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TENTH FEDERAL RESERVE DISTRICT

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POPULATION TRENDS AND INCOME PAYMENTS IN THE TENTH DISTRICT

Recent census data on population and migration and Department of Commerce data on income payments in the seven states of the Tenth District for the postwar period show a continuation of past trends. Since 1930 two out-migrations of substantial size have drained the District's population: one was caused by the severe droughts of the Thirties, the other by the nation's need of war workers in distant plants. Primarily dependent on agriculture and mineral extraction, the economy of the District has failed to support its growing population. During the 1935-1940 period, 15 per cent of the population between 25 and 30 years of age left the District. Contrary to common belief, more than three times as many left the cities and towns of the seven states as left the farms. From July 1, 1946, to July 1, 1947, only two states in the nation suffered a net loss of population and these, Nebraska and Oklahoma, were both District states. Although the years 1940 through 1947 were exceedingly prosperous ones for both farmer and miner, per capita income in the District was well below the national average, and none of the seven states gained population at the rate of the nation as a whole, despite a high rate of natural increase. Facts such as these warrant concern and attention. It is with this consideration in mind that population and income trends in the seven District states are examined.

TABLE I. PERCENTAGE CHANGES IN POPULATION FOR SELECTED PERIODS

	1910-1930	1930-1940	1940-1947	1946-1947
United States...	+33.2	+7.0	+8.9	+2.5
Colorado.....	+29.4	+9.2	+1.8	+0.9
Kansas.....	+11.3	-4.7	+6.9	+2.6
Missouri.....	+10.4	+4.1	+3.1	+2.0
Nebraska.....	+15.2	-4.9	-2.4	-0.1
New Mexico.....	+29.8	+25.8	+2.9	+4.2
Oklahoma.....	+43.6	-3.4	-2.3	-0.6
Wyoming.....	+53.7	+12.7	+5.5	+0.8

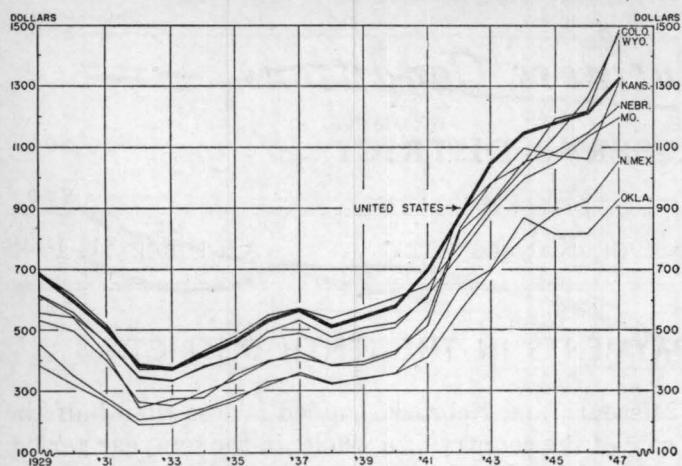
As shown in Table I, there has been great variation in the percentage increases in population among the different states. Between 1910 and 1930, Wyoming and Oklahoma gained considerably more population percentage-wise than the United States. New Mexico and Colorado gained only slightly less, and Kansas,

Missouri, and Nebraska gained at less than half the rate of the country as a whole. In the ten-year period, 1930 to 1940, the picture changed notably. New Mexico gained three and one half times the national average and Wyoming and Colorado gained somewhat more than the average. On the other hand, Missouri's population increased only about half the percentage of the nation as a whole, and Kansas, Nebraska, and Oklahoma lost population, the latter two states with a significant reversal of trend which has continued to the present time.

From 1940 to 1947, none of the states of the Tenth District gained as much, percentage-wise, as the United States. Kansas and Wyoming gained most, while Nebraska and Oklahoma continued to lose population. Between July 1, 1946, and July 1, 1947, these were the only two states in the nation that lost population, although their losses were very slight. During this year New Mexico gained considerably more than the national average and Kansas a little more. Thus, Colorado, Missouri, New Mexico, and Wyoming have had a continuous increase in population over these periods from 1910, while in 1947 New Mexico and Kansas were the only District states gaining population at or above the national rate. Averaging state figures, the Tenth District has never gained population in any of the above periods at the rate of the country as a whole.

Turning to income, it is found that the seven District states accounted for only 7 per cent of the total income payments to individuals in the United States in 1947. On a per capita income basis the District as a whole stood well below the nation over the period 1929 through 1947, as shown in Chart I. In 1929 Wyoming per capita income was 1 per cent above the national average while the other District states ranged from 10 to 45 per cent below. In 1947 Wyoming and Colorado per capita income stood at 10 and 11 per cent, respectively, above the national per capita income and the other states ranged from 1 to 30 per cent below the nation. Kansas had increased its per capita income most, rising from 78 to 99 per cent of the national

CHART I. PER CAPITA INCOME PAYMENTS, 1929-1947



average. New Mexico, which experienced a steady gain in population, shows a significant gain in per capita income, rising percentagewise from 58 to 80 per cent of the national per capita income. Missouri per capita income was 90 per cent of national per capita income in 1929 and the same in 1947. Oklahoma per capita income, 67 per cent of the national average in 1929, had only risen to 70 per cent by 1947, which was 10 percentage points below the second lowest District state. It is apparent that the District as a whole has neither gained population at the national rate nor has its population been able to earn a per capita income as high as the national average.

Comparing the major sources of income payments to individuals for the years 1940, 1944, 1946, and 1947, shown in Table II, it is seen that, for both the nation and the Tenth District, trade and service was the largest single component of total income payments to individuals and comprised about one fourth of all income payments. In Kansas, Nebraska, and Wyoming, agricultural income payments were slightly larger than trade and service income payments, and in the other District states constituted the second largest segment of income payments, New Mexico excepted. For the nation as a whole, however, agricultural income represented less than 10 per cent of total income, while manufacturing provided the second largest income component and accounted for a fourth to a fifth of total income payments, except in the war year 1944. In 1944 manufacturing payrolls in the District states generally were at a peak, being most significant in Kansas, Missouri, Nebraska, and Oklahoma, and reflecting stepped-up war production. Manufacturing income did not rise as rapidly in New Mexico and Wyoming, but in these states it has continued to become a larger component of total income payments to individuals, while in the other District states the relative importance of manufacturing payrolls has declined since the war.

