

The Changing Economy of the Tenth District

By Glenn H. Miller, Jr.

The Commerce Department recently released new gross state product (GSP) estimates through 1989 and revised GSP estimates dating back to 1977. Comprehensive and consistent across states, the GSP data by industry offer a broad, in-depth view of economic performance. The data are especially useful for studying long-run growth trends and long-run changes in industrial structure.¹

This article uses the new GSP figures to describe the Tenth District economy at the end of the 1980s and to show how its industrial makeup has changed since 1979. While the district economy has retained its distinctive character, it has become more like the national economy in important ways. The performance of the district economy in the years to come may reflect these changes.

THE CHANGING INDUSTRIAL CHARACTER OF THE DISTRICT ECONOMY, 1979-89

The economy of the Tenth District is in some ways similar to and in other ways different from the nation's economy. In 1979 and 1989, both

economies relied on the same three industries as their top contributors to total output: (1) manufacturing, (2) services, and (3) finance, insurance, and real estate (FIRE). But the district and the nation differed significantly in both 1979 and 1989 in how much they relied on resource-based industries. Agriculture and mining have contributed much more to district total output than to U. S. total output (Chart 1).

Using GSP data to analyze economic change in the district from 1979 to 1989 yields two conclusions. First, the district economy grew slowly during the 1980s, as total output growth reflected the ebbs and flows of its individual industries. District GSP climbed just 1.4 percent per year from 1979 to 1989 (Chart 2). Slow growth in the government and financial sectors, coupled with declines in mining and construction activity, hampered overall district growth.

Real output in the district grew just half as fast as total U. S. growth of 2.8 percent per year, lowering the district's share of total U.S. output moderately (Table 1). The slower total output growth in the district reflected slower growth in nearly all district industries. Only manufacturing and transportation grew faster in the district than in the nation from 1979 to 1989 (Chart 2). Output also grew more slowly in every district state than in the nation as a whole (Chart 3).

The GSP data also show that from 1979 to

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Table 1

**Tenth District Real GSP as a Share of
U.S. Real GSP, By Industry, 1979 and 1989**
(percent)

Industry	1979	1989
Total	7.6	6.7
Agriculture	13.2	11.9
Mining	17.4	13.6
Construction	8.3	5.5
Manufacturing	5.5	5.7
Transportation	8.3	8.4
Wholesale trade	7.3	6.1
Retail trade	7.6	6.7
FIRE	7.2	5.6
Services	6.6	5.9
Government	7.5	7.2

**Addendum: Total output
valued in billions of 1982 dollars**

United States	3,143	4,130
Tenth District	238	275

Source: U.S. Department of Commerce, Bureau of
Economic Analysis.

1989 the district's industrial structure changed due to differences in industry growth rates. Manufacturing picked up substantially, while mining dropped off sharply, making the district's industrial structure look more like that of the nation in 1989. Manufacturing's share of total output grew in every district state from 1979 to 1989, while mining's share shrank. The major difference between the district and national economies remained the district's heavier reliance on resource-based industries. Despite the diminished importance of mining and little change in the importance of agriculture, the district continued to rely more heavily than the nation on both mining and agriculture.

Agriculture

The relative importance of agriculture to the district economy changed little from 1979 to 1989. Farm output grew at about the same pace as total output in both the district and the nation. Consequently, agriculture's share of total output stayed about the same in both regions. Thus, the 1980s closed with agriculture still making nearly twice as large a contribution to output in the district as in the nation (Chart 1).

State by state changes in agriculture's contribution to district GSP were mixed. Farming's share increased in Nebraska, the district's most agricultural state. Among district states in 1989, agriculture's share of total output ranged from 12.9 percent in Nebraska to 2.4 percent in Wyoming (see appendix for GSP data for individual states).

