
The Tenth District's Expanding Service Sector

By *Tim R. Smith*

The proliferation of service jobs in the nation has received much attention. While the manufacturing sector has suffered substantial job losses during the current business cycle, job growth in services has been brisk. Because the service sector comprises a diverse collection of service industries, there is considerable confusion about what kinds of jobs the service industries are creating and what factors will affect the outlook for the service sector.

In the Tenth District, service industry jobs have grown even faster than in the nation. As the service sector becomes a bigger share of the work force, its performance will increasingly influence the outlook for the region's economy. The service sector already employs more workers than any other economic sector in the district, yet little is known about the individual industries that make up this sector.

This article explores the dimensions of the district's service sector and considers the outlook for its key industries. The first section defines the service sector and establishes its importance in the region's economy. The second section reviews service industries in the district and compares the service industry profiles of the individual district

states. The final section considers how the outlook for the district's key service industries, health care and business services, will be shaped by an aging population, health care reform, and technological change.

HOW IMPORTANT ARE SERVICES TO THE DISTRICT?

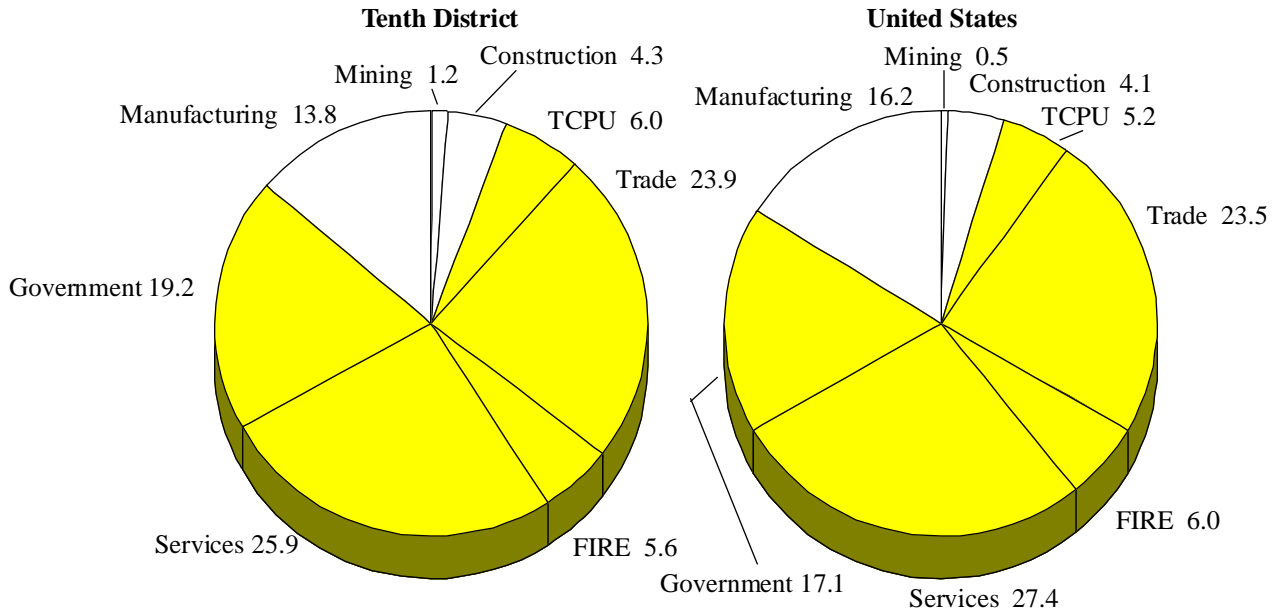
To understand the importance of services to the district economy it is helpful to answer three key questions: What industries make up the service sector, how big is the service sector relative to other parts of the region's economy, and how fast has the service sector been growing?¹

What is the service sector?

