

APACHE

EMPLOYMENT GROWTH
2001-03

2.3

2001-06

1.7

STANFORD 9
2002

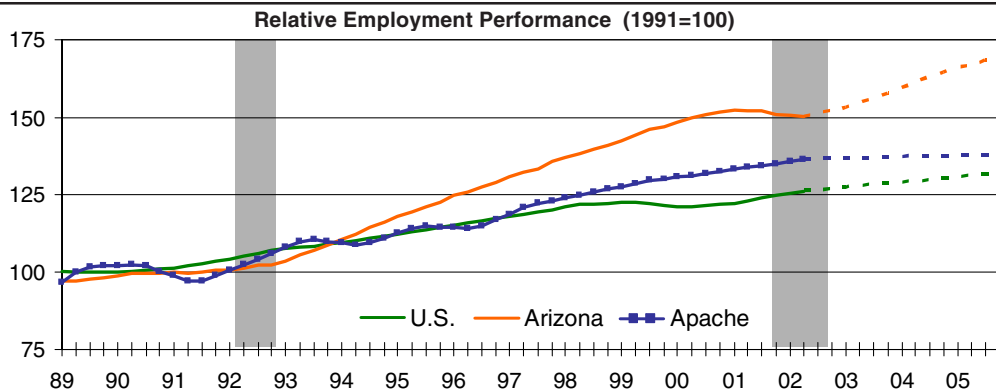
Language **24**
Math **41**
Reading **22**

EDUCATIONAL ATTAINMENT 2000

11.3%

POVERTY RATE

37.8%



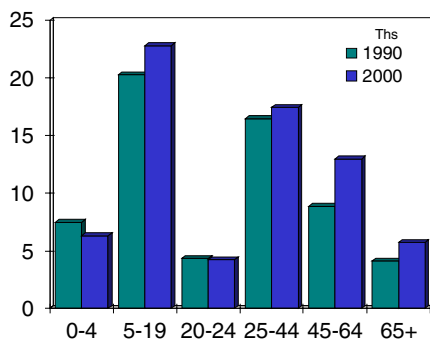
1995	1996	1997	1998	1999	2000	2001	Indicators	2002	2003	2004	2005	2006
0.93	0.96	1.00	1.04	1.13	1.22	1.29	Gross Product, C\$B	1.35	1.37	1.38	1.39	1.40
1.4	2.5	4.8	3.7	8.8	7.7	5.8	% Change	4.8	1.1	0.9	0.4	1.4
15.8	15.8	16.4	16.5	17.4	18.0	18.6	Total Employment (000)	19.0	19.4	19.7	20.0	20.2
5.9	0.2	4.0	0.7	5.3	3.5	2.9	% Change	2.4	2.2	1.8	1.2	1.0
16.4	19.7	17.4	15.5	14.0	12.8	12.0	Unemployment Rate	11.0	10.0	9.3	9.0	9.0
1.1	7.0	2.9	5.4	9.5	2.5	13.8	Personal Income Growth	8.0	3.8	4.4	3.9	4.1
68.3	69.5	70.5	69.9	69.8	69.2	68.6	Population (000)	68.0	67.3	66.6	66.0	65.3
67	94	96	100	89	104	82	Single-Family Permits	75	69	64	59	56
0	0	4	0	0	0	37	Multifamily Permits	30	38	35	33	30
27.6	28.5	29.3	30.4	32.6	35.8	38.9	Existing Home Price (\$Ths)	41.6	43.6	46.3	48.0	50.4
257	307	329	569	478	407	767	Mortgage Originations (\$Mil)	552	457	485	487	530
1.1	0.2	-0.1	-1.7	-1.2	-1.4	-1.7	Net Migration (000)	-2.0	-0.8	-0.5	-0.2	0.2
34	56	66	76	80	69	80	Personal Bankruptcies	67	56	48	46	43

INDUSTRY OPPORTUNITIES

Opportunities for economic development include:

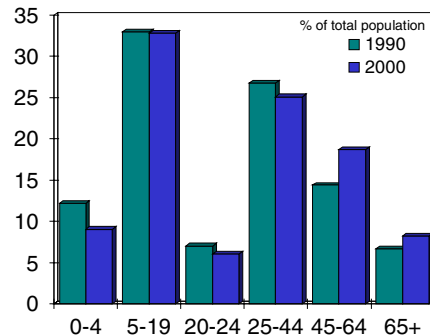
- Forest products
- Tourism

POPULATION BY COHORT



Source: Census Bureau

POPULATION DISTRIBUTION



Source: Census Bureau

ANALYSIS

Recent Performance. Payroll growth in Apache County remains positive, but has slowed since 1999. The tourism industry is APA's most substantial industry, although it has been flagging. Government payrolls, which include many of the tourism-related jobs that are on the Indian reservations, are also down on a year-ago basis. Additionally, a drop in building permits has led to a decline in the small construction industry. Although the unemployment rate remains in the double digits, it has fallen over the past few years, and is expected to continue its downward slide. Credit quality remains weak in the county.

Tourism. APA contains a ski resort and many fishing lakes on the Apache reservation, as well as Petrified Forest National Park. The ski resort is one of the largest non-gaming tourism attractions throughout reservations nationwide. Although the resort is beginning to diversify into mountain biking during the summer months, APA as a whole has been unable to increase its tourism business in the recent past.

Decreased visitor levels in the Petrified Forest are partly responsible, as the number of visitors dipped to less than 600,000 visitors in 2001; visitor levels regularly topped 800,000 throughout the 1990s before beginning to decline in 1999. Occupancy rates for the county's hotel rooms typically lag the rest of the state despite a limited supply of rooms, and 2002 has been no exception. Still, tourism remains the best avenue for economic growth in APA, due to the lack of strong alternatives. Increased use of the ski resort and a revival in the popularity of APA's natural attractions are expected to help tourism grow going forward.

Reservations. APA is dominated by its Indian reservations, which cover about two-thirds of the county's land. The two reservations, Navajo and Apache, have very low wages combined with high unemployment. As a result, the poverty rate in APA was 38% in 1999, compared

with only 14% in Arizona as a whole, according to the decennial census. Educational attainment, on average, also is very low in APA, as over one-third of the population aged 25 years and over lacks a high school diploma. Low education levels make it difficult for areas in the reservations to attract employers that are well paying. Consequently, the share of manufacturing employment is only 1% of the total in APA. Without a strong manufacturing base, APA must rely on tourism spending and government assistance to keep money flowing in the local economy. Weak economic fundamentals on the reservations could be a drag on long-term growth prospects for the county.

Demographics. APA suffers from consistent out-migration, due to the weak job prospects in the county. Out-migration is particularly severe among prime-age workers, which limits the earning potential of the community. A decline in the proportion of people ages 20-49 has kept the labor force from growing significantly, despite overall population growth during the 1990s. Demand for goods and services is also hurt by this exodus, due to a drop in the potential wage earners. That said, a pick-up in payroll growth will help stem this outflow of residents.

The Apache County economy is expected to grow at a modest pace going forward. The tourism industry is currently performing below potential. A return to the long-term trend of visitation levels in the Petrified Forest National Park would support a revival of the industry. A lack of high value-added services or production weighs down on the area's income growth potential. Low wages and high unemployment result in a high proportion of residents that are dependent on government subsidies. Long term, APA is expected to grow at a pace below the state average, due to its narrow industrial structure.

Sean Ford
December 2002

EMPLOYMENT & INDUSTRY

TOP EMPLOYERS

Apache-Sitgreaves National Forests
Arizona Dept. of Corrections-Apache Unit
Coronado Generating Station-SRP
Ft. Defiance Hospital
Indian Health Services
Navajo Communications Company
Navajo Nation
Navajo Tribal Utility Authority
P&M Coal Company
Packard-Hughes Interconnect
Sage Memorial Hospital
Springerville Generating Station-TEP
White Mountain Regional Medical Center

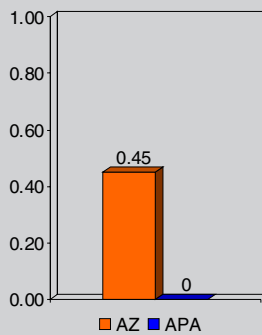
Employment Figures Unavailable

Source: Econ. Dev. of Apache County, January 2002

Public	
Federal	2,635
State	1,380
Local	4,563

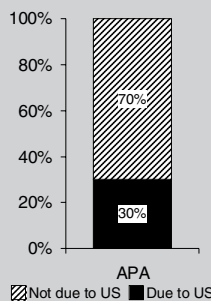
2001

INDUSTRIAL DIVERSITY

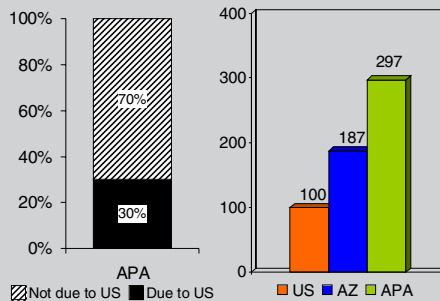


EMPLOYMENT VOLATILITY

DUE TO U.S. FLUCTUATIONS



RELATIVE TO U.S.

