Thomas B. Mandelbaum

Thomas B. Mandelbaum is an economist at the Federal Reserve Bank of St. Louis. Thomas A. Pollmann provided research assistance.

The Eighth District Business Economy in 1988: Still Expanding, But More Slowly

THE BUSINESS economy of the Eighth Federal Reserve District continued to expand in 1988, its sixth successive year of growth. District income and employment reached record highs, while the regional unemployment rate declined to its lowest level of the decade. Unlike the previous two years, in which regional economic growth approximated the national pace, however, the District economy grew substantially slower than the rest of the nation last year.[1] This article discusses the factors that caused this sluggishness and describes other significant developments in the Eighth District's business economy during 1988. In addition, it provides a perspective on future economic conditions in District states.

PERSONAL INCOME AND CONSUMER SPENDING

As figure 1 shows, District personal income growth during the current expansion has exceeded the national rate only in 1984. After approaching the nation's 3.2 percent gain in 1987, District real income growth slowed to 2.6 percent in 1988, while U.S. real income rose 3 percent.[2]

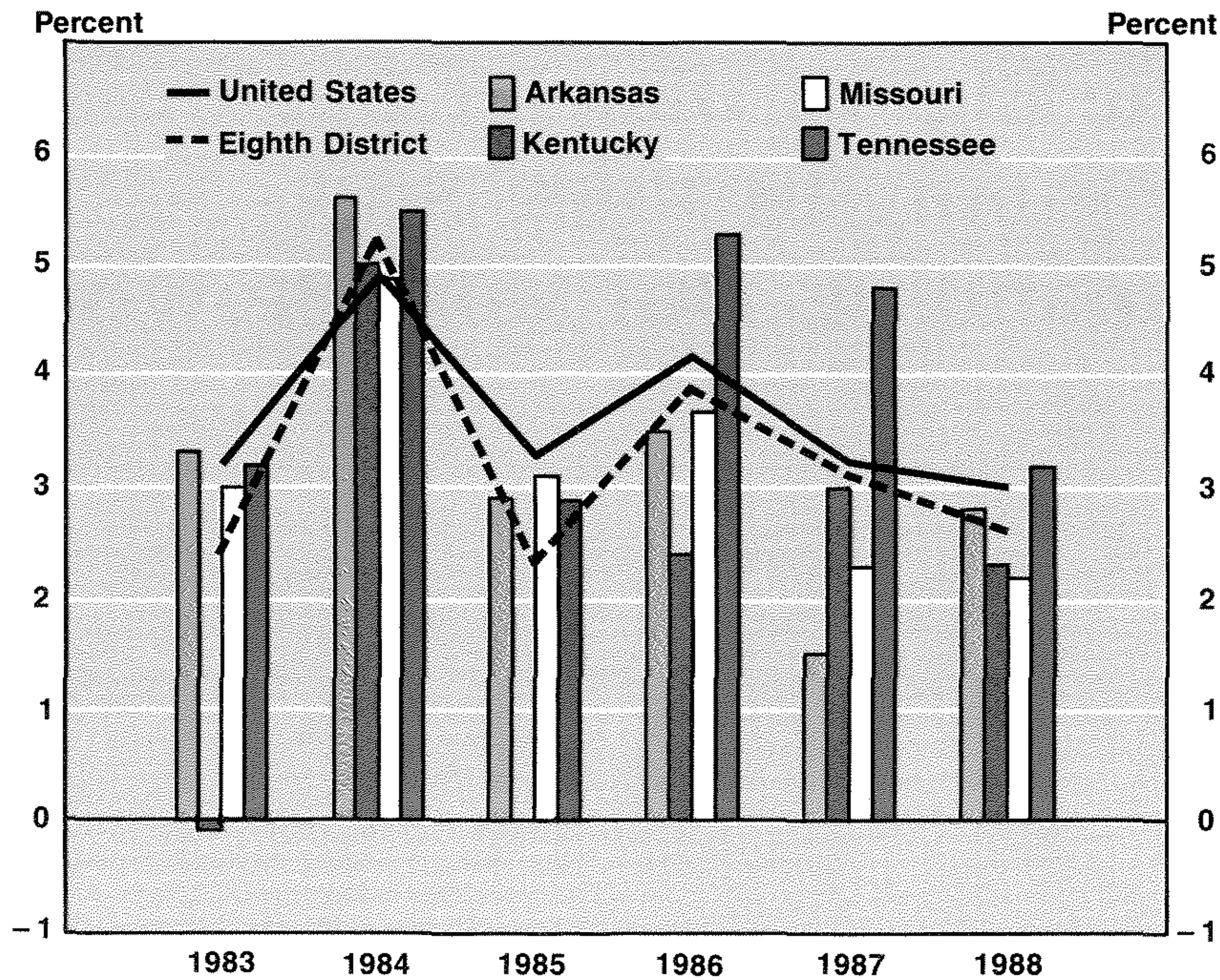
The region's relatively weak income growth in 1988 stemmed largely from its sluggish growth in real earnings, which make up about two-thirds of total income: real earnings rose 2.3 percent regionally compared with 2.7 percent nationally. The other sources of personal income—transfer payments and dividends, interest and rent—also grew slower regionally than nationally in 1988.

