side at mid-February (latest data available). An 11 per cent decrease in new automobile sales through mid-February in the Twin City metropolitan area compared with a year earlier also has been a disappointing development. The current recession, like its predecessors in 1949 and 1953-54, is also influenced by general inventory liquidation. In spite of the recessionary trends, however, now estimated to be 6 to 7 months old, wholesale and consumer prices continue to hold at or near peak levels. This, to date, repeats the experience of the 13-month recession of 1953-54 when prices were maintained in spite of a 10 percent decline in industrial production and a doubling of the unemployment figures.

It would appear that unemployment insurance and other unemployment compensation, together with favorable farm incomes and savings, have thus far been sufficient to maintain purchasing power and spending at a continued high level. Retail sales, at or near year-ago levels thus far in 1958, would indicate this to be true.

Bank deposits, both time and demand, continued to register on the plus side in January. While the level of bank deposits is not an accurate barometer of business conditions, it is nevertheless encouraging to some analysts that this important form of liquid assets has continued to trend upward. Interest rates in the money markets since the first of the year have registered further ease. District business loans, however, appear to be falling but other types of loans are being maintained or increased.

Crop and livestock conditions continue favorable for this time of the year in spite of the unusually small amount of precipitation this winter in much of the district. Subsoil moisture from last fall's heavy rains is largely responsible for this favorable condition. The snow pack in the mountains was only slightly below average as of February 1. Total farm income for 1957 was about 3 percent higher than in 1956, which reflects bumper crop production, higher livestock prices, and a substantial increase in government payments made to district farmers in 1957.

In general, the effects of the recessionary dip in the Ninth district are relatively mild thus far. The over-all district economic situation continues to be somewhat more favorable than that for the country as a whole.

The following selected topics describe particular aspects of the district's current economic scene:

NONFARM EMPLOYMENT DOWN IN MOST STATES

An analysis of employment trends in 1957 establishes a basis for placing the current employment level in proper perspective. It reveals the extent to which the recessionary forces have reduced economic activity in the current downturn. It also provides some insight into the differential effect these forces have had on local economies.

The decline in employment has occurred largely in manufacturing, mining, logging, construction and transportation. On the other hand, the continued high level of consumer expenditures has maintained quite well the employment in such secondary industries as wholesale and retail trade and the services.

In the Upper Michigan peninsula, employment declined sharply last fall. Because of the reduced output of steel and of a lower demand for timber products, activity has been curtailed especially in the production of iron ore, lumber and wood products. In most other types of manufacturing, employment has also declined for a number of months. In December, manufacturing employment was down by 2,500 and total nonfarm employment was down by 5,600 from the December 1956 figure. The number of unemployed had risen to 11.1 percent of the total labor force in Upper Michigan as compared with 7.2 percent in mid-December one year previously.

In the entire state of Wisconsin, nonfarm employment in December was down by 19,200 from

December 1956. In the northwestern part of the state, which is a part of the Ninth Federal Reserve district, the lower activity was concentrated in the production of iron ore, lumber and wood products as it was in Upper Michigan.

In Minnesota, nonfarm employment in January 1957 was approximately 23,000 workers over the January 1956 total. During 1957 the gain in employment for almost each month over the corresponding month of 1956 steadily narrowed and by December 1957 the increase had slipped below the previous year's by about 2,100 workers.

Unemployment slows in January

According to preliminary estimates, employment in January of this year again was about 6,000 above the January 1957 total. Since mid-January the number of workers laid off by manufacturing firms in Minnesota has been less than in former weeks. A few manufacturing firms have recalled some of their laid-off workers although most of them have been recalled only for temporary periods. These developments represent a slight improvement in the employment picture.

In the Twin City metropolitan area, employment in manufacturing firms in January declined for the fourth consecutive month. The total slipped to 5.6 percent below the year ago figure. In the nonmanufacturing grouping, January employment was still 1.8 percent above a year ago.

In Duluth, employment declined earlier than usual last fall due to an early closing of water transportation. In manufacturing, layoffs were made during 1957 in food processing, textiles and apparel, and metalworking. The largest layoffs occurred in the latter where employment dropped by more than 975 workers.

In North Dakota, nonfarm employment established another all-time record during 1957. The gain in employment which was concentrated in construction, trade, finance and service was maintained throughout the year. The recessionary forces obviously have not affected the employment in this state.