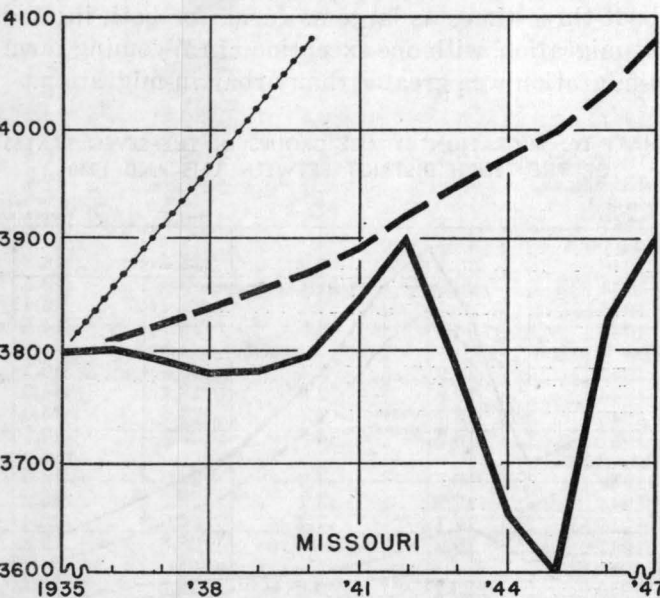
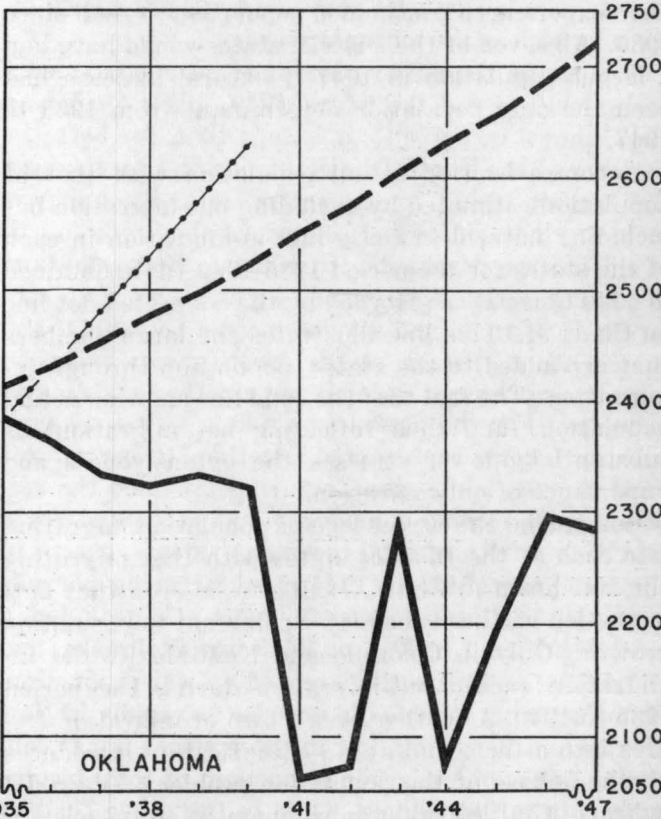
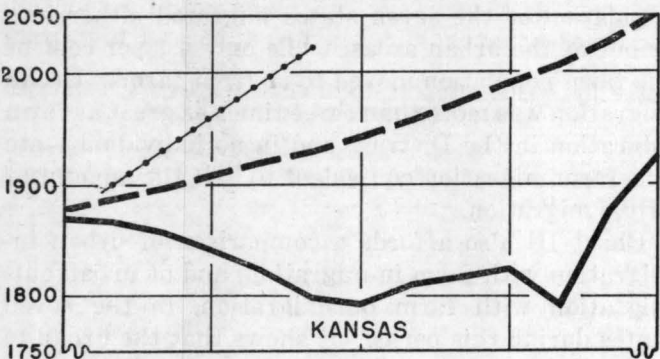
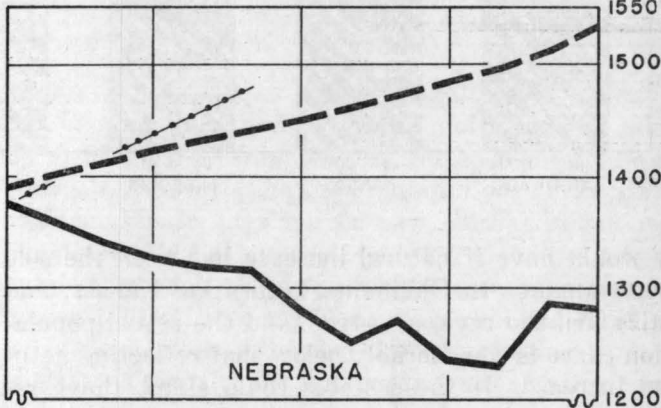
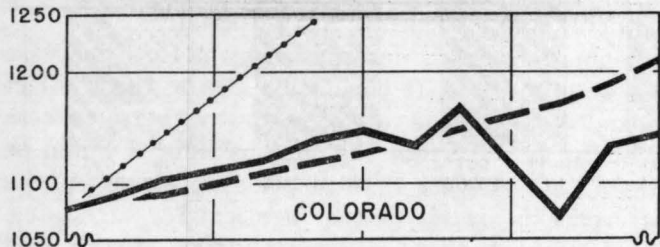
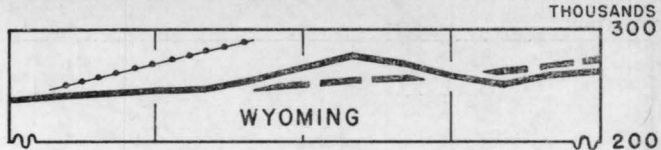
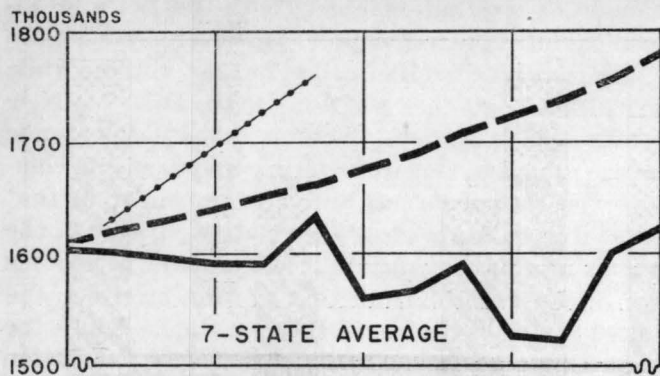
Government income payments are the third largest segment of both national and Tenth District total income payments to individuals. However, second place is occupied by manufacturing for the nation, while agriculture holds that position for the District. New Mexico is an exception. Owing perhaps to the atomic energy program, Government income payments comprise the second largest income component in that state. Generally speaking the relative position of the various income components in the postwar period has been little changed from that prewar in either the United States or the Tenth District states. Thus, the Tenth District continues to contrast with the nation as a whole in that the economic importance of manufacturing and agriculture are reversed.

Population size is determined by natural increase and by migration. If population size in the District depended only on the rate of natural increase (excess of births over deaths) the current figures would be substantially higher than at present. However, the difference is by no means identical for all states. Chart II shows that in Wyoming, New Mexico, and Colorado with one year excepted, actual population increased more rapidly between 1935 and 1943 than

