A Review of the Eighth District's Business Economy in 1986

Thomas B. Mandelbaum

FOR the second successive year, economic growth was generally moderate for both the nation and the Eighth District. Against this background of moderate growth, however, expansion in some regions and sectors was quite vigorous. This article describes the District's economic growth in 1986 in the context of the current recovery period. In addition, some recent projections of regional economic growth are discussed.

CONSUMER INCOME AND SPENDING

District nonfarm income growth, adjusted for inflation, has followed national trends throughout the current recovery period; it accelerated in 1984, but has grown more slowly in recent years (chart 1). Real income has grown more slowly in the District than nationally each year of the recovery.

Real District nonfarm personal income grew by 3 percent in 1986, somewhat slower than the nation's 3.4 percent expansion.[1] Each of the major components of personal income — earnings, transfer payments, and dividends, interest and rent — grew more slowly regionally than nationally.

District retail sales, after growing close to the national pace in the first three years of the recovery period, were considerably more sluggish in 1986: they grew by only 0.5 percent, after adjusting for inflation, compared with 2.4 percent growth in national retail sales. Consistent with national trends, sharp increases in District car sales in September and December boosted retail sales in the second half of the year. District retailers generally reported moderate gains in Christmas sales over last year. Changes in the federal tax code, which eliminated the deductibility of sales taxes after year's end, contributed to vigorous sales of autos and consumer durables in December.

LABOR MARKETS

District employment growth has followed a similar pattern to that for the nation during the recovery period (chart 2). As with personal income, the most rapid growth occurred in 1984; since then, both District and national employment have grown only moderately. District nonfarm employment grew by 2.3 percent in 1986, slightly less than the nation's 2.6 percent growth.

After falling rapidly in 1983, the District unemployment rate has declined more slowly each subsequent year of the recovery, following the national pattern. In 1986, the 1.8 percent growth of the District's total civilian employment was only slightly greater than the growth of the labor force, but sufficient to allow the District unemployment rate to drop slightly to 7.8 percent. In general, unemployment is higher in the

