

3. Economic Characteristics and Vitality

In this section, historic and current economic conditions within the six counties surrounding the Coronado National Forest (CNF) are examined. One primary purpose of this analysis is to determine trends in the economic dependency of communities on certain industries and forest resources. Data on selected cities within the area of assessment are also included in order to illustrate trends that may signal associations between forest management alternatives and economic change affecting specific populations. Indicators used to assess economic characteristics and vitality include major employers within the region, employment by industry, per capita and household income, portion of income derived from natural resources, and federal-lands related payments based on forest resource use.

Data show that the area of assessment for the CNF has experienced limited economic growth over the past two decades. In general, growth in total part- and full-time employment was particularly low when compared to the state averages over the same period. In terms of occupational structure, the region's closely resembled those for the states of Arizona and New Mexico overall with management, professional, and related occupations maintaining primary importance over sales and office as well as service occupations. Cochise, Pinal, and Pima Counties experienced significant gains in income from wood products and processing between 1990 and 2000 but reported either minimal gains or substantial losses in income from special forest products and processing over the same period. Cochise, Pima, and Graham Counties also reported increases in tourism employment that exceeded gains at the state level over the same period. Graham, Hidalgo, and Santa Cruz Counties reported relatively low per capita and family incomes as well as high rates of poverty, placing them among the most economically challenged counties in their respective states. In terms of federal-lands related revenue, Pima County has consistently been the largest recipient of Payment in Lieu of Taxes (PILT) benefits over the last several years whereas Cochise County has reported the greatest amount in forest receipts or "twenty-five percent monies."

3.1 Historical context and regional economic conditions

Arizona's economy has undergone dramatic changes over the past century. Originally a territory isolated on the borders of a cohering nation, Arizona, and the West in general, is quickly becoming more metropolitan, and economic realities have shifted to reflect this change. For the first half of the century, Arizona's economy was dominated by the mining, agricultural, and ranching industries. Following World War II and a dramatic increase in population which has continued to the present day, Arizona shifted away from a dependence on these earlier industries and diversified into a mix of urban and rural industries that cover nearly every sector. Industrial diversity showed some increases after 1971, but reached a peak in the mid-80s and has now fallen well below other states to .45 on the Industrial Diversity Index¹ (Sheridan 1995, Canamex 2001, ADOC 2002a). Per capita personal income (PPI) in Arizona has, in a general sense, followed the national trends although it has often fluctuated more dramatically in the short term. Labor force growth has been in the process of slowing since the 1970s when it reached a peak of 2.7% per annum. It afterwards slowed to 1.7% in the 1980s and to 1.2% in the 1990s. The relation and impact of education on economic standing has also heightened, with the salary ratio of college-educated workers to high-school educated workers increasing dramatically since 1975, up to above 1.85:1 from 1.55:1. Poverty rates have shifted only slightly in the past three or four decades, remaining between 14-16% (ADOC 2002a).

¹ Where 1.0 represents a state of industrial diversity equal to the U.S. as a whole. While no longer limited to agricultural and mining interests, Arizona is still restricted in its industrial array. By contrast, states like Texas and Illinois have IDIs near 0.8, which suggests a much broader industrial foundation.

Over the past thirty to thirty-five years, the primary locus of economical advancement has shifted. Mining, which represented 3% of the state's per capita income in the late 1960s, had dropped to a mere fraction of a percent by 2002. Agriculture, too, remained beneath 1%. While the manufacturing and trade/utilities areas of the economy have either remained static or dropped slightly in the second half of the past century, the service industry has skyrocketed, topping 20% by 2002, up from 13% in 1969 (BEA 2002). This trend is partially due to the fact that Arizona has become an increasingly urbanized state with 88.2% of the population living in urban areas according to the 2000 census. Recent PPI also reflects this disparity, with the 2002 metro figure being \$27,285 as compared to the non-metro amount of \$18,992—a differential of 30.4%, up from 23.3% in 1970.

The counties surrounding the CNF are collectively some of the most economically challenged compared to those surrounding the other forests in the state. The 2002 PPI of the six U.S. counties abutting CNF land is \$19,687², representing a 26.2% differential from the state average at that time, a 2.6% drop from 1969. Compared to the national averages, the PPI of the counties containing the Coronado represents only 63.9% of the national total, down nearly 13% over the past 30 years (BEA 2002). The thirty-year average rate of income growth in this region is 8.4%, well below the 10.1% state average. These figures are likely influenced by, among other things, the aforementioned shift in economic industries within the state away from mining, which has historically been a popular industry in the area of assessment.

3.2 Income and employment within key industries

Table 11 presents employment data by industry at both the state and county levels for the years 1990 and 2000. Economic data confirm earlier findings of relatively limited growth in the region when compared to state averages for both Arizona and New Mexico. For instance, growth in total full- and part-time employment for each of the six counties in the area of assessment was below that for its corresponding states between 1990 and 2000. Job growth was particularly limited in Santa Cruz County (17.35%), and total employment declined by 15.86% in Hidalgo County over the ten-year period. Similarly, growth in wage, salary, and proprietor's employment was relatively low for each of the counties with the exception of Cochise County, which experienced a relatively strong increase in proprietor's employment when compared to the state of Arizona over the same period. Each of the six counties experienced growth in non-farm and private employment that was well below the average for its respective state. Graham and Santa Cruz Counties saw substantial job growth in agricultural services and forestry while Pinal County experienced a 20.81% decline in jobs for the same sector. Considerable job losses in the mining sector were reported for Cochise, Pinal, and Santa Cruz Counties, mirroring a similar trend for the state of Arizona as a whole. Although each of the counties in Arizona witnessed a substantial increase in construction jobs, none of them matched the rate of increase in construction employment for Arizona overall, which was nearly 84% between 1990 and 2000. Both Graham and Cochise Counties saw relatively strong gains in employment within the financial services, insurance, and real estate (F.I.R.E.) sector over the ten-year period. Employment in the service and government sectors also saw significant gains throughout the area of assessment over this period.

Table 12 displays the percentage of employment in each industry at the state and county levels as well as the percentage change between 1990 and 2000. Data show that, as of 2000, proprietor's employment was higher in each of the six counties than its respective state average. Similarly, the percentage of farm employment was higher than the state average for each of the counties with the exception of Pima County. Graham County maintained a relatively high percentage of jobs in the agricultural services and forestry sector, as did Cochise County in the sector of wholesale trade. Throughout the region, counties

² N.B.: Discrepancies between these figures and the PPIs listed in Table 16 stem from the latter having been adjusted for deflation in order to calculate % change. The salaries listed in this section represent current PPIs in non-adjusted dollars.

demonstrated a high percentage of government and government enterprise employment when compared to state averages. A graphic display of the percentage changes in individual industry sectors between 1990 and 2000 is shown at both the county and state level in Figure 9.

Table 11. Employment by Industry, County, and State, 1990-2000 and % Change

	Graham County			Cochise County			Hidalgo County (NM)			Pima County		
	1990	2000	% Change	1990	2000	% Change	1990	2000	% Change	1990	2000	% Change
Employment by place of work												
Total full-time and part-time employment	7,753	10,562	36.23%	40,595	50,792	25.12%	2,838	2,388	-15.86%	321,710	444,366	38.13%
By type												
Wage and salary employment	6,141	8,252	34.38%	33,814	40,031	18.39%	2,393	1,875	-21.65%	267,918	363,960	35.85%
Proprietors employment	1,612	2,310	43.30%	6,781	10,761	58.69%	445	513	15.28%	53,792	80,406	49.48%
Farm proprietors employment	383	356	-7.05%	943	986	4.56%	145	157	8.28%	495	486	-1.82%
Non-farm proprietors employment	1,229	1,954	58.99%	5,838	9,775	67.44%	300	356	18.67%	53,297	79,920	49.95%
By industry												
Farm employment	548	549	0.18%	1,278	1,677	31.22%	302	311	2.98%	1,044	992	-4.98%
Non-farm employment	7,205	10,013	38.97%	39,317	49,115	24.92%	2,536	2,077	-18.10%	320,666	443,374	38.27%
Private employment	4,638	6,987	50.65%	22,741	32,315	42.10%	2,099	1,524	-27.39%	261,214	363,244	39.06%
Ag. services, forestry, fishing and other	183	436	138.25%	(D)	809	n/a	88	(D)	n/a	3,334	4,944	48.29%
Mining	18	21	16.67%	133	75	-43.61%	(L)	(D)	n/a	2,741	2,476	-9.67%
Construction	314	406	29.30%	(D)	2,781	n/a	102	84	-17.65%	18,834	27,709	47.12%
Manufacturing	195	332	70.26%	1,614	1,356	-15.99%	629	(D)	n/a	28,255	34,934	23.64%
Transportation and public utilities	210	260	23.81%	1,815	1,673	-7.82%	102	75	-26.47%	10,115	14,578	44.12%
Wholesale trade	158	204	29.11%	686	806	17.49%	162	(D)	n/a	8,838	12,616	42.75%
Retail trade	1,583	2,211	39.67%	6,612	8,909	34.74%	502	521	3.78%	60,494	73,942	22.23%
Finance, insurance, and real estate	269	548	103.72%	1,558	2,801	79.78%	65	76	16.92%	24,779	36,216	46.16%
Services	1,708	2,569	50.41%	8,362	13,105	56.72%	442	454	2.71%	103,824	155,829	50.09%
Government and government enterprises	2,567	3,026	17.88%	16,576	16,800	1.35%	437	553	26.54%	59,452	80,130	34.78%
Federal, civilian	322	330	2.48%	5,210	4,133	-20.67%	38	71	86.84%	7,966	9,160	14.99%
Military	99	77	-22.22%	6,478	5,944	-8.24%	30	19	-36.67%	7,840	7,686	-1.96%
State and local	2,146	2,619	22.04%	4,888	6,723	37.54%	369	463	25.47%	43,646	63,284	44.99%
State government	981	1,064	8.46%	355	1,322	272.39%	51	78	52.94%	16,079	(D)	n/a
Local government	1,165	1,555	33.48%	4,533	5,401	19.15%	318	385	21.07%	27,567	(D)	n/a