There is a great deal of confusion about what the service sector is, resulting partly from the intangible nature of services. Unlike goods such as food and autos, services are intangible and usually consumed at the time they are produced. Mostly, however, the confusion stems from the fact that other sectors of the economy also provide services. Commercial banks, for instance, provide many financial services. But as an integral part of the finance sector, the Commerce Department includes these services

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Chart 1
Employment Shares, 1993
 Percent of total nonagricultural employment



Notes: TCPU represents transportation, communications, and public utilities. Trade represents wholesale and retail trade. FIRE represents finance, insurance, and real estate.
 Source: U.S. Department of Labor.

in the finance, insurance, and real estate category of the economy. Other sectors of the economy providing services but listed as separate categories include the following: transportation, communications, and public utilities; wholesale and retail trade; and government. The major sectors of the economy are shown in Chart 1 with the shaded area indicating the service-producing sectors.

Throughout this article, the “service sector” will refer to consumer and producer service industries not classified in any of the other service-producing sectors. Bigger than any other service-producing sector, this group of industries is sometimes referred to as “narrow services” or “other services.” Table 1 lists all the industries that constitute such consumer and producer services.² Consumer services include

a broad range of major industries: hotels and other lodging places; personal services; auto repair and parking; motion pictures; amusement and recreation; health care; education; social services; and membership organizations. Producer services include business, legal, and engineering and management services.

A common fear across the nation is that high-paying manufacturing jobs are being supplanted by low-paying service jobs. However, many industries in the service sector pay high wages (Table 2). While hourly earnings in some industries such as personal services, social services, and hotels and other lodging places are well below the average for all nonagricultural jobs, earnings in such other industries as legal services, engineering and man-

Table 1
The Service Sector

Consumer services	
<i>Health services</i>	<i>Membership organizations</i>
Offices and clinics of medical doctors	Business associations
Offices and clinics of dentists	Professional organizations
Offices of osteopathic physicians	Labor organizations
Offices of other health practitioners	Civic and social associations
Nursing and personal care facilities	Political organizations
Hospitals	Religious organizations
Medical and dental laboratories	<i>Hotels and other lodging places</i>
Home health care services	Hotels and motels
Health and allied services, NEC	Rooming and boarding houses
<i>Social services</i>	Camps and recreational vehicle parks
Individual and family services	Membership-basis organization hotels
Job training and related services	<i>Personal services</i>
Child day care services	Laundry, cleaning, and garment services
Residential care	Photographic studios, portrait
Social services, NEC	Beauty shops
<i>Amusement and recreation services</i>	Barber shops
Dance studios, schools, and halls	Shoe repair and shoeshine parlors
Producers, orchestras, entertainers	Funeral service and crematories
Bowling centers	Miscellaneous personal services
Commercial sports	<i>Educational services</i>
Misc. amusement, recreation services	Elementary and secondary schools
<i>Motion pictures</i>	Colleges and universities
Motion picture production and services	Libraries
Motion picture distribution and services	Vocational schools
Motion picture theaters	Schools and educational services, NEC
Video tape rental	<i>Auto repair, services, and parking</i>
	Automotive rentals, no drivers
	Automobile parking
	Automotive repair shops
	Automotive services, except repair
Producer services	
<i>Business services</i>	<i>Engineering and management services</i>
Advertising	Engineering and architecture
Credit reporting and collection	Accounting, auditing, and bookkeeping
Mailing, reproduction, stenographic	Research and testing services
Services to buildings	Management and public relations
Misc. equipment rental and leasing	<i>Legal services</i>
Personnel supply services	Legal services
Computer and data processing services	
Miscellaneous business services	
Membership organizations, NEC	

NEC: Not elsewhere classified

Table 2
1993 Average Hourly Earnings, United States

<u>Industry</u>	<u>Dollars per hour</u>
Total Nonagricultural	10.83
Manufacturing	11.74
Mining	14.61
Construction	14.36
Transportation and Public Utilities	13.63
Wholesale Trade	11.72
Retail Trade	7.29
Finance, insurance, and real estate	11.35
Services	10.79
<i>Consumer services</i>	
Health services	11.78
Social services	7.86
Amusement and recreational services, including motion pictures	8.43
Membership organizations**	14.95
Hotels and other lodging places	7.57
Personal services*	7.51
Educational services	n.a.
Auto repair, services, and parking	9.33
<i>Producer services</i>	
Business services	10.13
Engineering & management services	15.01
Legal services	15.22