In South Dakota, a mild winter to the end of 1957 held layoffs in the construction field to a minimum. However, this did not offset completely the heavy cutbacks made in manufacturing; therefore, total nonfarm employment in December still was 500 less than the total in December 1956. Further declines in the employment picture were predicted by the state employment offices during January with no uptrend expected until April.

In Montana, nonfarm employment in December 1957 was 3,800 below the total of a year earlier. December was the fifth successive month to show an employment decline from the same month of the preceding year. Lower employment reflects the sharp decline in Montana's metal mining and processing industries, along with a less acute downturn in the lumber and logging industry.

DEMAND FOR LOANS WEAKENS

Loans at Ninth district weekly reporting banks decreased in each of the past five months. In each month the decrease was greater than that recorded in the comparable month a year earlier. During the five months ending January 29 of this year, loans other than those to banks fell $145 million while in the corresponding period a year earlier the decline amounted to only $21 million. The widely publicized reduction of demand for bank credit has thus been in evidence at district city banks for five months.

Loans at district country banks rose $25 million during the five months ended January 30, 1958; the gain a year earlier was $33 million during the equivalent months. Thus, the demand for loans has weakened relative to a year ago at both city and country banks but especially at the former. All of the January loan decline at district member banks occurred in Minnesota and South Dakota.

During the first five weeks of 1958, loans adjusted at Ninth district weekly reporting banks dropped $24 million in contrast to a decline of only $18 million during the like 1957 period. Especially significant was the $19 million cutback in *commercial and industrial loans* which accounted for most of the reduction at these banks. Agricultural loans, loans for purchasing or carrying securities, and real estate loans were virtually unchanged during these first five weeks. Commercial and industrial loans at all weekly reporting banks in the United States declined $1,820 million during this period, almost twice the $953 million decline registered during the corresponding period last year. The national decrease in 'C and I' loans accounted for nearly all of the $1,961 million drop in loans adjusted at the nation's weekly reporting banks during the first five weeks of 1958.

LOANS TO MEMBER BANKS DECLINE

Daily average borrowings by Reserve city banks in the Ninth Federal Reserve district fell to less than $1 million during the first half of February—a large decline from the $20 million figure of a year ago. Their borrowings during January were less than $3 million, down from the $32 million average in all of 1957 and the $15 million average in January 1957.

Country bank borrowings also declined—but less dramatically. Their daily average borrowings dropped to $3 million during the first 15 days of February, $7 million below the figure for the comparable 1957 period. The less than $2 million in borrowings by these banks in January 1958 was below both the $4 million figure in January a year ago and the $7 million daily average for the entire year 1957.

National figures reveal that daily average borrowings by all member banks in the United States were $428 million lower for the two weeks ended February 12, 1958 than the equivalent weeks last year, a 60 percent reduction. Easier money market conditions probably explain the cutback in the advances to member banks.

Member bank reserves, an important factor in the supply of loanable funds, have recently averaged higher than a year ago. The normal post-Christmas return flow of currency was the chief source of bank reserves during early 1958. During the period from the last week in 1957 through February 12, 1958, Federal Reserve holdings of government securities declined much less than during the like period a year earlier. As a result, bank reserves dropped less during this period in 1958 than during the corresponding period a year ago.

Further easing of reserve positions will no doubt result from the Federal Reserve Board's lowering of required reserve ratios by ½ percent for net demand deposits at all member banks. This significant change became effective on March 1 for country banks and on February 27 for other banks. The reduction in requirements released an estimated $500 million in reserve funds. These excess reserves permit an expansion of member bank credit. Because of the fact that required reserves amount to only a fraction of deposits, the volume of deposits can grow by a multiple of the $500 million released reserve balances. The banking system has thus been given the means to expand the nation's money supply if other factors remain unchanged.

Most Federal Reserve banks have also reduced their discount rates. The Federal Reserve Bank of Minneapolis cut its rate on loans to member banks from 3 percent to 2¾ percent on February 7, 1958. A similar action had already been taken by nine of the eleven other Federal Reserve banks in the nation.

An apparent downward shift in the demand for credit has complimented Federal Reserve actions in easing money market conditions. Reduced demand for credit is indicated by the larger decline in loans adjusted at the nation's weekly reporting banks during the first five weeks of 1958 than during the similar period in 1957.

