

Jobs Follow People in the Rural Rocky Mountain West

Over the past 25 years, employment growth has followed population growth in the Rocky Mountain West. The allure of amenities to potential migrants and employers, especially for counties rich in pristine natural landscapes, has increased over time. As with other U.S. nonmetro counties, the service and trade sectors now dominate employment in the Rocky Mountains.

The nonmetro areas of eight States of the Rocky Mountain West (Mountain Census Division: Arizona, Colorado, Idaho, Montana, New Mexico, Nevada, Utah, and Wyoming) saw extraordinary growth in population and employment in 1970-95. The fundamental mechanism of regional change appears to differ from the rest of the United States, with population inducing employment growth rather than vice versa. This analysis shows that natural amenities now play a strong role in explaining which counties are growing the fastest. These findings are generally consistent with new ideas being developed by regional researchers studying changes in the rural West.

Several other notable population and employment trends have emerged recently in the Rocky Mountain West. The 1970's was marked by nonmetro employment growth much greater than national averages, especially in counties adjacent to metro counties. However, population growth was not as strong in the region as in the rest of the United States, while the economic downturn of the 1980's appears to have affected the region harder than other areas. This trend was reversed in the 1990's as several parts of the Rocky Mountain West started to grow at a faster rate than other nonmetro areas of the country. While the nonadjacent and more remote counties have fared well in some respects, they continue to lag compared with growth patterns seen in counties adjacent to metro areas.

Major changes in the social, economic, and demographic structure of the United States have modified the forces driving population and employment change in the region

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today. Economic restructuring has altered the locational constraints of many industries. Many economic activities once dependent on urban economies and resources can now locate in more remote areas because of transportation and technological advances. In addition, newly emerging residential preferences for areas with environmental amenities and rural lifestyles have influenced migration. Finally, demographic changes (a larger retiree population) and the increasing importance of nonemployment income have created a large body of potential migrants who are motivated to move for reasons other than work. All of these changes, when combined with unique natural and scenic resources, suggest that the Rocky Mountain West is capable of developing a much more stable and environmentally sound mechanism for long-term economic and population growth, especially compared with the volatile resource-based economy of the past.

This article outlines two important perspectives on regional population and employment change in the United States from 1970 to 1995, and reviews recent trends in employment and population change for the entire region using aggregate measures and county-level analysis. Results from a regression model are then discussed to examine factors influencing population and employment growth, especially the role of population/employment interactions and natural amenities.

Researchers Offer New Views on Regional Growth and Change

The magnitude of the economic and population change that started in the 1960's and 1970's has elicited enormous research efforts in all the social sciences. This research shows that economic restructuring has been the primary driving force of socioeconomic change in the United States. Economic restructuring has resulted from a num-

ber of worldwide changes. Globalization of the world economy has increased competition for U.S. firms and has led to more volatile markets and the downsizing of many production processes. Economic restructuring has also involved a strong shift in employment toward the service and trade industries and away from the manufacturing and extractive industries.

Two perspectives on the nature of these changes are useful in understanding events taking place in the Rocky Mountain West. Each has its own view of how economic restructuring has affected population and employment change in the United States. The first, the *regional restructuring perspective*, focuses primarily on the changing location of economic activity in the United States. At the national level, these changes have precipitated (or hastened) the movement of existing industry out of the Rustbelt and into the Sunbelt. At the regional level, these changes have, in many circumstances, allowed firms and industries to move from cities into nonmetro areas in search of lower input costs (such as labor, land, and taxes). While the regional restructuring perspective argues that the nature of industrial location has radically changed over the last 30 years, the interaction between employment and population change has not. In short, people follow jobs.

The other explanation for regional change, the *deconcentration perspective*, contends that the new locational flexibility of many industries has fundamentally altered the interaction between employment and population change. Since firms are no longer tied to urban areas, and in fact may find it cheaper to move to nonmetro areas, other production requirements become more important. For example, many highly trained and specialized workers not tied to specific locations (such as software designers and other jobs that take advantage of communications advances) may find amenity-rich rural areas more desirable places to live. Hence, the primary contention of this perspective is that people—motivated by their desire to move to high-amenity locations—drive regional change. Jobs follow people.