TABLE II. MAJOR SOURCES OF INCOME PAYMENTS, EXPRESSED AS A PERCENTAGE OF TOTAL INCOME

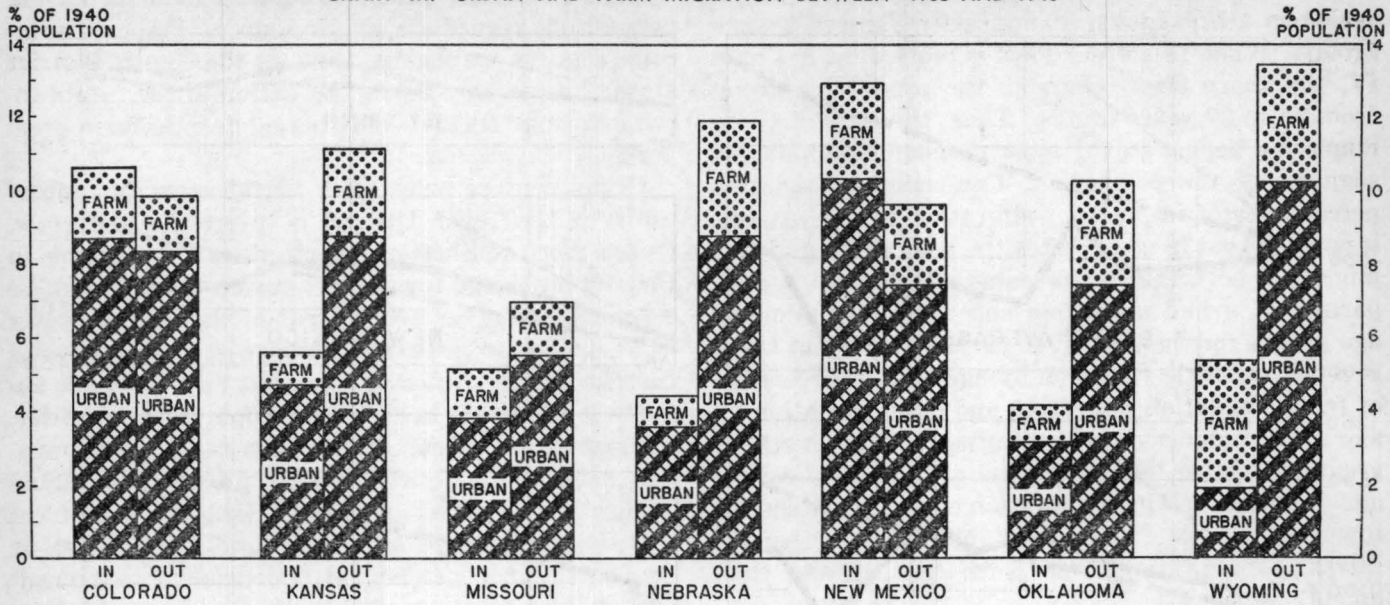
	Agri- culture	Manufac- turing	Trade and Service	Govern- ment
UNITED STATES				
1940.....	7.2	20.3	25.2	12.4
1944.....	8.9	28.2	21.0	17.8
1946.....	9.8	21.1	26.7	16.6
1947.....	9.6	22.4	26.8	14.5
COLORADO				
1940.....	10.9	8.4	26.8	17.6
1944.....	14.4	10.1	21.8	24.5
1946.....	14.7	8.9	27.4	20.8
1947.....	19.9	9.1	26.4	17.7
KANSAS				
1940.....	18.8	8.7	22.6	14.4
1944.....	23.2	19.5	16.6	18.1
1946.....	25.0	9.3	23.2	16.9
1947.....	33.5	8.8	20.6	14.0
MISSOURI				
1940.....	9.5	16.6	28.2	10.6
1944.....	12.3	23.6	23.6	16.2
1946.....	13.6	17.1	28.7	16.0
1947.....	11.1	18.7	30.0	14.3
NEBRASKA				
1940.....	20.4	6.9	25.4	14.2
1944.....	29.2	11.1	19.9	19.3
1946.....	31.1	7.1	25.4	15.4
1947.....	28.7	8.0	26.9	14.5
NEW MEXICO				
1940.....	20.9	2.4	23.5	16.1
1944.....	19.9	2.9	18.7	34.9
1946.....	15.7	4.7	26.6	24.0
1947.....	18.9	4.8	25.3	19.7
OKLAHOMA				
1940.....	18.1	7.3	24.0	14.6
1944.....	17.9	13.1	20.2	25.2
1946.....	17.1	7.4	26.5	22.4
1947.....	19.9	7.7	25.3	19.8
WYOMING				
1940.....	23.1	4.3	19.5	16.5
1944.....	22.3	4.6	17.8	21.5
1946.....	26.9	4.8	23.0	14.9
1947.....	27.2	5.1	22.9	13.4

CHART II. POPULATION TRENDS—TENTH FEDERAL RESERVE DISTRICT



KEY: ——— Actual population.
 - - - - - Population excluding migration but including natural increase cumulated from 1934 as base year.
 -••••• Population excluding out-migration but including natural increase and in-migration.

CHART III. URBAN AND FARM MIGRATION BETWEEN 1935 AND 1940



it would have if natural increase had been the sole determinant. In Oklahoma, Nebraska, Kansas, and Missouri, the reverse is true, and the actual population curve is considerably below that reflecting natural increase. If these states could simply have retained those born within their boundaries, they would have experienced continuous population growth since 1935. All seven of the District states would have had a larger population in 1947 if natural increase had been the only population determinant from 1935 to 1947.

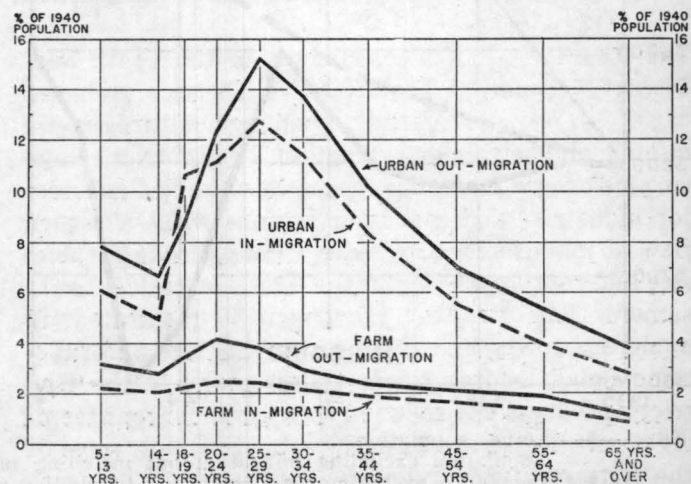
A comparison of actual population with that of population estimated by excluding out-migration but including natural increase and in-migration in each of the states for the period 1935-1940 (data obtained in 1940 Census) is afforded by the connected-dot line on Chart II. This line illustrates the large numbers that are added to the states' population through in-migration. The fact that the solid line showing actual population (and thus reflecting net migration) is substantially lower stresses the extensiveness and importance of out-migration.

Comparing the percentage of population migrating into each of the District states with that migrating out, as shown in Chart III, it can be seen that out-migration has been the major deterrent to population growth. Only in Colorado and New Mexico did in-migration exceed out-migration during the period 1935 to 1940. A further breakdown of migration figures into a farm and urban classification introduces another phase of the population problem. Chart III indicates that, contrary to common belief, people are leaving the cities and towns of the District states in far greater numbers than they are leaving the farms.

In the 1935-1940 period 12.7 per cent of the urban population of the seven states migrated either into or out of the urban areas, while only 4.1 per cent of the farm population moved to or from farms. Urban migration was more than three times as great as farm migration in the District, and in no individual state was farm migration equivalent to half the amount of urban migration.

Chart III also affords a comparison of urban in-migration with farm in-migration, and of urban out-migration with farm out-migration, in the seven states during this period. It shows that the urban to farm relationship was approximately the same, urban about three times as large as farm, for both in- and out-migration, with one exception. In Wyoming farm in-migration was greater than urban in-migration.