Advances in the supply of funds coupled with a reduction in demand have contributed to easier money market conditions. As a result, market rates of interest have fallen sharply and demand for Federal Reserve discount credit has been significantly lowered both in the nation as a whole and in the Ninth Federal Reserve district.

LIVESTOCK CHANGE SLIGHT

Beef Cattle—Ninth district beef raisers and feeders had a total inventory of 7,729,000 head of beef cattle on January 1, according to the U.S. Department of Agriculture; this was down approximately 1 percent from a year ago. All states in the district registered declines except South Dakota where farmers held over 4 percent more beef cattle than a year ago.

The inventory of beef cows and heifers approaching breeding age was down approximately 1 percent from a year ago in the district. Only South Dakota registered an increase in the inventory of female cattle of breeding age or those reaching breeding age; the increase was approximately 3 percent.

The inventory of beef calves was unchanged in the district. An increase in South Dakota of 6 percent offset a decline of about 2 percent in each of the other district states' calf inventories. The decline in calf inventories was in line with the 2 percent decrease in the calf crop of 1957.

The January 1 estimates of cattle and calves on feed also indicated a decrease compared with a year ago for every state in the district except South Dakota where farmers increased cattle and calves on feed by 13 percent.

Thus, except for the beef raisers in South Dakota who increased female stock by about 3 percent, it appears that producers in other district states are not in a position to expand beef production in the coming year.

Dairy Cattle—The total district inventory of cattle and calves kept for milk, 3,667,000 head, was approximately 1 percent lower than the inventory a year ago. The states of North Dakota and Montana registered declines of 4 and 5 percent respectively, while South Dakota had a 2 percent increase. The most important dairy state in the district, Minnesota, had an inventory of dairy stock equal to that of a year ago.

Hog numbers—The total numbers of hogs and pigs on farms in the district were 2 percent above last year. Only Montana had a slight decline in hog numbers, while the states of North Dakota and South Dakota had increases of 3 and 4 percent respectively. Minnesota, which usually accounts for approximately two-thirds of the hogs in the district, had 3,233 thousand head on farms January 1, about the same number as a year ago.

The intentions of district hog producers are to increase hog numbers by 8 percent in 1958, according to a recent U.S.D.A. estimate. South Dakota farmers are programming for a 12 percent increase in the spring pig crop, while the farmers of the other states expect to increase the crop 6 percent over a year ago. A breakdown of the hog inventory in district states indicates that although there has been little change in the total number of hogs on hand, the number of sows and gilts over six months old is up—in line with the plans for the increased spring pig crop.

Sheep and lambs—The total inventory of sheep and lambs on district farms and ranches was 4,828,000 head January 1, about 4 percent above a year ago. Every state in the district had an increase, but South Dakota recorded the largest increase of nearly 7 percent. The increase in the number of sheep and lambs was primarily in breeding stock, which increased 4 percent in the district. Farm flock areas showed the greatest increases in stock sheep inventories; Minnesota's breeding stock increased by 4 percent and South Dakota's, by 8 percent, with the greatest increase in the East River district. In Montana, however, farmers increased stock sheep by only 2 percent. Stock sheep inventories in the nation were up 3 percent from last year to 27.4 million head—the largest inventory since 1953.

There was an increase of 1 percent in the number of lambs on feed in the district from a year earlier. The nation as a whole substantially reduced the number of sheep and lambs on feed for market this year as stock sheep inventories were increased; inventories of sheep and lambs on feed were down 8 percent from a year ago to 3.9 million head, the lowest number in seven years.

Personal income in the Ninth district

According to estimates based on currently available statistics, personal income in the Ninth district approximated $9 billion for a new high in 1957. In 1956, the latest year for which Department of Commerce estimates are available by states, the district's personal income totaled $8.7 billion. Personal income in the United States was approximately $343 billion in 1957, and $324.3 billion in 1956.

Personal income—the income received by 'individuals' during a given period of time—includes a good many types of income: wages and salaries, other labor income, proprietor's income, rents, interest on savings, dividends from investments, pensions, unemployment compensation, social security benefits, and the market value of home-grown foodstuffs are all included in the estimate of personal income made annually by the Department of Commerce. These estimates are frequently used to compare economic conditions of the various states. These figures are also used to estimate the sales potential of a state, receipts from taxes, the level of personal savings, and as one ingredient in forecasts of gross national product.