Table 11 (cont.). Employment by Industry, County, and State, 1990-2000 and % Change

	Pinal County			Santa Cruz County			Arizona			New Mexico		
	1990	2000	% Change	1990	2000	% Change	1990	2000	% Change	1990	2000	% Change
Employment by place of work												
Total full-time and part-time employment	41,577	50,262	20.89%	13,489	15,830	17.35%	1,909,879	2,819,302	47.62%	767,139	972,954	26.83%
By type												
Wage and salary employment	34,947	41,939	20.01%	11,328	12,816	13.14%	1,607,628	2,355,299	46.51%	635,725	789,690	24.22%
Proprietors employment	6,630	8,323	25.54%	2,161	3,014	39.47%	302,251	464,003	53.52%	131,414	183,264	39.46%
Farm proprietors employment	807	747	-7.43%	186	180	-3.23%	8,027	7,572	-5.67%	13,600	14,985	10.18%
Non-farm proprietors employment	5,823	7,576	30.10%	1,975	2,834	43.49%	294,224	456,431	55.13%	117,814	168,279	42.83%
By industry												
Farm employment	2,088	2,110	1.05%	227	206	-9.25%	19,297	19,842	2.82%	19,766	21,760	10.09%
Non-farm employment	39,489	48,152	21.94%	13,262	15,624	17.81%	1,890,582	2,799,460	48.07%	747,373	951,194	27.27%
Private employment	27,667	31,997	15.65%	11,333	12,359	9.05%	1,583,146	2,410,566	52.26%	568,085	748,804	31.81%
Ag. services, forestry, fishing and other	1,350	1,069	-20.81%	116	255	119.83%	27,817	46,873	68.50%	8,414	13,548	61.02%
Mining	4,111	1,411	-65.68%	34	19	-44.12%	15,475	12,607	-18.53%	20,489	19,323	-5.69%
Construction	1,370	2,049	49.56%	502	631	25.70%	108,918	200,373	83.97%	40,606	59,895	47.50%
Manufacturing	3,681	3,416	-7.20%	1,142	1,053	-7.79%	194,529	225,767	16.06%	47,732	48,788	2.21%
Transportation and public utilities	1,518	1,070	-29.51%	835	1,425	70.66%	84,360	124,954	48.12%	34,130	43,350	27.01%
Wholesale trade	848	1,347	58.84%	1,621	1,910	17.83%	82,812	122,582	48.02%	27,896	33,751	20.99%
Retail trade	6,095	7,915	29.86%	3,746	3,166	-15.48%	344,297	484,207	40.64%	134,482	172,516	28.28%
Finance, insurance, and real estate	1,904	2,479	30.20%	695	788	13.38%	170,005	281,675	65.69%	46,955	62,905	33.97%
Services	6,790	11,241	65.55%	2,642	3,112	17.79%	544,933	911,528	67.27%	207,381	294,728	42.12%
Government and government enterprises	11,822	16,155	36.65%	1,929	3,265	69.26%	307,436	388,894	26.50%	179,288	202,390	12.89%
Federal, civilian	727	901	23.93%	383	1,006	162.66%	45,843	48,135	5.00%	31,621	30,205	-4.48%
Military	437	415	-5.03%	111	88	-20.72%	38,197	33,258	-12.93%	22,552	17,167	-23.88%
State and local	10,658	14,839	39.23%	1,435	2,171	51.29%	223,396	307,501	37.65%	125,115	155,018	23.90%
State government	4,593	4,939	7.53%	131	332	153.44%	61,595	81,026	31.55%	55,722	64,654	16.03%
Local government	6,065	9,900	63.23%	1,304	1,839	41.03%	161,801	226,475	39.97%	69,393	90,364	30.22%

(D) Not shown to avoid disclosure of confidential information, but the estimates for this item are included in the totals.

Source: Bureau of Economic Analysis
<http://www.bea.doc.gov/bea/regional/reis/action.cfm>

Table 12. Employment by Industry Percentages, County and State, 1990-2000 and % Change

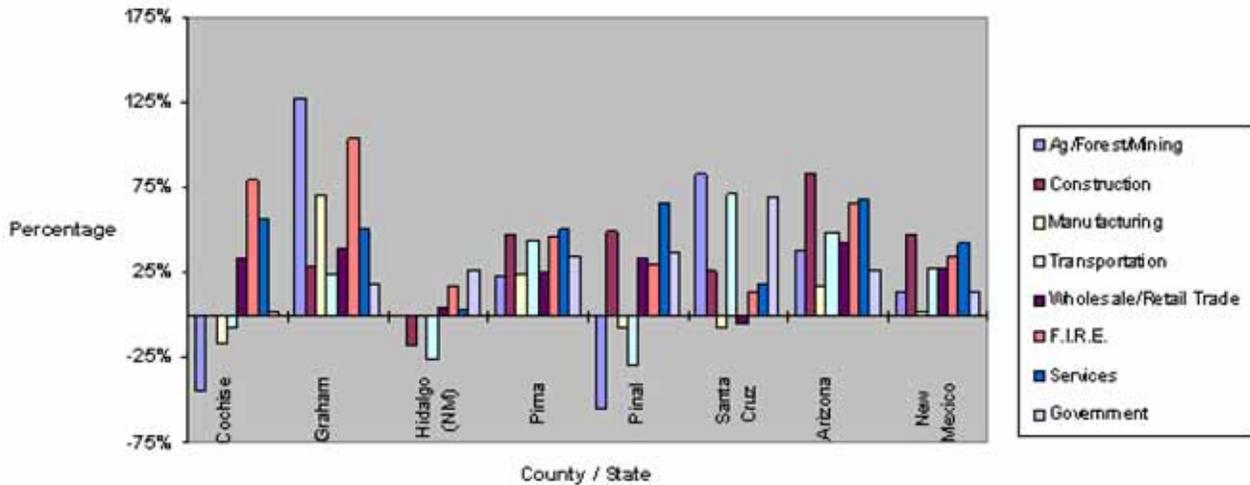
	Graham County			Cochise County			Hidalgo County (NM)			Pima County		
	1990	2000	% Change	1990	2000	% Change	1990	2000	% Change	1990	2000	% Change
Employment by place of work												
Total full-time and part-time employment	100.00%	100.00%	0.00%	100.00%	100.00%	0.00%	100.00%	100.00%	0.00%	100.00%	100.00%	0.00%
By type												
Wage and salary employment	79.21%	78.13%	-1.36%	83.30%	78.81%	-5.38%	84.32%	78.52%	-6.88%	83.28%	81.91%	-1.65%
Proprietors employment	20.79%	21.87%	5.19%	16.70%	21.19%	26.83%	15.68%	21.48%	37.00%	16.72%	18.09%	8.22%
Farm proprietors employment	4.94%	3.37%	-31.77%	2.32%	1.94%	-16.43%	5.11%	6.57%	28.68%	0.15%	0.11%	-28.92%
Non-farm proprietors employment	15.85%	18.50%	16.71%	14.38%	19.25%	33.82%	10.57%	14.91%	41.03%	16.57%	17.99%	8.56%
By industry												
Farm employment	7.07%	5.20%	-26.46%	3.15%	3.30%	4.88%	10.64%	13.02%	22.39%	0.32%	0.22%	-31.21%
Non-farm employment	92.93%	94.80%	2.01%	96.85%	96.70%	-0.16%	89.36%	86.98%	-2.67%	99.68%	99.78%	0.10%
Private employment	59.82%	66.15%	10.58%	56.02%	63.62%	13.57%	73.96%	63.82%	-13.71%	81.20%	81.74%	0.68%
Ag. services, forestry, fishing and other	2.36%	4.13%	74.89%	(D)	1.59%	n/a	3.10%	(D)	n/a	1.04%	1.11%	7.36%
Mining	0.23%	0.20%	-14.36%	0.33%	0.15%	-54.93%	(D)	(D)	n/a	0.85%	0.56%	-34.60%
Construction	4.05%	3.84%	-5.09%	(D)	5.48%	n/a	3.59%	3.52%	-2.13%	5.85%	6.24%	6.51%
Manufacturing	2.52%	3.14%	24.98%	3.98%	2.67%	-32.85%	22.16%	(D)	n/a	8.78%	7.86%	-10.49%
Transportation and public utilities	2.71%	2.46%	-9.12%	4.47%	3.29%	-26.33%	3.59%	3.14%	-12.61%	3.14%	3.28%	4.34%
Wholesale trade	2.04%	1.93%	-5.22%	1.69%	1.59%	-6.10%	5.71%	(D)	n/a	2.75%	2.84%	3.35%
Retail trade	20.42%	20.93%	2.53%	16.29%	17.54%	7.69%	17.69%	21.82%	23.34%	18.80%	16.64%	-11.51%
Finance, insurance, and real estate	3.47%	5.19%	49.54%	3.84%	5.51%	43.69%	2.29%	3.18%	38.96%	7.70%	8.15%	5.81%
Services	22.03%	24.32%	10.41%	20.60%	25.80%	25.26%	15.57%	19.01%	22.07%	32.27%	35.07%	8.66%
Government and government enterprises	33.11%	28.65%	-13.47%	40.83%	33.08%	-19.00%	15.40%	23.16%	50.39%	18.48%	18.03%	-2.42%
Federal, civilian	4.15%	3.12%	-24.77%	12.83%	8.14%	-36.60%	1.34%	2.97%	122.05%	2.48%	2.06%	-16.75%
Military	1.28%	0.73%	-42.91%	15.96%	11.70%	-26.66%	1.06%	0.80%	-24.73%	2.44%	1.73%	-29.02%
State and local	27.68%	24.80%	-10.42%	12.04%	13.24%	9.93%	13.00%	19.39%	49.12%	13.57%	14.24%	4.97%
State government	12.65%	10.07%	-20.38%	0.87%	2.60%	197.63%	1.80%	3.27%	81.76%	5.00%	(D)	n/a
Local government	15.03%	14.72%	-2.02%	11.17%	10.63%	-4.77%	11.21%	16.12%	43.88%	8.57%	(D)	n/a