CHART IV. MIGRATION BY AGE GROUPS IN THE SEVEN STATES OF THE TENTH DISTRICT BETWEEN 1935 AND 1940



Another aspect of the migration problem is revealed in a breakdown of migration figures by age groups. When this breakdown is plotted, as in Chart IV, the sharp peak occurs in the productive group from 25 to 30 years of age. Thus, the bulk of those migrating belong to the most economically valuable segment of the population. Comparing population percentages of in- and out-migration by age groups, it is noted that in most states the peak of in- and out-migration both fall in this same age group. A comparison of urban migration and farm migration by age groups for the 1935-1940 period shows that there is relatively little variation by age in the percentage of farm population migrating and great variation by age in the number of urban migrants. Moreover, the greatest number leave the farm at a slightly earlier age than that at which migration out of the cities and towns is greatest. This might indicate that there is intrastate migration from farm to city, and then on out of the state.

Several conclusions can be drawn from this study of population statistics. Out-migration is a serious problem in the Tenth District. The area has, at different times, shown an actual and a relative loss of population when compared with the United States as a whole. This loss of population, more severe in some parts of the District than in others, has been due to out-migration. Moreover, migration has been heaviest among the most productive age groups.

Urban rather than farm out-migration has been the chief factor in population loss. It is commonly understood that farm population is decreasing with farm mechanization, and that the population is moving on to nearby cities and towns. This may be true in the Tenth District, but if so it must be carried a step further, for people are leaving the urban areas and in greater numbers than they are leaving the farm. One fact is clear: the cities and towns of the

Tenth District are unable to support their increasing population, regardless of its source. Per capita income figures emphasize this, as the Tenth District stood considerably below the nation in per capita income during the 1940-1947 period despite farm prosperity.

Urban centers must offer better economic opportunity if the Tenth District is to prosper and grow. Unless more and better opportunities are available in District cities and towns, the present trend cannot be reversed, and other urban areas of the United States will continue to grow and prosper at the expense of District states. Not only more but new economic activity is needed to hold young people in the District.

Agricultural areas undergoing rapid mechanization, such as the Tenth District, must rely on industrialization to offset population loss. This problem is basic to all similar areas. To date the economy of the District has been primarily dependent on agriculture and the extractive industries. As per capita productivity is increased with farm and mine mechanization, industrial processing and manufacturing must be similarly increased if the District is to support its population. The failure of manufacturing payrolls to grow as rapidly as urban population has caused migration from urban centers of the District to other urban areas where greater industrial activity offers wider opportunities. Thus, it is the lack of utilization of the mineral resources and raw materials of the District, for manufacture and processing in the District, that has deterred population growth. Furthermore, greater industrialization would bring the Tenth District into better balance with the national economy in respect to the size of agricultural as compared with manufacturing components of total income payments to individuals. And, more nearly balanced agricultural and manufacturing income payments would mean greater economic stability for the District.

AN INDUSTRIAL PROGRAM FOR THE TENTH DISTRICT

The Tenth District Economy

The economy of the Tenth Federal Reserve District is based firmly upon agriculture, metal mining, and petroleum extraction. The District's huge surplus of raw materials moves into the nation's major industrial and consumer regions while a return flow of manufactured articles filters through wholesale and retail outlets into the hands of resident consumers. This two-way movement is facilitated by numerous towns and cities of varying size and function. Small trading towns collect many of the District's products and forward them on to larger assembly points. Retail stores in these towns supply most of the consumer and producer goods used in the areas

surrounding them. The large cities, such as Kansas City, Oklahoma City and Tulsa, Omaha, and Denver, are major concentration and processing points for raw materials. Wholesaling and manufacturing concerns of substantial size also operate in these cities. Other centers, such as Wichita, St. Joseph, and Albuquerque, perform similar functions for a more limited area.

While the economy of the Tenth District is thus based upon the raising and extraction of raw materials (crops, livestock, minerals, and petroleum), it is by no means limited to this activity. All of the larger cities and many of the towns have acquired significant amounts of manufacturing and an increasing number of the District's population is receiving its livelihood

from this source. Thus, 9 per cent of all persons employed in the District during 1939 were working in manufacturing concerns. While this is far below the ratio of 43 per cent for Connecticut and of 37 per cent for Massachusetts, it does indicate the economy has moved away from complete dependence upon the extraction and production of raw materials.

Much of the manufacturing now in the District is of course concerned with processing the raw materials of the region. Thus about one third of all persons employed in manufacturing are producing food and kindred products. In Wyoming 37 per cent and in Oklahoma 19 per cent of the workers in manufacturing are engaged in processing petroleum and coal. But there is also a significant and increasing number of persons engaged in manufacturing articles to be consumed in the District. Some are producers' goods, such as transportation equipment, farm machinery, oil machinery, construction materials, and stationary engines. Others are for the final consumers in cities, towns, and on the farms. The range of these products is quite wide and includes many of the consumer items purchased in the region. However, this does not mean that the District manufactures all of the goods consumed in the area or that it performs all of the processing steps on its raw materials. This is far from the truth. Only a very small portion of the consumer and producer goods used in the District is manufactured there and only a portion of the raw-material processing occurs inside the region.

Industrial Location The economy of the United States has reached its present state of high productivity through an efficient functioning of the principle of specialization. On a regional basis this principle holds that the nation as a whole will gain most when each area produces those goods for which it is best fitted. Thus wheat can be economically produced in Kansas and the extraction of petroleum is feasible in Oklahoma. Through the years there has also grown up a concentration of manufacturing activities in the northeastern section of the nation. Although suitable soil and climate for crops are restricted to well defined areas and mineral resources exist only in specific places, the economical location of manufacturing activities is a much more difficult problem. Theoretically for each manufacturing concern there is a geographical location where its goods may be produced and distributed at the lowest cost. The practical determination of this location is a highly complicated and technical procedure. The fact that several of the locational cost factors, such as labor, markets, and transportation, are continually shifting does not lessen the difficulty. The result is a fluidity or movement of manufacturing as these costs

change or the manufacturer becomes aware of the altered position of these costs.

Some of this movement results only in a shift from the center of large cities to their periphery. Other changes are from large cities to small urban centers in the same general location. But some are regional in nature, to the South and Southwest, the Midwest, and the Far West. All are shifts which have been occurring over a substantial period of time and there is every reason for expecting them to continue.

District Interest in Industry Interest in industrialization was accelerated in the Tenth Federal Reserve District by the severe droughts of the Thirties. These droughts emphasized with telling effect several weaknesses of the region's economy. To residents of the area it then became painfully evident that:

- (a) A purely "raw materials" economy has definite limits beyond which it cannot support additional population;
- (b) per capita incomes in raw material economies are very low; and
- (c) an economy based predominantly on agriculture is frequently subjected to violent changes in income caused by the vagaries of weather.

Accentuating these weaknesses was a process which had been operating for some time: mechanization of agriculture was steadily reducing the number of persons needed on farms.

The area began to lose population and the loss was not confined to the rural-farm population. Cities and towns of the region also fed the out-migration. Natural increase caused by the excess of births over deaths is unusually high in the rural areas and significantly high in most of the urban centers of the area, but this has been more than offset by migration from the region. Unfortunately a high percentage of those migrating are in those age groups that are productively most valuable to the area's economy.

It was only natural then that residents of the area, interested in its future, began to consider ways and means of permanently correcting the evident weaknesses of their economy. And it was also natural that their attention should almost immediately center on industrialization. Industry has no apparent limits of population size which it can support. Furthermore, per capita incomes in industrial economies are well above those found in societies where raw material extraction is the sole pursuit.

