertakes its own construction program in relation to its own needs and resources. Information on construction activity by these units is not accumulated by any centralized agency, and thus current information on the amount of

their construction activity can be secured only by contacting each of these governmental units. A survey which would make information available on the public construction programs of state and local governmental units in Kansas in the period following World War II was thus considered an addition to knowledge.

The analysis of the effect of these construction programs must, by necessity, center around economic conditions in Kansas, but it must be recognized that it is impossible to isolate the effect of any influence on economic conditions in Kansas without consideration of the economic conditions in the United States economy as a whole.

Definition of Public Works

Public works are defined by J.M. Clark as "durable goods, primarily fixed structures, produced by the government."[1]

The term commonly includes all public buildings, roads, airports, canals, sewage systems, projects for conservation and development of natural resources such as water power and forests, flood and erosion control, river and harbor development, and similar projects.[2] In those countries where public utilities are operated by the government, the construction of railroads, telephone and telegraph facilities will be included in public works. In the

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[1]John M. Clark, Economics of Planning Public Works (Washington: National Planning Board, 1935), p. 2.

[2]James A. Estey, Business Cycles, Their Nature, Cause and Control (New York: Prentice-Hall, Inc., 1941), p. 407.

United States such construction would be included in private works.[1]

In depressions, there is a tendency to expand public works activity. Thus in the United States under the Roosevelt administration, public works were extended to include slum clearance and the construction of low-cost housing.[2]

The state of public opinion, economic conditions, and the scope of activity normally carried on by governmental bodies will determine what types of construction will be included in public works at any particular time.

Methods of Procedure

A survey was undertaken to gather information on the amount of public construction which was undertaken or was being planned by state and local governmental units in Kansas in the period following the end of World War II.

Governmental units existing in the state of Kansas include the state, counties, cities, school districts, townships, irrigation districts and other special districts. Since each of these is a political entity and there is no centralized agency which accumulates and publishes information on their receipts and disbursements in sufficient detail to permit the accumulation of data on the amount of public construction activity by these units,

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[1] Loc. cit.
[2] Loc. cit.

it was necessary to contact each of the units individually to secure information on its public construction program.

It soon became evident that in order to keep this survey within the scope of a master's thesis, it would be possible to contact only those governmental units which were most likely to have undertaken major construction projects. Townships, irrigation districts and other special districts were eliminated from further consideration at this point because it was felt that they were the least likely to have undertaken major construction projects. Information available from the Federal Works Agency on the amount of planning activity by type of governmental units seemed to substantiate that conclusion. Justification for eliminating these governmental units from the study will be pursued more fully on pages 16 to 18 under "Limitations".

This left for consideration the state, counties, cities, and school districts. There are 1,723 such governmental units in Kansas.[1]

It was further felt that the size of the governmental unit had a great deal of influence on the amount of construction which that unit was likely to undertake. This also was substantiated by information available from the Federal Works Agency concerning the amount of planning activity by type of governmental unit. A large city with its greater need for public facilities and its

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[1]The League of Kansas Municipalities, Kansas Directory of Public Officials (Topeka: The League of Kansas Municipalities, 1947), p. 1.

greater financial resources would be expected to engage in more public construction activity than a small city or village with its limited need for public facilities and limited financial resources.

For this reason, cities having a population of 750 or less, according to the U.S. Census of 1940, were not contacted in this survey. Neither were school districts whose school enrollment in 1946 was less than 100 pupils. Justification for this action will also be pursued further on pages 16 to 18 under "Limitations".

Governmental units which were contacted included the state of Kansas, all counties, all cities having a population of 750 or more according to the 1940 Census, and all school districts having a school enrollment of 100 or more in 1946. Further information on the extent of the survey is shown in Table 1.

Data on the public construction program of the state of Kansas were secured from various publications printed by the state. It was found that even for the state of Kansas there was no centralized agency from which the amount of construction by the state in a given period could be readily obtained. Rather there are many boards and commissions, each of which operates more or less independently of each other. Appropriations are made by the State Legislature for each of these boards and commissions rather than by type of expense. Thus construction of highways is under the jurisdiction of the State Highway Commission. Construction of buildings at Kansas State College and other educational institutions are under the jurisdiction of the Board of Regents. Construc-

Table 1. Information on the extent of the survey made of the public construction programs of state and local governmental units in Kansas.

Activity	State	Counties	Cities			School districts			Total
			First class	Second class	Third class	First class cities	Second class cities	Third class cities	
Number of governmental units:									
Number existing in Kansas	1	105	12	77	500	12	84	932	1,723
Number from which information was requested	1	105	12	75	92	12	84	365	746
Number from which information was received	1	62	9	40	49	8	55	194	417
Percent of units answering request for information	100	59	67	53	53	67	65	53	56
Population of governmental units (000's omitted):[1]									
Units existing in Kansas	1,801	1,801	541	356	237	-[2]	-[2]	-[2]	1,801
Units from which information was requested	1,801	1,801	541	355	108	-[2]	-[2]	-[2]	1,801
Units from which information was received	1,801	782	480	199	56	-[2]	-[2]	-[2]	1,801

[1] Population figures shown are according to the U.S. Census of 1940.
[2] Population figures are not available by school districts.

tion of buildings at the various state hospitals is under the jurisdiction of the State Board of Social Welfare. Construction at the state penitentiary and other penal institutions is under the jurisdiction of the State Board of Administration. Any or all of the many boards and commissions may engage in construction in a given period.

Rather than contact each of the boards and commissions separately and get incomplete returns, it was decided to assemble information for the state of Kansas from various publications by the state. This permitted the gathering of more information on the state of Kansas than would have otherwise been possible. Further details on the sources of information for the public construction program of the state of Kansas is presented on pages 13 to 14.

Procedure Used in Securing Information from Local Governments. Information on the public construction programs of counties, cities, and school districts was secured almost entirely by mail. A tentative questionnaire was developed. Then this tentative questionnaire was taken to D.C. Wesche, City Engineer, of the City of Manhattan, Kansas. The purpose of the survey was described to Mr. Wesche, and he was asked for advice and suggestions concerning the best way to obtain the information that was desired. Mr. Wesche offered some valuable suggestions, and the proposed questionnaire and a form letter were also developed.

The form letter, the questionnaire, and the instructions for preparing the questionnaire were mailed to the appropriate official

of each local governmental unit in Kansas from which information was desired. A copy of the form letter, the questionnaire, and the instructions for preparing the questionnaire are included in the Appendix of this thesis. The purpose of the survey was described, and the official was asked to complete the questionnaire giving information on the construction program of his unit and return it by mail. A total of 745 local governmental units were asked to submit information on the public construction program of their units.

This survey of public construction programs of local governmental units was conducted in the summer and fall of 1948.

Information concerning the names of officials and addresses of local governmental units was obtained from the Kansas Directory of Public Officials, published by the League of Kansas Municipalities.

Each official was asked to submit separate information on each project which his governmental unit had completed since the end of World War II, then had under construction, or was planning to build.

Information was requested on the present status of the project, the time of construction, the estimated cost of the project, and the amount and source of funds for financing the project.

These projects were to include any major additions to existing facilities but were not to include projects involving normal maintenance of public facilities.

Information was requested on the following types of projects:

highways, roads, and streets; bridges, viaducts, and grade separations; airports, terminals, and landing strips; sewer, water, and sanitation facilities; schools and other educational facilities; hospitals and health facilities; public buildings; parks and other recreational facilities; and other public facilities.

The County Engineer of each of the 105 counties in Kansas was asked to submit information on the construction program of his county.

Information was requested from all first class cities and from all second and third class cities which had a population of 750 or more, according to the 1940 Census. For those cities which have the city manager type of government, the request was sent to the City Manager. For the remainder of the cities, the request was sent to the City Engineer if the city had such a position. If there was not city engineer, the request was sent to the mayor.

Information was requested from all school districts in first class cities, all school districts in second class cities, and those school districts in third class cities and unincorporated places that had 100 or more pupils in 1946. For school districts in the first and second class cities, the clerk of the school district was asked to supply the desired information. The position of clerk of the school district in third class cities and in unincorporated places is quite often not a full time position. In those cases it was felt that better results would be obtained if the request was made of the school superintendent. As a result,

information on the school districts in third class cities and in unincorporated places was sometimes requested of the clerk of the school district and sometimes of the school superintendent.

Those local governmental units which did not respond to the first request for information were later sent a second request for their cooperation. Those units which did not respond to the second request were not contacted again.

Information was received from a total of 416 local governmental units. Fifty-six per cent of the governmental units contacted responded to the request for information. The per cent of returns was higher than this average for counties, first class cities, school districts in first class cities, and school districts in second class cities. The per cent of returns was lower than the average in second class cities, third class cities and school districts in third class cities. The range of returns by type of governmental unit was from 53 per cent for second and third class cities and school districts in third class cities to 67 per cent for first class cities and school districts in first class cities.

Inasmuch as the larger cities seem more likely to have construction activity than smaller cities, and inasmuch as a higher return was gotten from the larger cities, it seems reasonable to assume that probably more than 56 per cent of total construction activity by local governmental units was reported in this survey.

The data presented in this thesis on the construction pro-

grams of local governments in Kansas was obtained principally from the answers to these questionnaires. In some cases the data was supplemented by information obtained from newspapers, periodicals, and printed documents.

Procedure Used in Securing Information on State Government. In assembling information on the construction program for the state of Kansas an attempt was made to obtain figures which were as nearly comparable as possible to those for local governments. The figures shown in this thesis for the state of Kansas include public construction by the state of Kansas in the fiscal years ending June 30, 1946, 1947, 1948, 1949, 1950, and 1951.

For all construction other than highways and bridges, actual expenditures for the fiscal years 1946, 1947, and 1948 were included. These figures were obtained from the Biennial Reports of the Auditor of State and Register of State Land Office. For all construction other than highways and bridges, appropriations were included for the fiscal years 1949, 1950, and 1951. These figures were obtained from the Session Laws passed by the Legislature of the State of Kansas.

The figures included for the construction of highways and bridges for the fiscal years ended June 30, 1946, 1947, 1948, 1949, and 1950 are actual amounts of construction contracts approved by the State Highway Commission of Kansas. Figures for the fiscal years 1946, 1947, and 1948 were obtained from the Biennial Reports of the State Highway Commission of Kansas. Figures for the fiscal years 1949 and 1950 were obtained directly from the State Highway Commission of Kansas.

Figures included for the construction of highway and bridges for the fiscal year 1951 are the average annual expenditures anticipated in the 20-year highway program which was adopted by the State Legislature in 1949. A detailed account of this 20-year highway program is given on pages 102 through 108 of this thesis.

Thus, in general, data shown in this thesis for the state as well as for local governmental units include actual expenditures for construction from September 1945 to the summer of 1948 and all construction expenditures which were being planned at the time of the survey. For the state of Kansas these planned expenditures extend through the fiscal year 1951, while for the local governmental units the planned expenditures are merely those which were being planned at the time of the survey in the summer and fall of 1948.

The answers to the questionnaires from the local governmental units and the data on the construction program of the state of Kansas were assembled and analyzed and form the foundation around which this thesis is built.

Limitations

First, this study is limited by the fact that it is impossible to isolate the effect of any given factor, such as public construction, on general economic conditions. The economic system of the United States is a highly complex mechanism. The total

flow of business activity is made up of many currents, some of which are flowing with the stream and some of which are flowing against the stream. It is therefore difficult to make an accurate evaluation of the effect on the total of any one of those many streams. Nevertheless, if the actual volume of public works activity expanded significantly during a period of general business expansion, rising prices, and material shortages, it may be thought to have aggravated these fluctuations rather than moderated them.

Second, this study is limited by the fact that it is impossible accurately to analyze economic conditions in Kansas except as a part of the economy of the United States as a whole. Kansas is not a self-sufficient economic unit. It is part of a highly specialized economy. Its resources are devoted primarily to the production of agricultural commodities, principally wheat, which it trades to other areas for the other commodities which it needs. Its economic welfare is also directly dependent upon the policies of the United States government. Economic conditions in Kansas cannot be studied in isolation; they must be studied only as a part of the United States economy as a whole.

Third, the state of Kansas is a political unit; it is not an economic unit. Its economic activity is the result of many heterogeneous economic influences. The economy of the eastern part of the state is far from being closely tied to the economy of the western part of the state. Statements about economic conditions in Kansas can only be generalizations, which need not necessarily apply to specific areas.

Finally, there are statistical limitations to this study. The information sought by this survey was an inventory of all public construction which had been undertaken since the end of World War II and all public construction which was being planned at the time of the survey by state and local governmental units in Kansas.

A complete inventory was not secured because (a) not all governmental units were contacted and (b) only 56 per cent of those contacted furnished the information requested.

Governmental Units Not Contacted. Governmental units which were not contacted included cities whose population according to the 1940 U.S. Census was less than 750, school districts whose school enrollment in 1946 was less than 100 pupils, all townships, all irrigation districts and all other special districts.

It was felt that the elimination of these units from the study would not seriously affect the results obtained because information available from the Federal Works Agency indicated that they probably would be engaging in very little construction activity.[1]

During World War II the Federal government through the Federal Works Agency undertook a program designed to encourage state and local governments to plan public works projects for post-war construction.[2] The Federal Works Agency made advances of Federal funds to state and local public bodies to assist them in financing the advance planning of their public works. By

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[1]See pages 56 through 70.
[2]See pages 56 through 70.

December 31, 1947, the Federal Works Agency had approved advances of funds for 7,203 projects having a total estimated cost of $2,398,186,000.[1]

In addition, the Federal Works Agency conducted a survey to determine to what extent state and local governments were making plan preparations for public works without Federal assistance. The survey was limited to public works for which plans had been completed and to public works for which plans were in the design stage.[2] According to this survey, as of June 30, 1947, state and local governmental units had completed plans without Federal assistance for 6,566 projects having a total estimated cost of $1,416,477,000. In addition state and local governmental units had brought plans to the design stage without Federal assistance for 8,275 projects having a total estimated cost of $4,737,833,000.[3]

Projects by special districts including townships, irrigation districts, and other special districts, accounted for only 3.4 per cent of the total estimated cost of projects for which an advance of Federal funds had been approved, only 2.4 per cent of the total estimated cost of projects for which plans had been completed without Federal assistance, and only 2.8 per cent of the total estimated cost of projects brought to the design stage with-

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[1]Bureau of Community Facilities, Federal Works Agency, Report on Plan Preparation of State and Local Public Works, December 31, 1947 (Washington: Federal Works Agency, March 1948), p. 46.

[2]See pages 56 through 70.

[3]Bureau of Community Facilities, op. cit., p. 61 and 66.

out Federal assistance.[1]

All cities of less than 2,500 population accounted for only 8.3 per cent of the total estimated cost of projects for which an advance of Federal funds had been approved by the Federal Works Agency, only 2.8 per cent of the total estimated cost of projects for which plans had been completed without Federal assistance, and only 0.9 per cent of the total estimated cost of projects brought to the design stage without Federal assistance.[2]

All school districts accounted for only 10.3 per cent of the total estimated cost of projects for which an advance of Federal funds had been approved by the Federal Works Agency, only 8.6 per cent of the total estimated cost of projects for which plans had been completed without Federal assistance, and only 7.0 per cent of the total estimated cost of projects which had been brought to the design stage without Federal assistance.[3]

In general, the Federal Works Agency data indicated that the larger the governmental unit, the greater the amount of public construction activity. The major public builders were the states, the counties, and cities over 2,500 population. The greatest amounts of public construction activity were reported by cities having a population of 100,000 or more.[4]

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[1] Ibid, p. 46, 61 and 66.
[2] Loc cit.
[3] Loc cit.
[4] Loc. cit.

Extent of Returns from Units Contacted. Next, it must be recognized that incomplete returns were received from those governmental units which were contacted in the survey. Of the 746 governmental units contacted, only 417 units or 56 per cent supplied information on their construction programs. Additional information on the extent of the survey will be found in Table 1, page 8a. It is interesting to note that the larger governmental units show a higher percentage return than the smaller governmental units. Complete information was obtained from the state of Kansas. Sixty-seven per cent of the first class cities and 67 per cent of the school districts in first class cities supplied information on their construction programs. Sixty-five per cent of the second class cities and 59 per cent of the counties supplied the information requested.

Inasmuch as a higher percentage return was received from the larger governmental units than from the smaller units, and data available from the Federal Works Agency indicates that the larger governmental units engage in greater amounts of public construction activity, it seems reasonable to assume that perhaps data was received in the survey on more than 56 per cent of the construction activity being carried on by the governmental units from which information was requested. After allowing for the effect of the elimination from the survey of the smaller governmental units, it still seems reasonable to assume that in the survey data was secured on more than half of the public construction activity which was being carried on in Kansas in the period under study.

While, admittedly, the inventory is not complete, sufficient information was secured to validate some generalizations concerning the effect of public construction on general economic conditions in the period under study. If data covering probably half of the public construction activity indicates that an expansion in public construction activity occurred at the same time that the expansion in private business activity took place, it can be said to indicate that public construction expansion contributed to the expansion in total business activity.

PUBLIC WORKS AS A STABILIZER OF BUSINESS ACTIVITY

An examination of the statistical records of business activity reveals that fluctuation and change, rather than stability, are characteristic of our business world.

These fluctuations of business are of many kinds. Some are abrupt, isolated, and discontinuous. Others are of a rhythmic nature. Rhythmic fluctuations include seasonal fluctuations and cyclical fluctuations.

Cyclical fluctuations are characterized by alternating waves of expansion and contraction. They are not periodic but they are cyclical in that the phases of contraction and expansion recur frequently and in fairly similar patterns.[1] These cyclical fluctuations may be further classified into minor cycles and major cycles.

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[1]James A. Estey, Business Cycles, Their Nature, Cause and Control (New York: Prentice-Hall, Inc., 1941), p. 13.

Major cycles may be defined as the fluctuations of business activity occurring between successive "crises". They may also be called "intercrisis" cycles.[1] In the United States for the period 1796-1920 there were 14 major cycles which ranged in length from 2 years to 16 years and whose average length was 8-6/7 years.[2]

Within major cycles there are shorter cycles which may be called minor or interrecession cycles.[3] In the United States the most common length of the interrecession cycle is three years and the average duration is about four years.[4] The cycles are generally referred to simply as "business cycles".

There is also some evidence that economic activity is subject to rhythmical fluctuations of a duration longer than the major cycle. Various economists claim to have demonstrated the existence of what are commonly called "long waves," occurring in a 50 or 60 year cycle.[5]

Because of the relatively short period of time involved, the fluctuations with which this thesis are particularly concerned are those which occurred in a short minor cycle or a "business cycle".

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[1] Ibid, p. 15.
[2] Ibid, p. 83.
[3] Ibid, p. 16.
[4] Ibid, p. 83.
[5] Ibid, p. 18.

The Characteristic Business Cycle

Business cycles are generally divided into four recurring phases: expansion, recession, contraction, and revival.[1] No one cycle is the same as another. The order of events as well as the events themselves is ever changing. Yet there is sufficient that is uniform, characteristic, and significant to develop a pattern.[2]

The following paragraphs describe a typical cycle and give a broad outline of what characteristically happens during the successive phases.

Expansion Phase. It will be convenient to think of the economic system as being temporarily in equilibrium. This equilibrium may be disturbed by factors which are capable of stimulating the whole economic system. These stimulants to general activity have been called "originating forces".[3] "Originating forces" are taken to include such things as wars, the effect of the weather on crops, certain elements in the processes of change in consumers' wants, inventions and the discovery of new goods.[4]

These originating forces set up a series of business responses. Once started, the increased activity spreads rapidly

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[1] Ibid, p. 78.
[2] Ibid, p. 102.
[3] Ibid, p. 103.
[4] John M. Clark, Strategic Factors in Business Cycles (National Bureau of Economic Research in Cooperation With the Committee on Recent Economic Changes, 1935), p. 14.

over a large part, if not all, of the field of business. For, even when the first impulse toward expansion is sharply confined to a single industry or a single locality, its effects in the restricted field stimulate activity elsewhere.[1]

In part, this diffusion of activity proceeds along the lines of interconnection among business enterprises. One line leads back from the industries first stimulated to the industries that provide raw materials and supplementary supplies. Another line leads forward to the chain of enterprises that handle the increased output of commodities.[2]

Futhermore, these responses seem to be cumulative in their nature. The impulse from the starter is taken up and amplified by the financial and industrial system, so that changes once begun proceed at a progressively increasing pace and cover wider and wider areas of financial and industrial life.[3]

It is these cumulative responses rather than the starters that give the characteristic wavelike and rhythmic effect of cycles.[4]

Under the stimulus of the originating cause, entrepreneurs increase the scope of their activities. This impetus is cumulative. It proceeds by engendering an optimistic bias in the calculations of all persons concerned with the active direction of business

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[1]Wesley C. Mitchell, Business Cycles and Their Causes (Berkeley and Los Angeles: University of California Press, 1941), p. 3.