Table 12 (cont.). Employment by Industry Percentages, County and State, 1990-2000 and % Change

	Pinal County			Santa Cruz County			Arizona			New Mexico		
	1990	2000	% Change	1990	2000	% Change	1990	2000	% Change	1990	2000	% Change
Employment by place of work												
Total full-time and part-time employment	100.00%	100.00%	0.00%	100.00%	100.00%	0.00%	100.00%	100.00%	0.00%	100.00%	100.00%	0.00%
By type												
Wage and salary employment	84.05%	83.44%	-0.73%	83.98%	80.96%	-3.60%	84.17%	83.54%	-0.75%	82.87%	81.16%	-2.06%
Proprietors employment	15.95%	16.56%	3.84%	16.02%	19.04%	18.85%	15.83%	16.46%	4.00%	17.13%	18.84%	9.96%
Farm proprietors employment	1.94%	1.49%	-23.43%	1.38%	1.14%	-17.54%	0.42%	0.27%	-36.10%	1.77%	1.54%	-13.12%
Non-farm proprietors employment	14.01%	15.07%	7.62%	14.64%	17.90%	22.27%	15.41%	16.19%	5.09%	15.36%	17.30%	12.62%
By industry												
Farm employment	5.02%	4.20%	-16.41%	1.68%	1.30%	-22.67%	1.01%	0.70%	-30.34%	2.58%	2.24%	-13.20%
Non-farm employment	94.98%	95.80%	0.87%	98.32%	98.70%	0.39%	98.99%	99.30%	0.31%	97.42%	97.76%	0.35%
Private employment	66.54%	63.66%	-4.33%	84.02%	78.07%	-7.07%	82.89%	85.50%	3.15%	74.05%	76.96%	3.93%
Ag. services, forestry, fishing and other	3.25%	2.13%	-34.50%	0.86%	1.61%	87.32%	1.46%	1.66%	14.15%	1.10%	1.39%	26.96%
Mining	9.89%	2.81%	-71.61%	0.25%	0.12%	-52.38%	0.81%	0.45%	-44.81%	2.67%	1.99%	-25.64%
Construction	3.30%	4.08%	23.72%	3.72%	3.99%	7.11%	5.70%	7.11%	24.62%	5.29%	6.16%	16.30%
Manufacturing	8.85%	6.80%	-23.23%	8.47%	6.65%	-21.43%	10.19%	8.01%	-21.38%	6.22%	5.01%	-19.41%
Transportation and public utilities	3.65%	2.13%	-41.69%	6.19%	9.00%	45.42%	4.42%	4.43%	0.34%	4.45%	4.46%	0.15%
Wholesale trade	2.04%	2.68%	31.40%	12.02%	12.07%	0.40%	4.34%	4.35%	0.28%	3.64%	3.47%	-4.60%
Retail trade	14.66%	15.75%	7.42%	27.77%	20.00%	-27.98%	18.03%	17.17%	-4.73%	17.53%	17.73%	1.15%
Finance, insurance, and real estate	4.58%	4.93%	7.70%	5.15%	4.98%	-3.39%	8.90%	9.99%	12.24%	6.12%	6.47%	5.63%
Services	16.33%	22.36%	36.95%	19.59%	19.66%	0.37%	28.53%	32.33%	13.32%	27.03%	30.29%	12.06%
Government and government enterprises	28.43%	32.14%	13.04%	14.30%	20.63%	44.23%	16.10%	13.79%	-14.31%	23.37%	20.80%	-10.99%
Federal, civilian	1.75%	1.79%	2.52%	2.84%	6.36%	123.82%	2.40%	1.71%	-28.87%	4.12%	3.10%	-24.68%
Military	1.05%	0.83%	-21.44%	0.82%	0.56%	-32.44%	2.00%	1.18%	-41.02%	2.94%	1.76%	-39.98%
State and local	25.63%	29.52%	15.17%	10.64%	13.71%	28.92%	11.70%	10.91%	-6.75%	16.31%	15.93%	-2.31%
State government	11.05%	9.83%	-11.05%	0.97%	2.10%	115.96%	3.23%	2.87%	-10.89%	7.26%	6.65%	-8.51%
Local government	14.59%	19.70%	35.03%	9.67%	11.62%	20.17%	8.47%	8.03%	-5.18%	9.05%	9.29%	2.67%

(D) Not shown to avoid disclosure of confidential information, but the estimates for this item are included in the totals

Source: Bureau of Economic Analysis
<http://www.bea.doc.gov/bea/regional/reis/action.cfm>



Source: Bureau of Economic Analysis

Figure 9. Percent Change in Industry by County and State, 1990-2000

Table 13 presents a list of major employers throughout the region adapted from the Arizona Department of Commerce Community Profiles. Dominant occupations as determined by number of employees and percentage of total employment are shown for each county in Table 14. Data show that five of the six counties within the area of assessment maintain occupational structures very similar to that of the states of Arizona and New Mexico as a whole. Management, professional, and related occupations is the dominant occupational category for both states, followed by sales and office occupations and, finally, by service occupations. Management/professional and sales/office are the two most common categories of occupation in Cochise, Graham, Pima, Pinal, and Santa Cruz Counties. The exception is Hidalgo County, where, as of 2004, service was slightly more predominant than either sales and office occupations or management, professional and related occupations. For both the states of Arizona and New Mexico, as well as for each of the counties within the area of assessment, construction, extraction, and maintenance and production, transportation, and material moving were also among the five most dominant occupational categories.

Table 13. Major Employers by County, 2004

Cochise County	Graham County	Hidalgo County (NM)
U.S. Army, Fort Huachuca	Arizona State Prison Systems, Safford	Burgett Geothermal Greenhouses, Animas
Sierra Vista Unified School District	Bonita Nurseries, Bonita	Hidalgo Medical Services, Lordsburg
Cochise County, Bisbee	City of Safford, Safford	Kentucky Fired Chicken, Lordsburg
U.S. Border Patrol	Eastern Arizona College, Thatcher	Kranberry's Family Restaurant, Lordsburg
Cochise College, Douglas/Sierra Vista	Federal Prison Facility, Safford	McDonald's, Lordsburg
Aegis, Sierra Vista	Impressive Labels, Safford	Phelps Dodge Corp. - Copper Smelter, Playas
Sierra Vista Regional Health Center	Mt. Graham Hospital, Safford	Sunshine Haven Nursing Home, Lordsburg
Arizona State Prison, Douglas	Safford Unified School District, Safford	USA Petroleum Corp., Deming
Douglas Unified School District	Wal-Mart, Thatcher	Western Bank, Lordsburg
Wal-Mart, Douglas/Sierra Vista		Lordsburg Municipal Schools, Lordsburg
City of Sierra Vista		U.S. Border Patrol, Silver City
Safeway Stores, Inc.		Animas Public Schools, Animas
New Tech, Fort Huachuca		
Sierra Southwest, Benson		
Northrop Grumman, Sierra Vista		
City of Douglas		
Willcox Unified School District		
Palominas Public Schools		
ILEX, Sierra Vista		
Cochise Private Industrial Council, Sierra Vista		
Pima County	Pinal County	Santa Cruz County
Arizona Air National Guard, Tucson	Abbott Labs/Ross Prod. Div., Casa Grande	Canchola Foods Company, Nogales
Amphitheater Public Schools, Tucson	Albertson's	Carondelet Holy Cross Hospital, Nogales
Bashas' Inc., Tucson Metro	Apache Junction Health Center	Immigration and Naturalization Service, Nogales
Carondelet Health Network, Tucson	Apache Junction Schools	City of Nogales
Checkmate Professional Employer	Arizona State Prison, Florence	District 35 Public Schools, Tubac
City of Tucson	Asarco, Hayden	Nogales Unified School District, Nogales
Davis-Monthan AFB, Tucson	Bashas'	Santa Cruz County, Nogales
Fry's Food and Drug Stores, Tucson Metro	Casa Grande Regional Medical Center	Wal-Mart Discount Cities, Nogales
International Business Machines Corp., Tucson	Casa Grande Elementary School Dist.	United Musical Instruments, Nogales
Marana Unified School District	Casa Grande Union H.S. Dist.	U.S. Customs Service, Nogales
Northwest Medical Center, Tucson	Casa Grande Valley Newspapers	
Pascua Yaqui Tribe, Tucson	Central Arizona College, Coolidge	
Phelps Dodge Mining Company, Safford	City of Apache Junction	
Pima Community College, Tucson	City of Casa Grande	
Pima County, Tucson	City of Eloy	
Pinal County	Coolidge Unified School District	
Raytheon Missile Systems, Tucson	Corrections Corp. of America, Eloy/Florence	
Safeway Stores, Inc.	Eloy Schools	
Southern Arizona VA Health Care System	Evergreen Air Center, Marana	
State of Arizona, Tucson	Flying J Truckstop	
Sunnyside Unified School District	Frito-Lay, Casa Grande	
TMC HealthCare, Tucson	Fry's Food and Drug Stores	
	Gila River Indian Community,	
	Government Farms	
Tohono O'Odham Nation	Harrah's Ak-Chin Casino	
Tucson Unified School District	Hexcel Corp.	
Unisource Energy Corp., Tucson Electric Power	Holiday Inn	
University Medical Center Corp., Tucson	Hunter Douglas Wood Products	
University of Arizona, Tucson	K-Mart	
U.S. Army Intelligence Center & Fort Huachuca	Pinal County	
U.S. Border Patrol, Tucson	Tanger Outlet Center	
Wal-Mart, Tucson Metro	Westile Roofing Products	

