

The Tenth District Economy: Catching Up

By *Tim R. Smith*

Economic performance generally improved during 1987 in the states of the Tenth Federal Reserve District—Colorado, Kansas, Missouri, Nebraska, New Mexico, Oklahoma, and Wyoming (Figure 1). The small pickup in district economic growth was due mostly to stabilizing conditions in two main sectors of the district economy—energy and agriculture. Although most Tenth District states performed better than in 1986, growth in the district as a whole was still sluggish and continued to lag the nation. While growth in the district is not likely to outpace the nation in the coming year, overall growth in employment and income should continue to improve.

This article reviews recent economic performance in the district and explores the outlook for the district in 1988. The article focuses first on performance in the district's important employment sectors and then discusses the contribution of these sectors to past and prospective performance of the individual states.

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Recent performance in the district

Overall economic growth in the district in 1987 was slightly better than in 1986.¹ Employment in the district increased in the first three quarters of 1987, at an annual rate of 0.5 percent, compared with no growth in 1986 (Chart 1).² Sluggish job formation kept the unemployment rate higher in the district than the nation (Chart 2). Real personal income in the district rose at an annual rate of 2.5 percent in the first half of 1987, a significant improvement over the 0.4 percent gain in 1986 (Chart 3). The improvement in employment and income is expected to continue in the final quarter of 1987 and on into 1988.

Some states of the district improved more than others. Most states that depend heavily on agriculture and energy—Kansas, New Mexico, Oklahoma, Colorado, and Wyoming—showed

¹ At the time of writing, the latest available personal income data were through the second quarter. For employment, third-quarter data are estimates based on two months of historical data.

² Growth rates are fourth quarter to fourth quarter. For periods of less than a year, growth rates were calculated from the fourth quarter to the most recent quarter and annualized.