[2]Ibid, p. 3.

[3]Ratey, op. cit., p. 104.

[4]Clark, op. cit., p. 17.

enterprises and with providing loans. When the first beneficiaries develop a cheerful frame of mind about the business outlook, they become centers of infection and start an epidemic of optimism. As it spreads, the epidemic of optimism helps to produce condtions that both justify and intensify it.[1]

An increase in the physical volume of business seems to be an invariable concomitant of the expansion phase.[2] If the position from which expansion started was one of incomplete employment of resources, the expansion is marked by an increase in production but not in prices.[3] As a considerable increase in wage disbursements is made to men engaged in producing materials or equipment and as their wages are spent for consumption goods, there is apt to be a lag in the production of such goods behind aggregate wage payments. When this occurs, there is a rise in prices. The records of cycles show that increases in the price level are delayed during the early stages of expansion but are stepped up sharply in the later stages.[4]

Of course the advance of prices is far from uniform. While all parts of the system feel the influence of a business revival, they respond with varying degrees of promptness to the stimulus. Retail prices rise less than the wholesale prices of the same commodities. Wholesale prices of finished products lag behind

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[1]Mitchell, op. cit., p. 5.
[2]Ibid, p. 7.
[3]Estey, op. cit., p. 106.
[4]Estey, op. cit., p. 106.

the wholesale prices of the same commodities in a partly manufactured state.[1]

This rise of prices is accompanied by and is dependent upon an increase in the volume of monetary means of payment. This increase is largely effected by an expansion in bank deposits.[2]

Expansion is marked not only by changes in the relative prices of goods but also by changes in the various elements of the cost structure. Raw material prices commonly move up quickly. Wages tend to lag. Interest, particularly long term interest, is slow to rise. Similarly rentals, insurance charges and taxes lag behind in expansion.[3]

Since the quest for profits is the great driving force of the money economy, the significance of all the processes sketched culminates in their bearing upon the amount of money business enterprises can make.[4]

The net result of these processes is to increase profits. Stimulated by the prospects of profit, further investment is made by entrepreneurs. This development is dependent on the expansion in the nation's monetary circulation, especially its bank credit.[5]

As soon as investments become large, business activity is further stimulated. The establishment of new enterprises and the enlargement of old enterprises involve a heavy demand for new

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[1]Mitchell, op. cit., p. 12-13.
[2]Estey, op. cit., p. 107.
[3]Ibid., p. 108.
[4]Mitchell, op. cit., p. 20.
[5]Estey, op. cit., p. 109.

industrial equipment--buildings, machinery, furnishings, etc. This increases the demand for materials, equipment, labor, discounts, and long loans. The whole set of expansion processes is thereby rendered still more intense.[1]

Thus activity grows in cumulative fashion until the whole economic system is brought to a relatively high pitch of production.

End of Expansion. This expansion builds up a series of threatening stresses that gradually accumulate and bring the period of expansion to an end. The cumulative forces making for expansion are overcome by a series of limiting forces brought into play by the expansion itself.

The first of these is the gradual rise of costs relative to prices. The tremendous pressure of the demand for materials and labor begins to make itself felt in rising prices, wages, and interest rates.[2] All these factors raise unit costs and make the price level less profitable to entrepreneurs than they had expected.

The problem of rising unit costs could be met if entrepreneurs could continue to raise selling prices, but this possibility meets two formidable obstacles. First, the producer experiences increased difficulty in raising prices without encountering the resistance of consumers. The second obstacle is the limit to the elasticity of bank credit. The banking system experiences

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[1]Mitchell, op. cit., p. 25.
[2]Estey, op. cit., p. 111.

increasing pressure on its reserves and is forced in time to raise its rate of interest, to be less inclined to expand loans further, and even to put pressure on less desirable borrowers to repay loans.[1]

These strains increase in the economic system as expansion continues and eventually reach the breaking point.

The Recession. The recession marks the turning period during which the forces that make for contraction finally win over the forces of expansion. The recession is of relatively short duration. Its outward signs are liquidation in the stock market, strain in the banking system, some liquidation of bank loans, and the beginning of the decline of prices.[2]

Production may continue for a while, but there is a sharp reduction in orders for equipment and in construction contracts.[3]

This period is marked by a collapse of confidence which causes sudden demands for liquidity. It quite often sets off a wave of fright which culminates in a general run on financial institutions.[4]

This cumulative wave of liquidation which begins in the stock market, the money market and the commodity market is the prelude to the more or less prolonged phase of business contraction which soon begins.[5]

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[1] Estey, op. cit., p. 112 and 113.
[2] Ibid., p. 114.
[3] Estey, op. cit., p. 114.
[4] Ibid., p. 116.
[5] Estey, op. cit., p. 115.

Contraction of Business Activity. The period of contraction is characterized by a general decrease in economic activity. There is a notable fall in the production of goods and services and in employment. The fall is general but it is by no means uniform. There is substantial reduction in manufacture, mining, construction and transportation, especially in the field of capital goods, buildings, machinery and equipment.[1]

The processes that cause this shrinking in trade, like the processes that cause an increase in times of revival, are cumulative in their effects. The more workmen discharged, the smaller becomes consumers' demand. Every reduction in consumers' demand causes a further decline in the business demand for the materials from which consumers' goods are made.[2]

Prices fall due to the shrinkage in the demand for consumers' goods, raw materials, producers' supplies, and construction work.[3] As on the rise there are marked differences in the rate of fall in prices. Retail prices lag behind wholesale prices of the same goods. Consumers' goods lag behind producers' goods.[4]

Along with this distortion in the price structure appears a distortion in the cost structure. The prices of labor fall less rapidly than the prices of commodities at wholesale. Interest rates

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[1] Ibid., p. 117.
[2] Mitchell, op. cit., p. 133.
[3] Ibid., p. 134.
[4] Ibid., p. 135.

on long-time loans decline at a slow pace.[1] Rents, insurance, and taxes are slow to move downward.[2]

Because of these relative changes in prices and costs, the margin of profit tends to disappear and be replaced by loss. All of this is very disheartening to business and induces a mood of pessimism which exaggerates the potential losses.[3]

As contraction continues, there is a great reduction in the volume of money in use. The general reduction in activity and the deteriorated prospects of all business result in a substantial fall in the volume of bank deposits. Loans are paid off. New loans do not take their place.[4]

Thus there is an accumulation of forces that lead to increased rates of contraction. One reduction in output causes further unemployment, further reduction of purchasing power, further fall in bank credit, and more deflation of prices.

Revival. Just as in expansion various forces which tend to bring the expansion to an end are eventually set in motion, so in contraction limiting forces arise to bring the contraction to an end.[5] Perhaps the most important of these forces are those that are working towards restoring the normal price relations and price-cost relations so badly distorted by the deflation.[6] The accumulated stocks of goods carried over are gradually disposed of.

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[1] Loc. cit.
[2] Estey, op. cit., p. 119.
[3] Loc. cit.
[4] Ibid., p. 117.
[5] Estey, op. cit., p. 119.
[6] Ibid., p. 120.

Factories and equipment deteriorate and must be replaced. The mere prescence of these potential needs weakens the forces of depression and stagnation.[1]

At the same time the relationship between costs and prices becomes more favorable. Interest rates sink to low levels. Wages are compelled to come down. Workers are anxious to hold their jobs and become more efficient. As a result of these changes, the margin of loss is reduced.[2]

Under these conditions any quickening of business may start a substantial wave of recovery.[3]

It is a debatable question whether complete recovery can come about in the absence of some originating cause, which is usually responsible for a period of expansion. Some writers hold that the recovery from depression is so stimulating to confidence that recovery will move into expansion without any outside originating cause. These writers hold that cycles once started are continous and self-generating.[4]

Other writers hold that some originating force, such as invention, new industries or commodities, favorable crops, great discoveries of gold, or war, are required to bring about complete recovery.[5]

A new period of expansion, whether the result of self-generating activity or an originating cause, will set off a new

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[1] Loc. cit.
[2] Ibid., p. 121.
[3] Loc. cit.
[4] Estey, op. cit., p. 123.
[5] Ibid., p. 125.

business cycle which will follow the same characteristic pattern described above.

The Desirability of Stabilizing Business Activity

The foregoing description of characteristic fluctuations in business activity leads directly to the question of whether or not society would benefit from a stabilization of business activity.

The desirability of stabilization is indicated by both common sense and economic analysis.[1]

Stabilization substitutes regular income and employment for irregular income and employment. Unless an individual is of a speculative nature, he will value a regular income more highly than an irregular income of the same aggregate. Regularity is particularly important to the masses of people whose incomes are small. Their incomes are spent principally for food, shelter and clothing. Any reductions in income encroach on important items in the standard of living. The poorest paid workers are also most likely to be unemployed in times of depression.[2]

As to the efficienty of labor, there is no doubt that irregularity of production is an evil.[3] Our cyclical fluctuations demand an exhausting pace and overtime in expansion and entail unemployment and short hours of work in contraction. Depression

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[1] Ibid., p. 519.
[2] Estey, op. cit., p. 520.
[3] Loc. cit.

also brings with it the constant fear of discharge, the loss of skill, and the destruction of morale. Depression also leads to restriction of output to make jobs last longer. Industrial disputes are sharpened by irregular employment.[1]

As to our natural resources, cyclical fluctuations lead to inefficiency in their use. Prosperity encourages speculation, extravagance, and waste. Variations in output require excessive expansion of capacity for peak loads and result in idle resources in times of depression.[2]

These considerations indicate that stabilization would be desirable even if the reduction of output and income in depression were counteracted by equal expansion of output and income in prosperity. The argument for stabilization is even stronger if the effect of cycles is to reduce the average level of production below production in a stable economy.[3]

Of course, one must not overlook the fact that even though the list of advantages of any proposal appear impressive, the proposal still is not desirable unless the advantages outweigh the disadvantages. Thus stabilization is not desirable unless the social cost of stabilization is less than the social benefits to be derived from stabilization.

Despite social costs of stabilization, there can be little

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[1] Loc. cit.
[2] Ibid., p. 521.
[3] Loc. cit.

doubt that the American public regards stabilization as desirable. This is apparent from the passage of the Employment Act of 1946 and the fact that both political parties are committed to support a stable economy.

Public Works as a Stabilizer of Business Activity

The manipulation of expenditures by governmental bodies for public works has long been recognized as one of the measures which governments can use to stabilize business activity.[1]

The depression of the 1930's brought forth many economic analyses of the stabilizing effects of public works. One of the best known is J.M. Clark's "Economics of Planning Public Works", a study made for the National Planning Board and published in 1935. The year 1935 also saw the publication of A.D. Gayer's "Public Works in Prosperity and Depression". "The Economics of Public Works" by S.H. Slichter, appearing in the American Economic Review Supplement, March 1934, is a short essay on the importance of public works as a stabilizer of business activity.

It was not until the publication of "The General Theory of Employment, Interest and Money" by John Maynard Keynes in 1936, however, that the beginning of a consistent theory for short-range government intervention was formulated.[2] Since that time the stabilizing possibilities of public works have been well recognized.

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[1]Estey, op. cit., p. 407.

[2]Paul J. Strayer, "Public Expenditure Policy," The American Economic Review, XXXIX (March 1949), 384.

The stabilizing possibilities of public works are due to the fact that the government in recent years has exercised a large demand for durable goods and to the fact that to a large extent such expenditures can be manipulated to offset changes in private business activity.[1]

Since governmental actions are not guided by the profit-making motive that surrounds private business transactions, governments may advance or postpone demands for durable goods within wide limits. This ability permits governments to stagger their operations in the field of durable goods against those of private enterprise.[2] This possibility is particularly important because in the characteristic business cycle the production of producers' goods fluctuates much more violently than the production of consumers' goods.[3] Fluctuations are greater in heavy industries than in light industries.

If no effort is made to plan or control expenditures by governmental units for public works, government activities tend to accentuate cyclical fluctuations. In times of prosperity, taxes flow in more freely and revenues rise. The demand for public works of all kinds also rises. In times of depression, revenues gradually shrink, and the demand for public works falls away. In an effort to balance their budgets, governmental units usually curtail public works activity. Under these circumstances government activities tend to increase the expansion of industrial

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[1]Estey, op. cit., p. 407.
[2]Ibid., p. 408.
[3]Ibid., p. 169.

activity in boom periods and increase the contraction in depression periods.[1]

If, on the other hand, government expenditures can be deliberately arranged to counteract rather than to exaggerate fluctuations in business spending, cyclical fluctuations will be reduced. If governments can increase their activities in times of depression and curtail their activities in times of prosperity, a more stable economy will result.

The effectiveness of this stabilizing agent depends on its importance in the economic system as a whole. It further depends upon the volume of public works as compared with comparable private expenditures and on the fraction of this volume which can be brought under effective control.[2]

The government has become an important influence in the determination of market conditions in a relatively short period of time. Prior to World War I, government finance was a minor factor. There was some expansion during World War I, but the return to normalcy after the war left the government in a relatively insignificant position. It was not until the depression of the 1930's that the government became a major factor in the determination of the economic welfare of the people of the United States.[3]

Since that time the magnitude of the level of government expenditures has increased both absolutely and as a percentage of the total national income.[4] In fact, the government in recent

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[1]Estey, op. cit., p. 408.
[2]Ibid., p. 409.
[3]Strayer, op. cit., p. 383-384.
[4]Ibid., p. 385.

years has come to play such a significant role in the economic affairs of the nation that Mr. Paul J. Strayer in an article "Public Expenditures Policy" in The American Economic Review states:[1]

> Management of the public debt now dominates the securities markets and government debt policy is more significant than the combined decisions of the largest financial houses in New York. Banks and the banking system are directly affected by the debt policy of the government and the whole theory of central banking policy has been permanently affected by the growth and influences of Treasury operations.

This increase in government influence has not resulted in increased government ownership of the productive resources of the nation. If this were the case, manipulation of government expenditures would undoubtedly be much more difficult than in the absence of increased government ownership of productive resources. Rather the increase in government influence is largely the result of the tremendous increase in transfer expenditures, increased war and defense expenditures, and the rapid expansion of foreign commitments in the postwar period.[2]

In the field of construction, expenditures by governmental bodies constitute an important proportion of the total. In the 11 years from 1923 to 1933, public construction averaged about 30 per cent of total construction.[3] During the depression of the 1930's this proportion rose greatly, partly because of the shrinkage of private investment and partly because of the great extension of the

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[1] Loc. cit.
[2] Loc. cit.
[3] Estey, op. cit., p. 409.

scope of public works.[1] In 1946 public construction constituted 21 per cent of total construction. In 1947 the ratio was 22 per cent.[2]

Since governmental expenditures are important in the economic system and since the volume of public works does nonstitute a sizeable proportion of total expenditures for durable goods, it would seem that the stabilizing possibilities of public works would depend upon the extent to which these expenditures can be controlled. If governmental expenditures can be controlled in a manner so as to offset private expenditures, it would seem that the manipulation of expenditures for public works could be an effective factor in stabilizing economic activity.

One of the purposes of this thesis was to attempt to determine to what extent public construction expenditures by state and local governments in Kansas in the period following World War II were or could have been controlled in such a manner so as to offset fluctuations in private business expenditures.

ANALYSIS OF ECONOMIC ACTIVITY SINCE END OF WORLD WAR II

Figures 1 through 6 show certain business indexes for the United States economy for the period since the end of World War II. A comparison of the activity represented in these charts with the

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[1] Loc. cit.

[2] "Public Construction Headed for Peacetime Record." Business Week, XLIV (August 4, 1948), p. 19-20.

description of the characteristic business cycle, pages 22 to 31 indicates that the United States economy has experienced a complete minor business cycle in the period since the end of World War II.

Originating Cause

During World War II large amounts of liquid assets including cash, bank deposits and bonds, were accumulated by individuals as the result of high earnings, war bond campaigns, wartime price controls, and the government's fiscal policy during the war. The total amount of money in circulation in the United States rose from $7,598,000,000 at the end of the year 1939 and $11,160,000,000 at the end of the year 1941 to a total of $28,515,000,000 at the end of the year 1945.[1] Total demand deposits, adjusted, rose from $38,992,000,000 at the end of the year 1941 to $75,851,000,000 at the end of the year 1945.[2] U.S. Savings Bonds rose from $6,140,000,000 at the end of the year 1941 to $48,183,000,000 at the end of the year 1945.[3]

During the war years, dollar sales of retail stores increased steadily but at a much less rapid rate than the disposable income of individuals. The unavailability of many consumer durable goods,

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[1]Board of Governors of the Federal Reserve System, Federal Reserve Bulletin, November 1948 (Washington: Federal Reserve System), p. 1381.

[2]Ibid., p. 1383.

[3]Ibid., p. 1399.

the channeling of a larger-than-normal proportion of income into savings, and price and rationing controls were major factors in holding down purchases at retail stores after 1941 to levels which were considerably below the amount which would have been purchased with the wartime income on the basis of the prewar relationship of sales to income.[1]

After VJ-day the patriotic motive for abnormal savings was gone. The supplies of gasoline, foods and other consumer goods were increased. Prices were permitted to rise. As a result, consumers rapidly adjusted themselves to a normal peacetime spending relation to income.[2]

To satisfy this increased demand for consumer goods, the demand for producers' goods were greatly intensified. Further, pent-up demands for plant and equipment were heavy because of the restrictions on construction during the war and because of the difficulty of securing machinery not essential to munitions production.[3]

Residential construction was another area where deficiencies carried over from the war--and, in this case, from the pre-war period, as well.[4] Also the demand for domestically produced goods

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[1]United States Department of Commerce, Survey of Current Business, October 1946 (Washington: United States Department of Commerce), p. 10-11.

[2]Loc. cit.

[3]United States Department of Commerce, Survey of Current Business, February 1947 (Washington: United States Department of Commerce), p. 4.

[4]Loc. cit.

was augmented by the pressing relief and rehabilitation needs of war-devastated areas.[1]

Before this increased demand for consumers' and producers' goods could be completely satisfied, however, there was first the problems of reconversion from a wartime to a peacetime basis. During most of 1946 the major developments on the production front, the labor-management difficulties, the developments on the price front including the removal of wartime price controls, and the developments on the demand front were not so much characteristic of a period of general business expansion such as occurs in the rising phase of a normal business cycle as they were peculiar to this particular period of rapid transition from an economy long mobilized for war production to an economy being geared to full-scale peacetime operations.[2]

By the end of 1946, however, many of these adjustments incident to this transition had been worked out.[3] The United States economy was ready to proceed with expansion to meet the increased demand.

All of these developments constituted an originating force which set in motion a series of business responses which were to remain in motion until the summer of 1950. The following paragraphs briefly describe this series of business responses.

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[1] Loc. cit.
[2] Ibid., p. 2.
[3] Loc. cit.

Prosperity Phase

A study of Fig. 1 through 6 shows that the period from the summer of 1946 to the fall of 1948 has all of the characteristics of the prosperity phase of the typical business cycle.

The originating cause of the business cycle under consideration was not in a single field of business. Had that been the case, expansion would have begun in a single field and from there diffused into other fields of activity until all phases of economic activity had been stimulated.

A stimulus was given to practically all phases of business activity at the same time. It set in motion many series of responses throughout the economy. These responses were cumulative in their effect, and each set of responses in turn affected all other phases of economic activity. It is to these series of responses that attention is now directed.

The expansion of business activity in this period is very clearly shown by changes in the gross national product, which is shown in graphic form in Fig. 1. The marked increase in gross national product is due partly to an increase in the physical volume of goods and partly to increases in prices.

The increase in the physical volume of goods is shown by the index of industrial production, shown graphically in Fig. 2. As in the typical business cycle, expansion was greater in durable manufacturing industries than in non-durable manufacturing industries.