The $9 billion record personal income received last year was almost four times larger than the $2.4 billion personal income total received by district individuals in 1929. Part of this increase has been due to increases in the price level. However, even with the effect of price increases removed and income stated in terms of 1947-49 dollars, total personal income has more than doubled in the district since 1929. The growth in personal incomes in the district has not been quite as large as the growth in the nation as a whole. District personal income in 1956 stood at 362 percent of the 1929 level. Personal income in the

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Note: This analysis of Ninth district personal income is based only upon the four full states included in the district: Minnesota, Montana, North Dakota and South Dakota.

Chart I—Total personal income for Ninth district and U.S., 1929-1956

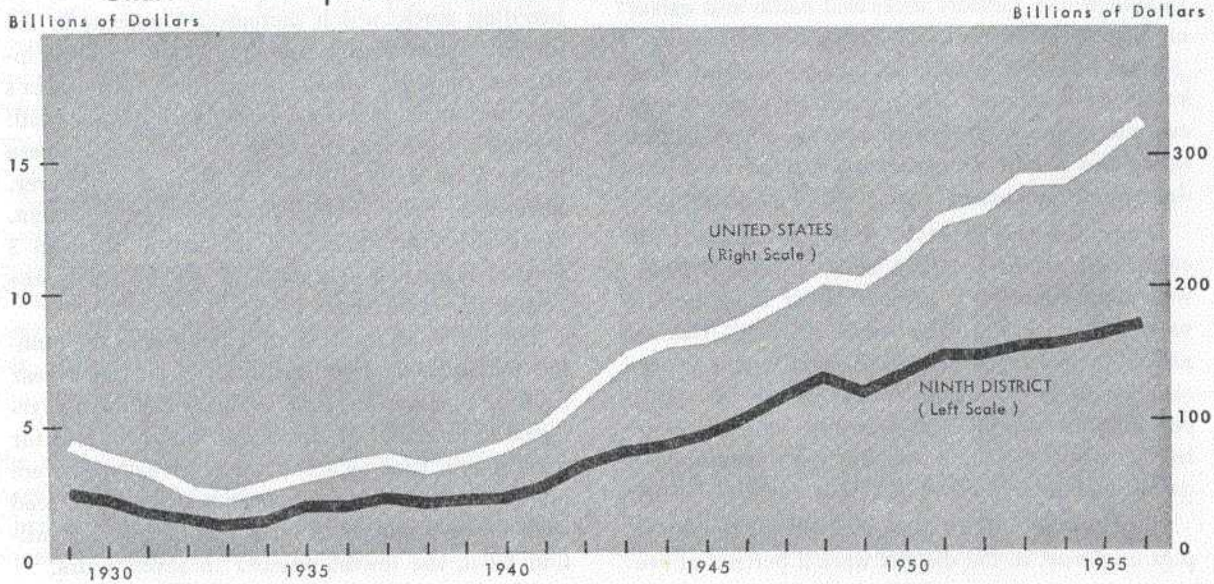
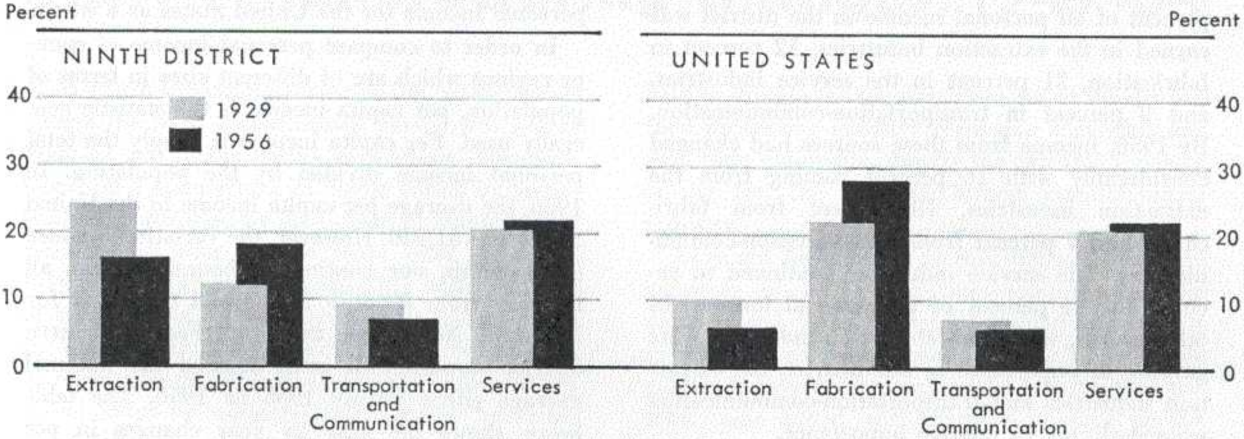


Chart 2—Percent change for selected industry groups, Ninth district and U.S., 1929-1956



nation as a whole in 1956 was 379 percent of the 1929 total.