Mining

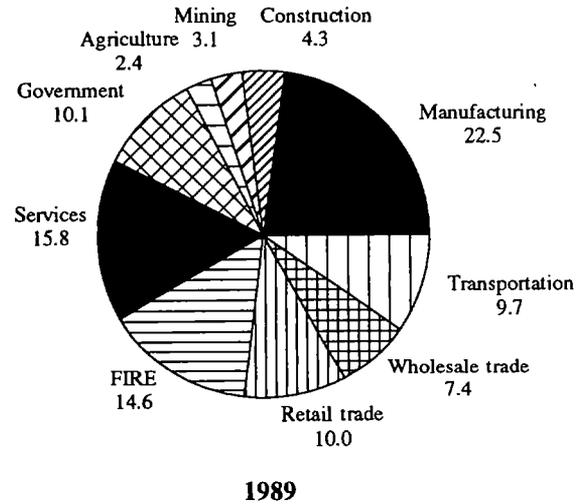
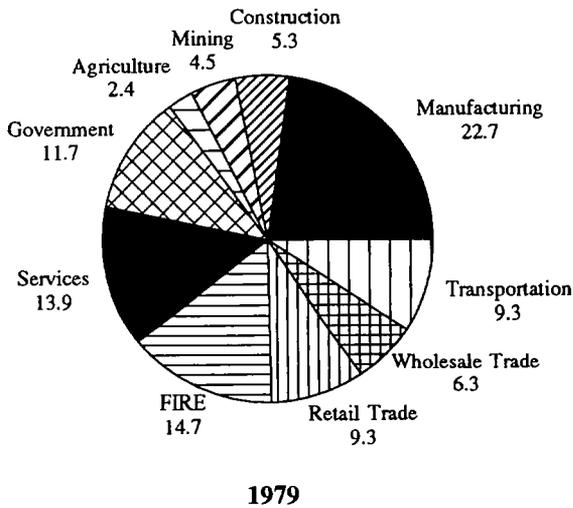
The mining industry suffered in the 1980s in both the district and the nation, but the percentage decline in output was considerably larger in the district (Chart 2). Continuing the decline of the past quarter-century, mining's share of total output in the district fell nearly 40 percent during the decade. Still, mining in 1989 remained twice as important in the district as in the nation (Chart 1).

The drop-off in district mining during the 1980s can be blamed almost completely on the slumping oil and gas sector. Oil and gas extraction in the district plummeted over the 1980s, but still remained the largest segment of the mining industry at decade's end. For the district as a whole, oil and gas extraction's share of total output shrank from 9 to 5 percent. In the region's three largest producing states—Oklahoma, New Mexico, and Wyoming—the oil and gas share of GSP ranged from 13 to 16 percent in 1989, down from 20 to 30 percent ten years earlier.

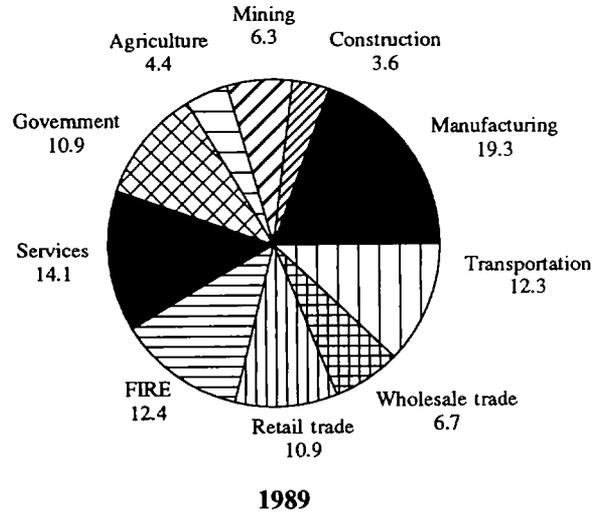
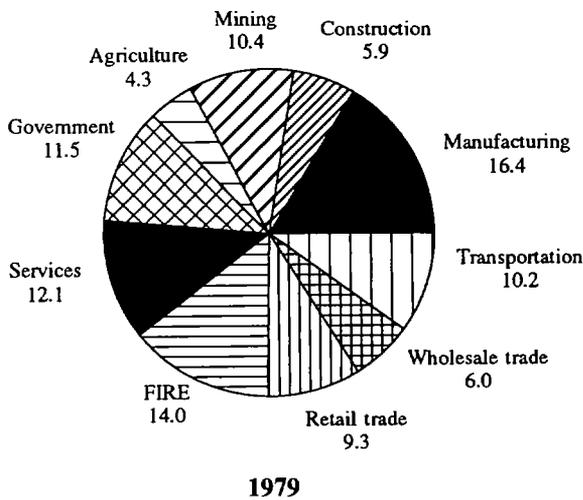
Coal mining bucked the tide of poor performance by the district's mining sector during the 1980s. Coal output grew slightly more than 10

