

Employment Growth in the Rural West From 1985 to 1995 Outpaced the Nation

Employment growth was much stronger in the rural West between 1985 and 1995 than it was in all U.S. rural areas and in the United States as a whole. Although the bulk of this job growth was in services, the rural West gained manufacturing jobs, as was the case elsewhere in the rural United States. Counties adjacent to metro areas grew more rapidly than those not adjacent, with employment gains led by health services, producer services, and retailing.

Job growth in the rural West outpaced U.S. job growth in 1985-95 by almost 60 percent. The pace of growth was more rapid in counties adjacent to metro counties than in more remote counties not adjacent to metro areas. Almost all job growth in the West occurred in service industries, led by retailing, health services, and producer services. Employment growth in producer services was especially strong in adjacent counties. Manufacturing employment in the rural West grew between 1985 and 1995, while nationally and in Western metro areas it declined. However, within the West, the loss of manufacturing employment occurred primarily in Los Angeles and San Francisco, while many other metro areas in the West had considerable growth.

Employment had a strong tendency to grow in rural and metro territory within each of the Bureau of Economic Analysis (BEA) Economic Areas in the West compared with total U.S. employment. (BEA Economic Areas are primarily urban-centered with rural territory functionally tied to their urban centers by commuting patterns or newspaper readership; see "Data Sources and Methodology.") Except in San Francisco and Los Angeles, employment growth in metro as well as adjacent *and* nonadjacent nonmetro territory has been at rates above the national average.

With the population resurgence in rural America in the 1990's, the need to document related changes in the economies of rural areas is heightened. This article describes these trends for 1985-95—a time frame long enough to determine which sectors contributed most to the current accelerated job growth in the West. While this

article does not fully cover sources of employment growth and change, it does point to the key sectors that rural western policymakers, regional development specialists, and scholars will want to focus on as they consider the development experience in their region. This article also demonstrates that the regional development experience of much of the rural West is intimately linked with trends in the metro West (which still captured most employment growth), suggesting that rural policymakers must keep apprised of nearby metro development.

Job Growth in Rural West Has Expanded More Rapidly Than in the Urban West and the Nation

Employment growth in the West in recent years has been dominated by service industries. Over 1985-95, the region added 4.3 million private nonagricultural jobs; 97 percent of these jobs were in service industries. This trend was prevalent in both metro and nonmetro territory in the West. Moreover, the rate of growth in the West has outpaced national performance in both metro and nonmetro territory (table 1). Total employment growth in the West exceeded the national growth rate over the study period by about 4 percentage points, 27.5 percent in the West versus 23.4 percent nationally. The relatively rapid growth of the rural West occurred in both adjacent and nonadjacent counties. Employment growth was particularly rapid in counties adjacent to metro counties.

Manufacturing employment declined nationally by 5 percent between 1985 and 1995, while in the West, it declined by 2 percent. However, job growth in manufacturing continued in nonmetro America. Nonmetro manufacturing employment grew faster for the West than for the Nation. Manufacturing employment growth in the West outpaced

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that for the Nation in adjacent counties but lagged that for the Nation in nonadjacent counties (table 1).

A growing body of evidence suggests that producer services, like manufacturing, underlie the economic base of regions. The West, like the Nation as a whole, enjoyed growth in producer services at rates nearly double those for overall job creation. Western growth was especially rapid in adjacent nonmetro counties, but lagged the national rate in nonadjacent counties.

Employment change in industries other than manufacturing and producer services paralleled the trend of total employment. Employment growth in nonmetro counties in the West was relatively strong, with the growth rate in

nonadjacent counties, unlike the rate for manufacturing and producer services, outpacing the national growth rate.

Employment in the West grew from 15.7 million to 20 million persons between 1985 and 1995, expanding by 3.8 million jobs in metro areas and over half a million jobs in rural areas. Individual industries contributed to this growth in differing ways in metro and nonmetro parts of the West.