Source: Arizona Department of Commerce - Community Profiles
http://www.azcommerce.com/Communities/community_profiles.asp
<http://www.dol.state.nm.us/pdf/LE-NM-2002.pdf>

Table 14. Dominant Occupations of State and County Populations, 2000

County/State	Number	Percent
Cochise County		
Management, professional, and related occupations	12,876	30.2%
Sales and office occupations	11,543	27.1%
Construction, extraction, and maintenance occupations	4,559	10.7%
Service occupations	9,075	21.3%
Production, transportation, and material moving occupations	4,001	9.4%
Graham County		
Management, professional, and related occupations	2,769	25.9%
Sales and office occupations	2,516	23.5%
Service occupations	2,219	20.8%
Construction, extraction, and maintenance occupations	1,751	16.4%
Production, transportation, and material moving occupations	1,232	11.5%
Hidalgo County , NM		
Service occupations	477	22.5%
Sales and office occupations	441	20.8%
Management, professional, and related occupations	435	20.5%
Construction, extraction, and maintenance occupations	369	17.4%
Production, transportation, and material moving occupations	300	14.2%
Pima County		
Management, professional, and related occupations	129,709	35.0%
Sales and office occupations	100,527	27.1%
Service occupations	65,326	17.6%
Construction, extraction, and maintenance occupations	39,765	10.7%
Production, transportation, and material moving occupations	34,698	9.4%
Pinal County		
Sales and office occupations	14,937	24.4%
Management, professional, and related occupations	13,523	22.1%
Service occupations	13,432	21.9%
Production, transportation, and material moving occupations	8,998	14.7%
Construction, extraction, and maintenance occupations	8,727	14.2%
Santa Cruz County		
Sales and office occupations	4,202	32.6%
Management, professional, and related occupations	3,229	25.1%
Service occupations	2,109	16.4%
Production, transportation, and material moving occupations	1,900	14.8%
Construction, extraction, and maintenance occupations	1,264	9.8%
Arizona		
Management, professional, and related occupations	730,001	32.70%
Sales and office occupations	636,970	28.50%
Service occupations	362,547	16.20%
Construction, extraction, and maintenance occupations	245,578	11.00%
Production, transportation, and material moving occupations	244,015	10.90%
New Mexico		
Management, professional, and related occupations	259,510	34.0%
Sales and office occupations	197,580	25.9%
Service occupations	129,349	17.0%
Construction, extraction, and maintenance occupations	87,172	11.4%
Production, transportation, and material moving occupations	81,911	10.7%

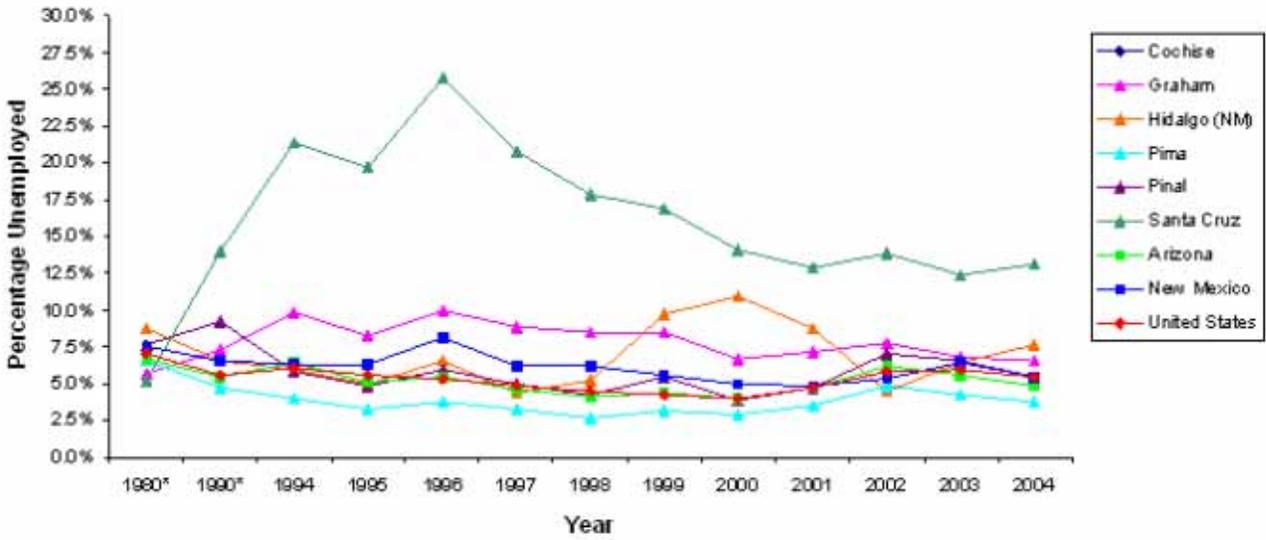
Source: U.S. Census Bureau, American Fact Finder
<http://factfinder.census.gov>

Table 15 presents annual unemployment rates for the counties in the area of assessment, the states of Arizona and New Mexico, the United States, and selected cities. Figure 10 graphically displays the unemployment rates at the county, state, and national levels over the same period. Data portray challenging economic circumstances throughout the region with five of the six counties in the area of assessment reporting average unemployment figures that were higher than average for their respective states. The lone exception to this trend was Pima County, which reported the lowest average unemployment at 3.9% over the period covered. In contrast, Santa Cruz County reported an average unemployment rate of 16.0% over the same period, due at least in part to the extremely high rate (20.3%) in the city of Nogales. The cities of Douglas, Lordsburg, and Eloy also reported double-digit rates of unemployment over the same period. Among the selected cities within the area of assessment, Oro Valley and Queen Creek reported the lowest average annual unemployment rate at 2.5%. Unemployment rates for selected border cities were unavailable at the time of this assessment. 2000 data for the state of Sonora, however, show that despite a relatively low rate of official unemployment—1.16% of individuals who were “economically active” were unemployed—45.8% of the population 12-years and older were “economically inactive” (INEGI 2005).

Per capita and median family incomes, as well as rates of individual and family poverty, are provided in Table 16. Data show that between 1990 and 2000, Pinal County saw the greatest increases in per capita and median family income at 31.76% and 25.06% respectively. However, Table 16 also shows that, as of 2000, each of the six counties within the area of assessment maintained lower levels of per capita and median family income than was average for its state. A similar trend is evident in individual and family poverty between 1990 and 2000. Both Pinal and Graham Counties witnessed substantial declines in individual and family poverty that were greater than reductions in poverty at the state level over the same period. Here again, Pinal County saw the greatest improvement with cuts in individual and family poverty of -29.17% and -36.84% respectively. Nonetheless, as of 2000, each of the counties maintained rates of poverty greater than those for their respective states. Within the area of assessment, Hidalgo and Santa Cruz Counties reported the highest rates of poverty in both categories. Among individual cities within the area of assessment, Green Valley, Oro Valley, and Queen Creek reported the highest levels of per capita and median family income as of 2000 while Lordsburg and South Tucson reported the lowest income. Between 1990 and 2000, the city of Marana experienced dramatic increases in both individual and median family income (90.17% and 71.82% respectively) and substantial cuts in both individual and family poverty. Florence, Oro Valley, Apache Junction and Benson also saw significant decreases in rates of poverty over the same period. As of 2000, South Tucson remained severely limited economically with 46.5% of individuals and families living in poverty. The percentage changes in per capita income for each county over the same period are graphically represented in Figure 11. Percent change in family poverty over the same period is displayed in Figure 12.