FIGURE 1
Tenth District states

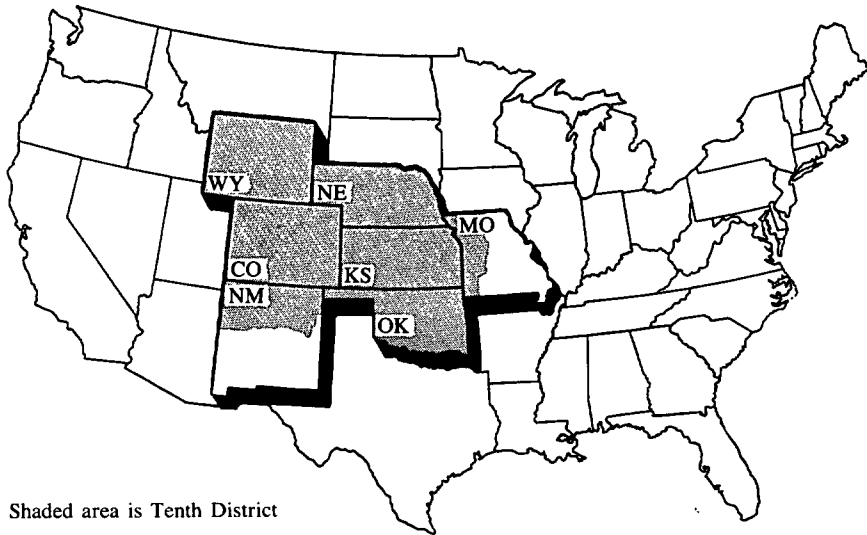
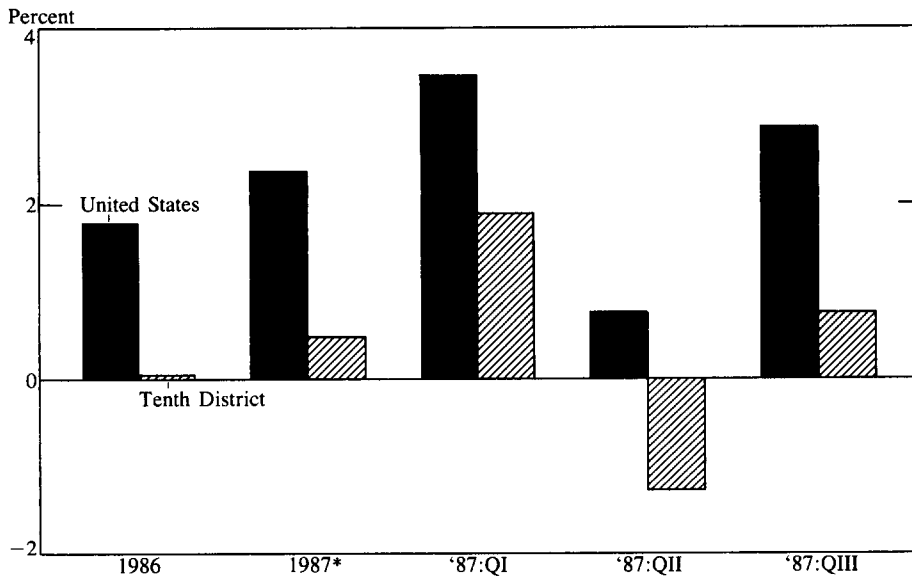
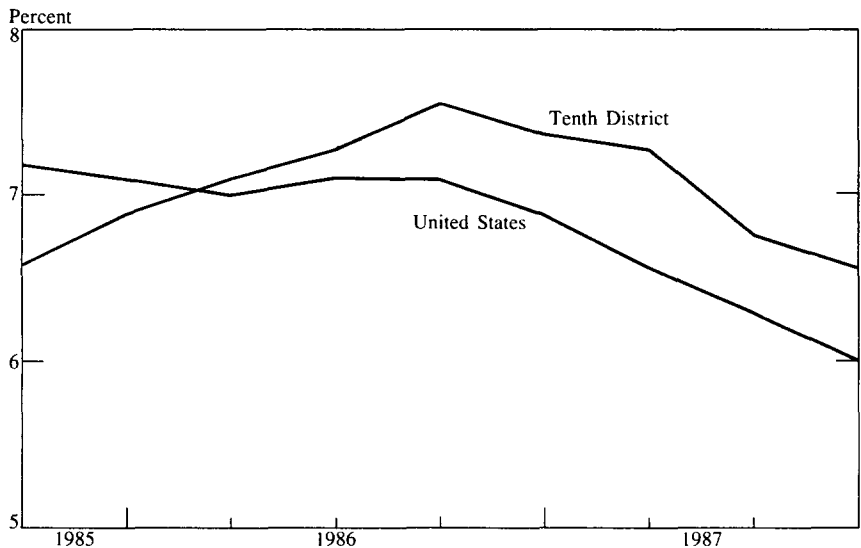


CHART 1
Growth in nonagricultural employment
 (Seasonally adjusted annual rates)



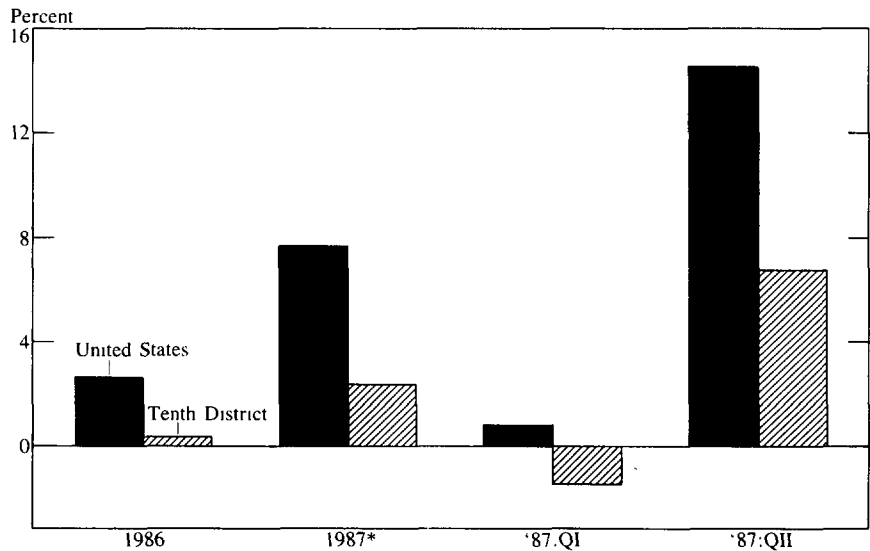
*First three quarters at annual rate
 Source: Data Resources, Inc.