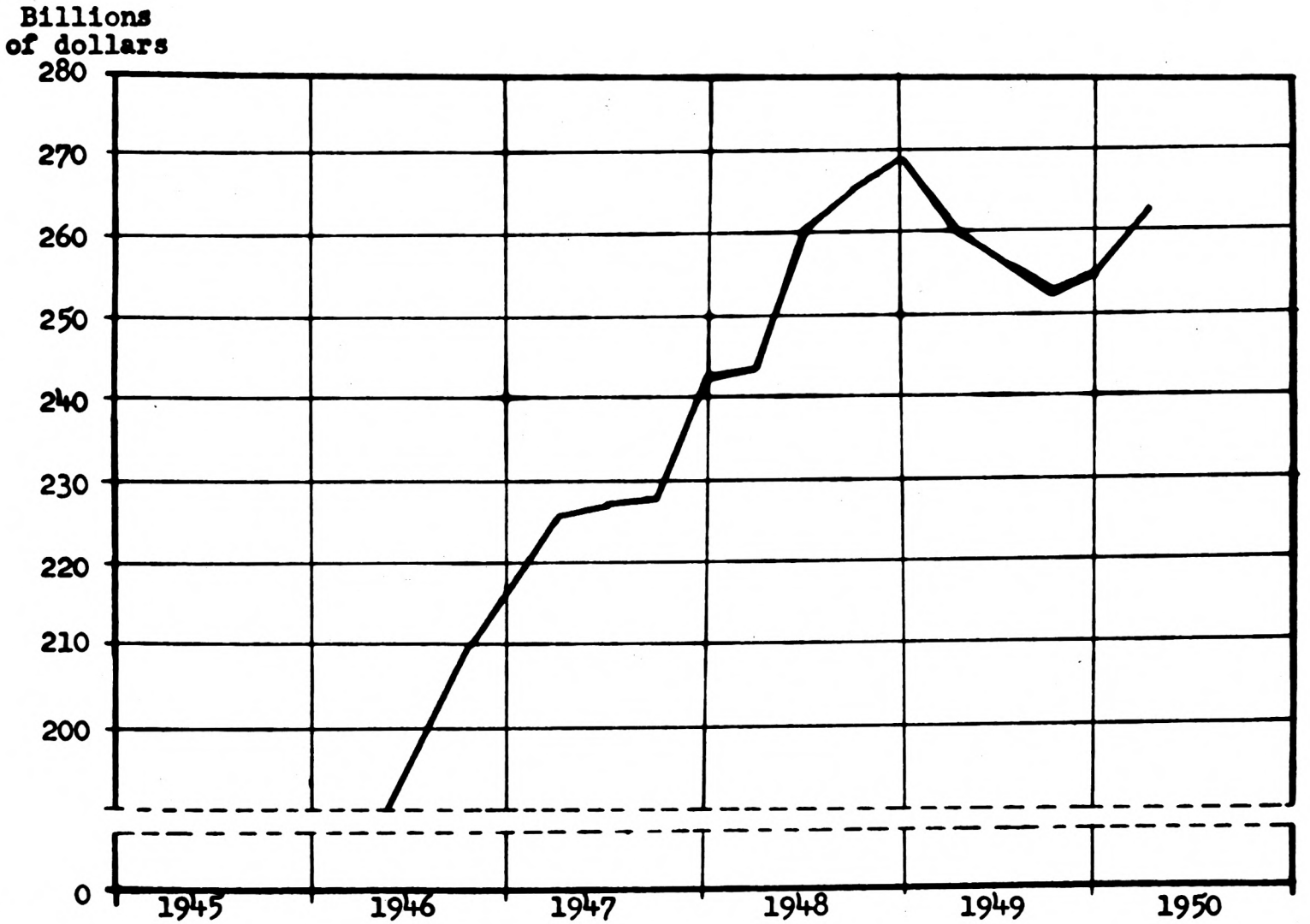

Figure 1. Gross national product, seasonally adjusted annual rates by quarters.

Source: Board of Governors of the Federal Reserve System, Federal Reserve Bulletins, September 1945 through August 1950 (Washington: Federal Reserve System).

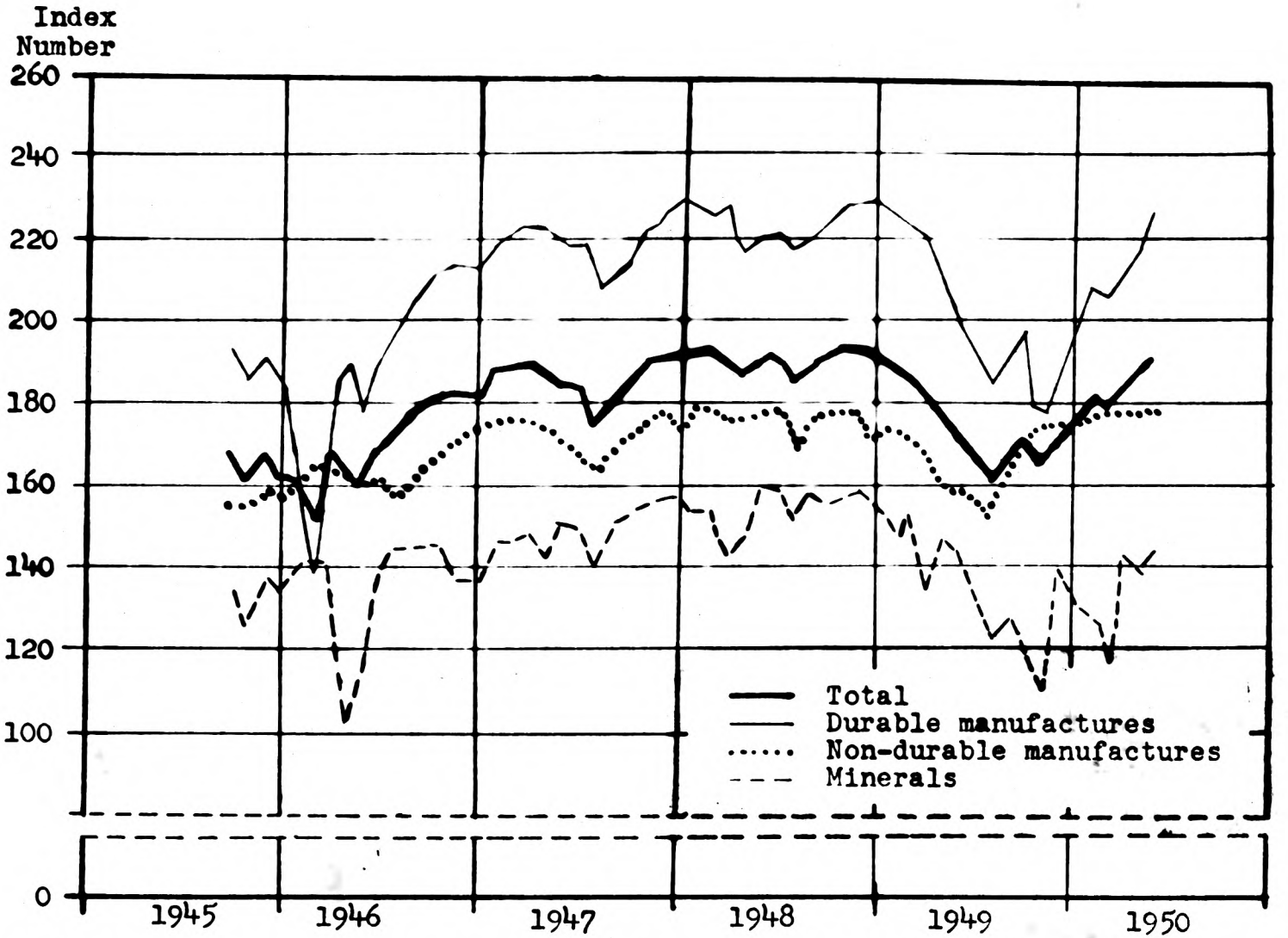

Figure 2. Index numbers of industrial production, physical volume, adjusted for seasonal variation, 1935-39 = 100.

Source: Board of Governors of the Federal Reserve System, Federal Reserve Bulletins, September 1945 through August 1950 (Washington: Federal Reserve System).

The expansion in manufacturing industries is also shown by the index of factory payrolls, which is shown graphically in Fig. 3.

A substantial addition to the nation's stock of capital goods--industrial machinery, plants, residential buildings--was made at the same time that consumers' and producers' goods were shipped abroad in large quantities to aid in rehabilitation and reconstruction.[1]

A study of price changes in this period indicates that the behavior of prices in this period also conformed to the characteristic pattern of price changes in the typical business cycle; although the behavior of prices in this period was complicated by further manifestations of the inflationary effect of the method of financing World War II.

Prices rose throughout the year 1947 and during the first half of 1948. Figure 4 shows index figures for wholesale prices and for consumers' prices. It should be noted that the base period for wholesale prices is 1926, while the base period for the consumers' price index is 1935-39. As a result price changes must be considered in relation to their relative position in September 1945. When the effect of the two different base periods is taken into consideration, it is apparent that in the period following the removal of wartime price controls in June 1946 wholesale prices rose faster than retail prices. Wholesale prices of

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[1]United States Department of Commerce, Survey of Current Business, February 1948 (Washington: United States Department of Commerce), p. 1.

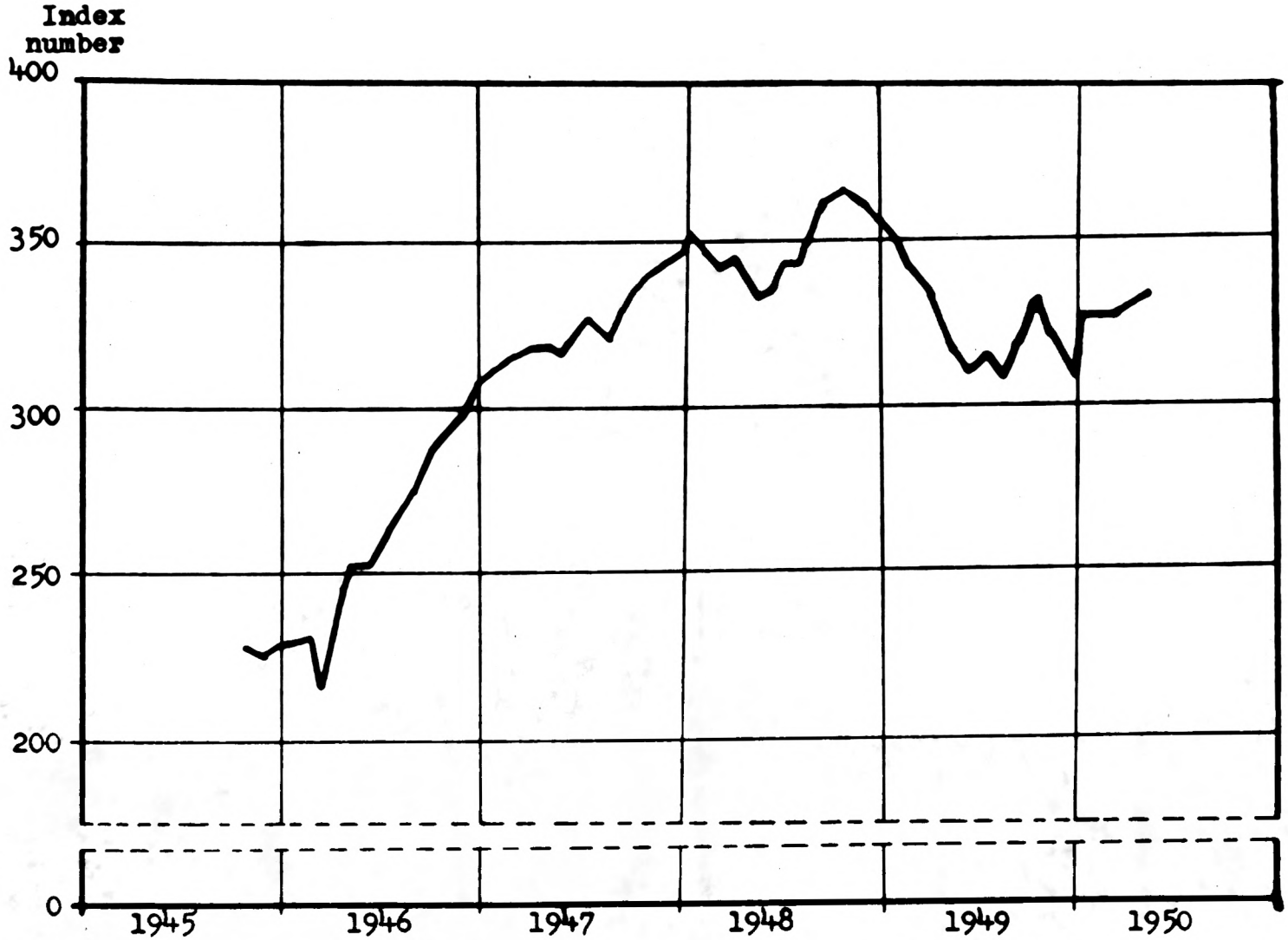

Figure 3. Index numbers of factory payrolls, without seasonal adjustment, 1939 = 100.

Source: Board of Governors of the Federal Reserve System, Federal Reserve Bulletins, September 1945 through August 1950 (Washington: Federal Reserve System).

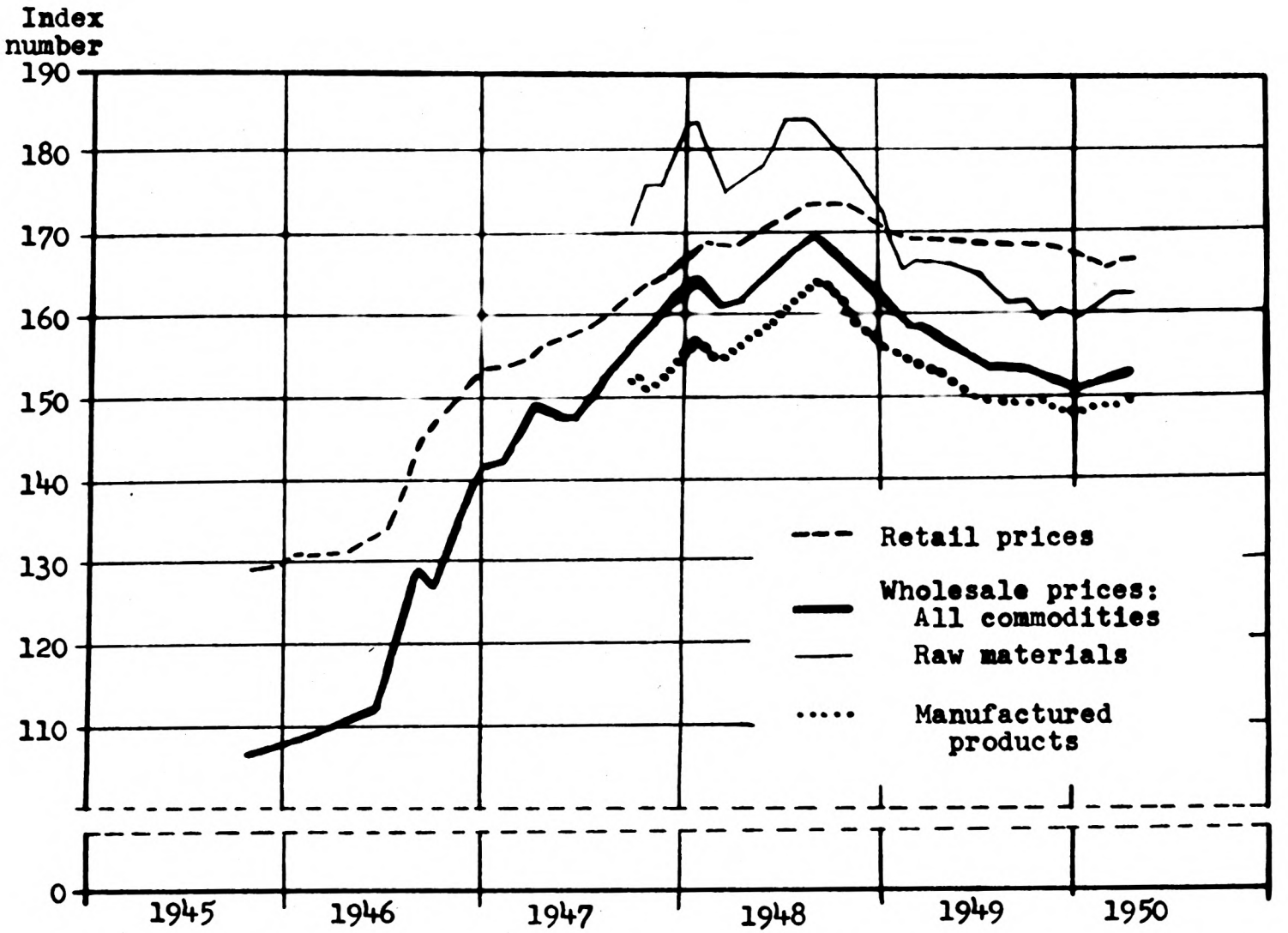

Figure 4. Consumers' price index, 1935-39 = 100, and wholesale price index, 1926 = 100.

Source: Board of Governors of the Federal Reserve System, Federal Reserve Bulletins, September 1945 through August 1950 (Washington: Federal Reserve System).

raw materials also rose faster than wholesale prices of manufactured products.

The civilian labor force employed, depicted graphically in Fig. 5, also reveals the pattern of business expansion. It should be noted that the figures plotted in Fig. 5 have not been adjusted for seasonal variation. While each year shows an expansion in the civilian labor force in the summer months and a contraction in the winter months, the overall pattern clearly shows expansion in the period under consideration. Total civilian employment averaged 58 million in 1947, an increase of 2.8 million over the average of 1946, in spite of the fact that by the beginning of 1947 almost all of the available manpower was already employed.[1]

The strong demand for labor kept unemployment close to a practical minimum and was the major influence underlying the further rise in wage rates during 1947.[2]

The strong demand for labor continued during the early months of 1948. Despite the fact that the labor force included approximately 1,140,000 more workers than in 1947, unemployment was lower than in 1947.[3]

The expansion phase of the business cycle is always marked also by an upsurge in construction activity. Index numbers of the

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[1] Ibid., p. 24.
[2] Loc. cit.
[3] United States Department of Commerce, Survey of Current Business, February 1949 (Washington: United States Department of Commerce), p. 31.

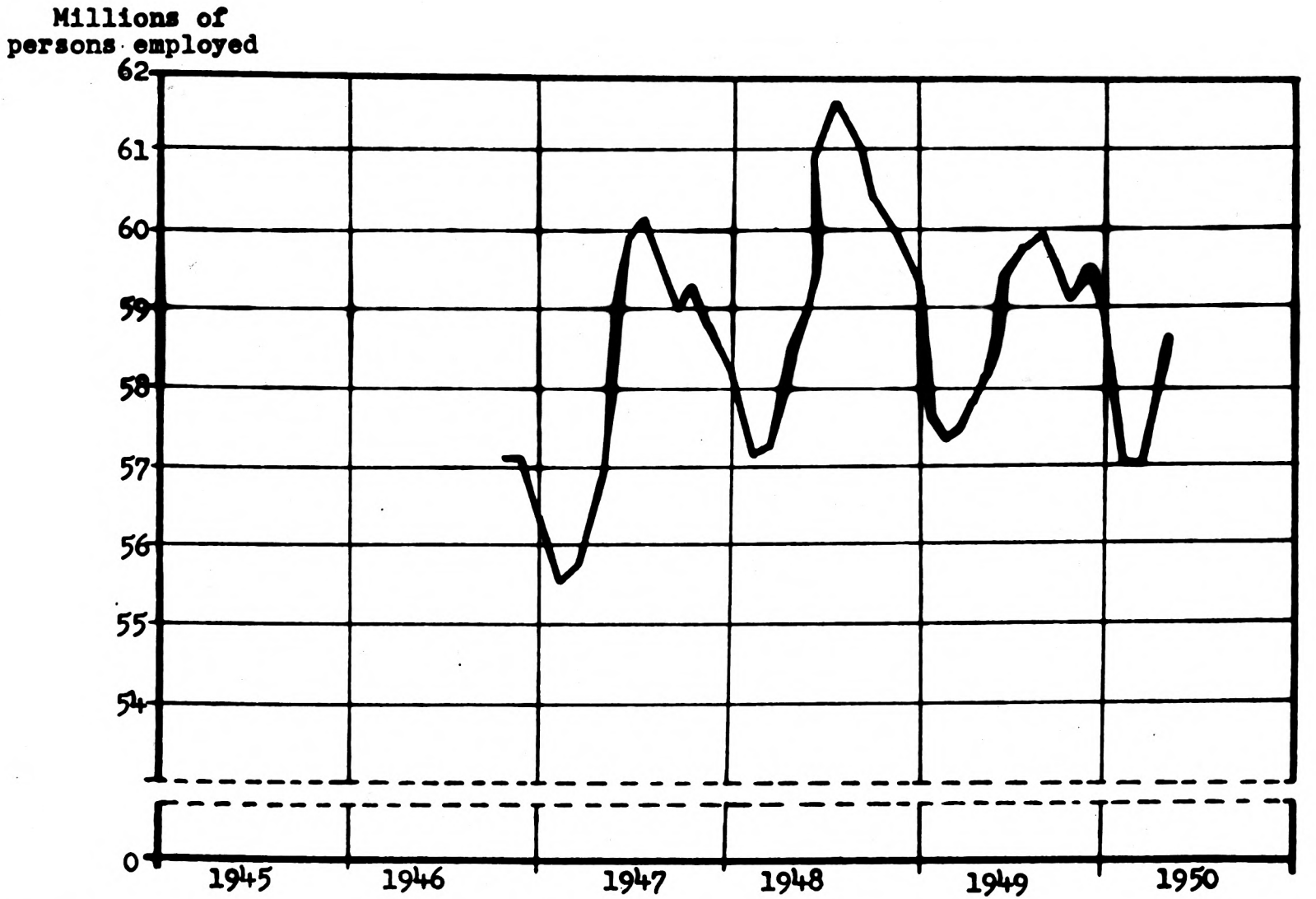

Figure 5. Civilian labor force employed, without seasonal adjustment.