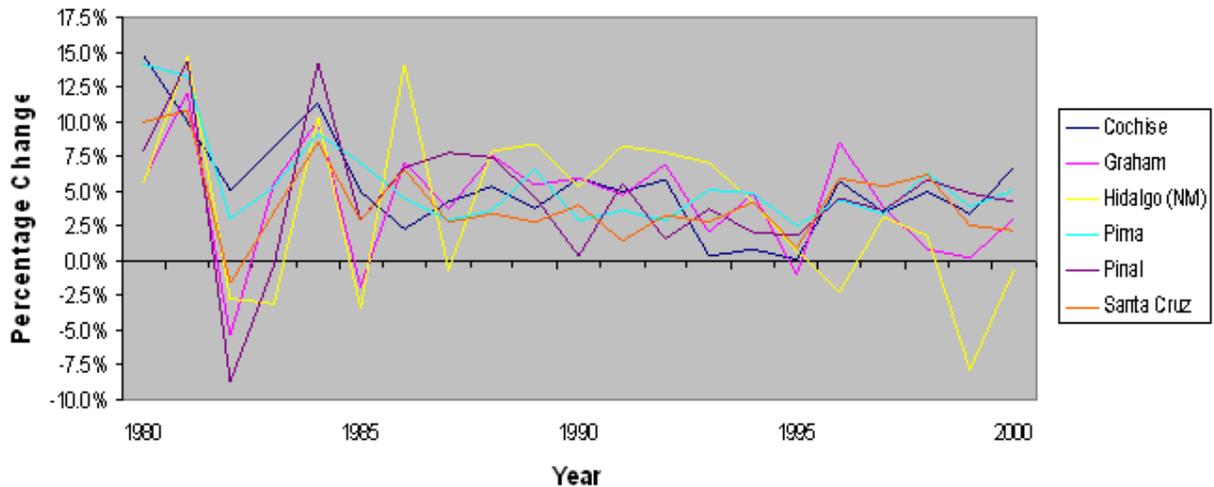
As expected, per capita and median family income figures for Sonora and selected border communities as of 2000 are much lower than areas within the United States. However, the cities of Agua Prieta and Nogales both reported individual and median family incomes which were higher than those for the state of Sonora as a whole. Still, rates of individual and family poverty, while high, were not the highest within the area of assessment as of 2000. For purposes of reporting, the Secretaría de Desarrollo Social (SEDOSOL) defines families and individuals in *pobreza de patrimonio* as those who cannot afford the basic demands of a nutritional diet, dress, footwear, dwelling, health, public transportation, and education (SEDOSOL 2002). Each of the selected border cities reported rates of individual and family poverty that were lower than the average for the state of Sonora.

Household income distribution for each county is presented in Table 17. Here again, the economic status of Hidalgo County is seen to be considerably limited with over 50% of households earning less than \$25,000 per year. Median household income ranged from a high of \$36,758 in Pima County to \$24,819 in Hidalgo County. Pima County was also the most affluent of the six counties with 9% of households earning \$100,000 or more as of 2000.



Sources: Arizona Department of Commerce, Arizona Workforce Informer
 U.S. Bureau of Labor Statistics

Figure 10. Unemployment Rates by County and State, 1980-2004



* Annual percent change in per capita personal income based on mid-year Census Bureau estimates of county population
 Source: Bureau of Economic Analysis

Figure 11. Annual Percent Change in Per Capita Income by County, 1980-2000

Table 15. Average Annual Unemployment Rates by County, State, Place, and U.S., 1980-2004

Area	1980*	1990*	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Average
Cochise County	10.1%	6.7%	10.7%	9.2%	9.7%	8.4%	6.8%	5.7%	4.6%	4.6%	5.5%	5.2%	4.3%	7.0%
Sierra Vista	11.3%	5.2%	8.3%	7.1%	7.5%	6.5%	5.2%	4.4%	3.5%	3.5%	4.2%	4.0%	3.3%	5.7%
Douglas	11.4%	13.5%	20.6%	18.0%	18.9%	16.5%	13.6%	11.6%	9.5%	9.5%	11.2%	10.7%	8.9%	13.4%
Bisbee	10.4%	6.6%	10.6%	9.1%	9.6%	8.3%	6.7%	5.6%	4.6%	4.5%	5.4%	5.2%	4.3%	7.0%
Benson	8.4%	7.8%	12.4%	10.7%	11.3%	9.7%	7.9%	6.6%	5.4%	5.4%	6.4%	6.1%	5.0%	7.9%
Willcox	7.2%	4.1%	6.7%	5.7%	6.0%	5.2%	4.1%	3.5%	2.8%	2.8%	3.4%	3.2%	2.6%	4.4%
Graham County	5.7%	7.3%	9.8%	8.2%	10.0%	8.9%	8.5%	8.5%	6.7%	7.2%	7.8%	6.8%	6.6%	7.8%
Safford	4.6%	6.1%	8.3%	6.9%	8.4%	7.5%	7.2%	7.1%	8.0%	6.0%	6.6%	5.7%	5.5%	6.8%
Thatcher	3.1%	4.8%	6.6%	5.5%	6.7%	5.9%	5.7%	5.6%	8.6%	4.7%	5.2%	4.5%	4.3%	5.5%
Hidalgo County	8.8%	6.6%	6.0%	5.0%	6.6%	4.4%	5.2%	9.7%	10.9%	8.7%	4.5%	6.4%	7.7%	7.0%
Lordsburg	13.2%	12.2%	n/a	n/a	n/a	N/a	n/a	n/a	11.6%	n/a	n/a	n/a	n/a	12.3%
Pima County	6.5%	4.7%	4.0%	3.3%	3.8%	3.3%	2.7%	3.1%	2.9%	3.5%	4.9%	4.3%	3.8%	3.9%
Tucson	6.5%	5.2%	4.4%	3.7%	4.2%	3.6%	3.0%	3.5%	3.2%	3.9%	5.4%	4.8%	4.2%	4.3%
Oro Valley	n/a	3.2%	2.7%	2.2%	2.5%	2.2%	1.8%	2.1%	1.9%	2.3%	3.3%	2.9%	2.5%	2.5%
Green Valley	13.3%	3.2%	2.7%	2.2%	2.6%	2.2%	1.9%	2.1%	2.0%	2.4%	3.3%	2.9%	2.6%	3.3%
Catalina	10.2%	5.2%	4.3%	3.6%	4.1%	3.6%	3.0%	3.4%	3.2%	3.9%	5.3%	4.7%	4.1%	4.5%
Marana	n/a	3.5%	2.9%	2.4%	2.8%	2.4%	2.0%	2.3%	2.1%	2.6%	3.6%	3.2%	2.8%	2.7%
South Tucson	n/a	11.9%	10.1%	8.5%	9.6%	8.5%	7.1%	8.1%	7.5%	9.0%	12.2%	10.9%	9.7%	9.4%
Pinal County	7.7%	9.2%	5.8%	4.8%	5.9%	5.0%	4.2%	5.5%	3.9%	4.7%	7.0%	6.5%	5.5%	5.8%
Apache Junction	11.2%	6.8%	4.2%	3.4%	4.3%	3.6%	3.0%	4.0%	2.8%	3.4%	5.1%	4.7%	4.0%	4.7%
Casa Grande	6.2%	7.9%	4.9%	4.1%	5.1%	4.3%	3.6%	4.7%	3.3%	4.0%	6.0%	5.6%	4.7%	5.0%
Florence	3.1%	4.7%	2.9%	2.4%	3.0%	2.5%	2.1%	2.8%	2.0%	2.4%	3.6%	3.3%	2.7%	2.9%
Eloy	12.6%	17.6%	11.5%	9.6%	11.7%	10.0%	8.4%	11.0%	7.9%	9.5%	13.8%	12.9%	10.9%	11.3%
Coolidge	13.4%	9.3%	5.8%	4.9%	6.0%	5.1%	4.2%	5.6%	3.9%	4.8%	7.1%	6.6%	5.6%	6.3%
Queen Creek	n/a	3.8%	2.9%	2.1%	2.3%	1.8%	1.7%	1.8%	1.6%	2.4%	3.5%	3.1%	2.5%	2.5%
Santa Cruz County	5.2%	14.0%	21.4%	19.7%	25.8%	20.8%	17.9%	16.9%	14.1%	12.9%	13.9%	12.4%	13.1%	16.0%
Nogales	5.2%	18.1%	27.0%	25.0%	32.1%	26.3%	22.9%	21.6%	18.3%	16.7%	17.9%	16.1%	17.0%	20.3%
Patagonia**	n/a	5.3%	n/a	n/a	n/a	n/a	5.3%							
Arizona	6.7%	5.5%	6.4%	5.1%	5.5%	4.6%	4.1%	4.4%	4.0%	4.7%	6.2%	5.6%	4.9%	5.2%
New Mexico	7.5%	6.5%	6.3%	6.3%	8.1%	6.2%	6.2%	5.6%	5.0%	4.8%	5.4%	6.4%	5.5%	6.1%
United States	7.1%	5.6%	6.1%	5.6%	5.4%	4.9%	4.5%	4.2%	4.0%	4.7%	5.8%	6.0%	5.5%	5.3%

* 1980 and 1990 unemployment data unavailable for towns with a population of fewer than 2,500 individuals

**Bureau of Labor Statistics publishes annual unemployment figures only for cities with a population greater than 25,000 individuals