To a large extent, the long term trend in personal income has been the same in the Ninth district as in the entire United States. Certain differences in the trend are evident. From 1940 to 1948, personal income grew a little faster in this region than it did in the nation as a whole. The increase in personal income was 194 percent for the district and 164 percent for the nation. It was during these years that agriculture, a particularly important industry in our district, increased its share of the nation's income. Agriculture currently accounts for over 14 percent of all personal income received in the district. From 1951 to 1956, personal income did not grow as fast in the district as it did in the nation. Personal income increased 17 percent in the district and 28 percent in the nation during this period. It should be noted that since 1951, the trend in agricultural income has been downward.

Over two-thirds of all personal income is received in the form of wages and salaries. In the Department of Commerce's annual summary, estimates are made of the amount paid in wages and salaries by companies in various industries. Four general groupings account for approximately half of all personal income. These groups are extraction, fabrication, service, and transportation-communication. There is some overlap between the various industries and frequently a single company bridges the 'gap' between industrial groups. However, these industrial groupings do provide a measure of the broad changes that have taken place. The extraction industries include mining, lumbering, and farming; but do not include processing of the ores, minerals, wood or agricultural products. The fabrication industries process the materials to obtain finished goods, and include primarily the manufacturing and construction industries. The transportation-communication industries, including the public utilities, comprise the third major group. The service industries include, among others, retail and wholesale trade, finance, and the professional occupations. The following discussion concerns only the wages and salaries paid in these industries (with one exception) and does not include the dividends of corporations or non-farm proprietor's income since these totals are not available by industry. The one exception is that farm proprietor's income is added into the total for the extraction industries.

In analyzing these sources of personal income in terms of their proportion of total income, some interesting changes in relative importance may be noted. Chart 2 shows the proportions of total personal income being derived from these general sources in 1929 and 1956 for both the Ninth district and the nation. In 1929, approximately 24 percent of all personal income in the district was earned in the extraction industries, 12 percent in fabrication, 21 percent in the service industries, and 9 percent in transportation-communication. By 1956, income from these sources had changed considerably with 16 percent coming from the extraction industries, 18 percent from fabrication and 7 percent from transportation-communication. The service industries continued to account for 21 percent of all personal income. In other words, while the fabrication industries were gaining in importance in our district, the extraction industries and transportation-communication were declining in relative importance.

The relative importance of the fabrication industries is much greater in the nation as a whole than in the district. In 1956 approximately 28 percent of all personal income in the nation came from fabrication, this being the greatest single source of income. The service industries were the next most important, transportation-communication third, and the extraction industries least important. This rank order of importance was the same in 1929 as it was in 1956.

In the Ninth district, however, the order of importance changed. In 1929, the extraction industries provided the most income, with the service industries second, fabrication third, and transportation-communication the least important. In 1956, the order had changed to service, fabrication, extraction, and transportation-communication.

The net result of these changes was that the extraction industries showed a relatively greater increase in the Ninth district than they did in the nation as a whole, with personal income from this source increasing 110 percent in the United States and 142 percent in the Ninth district from 1929 to 1956. A similar situation occurred in the fabrication industries where the increase was 390 percent in the United States and 455 percent in the district. On the other hand, both service industries and transportation-communication industries showed a relatively greater increase as sources of personal income for the United States as a whole.

In order to compare personal income of states or regions which are of different sizes in terms of population, per capita income is the statistic generally used. Per capita income is simply the total personal income divided by the population. In 1956, the average per capita income in the United States was $1,940. However, the variation between states within our continental boundaries ran all the way from $964 in Mississippi to $2,854 for Delaware. No state in the Ninth Federal Reserve district surpassed or even equaled the national average either during 1955 or 1956. The table below shows the year by year changes in per capita income in the states comprising the Ninth district. Since 1938, Montana has had the highest per capita income in the district, while North Dakota and South Dakota have alternated in having the lowest per capita income.

