

JOBS, INCOME, AND GROWTH IN ARIZONA: INDIVIDUAL VERSUS AGGREGATE MEASURES OF ECONOMIC PERFORMANCE

March 2005

Dennis Hoffman, Ph.D.

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and Director, Office of the University Economist**

**P³ | PRODUCTIVITY AND
PROSPERITY PROJECT**

ASU W. P. CAREY
SCHOOL of BUSINESS
ARIZONA STATE UNIVERSITY

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SUMMARY

Arizona has been among the national leaders for decades on overall measures of economic growth. Measured by aggregate (total) employment, personal income, and gross state product, the economy in Arizona has grown far faster than in the nation and various comparison states over the last economic cycle and over longer spans of time.

Aggregate growth rates, however, have no relationship to levels of, or changes in, individual economic well-being or prosperity. On measures such as per person income and per person gross state product, Arizona's figures are considerably below those of the nation and groups of comparison states.

Following below average growth in such per person measures from the early 1980s to the early 1990s, Arizona experienced average to slightly above average gains over the last decade. This has left the shortfalls from the nation and comparison states greater than the historical norms.

Narrowing the analysis to only those who are working results in similar findings to those on a per person basis. The average wage per employee, total compensation per employee, and gross state product per employee all are below national and comparison state averages, with little progress in the last decade to offset the deterioration of the prior decade.

Individual-level decennial census data also indicate that wages and salaries in Arizona are below average. Focusing the analysis only on those who had lived in Arizona for some time did not affect the results.

Segmenting the census data by age of the worker and following the wage increases over 20 years (1980 to 2000) by age (for example, comparing 25-year-old workers in 1980 to those 35 years old in 1990 and 45 years old in 2000) also revealed that wages in Arizona are less than the national average but have increased at close to the national pace. Focusing on workers with residential stability in Arizona does not change the results.

Data from the Internal Revenue Service specific to certain income levels, such as those with wages or salaries of \$50,000 or more, are consistent with the other data analyzed. The average wage is lower in Arizona and has increased in recent years at rates similar to comparison states and the national average.

Considerable debate has occurred in recent years about the overall health of the Arizona economy. Arguments from some camps suggest that high rates of aggregate growth are all that matters and that the state's job growth dynamics (in the volume of new jobs created) must make Arizona one of the nation's leaders in quality job creation. This argument presumes that with so many new jobs created, Arizona's volume of quality job creation must be high as well. In contrast, critics suggest that the Arizona economy is dominated by low-wage jobs and Arizona is challenged to create high-wage jobs as a significant percentage of its workforce. In its extreme, this viewpoint suggests that the state is slipping further behind the nation with each passing year. The analysis in this paper seeks to shed light on these issues. This paper complements a detailed assessment of job quality, based on analysis of industrial and occupational mix, recently completed by the Seidman Institute's Center for Competitiveness and Prosperity Research.

From an aggregate perspective, the picture looks very bright with growth in total personal income, gross state product, and employment in Arizona among the highest in the nation. Aggregate growth rates, however, have no relationship to levels of, or changes in, individual economic well-being or prosperity. On individual measures — such as wages per worker, income per person, and GSP growth per capita — the situation is less rosy with Arizona below national and comparison state averages.

The overall conclusions in this report are consistent with those of the more extensive CBR research. Arizona's economy grows very rapidly, but per person or per worker measures of wages, compensation, incomes, and gross state product are below the national average. No evidence exists that the situation is improving appreciably (or deteriorating). Indeed, the state appears to be creating income, wealth and quality jobs at rates that are similar to those displayed by other states. But Arizonans begin at low levels of wages so growth at the same pace as the nation results in no progress toward raising Arizona's average wage or per capita income relative to the national average.

In sum, Arizona is a job-generating marvel and is among the nation's leaders in aggregate growth. When population dynamics or numbers of workers are considered, the comparisons are not so favorable. The evidence is consistent with an economy experiencing massive expansion in the pool of available workers, due no doubt to the attractiveness of the region: its climate, lifestyle, and other features. The challenge will be to endow the labor force with sufficient human capital (education and skill) and then to expose that pool of workers to employers with sufficient physical capital and market opportunities.

With improvements in labor productivity, induced by strategic investments in physical capital (such as the transportation, communication, and education infrastructure) and/or increases in human capital endowments (educational attainment and skill development), the wage/income comparisons in Arizona can improve in comparison to other states. Such a trajectory shift could help ensure high standards of living and quality of life for all Arizonans. In other words, if the state is successful at improving the quality of its labor force and creating higher-quality jobs, its per worker and per person comparisons will improve.