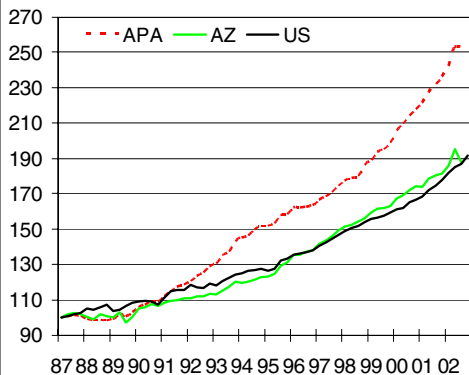


COMPARATIVE EMPLOYMENT AND INCOME

Sector	% of Total Employment			Average Annual Earnings		
	APA	AZ	US	APA	AZ	US
Mining	0.2%	0.4%	0.4%	\$46,652	\$42,760	\$64,853
Construction	4.6%	7.3%	5.1%	\$31,039	\$35,534	\$37,846
Manufacturing	1.4%	9.3%	13.4%	\$21,312	\$52,820	\$50,161
Durable	97.3%	77.2%	60.1%	\$20,789	\$56,574	\$52,419
Nondurable	2.7%	22.8%	39.9%	\$41,149	\$40,158	\$46,703
Transport/Utilities	7.1%	4.9%	5.4%	\$41,014	\$42,761	\$50,161
Wholesale Trade	0.8%	4.9%	5.1%	\$16,276	\$47,228	\$49,721
Retail Trade	10.3%	18.6%	17.8%	\$16,485	\$19,835	\$19,357
Finance, Ins., Real Estate	11.4%	6.6%	5.8%	\$19,418	\$31,403	\$42,743
Services	17.9%	31.3%	31.1%	\$33,562	\$30,334	\$33,327
Memo: Health Services	4.0%	6.8%	7.9%	\$34,676	\$41,149	\$40,060
Government	46.2%	16.6%	15.9%	\$27,049	\$38,727	\$41,557

Source: Percent of total employment - BLS, 2001; Avg annual earnings - BEA, 2000; Economy.com

HOUSE PRICES



Source: NAR, Economy.com, 1987Q1 = 100, NSA

LEADING INDUSTRIES

SIC	Industry	Employees (000)
GVSL	Total state and local government	5.8
GVF	Total federal government - civilian	2.7
651	Real estate operators & lessors	1.2
701	Hotels and motels	0.9
864	Civic, social, & fraternal association	0.7
174	Masonry, stonework, and plastering	0.7
653	Real estate agents & managers	0.7
417	Terminal service facilities for passengers	0.7
554	Gasoline service stations	0.5
822	Private colleges & universities	0.3
493	Combination utility services	0.3
866	Religious organizations	0.3
594	Miscellaneous shopping goods stores	0.2
391	Jewelry, silverware, and plated ware	0.1
483	Radio & tv broadcast stations	0.1
Total leading industry employment		15.9
High-tech employment		0.0
As % of total employment, all industries		0.0

Source: BLS, Economy.com, 2001

MIGRATION FLOWS

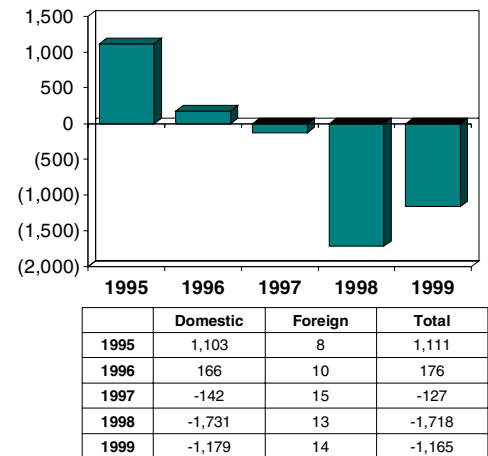
Into Apache County	Number of Migrants	Median Income
Maricopa County	883	16,780
Navajo County	629	14,880
Coconino County	298	14,999
Pima County	108	22,999
Salt Lake City	72	17,499
Albuquerque	44	12,916
San Diego	38	19,999
Pinal County	37	14,999
Las Vegas (NV part only)	33	19,999
Yavapai County	27	15,999
Total Immigration	5,296	16,913