Within the extractive/transformational sector, metro losses in manufacturing were more or less offset by gains in construction and agricultural services (table 2). In contrast, nonmetro areas not only had relatively strong percentage

Table 1
Percentage change in employment, 1985-95
Growth in the West has outpaced the Nation in metro and nonmetro areas

Area	Total		Manufacturing		Producer services		Other	
	U.S.	West	U.S.	West	U.S.	West	U.S.	West
	Percent							
Total	23.4	27.5	-5.0	-2.0	45.0	46.5	28.9	31.9
Metro	22.9	26.6	-9.0	-3.3	45.2	46.7	28.4	30.7
Nonmetro	26.8	36.9	12.3	14.6	42.6	42.9	31.8	41.1
Adjacent	26.9	44.5	9.8	18.1	48.1	61.0	34.1	51.3
Nonadjacent	26.8	32.5	16.2	11.0	39.9	33.8	30.8	36.0

Source: U.S. County Business Patterns, Department of Commerce.

Table 2
U.S. West employment change: metro and nonmetro counties, 1985-95
Adjacent and nonadjacent rural counties exhibit strong growth in health, producer, and retail services, as well as in construction

Sector	Metro change		Adjacent change		Nonadjacent change	
	1,000	Percent	1,000	Percent	1,000	Percent
Extractive/transformational:						
Agricultural	56.4	56.7	4.3	66.5	6.5	89.5
Mining	-40.7	-43.5	-2.6	-20.1	-16.8	-24.7
Construction	111.9	12.7	23.4	86.3	32.1	62.8
Manufacturing	-99.0	-3.3	22.4	18.1	13.0	11.0
Distributive:						
Transportation	283.1	27.8	10.0	38.3	9.5	17.1
Wholesale	508.5	26.7	19.5	36.5	21.2	19.0
Retail	731.1	24.5	67.0	48.0	96.5	39.6
Producer services:						
FIRE ¹	169.6	15.2	7.9	30.1	7.1	13.9
Business/professional	901.9	79.7	19.2	127.9	20.8	62.1
Legal	54.3	39.3	0.8	27.8	1.6	25.4
Not-for-profit:						
Health	1,227.8	46.7	32.8	61.0	36.1	33.8
Education	683.7	67.8	38.2	90.6	60.3	95.1
Social	89.9	41.2	2.9	56.2	5.9	84.3
Consumer services	174.2	83.5	9.8	92.1	15.3	90.2
Unclassified	947.8	66.0	50.9	91.1	81.4	87.8

¹FIRE = Finance, insurance, real estate.

Source: U.S. County Business Patterns, Department of Commerce.

growth in manufacturing, but also rapid expansion in construction and agricultural services. The rapid growth in construction employment follows from the rapid population growth in the rural West and its need for new housing, commercial structures, and public sector facilities. The manufacturing spurt occurred even in nonmetro parts of the West with strong dependence on timber, despite a downturn in public timber supplies.

Retail service growth reflects overall employment growth, while nonmetro distributive services grew at a rate below their metro growth rates. In contrast, producer services exploded (up 128 percent) in adjacent counties in the business and professional services, and grew very strongly in nonadjacent counties. Producer services jobs created in the nonmetro West represented less than 10 percent of total nonmetro job gain, while one-third of job creation in the metro West was in producer services.

Health services were the source of most new not-for-profit jobs, expanding rapidly in metro and nonmetro areas. Educational and social services also grew rapidly, although the number of jobs created was much less than in health services. Consumer services also grew at a higher-than-average rate in metro and nonmetro areas (table 2).

In the aggregate, services accounted for all the net job growth in the metro West and for 84 percent of total new jobs in the nonmetro West. These statistics are based on the coverage included in U.S. County Business Patterns, and exclude jobs created by proprietors, public sector jobs, and jobs within agriculture. The inclusion of these sectors would significantly increase the number of service workers.

The growth of services in the nonmetro West has been fueled partly by the migration of new residents who have demanded consumer services such as retailing, health, and utilities. Newcomers are spending more nonearnings

income (transfer payments and dividends, royalties, pensions, and rents) on these services. The importance of nonearned sources of income in the economic base of Western communities has grown (see "Quality of Life, Nontraditional Income, and Economic Growth" in this issue), and one consequence of households spending this income is the growing dominance of service employment in the rural West. However, these services also have "Lone Eagles" and "High-Fliers"—firms that are selling their services to distant clients. These include producer services, tourism/recreation, and marketing (such as wholesalers of agricultural commodities and transporters of agricultural, timber, or mining products).