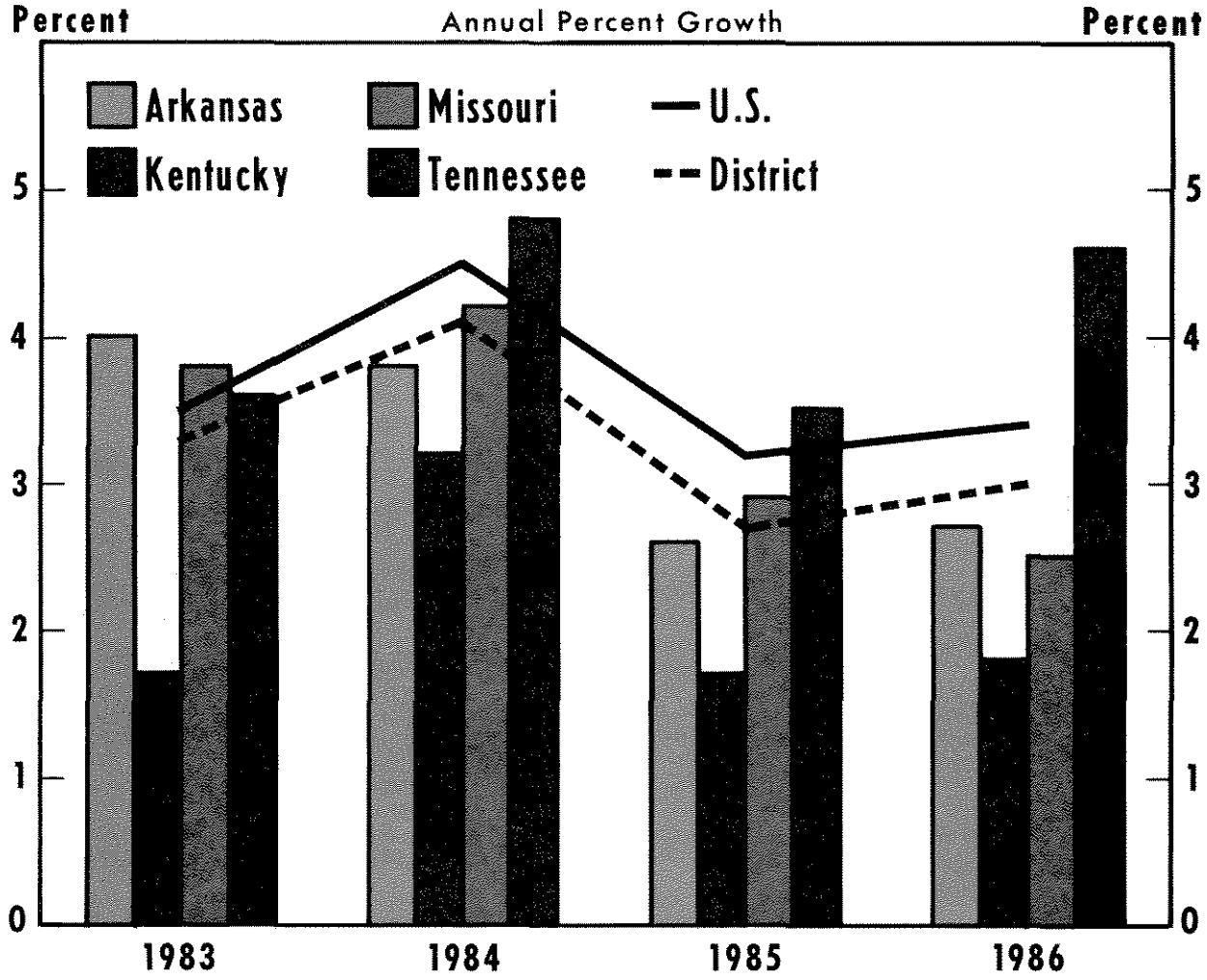
---

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

[1]Annual growth rates in this article compare data for the entire year with the previous year.

Chart 1

Growth of Real Nonfarm Personal Income



District's nonmetropolitan areas, as a result of weakness in agriculture- and energy-related businesses.

SECTORAL DIFFERENCES

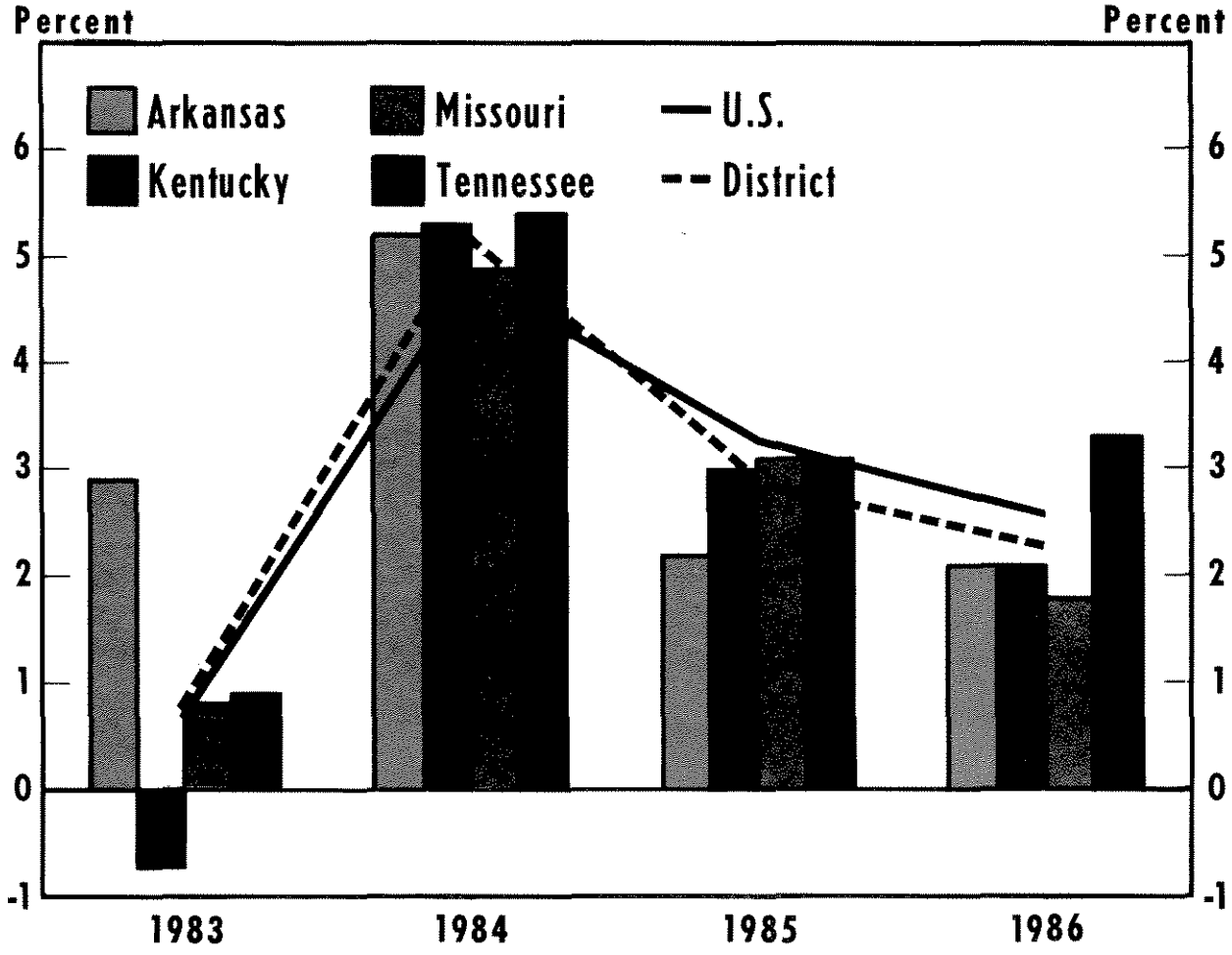
Throughout the recovery, District employment growth has been divided unevenly among sectors. Mining employment has fallen sharply, while the manufacturing, government and transportation/communications/public utilities sectors have grown sluggishly; trades, finance and services have grown moderately, while construction has expanded more sharply. Except for the mining sector, in which employment dropped considerably less than nationally, each of the District's sectors grew about as rapidly as its national counterpart.