Source: Board of Governors of the Federal Reserve System, Federal Reserve Bulletins, September 1945 through August 1950 (Washington: Federal Reserve System).

value of construction contracts awarded in the United States are shown in Fig. 6. These figures are adjusted for seasonal variation.

This year 1946 shows a large increase in construction activity which was due to the reconversion of industry from a wartime to a peacetime basis.[1] Then there was some slackening of activity. This was followed by another increase beginning in 1947 and extending into 1948 which follows fairly well the characteristic pattern of the expansion phase of the business cycle.

This increase was marked by divergent trends within the major types of construction activity. Public construction, led by construction of highways and educational facilities, showed a larger percentage increase than private construction. The acute shortage of housing, coupled with an easy credit situation, proved sufficient to obtain a strong upsurge in residential construction. In the industrial field, on the other hand, the record volume of new private construction in 1946 and government sales or leases to industry of an even larger volume of war plants had taken the edge off of the backlog of urgent industrial needs with the result that industrial construction showed a much smaller increase than residential construction.[2]

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[1]United States Department of Commerce, Survey of Current Business, February 1948 (Washington: United States Department of Commerce), p. 20.

[2]Loc. cit.

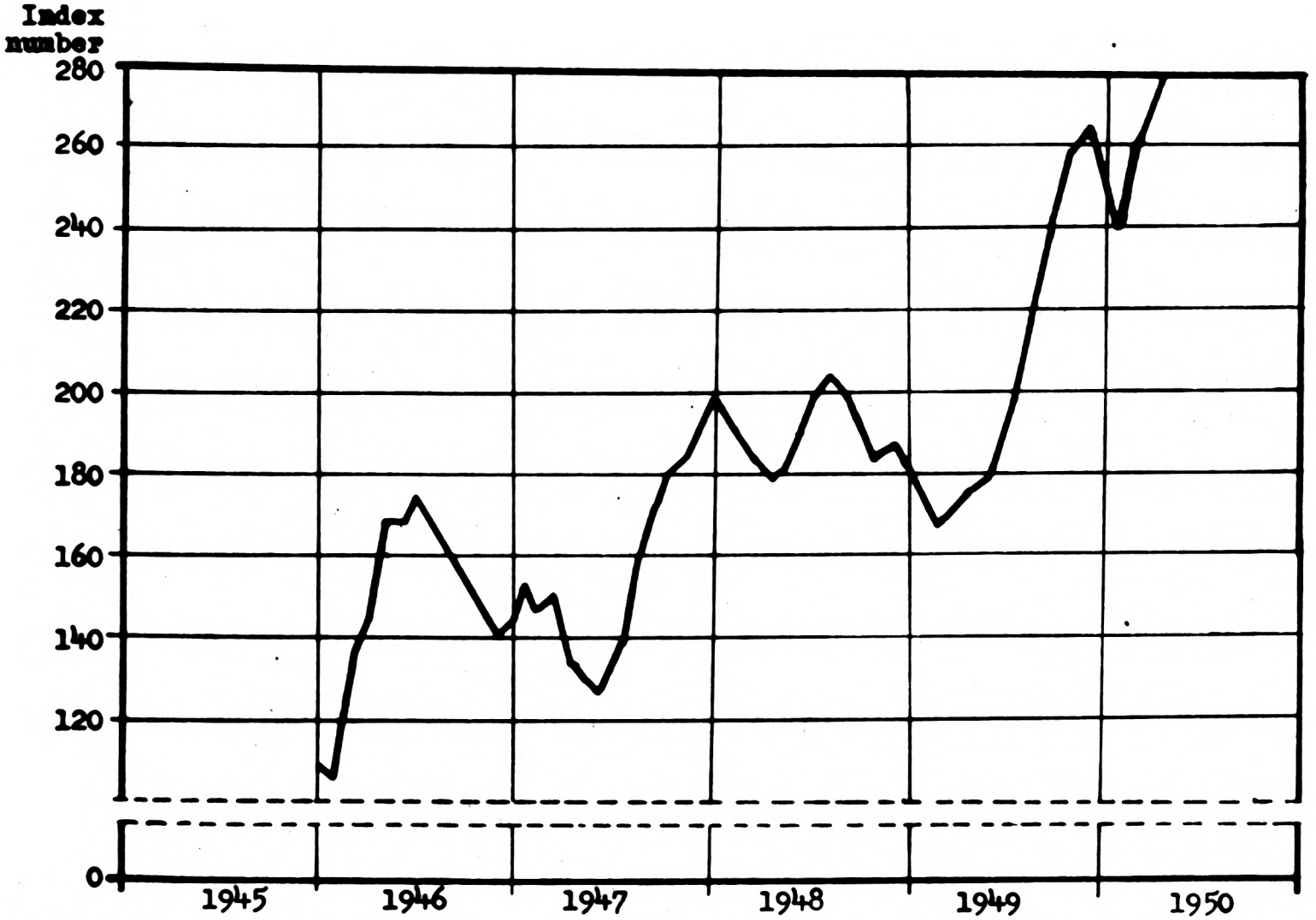

Figure 6. Index numbers of value of construction contracts awarded, adjusted for seasonal variation, 1923-25 = 100.

Source: Board of Governors of the Federal Reserve System, Federal Reserve Bulletins, September 1945 through August 1950 (Washington: Federal Reserve System).

Recession and Contraction

By the fall of 1948 these forces of expansion had set up a series of threatening stresses that accumulated and brought the period of expansion to an end.

When the period of expansion began, the United States economy was in a state that approached full employment. To expand production entrepreneurs found that they must bid against other entrepreneurs for scarce labor. Wage rates rose substantially in 1947[1] and continued to rise during most of 1948.[2] The tremendous pressure of the demand for scarce materials made itself felt in rising prices for raw materials. Figure 4 shows the substantial rise in the price level for raw materials in 1947 and the early months of 1948. The increase in the physical volume of goods was accomplished only by incurring higher and higher operating expenses.

On the other hand, there were evidences of slackening of demand for both consumers' goods and producers' goods in the last half of 1948. There were indications that consumers were beginning to resist any further increases in prices. There were indications of hesitancy in retail buying during the fall of 1948. In several important categories sales fell below the dollar totals of the previous year.[3] Durable sales advanced relative to income

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[1]United States Department of Commerce, Survey of Current Business, February 1948 (Washington: United States Department of Commerce), p. 24.

[2]United States Department of Commerce, Survey of Current Business, February 1949 (Washington: United States Department of Commerce), p. 32.

[3]Ibid., p. 26-27.

over the year, but the rate of increase slowed perceptibly. Among the durable-goods stores the automotive group was one of the few to register a strong advance. In the nondurable-goods field, a number of trades reported declines in the latter half of 1948.[1]

In addition, there was a pronounced tendency for plant and equipment expenditures to level off during 1948. Among the factors limiting expenditures for plant and equipment in 1948 was the fact that in general the most urgent postwar expansion and modernization requirements had been met. As a result capital outlays in 1948 in the industrial segment remained below the peak of the previous year.[2]

Thus producers found themselves facing the dual problem of rising costs on one hand and a slackening of demand and increased resistance to higher prices on the other hand.

As a result of these developments, the limiting forces overcame the forces making for expansion, and a period of recession and contraction ensued.

The period of contraction of business activity is shown in all of the indexes of business activity shown graphically in Fig. 1 through 6. Gross national product declined gradually for a period of nine months. Industrial production fell off rapidly. Durable manufactures showed a steeper decline than non-durable manufactures. Factory payrolls declined. The 1949 summer peak in the civilian labor force is considerably below the peak in 1948.

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[1] Ibid., p. 27-28.
[2] Ibid., p. 20-21.

The behavior of prices in this period conforms also to the characteristic pattern of the contraction phase of the business cycle. The decline in prices became general in the economy in the fall of 1948.[1] Wholesale prices began to decline before retail prices began to fall, and the decline in wholesale prices was steeper than the decline in retail prices. Wholesale prices of raw materials fell faster than wholesale prices of manufactured products.[2]

Entrepreneurs who had expanded business activity by incurring higher and higher operating costs now faced a falling price level and falling prospects for profit.

The contraction in business activity was cumulative. Each shrinkage in production caused a shrinkage in wage payments. Each decline in wage payments reduced the demand for consumers' goods. Each reduction in consumers' demand caused a further decline in the business demand for the materials from which consumers' goods are made.

The contraction of business activity is vividly described in the following quotation from U.S. News and World Report of March 4, 1949:

> A turn downward in business definitely is under way. This turn to lower levels means the start of an end to the big postwar boom. It marks the beginning of deflation.
>
> Economists representing major industries, banks and investment firms are in agreement on these conclusions. Their appraisal, just made on a confidential

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[1] Ibid., p. 11-13.
[2] Loc. cit.

basis for Government officials, is uniform on the point that the peak is past and that the next move is down.[1]

The period of recession and contraction lasted approximately nine months.

Revival

The period of contraction set into motion a series of forces which brought the period of contraction to an end. As a result of the forces in motion during the period of contraction, producers once again found themselves facing brighter prospects for profit.

Consumer demand in the aggregate remained firm in 1949. Supported by sustained high disposable income of consumers and stimulated by an expanding flow of automobiles for which backlog demand continued unsatisfied, aggregate consumer spending, comprising two-thirds of gross national product, held firm. Government purchases were also maintained at a stable rate.[2]

On the other hand, producers found themselves facing a more favorable relationship between prices and costs. The price of raw materials had fallen substantially, as shown in Fig. 4. Wage rates increased by only about 1.4 per cent from September 1948 to September 1949. In a large number of industries the emphasis shifted from wage increases to pension and welfare benefits.[3] Dur-

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[1]"'Dis-Inflation': How Deep? Business Advisers' Appraisal", U.S. News and World Report, XXVI (March 4, 1949), 13.

[2]United States Department of Commerce, Survey of Current Business, February 1950 (Washington: United States Department of Commerce), p. 1-3.

[3]Ibid., 30-31.

ing the period of falling prices, retail prices had not fallen as much as wholesale prices, as shown in Fig. 4. These factors added up to brighter profit prospects for entrepreneurs.

The most notable expansionary influence in the latter part of 1948 was the markedly rising trend of residential construction, which was beginning to carry commerical construction upward with it. This revival was sufficient to bring total private construction back to its peak by the fourth quarter of 1949.[1]

Further, the rate of liquidation of nonfarm business inventories had slackened. With business buying more closely geared to current sales for final use, this major factor of change was no longer exercising its retarding influence.[2]

These developments brought about a stabilization of the economy in the summer of 1948, and a period of revival followed. The upswing in business activity is shown clearly by the indexes of business activity which are shown in Fig. 1 through 6. Gross national product showed an increase in the last quarter of 1949. Industrial production increased, beginning in September 1949. Factory payrolls increased at the same time.

In June 1950, approximately nine months later, the forces of revival were still in process.

On June 25, 1950, the Republic of South Korea was invaded by forces from North Korea.[3] The United States Government, acting

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[1] Ibid., p. 1-3.
[2] Loc. cit.
[3] Kansas City Star, June 25, 1950, p. 1

through the United Nations, sent forces to support the Republic of South Korea in an attempt to repel the invasion.[1] The effect of this military action upon the economy of the United States will undoubtedly constitute the originating cause of the next business cycle.

PROGRAM OF FEDERAL GOVERNMENT FOR ENCOURAGING PLANS FOR POST-WAR CONSTRUCTION

Before the survey described in this thesis was undertaken, an investigation was made to determine whether similar information was already available from other sources.

Since the Federal government is committed to a policy of full employment, it is, of course, very much interested in the stabilizing possibilities of public works. It was found that the Federal Works Agency had accumulated information on the amount of public construction which was being planned by state and local governments.

During World War II the Federal government undertook a program designed to encourage state and local governments to plan public works projects for post-war construction. The purpose of the program was to provide a reserve of state and local public works, fully planned and ready for post-war construction, which could be used to stabilize the construction industry and to maintain a high level of general employment during the recession that

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[1] Kansas City Star, June 27, 1950, p. 1

was expected after the cancellation of war contracts.

The information accumulated by the Federal Works Agency concerned the amount of public works in reserve at that time or at a given time. As soon as a project was put under construction, it was eliminated from the reserve or "shelf" of public works. They were not interested in the relationship of public works to economic conditions throughout the business cycle. They were only interested in the existing reserve of public works which could be manipulated in the event a serious recession or depression developed in the post-war period.

It was felt that the information accumulated by the Federal Works Agency fulfilled a different purpose than the survey contemplated for this thesis and that such a survey would add valuable information to that already available from the Federal Works Agency. Also, the latest information available from the Federal Works Agency was as of December 31, 1947, and it was felt that the survey contemplated for this thesis could add more recent information. Thus the survey described in this thesis was undertaken and brought to completion.

A description of the program of the Federal Works Agency is given in the following paragraphs. The program consisted of three parts. The first provided for advances of Federal funds to state and local governments to assist them in their plan preparation. The second consisted of a survey of the planning activities of state and local governments that were going on without Federal aid. The third provided a Federal-aid highway program.

Advance of Federal Funds to Assist in Plan Preparation

During the war there was only a small volume of advance planning by state and local governments, and that being done was highly concentrated in a few states.[1]

There had not been a sufficient amount of advance blueprinting of state and local public works in the past because funds for blueprinting were seldom available prior to sale of the bond issue to cover the entire cost of the project, and localities hesitated to incur such a debt until it had been determined to push construction as fast as possible. Federal assistance was therefore offered in the form of repayable planning advances to state and local governments.[2]

The War Mobilization and Reconversion Act of 1944 authorized the Federal Works Agency to make advances of Federal funds to state and local public bodies to assist them in financing the advance planning of their public works exclusive of housing, such advances to be repaid as construction was started on the public works planned.[3]

A total of $65,000,000 was appropriated for this program: $17,500,000 in May 1945, $12,500,000 in December 1945, and $35,000,000 in June 1946.[4]

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[1]Federal Works Agency, Eighth Annual Report, Federal Works Agency, Fiscal Year Ended June 30, 1947 (Washington: Federal Works Agency, 1947), p. 157.

[2]Bureau of Community Facilities, Federal Works Agency, Report on Plan Preparation of State and Local Public Works, December 31, 1947 (Washington: Federal Works Agency, March 1948), p. 2.

[3]Ibid., p. 10.

[4]Loc. cit.

The Advance Planning Program was set up in May 1945 in the Federal Works Agency under the Bureau of Community Facilities.[1]

The provision of the War Mobilization and Reconversion Act of 1944 terminated June 30, 1947,[2] and for more than two years there was no authority for making further advances for the planning of additional projects.

As expressed in an article in Business Week, "Congress shut down the program in 1947, since no recession developed."[3]

The 81st Congress in October 1949, authorized another $100,000,000 for a two year period for advances or loans to local governments for the planning of public works. For the period ending June 30, 1950, the Congress appropriated $25,000,000. The act was very much like the previous act which had expired two years previously.[4]

The authorizing legislation provided for the apportionment of funds among the states on the basis of population.

To bring about a broad and equitable distribution of planning advances authorized under the War Mobilization and Reconversion Act and especially to assure the smaller towns an opportunity of participating in the program, preliminary quotas within each state were set up by the Bureau for counties and groups of counties. These quotas were adjusted from time to time to make

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[1] Ibid., p. 9.
[2] Ibid., p. 3.
[3] "Public Construction Headed for Peacetime Record," Business Week, XLIV (August 4, 1948), p. 19-20.
[4] "Federal Planning Aid," Kansas Governmental Journal, XXXV (December 1949), p. 23.

the best possible allocation of funds in accordance with the actual needs for planning advances within particular states.[1]

Any non-Federal public agency which had legal authority to construct public works could apply for planning advances for apecific public works.[2]

Almost all types of projects were eligible for planning advances. Planning advances for housing projects were specifically excluded by the authorizing legislation. Also planning advances were not made for Federal-aid highway projects for which other Federal funds for planning were available. All other non-Federal public works that the applicant expected to construct within four years were eligible for planning advances under the Bureau's program.[3]

With the funds provided under the War Mobilization and Reconversion Act, the Bureau of Community Facilities approved a total of 7,203 applications for planning advances in the total amount of $60,247,525. The advances were for the planning of state and local public works having an estimated total cost of $2,398,186,000.[4]

Advances of $872,000 were approved for 166 projects in Kansas. These advances were for the planning of state and local public works in Kansas having a total estimated cost of $26,424,000.[5]

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[1]Bureau of Community Facilities, op, cit., p. 10.
[2]Loc. cit.
[3]Bureau of Community Facilities, op. cit., p. 11.
[4]Ibid., p. 12.
[5]Ibid., p. 49.

Additional information on the number of projects and the estimated cost of the public works for which planning advances were approved is shown in Tables 2, 3 and 4, pages 62, 63, and 64.

Primary consideration in approving planning advances was given to projects for which there was the greatest need, notably to the types of public works necessary to supplement housing and industrial construction. Public works such as sewer, water and sanitation facilities, and schools and other educational facilities thus figure prominently among the projects proposed by governmental units both in Kansas and in the United States.[1] This can be seen from Table 4 which shows the estimated construction cost of the proposed public works by type of project.

Planning advances were made to governmental units of all sizes and types, to 3,983 different public bodies in all and to 92 public bodies in Kansas. These included state governments, counties, cities, towns, and townships of all sizes, school districts and special districts. The distribution of public works for which planning advances were approved is shown in Table 2 by type of governmental unit. Large cities, in which the larger projects are most likely to be found, accounted for a substantial part of the total estimated cost of all projects for which advances were approved. However, the smaller cities and towns accounted for a great many projects, mostly of a relatively small size.[2]

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[1] Ibid., p. 15.
[2] Ibid., p. 17.

Table 2. Number and type of governmental units having plans for public works in completed or design stage, as reported to the Federal Works Agency[1]

Governmental unit	States	Counties	Cities, townships, towns	School districts	Special districts	Total
State of Kansas						
Number of units for which applications for advance of Federal funds had been approved as of December 31, 1947	-	6	75	8	3	92
Number of units having plans completed or brought to design stage without Federal assistance as of June 30, 1947	1	15	56	7	1	80
Number of units reporting the absence of plans for public works as of June 30, 1947	-	87	14	65	-	166
United States						
Number of units for which applications for advance of Federal funds had been approved as of December 31, 1947	32	347	2,822	716	66	3,983
Number of units having plans completed or brought to design stage without Federal assistance as of June 30, 1947	49	909	2,782	1,971	290	6,001
Number of units reporting the absence of plans for public works as of June 30, 1947	1	1,630	3,440	2,296	127	7,494

[1]Source: Bureau of Community Facilities, Federal Works Agency, Report on Plan Preparation of State and Local Public Works, December 31, 1947 (Washington: Federal Works Agency, March 1948), p. 43, 58 and 59.