Recent research supports the deconcentration perspective. For example, amenities and other location-specific attributes have become much more important in understanding why people move to particular places, especially since World War II. The types of amenities preferred by migrants have changed, and now include not only warmer climates but also rural lifestyles and a desire to be near scenic natural landscapes. The deconcentration perspective also captures the increasing role of retirees. Over the past 50 years, this group has grown in size as Americans live longer. Retirees are even more significant because their incomes (savings, pensions, dividends, and so forth) are not tied to jobs or particular places. In fact, nonemployment income as a whole has become more important as a source of income—up to 50 percent—

throughout the nonmetro areas of the United States. The effect of these income changes is that more Americans can now take advantage of new amenity preferences as well. Economic growth is then generated almost entirely by multiplier effects from increased consumer spending in the service and trade industries, and not by changing demand for exports.

These perspectives have been outlined without much reference to particular places or areas. However, every region has specific historical processes that have altered how these forces play out over time. The Rocky Mountain West region has always relied on its extractive industries—and the whims of natural resource markets—to drive the local economy. Heavy manufacturing simply has not played a major part in the region's economic history.

Today, however, remarkable improvements in communications have enabled entrepreneurs to succeed in remote locations. In addition, more leisure time and higher incomes have increased demand for homes close to scenic areas. Thus, there is now a demand for these natural environments that is *not* related to extracting resources from the ground—a demand that is able to take advantage of these resources without necessarily destroying them at the same time. The demand for environmental amenities, along with other rationales for population and employment change, is embodied in the *quality-of-life model*, a new explanation for the changes taking place in the Rocky Mountain West.

Service and Trade Gain Employment in the Rocky Mountain West

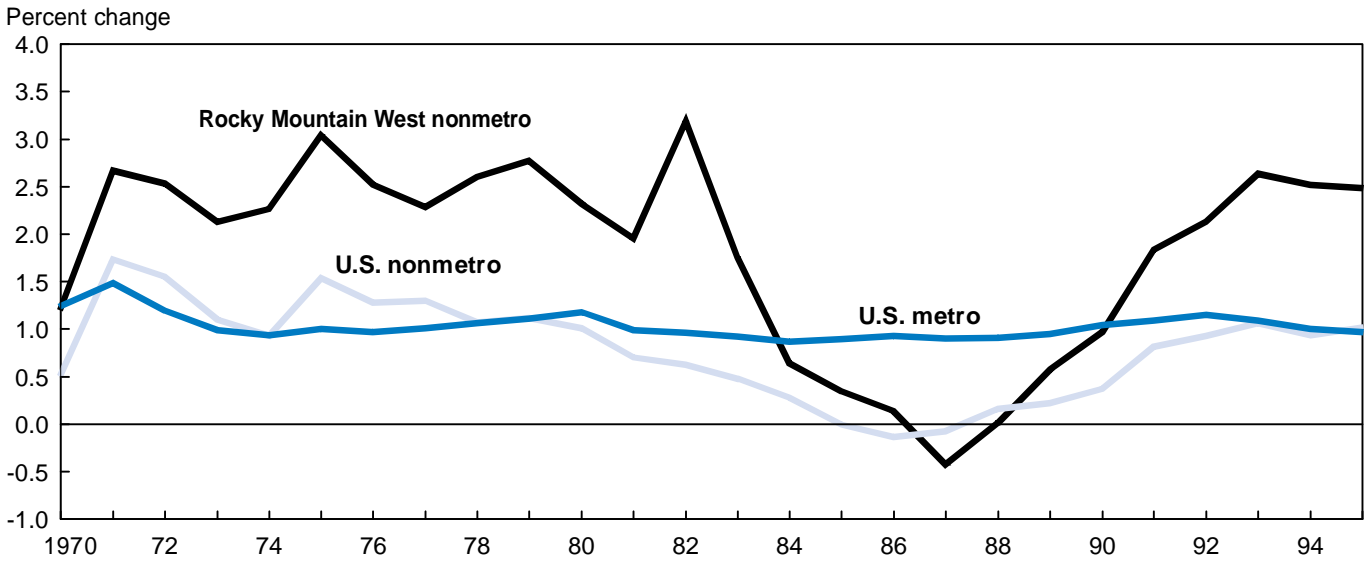
In terms of population, the Rocky Mountain West has seen patterns of growth and decline similar to those throughout the rural United States over the last 25 years, especially the remarkable growth of the 1990's. However, this region's changes were generally more extreme—growth was much greater in the 1970's, and more sustained. The downturn of the 1980's was quicker and more severe, while growth in 1990-95 was greater than for the nonmetro U.S. as a whole (fig. 1). In employment, the region has followed national trends more closely, experiencing patterns of growth and decline tightly linked to the business cycle. Here again, annual growth rates in the Rocky Mountain West have consistently outpaced those of the nonmetro U.S. (fig. 2).