Goods-Producing Sectors

Mining. The plunge in oil prices in the first half of 1986 had an adverse effect on some District communities dependent on oil extraction. The negative impact on the general regional economy was limited, however: only 1 percent of the District's nonfarm workers are engaged in mining activities and far fewer are employed in oil-extractive operations.

Chart 2

Growth of Nonfarm Employment



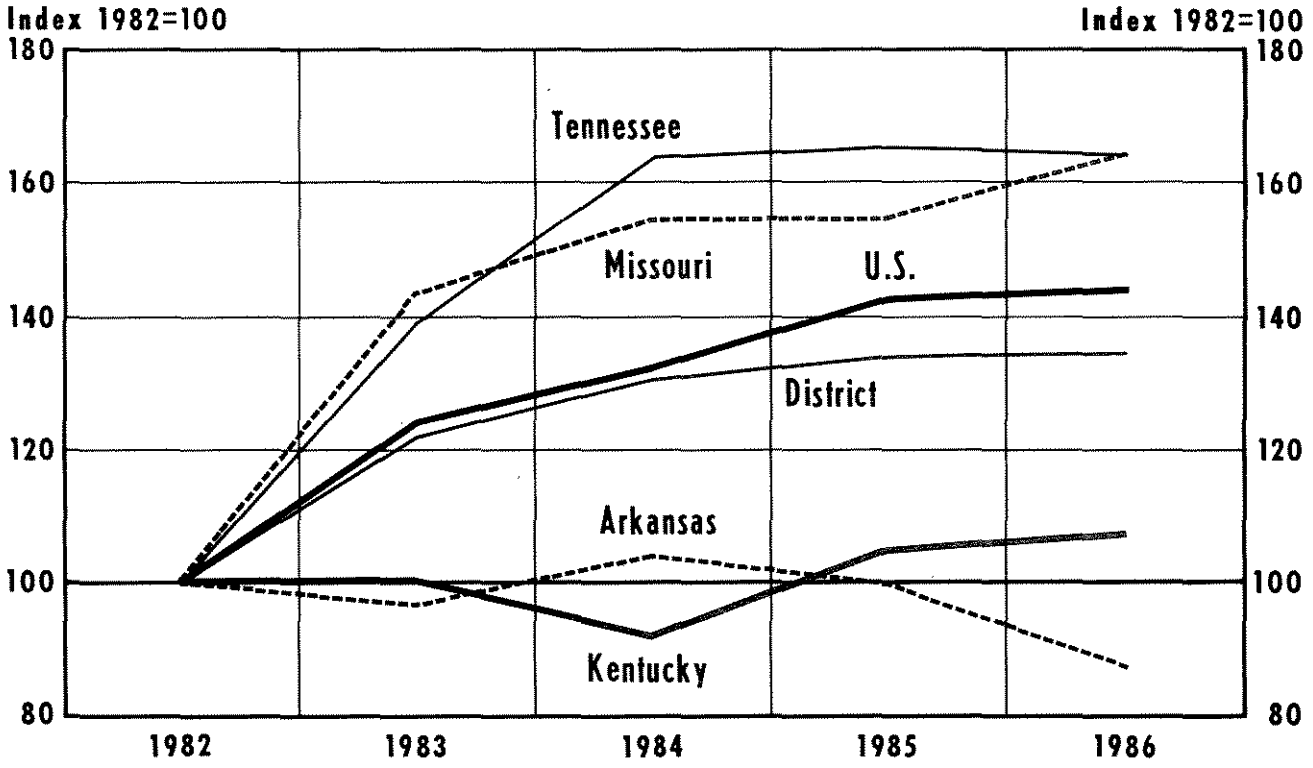
District mining employment — heavily concentrated in Kentucky coal production — fell 3.4 percent in 1986 and at a 5.1 percent annual rate since 1982. Employment in the nation's mining industry — more heavily engaged in oil extraction — fell more steeply during both periods. In 1986, 171.9 million tons of coal were mined in the four major District states, up 3.9 percent from its 1985 level and 7.0 percent above 1982. Productivity gains in coal mining allowed more coal to be produced with a declining work force.