This article has tried to illustrate the fact that both per capita and total personal income have increased substantially, even in real dollars, since the pre-depression peak of 1929. Furthermore, certain states and industries have improved their relative position within the economy.

Per capita income by years in the United States and the Ninth district

Year	Minnesota	Montana	No. Dak.	So. Dak.	United States
1929	$ 598	$ 595	$ 375	$ 417	$ 703
1933	311	299	145	129	375
1940	526	570	350	359	595
1942	796	896	654	742	909
1944	998	1168	1002	950	1194
1945	1100	1191	1009	1047	1234
1946	1174	1278	1046	1083	1249
1947	1256	1457	1446	1232	1316
1948	1404	1596	1383	1451	1420
1949	1298	1390	1136	1094	1382
1950	1397	1606	1260	1213	1491
1951	1533	1768	1320	1414	1649
1952	1578	1780	1222	1239	1727
1953	1646	1786	1228	1331	1788
1954	1642	1719	1222	1354	1767
1955	1675	1814	1347	1252	1846
1956	1745	1862	1365	1330	1940

Source: **A Survey of Current Business,** Department of Commerce, Office of Business Economics.

District manufacturing changes, 1947-54

Growth in manufacturing in the Ninth district during the most recent census period was not as great as that in the nation as a whole. This fact, based on a comparison of 'value added by manufacture,' is revealed by the Census of Manufactures released last year for the years 1954 and 1947. Between the two census years, the dollar amount of *value added by manufacture* for all industries in the United States increased by 56 percent, whereas it increased only 48 percent in the district. *Value added by manufacture* is a dollar figure derived from the value of shipments of industrial firms by subtracting the cost of materials, supplies, containers, fuel, purchased electric energy, and contract work.

There are a number of reasons for the district's lower growth rate. Several industries which have had very strong growth and have contributed considerably to the nationwide increase are either not found in the Ninth district, or are of very minor importance. For example, the aircraft and parts industry, which is practically non-existent in the Ninth district, had a 541 percent gain in value in 1954 over 1947. Certain sub-groups in the chemical industry, particularly organic and inorganic chemicals, have expanded their production tremendously. These industries contribute very little to the aggregate of manufacturing value in this district.

The *food processing* industry, excluding dairy products for which figures are not available for 1947, in this predominantly agricultural district increased only 28 percent, whereas in the United States as a whole it increased 32 percent. Many food processing plants are located near markets, or centers of population. As the centers of population grow, so do the food processing plants. Between 1950 and 1955 the total U. S. population increased almost 9 percent contrasted with less than 5 percent in the Ninth district. This may help to explain the seeming paradox of the district food processing industry recording somewhat less gain than nationally, despite the fact this industry is, by far, the district's largest manufacturing industry.