From Apache County

Maricopa County	932	16,461
Navajo County	825	18,042
Coconino County	399	16,573
Pima County	137	14,422
Albuquerque	90	18,999
Salt Lake City	57	14,374
Pinal County	56	18,749
Yavapai County	50	21,499
Las Vegas (NV part only)	42	21,666
Gila County	30	23,749
Total Outmigration	6,432	16,646

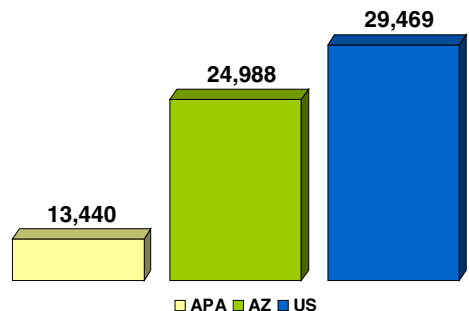
Net Migration	-1,136	267
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Net Migration, APA



Source: IRS (top), 2001; Census Bureau, 1999

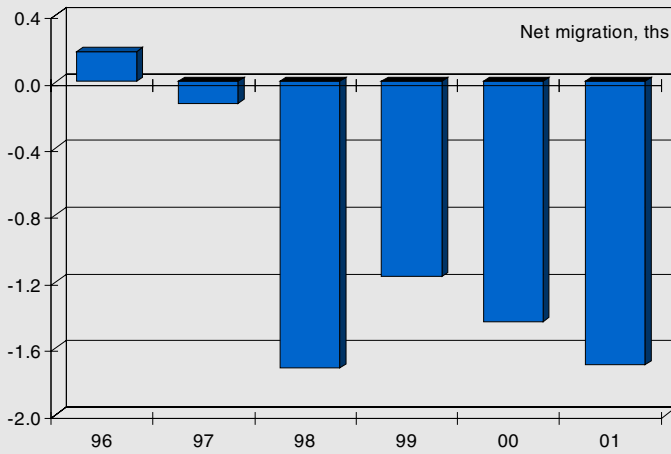
PER CAPITA INCOME



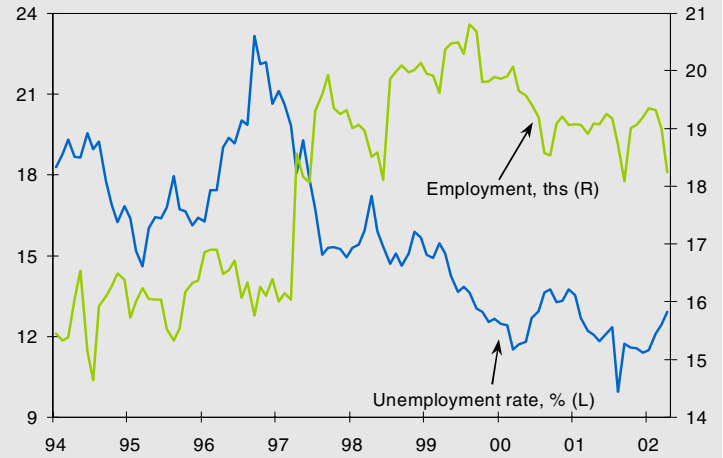
Source: Bureau of Economic Analysis, 2000