CHART 2
Unemployment rates



Source: Data Resources, Inc.

CHART 3
Growth in real personal income
(Seasonally adjusted annual rates)



*First two quarters at annual rate

Source: Data Resources, Inc.

improvement. Only two states—Nebraska and Missouri—showed weaker employment growth in 1987 than in 1986.

The district economy continued to lag behind the national economy in 1987. Nationwide, employment grew nearly five times faster than in the district and real personal income grew about three times faster. However, the underlying fundamentals of the district economy improved significantly in 1987, setting the stage for continued improvement.

Review and outlook by sector

Recent sector performance

While the district's energy sector stabilized in 1987 and agriculture posted some limited gains, the lingering effects of the declines in oil prices in 1986 and several years of farm recession continued to drag on the district's overall economic performance in 1987. And while these effects spilled over into most other sectors, the manufacturing sector made modest gains.

Energy and mining. The district's mining industry began recovering some of the nearly 34,000 jobs lost the previous year. Between the fourth quarter of 1986 and the third quarter of 1987, the district gained some 3,000 mining jobs. The improvement was due to increased stability in the energy industry and some gains in the mining of metals.

Oil and gas exploration and development activity picked up in the Tenth District during 1987. The number of drilling rigs in operation increased from a weekly average of about 250 at the beginning of the year to 311 in the third quarter, a level 50 percent higher than one year earlier. While the sharp cuts in drilling made in 1986 contributed to the large loss of mining jobs during that year, the more recent improvement in drilling activity helped to turn mining employment growth around in 1987.

Energy production was mixed in 1987, despite the increase in exploration for oil and gas in the district. Cumulative production of crude oil in the district was almost 11 percent less in the first six months of 1987 than in the same period a year earlier. However, district production of both natural gas and coal in the first six months was about 3 percent more than in the same period a year earlier.

Most other mining in the district remained weak, even though some signs of improvement began to emerge. Uranium, copper, and molybdenum mining continued below capacity, but sharply higher metals prices in the first half 1987 boosted copper production some and stabilized the production of precious metals. Both soda ash and bentonite production increased.

Agriculture. Conditions in the district's important agricultural sector improved in 1987. Nonetheless, grain stocks were still large and a few signs of financial stress lingered in the farm sector. Export volume improved some, but weak grain prices left export value little changed. Strong livestock prices brought a year of record profits for the district's livestock producers. Farm income, resting on strong livestock returns and high levels of government support, was at another record high in 1987. The financial problems that have plagued the district's farmers and their lenders over the past several years were relieved by strong farm income and modest increases in farmland values.

Manufacturing. The district's manufacturing sector began turning around in 1987. More stable conditions in the energy and agricultural sectors along with a declining dollar caused a slight increase in manufacturing employment in the district. After declining in 1986, the district's manufacturing employment rose in the first three quarters of 1987, though at an annual rate of less than 1 percent.

High-technology manufacturing was a source of strength in the manufacturing sector. A weaker

dollar strengthened high-technology industries that either export or compete with imports. In particular, the computer and semiconductor manufacturing segments of the industry began to rebound after a prolonged slump caused by worldwide overcapacity. And aerospace and other defense-related firms continued to perform well in 1987.

Oilfield and farm equipment manufacturing remained weak in 1987. However, improved drilling and better farm fortunes limited further declines in these industries.

The district's general aviation industry still suffered from weak demand and strong foreign competition. Unit sales of new aircraft were down more than a third in the first three quarters of 1987 from the same period in 1986. But the value of aviation production was up about 30 percent in the three-quarter period, reflecting increased sales of big-ticket jet and turboprop aircraft.

Automobile assembly in district states continued to lose some strength in 1987. Layoffs at district plants were frequent throughout the year. The number of units produced in plants in district states fell 23.4 percent in the 1987 model year, after a drop of 11.4 percent in the 1986 model year. The district's share of total U.S. auto production also declined, from about 19 percent in 1986 to about 15 percent in 1987.

Construction. Construction activity in the district remained flat in 1987. Though lower mortgage rates boosted housing activity early in the year, rising interest rates over the summer and the generally sluggish district economy caused the value of residential construction to fall more than 7 percent. By contrast, the same measure of housing activity nationwide increased about 3 percent.