The drought caused real personal farm income to fall sharply in Kentucky and Missouri last year, but had little direct effect on the expansion of total personal income. Personal income earned from farms has accounted for less than 2 percent of the region's or nation's total in recent years. Excluding it from income did not substantially change regional or national 1988 growth rates.

[1]Data from Arkansas, Kentucky, Missouri and Tennessee are used to represent the Eighth District.

[2]Growth rates compare data for the entire year with the average of previous years. The substantially slower growth of District income does not necessarily imply that District output also grew slower than the national average. For example, while the annual growth rate of District income between 1982 and 1986 was 0.4 percentage points less than the national rate, the growth rate of total output was just 0.1 percentage points lower. See Mandelbaum (1988/89).

Figure 1
Annual Percent Change in Real Personal Income

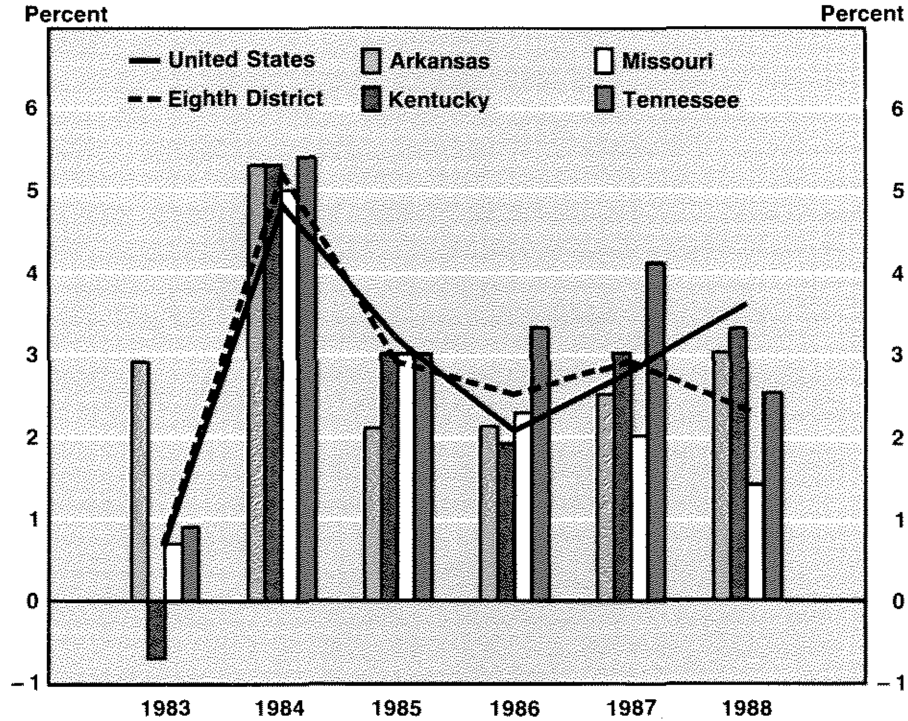


Though District personal income growth trailed the national average in 1988, it was typical of states in the nation's interior. In 1988 and throughout the recovery, the economies of most interior states have grown more slowly than those of states on either coast.[3] Between III/1987 and III/1988, for instance, the District's growth of real nonfarm income matched that of non-coastal states, but was a full percentage point slower than the 4 percent rate posted by coastal states.

Much of the strong coastal growth last year stemmed from the sharp expansion of earnings in service-producing industries, construction and, in many states, durables manufacturing. Earlier in the decade, the rapid expansion of

[3]This comparison excludes Alaska and Hawaii. See Coughlin and Mandelbaum (1988) for an overview of regional growth of per capita income in the 1980s.

Figure 2
Annual Percent Change in Payroll Employment



high-tech industries, often related to defense projects, fueled coastal growth as well. Meanwhile, the economic expansion of some interior states was hampered by the decline in commodity prices, particularly energy prices. Despite some strengthening during the year, relatively low energy prices continued to depress growth in energy-producing states in 1988.