INDIVIDUAL VERSUS AGGREGATE MEASURES OF ECONOMIC PERFORMANCE

Arizona has exhibited vibrant aggregate (overall) economic growth throughout much of the last several decades, as evidenced by any broad measure of economic activity, such as total employment, total personal income (PI), or gross state product (GSP). On the criterion of overall job creation and overall growth, Arizona is the envy of many states and regions.

The Arizona economy creates far more jobs than can be filled by its existing residents. If the migrants to Arizona from elsewhere in the country who fill these new jobs are unemployed or underemployed, the job creation in Arizona can boost the nation's economic measures, even on a per capita basis. Of course, many of the domestic migrants to Arizona are merely changing jobs, not enhancing the nation's economic performance.

Similarly, unemployed or underemployed immigrants from other countries who fill Arizona jobs enhance the world's economy. Many of Arizona's immigrants — who mostly are from Mexico — were unemployed or underemployed in their native country.

While the traditional economic focus of Arizonans has been on aggregate measures, especially employment growth, such aggregate measures provide little insight on the economic well-being of residents of a state or region. What about the average Arizona resident? Is he/she increasingly better off, in terms of income and wages earned, vis-à-vis the average resident of other states? Is the dynamic nature of the Arizona economy setting the stage for increasing standards of living for the average Arizona resident and his/her children? These questions transcend simple overall population growth rates or overall employment growth rates, shifting the focus to household incomes, wages, or individual purchasing power. Per person or per worker measures of personal income or GSP are the best ways to assess the prosperity of residents of a state or region.

The personal income, gross state product, wages and salaries, and total compensation data analyzed in this section are produced by the U.S. Department of Commerce's Bureau of Economic Analysis (BEA). Each aggregate measure is analyzed, with each then investigated on a per person and/or per employee basis. Arizona's performance on each measure is compared to that of three other economies:

- The United States.
- Ten "competitor" states as designated by the Greater Phoenix Chamber of Commerce: California, Colorado, Florida, Georgia, Nevada, New Mexico, Oregon, Texas, Utah, and Washington. Eight of the 10 states are in the West, including all five of Arizona's adjacent neighbors.
- Ten "new economy" states identified by the Milken Institute: California, Colorado, Connecticut, Massachusetts, Maryland, Minnesota, New Jersey, Utah, Virginia, and Washington. Only four of the 10 states are in the West; these four (California, Colorado, Utah, and Washington) also are part of the "competitor" grouping.

Personal Income: Total and Per Capita

Growth in real aggregate personal income (total PI adjusted for inflation) in Arizona has been substantial. Annual average growth over the last 33 years (1970 through 2003) was 5.4 percent, the second highest in the nation. This rate was higher than that of each of the comparison areas:

3.2 percent in the nation, 4.5 percent in the “competitor” states, and 3.6 percent in the “new economy” states. Annual average growth over the last decade (1993 through 2003) also was 5.4 percent in Arizona and 3.2 percent nationally, with Arizona ranking second only to Nevada.

When measured by real per capita personal income (total personal income less the impact of inflation and population growth) — the conventional benchmark for standard-of-living comparisons — Arizona’s performance looks quite different. Arizona’s growth averaged 1.8 percent per year from 1970 to 2003, ranking 46th among the 50 states, fractionally higher than in California and more than in Alaska, Hawaii and Nevada. This rate was lower than that of each of the comparison areas: 2.1 percent in the nation and the competitor states and 2.3 percent in the new economy states.

Thus, over the long term, the real income of the average Arizonan has lagged behind the rest of the nation. While the magnitude of the differences between Arizona and the comparison areas look small, such small differences in real income growth on a per capita basis over decades play a significant role in determining cross-country or cross-region standard-of-living differences.

Chart 1 depicts the ratio of per capita personal income in Arizona to the U.S. average, the competitor states, and the new economy states. Some cyclicalities in the ratios is seen, with the lowest figures occurring in recessionary years. Arizona slipped from 94 percent of the U.S. level in 1970 to 86 percent in 2003 (comparable years of the economic cycle), with most of the attrition coming in the late 1980s and early 1990s. The ratio has been relatively constant since the early 1990s. The comparison against the competitor states is similar to that of the nation, though the Arizona ratios in recent years were not quite as far below the historical norm as compared to the nation. Arizona’s performance against the new economy states has been markedly worse with a ratio of 85 percent in 1970 dropping to 77 percent in 2003.