Nonresidential construction did not increase from its lackluster pace in 1986. In most cities, the new tax laws and high vacancy rates combined to keep the construction of office, retail, and industrial buildings from gaining strength in 1987. Through the third quarter of 1987, the value

of nonresidential building contracts was unchanged from the same period a year earlier.

Services, retail trade, and wholesale trade. Growth of the district's service sector slowed significantly in 1987. Service employment in the district increased at an annual rate of less than 1 percent in the first three quarters of 1987, compared with an increase of 2.9 percent in 1986. The recent gain was far less than the healthy 5.4 percent growth in service employment for the nation at large.

The district's wholesale and retail trade remained flat again in 1987. Trade in rural areas was particularly weak as a result of continuing reverberations from the energy and agricultural sectors. Employment in trade was unchanged in the first three quarters of 1987, compared with a slight decline in 1986. Trade growth in the nation as a whole was stronger, but still less than 1 percent during the first three quarters.

Government. Federal government spending remained an important influence on the district economy in 1987. While still important, the proportion of federal spending for defense purposes shrunk over the past two years and is likely to continue to decline. Missouri, Colorado, and Kansas have the highest proportions of defense spending in the district.

Several years of sluggish economic performance in the region has brought deterioration in the fiscal condition of most district states. Although oil prices recovered some from their 1986 plunge, budgets remained tight in the district states that depend heavily on revenues from severance taxes—Wyoming, New Mexico, and Oklahoma. In an effort to buoy their state economies and state coffers, all seven district states have taken more aggressive positions toward economic development. These efforts ranged in 1987 from establishing various economic development commissions and task forces to tax reforms aimed at attracting new businesses.

Sector outlook

Although most sectors of the district economy will likely benefit from improvements in the primary energy and agricultural sectors, the performance of some sectors, such as construction, are expected to remain lackluster. The effect on each state will depend primarily on the mix of sectors.

The stability established in the district's energy industry in 1987 will carry over into 1988 if world oil prices remain relatively stable. That outcome depends largely on OPEC's ability to enforce its output agreement in the face of mounting tensions in the Persian Gulf. Other mining in the district will probably benefit some from higher metal prices and a lower valued U.S. dollar.

Slow improvements in the agricultural sector are expected to continue. Low grain prices and a lower exchange value of the dollar will stimulate some export demand, and grain stocks will continue to trend lower. Farm income will continue to depend heavily on government payments, and this dependence makes the farm sector vulnerable to policy changes brought on by efforts to trim the federal budget. Farmland values are expected to remain stable. Overall, agriculture appears to be in a much more stable period.

With expected improvements in the nation's trade balance, district manufacturing should improve in 1987. After the shakeout in high-technology industries over the past few years, the high-technology firms that remain are in a good position to take advantage of relatively favorable international market conditions. But defense spending probably will not add any further strength to high-technology industries. Recent layoffs at automobile plants and expectations of sluggish domestic auto sales suggest a somewhat bearish outlook for auto production in 1988, despite the likelihood of price increases on competing foreign models. Recovery in the district's general aviation, oilfield equipment, and farm

equipment manufacturing industries will almost certainly proceed very slowly.

Construction activity is likely to remain flat again in 1988. High vacancy rates in commercial buildings and the generally sluggish regional economy will postpone a significant revival in nonresidential construction. And problem real estate loans will remain a source of trouble for some financial institutions in the district. A modest pickup in economic activity could stem the decline in residential construction. But without significantly lower mortgage interest rates, housing activity is not likely to improve much.

The service sector appears to have reached a plateau. After sharing in the rapid growth of the nation's service sector, services in the district have seen their prospects for continued rapid growth dim. Employment in retail and wholesale trade may grow a little faster as improvements in agriculture, energy, and manufacturing take hold in 1988. But regional trade growth is likely to continue lagging the nation's growth in trade.

Federal government spending probably will add little, if any, additional strength to the district economy in 1988. Although expected to remain important in the district economy, defense spending is expected to decline in both real terms and as a proportion of total government spending. State governments will no doubt continue adjusting to changing revenue conditions by trimming expenditures and seeking new revenue sources. Economic development initiatives will become more important as states try to diversify their economic bases and improve their economic futures.