Source: Arizona Department of Commerce, Arizona Workforce Informer

<http://www.workforce.az.gov/cgi/dataanalysis/?PAGEID=94&SUBID=142>

U.S. Bureau Of Labor Statistics

<http://www.bls.gov/cps>

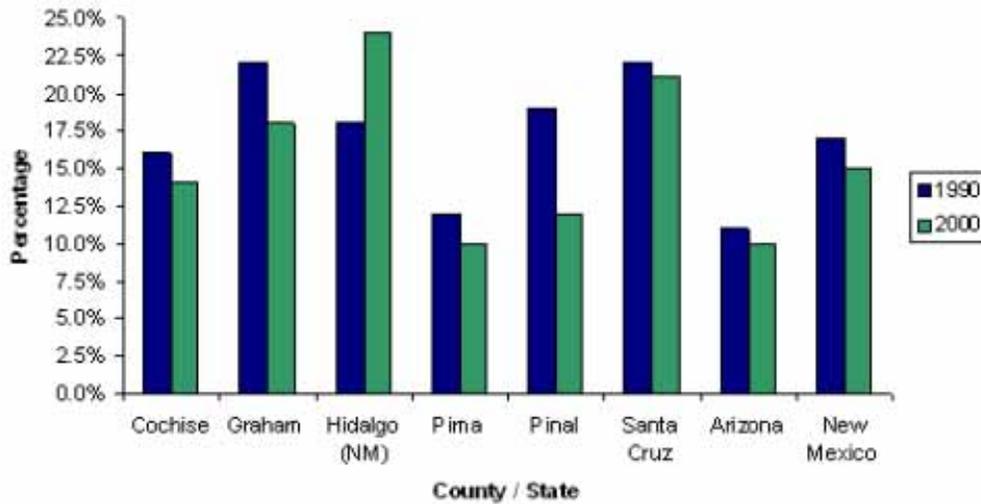
Table 16. Per Capita and Family Income by County and State, 1990-2000 and % Change

County/Place	Per Capita Income			Median Family Income			% Individuals in Poverty			% Families in Poverty		
	1990	2000*	% Change	1990	2000*	% Change	1990	2000	% Change	1990	2000	% Change
Cochise County	\$10,716	\$12,131	13.20%	\$26,152	\$28,835	10.26%	20.0%	18.0%	-10.00%	16.0%	14.0%	-12.50%
Sierra Vista	\$13,449	\$13,988	4.01%	\$32,764	\$33,442	2.07%	10.7%	10.5%	-1.87%	8.7%	8.0%	-8.05%
Douglas	\$6,619	\$10,232	54.59%	\$17,147	\$17,014	-0.77%	43.1%	36.6%	-15.08%	36.0%	32.1%	-10.83%
Bisbee	\$9,530	\$12,996	36.37%	\$22,276	\$27,834	24.95%	21.6%	17.5%	-18.98%	16.6%	12.9%	-22.29%
Benson	\$9,704	\$13,137	35.38%	\$21,357	\$27,590	29.19%	18.6%	13.7%	-26.34%	15.2%	6.2%	-59.21%
Willcox	\$8,428	\$8,964	6.36%	\$22,628	\$23,832	5.32%	23.1%	27.0%	16.88%	16.1%	21.6%	34.16%
Graham County	\$8,955	\$9,210	2.85%	\$21,754	\$26,113	20.04%	27.0%	23.0%	-14.81%	22.0%	18.0%	-18.18%
Safford	\$9,344	\$10,662	14.10%	\$24,206	\$27,842	15.02%	20.1%	17.3%	-13.93%	16.3%	13.9%	-14.72%
Thatcher	\$8,289	\$9,834	18.64%	\$24,611	\$30,646	24.52%	22.6%	20.2%	-10.62%	16.8%	12.8%	-23.81%
Hidalgo County	\$10,092	\$9,432	-6.54%	\$27,090	\$23,939	-11.63%	21.0%	27.0%	28.57%	18.0%	24.0%	33.33%
Lordsburg	\$7,077	\$8,253	16.61%	\$18,105	\$21,264	17.45%	35.8%	32.7%	-8.66%	32.1%	28.6%	-10.90%
Pima County	\$13,177	\$15,011	13.92%	\$30,985	\$33,722	8.83%	17.0%	15.0%	-11.76%	12.0%	10.0%	-16.67%
Tucson	\$11,184	\$12,384	10.73%	\$27,208	\$28,334	4.14%	20.2%	18.4%	-8.91%	14.4%	13.7%	-4.86%
Oro Valley	\$26,393	\$23,622	-10.50%	\$46,727	\$51,261	9.70%	5.3%	3.1%	-41.51%	4.1%	2.4%	-41.46%
Green Valley	\$21,531	\$23,625	9.73%	\$36,749	\$36,699	-0.14%	3.0%	3.0%	0.00%	2.0%	1.7%	-15.00%
Catalina	\$10,493	\$12,586	19.94%	\$27,372	\$31,194	13.96%	11.8%	9.7%	-17.80%	8.3%	7.9%	-4.82%
Marana	\$8,940	\$17,002	90.17%	\$25,045	\$43,033	71.82%	17.8%	6.2%	-65.17%	13.9%	5.5%	-60.43%
South Tucson	\$5,071	\$6,768	33.46%	\$12,931	\$13,364	3.35%	50.9%	46.5%	-8.64%	43.5%	46.5%	6.90%
Pinal County	\$9,228	\$12,159	31.76%	\$23,993	\$30,006	25.06%	24.0%	17.0%	-29.17%	19.0%	12.0%	-36.84%
Apache Junction	\$9,946	\$12,751	28.20%	\$23,151	\$28,624	23.64%	16.7%	11.6%	-30.54%	11.8%	7.3%	-38.14%
Casa Grande	\$11,388	\$12,077	6.05%	\$28,639	\$30,976	8.16%	17.4%	16.0%	-8.05%	16.1%	12.4%	-22.98%
Florence	\$10,101	\$8,557	-15.29%	\$24,397	\$31,835	30.49%	17.6%	7.0%	-60.23%	14.9%	6.1%	-59.06%
Eloy	\$5,836	\$6,976	19.53%	\$19,839	\$21,619	8.97%	36.7%	31.9%	-13.08%	31.2%	27.8%	-10.90%
Coolidge	\$7,634	\$10,366	35.79%	\$18,733	\$25,445	35.83%	36.2%	24.7%	-31.77%	29.5%	20.9%	-29.15%
Queen Creek	\$12,057	\$16,382	35.87%	\$37,083	\$49,832	34.38%	14.4%	9.2%	-36.11%	10.7%	6.0%	-43.93%
Santa Cruz County	\$9,007	\$10,074	11.85%	\$24,431	\$24,322	-0.45%	26.0%	24.0%	-7.69%	22.0%	21.0%	-4.55%
Nogales	\$7,795	\$7,722	-0.93%	\$20,386	\$18,693	-8.31%	31.2%	33.9%	8.65%	27.4%	30.8%	12.41%
Patagonia	\$8,436	\$11,627	37.83%	\$22,045	\$23,520	6.69%	30.9%	25.1%	-18.77%	26.1%	18.0%	-31.03%
Arizona	\$13,461	\$15,383	14.28%	\$32,178	\$35,450	10.17%	16.0%	14.0%	-12.50%	11.0%	10.0%	-9.09%
New Mexico	\$11,246	\$13,096	16.45%	\$27,623	\$29,913	8.29%	21.0%	18.0%	-16.67%	17.0%	15.0%	-11.76%
Sonora	n/a	\$1,954	n/a	n/a	\$7,969	n/a	n/a	34.1%	n/a	n/a	32.7%	n/a
Nogales	n/a	\$2,564	n/a	n/a	\$10,439	n/a	n/a	20.3%	n/a	n/a	19.7%	n/a
Agua Prieta	n/a	\$2,766	n/a	n/a	\$11,552	n/a	n/a	24.5%	n/a	n/a	22.3%	n/a
Naco	n/a	\$1,836	n/a	n/a	\$7,861	n/a	n/a	23.4%	n/a	n/a	21.7%	n/a

*2000 Income data for areas in the United States adjusted to reflect 1990 constant dollars by applying deflation factor calculated by Consumer Price Index
Income data for areas in Mexico calculated according to 2000 exchange rate of 9.4556 pesos to 1 U.S. dollar

Source: NRIS - Human Dimensions

Instituto Nacional de Estadística, Geografía e Informática (INEGI), Censo General de Población y Vivienda, 2000



Source: NRIS Human Dimensions

Figure 12. Percent of Families in Poverty by County, 1990-2000

Table 17. Household Income Distribution by County, 2000

	Cochise County		Graham County		Hidalgo County (NM)		Pima County		Pinal County		Santa Cruz County	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Less than \$10,000	5,438	12.39%	1,509	14.91%	447	20.77%	34,224	10.29%	6,319	10.29%	1,579	13.36%
\$10,000 to \$14,999	3,772	8.59%	1,090	10.77%	252	11.71%	23,849	7.17%	4,604	7.50%	1,188	10.05%
\$15,000 to \$24,999	7,579	17.27%	1,776	17.55%	383	17.80%	51,181	15.39%	9,488	15.45%	2,164	18.31%
\$25,000 to \$34,999	6,701	15.27%	1,406	13.89%	298	13.85%	48,844	14.69%	9,380	15.27%	1,913	16.18%
\$35,000 to \$49,999	7,453	16.98%	1,747	17.26%	329	15.29%	57,733	17.36%	12,082	19.67%	1,647	13.93%
\$50,000 to \$74,999	7,439	16.95%	1,720	17.00%	268	12.45%	58,835	17.69%	11,221	18.27%	1,802	15.24%
\$75,000 to \$99,999	3,154	7.19%	537	5.31%	93	4.32%	27,889	8.39%	4,435	7.22%	692	5.85%
\$100,000 to \$149,999	1,631	3.72%	236	2.33%	56	2.60%	18,830	5.66%	2,683	4.37%	519	4.39%
\$150,000 to \$199,999	430	0.98%	71	0.70%	12	0.56%	5,359	1.61%	605	0.99%	177	1.50%
\$200,000 or more	299	0.68%	28	0.28%	14	0.65%	5,753	1.73%	596	0.97%	140	1.18%
Median household income (\$)	\$32,105	(x)	\$29,668	(x)	\$24,819	(x)	\$36,758	(x)	\$35,856	(x)	\$29,710	(x)