Apache

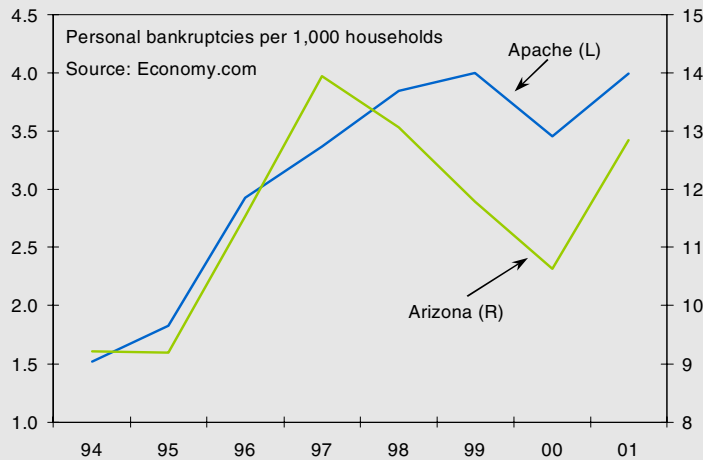
Apache Suffers Exodus Due to Lack of Good Opportunities...



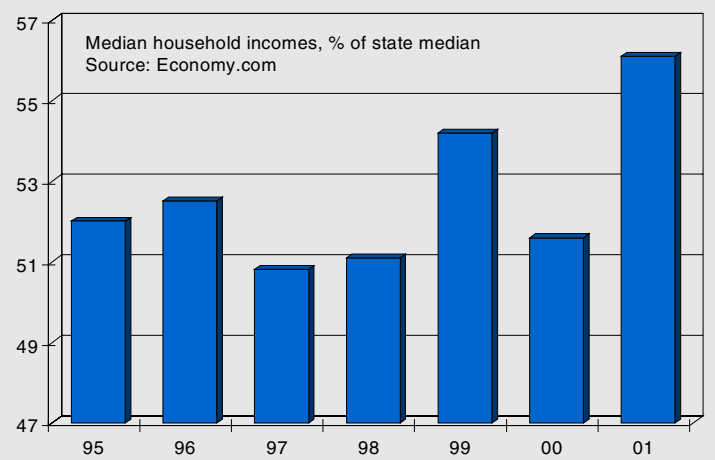
...Allowing Jobless Rate to Fall Despite Lack of Job Growth



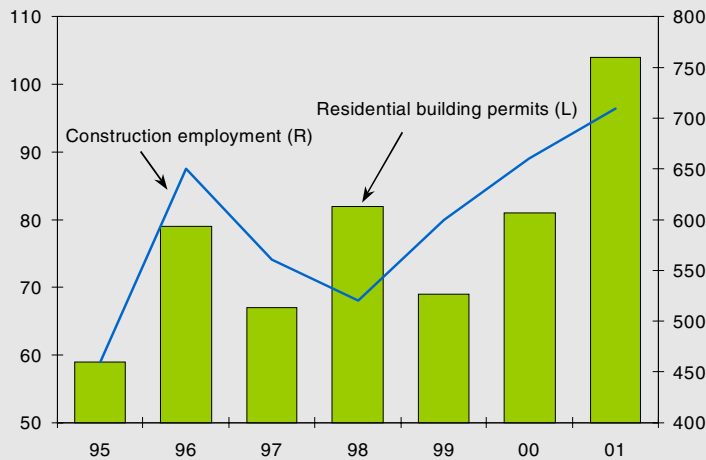
Bankruptcy Rate Is Still Low in Apache, Despite Recent Ascent



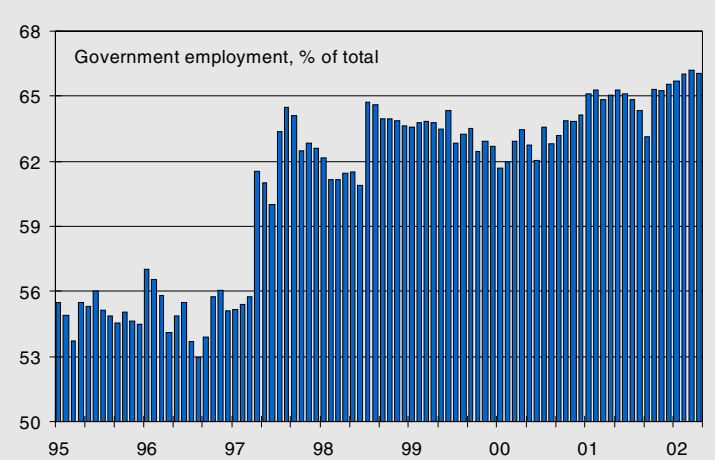
Apache's Low Incomes Due to Large Reservation Population