Less dramatic but perhaps just as important is the relative stability of income which results when manufacturing is introduced into a raw materials economy. The producers of raw materials are subject to economic setbacks when surpluses develop or, in the case

of agriculture, crop failures occur. As these setbacks do not always coincide with cyclical business declines, manufacturing activities in the area will probably be affected by them to only a minor degree and hence will exert a leveling influence on the region's income. Industrial concerns producing goods sold outside the region and not using the area's raw materials will not be affected by local adversities. Those processing the region's raw materials may be affected but by no means to as great an extent as the producers of raw materials. Of course those engaged in processing one raw material, such as petroleum, will not react to low returns in another field, such as agriculture. The net result is that the region which has not placed all its eggs in one basket is in a good position to meet local economic adversities.

But one important question remained in the minds of those who were considering industrialization of the region. If industry could economically operate in the area, why had it not already located there? The answer was not hard to find. The original location may have been accurately selected but changes in markets, labor, raw materials, transportation costs, and other factors may have altered radically since that date. The original selection of site may have been made for other than economic reasons which now are unimportant. Or, the industrial advantages of the region are unknown to those who control the location of manufacturing plants. Finally, some industries develop because a local resident had an idea or had made a discovery about a local raw material. This seldom happens in an agricultural economy because the people are not industrially minded. But what can be done to change the situation and further industrialization?

An Industrial Expansion Program for the Tenth District

Any complete program designed to bring manufacturing into the Tenth District must be composed of two separate and distinct parts. The first part in point of time will be concerned with discovering what industries can economically be located in the region. This is primarily a research job. The second part of the program is advertising or publicity. Its purpose is to make known to indicated manufacturing concerns and potential investors the information secured from the survey and research work. The following material applies only to the first part, the research phase of the program.

Basically a research program on industrial location for the Tenth District must analyze and study products of three general types. First are those made from raw materials extracted from the area and destined primarily for ultimate consumption outside the region. These involve such activities as milling grain,

slaughtering livestock, scouring wool, and refining petroleum. The second type of product is manufactured for sale locally and is not confined to using raw materials found in the region. Such goods are clothing, agricultural implements, and automobiles. The third class of products is more difficult to define because it is limited neither to the region's raw materials nor to its consumer market. The common denominator of this class is that the products are the result of an invention or idea locally engendered and developed. There are far more of these in the Tenth District than is usually realized. Many fall by the wayside but a few flower into national importance. They require careful cultivation.

Studies on the first class of products must follow several clearly defined steps. First there must be a comprehensive inventory of all the natural resources known to exist in the District. The second step is a determination of the use which is now being made of these resources or raw materials. This will include an analysis of each raw material to discover the extent to which it is processed before leaving the District and the places where the processing occurs. It will then be possible to limit the subsequent analyses to those raw materials that are not completely processed before leaving the District for sale in outside consumer centers. The final studies will take up each of these raw materials and discover where the remaining processing occurs, why it takes place at those points, and what are the possibilities of performing those activities somewhere in the Tenth District.

An example will clarify this phase of the program. It will of course be discovered in the inventory of resources that the District raises substantial numbers of beef cattle. This specific raw material will then be subjected to careful study. It will be found the cattle are marketed at various points both inside and outside the District. Some will be shipped outside the District for fattening and slaughter at distant points. A substantial number, it will probably be found, are slaughtered at major centers inside the District. Each of the products from the slaughtered animal will then be studied to determine what happens to it. It may be found a number of the products and by-products are fully processed at points inside the District. But it will also be determined that some are sent to outside points for further manufacture. A well-known case is that of hides, of which none is processed in the District. Each of these items is then subjected to careful analysis to determine why they are processed at outside points and a cost and market study is made to establish their suitability for economical production inside the District. This work must be thorough and technically adequate. It will take time but the dividends will be substantial.

The inventory work for both the second and third types of product may be performed at the same time. This will disclose the plants that are now operating in the District and producing goods for sale to local consumers and also those concerns, the result of local inventiveness, whose products may not be tied to either local raw materials or markets. Sufficient information about each concern should be secured to establish its location, size of operation, goods produced, and the area of product distribution. From this inventory information, it will be comparatively easy to determine those items of local consumption which are being successfully manufactured in the District and the market areas which are not currently supplied from this source. Subsequent analysis will then establish the possibility of expanding the operations of existing plants or establishing new ones producing the same products for sale in the areas not now served.

From studies of this kind there often emerges what appears to many persons as a very uneconomic procedure. It is likely there will be discovered a number of raw materials produced in the area that are sent outside the District to be processed or manufactured into consumer articles which are then shipped back to the District for sale and consumption therein. While the mere existence of situations of this kind is not conclusive evidence of economic waste, it certainly calls for immediate analytical attention. Of course a complete program of investigation would eventually study every commodity consumed locally to determine its suitability for manufacture in the area. However, the first steps should be concerned with those products now produced in a limited way for local consumption and those not locally manufactured but using local raw materials and consumed in the District.

The third and last type of product, those produced through local inventiveness and initiative, has received far too little attention for the potentially large expansion which may flow from them. Many of the

huge industrial concerns now operating in the United States grew from a one-man shop and an idea. Once these concerns have been discovered by the inventory study, the problem becomes one of learning the needs of each enterpriser and then assisting him in whatever way is possible. The concern may need financing, both equity and short-term, and the owner might have little conception of where or how it may be secured. Frequently, the budding industrialist knows little about the problems involved in marketing his product. Occasionally he needs engineering and production advice or he may require additional space and equipment and does not know how to secure them. But whatever the problem or need, once discovered, subsequent analysis will quickly determine the measures that can and should be taken. It must be remembered that in ventures of this kind the initial stages of development are most critical. The proper information or advice during this period is of inestimable value to the concern.

Effective Advertising That cities and towns and regions have spent substantial sums in an attempt to secure industry through advertising and publicity of various types is well known. In far too many cases the money has brought no results because the advertising was not based on an analytical and research program such as that outlined above. Consequently the monetary savings resulting from a comprehensive industrial research program are potentially large. The analysis will inform local areas and communities where advertising money can be effectively spent and also those places where it will be a complete waste. The Tenth Federal Reserve District cannot be accused of failure to advertise its industrial potentialities for much has and is being spent for this purpose. It would, however, receive major benefits from a thorough and comprehensive research program on industrial location. This it badly needs.

BUSINESS AND AGRICULTURAL CONDITIONS

MEMBER BANK CREDIT

District country bank loan volume has increased rapidly during the last three months. An important factor in that loan expansion has been wheat loans guaranteed by the Commodity Credit Corporation and other wheat loans, some of which have Commodity Credit Corporation guarantees pending. During September country bank loan volume expanded by 24 million dollars, which was a 4 per cent increase. District reserve city member bank loan volume showed an increase of 15 million dollars, or 2 per cent.

Both groups of banks reduced their holdings of Government securities during September. The reduc-

tion was especially large in the city banks, whose Government security holdings declined by 8 per cent. The volume of Government securities held by country member banks declined by 3 per cent. A considerable part of this decline resulted from liquidation of Government securities in order to meet the higher legal reserve requirements that became effective the latter part of the month. Loss of deposits was another factor leading to liquidation of Government securities by the city banks. Some decrease in Treasury bond holdings occurred in connection with Treasury retirement of the 2½ per cent bond which matured September 15.