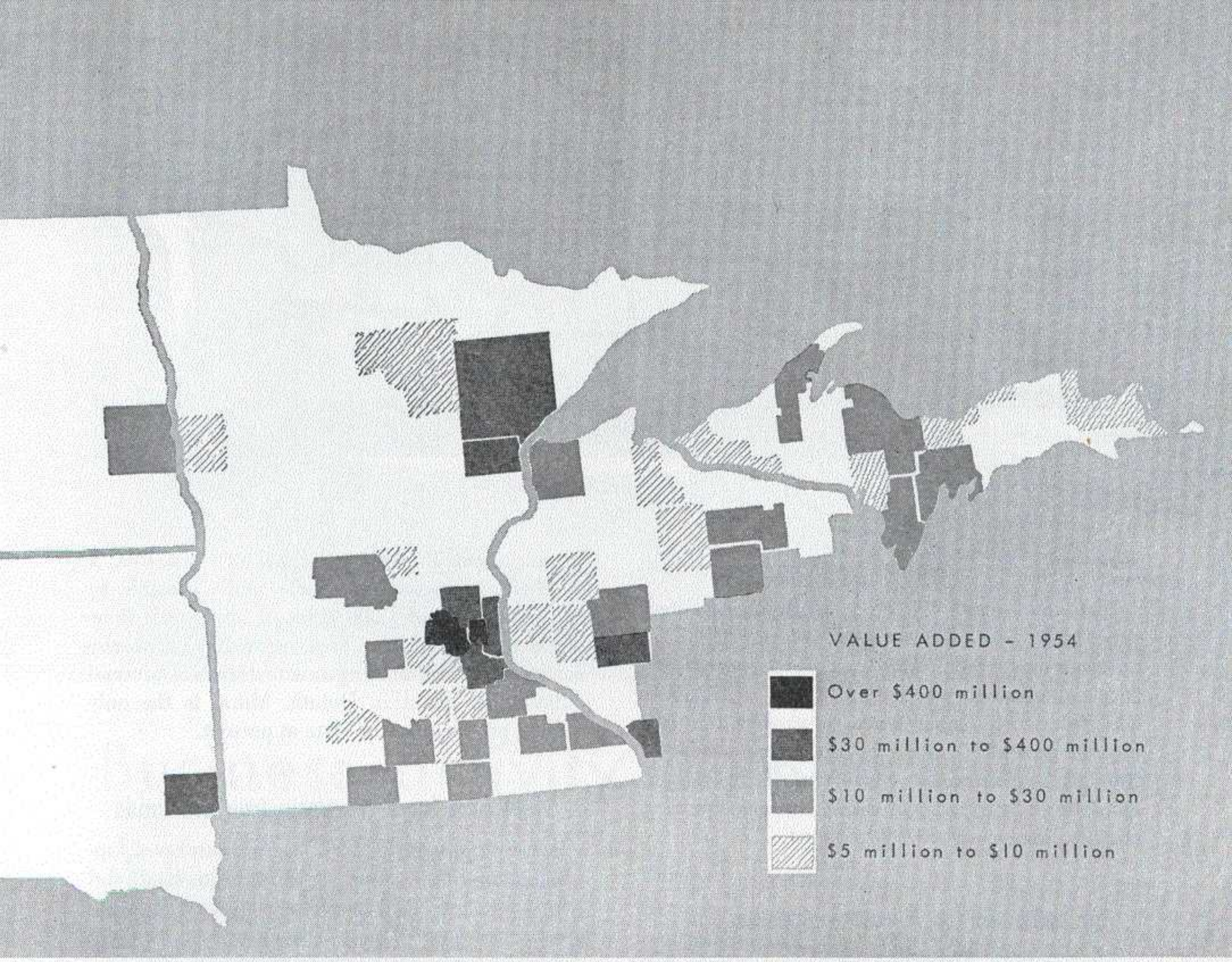
As might be expected in this district with large expanses of farms and pulp-wood forests, the value added in industries producing nondurable goods far exceeded those producing durable goods. Nondurables comprised 64 percent of the total value added, with durables making up the remaining 36 percent which was the same relationship as existed at the time of the 1947 census.

11 Top ranking industries in Ninth district

Major industries	1954 Rank	1947 Rank	Percent of total of all industries
Food and kindred products[1]	1	1	23.7
Machinery, except electrical	2	2	10.5
Pulp, paper and products	3	4	10.0
Printing and publishing	4	3	9.4
Chemical products	5	5	6.3
Fabricated metal products	6	6	4.5
Lumber and wood products[2]	7	8	4.4
Transportation equipment	8	12	3.7
Electrical machinery	9	9	2.8
Stone, clay and glass products	10	11	2.4
Apparel and related products	11	10	2.2

[1] Excludes dairy products due to difference in coverage between 1954 and 1947.
[2] Excludes logging camps and contractors due to difference in coverage between 1954 and 1947.

Geographically the concentration of manufacturing in the Ninth district is centered in the five-county metropolitan area surrounding Minneapolis-St. Paul. Industries in two counties, Hennepin and Ramsey, together account for almost half (48 percent) of all the value added in the Ninth district in 1954. These combined with adjacent Anoka, Dakota and Washington counties produced 53 percent. With the addition of 16 southeastern Minnesota counties each with total value added in excess of $5 million, the percentage climbs to 62 percent. Finally, within a radius of 150 miles of the Twin Cities (an area encompass-