In 1986 and 1987, the District's income growth was able to approach the national average largely because of Tennessee (see figure 1). Unlike most interior states, the Tennessee economy expanded much faster than the national average. In 1988, when Tennessee's income growth fell back to near the national average, the District's income growth fell further below the national average, as did most of the nation's interior.

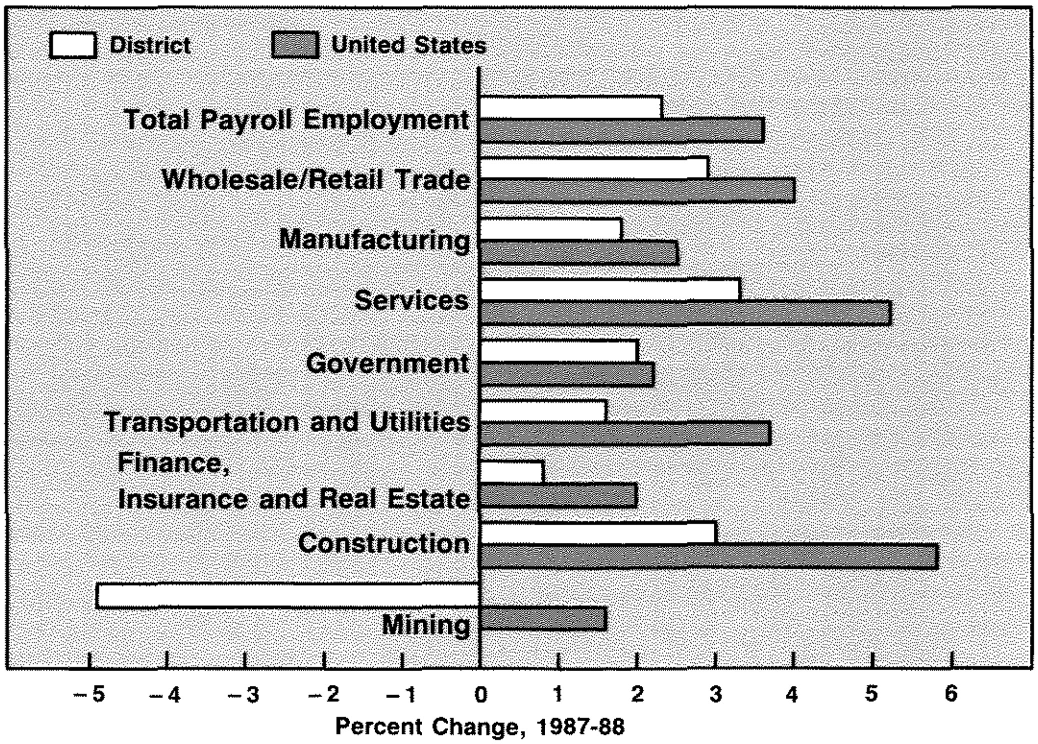
District retail sales have followed national trends during the first five years of the recovery, but expanded more slowly in 1988. Between 1982 and 1987, sales rose at 3.6 percent and 3.8 percent annual rates in the District and nation, after adjusting for inflation. In 1988, District real retail sales growth was a weak 1.6 percent compared with a national increase of 2.6 percent.

LABOR MARKETS

Employment data, presented in figure 2, tell essentially the same story as the income and sales data told: the District's expansion continued in 1988 but at a slower pace compared with either the previous few years or the national average. Nonagricultural payroll employment rose 2.3 percent last year in the District, while growing a robust 3.6 percent nationally. The District's weaker growth contrasts with the similarity of regional and national growth during the previous years of the the recovery: between 1982 and 1987, payroll employment grew at a 2.9 percent annual rate in the District and at a 2.7 percent rate nationally.

The District's 1988 unemployment rate was the lowest this decade. It averaged 6.5 percent,

Figure 3
Percent Change in Employment



down from 7.2 percent in the previous year and 10.8 percent in 1983. Although civilian employment (upon which the jobless rate is based) rose only 1.8 percent in 1988, the unemployment rate fell as the labor force grew even more slowly, rising by only 1 percent.

The relatively sluggish District job growth raises two questions. First, where in the nation have these new jobs been created? As was true of personal income, a disproportionate share of the nation's new jobs in 1988 were created in coastal states. California, Florida, New York and Virginia gained the most jobs, for example, generating approximately one quarter of the nation's new jobs last year. Illinois, Ohio, Pennsylvania and Texas also posted large job gains.