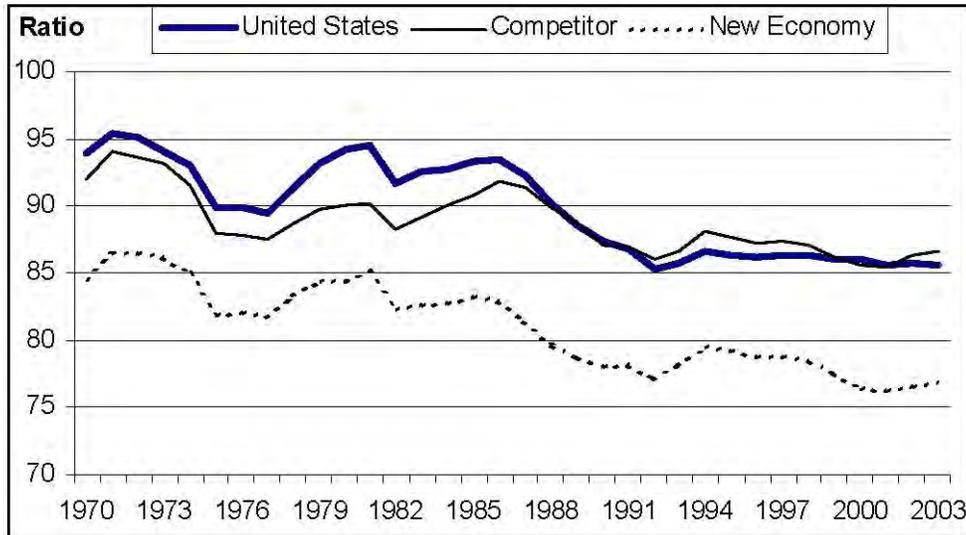
In 1970, Arizona real per capita income (in year 2003 dollars) was less than \$1,000 per person (6 percent) below the U.S. average. Arizona lagged the 10 competitor states by just under \$1,300 per person (8 percent). The differential from the new economy states was about \$2,700 per person (15 percent). The slower real growth in Arizona through 2003 resulted in further erosion of its relative position. In 2003, real per capita income in Arizona was \$4,500 below the nation (14 percent), \$4,200 below the competitor states (13 percent), and more than \$8,000 below the new economy states (23 percent).

Arizona’s performance over the last decade suggests that a downward trend is not inexorable. However, despite the rapid overall economic growth experienced over the last decade, the economic well-being of Arizona’s residents did not improve relative to any of the comparison groups and remained well below the historical norms. For the state’s prosperity to approach that of the nation, its trajectory of real per capita income growth must shift substantially up for a sustained period.

Gross State Product: Total and Per Capita

Since some have questioned the accuracy of the personal income data, the analysis presented above has been repeated for GSP. Like total personal income, GSP growth in the state has been substantial. Over the 1977-to-2003 interval (GSP data are not available prior to 1977), average

**CHART 1
RATIO OF PER CAPITA PERSONAL INCOME
IN ARIZONA TO COMPARISON AREAS**



Source: Calculated from U.S. Department of Commerce, Bureau of Economic Analysis.

annual growth of real GSP in Arizona was 5.3 percent, compared to 3.1 percent nationally, 4.1 percent in the competitor states, and 3.7 percent in the new economy states. Growth rates over the last decade were higher at 6.0 percent in Arizona and 3.5 percent nationally.