Rural Employment Growth in the West Widespread

Employment growth has varied dramatically within different subregions of the West. A shift-share analysis was conducted to summarize the performance of BEA Economic Areas in the West relative to the Nation, and to simultaneously capture trends in metro, adjacent, and nonadjacent counties within these areas. Three measures of job redistribution were calculated: net shift, industry shift, and competitive shift.

The *net shift* is the difference between growth in a region and growth expected given the national rate (23.4 percent in 1985-95, see table 1). Thus, the faster employment growth in the West than in the rest of the Nation led to a net shift of 644,000 jobs into the West over 1985-95. However, the aggregate net shift was almost 1.5 million jobs, roughly one-third of total employment growth. The difference derives from the slow growth of metro Los Angeles and San Francisco (table 3), which along with the relatively slow growth outside the West accounted for almost 97 percent of the negative net shift. In contrast, most BEA areas in the West grew faster than the national average, exhibiting positive net shifts.

Table 3

Shift-share analysis summary

While the West as a whole added 644,000 more jobs than its share of 1985 employment, the two largest metro areas in the West had very slow employment growth

Item	Net shift	Industry mix shift	Competitive shift
		Number of jobs	
Total +/- shift	1,464,438	233,100	1,334,905
Principal contributors to the negative shift:			
U.S. outside West	-644,405	-178,528	-465,966
Los Angeles metro	-560,822	27,992	-588,814
San Francisco metro	-208,791	36,851	-245,642
Percent of total negative shift	96.6	NA	97.4

NA (not applicable) here because there was no negative shift in the case of industry mix.

Source: U.S. County Business Patterns, Department of Commerce.

The net shift measure is based on the simple national growth rate. A more useful *industry mix shift* can be obtained by taking into account the varying rates of growth of specific industries at the national level. The actual pattern of growth in a given BEA region's metro, adjacent, or nonadjacent territory, when compared with the change expected using national growth rates for specific industries, leads to the *competitive shift* measure. The competitive shift describes how a region's economy actually fared, versus the share-based perspective of net and industry mix shifts. The Los Angeles and San Francisco metro areas that accounted for most of the negative net shifts in the West had a mix of industries that were growing more rapidly than the national average, resulting in a positive industry mix shift.

Competitive shifts in the West were mostly positive within both metro and nonmetro territory. One BEA Economic Area (San Diego) has no nonmetro territory—and it had a positive competitive shift. Seven BEA Economic Areas in the West do not have any counties designated as metro (Hobbs, NM/TX; Pendleton, OR/WA; Flagstaff, AZ/UT; Farmington, CO/NM; Missoula, MT; Idaho Falls, ID/WY; and Twin Falls, ID). The first two of these regions had negative competitive shifts, while the other five exhibited positive competitive shifts.

The most prevalent pattern is for nonmetro territory within each BEA Economic Area to mirror performance of the metro core. Only two regions have negative competitive shifts in both metro and nonmetro territory—Casper, WY/ID/UT, and Great Falls, MT—and only two regions had both nonmetro territory with a negative competitive shift and a positive competitive shift in metro territory (Pueblo, CO/NM, and El Paso, TX/NM). The regions with negative competitive shifts in nonmetro areas are located primarily on the western edge of the Great Plains. Elsewhere across the West, employment growth in nonmetro areas was relatively rapid, leading to positive competitive shifts. Even in Los Angeles and San Francisco, with large negative competitive shifts, overall nonmetro territory had a relatively strong growth rate, leading to positive competitive shifts. From the Rocky Mountains to the Pacific Ocean and from Canada to Mexico, positive competitive shifts in nonmetro areas prevail. The only exception is Pendleton, OR/WA.