The second question raised by the pattern of job growth is why the District's job growth was slower this year, after several years of near-national growth. As was true of income growth, Tennesee's faster-than-national employment expansion allowed the District workforce to grow at nearly the national pace in most previous years of the recovery (see figure 2). In 1988, however, employment in Tennessee grew at well below the national rate and District employment growth followed suit.

Another way to understand the factors that account for the relatively slow District job growth in 1988 is to consider the performance of the District economy's major sectors. As figure 3 shows, employment in all major sectors of the District economy grew more slowly in 1988 than the national average. In the figure, the eight divisions of payroll employment are ordered in descending size, ranging from the wholesale and retail trades sector, which employed almost a quarter of the 1988 District workforce, to mining, which employed less than 1 percent. The largest four sectors—trades, manufacturing, services and government—account for more than four-fifths of all total payroll employment.

GOODS-PRODUCING SECTORS

Although the 1.8 percent increase in District *manufacturing* employment last year trailed the nation's 2.5 percent increase, it represents a slight acceleration from the 1.2 percent annual rate of increase over the previous five years. In 1988, manufacturing growth was stimulated by a surge in exports. The value of U.S. manufactured exports rose 26.3 percent in 1988. Producers of nonelectrical machinery, an industry that includes computers and most capital goods, accounted for much of the rise in exports. Employment in the District's nonelectrical machinery industry rose 3 percent in 1988 compared with the nation's 6.7 percent rise.

Among the District's other large manufacturing industries, the fabricated metals and electrical equipment sectors also experienced moderate growth last year. The number of jobs in the apparel and textiles mill products declined, however, because of a fashion shift away from denim products and rising textile inventories. Transportation equipment employment also declined. The District transportation equipment sector is dominated by defense-related aerospace production—in which employment rose—and motor vehicles production—in which periodic layoffs, strikes and a Missouri auto assembly plant closure led to job losses.

After expanding sharply in the first two years of the recovery, District *construction* activity had leveled off in subsequent years until 1988, when building weakened substantially. The real value of District building contracts fell 8.3 percent last year. District building activity has followed national trends during the current recovery, although last year's drop in building contracts was somewhat more severe than the nation's 5.3 percent decline.

The weaker District performance stemmed from the residential sector; District residential contracts dropped by 11.8 percent in 1988, almost twice the national decline. Building permit data also show that residential activity declined last year: District housing permits fell 6.1 percent in 1988 while dropping 4.7 percent nationally. Both single-family and multi-family residential building weakened last year.

Throughout the recovery, District residential construction has expanded more slowly than the national average (reflecting the region's slower population growth), while nonresidential building has been stronger than at the national level. In 1988, the real value of nonresidential contracts dropped 4.3 percent regionally and 6.6 percent nationally.

While *mining* employment rose 1.6 percent nationally, it dropped 4.9 percent in the District. This differential is due largely to differences in the composition of mining. Nationally, oil and gas extraction accounts for most mining jobs while coal mining dominates the District mining workforce. The nation's increase in mining jobs last year was due entirely to increases in oil and gas extraction; employment was flat in the remaining mining sectors.

Coal production has remained strong in recent years, as much of the the nation's expanding industrial activity has been fueled by coal-generated electricity. Mine production in Kentucky, which accounts for most of the District's mining output, reached its highest point of the decade in 1987, then fell slightly, by 1.9 percent, in 1988. Rapidly increasing productivity allowed a more severe 6.3 percent drop in Kentucky coal mine employment in 1988.

SERVICE-PRODUCING SECTORS

The *wholesale and retail trades* sector is the District's largest in terms of employment. Since its growth is related to a region's income growth, the slower 1988 growth of District trades is not surprising. Trades employment rose 2.9 percent regionally and 4 percent nationally in 1988. During the first five years of the recovery, both the District and national trades sectors grew at annual rates of a little less than 4 percent.

Much of the slower District employment growth is attributable to the slower expansion of the *services* sector. Approximately half of the services jobs are in business and health services with the remainder in legal, personal and miscellaneous services. At both the regional and national levels, services has generated more new jobs—in 1988 and throughout the recovery—than any other sector. The increase of District services jobs of 3.3 percent in 1988, however, fell far short of the national average of 5.2 percent. The District's 1988 growth rate also represented a deceleration from its 4.9 percent annual pace over the previous five years. To some extent, the slower growth of the District services sector is related to the relatively sluggish growth of District manufacturing, for which the services sector provides business and legal services.