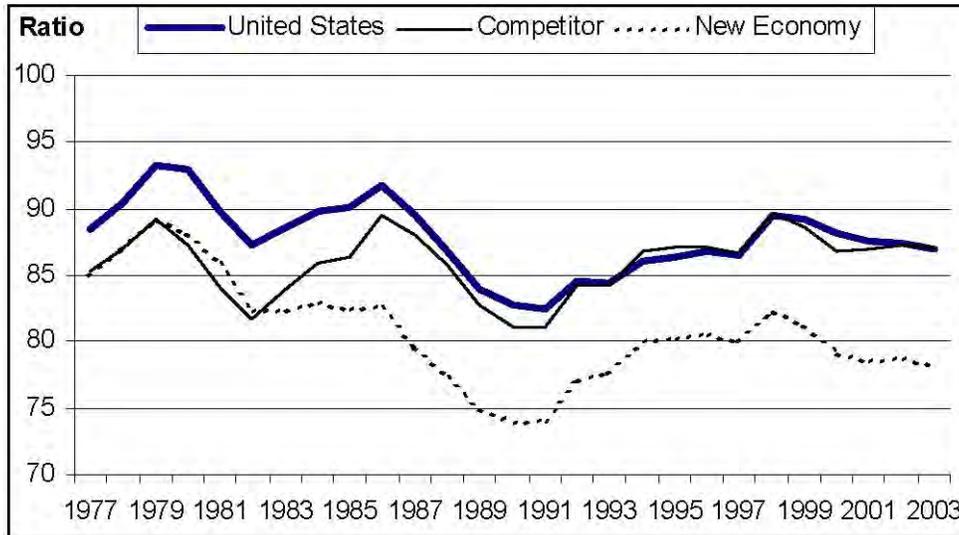
As in the analysis of personal income, the picture changes markedly when considered on a per capita basis. Chart 2 presents the ratio of per capita GSP in Arizona to per capita GSP in the U.S., the competitor states, and the new economy states. GSP per capita in Arizona was 88 percent of the U.S. level in 1977, slid to 82 percent in 1991, and largely recovered to 87 percent in 2003 (a similar year in the economic cycle to 1977). Against the competitor states, Arizona's ratio began at 85 percent in 1977 and was slightly higher at 87 percent in 2003. However, against the new economy states, Arizona's ratio declined from 85 percent in 1977 to 74 percent in 1990 and 1991, and recovered only partially to 78 percent in 2003.

Per Employee Measures

The per person personal income and GSP comparisons suggest that Arizona is not improving on basic standard-of-living comparisons against the nation or the competitor states and is declining when compared with the set of states identified by the Milken Institute as positioned for the 21st century economy. This section focuses on similar measures restricted to those in the workforce.

Some have argued that measuring Arizona's performance on a simple per capita basis may be misleading. The argument usually revolves around the idea that Arizona has an excess of some groups of people who earn little and therefore are the cause of Arizona's poor per capita comparisons. Among the groups identified have been Arizona's purportedly high proportions of children and retirees. However, according to the 2000 census, 13.0 percent of Arizona's residents were 65 or older, barely higher than the national average of 12.4 percent. Similarly, 26.6 percent

CHART 2
RATIO OF PER CAPITA GROSS STATE PRODUCT
IN ARIZONA TO COMPARISON AREAS



Source: Calculated from U.S. Department of Commerce, Bureau of Economic Analysis.

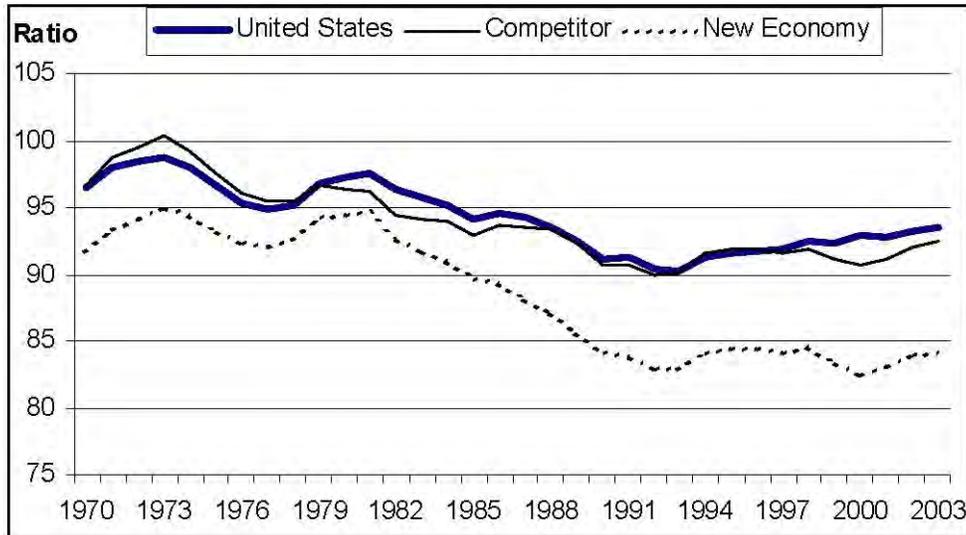
of Arizona’s residents were less than 18 years old, only a slightly greater share than the national average of 25.7 percent. Moreover, the median income reported in the 2000 census of those 65 or older was higher in Arizona than the national average, while median incomes of those of prime working age (25 to 64) were lower in Arizona than the nation. Thus, the age structure of Arizona residents accounts for little of the state’s subpar levels of per capita economic measures.