For the region's nonmetro counties as a group, migration has been the most volatile component of population change. Net migration for 1990-95 (435,000) nearly equaled net migration for the entire 1970's, with 1980's negative net migration sandwiched between. It is apparent that migration is related to U.S. economic restructuring and changing residential preferences. Natural increase, on the other hand, has remained fairly constant (table 1).

Figure 1

Annual rates of change in population, 1970-95

The Rocky Mountain West has followed national population trends to a degree, although changes in the region have been more extreme

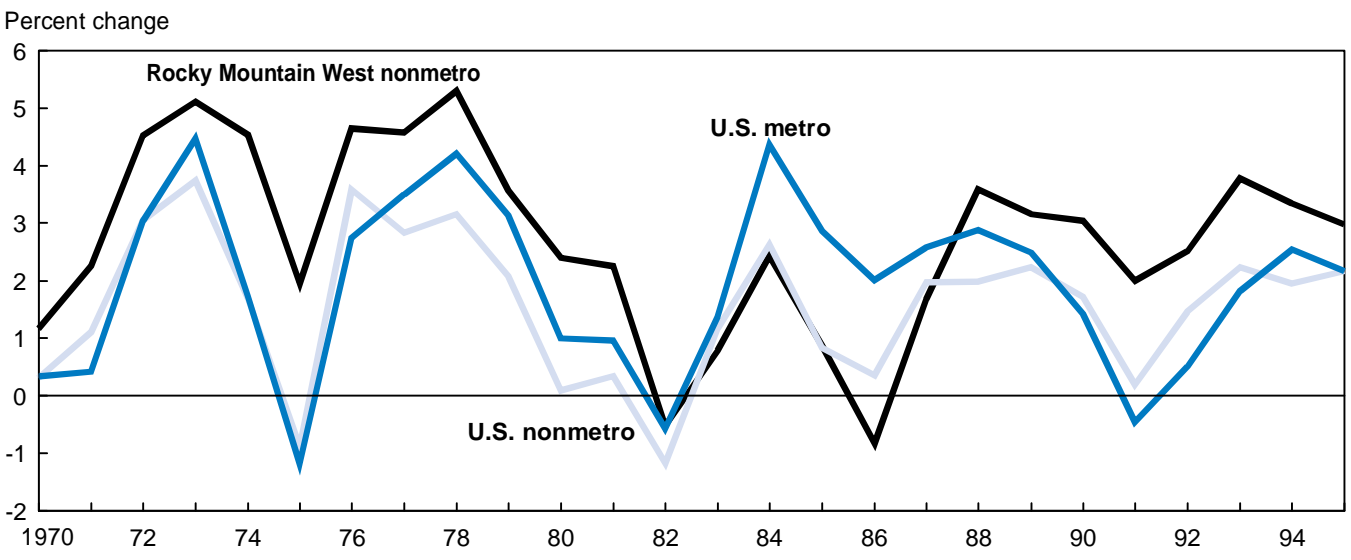


Source: Regional Economic Information System, 1997.