Government employment grew at a 1.4 percent annual rate during the first five years of the recovery in both the District and the nation. In 1988, growth was slightly stronger as govern-

Table 1
1988 Growth of Selected Economic Indicators

	U.S.	District	Arkansas	Kentucky	Missouri	Tennessee
Real personal income	3.0%	2.6%	2.8%	2.3%	2.2%	3.2%
Payroll employment	3.6	2.3	3.0	3.3	1.4	2.5
Manufacturing	2.5	1.8	3.7	4.4	0.4	0.8
Construction	5.8	3.0	0.0	8.6	0.6	3.2
Mining	1.6	−4.9	3.7	−6.3	−1.7	−4.7
Wholesale and retail trade	4.0	2.9	2.9	5.0	2.3	2.2
Services	5.2	3.3	4.4	4.0	2.0	3.9
Government	2.2	2.0	2.2	0.9	1.1	3.7
Finance, insurance and real estate	2.0	0.8	0.5	1.2	0.7	0.8
Transportation and public utilities	3.7	1.6	1.7	0.4	0.6	3.7
Real value of building contracts[1]	−5.3	−8.3	−17.4	−7.2	−6.1	−8.6

[1]Excludes nonbuilding construction. SOURCE: F. W. Dodge *Construction Potentials*.

ment employment rose by 2 percent in the District and 2.2 percent nationally.

In addition to directly providing jobs, the federal government influences the District economy through its spending in District states. Federal expenditures include grants-in-aid, direct payments to individuals and procurement contracts as well as salaries and wages. In fiscal year 1988, federal government spending in District states totaled $55.4 billion, or 2.6 percent more than in the previous year. Expenditures increased in each of the District states, ranging from 2.3 percent in Arkansas to 3.1 percent in Kentucky. Of the District total, $7.9 billion was received in the form of defense procurement contracts, down 4 percent from 1987. The decline was largely due to an 8.2 percent drop in Missouri, which received $5.5 billion in defense contracts in fiscal year 1988. Defense contracts have declined in recent years following rapid growth during the first half of the decade.

After identical 4.2 percent annual growth rates between 1982 and 1987, employment in both the District and national *finance, insurance and real estate* sectors grew more slowly in 1988, rising by just 0.8 percent regionally and 2 percent nationally. Consolidations among banks and thrifts and a slowdown in the sales and construction of homes contributed to the slowdown.

Employment in the District's *transportation and public utilities* firms rose just 1.6 percent in 1988, after growing at a slightly stronger 2.3 percent rate during the previous five years. In 1988, as well as throughout the recovery, much of the District's weakness was concentrated in Kentucky and Missouri.