* Professional organizations

** Miscellaneous personal services

Source: U.S. Department of Labor

agement services, and membership organizations are far above average. Moreover, hourly earnings in these service industries exceed earnings in manufacturing and even exceed earnings in the high-paying construction and mining sectors.³

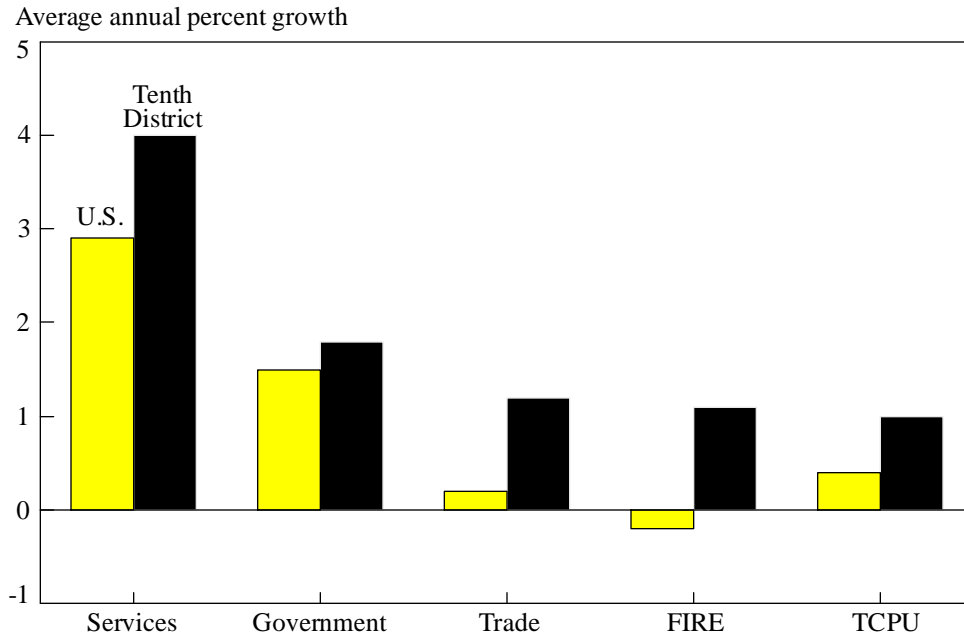
How big is the service sector?

The service sector employs more workers than any other economic sector in the district. Although accounting for a slightly smaller share of employ-

ment in the district than in the nation, the service sector employs about 26 percent of the region's work force (Chart 1). Moreover, the service sector generates the largest share of earnings in the region, accounting for 22.8 percent of total non-farm wages and salaries in 1992, the most recent year for which data are available.⁴

The importance of services varies only moderately across individual district states. Colorado has the highest concentration of service jobs at 28 percent of the state's work force. The shares of employment accounted for by services in Missouri and

Chart 2
Employment Growth in Service-Producing Sectors
 1989-93



Note: See note for Chart 1.
 Source: U.S. Department of Labor.

New Mexico are slightly above the district average of 26 percent, while the shares in Kansas, Nebraska, and Oklahoma are slightly below the district average. Wyoming, heavily dependent on its natural resources, has the lowest concentration of service jobs with only 20 percent of its work force employed in service businesses. The share of wage and salary earnings accounted for by services varies somewhat more across states, but the ranking is nearly the same.