Source: U.S. Census Bureau, Profile of Selected Economic Characteristics: 2000
<http://www.census.gov/census2000/states/az.html>

3.3 Forest and natural-resource dependent economic activities

Data on natural-resource dependent economic activities are comprised of available information on income from wood products and processing, income from special forest products and processing, and tourism employment. Analysis is based on IMPLAN data provided by the USFS Planning Analysis Group and Inventory and Monitoring Institute in Fort Collins, Colorado. IMPLAN is a form of input-output analysis developed specifically for the unique needs of the Forest Service. Input-output analysis (I-O) is used to quantify linkages among the structural parts of an economy. Given a particular economic impact, for example a public lands management decision, I-O analysis generally calculates the overall effects resulting from a direct impact on the economy. This mathematical model accounts for a variety of employment, income, and output effects including both direct effects (i.e. wages) and indirect effects (i.e. the stimulation of local economy to supply inputs and processing). Some I-O analyses also model induced effects, the additional economic effects of household spending of increased wages within the community. The secondary (indirect and induced) effects are often described as “ripplelike” effects of spending throughout other sectors of a local economy (Loomis 2002). IMPLAN data are tabulated for 525 distinct industries according to the North American Industry Classification System (NAICS). A list of industries used to calculate income from wood and special forest products and processing as well as tourism employment is included in Appendix A. It should also be noted that analysis of IMPLAN data in this assessment is based solely on the direct economic impacts of selected industries and does not include indirect or induced economic impacts. Appendix B addresses some of the indirect economic effects of forest-related industries.

Total labor income from forest resources for the years 1990 and 2000 is shown in Table 18. Total labor income is commonly defined as the sum of employee compensation and proprietor income. Data show that Cochise, Pinal, and Pima Counties each reported especially strong gains in total labor income from wood processing and products between 1990 and 2000, contributing to an increase in this category for the area of assessment that was substantially greater than that for the state of Arizona over the same period. Particularly strong gains were reported in the individual sectors of special product sawmills, prefabricated wood buildings, reconstituted wood products, wood household furniture, structural wood members, and millwork. Interestingly, the counties that reported the largest increases in total labor income from wood products and processing reported either minimal gains or substantial losses in income from special forest products and processing over the same period. Graham and Hidalgo Counties reported the strongest increases in income from special forest products and processing between 1990 and 2000. Table 18 shows that the area of assessment, in comparison to statewide figures, realized a large increase in income from wood products and processing and an overall loss in income from special forest products and processing between 1990 and 2000.

Table 18. Total Labor Income from Forest Resources by County and State, 1990-2000 and % Change

County / State	Income from Wood Products and Processing			Income from Special Forest Products and Processing		
	1990	2000*	%Change	1990	2000*	%Change
Cochise County	\$930,836.12	\$2,316,042.25	148.81%	\$2,749,189.17	\$2,847,457.56	3.57%
Graham County	\$0.00	\$47,675.72	n/a	\$1,301,649.08	\$2,622,988.60	101.51%
Hidalgo County	\$0.00	\$0.00	0.00%	\$815,788.28	\$1,316,613.24	61.39%
Pinal County	\$1,857,088.91	\$3,403,789.99	83.29%	\$14,124,030.37	\$9,449,586.45	-33.10%
Pima County	\$12,710,945.28	\$23,744,236.92	86.80%	\$7,086,517.78	\$3,526,435.86	-50.24%
Santa Cruz County	\$302,875.49	\$280,303.11	-7.45%	\$962,175.81	\$929,841.86	-3.36%
Assessment Area Total	\$15,801,745.81	\$29,792,048.00	88.54%	\$27,039,350.49	\$20,692,923.57	-23.47%
Arizona	\$263,558,989.17	\$369,474,538.71	40.19%	\$175,994,086.50	\$137,825,248.28	-21.69%
New Mexico	\$74,750,035.16	\$71,318,854.00	-4.59%	\$32,359,688.72	\$39,734,899.98	22.79%

*2000 Income data adjusted to reflect 1990 constant dollars by applying deflation factor calculated by Consumer Price Index
Source: IMPLAN data

Information on tourism employment for each of the counties within the area of assessment, as well as the states of Arizona and New Mexico, is provided in Table 19. Calculating the direct impact of tourism is made particularly difficult given the fact that a limited percentage of business activity in any given industry can be considered the result of tourism. For the purposes of this assessment, tourism employment has been assessed based on percentages derived from the Travel Industry Association of America Tourism Economic Impact Model (TEIM). This is the same model used in the Arizona Tourism Statistical Report issued by the Arizona Office of Tourism (AZOT).

Table 19 suggests that the most substantial gains in tourism employment between 1990 and 2000 took place in Cochise, Graham, and Pima Counties, each of which exceeded the rate of increase for tourism employment at the state level. Although Hidalgo County reported the highest rate of increase in tourism employment over the period, the number of individuals employed as a result of tourism in 2000 remained relatively low. Meanwhile, Pinal and Santa Cruz Counties reported figures that suggest minimal increases in tourism employment over the same period.

Table 19. Tourism Employment by County and State, 1990-2000 and % Change

Industry Sector	Cochise County			Graham County		
	1990	2000	%Change	1990	2000	%Change
Retail	406	550	35.44%	111	152	36.25%
Restaurant/Bar	471	744	58.01%	132	147	11.13%
Lodging	708	858	21.29%	98	195	98.93%
Amusement	12	18	46.95%	1	1	0.00%
Total	1,597	2,171	35.91%	342	494	44.38%
Industry Sector	Hidalgo County			Pima County		
	1990	2000	%Change	1990	2000	%Change
Retail	36	35	-2.65%	3,758	4,269	13.62%
Restaurant/Bar	55	49	-11.33%	4,764	6,633	39.23%
Lodging	11	148	1,196.65%	7,547	10,846	43.71%
Amusement	0	2	2,779.99%	353	427	21.21%
Total	102	233	128.10%	16,421	22,176	35.04%
Industry Sector	Pinal County			Santa Cruz County		
	1990	2000	%Change	1990	2000	%Change
Retail	456	535	17.39%	329	252	-23.16%
Restaurant/Bar	375	574	53.12%	113	166	47.14%
Lodging	665	510	-23.29%	446	589	32.15%
Amusement	34	80	134.27%	13	11	-13.30%
Total	1,530	1,700	11.09%	901	1,019	13.18%
Industry Sector	Arizona			New Mexico		
	1990	2000	%Change	1990	2000	%Change
Retail	21,655	30,376	40.28%	8,217	10,748	30.81%
Restaurant/Bar	26,393	38,395	45.47%	10,734	14,290	33.13%
Lodging	47,848	56,848	18.81%	14,056	17,021	21.09%
Amusement	1,442	3,462	140.05%	490	1,421	189.73%
Total	97,338	129,081	32.61%	33,497	43,480	29.80%

Source: IMPLAN data

3.4 Government earnings from federal-lands related payments

Federal lands support the fiscal management of local governments through Payments in Lieu of Taxes (PILT) and what are commonly referred to as “Payments to States” or “Secure Schools and Roads” funding. PILT funds derive from a 1976 law (Public Law 94-565) that provides funds to local governments based on the amount of federal lands within their jurisdiction. These payments are affected by federal funding limitations, prior year “Payments to States,” and formulas derived from county populations. Based on annual congressional appropriation decisions, PILT payments may not always be fully funded. Initially counties received monies based on a 1908 law that allocated to them ten percent of the gross revenues generated from timber harvest, grazing, mining, and all other uses from the federal lands within their jurisdictions.

The Weeks Law of 1911 increased the amount of forest receipt payments from ten to twenty-five percent. These “twenty-five percent monies” were mandated for use in schools and on roads. With recent diminishing commercial uses of federal lands, the President, in 2000, signed the Secure Rural Schools and Community Self Determination Act (PL 106-393). The purpose of the Act was to address the diminishing amounts of the twenty-five percent monies. This new law provides counties with the option of continuing to receive the twenty-five percent amount or to elect to receive a fixed amount based on the average of the three highest years between 1986 and 1999. In rural counties, these funds can be an

important source of funding to maintain roads and provide support for schools. The law was originally scheduled to sunset in 2006, but a bill to reauthorize the Act and extend it through FY 2013 was, at the time of this report, being considered by Congress (S. 267, H.R. 517).