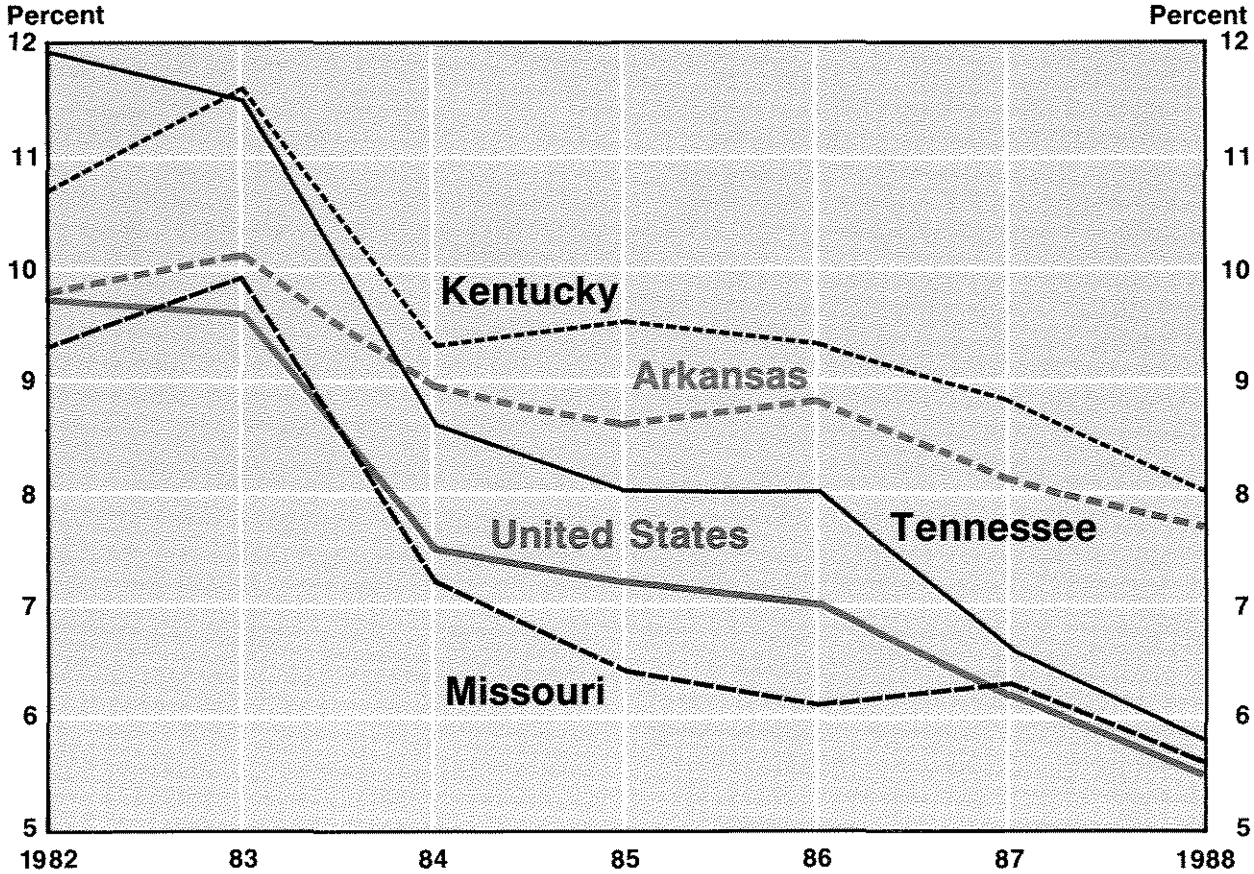
INTERSTATE COMPARISONS

Although discussions of the District's economy provide an overview of broad regional trends, they obscure substantial differences among individual states. Wide variations in annual income and employment growth, for example, can be seen in figures 1 and 2 as well as in table 1. This section highlights these and other differences among the state economies.

Arkansas

Arkansas enjoyed moderate economic growth during 1988, despite a sharp decline in construction activity. As figure 1 shows, the state's 2.8 percent rise in real personal income was just slightly below the national average. The earnings component of personal income rose marginally faster in Arkansas than in the nation, in part because of the strong growth from farms. Arkansas' income growth was impeded, however, by the relatively slow expansion of transfer payments and dividends, interest and rent.

Figure 4
Unemployment Rates: United States and District States



Payroll employment rose at a moderate 3 percent in 1988, the same rate as during the first five years of the recovery. Manufacturing, one of the state's chief strengths in the period, continued strong in 1988, with manufacturing jobs growing by 3.7 percent. Employment in factories making fabricated metals and transportation equipment rose rapidly. Although the state lacks a major vehicle-assembly plant, parts suppliers expanded in response to the growing needs of car and truck makers throughout the region. Employment growth in food processing– the state's largest manufacturing industry–slowed in 1988 to 1.9 percent from a 5.1 percent pace during the previous five years.

As figure 4 shows, unemployment rates fell in Arkansas, as they did in each of the District states in 1988. Arkansas' rate has declined relatively slowly during the recovery, however. The 7.7 percent jobless rate for 1988 is just 2.1 percentage points below its 1982 rate, compared with a 4.2 percentage-point drop nationally.

Construction activity, weak throughout the recovery, declined sharply in 1988 (see table 1). After rising in 1983 and 1984, the real value of building contracts declined each subsequent year and dropped 17.4 percent in 1988, the most severe decline among the District states. Both residential and nonresidential building declined sharply last year.

Kentucky

Kentucky's economic growth during 1988 was mixed. While employment growth was fairly strong, income growth was rather weak and construction activity declined. Real personal income rose 2.3 percent in 1988. The drought was partially responsible for this sluggish increase. Kentucky's 2.6 percent rise in nonfarm personal income matched the District average. Payroll employment rose 3.3 percent last year, the second consecutive year of moderate growth. Despite these job gains in recent years, the state's unemployment has remained high. In 1988, the unemployment rate averaged 8 percent, the highest rate among District states. The jobless rates in the Louisville and Lexington areas are considerably lower, but rates generally are higher in rural areas, particularly where coal mining has been dominant.[4]

Much of Kentucky's recent employment strength stems from the state's largest sectors: wholesale and retail trades, services and manufacturing. Employment in services and in wholesale and retail trades rose by 4 percent and 5 percent in 1988, with much of the growth in the Louisville area.