SELECTED ITEMS OF CONDITION OF TENTH DISTRICT MEMBER BANKS
(In millions of dollars)

	ALL MEMBER BANKS			RESERVE CITY BANKS			COUNTRY BANKS		
	Sept. 29 1948	Aug. 25 1948	Sept. 24 1947	Sept. 29 1948	Aug. 25 1948	Sept. 24 1947	Sept. 29 1948	Aug. 25 1948	Sept. 24 1947
Loans and investments.....	4,209	4,309	4,275	2,231	2,325	2,360	1,978	1,984	1,915
Loans and discounts.....	1,468	1,429	1,167	837	822	703	631	607	464
U. S. Government obligations.....	2,364	2,506	2,762	1,201	1,310	1,475	1,163	1,196	1,287
Other securities.....	377	374	346	193	193	182	184	181	164
Reserve with F. R. Bank.....	902	818	822	537	499	496	365	319	326
Balances with banks in U. S.....	583	597	673	255	253	262	328	344	411
Cash items in process of collection.....	267	257	251	249	240	234	18	17	17
Gross demand deposits.....	5,045	5,078	5,114	2,767	2,820	2,846	2,278	2,258	2,268
Deposits of banks.....	804	833	987	745	774	914	59	59	73
Other demand deposits.....	4,241	4,245	4,127	2,022	2,046	1,932	2,219	2,199	2,195
Time deposits.....	666	664	672	357	356	363	309	308	309
Total deposits.....	5,711	5,742	5,786	3,124	3,176	3,209	2,587	2,566	2,577
Borrowings.....	7	4	11	6	2	10	1	2	1

Deposit volume of the city banks declined by 2 per cent during the month, while country bank deposits increased by 1 per cent. For the city banks, interbank deposits showed the largest change of any class of deposits, as they decreased by 29 million dollars. Demand deposits of individuals and businesses and of State and local governments decreased, while Federal Government deposits increased. Virtually all of the

expansion in country bank deposits was in demand deposits other than interbank.

DEPARTMENT STORE TRADE

The dollar volume of sales at reporting department stores in this District in September was very little larger than a year ago, but sales recovered in October and in the first three weeks of the month were about 10 per cent above the corresponding period a year earlier. Sales increased less than is usual from August to September, and the seasonally adjusted index of daily average sales dropped from the near-record high of 336 per cent of the 1935-39 average in August to 329 per cent in September. Some evidence of consumer resistance to high prices is furnished by the disparity in sales gains between the main store and the basement store. For women's apparel, the percentage increase in basement store sales this year has been about double that in the main store; for men's wear, the percentage gain in basement store sales has been about five times that in the main store.

Department store sales and stocks in leading cities:

	BANK DEBITS		Change from '47	
	Sept. 1948	9 Mos. 1948	Sept. 1947	9 Mos.
COLORADO				
Colo. Springs.....	48,678	352,892	+30	+16
Denver.....	531,043	4,360,959	+12	+12
Gr. Junction.....	13,596	113,131	+9	+10
Greeley.....	23,009	188,845	0	+21
Pueblo.....	40,167	353,957	+8	+17
KANSAS				
Atchison.....	13,926	139,002	-14	+7
Emporia.....	10,009	88,569	-2	+8
Hutchinson.....	40,288	418,121	-3	+15
Independence.....	6,672	60,403	+3	+3
Kansas City.....	63,097	568,428	+6	+11
Lawrence.....	9,942	92,463	+14	+15
Parsons.....	8,414	72,416	+12	+14
Pittsburg.....	11,226	102,870	+5	+15
Salina.....	36,714	361,440	-11	+4
Topeka.....	83,433	772,254	+1	+9
Wichita.....	213,518	2,014,279	+6	+15
MISSOURI				
Joplin.....	26,979	237,327	+3	+7
Kansas City.....	1,086,625	9,565,949	+6	+14
St. Joseph.....	98,103	873,347	+3	+9
NEBRASKA				
Fremont.....	15,413	147,651	+7	+27
Grand Island.....	22,514	196,017	+10	+12
Hastings.....	14,861	132,660	0	+8
Lincoln.....	76,847	695,139	+13	+14
Omaha.....	484,458	4,267,838	-2	+3
NEW MEXICO				
Albuquerque.....	74,059	639,833	+17	+17
OKLAHOMA				
Bartlesville.....	120,216	932,760	+71	+67
Enid.....	35,289	379,678	-7	+4
Guthrie.....	4,275	38,876	+13	+16
Muskogee.....	24,078	209,658	+18	+13
Okla. City.....	306,136	2,687,578	+14	+16
Oklmulgee.....	6,124	57,684	+5	+12
Ponca City.....	16,320	172,671	-24	-3
Tulsa.....	542,644	4,437,453	+41	+42
WYOMING				
Casper.....	29,376	230,507	+29	+32
Cheyenne.....	31,089	249,392	+20	+13
District, 35 cities.....	4,169,138	36,212,047	+11	+16
U. S., 333 cities.....	104,729,000	917,264,000	+14	+13

	SALES		STOCKS	
	Sept. '48 comp. to Sept. '47	9 Mos. '48 comp. to 9 Mos. '47	Sept. 30, '48 comp. to Sept. 30, '47	Sept. 30, '48 comp. to Sept. 30, '47
(Per cent increase or decrease)				
Denver.....	+1	+4	+22	
Pueblo.....	+7	+15	+16	
Hutchinson.....	+5	+6	+41	
Topeka.....	+7	+9	+14	
Wichita.....	+7	+10	+32	
Joplin.....	+14	+9	+25	
Kansas City.....	+3	+9	+11	
St. Joseph.....	-8	0	*	
Lincoln.....	+4	+8	*	
Omaha.....	+3	+6	+11	
Oklahoma City.....	-4	+10	+47	
Tulsa.....	+2	+17	*	
Other cities.....	+7	+7	+30	
District.....	+2	+8	+22	

*Not shown separately but included in District total.

Department store inventories increased somewhat in September, following five consecutive months of contraseasonal declines. The seasonally adjusted index of stocks increased from 262 per cent of the

1935-39 average in August to 274 in September but was still much below the peak of 353 per cent last March. Stocks of merchandise on hand at the end of September were 22 per cent larger in value than a year ago, while the dollar volume of orders outstanding was 24 per cent smaller.

INDUSTRIAL PRODUCTION

Meat Packing As measured by packers' purchases at principal markets of the District, slaughter operations in the Tenth District in the first nine months of 1948 were about 15 per cent below those in the first nine months of 1947. Cattle slaughter in September, although 2 per cent above August, was down 30 per cent from September, 1947. This sharp decline in cattle slaughter as compared with a year ago is principally a result of the later marketing of grass fat cattle this year than last. Cattle slaughter under Federal inspection throughout the United States in September this year was 16 per cent below the slaughter in September a year ago. Competition between feeders and packers for "two-way" cattle has so far not been as keen as was expected.

Cold storage holdings of beef on October 1 were 10 million pounds less than on October 1, 1947, and were only half of the average amount in storage on that date. Cold storage holdings of pork on October 1 this year were somewhat higher than a year ago, but were below the average holdings for October 1.

Flour Milling Flour production in the Southwest continued on a reduced scale throughout the first half of October. There was, however, an increase in the level of milling operations the first week in October as a result of new orders placed by large commercial users. Mills were still doubtful of their ability to resume full scale operations six days a week because of an unusually low volume of backlog orders.