Table 3. Estimated cost of public works for which plans were in completed or design stage, as reported to the Federal Works Agency, in thousands of dollars.[1]

Governmental unit	Plans for which an advance of Federal funds had been approved as of December 31, 1947	Plans completed without Federal assistance as of June 30, 1947	Plans in design stage without Federal assistance as of June 30, 1947
State of Kansas			
Number of projects	166	71	82
Planning advance (000's omitted)	$ 872	$ -	$ -
Estimated cost: (000's omitted)			
Construction	$22,285	$7,270	$13,674
Land, equipment, and other	4,138	1,108	2,165
Total estimated cost	$26,424	$8,378	$15,839
United States			
Number of projects	7,203	6,566	8,275
Planning advance (000's omitted)	$60,248	-	-
Estimated cost: (000's omitted)			
Construction	$2,021,162	$1,203,524	$3,907,930
Land, equipment, and other	377,024	212,953	829,903
Total estimated cost	$2,398,186	$1,416,477	$4,737,833

[1]Source: Bureau of Community Facilities, Federal Works Agency, Report on Plan Preparation of State and Local Public Works, December 31, 1947 (Washington: Federal Works Agency, March 1948), p. 49, 62 and 67.

Table 4. Estimated construction costs, exclusive of land, equipment, and other costs, of public works for which plans were in completed or design stage, as reported to the Federal Works Agency, in thousands of dollars.[1]

Governmental units	Plans for which an advance of Federal funds had been approved as of December 31, 1947	Plans completed without Federal assistance as of June 30, 1947	Plans in design stage without Federal assistance as of June 30, 1947
State of Kansas			
Highways, roads and streets	1,192	1,118	736
Bridges, viaducts, grade separations	196	300	1,186
Airports, terminals, landing strips	-	405	222
Sewer, water, sanitation facilities	6,206	1,878	2,562
Schools, other educational facilities	12,257	1,383	3,134
Hospitals and health facilities	929	1,215	1,625
Other public buildings	1,180	236	2,383
Parks, other recreational facilities	324	67	887
Miscellaneous public facilities	-	668	941
Total	$22,285	$ 7,270	$13,674
United States			
Highways, roads and streets	67,513	161,246	625,209
Bridges, viaducts, grade separations	62,821	54,750	194,041
Airports, terminals, landing strips	27,862	15,219	179,130
Sewer, water, sanitation facilities	888,654	381,683	951,993
Schools, other educational facilities	505,193	283,038	740,912
Hospitals and health facilities	109,069	68,243	345,508
Other public buildings	194,802	93,275	239,829
Parks, other recreational facilities	59,241	46,624	121,045
Miscellaneous public facilities	106,007	99,446	510,263
Total	$2,021,162	$1,203,524	$3,907,930

[1]Source: Bureau of Community Facilities, Federal Works Agency, Report on Plan Preparation of State and Local Public Works, December 31, 1947 (Washington: Federal Works Agency, March 1948), p. 55, 64 and 69.

Survey of Planning Activity Without Federal Aid

A survey was instituted by the Bureau of Community Facilities of the Federal Works Agency in October 1945 to find out to what extent state and local governments were making plan preparations for public works without Federal assistance. This survey was limited to public works for which the plan preparations had been completed and those for which plan preparations had reached the design stage.[1]

In an effort to secure the fullest possible information on state and local planning conducted without Federal assistance, the field staffs of the Bureau contacted approximately 40,000 governmental units and asked them to report all their proposed public works for which plans had been completed or brought to design stage without Federal aid.[2]

Of the approximately 40,000 governmental units contacted throughout the country, 13,500 units reported to the Bureau on the status of their plan preparations. These reporting units included nearly all the state governments and a very large proportion of the counties and of cities, towns and townships with population of 50,000 and over. The governmental units reporting also included a substantial proportion of all the cities, towns

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[1]Bureau of Community Facilities, Federal Works Agency, Report on Plan Preparation of State and Local Public Works, December 31, 1946 (Washington: Federal Works Agency, January 1947), p. 22.

[2]Loc. cit.

and townships with a population of 2,500 or more.[1]

Approximately 6,000 governmental units in the United States and 80 governmental units in Kansas reported that they had plan preparations completed or in the design stage for one or more public works.[2] Approximately 7,500 governmental units in the United States and 166 governmental units in Kansas indicated that they had no plan preparations in either the completed or design stage.[3]

For purposes of this survey, public works in the completed stage of plan preparation were defined as those on which final drawings and specifications and contract documents had been completed; and arrangements were in process or had been brought to the point where bids could be advertised and contracts awarded, if land and funds were available.[4]

The design stage of plan preparation was defined as that in which surveys, borings, soundings, etc., were being made, final drawings and specifications, and contract documents were being prepared, and all necessary steps were being taken to bring the plan preparations to the completed stage.[5]

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[1]Bureau of Community Facilities, Federal Works Agency, Report on Plan Preparation of State and Local Public Works, December 31, 1947 (Washington: Federal Works Agency, March 1948), p. 27.

[2]Loc. cit.

[3]Loc. cit.

[4]Bureau of Community Facilities, Federal Works Agency, Report on Plan Preparation of State and Local Public Works, December 31, 1947 (Washington: Federal Works Agency, March 1948), p. 28.

[5]Ibid., p. 34.

For Kansas the total estimated cost of public works for which plans had been completed as of June 30, 1947, was $8,373,000, of which construction costs amounted to $7,270,000.[1]

For the United States the total estimated cost of public works for which plans had been completed as of June 30, 1947, was $1,416,477,000, of which construction costs amounted to $1,203,524,000.[2] The estimated total cost of public works for which plans had been completed without Federal aid is shown in Table 2. Construction costs account for over four-fifths of total costs, a relationship which has remained stable through the years. The balance includes the cost of land, equipment, and such relatively small items as planning.[3]

Public works in the design stage of plan preparation as of June 30, 1947, had an estimated total cost of $15,839,000 for Kansas and $4,737,833,000 for the United States.[4]

Sewer, water and sanitation facilities, and schools and other educational facilities were the two largest groups in the completed stage for Kansas and for the United States as shown in Table 4.

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[1] Ibid., p. 62.
[2] Loc. cit.
[3] Ibid., p. 29.
[4] Ibid., p. 67.

Federal-Aid Highway Program

The Federal-Aid Highway Act of 1944 authorized appropriation of $500,000,000 Federal funds to aid the states in highway improvement in each of the first three post-war fiscal years. For each year there was authorized $225,000,000 for the Federal-aid highway system, $150,000,000 for expenditures on a system of principal secondary or feeder roads, and $125,000,000 for the Federal-aid system in urban areas.[1]

As of June 30, 1947, the Kansas State Highway Commission had completed plans for highway improvements estimated to cost $27,943,000 and had plans under way for highway improvements estimated to cost $51,245,000.[2] For the United States plans were completed for highway improvements estimated to cost $928,943,000 and plans were under way for highway improvements estimated to cost $2,345,845,000.[3]

The status of plan preparation for future construction of Federal-aid and state highway projects for Kansas and for the United States, as of June 30, 1947, in terms of their estimated construction costs, is summarized in Table 5.

These projects included work of all classes supervised by state highway departments. A large portion of the plans was made

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[1]Federal Works Agency, Eighth Annual Report, Federal Works Agency, Fiscal Year Ended June 30, 1947 (Washington: Federal Works Agency, 1947), p. 84.

[2]Ibid., p. 183.

[3]Loc. cit.

up of Federal-aid projects of all the three classes, urban, primary rural, and secondary. The remainder of the projects consisted of plans for construction to be financed entirely with state funds.[1]

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[1]Bureau of Community Facilities, Federal Works Agency, Report on Plan Preparation of State and Local Public Works, December 31, 1947 (Washington: Federal Works Agency, March 1948), p. 37.

Table 5. Status of plan preparation for future construction of Federal-aid and state highways as of June 30, 1947.[1]

Governmental unit	Miles of road	Estimated construction cost in thousands of dollars
State of Kansas		
Plans completed	2,176	$ 27,943
Plans under way	1,542	51,245
Total	3,718	$ 79,188
United States		
Plans completed	17,732	928,943
Plans under way	35,614	2,345,845
Total	53,345	$3,274,788

[1]Source: Federal Works Agency, Eighth Annual Report, Federal Works Agency, Fiscal Year Ended June 30, 1947 (Washington: Federal Works Agency, 1947), p. 183.

RESULTS OF SURVEY OF PUBLIC CONSTRUCTION IN KANSAS

The pages that follow analyze the construction activity reported in this survey by the 416 local governmental units which supplied information on their construction programs and the construction program for the state of Kansas for the fiscal years ending June 30, 1946, 1947, 1948, 1949, 1950, and 1951.

Construction Activity by Type of Governmental Unit

Table 6 presents an analysis of the public construction programs reported by the 417 state and local governmental units. The questionnaires were mailed to the governmental units in the summer and fall of 1948. The answers had all been received by the early months of 1949.

Of the 417 units which supplied information, 192 units reported that their governmental units had engaged in no construction activity since the end of World War II, had no construction in process and were planning no construction at the time of the survey. Of the 192 units which reported that their unit had no construction activity to report, 128 units were school districts in third class cities, 26 were school districts in second class cities, and 21 were third class cities. The large proportion of these smaller governmental units having no construction activity suggests that perhaps the reason that a smaller proportion of returns was received from the smaller governmental units was that many of them had no construction activity to report. This fact also tends to give justification for the elimination from

Table 6. Analysis of the public construction programs of the 417 state and local governmental units in Kansas from which information was received.

Activity	State	Counties	Cities			School Districts			Total
			First class cities	Second class cities	Third class cities	First class cities	Second class cities	Third class cities	
Number of governmental units from which information was received	1	62	8	40	49	8	55	194	417
Number of units which reported unit had engaged in no construction activity and was planning none	-	6	-	8	21	3	26	128	192
Number of units reporting construction activity	1	56	8	32	28	5	29	66	225
Total number of projects reported	115[1]	209	53	122	56	10	38	82	685
Number of Projects in "idea stage" for which detailed information could not be reported	-	2	1	-	3	3	4	11	24
Number of projects for which detailed information was reported	115[1]	207	52	122	53	7	34	71	661

[1]The number of projects shown above for the State of Kansas are exclusive of highway and bridge construction, for which the only figures available are in terms of miles or road and number of bridges rather than number of projects.

consideration of townships, irrigation districts, other special districts, cities having a population of less than 750, and school districts having less than 100 pupils in 1946.

The 225 governmental units having construction activity reported a total of 685 different construction projects. Twenty-four of these projects were reported as being only in the "idea stage." Detailed information on costs, methods of financing, etc., could not be supplied on these projects. This leaves a total of 661 projects on which detailed information was supplied. These figures do not include construction of highways and bridges by the state of Kansas because the only figures available on such construction are in terms of miles of road and number of bridges rather than number of projects.

Further analyses of the results of this survey which are presented in the following pages of this thesis are based upon these 661 projects for which detailed information was supplied plus the construction of highways and bridges by the state of Kansas.

Table 7 shows the type of projects which were included in the construction programs of each type of governmental unit. Table 8 shows the cost of construction projects, by type of project, which were included in the construction programs of each type of governmental unit.

Table 7 shows the largest number of projects to have been reported by counties. The second largest number of projects shown is for second class cities, and the third largest number of projects is attributed to the state of Kansas. These figures are somewhat

Table 7. Number of construction projects, by type of project, for which detailed information was reported by 417 state and local governmental units in Kansas.

Type of project	State	Counties	Cities			School districts			Total
			First class cities	Second class cities	Third class cities	First class cities	Second class cities	Third class cities	
Highways, roads, and streets[1]	-[2]	143	14	35	19	-	-	-	211
Bridges, viaducts, and grade separations[1]	-[2]	45	1	-	-	-	-	-	46
Airports, terminals and landing strips	-	-	2	11	1	-	-	-	14
Sewer, water and sanitation facilities	-	-	29	48	18	-	-	-	95
Schools and other educational facilities	52	-	-	-	-	7	34	71	164
Hospitals and health facilities	48	9	1	4	1	-	-	-	63
Other public buildings	15	7	3	4	2	-	-	-	31
Parks and other recreational facilities	-	3	1	11	4	-	-	-	19
Power plant facilities	-	-	1	9	8	-	-	-	18
Total	115	207	52	122	53	7	34	71	661

[1] In some cases, the projects reported by local governmental units included the construction of both highways and bridges. When this was the case, the project was included in the construction of highways.

[2] The number of projects shown above for the state of Kansas is exclusive of highway and bridge construction, for which the only figures available are in terms of miles of road and number of bridges rather than number of projects.

Table 8. Cost of construction projects, by type of project, for which detailed information was reported by 417 state and local governmental units in Kansas, in thousands of dollars.

Type of project	State	Counties	Cities			School districts			Total
			First class	Second class	Third class	First class cities	Second class cities	Third class cities	
Highways[1]	$113,890	10,279	6,555	4,459	1,460	-	-	-	136,643
Bridges[1]	17,420	1,787	140	-	-	-	-	-	19,347
Airports	-	-	1,066	702	10	-	-	-	1,778
Sewer and water	-	-	18,394	4,002	652	-	-	-	23,048
Schools	19,170	-	-	-	-	1,807	6,805	10,193	37,975
Hospitals	7,698	2,201	850	1,475	157	-	-	-	12,380
Public buildings	2,959	1,458	200	957	97	-	-	-	5,672
Parks	-	129	175	462	91	-	-	-	858
Power plant	-	-	2,200	3,175	508	-	-	-	5,884
Total	$161,137	15,854	29,580	15,232	2,975	1,807	6,805	10,193	243,583

[1] In some cases, the projects reported by local governmental units included the construction of both highways and bridges. When this was the case, the project was included in the construction of highways.

misleading since the number of projects for the state of Kansas do not include the construction of highways and bridges. Counties reported only a few projects other than highways, roads, and bridges.

Table 8 shows the estimated cost of construction projects by each type of governmental unit, and this table gives a much better picture of the amount of construction activity by each type of governmental unit. This table shows the state to be by far the largest public builder. In fact, more than half of the construction covered in this survey is attributable to the state of Kansas. This is partially due to the fact that virtually complete information was obtained for the state, while only partial information was obtained from local governmental units. This is probably also partially due to the fact that the amount of planned construction at the time of the survey which was reported by the state was undoubtedly more complete and covered a longer period of time than that reported by local governmental units. Appropriations for the state of Kansas were included through the fiscal year 1951. Local governmental units undoubtedly could not report at the time of the survey on many projects which may actually be completed within the time that projects reported by the state are completed.

A total of $243,583,000 construction activity was reported in this survey. Construction activity by the state of Kansas amounted to $161,137,000. The type of governmental unit having the next largest amount of construction is first class cities with $29,580,000 of construction activity. Counties reported

$15,854,000 of construction activity. Second class cities reported $15,232,000 of construction activity.

Construction Activity by Type of Project

Tables 7 and 8 also show the number of construction projects and the cost of construction projects by type of project.

Both the largest number of projects and the largest item under construction costs are for highways, roads and streets. Of the total cost of construction projects, $243,583,000, more than half, or $136,643,000, was for the construction of highways, roads, and streets. This also is partially due to the fact that virtually complete information was obtained for the state of Kansas whereas information for local units is only partially complete. It is also partially due to the fact that information for the state of Kansas is complete through the fiscal year 1951, while data for local governmental units is undoubtedly only partially complete through that period. Nevertheless, the construction of highways, roads, and streets is undoubtedly the most important type of construction in this period. The state, counties, first class cities, second class cities, and third class cities all report large amounts for construction of highways, roads and streets.

When the amount of construction of bridges, viaducts, and grade separations is added to the amount of construction of highways, roads, and streets, the amounts involved in road improvements are even more impressive.

The next largest amounts shown are for the construction of schools and other educational facilities. A total of $37,975,000 cost of construction projects was reported for this type of project.

Of this amount the state of Kansas accounts for $19,170,000, and school districts in third class cities account for $10,193,000.

The large amount of school construction by the state of Kansas is due principally to the extensive building programs at the state university and the various state colleges, which was approved by the 1949 Legislature. The amounts include large appropriations for the fiscal years 1949, 1950, and 1951. The distribution of these projects between the various educational institutions is shown in Table 9.

Table 9. Distribution of construction by state of Kansas for schools and other educational facilities, by educational institutions, in thousands of dollars.

Educational institution	Cost of construction projects
Kansas State College, Manhattan	$4,488
University of Kansas, Lawrence	4,599
University Medical School, Kansas City	4,898
Kansas State Teachers College, Emporia	1,840
Kansas State Teachers College, Pittsburg	1,355
Fort Hays State College, Hays	1,025
Garden City Experiment Station, Garden City	16
Colby Experiment Station, Colby	16
Mound Valley Experiment Station, Mound Valley	79
School for Blind, Kansas City	510
School for Deaf, Olathe	295
Kansas Vocational School, Topeka	48
Total	$19,170

The next largest amount for cost of construction projects is for the construction of sewer, water, and sanitation facilities. Of the total of $23,048,000, first class cities accounted for $18,394,000.

The large amounts shown for highways, schools, and sewer and water facilities undoubtedly reflect the accumulated need for such facilities during and even before World War II. The accumulated need for improvements in the highway system of Kansas which had been building up during and even before World War II is discussed further under "Twenty Year Highway Program of State of Kansas."

Construction Activity by Type of Cost

Table 10 shows the cost of construction projects by type of cost. In total, by far the most important type of cost is the cost of construction. Of the total $243,583,000 cost of construction projects reported, $222,592,000 was reported as constituting costs of construction. Costs of land and rights-of-way, equipment costs, and other costs were relatively small.

The Federal Works Agency reports that construction costs normally account for over four-fifths of total costs, and that this relationship has remained stable through the years.[1]

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[1]Bureau of Community Facilities, Federal Works Agency, Report on Plan Preparation of State and Local Public Works, December 31, 1947 (Washington: Federal Works Agency, March 1948), p. 29.

Table 10. Cost of construction projects, by type of cost, for which detailed information was reported by 417 state and local governmental units in Kansas, in thousands of dollars.

Type of project	Cost of land and rights-of-way	Construction costs	Equipment costs	Other costs	Total costs
Highways, roads and streets[1]	$1,936	$133,708	$ 410	$ 590	$136,643
Bridges, viaducts and grade separations[1]	10	19,269	5	63	19,347
Airports, terminals, and landing strips	275	1,253	225	25	1,778
Sewer, water, and sanitation facilities	336	10,313	12,144	255	23,048
Schools and other educational facilities	343	35,215	1,930	490	37,975
Hospitals and health facilities	55	11,645	529	152	12,380
Other public buildings	103	5,475	74	20	5,672
Parks and other recreational facilities	23	743	44	48	858
Power plant facilities	-	4,975	821	88	5,884
Total	$3,081	222,592	16,182	1,729	243,583

[1] In some cases, the projects reported by local governmental units included the construction of both highways and bridges. When this was the case, the project was included in the construction of highways.

Sewer, water, and sanitation facilities are the only type of project for which this relationship does not hold true in the survey conducted for this thesis. More than half, or $12,144,000 out of $23,048,000, of the cost of such projects was for equipment costs. Again this undoubtedly reflects an accumulation of needs during the period of World War II.

Methods of Financing

Table 11 shows the methods of financing projects reported by the 417 state and local governmental units by type of governmental unit. Table 12 shows the methods of financing projects by type of project.

The state of Kansas financed its projects in this period by two methods: tax receipts and grant of funds by the Federal government.

Projects reported by the state of Kansas consist of highways, bridges, schools, hospitals, and other public buildings. The construction of highways and bridges by the state of Kansas is financed from two sources: motor vehicle revenues and Federal aid. Funds for the state highway system from April 1, 1929, to December 31, 1947, were secured 70.5 per cent from motor vehicle revenues and 29.5 per cent from Federal funds.[1]

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[1]Kansas Highways Fact-Finding and Research Committee, "Highway Needs of Kansas" (Topeka: Kansas Highways Fact-Finding and Research Committee, 1948), p. 30.

Table 11. Methods of financing projects, by type of governmental unit, for which detailed information was reported by 417 state and local governmental units in Kansas, in thousands of dollars.