Improved outlook for district states

All but two district states shared in the slight increase in economic activity in the district in the first part of 1987. Employment growth improved in Colorado, Kansas, New Mexico, Oklahoma, and Wyoming, but employment growth slowed

in Missouri and Nebraska in the first three quarters of 1987 (Chart 4). Real personal income grew more rapidly in Nebraska, New Mexico, Missouri, and Colorado in the first half of 1987 than in 1986, but more slowly in Kansas (Chart 5). Real personal income fell more in Oklahoma and Wyoming in the first half of 1987 than in 1986. The drop in income in these two states reflected continuing adjustments to the 1986 decline in oil prices and a significant downscaling of the energy industry. In these and all district states, economic performance reflects the influence of the industries important to each state. Similarly, the outlook for each state is influenced by the outlook for key sectors in that state.

Kansas

Economic conditions improved somewhat in Kansas in 1987, but the state's overall growth remained moderate. Employment growth improved while income growth slowed slightly. Employment growth in Kansas reached an annual rate of 2.4 percent in the first three quarters of 1987, a rate about equal to the nation's rate and above the district average. Personal income grew at about the same rate in Kansas as in the district as a whole in the first half of 1987. While the turnaround in the agricultural sector was a positive factor for Kansas in 1987, performance in other major sectors was mixed.

Stable oil prices at about \$20 a barrel prevented many additional closings of the state's numerous stripper wells—those producing less than ten barrels a day. While exploration and development activity stabilized in Kansas, crude oil production for the first half of 1987 was about 18 percent lower than for the same period a year earlier. Natural gas production in Kansas fell almost 10 percent in the first half of 1987. Coal production was off slightly after rebounding some in 1986. The state's total mining employment increased at an annual rate of 14.5 percent in the

first three quarters, a significant turnaround from the 30 percent decline recorded in 1986.

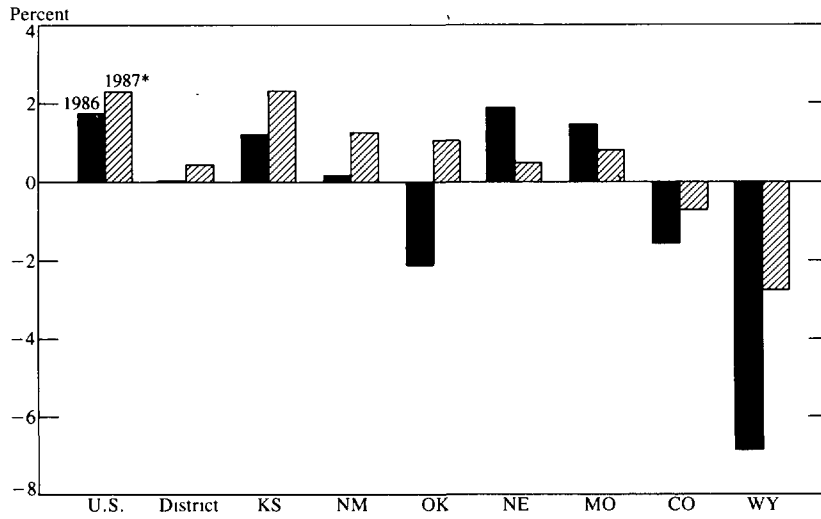
The state's manufacturing sector was bolstered by defense-related aircraft production and some improvement in the value of general aviation shipments from manufacturers in Wichita. High-technology industries in Kansas, many of which are aircraft-related, performed generally better in 1987 than in 1986. In particular, the assembly of civilian jet aircraft components remained an important positive factor in Kansas manufacturing. But the Kansas City-based automobile industry did not provide as much strength to the state's manufacturing sector in 1987 as in the past few years. Auto production in Kansas fell 27.4 percent during the 1987 model year.

While some modest improvement is possible, the Kansas economy probably will perform about the same in 1988 as in 1987. High-technology manufacturing will likely benefit from favorable exchange rates and an improving general aviation industry. But the general aviation industry itself faces further adjustment to a new market environment where economic conditions and tax laws suppress demand for business aircraft. The manufacturing sector will not gather much additional strength from automobile production or military spending. The oil and gas industry is not likely to improve much, but it should remain stable. These factors, combined with an improving farm economy, point toward continued moderate growth for Kansas in the year ahead.