Flour sales in the Southwest at mid-October averaged only about 53 per cent of milling capacity, a sharp drop from the level of sales during the first week of the month. Domestic sales in the territory were small in number and size, as most users continued the policy of buying in small lots. A large export sale of 80 per cent extraction flour was made to Italy in early October, and additional export sales were expected for early winter delivery.

Petroleum The petroleum industry celebrated Oil Progress Day throughout the nation on October 14 and made this an opportunity to report to local communities on the development of the oil industry and its contribution to the American economy.

Exploration of the possibilities of developing a synthetic fuels industry capable of adding 2,000,000

barrels a day to current oil production is a project to be undertaken by the Government early next year in a nationwide survey of potential producing areas. The 2,000,000 barrel goal is one set by defense planners to meet the impact of a possible new war emergency. A major challenge in the field of synthetic liquid fuels research at the present time is the need to develop methods for cheaply converting coal to synthesis gas, which in turn yields gasoline and oil when heated in the presence of a catalyst. This coal gasification problem is being studied in the laboratories and pilot plants of both industry and the Bureau of Mines. One of the most intriguing experiments is underground coal gasification which calls for partially burning or gasifying the unmined coal, bringing the gases to the surface and there converting them to gasoline.

In the Tenth District one out of every five employed persons in Wyoming is now employed in some branch of the oil industry, according to the State Employment Security Commission. Over the six-year period ending last June the Wyoming oil industry has increased by 72 per cent in the number of firms, 106 per cent in employment, and 304 per cent in payrolls. Nebraska gasoline production totaled 232,553,647 gallons in the first seven months of this year, a gain of 12 per cent over the corresponding 1947 period.

A large Oklahoma company has announced a new process for increasing well productivity, hydrafrac, which may open the way to the equivalent of entire new oil fields. Jellied gasoline or jellied light crude oil pumped into an oil well under very high pressure splits the rock formations and opens cracks through which oil can flow into the well hole. Sand suspended in the jelly prevents the cracks from closing again.

Employment It is widely expected that the present boom in employment and personal income in the nation will continue well into 1949. The labor market is growing progressively tighter and more "occupational stringencies" are showing up, according to the Bureau of Employment Security. A recent survey made by the Bureau showed that of 138 principal labor market areas only 22 had noteworthy labor surpluses and concluded that no manpower shortage exists yet but that workers will have to be shifted around to meet the demands of armament and European recovery programs. It was pointed out that underlying the needs for defense as well as for the entire civilian economy is a shortage in the professions. Engineers of all types, doctors, dentists, and nurses, it was stated, are in current tight supply, and the greatest absolute shortage is in teachers.

In the Tenth District, Oklahoma reports a rise of 87 per cent in industrial employment since 1930 as

compared with a national increase of 78 per cent. The increase since 1946 has been 10.4 per cent compared with a nationwide employment gain of 9.3 per cent. And payrolls have almost tripled since 1940. Three big fields take up most of Oklahoma's industrial workers—food, machinery, and petroleum and coal products. It is hoped that the gain in employment opportunities will reverse the declining population trend of the last few years.

According to Colorado state employment department offices, demand for workers will continue exceptionally good, at least until winter weather sets in. Nearly 400,000 workers, about the same as last year's record high, are holding down jobs. The number will be held up through the fall and early winter by continued food processing, by a new spurt in construction work, and by coal mine reopenings. In Wyoming, indications point to a continuing rise of employment in most areas although some fall layoffs are appearing and can be expected as the season progresses. Most of the cutbacks will come in two main seasonal activities, agriculture and construction. In Nebraska, the demand for workers in manufacturing and construction industries is tightening the state labor market and intensifying shortages in skilled occupations. This is expected to continue until mid-December, or the coming of cold weather.

AGRICULTURE

Crops Continued mild and dry weather in many sections of the District in late September and early October further aggravated the dry topsoil condition in the western half of Nebraska, Kansas, and Oklahoma and in eastern Wyoming and New Mexico. Many localities in these states had not received measurable rainfall since the first week in September, and high winds occasionally caused local dust storms. Wheat seeding was largely completed by the middle of October except in those extremely dry areas where producers were awaiting rainfall rather than sow wheat in the dust. Much wheat was planted in dry topsoil in central western Nebraska and central Kansas, with the result that seed germination has been slow and unsatisfactory. Reseeding may be necessary on many of these fields.

The harvest of cotton and peanuts in Oklahoma was nearing completion by mid-October, and the sugar beet harvest was getting under way in Colorado, Wyoming, and Nebraska. As of October 1 there had been no killing frosts in the sugar beet area. The abnormally long growing season allowed a further growth of beets, and tonnage yields per acre will likely be greater than was anticipated a month ago. Corn has matured and dried exceptionally well in most areas, and so far marketings of new crop corn have been

small. Feeding of new corn in eastern Kansas, Missouri, and Oklahoma began in some volume around the first of October. Most grain prices held at or near loan levels throughout the last half of September and the first part of October. Wheat prices developed some strength toward the middle of October and moved higher, but corn prices declined considerably after mid-October.

The lower range of Kansas City cash grain prices:

	Oct. 25 1948	Sept. 30 1948	Aug. 31 1948	Sept. 30 1947
No. 1 dk., hd. wheat, bu..	\$2.23 1/4	\$2.18	\$2.18 1/2	\$2.79 1/4
No. 2 mixed corn, bu.....	1.29	1.42	1.92	2.37
No. 2 white oats, bu.....	.80	.76	.73 1/2	1.14
No. 2 rye, bu.....	1.66	1.50	1.55	2.80
No. 2 barley, bu.....	1.24	1.22	1.17	1.74
No. 2 white kaffir, cwt...	2.25	2.30	2.73	3.95

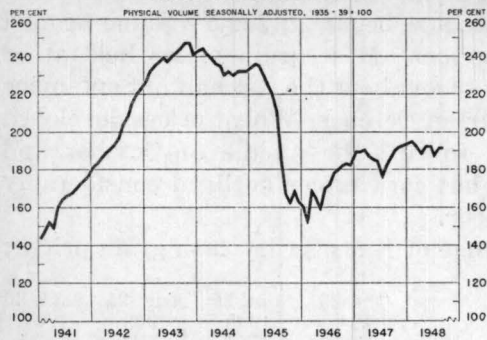
Livestock Receipts of cattle at principal marketing centers of the District in September were 15 per cent larger than in August and sheep receipts were up 126 per cent from August. Shipments of stocker and feeder cattle from District markets in the first nine months of this year were about 15 per cent below the shipments in the first nine months of 1947. Shipments of stocker and feeder calves so far in 1948 have been 7 per cent below the volume in the same period of 1947. However, it is expected that the number of cattle to be fed this winter will not vary greatly from last year, although they will likely be fed to heavier weights than a year ago. The most important factors in the present cattle feeding situation are the record supplies of feed available and lower feed prices in the principal feeding areas. At the same time, high prices for feeder cattle and the uncertainty of the future level of prices for finished cattle have caused feeders to buy cautiously.