Chart 1
Real GSP by Industry as Share of Total GSP
 (Percent)

United States

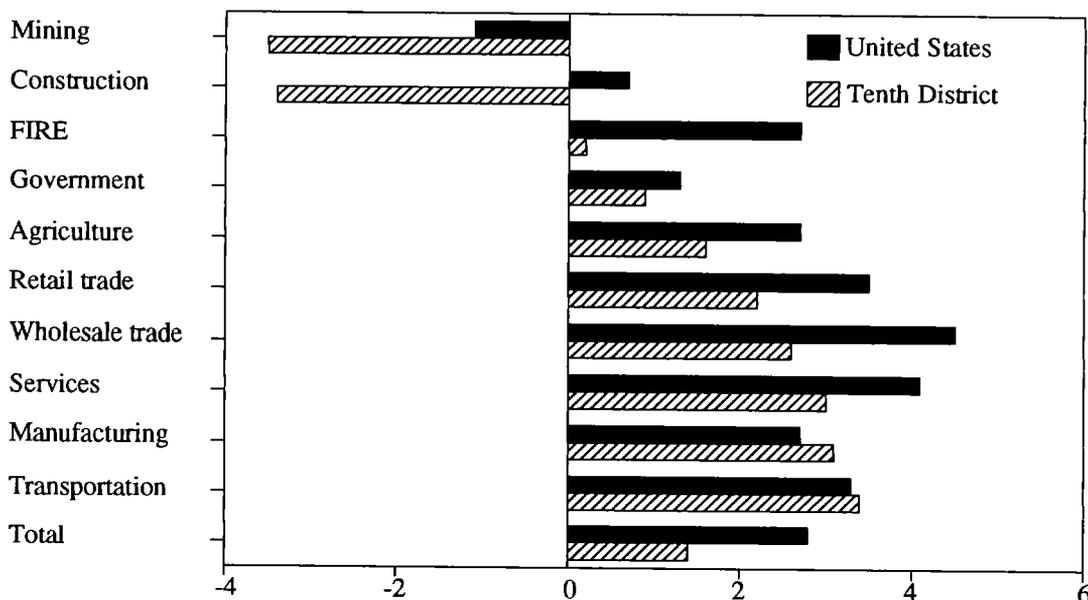


Tenth District



Source: U.S. Department of Commerce, Bureau of Economic Analysis.

Chart 2

Real GSP Growth by Industry in the U.S. and Tenth District, 1979-89*(Average annual percent change)*

Source: U.S. Department of Commerce, Bureau of Economic Analysis.

percent per year over the decade, reflecting the desirable features of district coal, such as its low sulfur content and ease of mining. Production soared in Wyoming and New Mexico. By 1989, nearly 16 percent of Wyoming's GSP came from coal mining.

Non-energy mining has contributed much less than energy to the district economy. But metal mining and the production of nonmetallic minerals other than fuels—especially important in Wyoming—also slackened in the 1980s, further weakening the region's mining sector.