Employment growth in both adjacent and nonadjacent rural territory in the West was above the national growth rate. Accordingly, adjacent and nonadjacent components of the BEA Economic Areas show a widespread pattern of positive competitive shifts. From Canada to Mexico, the trend west of the Great Plains is fairly consistent—both adjacent and nonadjacent territory grew relatively rapidly. Only in Eugene-Springfield, OR/CA, and Pendleton, OR/WA, were there negative competitive shifts, led in both regions by poor performance in manufacturing and health services. The sprawling distances between metro

cores and nonadjacent nonmetro regions in the West bring into question their functional connectivity. The relatively rapid growth of adjacent nonmetro territory in the rural West may be spillover from metro areas, but this seems less likely for nonadjacent parts of BEA Economic Areas. Instead, growth here has been driven by a surge in health services, producer services, consumer services, retailing, construction, and nonearnings income (table 2).

Key Growth Sectors Free Remote Areas From Metro Reliance

The leading sectors contributing to the competitive shifts—whether positive or negative—in the rural West vary among the BEA Economic Areas (table 4). In the nonmetro territory of almost every area, retailing was among the leading contributors to the competitive shift. However, other leading sectors vary, with manufacturing, construction, health services, and other services entering frequently.

The most common pattern has been for adjacent and nonadjacent competitive shifts to be positive, as in the Denver BEA Economic Area, where the shift was 7,700 jobs in adjacent counties and 27,400 jobs in nonadjacent counties. Of these 35,000 jobs, 11,000 were in other services (mainly lodging), 8,200 were in retail, 5,900 were in manufacturing, 6,900 were in construction, and 2,000 were in health services. The BEA Economic Areas with competitive shifts in other services are largely in the Rocky Mountains (or the Sierra Nevada), reflecting the growth of tourist-oriented economic activities. A number of these regions are also recipients of rural manufacturing jobs. In some regions, there are offsetting trends, such as in Eugene-Springfield, OR/CA, where higher than expected declines in manufacturing and slower than expected growth in health services were offset by relatively strong construction and retail activity.

Strong positive or negative competitive shifts in manufacturing, mining, other services, producer services, and health services are evidence of changes in the economic base of these regions. For example, expanding producer services in Missoula, MT, or manufacturing in Flagstaff, AZ/UT, generate income that stimulates local services growth, which requires new construction in housing, commercial, and public structures to support the growing economy. In many of these regions, robust growth of local services is also related to the arrival of people who either are retired or live on assets or transfer income.

Research Needs

The data base used for this article documented employment changes that are now 4 years old. With the continued expansion of commuter air service and the extension of document/small package courier service to the most rural places in the West, we should expect the trends doc-

Table 4

Principal sector contributors to rural competitive shift

Services lead the competitive shifts in all Western rural BEA Economic Areas, but growth or decline in manufacturing, construction, and mining also plays an important role in many of these regions

Area	Mining	Construction	Manufacturing	Transport ¹	Wholesale	Retail	Services		
							Producer	Health	Other
Hobbs, NM/TX						-X			
Santa Fe, NM						-X		X	
Pueblo, CO/NM			-X		-X	-X		X	
Denver, CO/KS/NE		X	X			X			X
Casper, WY/ID/UT			X			-X	-X		-X
Billings, MT/WY			X			X			X
Great Falls, MT						X			X
Missoula, MT		X				X	X		X
Spokane, WA/ID		X				X	X		X
Idaho Falls, ID/WY		X				X	-X	X	X
Twin Falls, ID		X				X	X		
Boise City, ID/OR			X						-X
Reno, NV/CA	X								-X
Salt Lake City, UT/ID		X	X	X		X			X
Las Vegas, NV/AZ/UT		X				X			
Flagstaff, AZ/UT		X	X			X		X	
Farmington, NM/CO			X	-X		X		X	
Albuquerque, NM/AZ					X		X		
El Paso, TX/NM						-X			-X
Phoenix-Mesa, AZ/NM	X	X	X			X		X	
Tucson, AZ						X		X	
LA-Riverside-Orange Co., CA/AZ	-X					X		X	
Fresno, CA						X			
SF-Oakland-San Jose, CA				X		X			
Sacramento-Yolo, CA				X		X			X
Redding, CA/OR			X	-X		X		-X	
Eugene-Springfield, OR/CA	X	-X			X		-X		
Portland-Salem, OR/WA		X	X			X	X	-X	
Pendleton, OR/WA			-X					-X	
Richland-Kennewick-Pasco, WA		-X			X		X		
Seattle-Tacoma-Bremerton, WA	X				X		X		

¹ Transportation, communications, utilities.