Type of governmental unit	Tax receipts	Bond issues authorized	Bond issues anticipated	Grant of funds by		Other	Total
				Federal government	State government		
State	$114,193	$ -	$ -	$46,945	$ -	$ -	$161,137
Counties	3,882	2,605	459	5,053	3,408	447	15,854
Cities							
First class	826	9,086	6,104	704	338	12,522	29,580
Second class	974	8,370	1,179	780	196	3,733	15,232
Third class	71	1,451	842	55	54	502	2,975
School districts							
First class cities	807	1,000	-	-	-	-	1,807
Second class cities	740	4,053	1,575	-	-	437	6,805
Third class cities	337	8,587	985	-	-	284	10,193
Total	$ 121,830	$ 35,152	$ 11,144	$ 53,537	$ 3,996	$ 17,925	$ 243,583

Table 12. Methods of financing projects, by type of project, for which detailed information was reported by 417 state and local governmental units in Kansas, in thousands of dollars.

Type of project	Tax receipts	Bond issues authorized	Bond issues anticipated	Grant of funds by		Other	Total
				Federal government	State government		
Highways[1]	$88,895	$ 5,071	$ 5,586	51,878	$ 3,310	$ 359	$ 136,643
Bridges[1]		-	-		686	206	19,347
Airports	-	984	-	757	-	37	1,778
Sewer and water	314	7,250	2,497	-	-	12,987	23,048
Schools	21,054	13,639	2,560	-	-	722	37,975
Hospitals	7,698	2,970	155	882	-	675	12,380
Public buildings	3,818	1,576	200	20	-	58	5,672
Parks	52	750	-	-	-	56	858
Power plant	-	2,912	145	-	-	2,827	5,884
Total	$ 121,830	$ 35,152	$ 11,144	$ 53,537	$ 3,996	$ 17,925	$ 243,583

[1]In some cases, the projects reported by local governmental units included the construction of both highways and bridges. When this was the case, the project was included in the construction of highways.

During the period under consideration the Federal government granted Federal aid for the construction of highways and bridges under the Federal Aid Highway Act of 1944 and the Federal Aid Highway Act of 1948. Under the Federal Aid Highway Act of 1944 Kansas was apportioned a total of $10,740,000 for each of the fiscal years ending June 30, 1946, 1947, and 1948. These funds had to be matched on an equal basis with state funds, with certain minor exceptions.[1] No Federal funds were appropriated for this purpose for the fiscal year ended June 30, 1949. Under the Federal Aid Highway Act of 1948 Kansas was apportioned a total of $9,473,000 for each of the fiscal years ending June 30, 1950 and 1951.[2] These funds also had to be matched on an equal basis with state funds, with certain minor exceptions. The Kansas State Legislatures of 1945, 1947, and 1949 took steps to secure the full benefit of these Federal aid highway programs.[3]

Federal aid can not be used for maintenance; it must be used for construction.

The other source of revenue for the construction of highways and bridges by the State of Kansas is motor vehicle revenues, which includes the gasoline tax, fees collected for motor vehicle licenses, and motor carrier fees.[4]

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[1]State Highway Commission of Kansas, 15th Biennial Report to June 30, 1946 (Topeka: State Printer, 1946), p. 12-13.

[2]State Highway Commission of Kansas, 16th Biennial Report to June 30, 1948 (Topeka: State Printer, 1948), p. 13.

[3]Loc. cit., and State of Kansas, Session Laws, 1949 (Topeka: State Printer, 1949), p. 594-5.

[4]Kansas Highways Fact-Finding and Research Committee, op. cit. p. 35.

Additional information concerning the financing of highways and bridges by the state of Kansas is given under "Twenty Year Highway Program of State of Kansas".[1]

The next largest amount of construction by the state of Kansas in the period under consideration is the construction of schools and other educational facilities. This amount consists principally of the building programs at the state university and the various state colleges. This construction is financed by two sources: general funds of the state treasury and the Kansas Educational Building Fund.[2]

The extensive appropriations for buildings at the state university and the various state colleges for the fiscal years 1949, 1950 and 1951 were financed principally from surplus funds in the state treasury, which had accumulated during World War II, and by an increase in the Kansas Educational Building Fund levy. In prior years the source of revenue for this fund was a 1/4 mill tax on all property subject to the ad valorem property tax. In 1949 this tax was increased to 3/4 mill on all property which is subject to ad valorem property taxation.[3]

The construction of hospitals and other public buildings by the state of Kansas in this period were financed from general funds in the state treasury.

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[1]See page 102.

[2]State of Kansas, Session Laws, 1949 (Topeka: State Printer, 1949), p. 118-119.

[3]State of Kansas, Session Laws, 1949 (Topeka: State Printer, 1949), p. 753.

Local governmental units financed their construction projects in this period principally through bond issues. The total cost of construction projects reported by local governmental units was $82,446,000. Of this amount, $46,296,000, or more than half, was financed either by bond issues authorized or bond issues anticipated.

Another important source of funds for construction projects by local governmental units was the grant of funds by the Federal government and by the state government for the construction of highways and bridges.

A large item is shown in the "Other" column for first class cities. This represents principally surplus funds which were accumulated during World War II by municipally owned sewer and water facilities and municipally owned power plants. The expenditures were largely for equipment.

Time of Construction

Table 13 shows the time of construction reported by the 417 state and local governmental units by type of unit, and Table 14 shows the time of construction by type of project.

Projects by local governmental units are included in their entirety in the period in which construction was begun. Data shown for the state of Kansas for the fiscal years 1946, 1947 and 1948 are the actual amounts expended. Data for the state for the fiscal years 1949, 1950 and 1951 are the amounts appropriated.

Table 13. Time of construction, by type of governmental unit, of projects for which detailed information was reported by 417 state and local governmental units in Kansas, in thousands of dollars.[1]

Type of governmental unit	Fiscal year ended June 30, 1946	1947	1948	1949	1950 & 1951	Total
State	$ 17,690	$21,335	$ 17,938	$30,364	$ 73,811	$161,137
Counties	1,660	2,226	3,670	3,772	4,526	15,354
Cities						
First class	3,315	1,928	5,744	12,710	5,883	29,580
Second class	1,258	4,037	2,022	5,167	2,748	15,232
Third class	471	262	808	1,141	293	2,975
School districts						
First class cities	-	-	375	307	1,125	1,807
Second class cities	-	112	1,019	1,010	4,664	6,805
Third class cities	237	626	1,004	6,427	1,899	10,193
Total	$24,630	$30,523	$ 32,580	$ 60,900	$94,951	$243,583

[1] Projects by local governmental units are included in the period in which construction was begun. Cost of state projects are included in the periods in which expenditures were made.

Table 14. Time of construction, by type of project, of projects for which detailed information was reported by 417 state and local governmental units in Kansas, in thousands of dollars.[1]

Type of project	Fiscal year ended June 30, 1946	1947	1948	1949	1950 & 1951	Total
Highways, roads and streets[2]	$19,145	$21,359	$20,248	$23,384	$52,508	$136,643
Bridges, viaducts, grade separations[2]	1,531	3,938	3,022	3,953	6,903	19,347
Airports, terminals, landing strips	152	10	142	1,473	-	1,778
Sewer, water, sanitation facilities	678	1,860	5,080	12,813	2,617	23,048
Schools, other educational facilities	344	777	2,999	13,768	20,086	37,975
Hospitals, health facilities	222	869	131	3,468	7,690	12,380
Other public buildings	8	19	156	572	4,917	5,672
Parks, other recreational facilities	-	106	557	45	150	858
Power plant facilities	2,550	1,585	245	1,424	80	5,884
Total	$24,630	$30,523	$32,580	$60,900	$94,951	$243,583

[1] Projects by local governmental units are included in the period in which construction was begun. Cost of state projects are included in the periods in which expenditures were made.

[2] In some cases, the projects reported by local governmental units included the construction of both highways and bridges. When this was the case, the project was included in the construction of highways.

Any project by the state of Kansas may thus be included in more than one fiscal year if expenditures or appropriations were made in more than one fiscal year. Thus, the time of construction for the state and for the local governments are not exactly parallel.

Construction for the fiscal year 1946 is relatively small, $24,630,000 in total. The next three years show additional amounts in each successive year. The highest figure for any one year is $60,900,000 for the fiscal year 1949. Figures for the fiscal years 1950 and 1951 show a total of $94,951,000. However, the time of the survey was such as to make it extremely doubtful whether data was obtained on all construction projects which might be completed by local governments in those years.

For all levels of government, in general, there was relatively little construction in the fiscal year 1946, and successively larger amounts for each of the fiscal years 1947, 1948, and 1949. If it could be assumed that the data for local governments for the fiscal years 1950 and 1951 were complete, the figures would show a slackening in those years. However, such a conclusion is of extremely doubtful validity because of the time of the survey.

The largest amount of construction in the fiscal year 1946 was the construction of highways and bridges and power plant facilities. In the fiscal year 1947 the largest amounts of construction were for highways, bridges, sewer and water, and power plant facilities, in that order. In the fiscal years 1948 and 1949, sewer and water facilities and schools assumed much

larger proportions than in the years 1946 and 1947. For the fiscal years 1950 and 1951 large amounts are shown for highways and bridges and for schools and other educational facilities.

Projects reported by the 416 local governmental units were sufficiently detailed to permit accumulation of cost of construction projects by quarters. Projects are included in the period in which construction was begun. Five projects reported by first class cities have been prorated between quarters on the basis of the total construction by quarters of all other projects. These five projects included highways, sewers and water facilities and represented construction activity taking place over periods of from one to three years.

The time of construction by the 416 local governmental units by quarters is shown graphically in Fig. 7. A study of this figure seems to indicate that public construction activity by local governmental units in Kansas paralleled total business activity in the United States economy. The period of expansion paralleled the period of expansion in total business activity. The peak was reached at approximately the same time.

More detailed figures on the time of construction by local governmental units is shown in Table 15.

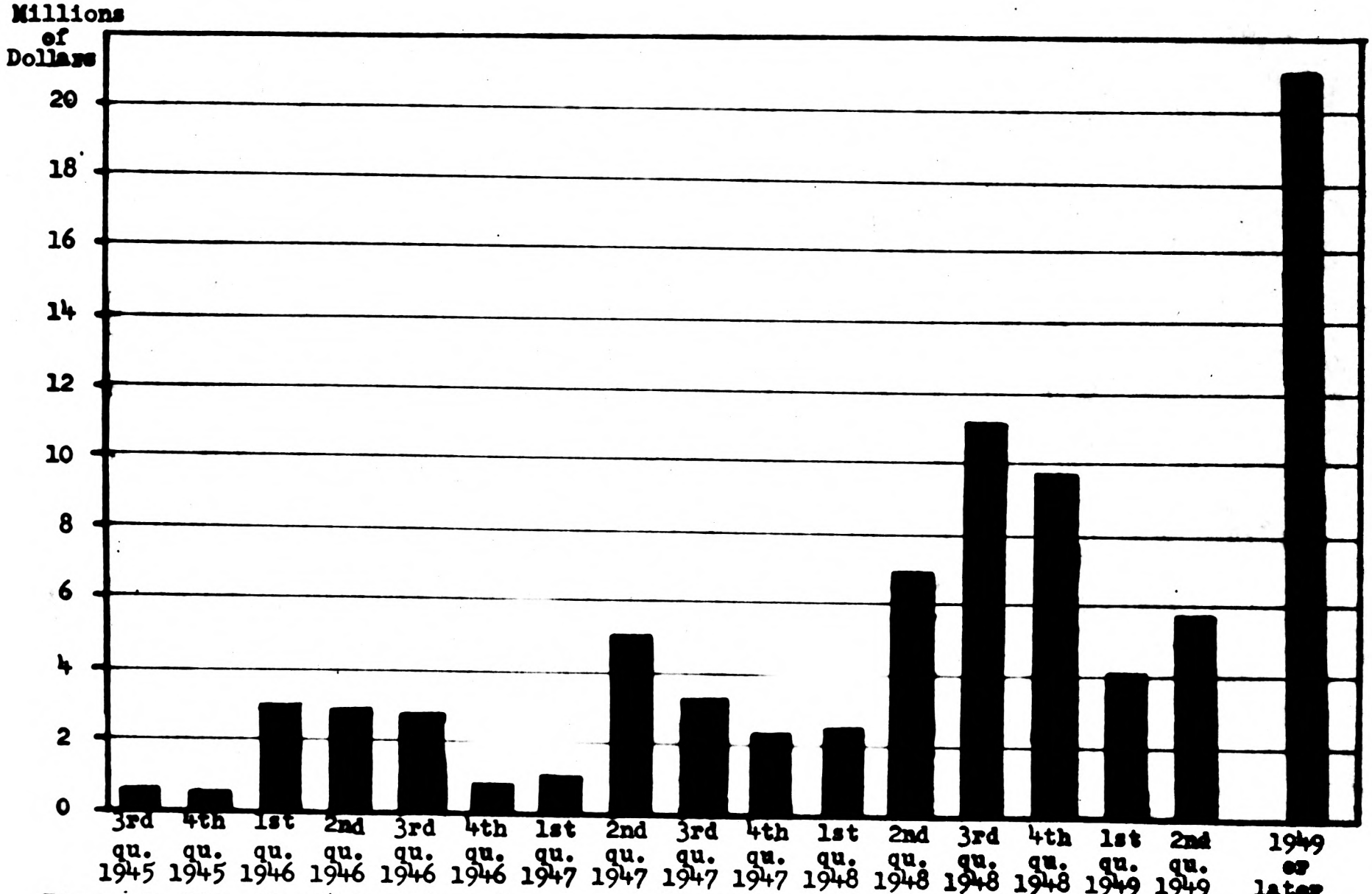

Figure 7. Time of construction of projects for which detailed information was reported by 416 local governmental units in Kansas.

Table 15. Time of construction by quarters, by type of project, of projects for which detailed information was reported by 416 local governmental units in Kansas, in thousands of dollars.[1]

Type of project	Third quarter 1945	Fourth quarter 1945	First quarter 1946	Second quarter 1946	Third quarter 1946	Fourth quarter 1946
Highways[2]	$500	$405	$220	$1,987	$1,003	$ 338
Bridges[2]	-	-	-	-	-	-
Airports	-	92	60	-	10	-
Sewer and water	29	29	179	441	166	280
Schools	-	-	-	237	-	-
Hospitals	-	-	-	210	-	-
Public buildings	-	-	-	-	-	-
Parks	-	-	-	-	-	-
Power plant	-	-	2,550	-	1,435	150
Total	$529	$ 527	$3,009	$2,876	$2,614	$768

Type of project	First quarter 1947	Second quarter 1947	Third quarter 1947	Fourth quarter 1947	First quarter 1948	Second quarter 1948
Highways[2]	$136	$2,185	$1,945	$ 408	$ 779	$ 2,662
Bridges[2]	12	366	72	113	24	90
Airports	-	-	-	-	-	142
Sewer and water	106	1,308	625	1,354	883	2,218
Schools	565	173	455	120	375	1,448
Hospitals	-	850	-	-	120	-
Public buildings	-	-	-	-	-	8
Parks	-	106	-	64	81	412
Power plant	-	-	-	201	44	-
Total	$819	$4,989	$ 3,097	$2,260	$2,306	$6,981

Table 15. (concl.)

Type of project	Third quarter 1948	Fourth quarter 1948	First quarter 1949	Second quarter 1949	1949 or later planning stage
Highways[2]	$2,664	$1,557	$ 495	$ 205	$ 5,264
Bridges[2]	35	94	74	149	898
Airports	636	837	-	-	-
Sewer and water	5,135	5,083	963	1,632	2,617
Schools	969	1,549	1,660	3,566	7,688
Hospitals	157	450	840	-	2,055
Public buildings	247	50	20	-	2,387
Parks	15	30	-	-	150
Power plant	1,298	66	-	60	80
Total	$11,156	$ 9,715	$ 4,051	$ 5,661	$ 21,138

[1] Projects are included in the period in which construction was begun. Five projects reported by first class cities have been prorated between quarters on the basis of total construction by quarters. These five projects included highways, sewers and water facilities and represented construction activity taking place over periods from one to three years.

[2] In some cases, the projects reported included the construction of both highways and bridges. When this was the case, the project was included in the construction of highways.

Reasons for Postponing Construction. One of the purposes of this thesis was to determine whether there was any conscious effort being made by public officials in Kansas to plan their construction programs so that public construction activity would offset fluctuations in private business activity. An attempt was made to secure such information by requesting local governmental units to explain on the questionnaire why construction was being postponed on those projects which were being delayed at the time of the survey.

Answers to the question were received from nearly two-thirds of the local governmental units which reported having projects in the idea stage, projects in the planning stage or projects which were being delayed at the time of the survey. A total of 118 local governmental units reported having projects in these categories, and answers to the question were received from 74 of those units. The units answering the question included 29 counties, 12 cities and 33 school districts. The size of the projects on which reasons for delay were secured, ranged all the way from very small projects to $1,000,000 high school building being planned by the Board of Education, Manhattan, Kansas, and a $2,684,000 school building being planned by the Shawnee-Mission High School District, Merriam, Kansas. It seems reasonable to assume that a good cross-section of the reasons for delay in construction was secured.

The reasons given for delaying construction are presented in Table 16. It should be noted that the total number of reasons

Table 16. Reasons given by 74 local governmental units for delay in construction of projects.

Reasons given	Number of times reason was given
"High construction costs" or "Waiting for construction costs to lower"	25
"Difficulties in raising funds"	22
"Awaiting completion of plans"	18
"Inability to secure labor and materials"	13
"Awaiting grant of Federal funds" or "Awaiting grant of state funds"	10
"Difficulties in securing land and rights-of-way"	8
"No bids received from contractors within limits of funds originally available"	6
"Special election required"	6
"Awaiting construction season"	4
Total	112

does not indicate the total number of projects, as some projects were being delayed for more than one reason.

The reason given the largest number of times was "high construction costs" or "waiting for construction costs to lower". This reason was given 25 times. High construction costs are also reflected in the reason given six times that no bids were received from contractors within the limits of funds originally available.

The next most prevalent reason given was difficulties in raising funds, which was given 22 times. Undoubtedly, this reason also is related to high construction costs since the difficulties in raising funds would be aggravated by high construction costs.

The inability to secure labor and materials was given 13 times as the reason for delay. This reason reflects directly one of the results of fluctuations in total business activity.

"Awaiting completion of plans" in some instances reflected indirectly the results of fluctuations in total business activity because some public officials indicated that the architect was "too busy" to complete the plans.

It will be noted that none of the governmental units reported that they were deliberately planning their construction programs so that public construction would offset fluctuations in private business activity. However, the above analysis of the reasons given indicates that the most prevalent reasons given are closely related to fluctuations in total business activity. The reactions

of public officials suggests indirectly that perhaps some of the projects which are being delayed will be constructed at such times as to offset fluctuations in private business activity.

Geographical Distribution of Construction

The geographical distribution of construction reported by the 417 state and local governmental units in Kansas, exclusive of construction of highways and bridges by the state of Kansas, is shown graphically in Fig. 8 and in detail in Table 17.

For only three counties was a total of more than $5,000,000 of construction activity reported. The largest amount of construction was reported for Wyandotte county, $23,018,000. The next largest amount was reported by Riley county, $6,928,000. The third largest amount was reported by Shawnee county, $5,230,000.

The largest concentrations of construction activity was centered in the eastern and in the south central portions of the state.