New Mexico

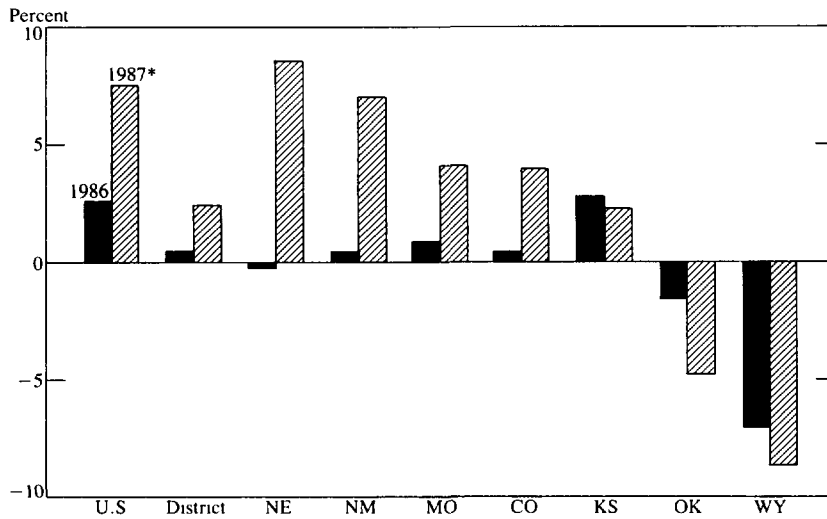
New Mexico's economy improved considerably in 1987 from its very slow pace in 1986. Employment rose at an annual rate of 1.3 percent during the first three quarters of the year. While still slow, this growth exceeded the district average and represents a significant improvement over the 0.2 percent growth in 1986. Likewise, personal income growth during the first half of 1987 was

CHART 4
Growth in nonagricultural employment
 (Seasonally adjusted annual rates)



*First three quarters at annual rate
 Source: Data Resources, Inc.

CHART 5
Growth in real personal income
 (Seasonally adjusted annual rates)



*First two quarters at annual rate
 Source: Data Resources, Inc.

much stronger than during the previous year, about matching income growth for the nation and far exceeding the district's income growth. While the metropolitan areas of New Mexico—Albuquerque and Santa Fe—continued to perform better than the rural parts of the state, all areas benefited from more stable conditions in energy and agriculture.

Mining activity rebounded some in New Mexico in 1987 after a sharp decline in 1986. While actual production of crude oil fell, exploration and development activity stabilized along with oil prices. Coal production also fell, but natural gas output increased slightly. Uranium mining remained depressed but higher copper prices boosted the state's copper production. Improvements in the agricultural sector and the lower valued dollar provided some help to the weak potash industry. Mining employment in the state increased at an annual rate of more than 7 percent in the first three quarters, compared with a 28 percent decline in 1986.

The state's manufacturing sector improved significantly in 1987, due largely to better performance in the important high-technology industries. Semiconductor and computer manufacturing in the state benefited from the falling U.S. dollar, after suffering the effects of several years of worldwide overcapacity and fierce foreign competition. Defense-related research and manufacturing remained important, particularly near the Sandia and Los Alamos research laboratories.

The service and trade sectors fared better in New Mexico than in most other district states in 1987. While the rate of growth in financial services slowed, other services—many related to tourism—and retail trade grew faster than in 1986.

Improvement in the mining and agricultural sectors will probably bring more gains to the New Mexico economy in 1988. Other sectors should also benefit from any gains made in these primary

sectors. Boosted by tourism, the service and trade sectors are likely to continue lending strength. Federal spending, though more uncertain in 1988, will remain an important factor in the New Mexico economy because of the substantial number of military installations in the state. The high-technology industry will be the primary beneficiary, both from direct defense contracts and commercial applications of defense research.

Oklahoma

The Oklahoma economy reached a turning point in 1987. A more stable energy industry was primarily responsible for limited improvement in Oklahoma's economic conditions. Employment grew at an annual rate of 1.2 percent in the first three quarters of 1987, compared with a decline of over 2 percent in 1986. Personal income fell again in 1987, however, as adjustments to the 1986 oil price shock continued.