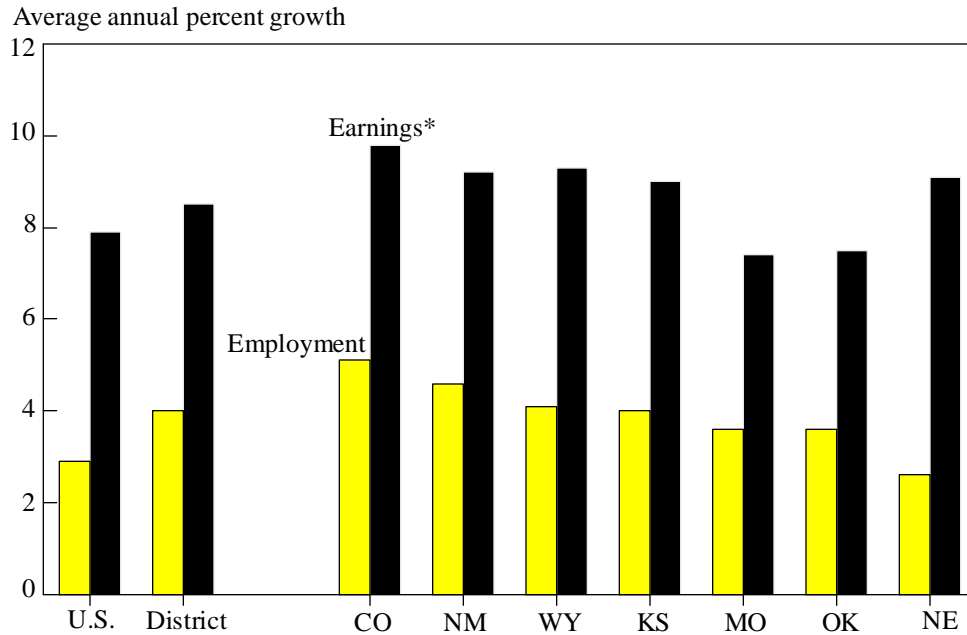
How fast is the service sector growing?

Not only is the service sector a major force in the district economy, but it has also been a rapidly

growing force during the current business cycle. The period from 1989 to 1993 provides a good time frame for measuring recent growth in the service sector because it captures both the recession and expansion phases of the business cycle. The service sector has been outpacing all of the other service-producing sectors, posting annual job growth of 4 percent from 1989 to 1993 (Chart 2).⁵ Moreover, the Tenth District's service sector has been adding jobs at a faster pace than the nation. Growth in wage and salary earnings has also been particularly strong.⁶

Such rapid growth has caused the service sector to gain an increasing share of the region's economic activity. Services' share of total employment grew from 23.8 percent in 1989 to 25.9 percent in 1993. The share of earnings generated by the

Chart 3
Employment and Earnings Growth in Services
 1989-93



* Earnings growth for period 1989-92.

Source: U.S. Department of Labor and U.S. Department of Commerce.

service sector grew from 21.0 in 1989 to 22.8 percent in 1993.⁷

Growth in services has been strong in all district states. Both service employment growth and earnings growth have been strongest in the mountain states (Chart 3). In Colorado, service jobs expanded 5.1 percent per year from 1989 to 1993, while earnings expanded almost 10 percent per year. Service employment and income growth in New Mexico, Wyoming, and Kansas followed closely behind. The service sectors in Missouri and Oklahoma recorded income and earnings growth slightly below the district averages, while Nebraska posted strong income growth but below-average employment growth.

A PROFILE OF THE DISTRICT'S SERVICE SECTOR

An important step in forming an outlook for the service sector is to identify which industries are most vital to the region's economy. While it is no secret that the service sector is large and growing overall, its mix of individual industries is not well understood.

The district's key service industries

One way to measure the importance of an industry within the service sector is to look at its share of employment. This measure is especially

Table 3
Service Industry Mix and Growth in the Tenth District

Industry	Employment Shares, 1993 (percent of services)		Employment Growth (average annual rate, 1989-93)	
	U.S.	District	U.S.	District
Services	100.0	100.0	2.9	4.0
Consumer Services	65.8	64.9*	3.1	3.6*
Health services	29.4	30.0*	4.4	4.1*
Social services	6.9	6.9*	5.9	8.5*
Amusement and recreational services, including motion pictures	5.3	5.6*	3.3	4.0*
Membership organizations	6.5	5.5*	1.7	1.8*
Hotels and other lodging places	5.2	5.4*	-0.3	0.6*
Personal services	3.7	4.1*	0.5	1.5*
Educational services	5.8	3.9*	1.5	1.9*
Auto repair, services, and parking	3.1	3.5*	1.2	2.3*
Producer Services	30.5	28.9*	2.9	4.4*
Business services	19.0	18.6*	3.9	5.4*
Engineering and management services	8.4	7.6*	1.4	3.1*
Legal services	3.1	2.6*	1.4	0.8*
Other	3.7	6.3*	-0.1	6.7*

* Estimates derived from ES-202 data.

Note: Totals may not add due to rounding.

appropriate given the rising concern about the effect of rapid growth of service jobs on the region's economy.