In Table 20, PILT entitlement acreage is presented for each county by agency as of 2004. Pima County holds the greatest entitlement acreage with nearly 1.6 million acres, 389,871 of which are Forest Service (FS) lands. Cochise County holds the largest amount of FS lands entitled to PILT with 489,542 acres. Actual PILT payments for each county are presented in Table 21. Consistent with its abundance of entitlement acreage, Pima County has been the largest recipient of PILT payments over the last four years. Graham County had the second highest PILT payments over the last four years with an annual average of over \$1.2 million. Hidalgo County reported the lowest average annual PILT payment at \$397,318 between 2000 and 2004. Annual forest receipts for the period spanning 1986-1999 are presented for each county in Table 22. Here again, Hidalgo County reported the least amount in average annual forest receipts with \$8,900. By comparison, Cochise County had the greatest amount of annual average forest receipts over the same period with \$58,500.

Table 20. Payment in Lieu of Taxes (PILT) Entitlement Acreage by County and Agency, FY 2004

County	BLM	FS	BOR	NPS	COE	ARMY	FISH	URC	TOTAL
Cochise County	391,051	489,542	1,989	17,592	0	0	0	0	900,174
Graham County	733,167	396,174	0	0	0	0	0	0	1,129,341
Hidalgo County (NM)	747,150	76,589	0	0	0	0	0	0	823,739
Pima County	376,616	389,871	5,898	410,822	0	0	416,210	0	1,599,417
Pinal County	382,231	222,889	21,312	473	0	0	0	0	626,905
Santa Cruz County	13,574	418,298	0	45	0	0	0	0	431,917
TOTAL	2,643,789	1,993,363	29,199	428,932	0	0	416,210	0	5,511,493

Source: U.S. Department of the Interior, Bureau of Land Management
<http://www.blm.gov/pilt/search.html>

Table 21. County PILT Payments, 2000-2004

County	2000	2001	2002	2003	2004	Average
Cochise County	\$653,544	\$936,958	\$976,944	\$1,089,494	\$1,225,198	\$976,428
Graham County	\$817,889	\$1,187,783	\$1,248,837	\$1,421,185	\$1,461,333	\$1,227,405
Hidalgo County (NM)	\$282,260	\$405,862	\$425,861	\$430,317	\$442,290	\$397,318
Pima County	\$1,061,362	\$1,529,516	\$1,618,859	\$1,841,427	\$1,901,776	\$1,590,588
Pinal County	\$396,290	\$568,264	\$599,120	\$673,798	\$842,978	\$616,090
Santa Cruz County	\$331,976	\$475,255	\$498,484	\$569,132	\$597,577	\$494,485
TOTAL	\$3,543,321	\$5,103,638	\$5,368,105	\$6,025,353	\$6,471,152	\$5,302,314

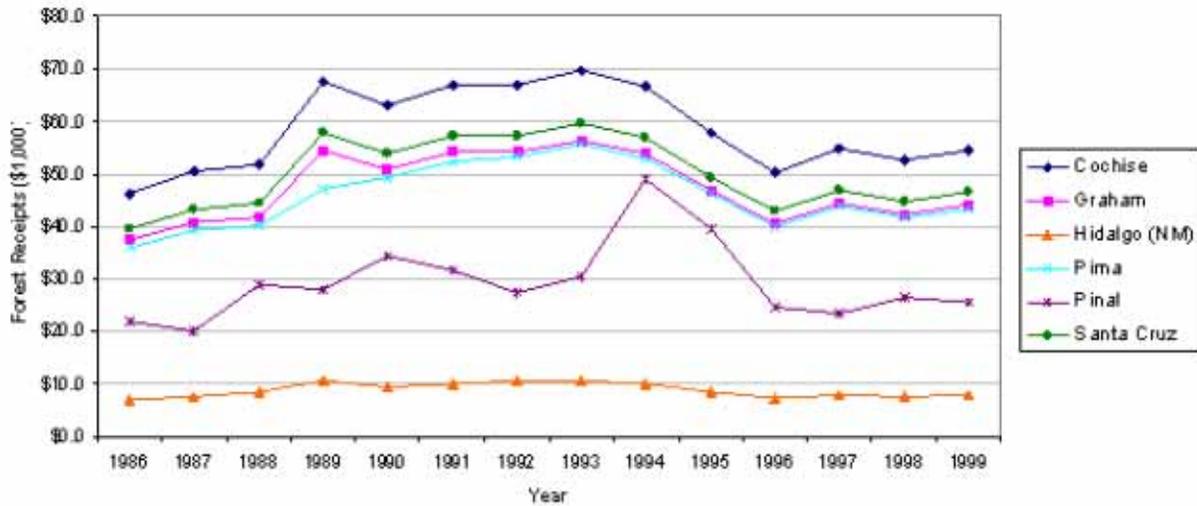
Source: U.S. Department of the Interior, Bureau of Land Management
<http://www.blm.gov/pilt/search.html>

Table 22. Forest Receipts by County, 1986-1999 (Amounts in 1,000s)

County	1986	1987	1988	1989	1990	1991	1992	1993
Cochise County	\$46.1	\$50.4	\$51.7	\$67.4	\$62.9	\$66.9	\$66.8	\$69.7
Graham County	\$37.3	\$40.8	\$41.8	\$54.5	\$50.9	\$54.1	\$54.1	\$56.4
Hidalgo County (NM)	\$7.0	\$7.7	\$8.5	\$10.7	\$9.5	\$10.0	\$10.6	\$10.6
Pima County	\$36.0	\$39.3	\$40.3	\$47.0	\$49.2	\$52.4	\$53.3	\$55.6
Pinal County	\$21.8	\$20.1	\$29.0	\$28.1	\$34.4	\$31.5	\$27.5	\$30.3
Santa Cruz County	\$39.5	\$43.2	\$44.3	\$57.7	\$53.9	\$57.3	\$57.2	\$59.7

	1994	1995	1996	1997	1998	1999	Average
Cochise County	\$66.5	\$57.9	\$50.3	\$54.8	\$52.5	\$54.5	\$58.5
Graham County	\$53.8	\$46.7	\$40.6	\$44.3	\$42.4	\$44.0	\$47.3
Hidalgo County (NM)	\$10.0	\$8.6	\$7.4	\$8.0	\$7.7	\$7.9	\$8.9
Pima County	\$53.0	\$46.1	\$40.0	\$43.7	\$41.7	\$43.3	\$45.8
Pinal County	\$48.9	\$39.6	\$24.5	\$23.5	\$26.6	\$25.7	\$29.4
Santa Cruz County	\$56.8	\$49.4	\$42.9	\$46.8	\$44.8	\$46.5	\$50.0

Source: NRIS - Human Dimensions



Source: NRIS - Human Dimensions

Figure 13. Forest Receipts by County, 1986-1999

3.5 Key issues for forest planning and management

In the early stages of Arizona's development, extractive industries such as mining, ranching, farming, and timber harvesting were the mainstays of local economies. For decades, these sectors provided the foundation for employment upon which the state's predominantly rural economy was based (Case and Alward 1997, Rasker 2000). In recent decades, however, Arizona has joined neighboring western states in experiencing a significant decline in extractive industries along with the employment and income traditionally provided by these sectors (Baden and Snow 1997, Booth 2002).

While these changes have undoubtedly had negative impacts on many local economies, the relative expansion of information- and service-based industries has led to a more diverse, and some say more sustainable, state economy (Baden and Snow 1997, Booth 2002). The economic data gathered for the area of assessment for CNF illustrate this trend, evincing substantial growth in the F.I.R.E. (finance, insurance and real estate), services, and construction industries. When matched with a simultaneous decline in extractive and productive industries, these changes have made the composition of the area's rural economy similar to those of urban areas and the state of Arizona as a whole (Booth 2002, Case and Alward 1997).

Again, these changes are emblematic of those seen in recent decades throughout the Mountain West and signal important demographic and economic trends that are likely to shape the region's future development. Despite relatively slow economic growth for the area surrounding CNF, data show expansion of certain populations and industries that are increasingly important to the local economy. In particular, the increase in retirement-aged population and seasonal housing units, when combined with increases in the service/professional, retail trade, and construction industries, mirrors a common trend in rural western economies.

These trends support the notion that growth in many western communities is increasingly supported by individuals and households with the wherewithal to advocate non-extractive economies. Data show that per capita and median household incomes in the region grew less than the state average between 1990 and 2000, with overall income levels remaining well below the state average for each of the counties in the area of assessment. This trend takes on increasing relevance when combined with observed demographic trends showing an influx of retirement-age residents and seasonal homeowners. Several researchers have noted that while labor income is growing in the rural Mountain West, it is growing more slowly than transfer (social security, pensions, and retirement) and dividend income. In other words, the growth of many western communities is being fueled, at least in part, by income that is not tied to local employment (Booth 2002, Rasker 2000).

The relative expansion of the service and professional industries is also facilitated by advances in transportation and information technology that increasingly allow urban populations to relocate to high-amenity, rural communities while maintaining employment and income characteristics typical of more urban settings (Booth 2002, Rasker 2000).

Together, these trends signal a convergence of rural and urban economies that carries important implications for natural resource management. Many of the communities hardest hit by the transition away from extractive industries belong to traditional constituencies associated with the FS, the BLM, and other federal and state agencies. In many cases, these agencies are caught between the necessity of responding to market forces and those powerful interests determined to protect established industries from such changes (Baden and Snow 1997). Finally, data for the area surrounding the CNF demonstrate the reciprocal cause-and-effect relationships between economic and demographic trends. Although economic growth of rural communities may be fueled by households with relatively "footloose" sources of income, potentially negative consequences include an increased demand for construction, schools, health care and other services as well as undesirable side effects such as pollution, urban sprawl, and congestion (Rasker 2000, Case and Alward 1997).