Western range feed conditions as of October 1 were rated as only poor to good. In some states feed conditions were the poorest since 1939. Range feed was very short in parts of Wyoming, New Mexico, and in western Oklahoma, and owners have culled stock cattle and sheep herds heavily. Some thin cattle were sold and shipped out of Wyoming in late September to more eastern points where winter feed supplies are more adequate. There is reported to be a good supply of cured feed on most pastures in Nebraska and Kansas and in eastern Colorado.

Top carlot livestock prices at Kansas City:

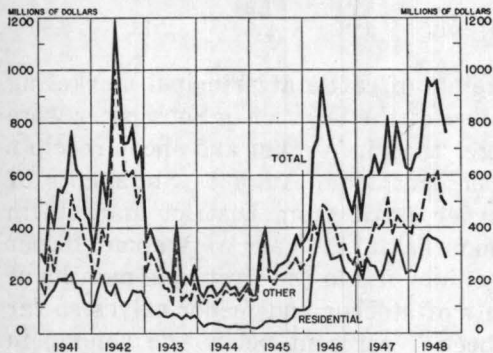
	Oct. 25 1948	Sept. 1948	Aug. 1948	Sept. 1947	Sept. 1946	Sept. 1945
(In dollars per hundredweight)						
Beef steers.....	38.00	39.00	39.00	33.00	19.90	17.65
Stocker cattle.....	29.00	30.00	31.00	24.75	18.00	14.00
Feeder cattle.....	28.50	32.50	34.50	27.65	19.00	14.40
Calves.....	28.00	29.00	31.00	24.00	13.50	17.75
Hogs.....	26.25	30.00	31.75	31.00	15.95	14.50
Lambs.....	25.00	26.75	29.50	25.65	19.00	14.00
Slaughter ewes.....	8.75	11.00	11.50	8.50	8.75	6.00

INDUSTRIAL PRODUCTION



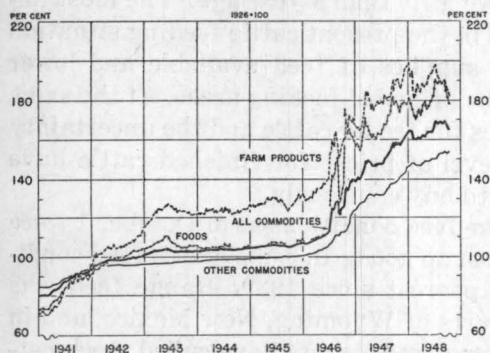
Federal Reserve index. Monthly figures, latest shown is for September.

CONSTRUCTION CONTRACTS AWARDED



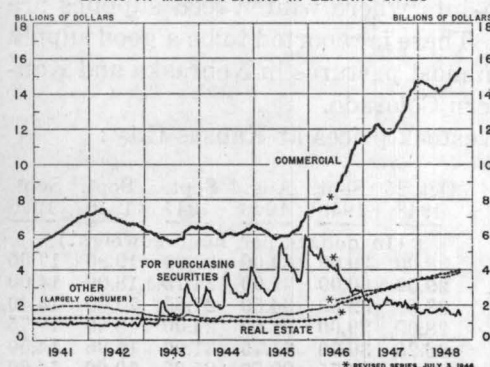
F. W. Dodge Corporation data for 37 Eastern States. "Other" includes nonresidential buildings and public works and utilities. Monthly figures, latest shown are for September.

WHOLESALE PRICES



Bureau of Labor Statistics' indexes. Weekly figures, latest shown are for week ending October 16.

LOANS AT MEMBER BANKS IN LEADING CITIES



Excludes loans to banks. Wednesday figures, latest shown are for October 13.

NATIONAL SUMMARY OF BUSINESS CONDITIONS

By the Board of Governors of the Federal Reserve System

Industrial output and employment were maintained in September at August levels. Value of department store sales in September and the early part of October showed about the usual seasonal increase. Prices of foods declined from earlier record levels, while prices of most other commodities showed little change.

INDUSTRIAL PRODUCTION

The Board's seasonally adjusted index of industrial production was maintained in September at 191 per cent of the 1935-39 average. Manufacturing output showed a small gain, while minerals production declined 3 per cent.

Steel mill activity in September was at a rate of 96 per cent of capacity as compared with 93 per cent in August. Output of electric steel reached a new record level. In the third week of October total steel production was scheduled at a rate of 99 per cent of capacity. Activity at most metal fabricating plants showed little change in September. Automobile production was curtailed further but increased sharply in the last week of September, reflecting mainly settlement of strikes at suppliers' plants. Output of lumber and stone, clay and glass products declined somewhat in September.

Production of nondurable goods rose slightly in September and was at a level close to the June rate. Cotton consumption and production of paperboard and rubber products showed small further gains from the reduced summer levels. Food production was in larger volume in September, reflecting increased meat production and a recovery in canning operations from the sharply curtailed rate in August. Output of petroleum products was reduced somewhat in September mainly because of labor disputes at refineries in California.

Production of minerals declined in September, reflecting chiefly the reduced output of crude petroleum on the West Coast. In the early part of October petroleum output recovered to the August rate. Coal production declined somewhat in September and the first half of October and was below year-ago levels, reflecting some reduction in demand, mainly for export.

CONSTRUCTION

Contracts awarded for construction, reported by the F. W. Dodge Corporation, declined further in September reflecting mainly seasonal decreases in most types of awards. The number of new houses started, according to Department of Labor preliminary estimates, declined from 83,000 in August to 81,000 in September. Last year the number of new units started was 86,000 in August and 94,000 in September.

DISTRIBUTION

Value of department store sales in September and the early part of October was maintained close to the advanced level prevailing since last May, after allowance is made for the usual seasonal changes.

COMMODITY PRICES

The general level of wholesale commodity prices declined 3 per cent from the middle of September to the first week of October, reflecting chiefly sharp decreases in prices of livestock products. During the subsequent two weeks prices of these products increased somewhat. Spot prices for corn dropped sharply in September and the first three weeks of October and were moderately below the support level for the new crop. Wholesale prices of textiles, leather, lumber, and coal declined somewhat, while further marked advances were reported in prices of various metal products.

Retail food prices in mid-October were estimated to be about 5 per cent below the record high reached in July, while consumer prices of most other groups of items advanced somewhat further in this period.

BANK CREDIT

Required reserves of all member banks were increased by about 2 billion dollars in the latter part of September as a result of the action of the Board of Governors in increasing reserve requirements against net demand and time deposits. The increase in required reserves necessitated substantial sales of Government securities by banks to the Federal Reserve in the latter part of September, but the increase was about equal to the volume of reserve funds that had been supplied to banks in the period June through September by gold inflow and net sales of Government securities to the Federal Reserve Banks by nonbank investors.

Federal Reserve support purchases of long-term Government securities from insurance companies and other nonbank investors continued large during the first three weeks of October. Banks used the reserve funds supplied them by Federal Reserve transactions with nonbank investors to purchase short-term securities from the Reserve Banks. Total holdings of Government securities at the Reserve Banks declined somewhat.

Business loans showed further rapid growth at banks in leading cities during September and the first half of October. Real estate and consumer loans also continued to rise. During the first half of October, banks in leading cities added somewhat to their holdings of Government securities, following reductions in late September to meet higher reserve requirements.

INTEREST RATES AND SECURITY MARKETS

Yields on short-term Government securities rose slightly in late September and early October. Prices of high-grade corporate and municipal bonds were relatively stable during the first three weeks of October, and common stock prices rose somewhat, following moderate declines in September.