Manufacturing

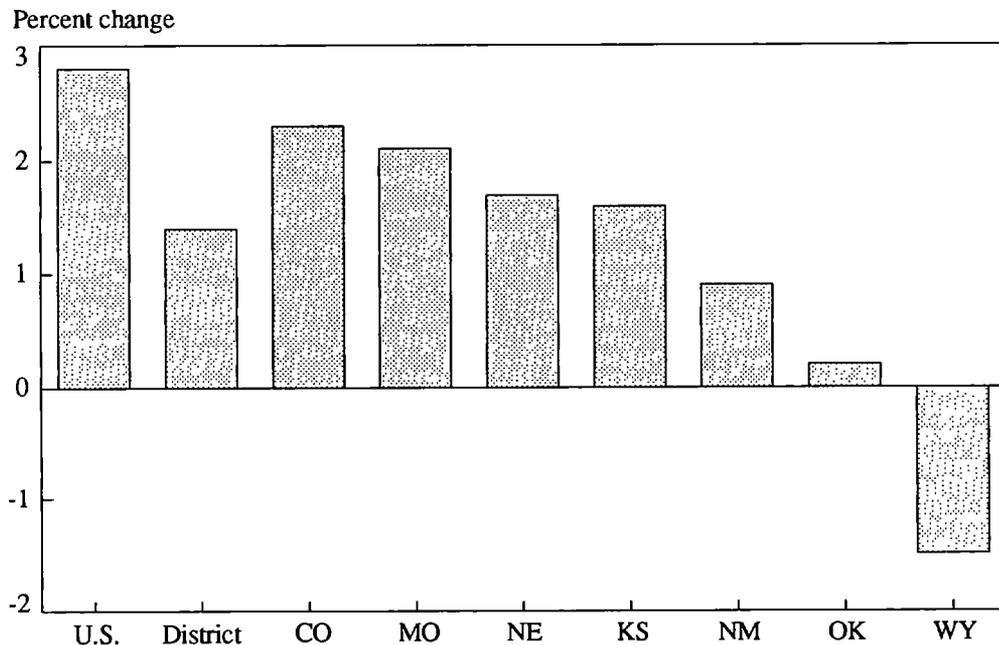
In both 1979 and 1989, manufacturing contributed more to total output than any other

industry in both the district and the nation (Chart 1). Over the decade, manufacturing output grew faster in the district than in the nation—3.1 percent per year compared with 2.7 percent, respectively (Chart 2). Yet only three district states recorded faster manufacturing growth than the nation—Colorado, Missouri, and New Mexico.

Output of both durable and nondurable goods grew faster in the district than in the nation. In the district, durables production outpaced nondurables production, despite only a small rise in the output of motor vehicles. Nondurables growth suffered from relatively slow growth by the district's important food processing and printing and publishing industries.

In the district, manufacturing's share of total output grew substantially over the course of the

Chart 3

Real GSP Growth in the U.S. and Tenth District, 1979-89*(Average annual percent change)*

Source: U.S. Department of Commerce, Bureau of Economic Analysis.

decade, as growth in factory output considerably outpaced growth in total GSP. In the nation, meanwhile, manufacturing's share of total output stayed much the same, as the nation's manufacturing growth just matched the pace of its total output growth. Consequently, the gap between manufacturing's importance in the nation and in the district narrowed by nearly one-half. Nonetheless, Missouri was the only state in the district where manufacturing produced a larger share of total output than in the nation.