Figure 2

Annual rates of change in employment, 1970-95

Employment growth has been tied to national business cycles, with the Rocky Mountain West showing little divergence from national trends



Source: Regional Economic Information System, 1997.

Metro counties have traditionally outpaced nonmetro counties in terms of population growth; those nonmetro counties that grew rapidly were almost all located adjacent to metro counties (at least 2 percent of the labor force commutes to metro counties). However, in the 1970's, very rural counties, or those nonadjacent to cities, saw rates of increase close to or greater than adjacent nonmetro counties. This anomaly bypassed the Rocky

Mountain West, where adjacent counties grew consistently faster over all three decades in terms of population and net migration. In the 1980's, four out of five nonadjacent counties suffered net migration losses, and over half lost population, a much higher percentage than for adjacent counties in the region (table 1).

Table 1

Demographic components of change in the nonmetro Rocky Mountain West, 1970-95

The primary component of population change in all time periods has been migration; the more remote counties showed their strongest growth in the 1990's

Demographic components, years, and county types	Absolute change	Percent change	Percent counties growing
	Number	Percent	
Population:			
1970-80—			
Adjacent	312,411	43.0	97.9
Nonadjacent	700,946	27.4	78.3
All	1,013,357	30.9	81.9
1980-90—			
Adjacent	265,856	25.6	76.6
Nonadjacent	234,148	7.2	45.9
All	500,004	11.6	51.6
1990-95—			
Adjacent	255,917	19.6	91.5
Nonadjacent	371,808	10.7	83.6
All	627,725	13.1	85.0
Net migration:			
1970-80—			
Adjacent	219,338	30.2	95.7
Nonadjacent	353,273	13.8	58.5
All	572,611	17.5	65.4
1980-90—			
Adjacent	150,208	14.5	53.2
Nonadjacent	-174,392	-5.4	14.0
All	-24,184	-0.6	21.3
1990-95—			
Adjacent	201,809	15.5	85.1
Nonadjacent	233,061	6.7	72.0
All	434,870	9.1	74.4
Natural increase:			
1970-80—			
Adjacent	93,073	12.8	97.9
Nonadjacent	347,673	13.6	97.6
All	440,746	13.4	97.6
1980-90—			
Adjacent	115,648	11.1	97.9
Nonadjacent	408,540	12.5	97.6
All	524,188	12.2	97.6
1990-95—			
Adjacent	54,108	4.1	80.9
Nonadjacent	138,747	4.0	83.6
All	192,855	4.0	83.1

Note: Based on 1980 metro/nonmetro classification, 254 nonmetro (47 adjacent and 207 nonadjacent) and 24 metro counties.

Source: U.S. Census, 1970, 1980, 1990, Current Population Survey, 1996, and other special tabulations.

Nonmetro employment growth in the region shows some similarities to population trends, but some interesting differences as well. Employment growth in the 1970's in nonadjacent counties was of the same magnitude as for adjacent counties (table 2), indicating sustained economic growth throughout nonmetro areas, a trend that corresponds with improved opportunities for industries in the

rural hinterlands. Population growth, however, did not match employment growth, which may be due to abundant and underused labor already in place. Over all three time periods, employment in adjacent and nonadjacent counties grew, with nonadjacent counties growing at a slower pace. However, differences between adjacent and

nonadjacent counties were smaller than those seen with respect to population change (table 1).

As in the rest of the United States, farming and mining in the Rocky Mountain West have diminished over time, with a brief respite for mining at the end of the 1970's. Likewise, there has been a strong surge in producer and consumer services, especially since 1980, and smaller increases in retail and wholesale trade (fig. 3). Nearly half

of the farming counties and over half of the mining counties in the region have changed their major economic activities from 1970 to 1995 (see box, "Classification of County-Level Economies"). Furthermore, four times as many counties (from 13 to 72) have service and trade as their primary economic activities (table 3).