As in the nation, two key industries account for most of the jobs in the district's narrow service sector (Table 3).⁸ Health services account for 30 percent of the region's service jobs, ranking highest among service industries. Business services make up the second largest service industry and account for nearly 19 percent of the district's service jobs. The other nine service industries in the sector are much less important, each with employment shares

of less than 10 percent.

Health and business services are both broad industry categories encompassing large numbers of diverse activities (Table 1). Health services include medical and dental offices; nursing and personal care facilities; hospitals; home health care services; and several related industries. Business services include advertising; mailing, reproduction, and stenographic services; building maintenance; equipment leasing; personnel supply services; and computer and data processing services (which include

programming, prepackaged software, systems design, data processing, information retrieval, and computer maintenance and repair).

Not only are the health and business services industries big, they are also among the fastest-growing industries of the sector (Table 3). Employment in business services grew 5.4 percent annually from 1989 to 1993, the second-fastest pace among district service industries.⁹ And health services, the district's largest service industry, grew at the third-fastest pace of 4.1 percent.

The mix of service industries in district states

The mix of service industries differs little across the individual district states. Table 4 shows the share of employment held by each of the 11 main service industries in each district state. In terms of employment, the health services industry is the largest service industry in all seven district states. The second largest industry in most district states is business services.

In New Mexico, the second largest share of employment is accounted for by engineering and management services. This category is large because it includes research organizations and testing laboratories—service businesses that receive a considerable volume of contracts from the state's Sandia and Los Alamos national laboratories.

In Wyoming, hotels and other lodging places account for a larger share of employment than business services. This category is large because of the state's important tourism industry, which draws on the popularity of Yellowstone and Teton National Parks and mountain skiing.

In Colorado, as in the other mountain states in the region, the share of service jobs in hotels and other lodging places is higher than the district average. Colorado's share of service jobs in engineering and management services is also larger than average, probably due to its concentration of high-technology manufacturing.

THE OUTLOOK FOR THE DISTRICT'S SERVICE SECTOR

Since the profile of the district's service sector closely matches that of the nation, the outlook for the service sector in the district is likely to resemble that of the nation. Moreover, with a similar service sector profile across district states, the outlook is similar from state to state. In all cases, health and business services are likely to be the driving forces behind prospective growth in the service sector.

There is little to suggest that the rapid growth in the district's service sector will diminish. As the nation's economic expansion proceeds, growth in the region and the nation will boost demand for services by both consumers and producers.¹⁰ Moreover, the region's two biggest service industries, health and business services, have solid outlooks.¹¹

The outlook for health services

Two factors promise to help keep the health services industry one of the fastest-growing service industries. First, the number of elderly continues to grow. Second, health care reform appears to be on the horizon. As a result, possible extension of health care benefits to a larger share of the population may stimulate growth of health services.

The elderly are a group of intensive consumers of health services whose numbers are increasing for two reasons. First, larger numbers of the population are entering this cohort. Second, those already among the ranks of the elderly are living longer. The share of the population aged 75 years or more has already increased and is expected to continue increasing modestly over the next ten years.¹² Moreover, the share of the population accounted for by this age group is larger in the district than in the nation. These factors should add momentum to the expansion of home care services, the fastest growing component of the health services industry (U.S. Department of Commerce). Also expected to grow are nursing and personal care facilities.

Table 4
Service Industry Mix in the Tenth District
 (Percent of services)