Kentucky's manufacturing job growth of 4.4 percent last year was its highest since 1984. Much of this growth can be traced to the expansion of motor vehicle production. The Toyota assembly plant in the Lexington-Georgetown area hired thousands of new workers and the light truck plant in Louisville expanded production. Many parts suppliers for these and other assembly plants in the region either expanded or began operations in Kentucky last year. The state has benefited from the shift to "just-in-time" inventory strategies during the 1980s which require parts suppliers to be near assembly plants. Fabricated metals plants in Kentucky also sharply increased their workforces in 1988, largely because of increased orders from motor vehicle parts suppliers.

After growing by nearly 5 percent a year between 1982 and 1987, the real value of construction contracts fell 7.2 percent in 1988, with both residential and nonresidential building contracts falling. Residential building contracts in the Louisville and Lexington areas remained strong, however, falling only slightly.

Missouri

Missouri's economic expansion has slowed to a sluggish pace in recent years. In the recovery's first four years, personal income and employment rose moderately, expanding at near the the national rate (see figures 1 and 2). In 1987 and 1988, however, growth trailed the national and District averages. Personal income rose 2.2 percent last year, after adjusting for inflation. The drought severely affected the northern part of the state, but had only a minor impact on overall personal income growth. Rather, it was the slow growth of nonfarm earnings, reflecting the sluggish job expansion in the state, that was largely responsible for Missouri's relatively slow personal income growth.

Missouri's payroll employment rose just 1.4 percent last year, less than half the national rate. Nevertheless, since the state's labor force was flat, the unemployment rate declined to 5.6 percent in 1988 from 6.3 percent a year earlier. As table 1 shows, employment in every major sector rose more slowly than in the rest of the nation in 1988. Services and trades—the major sources of Missouri's job growth between 1982 and 1987—grew at their slowest rate of the recovery last year. On a positive note, manufacturing employment rose 0.4 percent in 1988, its first increase since 1984. Employment rose slightly in many industrial sectors, but fell in food processing, textiles and apparel, and transportation equipment industries. The latter, which employs almost one of every six of Missouri's manufacturing workers, experienced job gains in aircraft manufacturing but had larger losses among producers of motor vehicles and parts.

As in the other District states, the real value of construction contracts fell in 1988 in Missouri. The decline in the residential sector was particularly severe, with most of the weakness in the multi-family housing market. Last year's construction decline contrasts with strong growth during the first five years of the recovery.

[4]Throughout the nation, unemployment rates tend to be higher in nonmetropolitan areas than in metropolitan areas. In the fourth quarter of 1988, for example, the average U.S. unemployment rate outside of metropolitan areas (not seasonally adjusted) was 5.8 percent compared with 4.9 percent in metropolitan areas. See U.S. Department of Labor (1989), pp.79-80. For a discussion of the slower economic growth in nonmetropolitan areas during the 1980s, see Carraro and Mandelbaum (1989).

Tennessee

Although moderate, Tennessee's economic growth in 1988 was considerably slower than in 1986 and 1987 (see figures 1 and 2). Personal income increased by 3.2 percent in 1988, a drop from approximately 5 percent in each of the previous two years. Payroll employment rose 2.5 percent in 1988, after increasing 4.1 percent in 1987. Tennessee's 1988 income growth, however, exceeded the national average, while its job growth was sufficient to allow the unemployment rate to fall to 5.8 percent in 1988 from 6.6 percent in 1987.

Growth in most sectors of the Tennessee economy slowed last year. The 1988 employment increases in Tennessee's services and trades sectors were the smallest in several years. Manufacturing employment growth rose 0.8 percent last year. Employment shrank in many nondurables sectors, such as chemicals and textiles and apparel, while most of the sectors producing durables rose moderately. Employment in the Memphis area rose only slightly in 1988 after several years of strong gains. The impending construction of a $1.2 billion cereal plant should help boost Memphis area job growth in 1989, however.

The real value of construction contracts awarded in Tennessee fell 8.6 percent last year after growing 8 percent in 1987. The 1987 strength stemmed from the sharp expansion of nonresidential building. In 1988, nonresidential contracts rose only marginally, while residential contracts plunged 16.4 percent after adjusting for price changes.