Manufacturing. Many analysts expected the declining exchange value of the dollar since early 1985 to stimulate domestic manufacturing activity in 1986 by making imports more expensive to domestic consumers and exports less expensive in foreign markets. A recent survey of District manufacturers, however, suggests that the shrinking value of the dollar had little effect on either employment or output in 1986. In most cases, market-specific factors were more important than the dollar's decline in influencing growth. One reason for this is that many District producers are competing against, or buying imports from, nations whose currencies have not substantially appreciated against the dollar, such as Taiwan and South Korea.

District manufacturing employment expanded at a 1.2 percent annual rate between 1982 and 1986, exceeding the nation's 0.5 percent pace. Employment in the District's transportation equipment, fabricated

Chart 3

Real Value of Construction Contracts



metals and printing/publishing industries grew fastest over this period, while regional producers of chemicals and textile/apparel reduced their work forces.

District manufacturing employment dropped 0.6 percent in 1986, similar to the national decline in such employment.[2] Of the District's major industries, only the printing/publishing, food processing and transportation equipment sectors increased their work forces over the year. Employment in the production of textiles and apparel leveled off in 1986 after a sharp drop in 1985.

District defense contractors, primarily manufacturers, benefited from the acceleration of federal defense spending in the first half of the 1980s. The real value of defense contracts received in the District grew at an 8.8 percent annual rate between 1982 and 1985. Recently, however, growth in defense contracts has waned. While the inflation-adjusted value of defense contracts awarded nationally declined slightly in fiscal 1986 from the previous year, District contracts dropped almost 17 percent to $7.3 billion, in 1982 dollars, because of a sharp decline in Missouri.

Construction. After increasing sharply in 1983, District construction activity has grown more slowly each year of the recovery. Chart 3 shows that the real value of construction contracts awarded in the Eighth District and in the nation followed similar growth paths through 1984. Contracts expanded more slowly in the District than in the nation in 1985 and 1986, however, primarily because of slower District growth of residential construction.

Residential construction, which accounts for about half of the value of regional construction contracts, grew more slowly in the District than in the nation throughout the recovery. Following a large increase in the first year of the recovery, single-family housing permits issued in the District grew moderately

[2]The decline in manufacturing employment does not necessarily imply a decline in manufacturing output, however. Increases in worker productivity have allowed the nation to produce increasing output with fewer workers in recent years. See Tatom (1986) and Ott (1987).

through 1985. In 1986 they jumped 24.8 percent, as mortgage rates declined to their lowest level since the late 1970s. Permits for multi-family dwellings expanded rapidly in 1983 and 1984 but have subsequently declined.

Due primarily to a stronger upturn in 1983, the expansion of District nonresidential building exceeded the nation's growth in the current recovery period. Between 1982 and 1985, the real value of District nonresidential contracts grew at a 14.4 percent annual rate, exceeding the nation's 11.1 percent pace. The pace of nonresidential building slowed in 1986, however. District nonresidential construction contracts declined 0.2 percent in 1986, compared with a more severe 6.6 percent drop nationally.

Nonbuilding construction (primarily public works and utilities) expanded more slowly in the region than in the nation throughout the recovery period. While the real value of District nonbuilding contracts declined at a 2.9 percent rate between 1982 and 1986, a 2.3 percent increase was posted for the nation as a whole. District nonbuilding contracts fell 6.4 percent in 1986 compared with a slight increase nationally.

Service-Producing Sectors

Three of the service-producing sectors — trades, finance and services — account for more than half of the District's nonfarm work force and were responsible for most of the District's job growth since 1982.

The *services* sector was the second-most rapidly expanding portion of the District economy, growing at a 4.8 percent annual rate between 1982 and 1986, which is only slightly less than its growth nationally. Employment in the District's services sector accelerated slightly in 1986, growing by 5.4 percent. Much of the growth of the regional services sector was concentrated in business and health services, mirroring national trends.

Employment in *retail and wholesale trades* grew at a 4.3 percent annual rate in the recovery period with progressively slower growth since 1984, reflecting the deceleration of District retail sales. Because of particularly swift growth in Tennessee, the sector has expanded faster in the District than nationally during the last four years.

The *finance* sector includes financial, insurance and real estate firms. Nationally, employment in the sector accelerated throughout the recovery, culminating in a 5.9 percent jump in 1986. Employment gains in 1986 were stimulated by extensive homebuilding and mortgage refinancing as interest rates dropped. District gains have been considerably weaker than the national average since 1985. In 1986, the sector grew by 3.1 percent regionally, compared with 5.9 percent nationally.

Following moderate gains in 1984, employment growth in both the District's and the nation's *transportation, communication and utilities* sector has been sluggish. Deregulation and consolidations of communications and transportation firms curbed the growth of this sector. Although it did not result in substantial employment gains, barge traffic on the Mississippi River was up in 1986, the first increase since 1983. The weight of shipments passing through the locks at Alton, Illinois, increased 7.6 percent last year due to larger shipments of grain, coal, chemicals and petroleum.