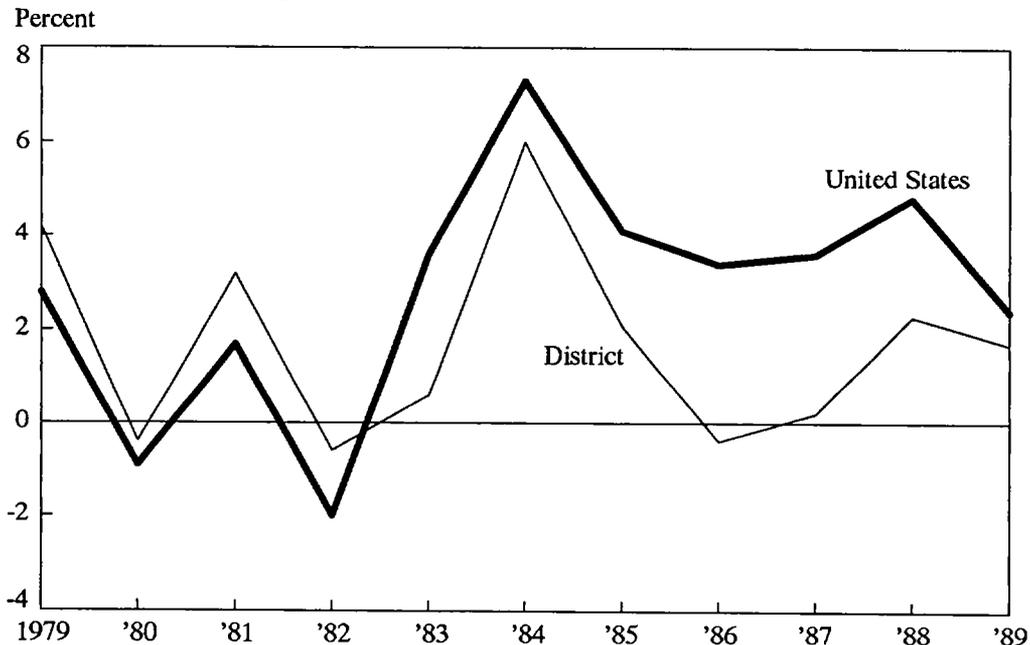
IMPLICATIONS FOR THE 1990s

In the past, the economies of the nation and the district have behaved differently, partly due to the differences between their industrial structures.

Sometimes the differences benefited the district. For example, since World War II, recessions have been milder on average in the district than in the nation. But sometimes the differences have caused the district economy to suffer. For example, because energy and agriculture are so important to the district, downturns in those sectors sometimes hurt the district economy disproportionately.

Instances of both of these examples were clearly evident in the 1980s. From 1980 through 1985 the district followed much the same path as the nation in recession and recovery (Chart 4). District GSP declined less than national output in the recession years of 1980 and 1982, but the nation rebounded more strongly from the 1982 recession. This performance matched the post-World War II record, in which recessions have been milder on average

Chart 4

Real GSP Growth in the U.S. and Tenth District, 1979-89*(Average annual percent change)*

Source: U.S. Department of Commerce, Bureau of Economic Analysis.

in the district than in the nation, but growth in early recovery periods has been slower in the district.

After 1985, when the nation's economic growth left the district behind, a key factor was the district's greater reliance on energy. The sharp fall in oil prices and collapse of the energy industry brought a drop in real output in the district in 1986 and virtually no growth in 1987. In the final years of the decade, district growth improved but still trailed the national rate, due in part to the impact of the energy industry collapse on real estate and other parts of the regional economy.

What are the implications of the changes in the district economy for the region's future? Changes in industrial structure might change how the district performs relative to the nation, especially with regard to the district's short-run ups and downs in economic activity.

Now that the district's industrial structure has become somewhat more like the nation's, the district may see both advantages and disadvantages. On the negative side, the district's business cycles might behave more like the nation's, due primarily to the district's increased reliance on manufacturing. For example, recessions might not be milder on average for the district than for the nation, as they have been in the past. On the positive side, with less reliance on energy, the district may be less affected by cycles in the energy sector. For example, large swings in world oil prices may have less impact on regional economic activity than they had in the 1970s and 1980s. Thus, the district economy may find itself more susceptible to the effects of national recessions but less susceptible to the effects of large swings in the performance of a single sector.