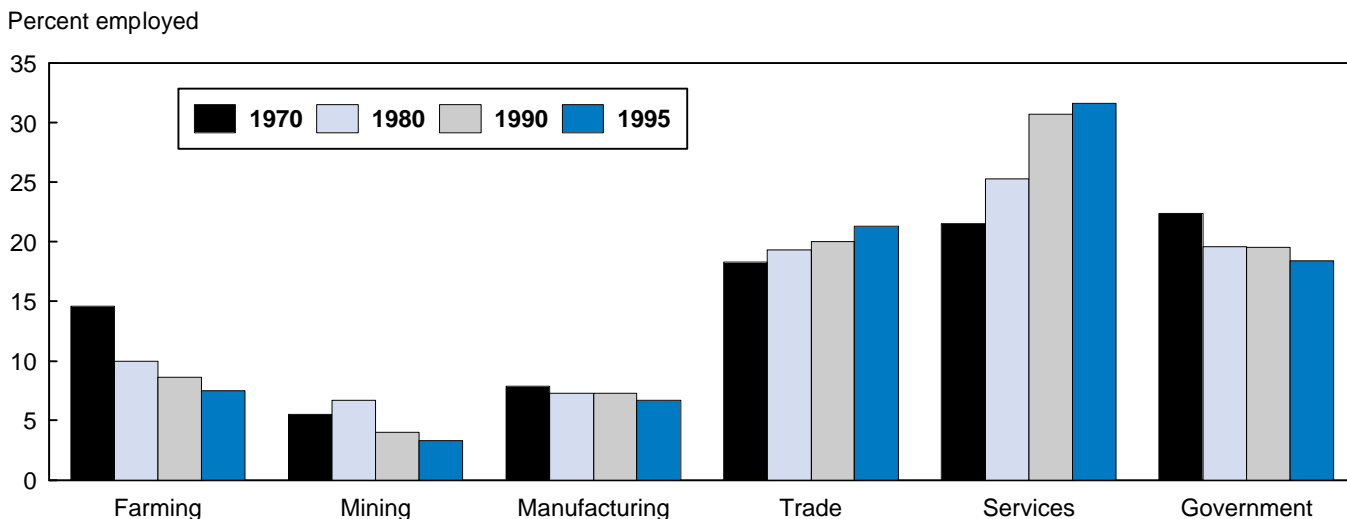
County typology can differentiate the effect of economic structure on growth rates for population, employment,

Table 2
Employment change in the nonmetro Rocky Mountain West, 1970-95
For the more remote counties, the 1970's was a time of increased employment growth, with growth rates nearly matching those found in counties adjacent to metro areas

Years and county types	Initial employment level	Absolute change	Percent change	Percent counties growing
		Number	Percent	
1970-80:				
Adjacent	288,814	143,346	49.6	93.6
Nonadjacent	1,074,377	508,582	47.3	87.0
All	1,363,191	651,928	47.8	88.2
1980-90:				
Adjacent	432,160	155,782	36.0	87.2
Nonadjacent	1,582,959	235,970	14.9	67.1
All	2,015,119	391,752	19.4	70.9
1990-95:				
Adjacent	587,942	192,846	22.1	85.1
Nonadjacent	1,818,929	258,435	14.2	77.7
All	2,406,871	388,281	16.1	79.1

Note: Based on 1980 metro/nonmetro classification, 254 nonmetro (47 adjacent and 207 nonadjacent) and 24 metro counties.
 Source: Regional Economic Information System, 1997.