Government sector employment grew little during the expansion period, both regionally and nationally. In recent years, however, government spending contributed heavily to the growth of the District economy. Despite a drop in Department of Defense contracts, federal government expenditures in District states grew to $56.5 billion in fiscal year 1986, a gain of 3.7 percent from a year earlier, after adjusting for inflation.

INTERSTATE COMPARISONS

Economic growth varied somewhat among the District's states. This section highlights differences among these economies. For similar comparisons among the District's major metropolitan areas, see pages 28 and 29.

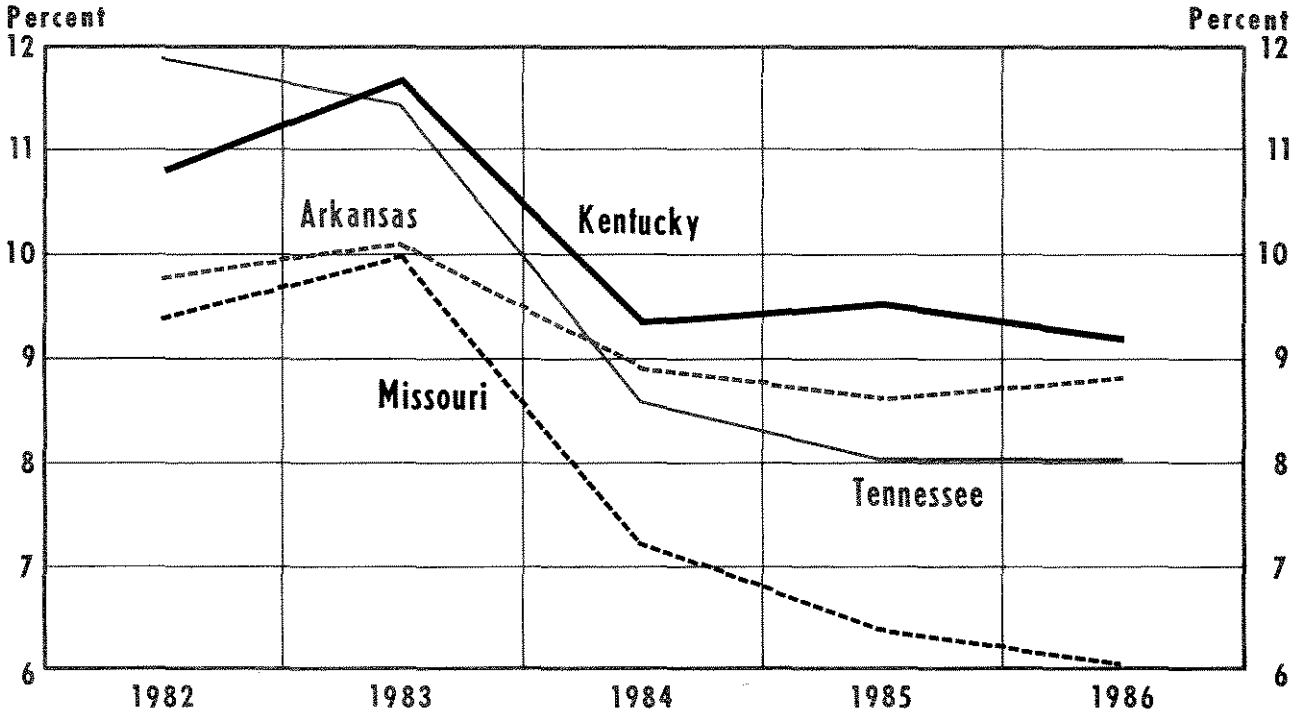
Arkansas

Arkansas' nonfarm income and employment growth was moderately strong in 1983 and 1984, but weakened considerably in succeeding years (charts 1 and 2). As employment growth slowed, the state's unemployment rate dropped only slightly from its 1984 level (chart 4).

In 1986, real nonfarm personal income grew 2.7 percent in Arkansas, slightly slower than the District and national averages. A drop in real income from dividends, interest and rent contributed to the sluggishness in Arkansas. Arkansas' nonfarm employment expanded by 2.1 percent in 1986. Employment in construction and most service-producing sectors grew slower than the District's average pace, while manufacturing grew more rapidly.

Chart 4

Unemployment Rates in Eighth District States



Of the four District states, Arkansas is most dependent on manufacturing as a source of jobs; manufacturing employment accounts for more than a quarter of the state's 1986 nonfarm work force. Manufacturing employment grew 1.2 percent in 1986 and at a 2.1 percent rate over the recovery period, the most rapid manufacturing growth of the District states. Employment in the state's relatively large food processing industry grew by 8.3 percent last year and has accounted for much of the growth in Arkansas manufacturing since 1982. Most of this growth was at poultry processors, who have benefited from the shift away from red meat consumption in favor of poultry in recent years.