Rise in Permitting Boosts Construction Employment



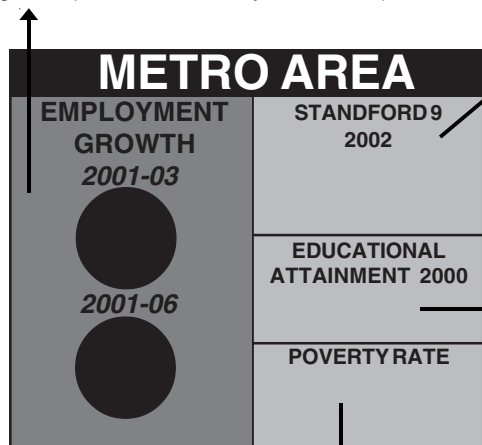
Tribal Activities Skew Government Employment Upward



USER'S GUIDE

Educational Growth

These numbers represent the county's annualized employment growth rate in its short-term (over the next two years, top) and its long-term growth (over the next five years, bottom).



Poverty Rate

This data point reflects the share of total population in the county that lives below the Federal Poverty Line. This is 1999 data, released by the Census bureau based on the Decennial Census 2000 surveys. The Census Bureau uses a set of money income thresholds that vary by family size and composition to detect who is poor. If the total income for a family or unrelated individual falls below the relevant poverty threshold, then the family or unrelated individual is classified as being "below the poverty level."

Standford 9

The data represent percentile ranks for the county's 9th grade students, released in Spring 2002. Stanford 9 tests are a commonly used measure of educational attainment for K-12 students. The test is a standardized one that compares individual students' performance in each of the subject areas with a representative sample of national public school students.

Educational Attainment

This value represents the share of the county's residents aged 25 and over who have attained a bachelor's degree or higher. This is taken from data released by the Census Bureau based on the Decennial Census 2000 surveys.

Industry Opportunities

Future opportunities for economic development include a mix of those industries that already drive the state's economy, and others in which their roles may be enhanced. A three-step process led to the creation of priority economic opportunities. First, Economy.com's forecasts of industry employment over the coming ten years was used to provide a rank of growth rates across all two-digit industries as defined by SIC codes.

Second, Economy.com conducted econometric analysis of the comparative advantages that contribute to the determination of industry location, using this to calculate the estimated growth potential by industry in Arizona. This was then compared with actual industry performance over the past ten years, and the difference provided a ranking of industries in which full potential is not yet realized given current measures of comparative advantage.

The rankings emerging from this analysis were then combined with the ranking of industries according to the national outlook by industry, weighting these two factors equally. Finally, from the ranking of industries that emerged from these criteria, industries were selected that had qualities fundamental to the assumptions of the changing macro and international economic environment.

Population by cohort and population distribution

These two charts use population data for 1990 and 2000 released by the Census Bureau as part of its Decennial Census surveys. The first chart contrasts the actual number, in thousands, of residents in the county by age cohort, while the second chart details the share of residents in each age cohort.

Indicator	Units	Source	Note
Gross Product	Chain-weighted dollars	Economy.com	GCP is the sum of all income produced in a county, including corporate profits. Thus, it does not necessarily track employment growth.
Total Employment	Thousands	BLS 790 employment series; for NECMAs series estimated by Economy.com	Defined as sum of mining, construction, manufacturing, transportation/public utilities, wholesale/retail trade, finance/real estate, services, and government.
Unemployment Rate	Percent	Household employment series	
Personal Income Growth	% change previous year	Bureau of Economic Analysis	Measures income received by households from employment (including self), investments, and transfer payments.
Population	Thousands	Bureau of Census	
Single-Family Permits	Number of units	Bureau of Census	
Multifamily Permits	Number of units	Bureau of Census	
Existing Home Price	Thousands dollars	Nat'l Assoc Realtors	Index is affected by mix of homes sold.
Mortgage Originations	Millions dollars	Federal Financial Institutions Council	
Net Migration	Thousands	Bureau of Census	Calculated as number of domestic and international people moving into a state minus those leaving.
Personal Bankruptcies	Number of household filings	Admin. Office U.S. Courts	

USER'S GUIDE

EMPLOYMENT AND INDUSTRY STRUCTURE

INDUSTRIAL DIVERSITY

Industrial diversity is defined as the extent to which a county's industrial structure approximates the U.S. industrial structure.