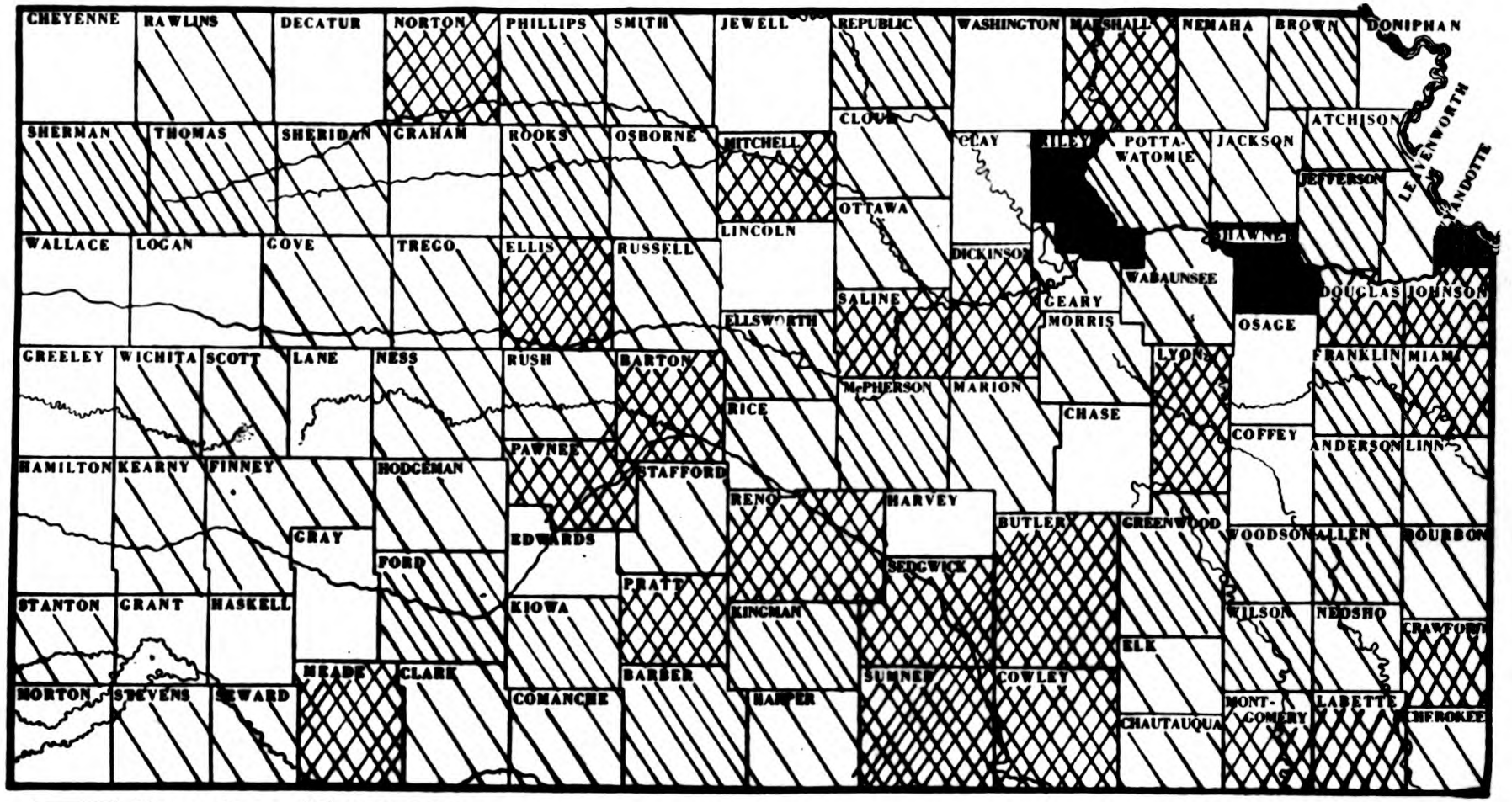

Figure 8. Geographical distribution of construction reported by 417 state and local governments in Kansas, exclusive of highways and bridges by state of Kansas.

Table 17. Georgraphical distribution of construction reported by 417 state and local governmental units in Kansas exclusive of construction of highways and bridges by state of Kansas, in thousands of dollars.

County	Construction reported by 416 local governmental units	Construction by state of Kansas exclusive of highways and bridges	Total
Allen	988	-	988
Anderson	732	-	732
Atchison	447	185	632
Barber	633	-	633
Barton	1,380	-	1,380
Bourbon	211	-	211
Brown	967	-	967
Butler	1,936	-	1,936
Chase	-	-	-
Chautauqua	491	-	491
Cherokee	170	-	170
Cheyenne	52	-	52
Clark	344	-	344
Clay	837	-	837
Cloud	231	-	231
Coffey	12	-	12
Comanche	339	-	339
Cowley	2,203	1,116	3,319
Crawford	1,580	1,355	2,935
Decatur	-	-	-
Dickinson	1,377	-	1,377
Doniphan	577	-	577
Douglas	133	4,599	4,732
Edwards	-	-	-
Elk	225	-	225
Ellis	565	1,025	1,590
Ellsworth	595	-	595
Finney	322	16	338
Ford	785	-	785
Franklin	238	-	238
Geary	193	-	193
Gove	338	-	338
Graham	-	-	-
Grant	-	-	-
Gray	-	-	-
Greeley	10	-	10
Greenwood	639	-	639
Hamilton	99	-	99

Table 17. (cont.)

County	Construction reported by 416 local governmental units	Construction by state of Kansas exclusive of highways and bridges	Total
Harper	$ 156	$ -	$ 156
Harvey	-	-	-
Haskell	-	-	-
Hodgeman	189	-	189
Jackson	145	-	145
Jefferson	853	-	853
Jewell	14	-	14
Johnson	3,696	295	3,991
Kearny	271	-	271
Kingman	745	-	745
Kiowa	675	-	675
Labette	565	572	1,137
Lane	-	-	-
Leavenworth	190	159	349
Lincoln	-	-	-
Linn	38	79	117
Logan	29	-	29
Lyon	1,470	1,840	3,310
Marion	421	-	421
Marshall	1,038	-	1,038
McPherson	712	-	712
Meade	3,069	-	3,069
Miami	360	1,286	1,646
Mitchell	817	474	1,291
Montgomery	4,463	-	4,463
Morris	330	-	330
Morton	-	-	-
Nemaha	280	-	280
Neosho	198	-	198
Ness	162	-	162
Norton	-	1,049	1,049
Osage	31	-	31
Osborne	211	-	211
Ottawa	408	-	408
Pawnee	356	1,540	1,896
Phillips	504	-	504
Pottawatomie	562	-	562
Pratt	1,264	-	1,264
Rawlins	315	-	315
Reno	2,024	365	2,389
Republic	599	-	599
Rice	118	-	118

Table 17. (concl.)

County	Construction reported by 416 local governmental units	Construction by state of Kansas exclusive of highways and bridges	Total
Riley	$ 2,440	$ 4,488	$ 6,928
Rooks	682	-	682
Rush	402	-	402
Russell	162	-	162
Saline	2,434	-	2,434
Scott	124	-	124
Sedgwick	4,295	-	4,295
Seward	100	-	100
Shawnee	1,270	3,960	5,230
Sheridan	172	-	172
Sherman	1,084	-	1,084
Smith	398	-	398
Stafford	162	-	162
Stanton	157	-	157
Stevens	160	-	160
Sumner	1,303	-	1,303
Thomas	728	16	744
Trego	448	-	448
Wabaunsee	173	-	173
Wallace	-	-	-
Washington	-	-	-
Wichita	321	-	321
Wilson	799	-	799
Woodson	104	-	104
Wyandotte	17,610	5,408	23,018
Total	$ 82,447	$ 29,827	$112,274

Twenty Year Highway Program of State of Kansas

Recognizing that Kansas' highway network was "inadequate for the public need", the Kansas Legislature in 1947 created the Kansas Highway Fact-Finding and Research Committee by Joint Senate Resolution No. 3. The committee was instructed to study all facts pertinent to the development of a "proper, useful and complete" highway network, prepare a long-range, coordinated plan to achieve better highways for Kansas, make recommendations for future legislation, and report its findings to the Legislative Council and the Kansas Legislature.[1]

It was apparent that even before World War II the highways in Kansas had been deteriorating faster than maintenance crews were able to repair them. In part, this was due to the greater mileage of the state-wide system of highways and rural roads. But war, with its shortages of manpower, material and equipment hastened the deterioriation. As a result of these forces, the increasing public demand for highway transportation had greatly outpaced the rate of improvements and maintenance.[2]

The Kansas Highway Fact-Finding Committee undertook an extensive study which consisted of engineering determination of Kansas' highway needs and of methods by which these needs could best be met. Standards of "tolerable conditions" were

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[1]State of Kansas, Session Laws, 1947 (Topeka: State Printer, 1947), p. 604.

[2]Kansas Highways Fact-Finding and Research Committee, Highway Needs of Kansas (Topeka: Kansas Highways Fact-Finding and Research Committee, 1948), p. 8.

developed for highways and bridges. Then an extensive inventory of Kansas' highway system was taken. The existing physical status of all roads, streets and bridges was compared to "tolerable conditions". By this process deficient sections were located. Then the amount and type of work required to bring deficient sections up to modern standards was determined, and the cost of this work was estimated. All of these factors were assembled into a balanced program for all highways, roads and streets in Kansas.[1]

Detailed recommendations were presented to the State Legislature of 1949. The recommendations included recommendations for the control and regulation of traffic, recommendations for improvements in maintenance practices, recommendations for a broad safety program, recommendations for reclassification of a highway system, and recommendations for the establishment of uniform standards.[2] However, it is the recommendations for the construction of highways, roads and streets that is of particular interest in this thesis.

Following is a tabulation of the accumulated road and street needs of Kansas, as reported by the Kansas Highway Fact-Finding Committee. These accumulated highway needs represent only the road and street improvements which were then required to serve the state's people with an adequate, safe highway

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[1]Kansas Highways Fact-Finding and Research Committe, op. cit., p. 106.

[2]Ibid., p. 65-105.

transportation network. The cost of the work required to correct the deficiencies was estimated at 1947 price levels.

Table 18. Accumulated needs of state highways, county roads, and city streets.[1]

Governmental unit	Needed Mileage	Needed Structures (number)	Cost of needed improvements (based on 1947 prices)
State highways	7,726	1,421	$520,120,000
County roads	71,285	7,819	343,540,000
City streets exclusive of state highways	2,951	121	93,632,000
Total	81,962	9,361	$957,292,000

It was recognized that it would be impossible to correct immediately the deficiencies that had accumulated over many years. It was also recognized that many of the existing highways and roads would have to be replaced during the period of the program. Therefore, a 10-year, a 15-year and a 20-year balanced program providing for new construction, replacements, and maintenance were presented to the 1949 State Legislature for consideration. The 20-year program was adopted by the State Legislature, so it is the only one that need be considered here.[2]

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[1] Ibid., p.109.

[2] State Highway Commission of Kansas, Highway Highlights, X (January 1950), p. 1.

Following is a tabulation of average annual amounts for a 20 year period, required for adequate development, replacement and maintenance of state, county and city roads and streets.

Table 19. Annual cost, in thousands of dollars, of 20 year balanced highway program for Kansas.[1]

Governmental Unit	Accumulated needs	Replacements	Maintenance	Total
State highways	$22,287	$ 8,047	$ 8,960	$39,294
County roads	14,720	6,763	17,367	38,850
City streets	4,013	3,349	3,252	10,614
Total	$41,020	$ 18,159	$29,579	$88,758

This 20 year highway program was adopted by the 1949 State Legislature. It was to be put into effect with the fiscal year beginning July 1, 1950.[2]

In the survey of public construction conducted for this thesis, the amounts included for construction of highways and bridges by the state of Kansas in the fiscal year 1951 were based upon the above figures.

The adoption of this program necessitated the adoption of measures to finance the additional expenditures contemplated under the program.

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[1]Kansas Highways Fact-Finding and Research Committe, op. cit., p. 118.

[2]State Highway Commission of Kansas, Highway Highlights, X (January 195), p. 1.

Following is a tabulation of the source of funds available to the state, counties, townships and cities for construction, maintenance, and operation of highways, roads and streets in the years 1945, 1946, and 1947.

Table 20. Source of funds available for construction, maintenance and operation of highways, roads and streets in Kansas, in thousands of dollars.[1]

Source of funds	1945	1946	1947
Property taxes	$ 6,798	$11,167	$11,282
Bond issues	644	3,802	5,172
Motor vehicle revenues	12,760	20,240	24,084
Federal aid	476	4,996	9,329
Miscellaneous	1,884	2,516	3,145
Total	$22,512	$42,721	$53,012

Motor vehicle revenues include the gasoline tax, fees collected for motor vehicle licenses, and motor carrier fees. Revenues collected by the state from these sources are placed in the Highway Fund and the Second Revenue Anticipation Warrant Retirement Fund. These funds are then distributed to the state, counties, townships, and cities for the construction, maintenance and operation of highways, roads and streets.[2]

It must be borne in mind that the above figures are funds available and do not necessarily correspond with figures shown by the survey conducted for this thesis as being expended in the

[1]Kansas Highways Fact-Finding and Research Committee, op. cit., p. 130.

[2]Ibid., p. 35.

above years, partly because of the accumulation during the war years of surplus funds available for the construction of highways. It should also be borne in mind that the above figures cover construction, maintenance, and operation of highways, while figures shown by the survey cover only construction. Also, in any comparison, it should be borne in mind that the above figures are total available to the state, counties, townships, and cities.

Following is a tabulation of the division of funds available to the states, counties, townships and cities for construction, maintenance and operation of highways, roads and streets in the years 1945, 1946 and 1947.

Table 21. Division of funds available from all sources for construction, maintenance and operation of highways, roads, and streets, in thousands of dollars.[1]

Governmental unit	1945	1946	1947
State	$ 8,318	$19,315	$22,851
Counties and townships	11,592	17,020	21,781
Cities	2,602	6,386	8,380
Total	$22,512	$42,721	$53,012

In the period from 1929 to 1947, 60 per cent of the funds available to the State Highway Department were used for construction and 40 per cent were used for maintenance and operation.

[1] Ibid., p. 131.

From 1937 to 1947 59 per cent of the funds available to cities were used for construction and 41 per cent was used for maintenance and operation.[1]

Funds for the state highway system come from motor vehicle revenues and Federal aid.[2] Receipts for county and township roads and city streets come from the following sources: general property taxes, bond and note issues, motor vehicle revenues, Federal aid and miscellaneous funds.[3]

A comparison of funds available in 1947, $53,012,000, with the average annual figures anticipated under the 20 year highway program, $88,758,000, indicates that an additional $35,746,000 in revenues must be raised annually by the state, counties, townships, and cities.

To raise the state's portion of this additional revenue, the 1949 State Legislature passed the following revenue measures: (1) an increase from 4 cents to 5 cents tax per gallon on gasoline,[4] (2) an increase in motor vehicle license fees,[5] and (3) a change from an exemption system to a refund system for gasoline sold to non-highway users.[6]

It is expected that these revenue measures will produce sufficient additional revenue to pay for the highway program as it is put into effect.

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[1] Ibid., p. 32.
[2] Ibid., p. 20.
[3] Ibid., p. 31.
[4] State of Kansas, Session Laws, 1949 (Topeka: State Printer, 1949), p. 794-798.
[5] Ibid., p. 156-158.
[6] Ibid., p. 799-804.

SUMMARY AND CONCLUSIONS

Based on the foregoing analysis of the results of the survey of the public construction programs of state and local governmental units in Kansas in the period following the end of World War II, the following conclusions appear to be reasonable:

(1) Information was secured by the survey on approximately half of the public construction activity by state and local governmental units in the period under consideration. The reasons for believing that the results covered approximately half of the construction activity were explained on pages 16 through 20. This conclusion is further substantiated by a comparison of data secured in this survey with data reported by the Federal Works Agency.

The 417 state and local governmental units from which infromation was received in this survey reported a total of $24,630,000 public construction activity undertaken in the fiscal year ended June 30, 1946, $30,523,000 undertaken in the fiscal year 1947, $32,580,000 undertaken in the fiscal year 1948, $60,900,000 undertaken in the fiscal year 1949, and $94,951,000 in the fiscal years 1950 and 1951, making a grand total of $243,583,000.

The Federal Works Agency reported that (a) as of December 31, 1947, state and local governments in Kansas had received grants of Federal funds for 166 projects having an estimated cost of $26,424,000, (b) as of June 30, 1947, state and local governments

in Kansas had completed plans without Federal assistance for 71 projects having an estimated cost of $8,378,000, and (c) as of June 30, 1947, state and local governmental units in Kansas had brought plans to the design stage without Federal assistance for 82 projects having an estimated cost of $15,839,000.

The data reported by the Federal Works Agency is concerned only with the amount of plan preparation at a given time, whereas the survey undertaken by this thesis was concerned with the actual amount of construction undertaken during the period under consideration and the amount of construction being planned at the time of the survey. Nevertheless, the estimated cost of projects reported in the survey undertaken in this thesis is sufficiently similar to the estimated cost of projects reported by the Federal Works Agency to warrant the conclusion that the survey undertaken in this thesis furnished the basis for a reasonably accurate estimate of the public construction activity by state and local governments in Kansas in the period under consideration.

(2) Public construction activity by state and local governmental units in Kansas was expanded substantially in the period following World War II. The figures on the preceding page for estimated cost of projects reported by 417 state and local governmental units show an increase in each of the fiscal years 1946, 1947, 1948, and 1949, indicating that an expansion of public construction activity took place within the period under consideration.

There is evidence that public construction activity in 1946, 1947, 1948, and 1949 was greatly expanded over the pre-war years of 1939 and 1940. As shown in Table 22, public construction activity in Kansas by the national government, the state governments, and local governments amounted to $24,800,000 in the calendar year 1939 and $32,400,000 in the calendar year 1940. Public construction activity reported by 417 state and local governmental units in Kansas was $24,630,000 in the fiscal year 1946, $30,523,000 in the fiscal year 1947, $32,580,000 in the fiscal year 1948, and $60,900,000 in the fiscal year 1949. If these amounts represent approximately half of the total public construction activity in Kansas in the period under consideration, the annual dollar amount of public construction in Kansas in the period from 1946 to 1949 was considerably greater than in 1939 and 1940.

Table 22 shows unusually large amounts of public construction in Kansas in the years 1942 and 1943. These amounts undoubtedly consist mostly of construction of war plant facilities by the national government in those years. The annual dollar amount of public construction in Kansas by state and local governments in the period from 1946 to 1949 was apparently much less than public construction by the national, state, and local governments in 1942 and 1943. This would indicate that the stimulus to general business activity by public construction in Kansas in the period from 1946 to 1949 was not as great as the stimulus to general business activity by construction of war plant facilities by the national government in 1942 and 1943.

Table 22. Total new construction activity in the state of Kansas, 1939-1946, in millions of dollars.[1]

Year	Private construction activity	Public construction activity[2]	Total construction activity	Percent of public construction to total construction
1939	$36.7	$24.8	$61.5	40.3
1940	44.7	32.4	77.1	42.0
1941	59.2	66.5	125.7	52.9
1942	48.0	266.8	314.8	84.8
1943	41.7	201.2	242.9	82.8
1944	39.2	36.6	75.8	48.3
1945	44.0	34.5	78.5	43.9
1946	86.7	28.2	114.9	24.6

[1]Source: Department of Commerce, Office of Domestic Commerce, Geographic Distribution of Construction in the United States, 1939-1947 (Washington: Department of Commerce, January 1948), p. 62-64.

[2]Includes construction by national, state, and local governmental units.

There is also some indication that the proportion of public construction to total construction was greater in the period from 1946 to 1949 than in the pre-war years of 1939 and 1940. The value of construction contracts, including residential, non-residential, public utility and public works, awarded in Kansas in the calendar year 1947 was $118,475,000.[1] The amount of public construction reported by 417 state and local governments in the survey undertaken in this thesis for the fiscal year 1947 was $30,580,000. If this figure represents approximately half of the total public construction in Kansas in this period, it would indicate that approximately half of the total construction activity in Kansas was public construction activity. The value of construction contracts, including residential, nonresidential, public utility and public works, awarded in Kansas was $128,797,000 for the calendar year 1948.[2] When this figure is compared with the results of the survey in this thesis, there is an indication that also in the year 1948 public construction accounted for approximately half of the total public construction in Kansas. In 1939 public construction accounted for only 40.3 per cent of total construction, and in 1940 public construction accounted for only 42.0 per cent of the total, as shown in Table 22.

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[1]Bureau of Business Research, School of Business, University of Kansas, Kansas Business Review (December 1950, p. 9.

[2]Loc. cit.

(3) This substantial expansion of public construction activity occurred at the same time that private business activity was expanded. Total business activity expanded in the period from the cessation of hostilities of World War II to the fall of 1948. Since public construction activity expanded significantly during this period of general business expansion, and since this expansion represented a significant increase over the pre-war years, the expansion in public construction activity can be said to have contributed to the expansion in general business conditions and to have aggravated fluctuations in business activity rather than to have moderated fluctuations.

(4) This substantial expansion of public construction activity contributed significantly to the rise in the general price level by increasing the demand for scarce materials and labor. This conclusion is substantiated (a) by the fact, explained in the previous paragraphs, that public construction activity in the period from 1946 to 1949 represented a significant increase over the pre-war years, (b) by the fact, explained in the previous paragraphs, that the proportion of public construction activity to total business activity rose from 1939 and 1940 to the years, 1946, 1947, 1948, and 1949, and (c) by the fact that thirteen public officials in Kansas in explaining the reasons for delay in construction projects which were being delayed at the time of the survey, said that they were unable to secure scarce labor and materials.