Industries related to forest products also are quite important to Arkansas' industrial base. Employment at furniture and paper product firms increased last year, while employment in lumber and wood products declined. Historically, much of the lumber and wood products were purchased by the oil-patch states, where economies are currently weak. Sluggish construction activity within Arkansas also hindered the expansion of the lumber industry.

Construction activity in Arkansas has been weaker than in other District states (chart 3) and the nation. The real value of construction contracts declined 12.1 percent in 1986 and at a 3.2 percent annual rate between 1982 and 1986. While nonresidential building grew at near the national pace throughout the recovery, the expansion of contracts for nonbuilding projects and for residential construction trailed the national average. Multi-family residential growth was particularly slow.

Kentucky

Kentucky rebounded from the last recession more slowly than the other District states. This can be seen clearly in charts 1, 2 and 4. Kentucky's real nonfarm income was weak in 1983, while nonfarm employment declined and the unemployment rate rose. In subsequent years, employment in Kentucky grew at near the District's average pace, but the unemployment rate remained relatively high and real income growth was weak.

Much of the state's sluggish growth can be traced to

Major Metropolitan Areas in the Eighth District

Much of the District's economic activity is concentrated in four metropolitan areas: Little Rock, Louisville, Memphis and St. Louis, which account for about a third of the District's nonfarm work force and personal income. This section compares the recent growth of employment and construction in these four metropolitan areas.

Little Rock

After three years of moderate growth, nonfarm employment growth in Little Rock dropped sharply in 1986 to 1.3 percent (chart 1A).[1] The primary source of Little Rock's employment growth — construction and service-producing sectors — during the recovery matched those of the District's other major metropolitan areas. Little Rock's largest employment gains in 1986 were in business and health services and retail trade; the sharpest declines occurred in the manufacture of durable goods, particularly electronic equipment. The slow job growth in 1986 caused the Little Rock unemployment rate to rise to 6.9 percent from 6.4 percent in 1985.

As chart 2A shows, construction activity has been sluggish throughout the recovery in Little Rock, trailing the other metropolitan areas.[2] 1986 was no exception, as a slight gain in the real value of nonresidential building contracts was counterbalanced by losses in the residential sector.

Louisville

Louisville has enjoyed a moderately strong, steady expansion throughout the recovery, with losses in manufacturing more than offset by gains in service-producing sectors, particularly finance, insurance and real estate and trade. Unemployment has declined from 11.7 percent in 1982 to 7.0 percent in 1986. Construction activity has been moderate in recent years, growing at near the average of the four metropolitan areas (see chart 2A). In 1986, however, construction activity declined as vigorous homebuilding was offset by declines in the nonresidential sector.

Memphis

Among the four metropolitan areas, Memphis has had the fastest growing nonfarm work force since 1984. In 1986, employment grew by 3.9 percent with strong gains in most service-producing sectors. Business and health services grew particularly rapidly. Memphis' unemployment rate edged up slightly to 6.8 percent in 1986 as the area's labor force grew even more rapidly than employment.

Moderate growth in the nonresidential sector and an extremely strong residential expansion allowed Memphis to post the most rapid construction growth of the four metropolitan areas in the 1982–86 period. In 1986, construction growth was brisk, with a moderate expansion in the construction of nonresidential and single-family homes and a decline in multi-family residential building.

St. Louis

Employment in St. Louis, the largest and most diversified economy in the District, has grown more slowly than the average of the four metropolitan areas most years of the current recovery (chart 1A). An even slower expansion of the area's labor force, however, allowed the unemployment rate in St. Louis to gradually decline to 7.0 percent in 1986 from its 10.7 percent peak in 1983. Manufacturing employment in the St. Louis area grew slightly between 1982 and 1986, largely because of gains in the production of motor vehicles.[3] Employment in

[1]Employment data for 1982 do not include Jersey County, Illinois, as part of the St. Louis metropolitan area. In addition, Shelby County, Kentucky, and Harrison County, Indiana, are not included as part of the Louisville metropolitan area in the 1982 data. These exclusions cause the 1983 growth rates for these two metropolitan areas to be higher than if consistent definitions had been used.

[2]The construction contract data for all years are based on the 1982 definitions of the metropolitan areas. They therefore exclude several counties added to the metropolitan areas in 1983: the Little Rock area excludes Faulkner and Lonke counties in Arkansas; Louisville excludes Harrison County, Indiana, and Shelby County, Kentucky; St. Louis excludes Jersey County, Illinois.

[3]In order to maintain a consistent definition of manufacturing, Missouri Division of Employment data were adjusted for changes in industrial categories.

traditional industries like textile and apparel production, metals fabrication and shoe production continued to decline throughout the period. In 1986, manufacturing employment dropped slightly, with declines concentrated in the production of primary metals and chemicals.