Diversity is derived using the following formula:
 $Diversity = 1/\sqrt{\sum (EMP_{ij}/EMP_{USj}) * EMP_{ij}}$

Where EMP = share of employment in three-digit SIC industry j during period 2000-01; i = COUNTY; US = U.S. The Diversity measure is bounded between 0 and 1. 1 means the county has the same industrial structure as the U.S.; 0 means it has a totally different industrial structure than the U.S.

Formula derived from Hachman index, Bureau of Business and Economic Research, Univ. of Utah, December 1994.

EMPLOYMENT VOLATILITY

Employment volatility is defined as the standard deviation in a county's monthly year-over-year percentage nonagricultural employment growth relative to the standard deviation in U.S. year-over-year percentage nonagricultural employment growth over the 1992 to 2001 period. Volatility of 100 means that employment volatility in a county is equal to employment volatility in the nation. Counties tend to be inherently more volatile than states.

EMPLOYMENT VOLATILITY DUE TO U.S. FLUCTUATIONS

Volatility due to U.S. fluctuations (also known as "systematic volatility") is defined as:
 $SYSVOL = (Ri2)/1/2$

where SYSVOL = systematic volatility; R2 = is the proportion of total variance in county i's growth rate that is associated with contemporaneous fluctuations in national growth.

Volatility not due to U.S. fluctuations (also known as "nonsystematic volatility") is defined as:
 $NONSYS = 1 - (Ri2)/1/2$

where NONSYS = nonsystematic volatility in county i; R2 is the proportion of total variance in county i's growth rate that is associated with contemporaneous fluctuations in national growth.

Formulas modified from "Assessing Regional Economic Stability: A Portfolio Approach," Economic Review (Federal Reserve Bank of San Francisco), Winter 1990.

MIGRATION FLOWS

IRS data. When a taxpayer notifies the IRS of a change in address, the IRS records the household's current county of residence, the county to which the household is moving, the number of household members, and household income. Economy.com aggregates this data by metro area into gross migration. The data are then sorted to show the ten counties providing the largest number of new residents and the ten counties to where the largest number of current residents move. Subtracting the gross out-migration flows from the gross in-migration flows gives net out-migration.

The IRS migration data have several advantages. One advantage of the IRS data is that it is the only migration data set to show where out-migrants are moving to and where in-migrants are coming from. Another advantage is that the average income levels can be associated with both in-migrants and out-migrants. The disadvantages of the IRS migration data are that it only covers households that have filed income-tax returns and thus is not a complete record of all migration; and that it lags by two to two-and-one half years.

Census data. The Census measure of net migration attempts to capture all migration to and from counties. Economy.com aggregates this data to metro areas and to states. The Census measure of net migration differs from the IRS measure in several ways. First, Census measures only net migration; gross in and out flows are not available. Second, Census data cover all migrants, including international migrants, not just those who file income tax returns. Census data lack accompanying income data. Numbers differ from migration series data in indicator tables, which are estimated on Census 2000 data. New migration data from the Census will be available in 2002.

HOUSE PRICES

The house price index presents relative growth in the median price for existing single family homes, indexed to the first quarter of 1987. The median home price data comes from the National Association of Realtors, and is estimated at the county level by Economy.com. Each month the NAR Research Division receives data on existing single-family home sales from over 650 Boards/Associations of Realtors and multiple listing systems across the country. In 1994, data on over 1,500,000 existing single-family homes were received and processed.

LEADING INDUSTRIES

Leading industries are defined as the largest industries with location quotients greater than 1.1. A location quotient greater than 1 indicates an industry that serves more than the local market. Location quotients are calculated according to the formula: $LC_{im} = (E_{im}/E_{tm}) / (E_{iUS}/E_{tUS})$ where LC = location quotient in county m for industry i; E = employment in industry i for county m or the U.S.; and t = total employment for county m or the U.S.

Economy.com defines high-tech employment as the sum of employment in the following industries:

SIC	Industry
283	Pharmaceuticals
357	Computer & Office Equipment
366	Communications Equipment
367	Electronic Components & Accessories
381	Search & Navigation Equipment
382	Measuring & Controlling Devices
384	Medical Instruments & Supplies
385	Ophthalmic Goods
489	Communications Services, NEC
737	Computer & Data Processing Services
873	Research & Testing Services

Prepared for the Arizona Department of Commerce
Office of Economic Information and Research
December 2002