(5) Because of the impact of World War II upon the economy of the United States, the expansion in public construction

activity in the period following World War II was undoubtedly inevitable. Table 14, showing the time of construction by type of project, indicates that in the fiscal year 1946 public construction expenditures were principally for highways and bridges. Even before World War II the highways in Kansas had been deteriorating at a faster rate than they were being repaired. World War II hastened this process of deterioration. These developments made it essential, from the standpoint of service from the roads, that repairs be made as soon as possible following the end of the war. A large amount was also spent in the fiscal year for power plant facilities. This too reflected the accumulated needs for repairs from the period during the war.

In the fiscal year 1947 expenditures again were largely for highways and bridges. Further amounts were spent on power plant facilities. The only other sizeable item in this year was for sewer, water and sanitation facilities. These expenditures to a large extent reflected the need for sewer and water facilities in housing areas developed during the war around war plants and other wartime facilities.

Expenditures in the fiscal year 1948 were again principally for highways and bridges. The next largest item in this year was for sewer and water facilities. Power plant facilities became of minor importance in this year, but sizeable expenditures were made in this year for schools and other educational facilities.

All of these expenditures reflect accumulated needs from the war period, and it seems quite possible that general welfare would not have been furthered by their postponement in the interest of economic stabilization.

(6) When a recession was experience in the United States economy in the early months of 1949, there was a substantial volume of public construction which was in the planning stage that might have been manipulated to stabilize business activity if the recession had led into a prolonged depression of serious proportions. At the time of the recession, the amount of public construction shown by the survey as being planned for the fiscal years 1950 and 1951, $94,951,000, was in the planning stage and could for the most part undoubtedly have been so manipulated. How much public construction activity would have been needed for stabilization purposes would have depended, of course, on the seriousness of the recession or depression. However, in view of the fact that this amount of planned construction is substantially below the level of public construction activity in Kansas in the years 1942 and 1943, it is extremely doubtful whether this volume would have been sufficient to have contributed materially to stabilization. It would have furnished a beginning, however, to which public works expenditures by the national government could have been added.

(7) The answers to the questionnaire in this survey would indicate that public officials in Kansas are not making any conscious effort to plan public construction programs so that public construction will offset fluctuations in private business

activity. Needed projects apparently were constructed regardless of effect on general economic conditions. The reasons given by public officials for postponing those projects which were being delayed at the time of the survey indicate that the most prevalent reasons given are closely related to fluctuations in total business activity. The reactions of public officials suggested indirectly that some of these projects perhaps would be constructed at such times as to offset fluctuations in private business activity.

(8) The results of the survey indicate that the state of Kansas engaged or is planning to engage in a substantially larger amount of public construction than any other type of governmental unit. Even when proper allowance is made for the fact that complete information was secured on the public construction program of the state and incomplete returns were received from the other types of governmental units, the state government still looms as the largest public builder.

The types of projects which involved by far the largest expenditures were highways and bridges. Of the total cost of construction projects reported in the survey, nearly two-thirds was for the construction of highways and bridges.

These two results of the survey place the 20-year highway building program of the state of Kansas in a very significant light from the standpoint of future possibilities of manipulating public construction expenditures so as to stabilize economic conditions. The Kansas Highways Fact-Finding and Research Committee estimated the accumulated needs for state highways,

county roads and city streets in the Kansas at $957,292,000 based on 1947 prices. The 1949 State Legislature adopted a 20-year program for the provision of these needed improvements in the highway system of Kansas. It was recognized that it would be impossible to correct immediately the deficiencies that had accumulated over many years, and it was also recognized that many of the existing highways and roads would have to be replaced during the period of the program. The program adopted anticipates an annual cost for a twenty year period of $88,758,000 for needed improvements, replacements, and maintenance of the highway system. It will be noted that this anticipated annual expenditure for highways and bridges alone is greater than the amount reported in the survey for any one fiscal year for all types of public construction. Even when proper allowance is made for incomplete returns in the survey, this anticipated average annual expenditure for highways and bridges is larger than the estimated expenditures for all types of projects in all years covered by the survey with the exception of the fiscal year 1949.

The report of the Kansas Highways Fact-Finding and Research Committee gives no indication of an awareness on the part of the committee members of the economic stabilizing possibilities of this proposed highway program. Neither did the 1949 State Legislature show any apparent indication of the awareness of the stabilizing possibilities of this program. The program adopted anticipates an <u>average</u> annual expenditure with no indication being

made of possible manipulation of expenditures in the interest of economic stabilization.

Should an awareness develop of a need for economic stabilization through the manipulation of expenditures for public construction, there seems to be little doubt that this proposed 20 year highway program for the state of Kansas offers by far the greatest possibilities for future stabilization.

(9) The method of financing projects reported in the survey by local governmental units was largely through bond issues. Information was not gathered as to whom these bonds were issued. If these bonds were bought largely by the commercial banks, their issuance would have constituted an inflationary pressure and aggravated the rise in the general price level which occurred in the period covered by the survey. On the other hand, if the bonds were issued largely to individuals who would otherwise have spent the money on goods and services, the issuance of the bonds would not have had an inflationary effect on the price level. This latter possibility, however, seems unlikely.

The state of Kansas financed the projects reported in the survey through tax receipts and the grant of funds by the national government. The principal sources of tax revenues by the state of Kansas were (a) the Kansas Educational Building Fund levy which is part of the ad valorem property tax and which is used exclusively for the construction of educational facilities, (b) the gasoline tax which is used exclusively for the maintenance, operation and construction of highways and bridges,

and (c) fees collected for motor vehicle licenses and motor carrier fees which are also used exclusively for the maintenance, operation, and construction of highways and bridges. The gasoline tax, fees collected for motor vehicle licenses, and motor carrier fees were undoubtedly largely collected from consumers and business enterprises. These taxes undoubtedly did not tap a very large amount of funds which otherwise would have been idle. If this is true, they would not have added to the inflationary pressures in the period covered by the survey.

To the extent that the Kansas Educational Building Fund levy may have tapped funds which otherwise may have been idle, this tax may have added to the inflationary pressures in the economy. If the tax was, however, largely paid from funds which would otherwise have been spent on goods and services, this tax would not have contributed to inflationary pressures.

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The author also makes grateful acknowledgment for the use of the facilities of the Department of Economics and Sociology which were used in preparing and mailing the questionnaires to local governmental units in Kansas.

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APPENDIX

Form 1. Form Letter Sent to Local Governmental units

KANSAS STATE COLLEGE
OF AGRICULTURE AND APPLIED SCIENCE
MANHATTAN

DEPARTMENT OF ECONOMICS AND SOCIOLOGY

The Department of Economics and Sociology at Kansas State College is making a study of the effect that public construction may have on business activity during the next year or two or at a later time.

A survey is being made to obtain information on all the public buildings, bridges, airports, parks and other projects which governmental units in Kansas have built since the end of World War II, are building, or are planning to build. When this information has been assembled, it will be analyzed to determine the effect that public construction in Kansas may have on general economic conditions.

Your cooperation in obtaining information on the public construction program of your governmental unit will be greatly appreciated. Copies of a printed form and instructions for its preparation are enclosed. If you will fill in the enclosed form for your governmental unit and return it in the enclosed return envelope, you will contribute materially to this study of public construction in Kansas.

Please return the report even if your governmental unit has no construction activity to report at this time. No building activity or plans may be indicated simply by checking the square provided in the upper right hand corner of the report.

If you are interested in receiving a summary of the results of this survey, we shall be pleased to furnish you a copy of the summary as soon as the results are available.

The identity of individual projects will be kept confidential.

Your cooperation in furnishing this information is greatly appreciated.

Sincerely yours,

George Montgomery

George Montgomery
Head of Department

GM:rk:rj
Enclosure

Form 2. Questionnaire on Public Construction Program.

REPORT ON PUBLIC CONSTRUCTION

Name of governmental unit _____ Date _____
(Legal corporate name of city, county, etc.)

Address _____
(City) (County) (State)

If governmental unit has no construction activity to report, place an X in this square ☐

(Use a separate column for each project)

1. Description of project (see instructions)	1. _____	1. _____	1. _____
2. Present status: (check one) (see instructions)			
a. Project in idea stage	2. a. ( )	2. a. ( )	2. a. ( )
b. Project in planning stage	b. ( )	b. ( )	b. ( )
c. Project now under construction	c. ( )	c. ( )	c. ( )
d. Project completed since September 1945	d. ( )	d. ( )	d. ( )
3. When did construction begin? or approximately when will it begin? (Month and year)	3. _____	3. _____	3. _____
4. If construction will not begin until 1949 or later, why is it being delayed?	4. _____	4. _____	4. _____
5. Estimated no. of months required for construction	5. _____	5. _____	5. _____
6. Estimated cost of project (see instructions)			
a. Land and rights-of-way	6.a.$ _____	6.a.$ _____	6.a.$ _____
b. Construction	b. _____	b. _____	b. _____
c. Equipment	c. _____	c. _____	c. _____
d. All other	d. _____	d. _____	d. _____
e. Total	e.$ _____	e.$ _____	e.$ _____
7. Amount and source of funds for financing project:			
a. Tax receipts	7.a.$ _____	7.a.$ _____	7.a.$ _____
b. Bond issues - Authorized	b. _____	b. _____	b. _____
c. Bond issues - Anticipated	c. _____	c. _____	c. _____
d. Grant of funds by Federal Government	d. _____	d. _____	d. _____
e. Grant of funds by State Government	e. _____	e. _____	e. _____
f. Other (specify) _____	f. _____	f. _____	f. _____
g. Total	g.$ _____	g.$ _____	g.$ _____
(Total for Item 6 should agree with Total for Item 7)			

Are you interested in receiving a summary of the results of this survey? Yes ( ) No ( )
Use reverse side of sheet if more space is required for any item or for general comments.

Signed _____
Title _____

INSTRUCTIONS FOR PREPARATION
of
REPORT ON PUBLIC CONSTRUCTION

Information is requested on all projects which your governmental unit (1) has completed since the end of World War II (September 1945), (2) has under construction now and (3) is planning to build.

These projects should include any major additions to existing facilities but should not include projects involving normal maintenance of public facilities.

Use a separate column on the report for each project.

The following additional information is given with respect to certain items:

Item 1 - A very brief general description of the project, worded so as to permit classification into one of the following major types of work:

1. Highways, roads and streets.
2. Bridges, viaducts, and grade separations.
3. Airports, terminals, and landing strips.
4. Sewer, water and sanitation facilities.
5. Schools and other educational facilities.
6. Hospitals and health facilities.
7. Public buildings, other than those which would normally be included in items 5 and 6.
8. Parks and other recreational facilities.
9. All other public facilities.

Item 2 - The following may be helpful in classifying the present status of the project:

"Idea stage" would indicate that:

(a) the proposed project may yet have to be approved by the voters in a special election.
(b) no basic engineering studies have been made except very preliminary sketches and estimates of cost.

"Planning stage" would indicate that:

(a) the proposed project has been approved by the voters in any necessary special elections.
(b) final drawings, specifications, and contract documents are either in the process of preparation or have been completed.

Item 6 - The estimated cost of the project:

Since the exact costs of many project may not yet be known, it will be appreciated if rough approximations are included wherever more exact data is not available. The estimated cost should be subdivided into:

a. The estimated cost of land and rights-of-way.
b. All construction costs incidental to the general construction, including heating, plumbing, electrical work and built-in equipment.
c. The estimated cost of equipment, such as machinery, furniture, hospital equipment, laboratory equipment, and all other equipment not a part of a general contract for construction.
d. The estimate of all other costs, such as engineering, legal, administrative, plan preparation, etc.

SURVEY AND ANALYSIS OF THE PUBLIC CONSTRUCTION PROGRAMS OF STATE AND LOCAL GOVERNMENTS IN KANSAS

by

RUTH ELLA KINDRED CLIFTON

B. S., Kansas State College
of Agriculture and Applied Science, 1941

AN ABSTRACT OF THESIS

submitted in partial fulfillment of the

requirements for the degree

MASTER OF SCIENCE

Department of Economics and Sociology

KANSAS STATE COLLEGE
OF AGRICULTURE AND APPLIED SCIENCE

1951

PURPOSE

The general purpose of this thesis was to relate the effect of public construction activity to general economic conditions in the period following the end of World War II.

If an expansion of public construction activity occurs at the same time that private business activity expands or if public construction activity is contracted at the same time that private business activity contracts, fluctuations in total business activity will be intensified. On the other hand, if expenditures by governmental units for public works can be manipulated and timed so that such construction offsets reductions in private business activity, fluctuations in total business activity will be reduced.

Specific purposes are summarized in the following paragraphs.

(1) In the period immediately following the end of World War II the economy of the United States experienced a period of great expansion of business activity. One of the purposes of this thesis was to determine whether construction by state and local governmental units in Kansas was expanded in this period at the same time that private business activity was expanded, thus contributing to the expansion that occurred in total business activity.

(2) This expansion in total business activity was accompanied by a rise in the general price level. A second purpose of this thesis was to determine the extent to which public construction in Kansas in the period following World War II contributed to the rise in the general price level by increasing the demand for scarce materials and labor.

(3) In the early months of 1949 the United States economy experienced a period of recession. A third purpose of this thesis was to analyze the volume of public construction which state and local governmental units in Kansas had in the planning stage and to attempt to determine the amount of such construction that might have been manipulated to stabilize business activity in the event that this recession had led into a prolonged depression of serious proportions.

(4) Finally, a fourth purpose of this thesis was to determine whether or not public officials in Kansas were making any conscious effort to plan public construction so that such activity could be timed to offset fluctuations in private business activity and thus to stabilize economic conditions.

LIMITATIONS

Limitations of this study include those summarized in the following paragraphs.

(1) It is impossible to isolate the effect of any given factor, such as public construction, on general economic conditions. The total flow of business activity is made up of

many currents, and it is difficult to make an accurate evaluation of the effect on the total of any one of those many streams. Nevertheless, if the actual volume of public works activity expanded significantly during a period of general business expansion, rising prices, and material shortages, it may be thought to have aggravated these fluctuations rather than moderated them.

(2) It is impossible accurately to analyze economic conditions in Kansas except as a part of the economy of the United States as a whole.

(3) The state of Kansas is a political unit; it is not an economic unit. Since economic activity in Kansas is the result of many heterogeneous economic influences, statements about economic conditions in Kansas can only be generalizations which need not necessarily apply to specific areas.

(4) This study is further limited by the fact that in the survey an incomplete inventory of public construction was secured because (a) the smaller governmental units were not contacted and (b) only 56 percent of the governmental units contacted furnished information requested in the survey.

METHODS OF PROCEDURE

A survey was undertaken in the summer and fall of 1948 to gather information on the amount of public construction which was undertaken or was being planned by state and local governmental units in Kansas in the period following the end of World War II.

Information was requested from the state of Kansas, all counties, all cities having a population of 750 or more according to the 1940 Census, and all school districts having a school enrollment of 100 or more pupils in 1946.

Data on the public works program of the state of Kansas were secured from various publications printed by the state. Information on the amount of construction by counties, cities, and school districts was secured almost entirely by mail through the use of a questionnaire.

A total of 745 local governmental units were asked to submit information on each project which they had completed since the end of World War II, had under construction at the time of the survey, or were planning to build at the time of the survey.

Information was received on the public construction programs of 417 state and local governmental units. The data secured included complete information for the state of Kansas and information on the construction programs of 59 per cent of the counties in Kansas, 67 per cent of the first class cities, 53 per cent of the second class cities, 53 per cent of the third class cities having a population of 750 or more, 67 per cent of the school districts in first class cities, 65 per cent of school districts in second class cities, and 53 per cent of the school districts in third class cities having a school enrollment of 100 or more in 1946.

The answers to the questionnaires from the local governmental units and the data on the construction program of the

state of Kansas were assembled and analyzed and form the foundation around which this thesis was built.

RESULTS OF SURVEY

Of the 417 governmental units which supplied information, 192 units reported that they had engaged in no construction activity since the end of World War II, had no construction in process and were planning no construction at the time of the survey. The 225 units reporting construction activity supplied detailed information on 661 projects having a total estimated cost of $243,583,000.

Of this total amount of construction, $24,630,000 constituted cost of projects begun in the fiscal year 1946, $30,523,000 covered cost of projects begun in the fiscal year 1947, $32,580,000 was for projects begun in the fiscal year 1948, $60,900,000 constituted cost of projects planned for construction in the fiscal year 1949, and $94,951,000 was for projects planned for construction in the fiscal years 1950 and 1951.

Total business activity in the United States expanded from the cessation of hostilities of World War II to the fall of 1948. This is shown by the fact that the index of industrial production prepared by the United States Department of Commerce rose gradually from a low of 152 in February 1946 to a high of 195 in October 1948. The index of industrial production fell to 161 in July 1949. This, in turn, was followed by a period of revival.

Of the total construction activity reported by 417 state and local governmental units in the survey conducted for this thesis, projects costing $161,137,000 were reported by the state of Kansas, and this amount was greater than that reported by any other type of governmental unit. The type of unit having the next largest amount of construction was first class cities with $29,580,000 of construction activity.

More than half of the total cost, or $136,643,000, was for the construction of highways, roads, and streets. Schools and other educational facilities constituted the type of project for which the next largest amount of construction activity was reported.

Projects by the state of Kansas were financed through tax receipts and the grant of funds by the Federal government. Local governmental units financed their projects principally through bond issues. Another important source of funds for local units was the grant of funds by the Federal government and the state government for the construction of highways and bridges.

An analysis of the percentage returns from the various types of governmental units and an analysis of information available from the Federal Works Agency concerning the amount of planning activity by type of governmental unit in the period following the end of World War II, makes it appear reasonable to assume that data was secured in the survey on approximately half of the public construction activity by state and local governments in the period following World War II.

If the survey did actually secure information on approximately half of the public construction in Kansas, public construction in Kansas in the years 1946, 1947, 1948, and 1949 was greater than in the pre-war years of 1939 and 1940 when public works activity, according to figures published by the United States Department of Commerce, amounted to $24,800,000 and $32,400,000, respectively.

Further, when the data secured in the survey are compared with the total value of construction contracts awarded in Kansas, $118,475,000 and $128,797,000 in the calendar years 1947 and 1948, respectively, according to figures published in the Kansas Business Review, it appears that the proportion of public construction to total construction was approximately 50 percent in the years 1947 and 1948. This compares with 40.3 percent for 1939 and 42.0 percent for 1940, according to data from the United States Department of Commerce.

In order to secure information as to whether public officials in Kansas were making any conscious effort to plan their construction programs so that public construction activity would offset fluctuations in private business activity, local governmental units were asked to explain on the questionnaire why construction was being postponed on those projects which were being delayed at the time of the survey. A total of 118 units reported having projects delayed, and answers were received from 74 of those units. None reported that they were planning their construction programs so as to stabilize economic activity by undertaking public construction at such times as to

offset fluctuations in private business activity.

The only long range plan for future public construction discovered in the survey was a twenty year program adopted by the 1949 Kansas State Legislature for the improvement of highways, roads, and streets in Kansas. This program anticipates an average annual expenditure of $88,758,000 over a twenty year period for maintenance, replacements, and provision of needed improvements in the highway system.

CONCLUSIONS

An analysis of the results of the survey of public construction programs of state and local governmental units in Kansas in the period following the end of World War II seems to support the following conclusions:

(1) Public building activity was expanded within the period from 1946 to 1949, and the volume of public works as well as the proportion of public construction to total construction was greater in those years than in the pre-war years of 1939 and 1940.

(2) This substantial expansion of public construction activity occurred at the same time that private business activity expanded and contributed to the expansion in general business conditions.

(3) The increased volume of public works also contributed significantly to the rise in the general price level by increasing the demand for scarce materials and labor.

(4) Expenditures during this period largely reflected accumulated needs from the war period, and it seems quite possible that general welfare would not have been furthered by the postponement of these projects in the interest of economic stabilization.

(5) When a recession was experienced in the United States economy in the early months of 1949, there was a substantial volume of public construction which was in the planning stage that might have been manipulated to stabilize business activity if the recession had led into a prolonged depression of serious proportions.

(6) The answers to the questionnaire would indicate that public officials in Kansas are not making any conscious effort to plan public construction programs so that such construction will offset fluctuations in private business activity.

(7) The greatest possibilities for future stabilization of economic conditions by manipulating expenditures of state and local governments for public works seem to lie in the twenty year program which was adopted by the 1949 Kansas State Legislature for the improvement of highways in the state of Kansas.