Residential construction in the St. Louis area, which has grown rapidly since 1982 (chart 2A), grew particularly sharply in 1986. The real value of residential construction contracts grew 32.1 percent in 1986, twice the average of the four metropolitan areas. Nonresidential building grew more slowly. The real value of nonresidential construction contracts increased more slowly in St. Louis than in the other metropolitan areas since 1986. The value of nonresidential contracts was flat in 1986, following strong growth in 1985. Reflecting this growth, a large volume of office space was completed in 1986, resulting in a sharp rise in office vacancy rates in the St. Louis area.

Chart 1A

Growth of Nonfarm Employment in District Metropolitan Areas

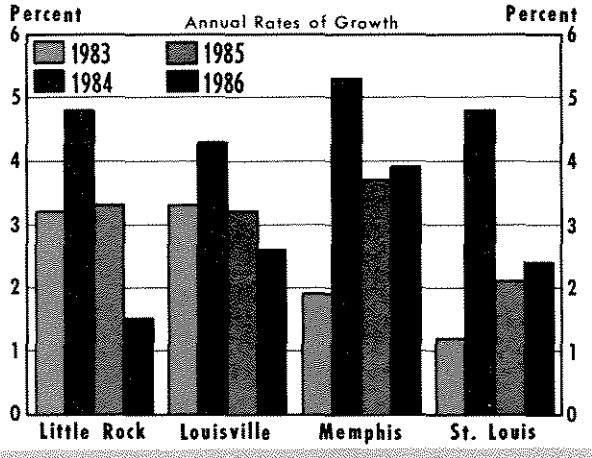
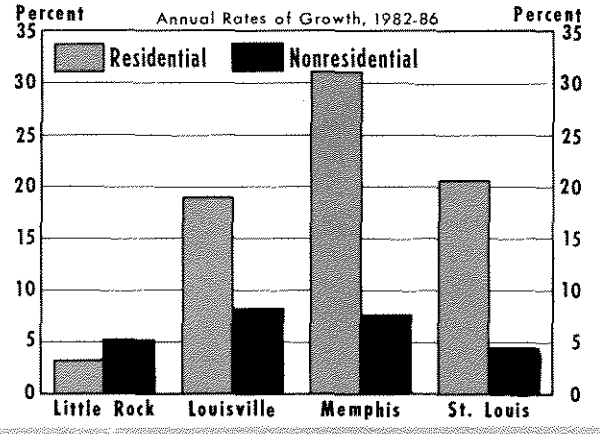


Chart 2A

Growth of Real Value of Construction Contracts in District Metropolitan Areas



Kentucky's three largest sectors: trades, services and manufacturing. Each has grown more slowly than in other District states since 1982. Manufacturing employment fell 1 percent in 1986, with losses concentrated in production of durable goods, including primary metals, nonelectrical machinery and transportation equipment.

One bright spot in the state economy was the strong job expansion in the financial industries. Between 1982 and 1986, employment in this sector grew at a 4.2 percent rate, leading the District states.

Construction employment in Kentucky also expanded moderately since 1984. The real value of construction contracts expanded slowly, however, increasing 2.6 percent in 1986 and at a 1.9 percent rate since 1982 (chart 3). Although nonresidential construction expanded slightly faster than the regional and national averages, residential and nonbuilding construction was substantially weaker in the state.

Missouri

Missouri's general economic growth matched the District's average in the first three years of the recovery period, with stronger construction activity offset by weakness in manufacturing. In 1986, a slowdown in most sectors of the economy resulted in slower growth of real income and nonfarm employment. Due, in part, to slow labor force growth, however, employment grew rapidly enough to allow the state's unemployment rate to drop steadily from 9.9 percent in 1983 to 6.1 percent in 1986 (chart 4).

Most of the District's 1986 decline in manufacturing jobs was concentrated in Missouri, where manufacturing employment fell 1.9 percent. The largest declines occurred in Missouri's fabricated metal and electrical and nonelectrical machinery industries.

The transportation equipment industry, which is particularly important to the state economy, was a source of strong growth in the first two years of the recovery; it has declined slightly in the last two years. In 1986, employment increases in aircraft manufacturing — spurred by defense spending — were offset by job losses in motor vehicle production. The decline in auto employment was produced by temporary layoffs for plant modifications and inventory reductions after slower-than-expected sales late in the year. Layoffs of auto assembly workers early in 1987 and the scheduled closing of an aging truck assembly plant in St. Louis by mid-1987 are likely to produce little job growth in this sector in 1987.

Defense contracts awarded in Missouri — recipient of two-thirds of the District's total — fell 27.8 percent in fiscal 1986, after adjusting for inflation. The $5.5 billion in contracts were primarily for the production of aircraft in the St. Louis area. Despite the recent decline, the backlog of uncompleted contracts and federal defense expenditures not yet spent imply continued high levels of defense activity for 1987.

Construction activity in Missouri has been strong since the trough of the last recession (chart 3). The real value of construction contracts grew at a 13.3 percent annual rate between 1982 and 1986. Following little growth in 1985, construction grew sharply last year in Missouri, led by gains in single-family home construction. In contrast to falling growth in the nation as a whole, nonresidential construction and multi-family residential construction in Missouri also grew vigorously in 1986.