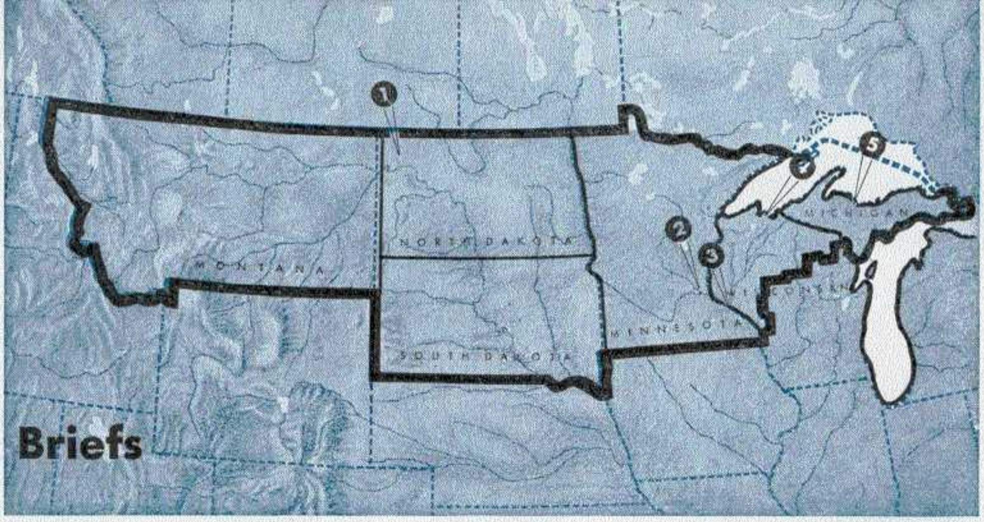
FOR MAJOR MANUFACTURING COUNTIES

1954 of all the industries in total value added. The industry also slipped a trifle since the 1947 census when it comprised 11.4 percent of the district total. Value added by manufacture in 1954 amounted to over $182 million or 38 percent more than the $132 million in 1947. Deflating the 1954 figure to the level of 1947 prices, the increase in physical output was 21 percent.

Third and fourth places in the 1954 census go to the *pulp, paper, and products,* and *printing and publishing* industries with $174 million and $164 million respectively in value added. It is interesting to note here that the pulp and paper industry increased 68 percent to bring it up from its fourth place position in 1947 to third place 7 years later. The printing and publishing industry fell from third to fourth place increasing only 35 percent in value added from 1947. Deflating value added to 1947 dollars, the former increased 47 percent and the latter 18 percent.

One other industry, that of *chemicals and products,* passed the $100 million mark in 'value added' in 1954 with $109 million, an increase of 51 percent (or 32 percent in terms of 1947 constant dollars). It retained its fifth rank position held in the previous census.

Economic Briefs



1. Williston levee system partly complete

Stage one of the Williston, N. D. flood protection levee system was completed during the 1957 construction season. The six-mile stretch of 20-foot embankments was built at a cost of $511,000. The levees are being built to protect the city against possible flooding by the rising waters of the Garrison reservoir. Stage two of the system, consisting of two miles of dikes, is about 4 percent complete under a $408,000 contract.

2. Bonds issued for airport expansion

Metropolitan Airports Commission issued $26 million worth of bonds in December to provide funds for Wold-Chamberlain airport expansion. An $18 million portion of the revenue rasied will be used by Northwest Airlines for construction of its main base facilities at Wold-Chamberlain. The airlines firm will repay the money over a 30-year period. The remaining $8 million will be used for construction of a new airport terminal, runway extensions and access roads.

3. Cement firm to build plant in Minnesota

Universal Atlas Cement Company has purchased land to build a cement plant near Planks, Minn., about 15 miles southeast of Rochester. A southern Minnesota plant was made possible by the acquisition of 1,000 acres of high-grade limestone deposits in the area, providing a nearby source of cement-making raw materials. Universal Atlas' other plant in Duluth, Minn. is the only cement producer in the state at present.

4. Steel firm buys Wisconsin iron ore lands

Jones & Laughlin Steel Corp. purchased approximately 300 acres of Wisconsin land and leased another 1,720 acres as part of its iron ore reserve program. The land is located in Iron and Ashland counties in northern Wisconsin. The firm has conducted geologic and geophysical studies and diamond drilling on the properties which were optioned in 1954 and 1956.

5. Housing project at Michigan A F base

The $6 million housing project designated for Sawyer Air Force base in Upper Michigan this year will temporarily increase the work force in the area by an estimated 800 to 1,000 persons. Bids have been entered and construction of the 340 housing units is scheduled for the 1958 construction season. An additional 235 housing units for the base are reported in the planning stage.