Industry	U.S.	District	Colorado	Kansas	Missouri	Nebraska	New Mexico	Oklahoma	Wyoming
Services	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Consumer Services	65.8	64.9*	59.5*	66.9*	72.1	59.0*	61.7*	59.9*	75.0*
Health services	29.4	30.0*	23.5	37.0*	33.4	31.3	24.8	30.2*	20.4
Social services	6.9	6.9*	5.7	7.4*	6.9	6.2	8.0	7.6*	10.1
Amusement and recreational services, including motion pictures	5.3	5.6*	8.0	5.0*	5.3	3.1	4.0*	5.2*	7.1
Membership organizations	6.5	5.5*	5.2	3.4*	7.8	4.9	7.1	2.3*	8.1*
Hotels and other lodging places	5.2	5.4*	7.1	3.9*	4.7	3.8	7.6	3.3*	18.9
Personal services	3.7	4.1*	3.7	4.8*	4.1	4.2**	3.4	4.0*	4.3
Educational services	5.8	3.9*	3.0	2.4*	6.6	.4	3.9	3.5	.6*
Auto repair, services, and parking	3.1	3.5*	3.2*	3.2*	3.3	5.1	2.9*	3.9*	5.5
Producer Services	30.5	28.9*	36.4	29.6*	24.9	32.3	33.9	26.2*	19.4
Business services	19.0	18.6*	23.0	18.4*	16.7	23.5	15.2	16.3*	10.7
Engineering and management services	8.4	7.6*	10.6	8.8*	5.9	6.7	15.8	6.9*	6.1
Legal services	3.1	2.6*	2.9	2.5*	2.4	2.1	2.9	3.0*	2.6
Other	3.7	6.3*	4.1	3.4*	3.0	8.7	4.4	13.9*	5.7

* Estimates derived from ES-202 data.

** Estimates are derived from ES-202 data and do not include colleges and universities

Note: Totals may not add due to rounding.

Source: U.S. Department of Labor, Kansas

Health care reform may give another shot in the arm to the region's largest service industry. While it is too early to tell the precise shape of health care reform legislation, benefits are likely to be extended to a larger share of the population. With a bigger base of health care consumers, the size of the health services industry is expected to grow considerably. Mounting pressure to reduce the cost of extending benefits to more people may favor health care delivery systems, such as home care and managed care (health maintenance and preferred provider organizations). Already, employers and private insurers have expanded the use of managed care networks in an effort to contain health care costs.

The outlook for business services

The other force behind an expanding service sector will be rapid growth in business services. This growth will stem from two sources. First, restructuring in the manufacturing sector will continue to cause production activities to be decoupled from related service activities. As a result of this decoupling, or "vertical disintegration," services once provided in house are increasingly purchased from outside vendors. Second, innovations in service provision are giving rise to entirely new services in the marketplace.¹³

The most common explanation offered for continuing rapid growth in business services and other producer services is the "outsourcing" explanation. This explanation holds that as manufacturers restructure to reduce costs, they take advantage of scale economies in business services by purchasing these functions from firms that specialize in service production, instead of providing them in house. For example, a manufacturer may reduce costs by purchasing accounting services from a firm that specializes in accounting, eliminating the need for the manufacturer to maintain its own accounting department.

In addition to slashing costs by exploiting scale economies of specialized service firms, a shift to

flexible manufacturing may also stimulate demand for services provided from outside service providers (Coffey and Bailly). Over the past decade, many manufacturers have moved from large "batch" processes to smaller "flexible" processes to satisfy rapidly changing market demands. As a result, service requirements of manufacturers are becoming more complex and costly to supply in house. Thus, many manufacturers are turning to outside service vendors.

The growth in business services from outsourcing will probably lose some of its momentum as the restructuring of the manufacturing sector becomes more complete. As this happens, innovation-based growth in business services promises to sustain solid employment gains in this important producer service industry. A good example of innovation-based growth in business services is the packaged computer software industry. A large and vital service industry has sprouted around development of software to help businesses perform a wide variety of functions, such as word processing and data management.

Ongoing developments in information technology will no doubt continue to fuel development of new ways of conducting business and new types of business services. Additional developments in packaged software, multimedia products, artificial intelligence, and computer-aided design, manufacturing, and engineering are expected to drive growth in business services in the years ahead (Department of Commerce).

SUMMARY AND CONCLUSIONS

The service sector provides more jobs in the Tenth District than any other economic sector. The sector comprises a large and complex collection of industries, and the distribution of these industries is much the same in the nation, the district, and individual district states. Two industries dominate the service sector. Health care and business services account for the lion's share of service jobs and have

been the fastest-growing service industries during the current business cycle.

Continued growth in the regional and national economies is expected to sustain growth in service employment in the short term. In the long term, several developments in the two most important service industries are likely to ensure continued growth. An aging population and extension of health care benefits to a larger share of the population point toward a rapid pace of growth in health services jobs in the years ahead. Additional restructuring of manufacturing firms and innovations in information technology will help boost job growth in business services.