Figure 3
Sectoral employment in the nonmetro Rocky Mountain West by sector, 1970-95
Employment has shifted away from the extractive sectors to the service and trade sectors



Source: Regional Economic Information System, 1997.

net migration, and wages. In terms of population and employment growth, the service and trade counties have done the best through all three time periods (table 4). While farming and mining counties have had diminished population and employment growth since the 1970's, manufacturing counties rebounded in the 1990's. Average wages for service and trade counties have declined over time, while mining county wages remain very high. Overall, wage growth has been minimal across the board. This finding reinforces the notion that although the service and trade sectors are the fastest growing in the region, they may not necessarily be the best jobs for the local population.

Population Is Driving Growth

While typologies provide insights into the role of economic structure, they offer little information on how population and employment interact in the growth process. Newly developed analytical techniques help sort out some of these important relationships (see box, "Regional Adjustment Models"). These new models tell us that increasing population is driving employment growth in all three time periods (table 5). However, the same is not true for employment with respect to population growth (table 6). In fact, employment growth was related to population decline for two time periods. This finding may be the result of using overall employment growth to describe a complex and dynamic employment structure. For exam-

Table 3

Number of nonmetro counties by economic type in the Rocky Mountain West, 1970-95

The number of counties dominated by service and trade jobs has gone from 13 to 59 over a 25-year period

Economic type	1970	1975	1980	1985	1990	1995	Absolute change, 1970-95	Percent change, 1970-95
Farming	111	93	77	79	71	64	-47	-42.3
Mining	31	29	37	22	16	13	-18	-58.1
Manufacturing	23	25	23	18	23	19	-4	17.4
Service trade	13	18	24	49	60	72	59	453.8
Government	25	23	20	17	17	17	-8	-32.0
Other	51	66	73	69	67	69	18	35.3

Source: Regional Economic Information System, 1997.

Table 4

Growth rates for nonmetro counties in the Rocky Mountain West by economic type, 1970-95

Service-oriented counties grew faster in population, employment, and migration, but lagged in average wages

Year and economic type	Population	Employment	Migration	Average wage ¹
	Percent			Dollars
1970-80:				
Farming	16.8	25.1	5.3	15,875
Mining	35.5	58.7	13.9	22,157
Manufacturing	28.6	36.2	13.2	19,770
Service and trade	65.5	83.0	36.6	21,188
Government	30.2	44.0	8.1	19,859
1980-90:				
Farming	-2.3	5.3	-10.0	16,638
Mining	0.9	10.0	-14.8	26,438
Manufacturing	2.0	12.4	-8.4	20,908
Service and trade	28.9	42.9	11.8	20,145
Government	7.3	18.2	-14.8	21,174
1990-95:				
Farming	6.3	2.7	4.2	15,066
Mining	3.8	5.0	-1.6	25,619
Manufacturing	13.5	13.6	8.7	18,963
Service and trade	16.1	31.5	11.0	18,735
Government	7.5	7.7	2.8	20,204

Note: All monetary figures are inflation-adjusted 1993 dollars.

¹ Average wage is a single-year figure for first year of the time period.

Source: Regional Economic Information System, 1997.

Table 5

Factors related to employment growth in the nonmetro Rocky Mountain West, 1970-95

Employment growth is now being driven by population growth in counties dominated by service and trade industries; on the other hand, firms are still attracted to counties with lower wages

Variable	Hypothesis	Expected effect	Actual effect on employment growth		
			1970-80	1980-90	1990-95
Employment ¹	Employment growth induces more employment growth	+		-	+++
Population ²	Feedback effect of population	+	+++	+++	++
Average wage	Firms move to lower paying areas	-	-		--
Percent dividend income of total income	Nonemployment dividend income induces growth	+	+++	++	
Percent transfer income of total income	Nonemployment income in form of aid payments may (not) hinder growth	+ or -	--	---	---
Adjacent to metro county (1980)	Proximity to cities induces growth	+	-	++	+++
Agricultural county ¹	Declining importance of agriculture	-	--		
Mining county ¹	Declining importance of mining	-		--	
Manufacturing county ¹	Unknown effect—insignificant size of manufacturing sector	+ or -	-		++
Service and trade county ¹	Increasing importance of service and trade sectors on growth	+		+++	+++

Note: Table shows which variables were significantly related to population and employment growth for each of the three time periods used in this article. The signs indicate a positive or negative relationship, with the number of signs indicative of the strength of the relationship (more signs indicate a stronger relationship, with no signs indicating no relationship).