X = Large positive contribution to competitive shift.

-X = Large negative contribution to competitive shift.

umented here have continued into the late 1990's. Advances in telecommunications and information technologies have continued, and they have also probably fueled a continuing influx of people into the rural West. However, history teaches us that trends are never stable—the geography of economic development in the rural West in the late 1990's must also be documented. In doing so, it will be important to simultaneously track changes in non-earnings income, the growth of nonfarm proprietors' income, and characteristics of migrants in order to have a more complete understanding of the forces shaping the rural West.

For Further Reading . . .

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William B. Beyers and David P. Lindahl, "Lone Eagles and High Fliers in the Rural Producer Services," *Rural Development Perspectives*, Vol. 12, No. 3, pp. 2-10, 1996.

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Sven Illeris, *The Service Economy: A Geographical Approach*, Chicester, England: Wiley, 1996.

Joel Kotkin, "Why Wall Street Is Losing Out to 40 Acres and a Modem," *New York Times*, Dec. 27, 1998, p. 7.

Data Sources and Methodology

The database used for this article excluded proprietors, as well as employees in the public sector and in agriculture. Nationally, the excluded employment is over one-third of the labor force. Thus, results reported here should be interpreted as partial. Clearly, agriculture is very important in the rural West, and nonfarm proprietors' income has risen strongly in recent years. If nonfarm proprietors had been included, however, it is unlikely that we would see differences in the broad trends.

I developed the data from 1985 and 1995 U.S. County Business Patterns data. The 1985 data were estimated for each county in the United States, using a biproportional matrix adjustment technique to estimate employment in sectors subject to suppression codes. This procedure involved estimating a matrix of reported values for each industry and county, and calculating the amount of employment in each county and industry that was suppressed to retain confidentiality. Data flags used by the Census Bureau to bound the magnitude of suppressed employment were replaced with initial values within the range of the given suppression code. Through an iterative balancing process, an estimate was developed for each industry and county that added up to the values of the suppressed employment. This file was then merged with the file of known values to yield the matrix of employment for each State. A similar procedure was used with the 1995 data now available on compact discs. The resulting county-level estimates were then grouped into (the 1995 definitions of) BEA Economic Areas. These are (primarily) defined as groupings of metro and nonmetro counties, with metro areas as their "core," and nonmetro counties joined by commuting or newspaper readership patterns. The definitions of adjacent and nonadjacent were developed using a file of urban influence codes obtained from the Economic Research Service, USDA.

The shift-share model developed in this article makes use of standard methodology for the calculations. In this analysis, the benchmark for calculations was the Nation as a whole. The national growth rate over 1985-95 was used as the benchmark, and was the base for calculating the expected shares of job growth, and the net shifts (defined as the difference between expected and actual growth). Thus, the 1985 employment level in each industry in each region was multiplied by this growth rate to estimate the expected shares of aggregate growth. A correction to these expected growth rates was made through the calculation of national industry-specific growth rates. The difference between these growth rates and the overall national growth rate was used to calculate the "industry mix" factor, derived by multiplying the 1985 employment level in each industry by this industry-specific growth rate.

The competitive shift was calculated as the difference between the actual change in an industry in a region and the magnitudes of the share and industry mix components. Where the industry growth rate in the region outpaced the Nation, the residual is positive; where it lags, the component is negative. Regionalization amounted to the metro, adjacent nonmetro, and nonadjacent nonmetro territory found in each BEA Economic Area.

Peter B. Nelson and William B. Beyers, "Using Economic Base Models to Explain New Trends in Rural Income," *Growth and Change*, Vol. 29, pp. 295-318, 1998.

Thomas M. Power, *Lost Landscapes and Failed Economies*, Washington, DC: Island Press, 1996.

Benjamin Stevens and Craig Moore, "A Critical Review of Shift-Share Analysis," *Journal of Regional Science*, Vol. 30, 1980, pp. 420-450.

Colin C. Williams, *Consumer Services and Economic Development*, London: Routledge, 1997.