Tennessee

Tennessee's economic growth has exceeded that of the District throughout the recovery. Tennessee's unemployment rate has fallen from 11.9 percent, highest in the District, in 1982, to 8.0 percent by 1986, second-lowest of the District states. As chart 1 shows, the state's real nonfarm income growth was particularly strong in 1986, reflecting its employment expansion (chart 2). Nonfarm employment grew by 3.3 percent in 1986, making Tennessee the District's fastest-growing state. The trades and services sectors, accounting for almost half of nonfarm employment, have been responsible for much of the job gains in recent years.

Employment growth in the state's manufacturing sector has mirrored the District average each year since 1983. Manufacturing employment dropped slightly in 1986; gains in food processing, fabricated metals, printing/publishing and transportation equipment were offset by losses in most other industrial sectors. Employment in the state's largest manufacturing industry, textile and apparel production, increased steadily the second half of 1986, but at year-end remained below the level of a year earlier.

Following sharp growth in 1983 and 1984, construction activity in Tennessee leveled off at relatively high levels in 1985 and 1986. Both residential and nonresidential construction growth have been weak in the past two years. In the residential sector, strong gains in single-family homebuilding were nullified by losses in the construction of multi-family units.

OUTLOOK FOR 1987

Projections from academic and government institutions in District states suggest that this year's economic growth will be similar to last year's. Table 1 presents the actual growth rates for 1986 and projections for 1987 for several economic indicators. For comparison, projections of national growth made by Wharton Econometrics are provided.

The growth of total personal income in the nation is expected to slow in 1987; in contrast, it is expected to accelerate in the District states. To some extent, the projected acceleration of District personal income growth simply reflects higher expected inflation. Kentucky's estimated income growth, however, represents a substantial increase over last year's growth.

In Arkansas and Kentucky, nonfarm payroll employment should grow more rapidly in 1987; in Missouri and Tennessee, the growth of nonfarm payroll employment is expected to slow. Projections of increased growth in the manufacturing sector are based partly on the anticipated effects of the dollar's declining exchange value since early 1985.

The most rapid deceleration of payroll employment is anticipated in Tennessee, where employment is projected to grow by 1.7 percent in 1987, following its 3.3 percent growth last year. Employment growth in the Tennessee wholesale/retail trades sector is expected to slow as consumer spending slows. Construction employment is also expected to expand more slowly next year in response to the Tax Reform Act of 1986.

Employment growth in Arkansas, Missouri and Tennessee should be sufficient to allow a slight drop in unemployment rates. Unemployment projections for Kentucky are not available.

Table 1

Projected Growth in Eighth District States

	1986	1987
Unemployment rate		
United States	7.0%	6.7%
Arkansas	8.8	8.4
Kentucky	9.2	N/A
Missouri	6.1	5.6
Tennessee	8.0	7.9
	Percent change[1]	
	1986	**1987**
Payroll employment		
United States	2.6%	2.6%
Arkansas	2.1	2.5
Kentucky [1]	2.3	3.4
Missouri	1.8	1.2
Tennessee	3.3	1.7
Manufacturing employment		
United States	−0.7%	N/A
Arkansas	1.2	2.3%
Kentucky	−0.4	N/A
Missouri	−1.9	0.2
Tennessee	−0.1	0.4
Personal income (current dollars)		
United States	5.3%	5.0%
Arkansas	3.4	6.3
Kentucky	2.2	6.8
Missouri	3.9	5.8
Tennessee	6.1	6.3

[1]Percent changes compare entire year with previous year, except for Kentucky figures which reflect fourth quarter to fourth quarter growth.

SOURCES: United States: Wharton *Quarterly Model Outlook*, March 1987; Arkansas: University of Arkansas at Little Rock, *Arkansas Economic Outlook*, January 1987; Kentucky: Kentucky Revenue Cabinet; Missouri: College of Business and Public Administration, University of Missouri-Columbia, *Missouri Economic Indicators*; 4th Quarter, 1986; Tennessee: Center for Business and Economic Research, the University of Tennessee, Knoxville, *On the State Economic Outlook*.

CONCLUSION

The District's economic growth has been similar to the nation's in 1986 and throughout the current recovery period, with sharp 1984 gains followed by two years of moderate growth. Income and employment growth generally has been strongest in Tennessee among the District states, while the expansion of construction activity has been concentrated in Missouri and Tennessee. Projections of economic growth in District states suggest that the expansion will continue, making 1987 the fifth successive year of growth for the District economy.

REFERENCES

Ott, Mack. "The Increasing Share of Services in U.S. Output — A Long-Run View," this *Review*, forthcoming, 1987.

Tatom, John A. "Why Has Manufacturing Employment Declined?" this *Review* (December 1986), pp. 15–25.