OUTLOOK FOR 1989

Projections from academic and governmental institutions in each District state suggest that the states' economies will continue to grow in 1989, but at a slower rate than in 1988. This slowing reflects the strong ties between the states' economies and the national economy, whose growth is also expected to slow. Many observers of the national economy feel that it cannot continue to expand at the pace of the last few years, given the low level of unemployment and high rates of capacity utilization.[5]

Table 2
Economic Projections for District States

	1988	1989
Unemployment Rate		
United States	5.5%	5.5%
Arkansas	7.7	8.1
Kentucky	8.0	7.2
Missouri	5.6	6.1
Tennessee	5.8	6.3
	Percent change[1]	
	1988	1989
Payroll employment		
United States	3.6%	2.2%
Arkansas	3.0	1.5
Kentucky	3.3	1.3
Missouri	1.4	1.1
Tennessee	2.5	1.1
Manufacturing employment		
United States	2.5	0.6
Arkansas	3.7	2.5
Kentucky	4.4	1.5
Missouri	0.4	N.A.
Tennessee	0.8	0.4
Personal income (current dollars)		
United States	7.3	7.9
Arkansas	7.0	4.6
Kentucky	6.5	7.0
Missouri	6.4	8.3
Tennessee	7.5	7.1

[1]Percent changes compare entire year with previous year.

SOURCES: United States: DRI/McGraw-Hill, *Review of the U.S. Economy*, January 1989; Arkansas: University of Arkansas at Little Rock, *Arkansas Economic Outlook*, January 1989; Kentucky: Kentucky Finance and Administration Cabinet based on DRI/Mcgraw-Hill projections, January, 1989; Missouri: College of Business and Public Administration, University of Missouri-Columbia, *Missouri Economic Indicators*, 2nd Quarter, 1988; Tennessee: Center for Business and Economic Research, University of Tennessee, Knoxville, *An Economic Report to the Governor of the State of Tennessee On the State's Economic Outlook*, January 1989.

Table 2 presents actual data for 1988 and projections for 1989 for several economic in-

[5]The *Blue Chip* consensus forecast (from February 1989) of 51 private economists, for example, indicates that real GNP growth will slow to 2.7 percent in 1989 (full year-over-year comparison) from its 3.8 percent increase in 1988.

dicators. Projections for the national economy made by DRI/McGraw-Hill also are provided. Although different methodologies were used to generate the various projections, they are all consistent in their forecast of an employment slowdown in 1989. U.S. payroll employment growth is expected to slow to 2.2 percent in 1989 from its 3.6 percent rise last year. Employment in each of the states is expected to grow even more slowly than in nation. Reflecting the slow job growth, unemployment rates are expected to rise in Arkansas, Missouri and Tennessee. Lower rates are anticipated in Kentucky, however.

To the extent that the projections are correct, manufacturing will provide fewer new jobs in 1989 than in 1988. Nationally, manufacturing employment growth is expected to slow to a 0.6 percent rise from the 2.5 percent increase in 1988. Each of the District states for which data are available show a similar pattern of deceleration. In Arkansas, manufacturing growth is expected to slow, in part, because anticipated higher interest rates may slow orders for durables goods, particularly those related to residential investment. In Tennessee, a continuation of the weakness in the textiles, apparel, lumber and wood products sectors are expected to retard manufacturing growth in 1989.

In contrast to employment, national personal income, measured in current dollars, is expected to grow faster in 1989 than in 1988. There are several reasons for this. First, expected higher inflation in 1989 raises the year's estimated nominal income figure. Second, DRI expects interest rates will be higher in 1989 which will raise interest income. Finally, transfer payments, particularly for Medicare and Medicaid, are expected to grow rapidly. Personal income is expected to grow more slowly in 1989 than in 1988 in Arkansas and Tennessee, while accelerating in Kentucky and Missouri.

CONCLUSION

The Eighth District's business economy during 1988 was strong and growing, albeit at a slower rate than in the previous two years. The unemployment rate fell to its lowest level of the decade, and personal income and employment in most sectors continued to expand. Regional growth was weaker than at the national level, however, as job growth in each of the major sectors of the economy trailed the national average and District construction activity declined more severely. Although projections suggest that economic growth may slow this year, it is expected that 1989 will be the seventh successive year of growth for both the Eighth District and the nation.

REFERENCES

Carraro, Kenneth C., and Thomas B. Mandelbaum. "Rural Economic Performance Slows in the 1980s," *Pieces of Eight - An Economic Perspective on the Eighth District*, Federal Reserve Bank of St. Louis, (March 1989), pp. 5-8.

Coughlin, Cletus C., and Thomas B. Mandelbaum. "Why Have State Per Capita Incomes Diverged Recently?" this *Review* (September/October 1988), pp. 24-36.

Mandelbaum, Thomas B. "Gross State Product Series Provides New Perspectives on Regional Economies," *Business: An Eighth District Perspective*, Federal Reserve Bank of St. Louis (Winter 1988/89).

U.S. Department of Labor. *Employment and Earnings*, (January 1989).