APPENDIX

Real GSP Growth by Industry, 1979–89

Industry	Tenth								
	US	District	CO	KS	MO	NE	NM	OK	WY
Agriculture	2.7	1.6	5.8	.3	-1.7	4.0	2.1	1.6	-1.7
Mining	-1.1	-3.5	-2.3	-5.9	-1.1	-2.5	-2.7	-4.3	-2.8
Construction	.7	-3.4	-4.3	-3.3	-1.4	-2.5	-1.7	-5.7	-6.7
Manufacturing	2.7	3.1	4.7	2.5	3.0	2.5	5.3	2.7	-.8
Transportation	3.3	3.4	4.4	3.9	2.9	2.8	3.1	2.8	4.0
Wholesale trade	4.5	2.6	3.6	2.5	2.8	2.2	3.3	1.5	-1.4
Retail trade	3.5	2.2	2.4	2.4	2.6	1.1	3.0	1.7	-2.0
FIRE	2.7	.2	.3	.9	.9	.1	-.5	-1.0	-1.0
Services	4.1	3.0	4.0	2.5	3.3	2.3	3.6	2.1	-1.1
Government	1.3	.9	1.1	1.3	.8	.6	1.1	.6	1.3
Total	2.8	1.4	2.3	1.6	2.1	1.7	.9	.2	-1.5

Source: See Table 1.

Industry Output as a Share of Total GSP, 1979

(Percent)

Industry	Tenth								
	US	District	CO	KS	MO	NE	NM	OK	WY
Agriculture	2.4	4.3	2.3	6.4	3.8	10.3	2.4	3.7	2.5
Mining	4.5	10.4	5.3	6.0	.5	.5	27.3	21.4	41.5
Construction	5.3	5.9	7.4	5.2	5.0	4.7	6.3	5.3	10.0
Manufacturing	22.7	16.4	13.6	20.1	24.4	15.1	5.1	13.8	3.7
Transportation	9.3	10.2	9.8	11.3	11.3	11.1	8.7	8.9	8.3
Wholesale trade	6.3	6.0	6.1	6.3	7.3	7.3	3.4	5.3	2.8
Retail trade	9.3	9.3	10.9	8.9	10.1	9.8	7.8	8.4	6.3
FIRE	14.7	14.0	16.2	13.7	14.1	16.2	13.9	11.6	11.1
Services	13.9	12.1	14.7	11.3	13.5	12.2	11.0	10.2	6.5
Government	11.7	11.5	13.9	10.8	10.0	12.8	14.2	11.3	7.2

Source: See Table 1.

Industry Output as a Share of Total GSP, 1989
(Percent)

<u>Industry</u>	<u>US</u>	<u>Tenth District</u>	<u>CO</u>	<u>KS</u>	<u>MO</u>	<u>NE</u>	<u>NM</u>	<u>OK</u>	<u>WY</u>
Agriculture	2.4	4.4	3.3	5.6	2.6	12.9	2.7	4.2	2.4
Mining	3.1	6.3	3.4	2.8	.4	.3	18.9	13.6	36.4
Construction	4.3	3.6	3.8	3.2	3.5	3.1	4.9	2.9	5.8
Manufacturing	22.5	19.3	17.0	22.0	26.5	16.3	7.9	17.7	4.0
Transportation	9.7	12.3	11.9	14.2	12.3	12.3	10.8	11.5	14.4
Wholesale trade	7.4	6.7	6.9	6.9	7.8	7.6	4.3	6.1	2.9
Retail trade	10.0	10.0	11.0	9.6	10.5	9.3	9.6	9.8	6.0
FIRE	14.6	12.4	13.2	12.8	12.6	13.8	12.1	10.3	11.7
Services	15.8	14.1	17.3	12.4	15.1	12.8	14.3	12.3	6.8
Government	10.1	10.9	12.3	10.5	8.7	11.5	14.5	11.7	9.6

Source: See Table 1.

ENDNOTES

¹ For a description of the construction of GSP estimates and their uses, see Glenn H. Miller, Jr., "Changes in Tenth District Industrial Structure, 1963-86: Evidence from New State

Data," Federal Reserve Bank of Kansas City, *Economic Review*, November 1989, pp. 35-51.

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