Despite fears of a proliferation of low-paying service jobs, earnings growth in the service sector should remain strong. Jobs in health and business services are among the highest-paying service jobs. Moreover, many of these service jobs pay as much

as manufacturing jobs.

Continued growth in its single largest sector bodes well for the district economy. The economic benefits of an expanding service sector will be enhanced by the prospect of selling services to buyers outside the district. Exports of services to customers outside the region are important because they provide a net increase in income to the region and generate additional economic activity within the region when the income is spent. Although most health services are consumed by local residents, the health care industry has some modest potential for exporting services to other regions either by attracting patients from outside the district or by exporting medical technology developed within the district. The prospects for the district economy are particularly enhanced by the favorable outlook for business services. These producer services have great potential to be exported to customers in other regions.

ENDNOTES

¹ The Tenth District comprises Colorado, Kansas, Nebraska, Oklahoma, Wyoming, western Missouri, and northern New Mexico. Because most of the employment and earnings data used in this article are available only at the state level, this article looks at the region comprising the seven district states (often referred to as the district or the region in this article) instead of the slightly smaller region defined by the Tenth District boundaries.

² Assignment of industries to consumer services and producer services differs from study to study. For example, some analysts exclude legal services from producer services because a significant number of these services are purchased by consumers.

³ Some recent studies have even suggested that regions would enhance their growth prospects by emphasizing services instead of manufacturing in their economic development strategies (Smith and Fox, Testa, Schmidt).

⁴ By contrast, the manufacturing sector accounted for only 17.1 percent of earnings in 1992.

⁵ The employment data used in this article count the number of service jobs and, therefore, are not adjusted for part-time employment. To the extent that recent cost-cutting measures

by manufacturing and service companies have increased the number of part-time jobs, the impact of job growth on the region's economy will be diluted even if the growth occurs in high-wage industries.

⁶ In addition to strong employment growth, the narrow service sector has had the strongest income growth among the service-producing sectors, with total non-farm wage and salary earnings advancing at an annual rate of 8.5 percent between 1989 and 1992. (The most recent year for which earnings data are available is 1992.)

⁷ In the nation, the share of employment accounted for by the service sector increased from 24.9 percent in 1989 to 27.4 percent in 1993. Because the overall district economy was growing faster than the national economy during this period, the increase in the relative size of the district's service sector, in terms of both employment and earnings, was slightly smaller than in the nation.

⁸ This section uses three-digit employment data to describe the reliance of district states on various service industries. In some cases, where data were unavailable from the U.S. Department of Labor source, estimates were made using ES-202 establishment data obtained from state reporting agencies. Although uniform data were available for most

states and industries, the profile of the district's service industries presented in this article should be viewed as an approximation based on limited data due to the inclusion of estimates for some states and industries.

⁹ Although the social services industry—which includes job training and day care—added jobs at a faster pace between 1989 and 1993, this industry accounts for only about 7 percent of total service jobs.

¹⁰ Although this article focuses on the recent growth in the service sector during the current business cycle, the expansion of the service sector is not a new phenomenon. The service sector's share of employment more than doubled over the past 30 years. Thus, the service sector dominates the labor force in the 1990s, while manufacturing dominated the labor force in the 1960s. This longer term shift from manufacturing jobs to service jobs has been attributed by some analysts to productivity growth in manufacturing (Beeson and Bryan, Groshen). Just as increased productivity in agriculture led to a shift toward consumption and

employment in manufacturing during the early part of this century, an increase in manufacturing productivity has made the population more affluent and shifted consumption and employment toward services.

¹¹ The discussion of the outlook for the district's key service industries is based in part on the U.S. Department of Commerce outlook for these industries (U.S. Department of Commerce).

¹² The share of the district's population aged 75 and over increased from 4.8 percent in 1980 to 5.7 percent in 1993 and is projected by the U.S. Department of Commerce to increase to 6.3 percent by the year 2005.

¹³ Other factors such as transaction costs or increased government regulation may also affect the growth of producer services. See Beyers and Lindahl for a complete discussion of the factors favoring growth in producer services.

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