The state's important energy industry began recovering a little in 1987 from the turmoil that began when oil prices declined drastically in 1986. The average weekly number of drilling rigs in Oklahoma stood 44 percent higher in September than one year earlier. In spite of the increased exploration, output of oil and natural gas from producing wells continued to fall in 1987. Oil production fell almost 12 percent during the first half of 1987. However, natural gas production increased about 1 percent. However, Oklahoma's mining sector added jobs at an annual rate of 2.0 percent in the first three quarters of 1987, compared with a 15.0 percent decline in 1986.

The manufacturing sector in Oklahoma continued weak in 1987. Auto production fell 18.6 percent during the 1987 model year. The state's oilfield equipment manufacturing industry remained generally depressed despite the pickup in drilling activity.

There is little to suggest that the Oklahoma economy will rebound sharply in 1988. Instead,

a stable energy industry and a stronger agricultural sector have set the stage for continuation of the slow recovery in the state's economy that began in early 1987.

Nebraska

Overall economic conditions in Nebraska in 1987 were little changed from 1986. Employment growth slowed to an annual rate of less than 1 percent in the first three quarters of 1987, from 1.9 percent in 1986. Personal income growth, spurred by government subsidies to Nebraska farmers, was stronger in the first half of 1987 than in 1986. While problems in the state's important agricultural sector began to subside, other sectors weakened.

Growth in services contributed no additional strength to the Nebraska economy in 1987. Services, particularly finance and telemarketing, have become important in Omaha and Lincoln in recent years. But service growth slowed significantly in 1987, reflecting a pattern repeated in most district states.

Nebraska's manufacturing sector remained weak in 1986. The food processing industry continued to perform well in a stable national market for food products. Farm equipment manufacturing suffered from another year of weak sales of farm equipment nationwide.

The construction sector was generally weak. Although nonresidential construction activity increased, the value of residential construction fell almost 24 percent in the first three quarters from the level of the same period a year earlier. Construction employment fell at an annual rate of about 12 percent during the first three quarters of 1987, compared with a small gain of 1.3 percent in 1986.

Since the near-term outlook for the Nebraska economy is heavily influenced by the condition of the agricultural sector, the turnaround in agriculture portends a better economic climate for

the state in 1988. But how much better? If farm income remains strong and the national market for food products does not deteriorate, Nebraska's economy should improve modestly. Moreover, aggressive state economic development programs, including tax incentives to businesses, should begin having a positive effect on economic activity.

Missouri

Missouri's economy was lackluster in 1987. Employment growth in the district's most diversified state slowed to a snail's pace in the first three quarters of 1987, due largely to poor performance in manufacturing, a slowdown in construction, and the continuing effects of a weak agricultural sector. On the other hand, real personal income growth, boosted by strong farm income, grew faster than the district average in the first half of the year.

The decline in the U.S. dollar began having some positive effect on the state's export-dependent industries as 1987 unfolded, though auto production and defense-related aerospace manufacturing did not provide as much strength to the Missouri economy as in 1986. As a result, manufacturing remained generally weak in Missouri.

Missouri's agricultural sector had a better year in 1987. Export markets improved a little and farm earnings were bolstered again by large government payments. In addition, the state's important hog and cattle industries had a highly profitable year.

The construction industry did not provide as much strength to Missouri in 1987 as in 1986. Residential construction was strong early in the year, when mortgage interest rates were low, but fell off during the summer. The value of nonresidential construction increased some in the first three quarters of 1987, compared with the same period a year earlier, but construction

employment fell at an annual rate of over 3 percent during the first three quarters of the year.

Missouri is expected to continue growing slowly in the year ahead. The state's economic growth will probably fall behind the district average as conditions in states depending primarily on agriculture and energy begin to improve. Missouri's manufacturing sector will be helped by the decline in the value of the U.S. dollar, but no additional strength is expected from defense spending or automobile production. Construction will likely remain weak after the winding down of major building booms in Kansas City and St. Louis. A somewhat healthier farm economy will bring some improvement to the state's depressed rural economy.

Colorado

The Colorado economy remained weak in 1987, but some gains were made over even weaker conditions in 1986. Employment in the state declined at an annual rate of 0.6 percent in the first three quarters of 1987, less than half the rate of decline in 1986. And personal income growth increased to an annual rate of about 4 percent in the first half of the year. Continued weakness in the Colorado economy was due to the lagged effects of several years of problems in the state's agricultural and manufacturing sectors combined with continuing adjustments to the oil price decline of 1986.