¹ Variable represents value for first year of time period.

² Variable represents value for last year of time period, estimated using the model in table 6.

Sources: Regional Economic Information System, 1997; U.S. Census, 1970, 1980, 1990; Area Resource File, 1995; USDA (Topographic Index).

ple, employment may be declining in the extractive sectors while increasing in the service sectors. Nevertheless, these findings support the quality-of-life model, which holds that population change and labor supply are the driving forces for change in a region, or that jobs follow people. This trend is opposite the national trend, where employment led population growth, at least through the 1980's. Because of its scenic landscapes and many recreational opportunities, the Rocky Mountain West may have spearheaded a trend toward regional socioeconomic change driven by migration and changing residential preferences.

Geographic location (adjacent to metro counties) remains an important factor in explaining population and employment growth for all time periods (the exception being employment growth in the 1970's). The model results

show that proximity to large urban centers and their economies has been crucial to the growth of nonmetro areas. Economic structure continues to play an important but changing role in differentiating growth patterns. For example, population growth in the region was not associated with any particular type of economy in the 1970's. In the 1980's, economic structure became more strongly associated with population change, especially the decreases in mining and the increases in service counties. The 1990's saw a further increase in the effect of economic structure, with positive growth associated with farming, manufacturing, and services counties. Employment growth in the 1970's and 1980's was associated with declines in farming, mining, and manufacturing. Service economies fare the best with regard to employment, as is the case nationwide. The emergence of these county types is a fundamental part of the quality-of-life model, which empha-

Table 6

Factors related to population growth in the nonmetro Rocky Mountain West, 1970-95

Amenities have become increasingly related to population growth in the region; employment growth is not needed to drive or initiate migration into the region

Variable	Hypothesis	Expected effect	Actual effect on population growth		
			1970-80	1980-90	1990-95
Employment ¹	Feedback effect of employment on population growth becomes less important	-		- - -	- - -
Population ²	Population growth induces more population growth	+	+++	+++	+++
Topographic index	Scenic high-mountain areas are attractive to migrants	+			+
Percent Forest Service land	Scenic FS areas are attractive to migrants	+			++
Percent Bureau of Land Management land	Scenic BLM areas are attractive to migrants	+	+++	+++	+++
Average wage ²	Proxy variable for amenities—people forgo higher wages for scenic areas	-		-	--
Gross rent ²	Proxy variable for amenities—people willing to pay higher rents for scenic areas	+	+++	+++	+++
Adjacent to metro county (1980)	Proximity to cities induces growth	+	-	++	+++
Agricultural county ²	Declining importance of agriculture	-			+++
Mining county ²	Declining importance of mining	-		- - -	
Manufacturing county ²	Unknown effect—insignificant size of manufacturing sector	+ or -			+++
Service and trade county ²	Increasing importance of service and trade sectors on growth	+		+++	+++

Note: Table shows which variables were significantly related to population and employment growth for each of the three time periods used in this article. The signs indicate a positive or negative relationship, with the number of signs indicative of the strength of the relationship (more signs indicate a stronger relationship, with no signs indicating no relationship).

¹ Variable represents value for last year of time period, estimated using the model shown in table 5.

² Variable represents value for first year of time period.

Sources: Regional Economic Information System, 1997; Payments in Lieu of Taxes, 1996 (BLM and FS land); U.S. Census, 1970, 1980, 1990; Area Resource File, 1995; USDA (Topographic Index).