Colorado's mining sector continued to suffer effects of the 1986 oil price decline. Drilling activity at the end of the third quarter was slightly lower than a year earlier, and production of both oil and natural gas fell. Mining of precious metals improved, but the state's molybdenum mines continued to operate below capacity in 1987. Overall, mining employment fell at an annual rate of 3.2 percent in the first three quarters of the year—which compares favorably with the 21 percent plunge in mining jobs in 1986.

High-technology manufacturing began recovering in 1987 from the slump that began in 1984. The shakeout in microchip and computer peripheral manufacturing left fewer and possibly more efficient firms in the industry. These firms, aided by more favorable international market conditions, began to meet foreign competition more effectively in 1987.

Construction activity continued to slow in Colorado in 1987. High vacancy rates in downtown Denver and its southeast suburbs kept nonresidential construction depressed. Through the first three quarters of 1987, the value of nonresidential construction in Colorado fell nearly 20 percent from the same period in 1986. And the value of residential construction fell about the same proportion.

The state's important tourist industry was boosted by another record ski season. Skier visits during the 1986-87 season increased 3.7 percent over the previous season, setting a record for the sixth straight year. Visits to national park service areas were also estimated to have increased in 1987.

The condition of Colorado's economy should improve in the year ahead. The mining and agricultural sectors will be much less of a drag on economic growth than they were during the past two years. Moreover, the outlook for the manufacturing sector, led by export-sensitive high-technology industries, has improved as a result of the decline in the exchange value of the dollar. The recreation industry is again likely to contribute to job growth in the state.

Wyoming

Economic performance in Wyoming improved in 1987. But despite more stable conditions in the energy and agricultural sectors, the state's economy remained quite weak overall. Employment in Wyoming fell at an annual rate of 2.7 percent in the first three quarters of 1987, a full four percentage points less than the decline in

1986. Real personal income in the state also fell again in 1987.

Wyoming's mining industry remained depressed in 1987, after a severe decline the previous year. However, some signs of improvement began to emerge. Although crude oil production fell during the first three quarters of 1987 compared with the same period a year earlier, natural gas and coal production increased. And exploration and development activity picked up some in late summer. Other mining, particularly the mining of soda ash and bentonite, also picked up. These factors contributed to growth in mining employment at an annual rate of 5.4 percent in the first three quarters of 1987. Although from a much smaller base of mining jobs, this gain represents a significant improvement over the nearly 27 percent decline in Wyoming's mining employment in 1986.

Construction activity in Wyoming was mixed in 1987. Housing activity increased throughout the first three quarters of the year, but nonresidential construction fell for the second year in a row. Through the first three quarters of 1987, the value of nonresidential contracts was down about 30 percent from the same period a year earlier.

Agriculture contributed no strength to the Wyoming economy in 1987, but neither was its effect on economic growth as negative as in 1986. Though Wyoming's farmers and ranchers continued to work through some problems, improved profits from livestock operations softened the effect of farm financial stress on general economic activity in the state.

Wyoming's important tourist industry helped buoy the state's economy. National parks in the

state had another solid year and skiing was boosted by improved air transportation from large eastern cities.

The year ahead promises to be another difficult one for the Wyoming economy. Agriculture and mining are not likely to contribute much to economic growth in 1988. But these two sectors will certainly do less harm than in recent years. The worst employment losses appear to be over and improvement will probably continue, though at a slow pace.

Conclusion

Economic performance in the seven-state Tenth Federal Reserve District region improved modestly in 1987. Economic growth remained sluggish, however, and growth in the district continued to lag growth in the nation. The performance of each state, determined by the particular mix of industries in each state, varied significantly. One of the most positive signs in 1987 was that the states with the heaviest reliance on energy and agriculture began to improve.

Improvement in the district's economic performance likely will continue in 1988. Expected gains in the agricultural sector and a more pronounced positive effect on overall economic conditions, although the Tenth District economy will probably continue to lag the national economy in 1988. Performance will again vary from state to state. However, the difference in performance between states depending heavily on natural resource industries and other more diversified states should continue to become smaller.