Classification of County-Level Economies

Previous research suggests that economic structure is tightly linked to population and employment growth. A typology of counties was developed based on employment structure using six sectors: farming, mining, manufacturing, service and trade, government, and other (diversified). Four base years were used: 1970, 1980, 1990, and 1995, with sectoral employment for each year based on a 3-year average. Once employment had been calculated for each of the six sectors, counties were classified according to sectoral dominance. A cutoff or threshold point based around one standard deviation above the regional average for employment in a given sector was used to classify that county as dominated by that sector. This approach provides an understanding of the magnitude and character of county-level economic change. The aggregate measures used above, although useful, can be misleading because a small number of counties may be dominating the statistics. A more complex typology was developed by USDA in the 1980's to examine issues similar to those explored here.

sizes environmental and social amenities over brute sectoral swings.

Amenities—as measured by Forest Service and Bureau of Land Management (BLM) land, along with rugged/scenic terrain—have become increasingly important in explaining population growth. For example, in the 1970's, only BLM land was tied to population growth; by the 1990's, all three variables predicted population growth, indicating an increased demand for these amenities (table 6).

Two other economic variables (gross rent and average wage) provide indirect support for the greater value of amenities. Typically, migrants would be attracted to locations with lower rents and higher wages. However, the opposite was found in the Rocky Mountain West, where migration and population growth have been associated with counties that have lower wages and higher rents. In fact, this relationship has become stronger over time. Thus, migrants seem more willing to forgo lower rents and higher wages so that they can live in high-amenity areas. Rents actually go up and wages come down when people inundate a county for amenity reasons.

In terms of employment growth, different processes are at work (table 5). For example, average wage with respect to employment growth was more predictable, with firms (or employment) attracted to counties with lower wages in the 1970's and 1990's (with a recession accounting for the lack of a relationship in the 1980's). The effect of nonemployment income on employment growth was not expected. Overall, the positive effect of dividends and rents on employment change has declined over time, while the negative effect of transfer payments has diminished as well. The negative effect of transfer payments may be explained by the high percentage of income maintenance

Regional Adjustment Models

Over the past 30 years, researchers have engaged in a difficult “chicken-or-egg” debate: does employment growth induce population growth (regional restructuring) or does population growth induce employment growth (deconcentration)? Analytical techniques have been developed to measure which mechanism is stronger, including regression models that simultaneously take into account the effect of population and employment growth. The regional adjustment models used here are a relatively new version of this “simultaneous equations” approach (Clark and Murphy). By using this type of model, it is possible to examine population and employment growth while controlling for the effects of population/employment interactions, economic structure, geographic location, environmental amenities, and nonemployment income. The variables used for the population and employment growth equations were chosen to specifically test the significance of factors researchers believe are associated with population and employment growth in the Rocky Mountain West. Additionally, since the data are available for 25 years, it will be possible to see how the influence of these factors has changed over time.

programs associated with this source of income (a sign of economic distress). However, the effects of dividends and rents cannot be easily reconciled with the expectations of the quality-of-life model because alternative sources of income are assumed to be one of the major factors associated with economic growth in the face of a decline in primary sector employment.

These findings validate many of the claims of the quality-of-life model, especially the positive role of the service sector in driving employment growth. Additionally, amenities have become more important since the 1970's, as indicated by the increasing importance of Federal lands and areas with topographic diversity, and the contrary effects on rents and average wages. Most important, the mechanism of change in the region does not support the traditional notion that people follow jobs into a region. In fact, evidence is strong that the opposite is true—jobs follow people.

Conclusion

Population and employment changes taking place in the Rocky Mountain West show the importance of quality-of-life factors in an area rich in environmental amenities. The region's unique endowment of scenic landscapes can be used to drive growth, releasing the region from the volatility associated with economies reliant on natural resources. However, not all changes are positive, as evidenced by the relatively flat wages found in the region's nonmetro areas, especially in counties based on services. In general, policymakers in the region pushing for service sector growth and attracting migrants should find some comfort in these results, although they need to fully eval-

uate the wage effects of these policies as well. This means that any economic development policy should not neglect traditional sources of income in the resource industries if these can be maintained without destroying the environmental amenities sought by so many of today's migrants.

For Further Reading . . .

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