Average Wage Per Job

The average wage measure includes only those with a job, calculated from the wage and salary portion of personal income divided by the number of wage and salary workers. As in the total personal income and total GSP discussions, growth in total real wages and salaries in the state has been robust. Arizona’s average annual real growth averaged 5.0 percent from 1970 to 2003 as compared with 2.7 percent in the U.S., 4.0 percent in the competitor states, and 3.2 percent in the new economy states. Between 1993 and 2003, average annual growth rates were higher: 5.7 percent in Arizona and 3.3 percent nationally.

Chart 3 depicts total wages and salaries per worker over the 1970-to-2003 period. The average wage in Arizona was 96 percent of the national average in 1970, but the ratio slipped to 90 percent in 1992 and 1993 before rising somewhat to a little above 93 percent in 2003. Arizona fares slightly worse against the 10 competitor states with wages per job falling from 97 percent in 1970 to 90 percent in 1992 and 1993, rising to 92 percent in 2003. Arizona’s performance against the new economy states deteriorated from a ratio of 92 percent in 1970 to 83 percent in 1992 and 1993; it barely has climbed since then. The issue of Arizona’s low average wage is explored in considerable detail in the report “Job Quality in Arizona” produced by the Seidman Institute, available online at <http://economist.asu.edu/P3/job-quality>.

**CHART 3
RATIO OF AVERAGE WAGE PER WAGE AND SALARY EMPLOYEE
IN ARIZONA TO COMPARISON AREAS**



Source: Calculated from U.S. Department of Commerce, Bureau of Economic Analysis.

GSP Per Employee

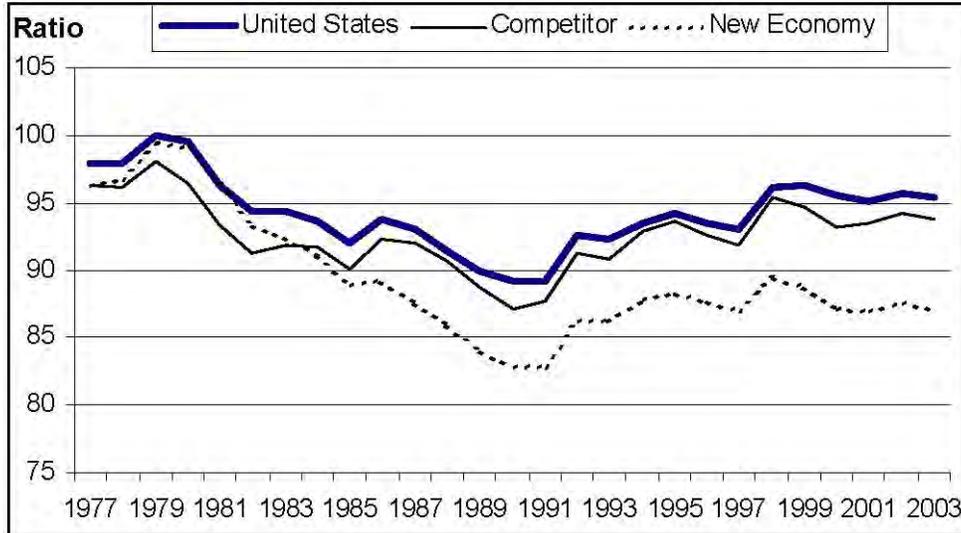
Results are similar using the measure of gross state product per employee (total GSP divided by all workers, including proprietors [self employed] as well as wage and salary employees). As seen in Chart 4, GSP per employee in Arizona as a ratio to the national average and to the two comparison groups fell through the 1980s and into the early 1990s. Some improvement occurred between the early 1990s and 2003, but the ratios remained below the levels of the late 1970s and early 1980s, particularly compared to the new economy states.

Total Compensation Per Employee

The Bureau of Economic Analysis recently released (for the first time) total compensation data (only for the 1998-to-2003 period) in a format that allows cross-state and cross-region comparisons using metropolitan and statewide data. The BEA compensation estimates include employer contributions for employee pension and insurance funds and employer contributions for government social insurance. Hence, total compensation estimates provide a more complete picture of the amount employers provide in compensation to individuals on their payrolls than do wage and salary figures alone.

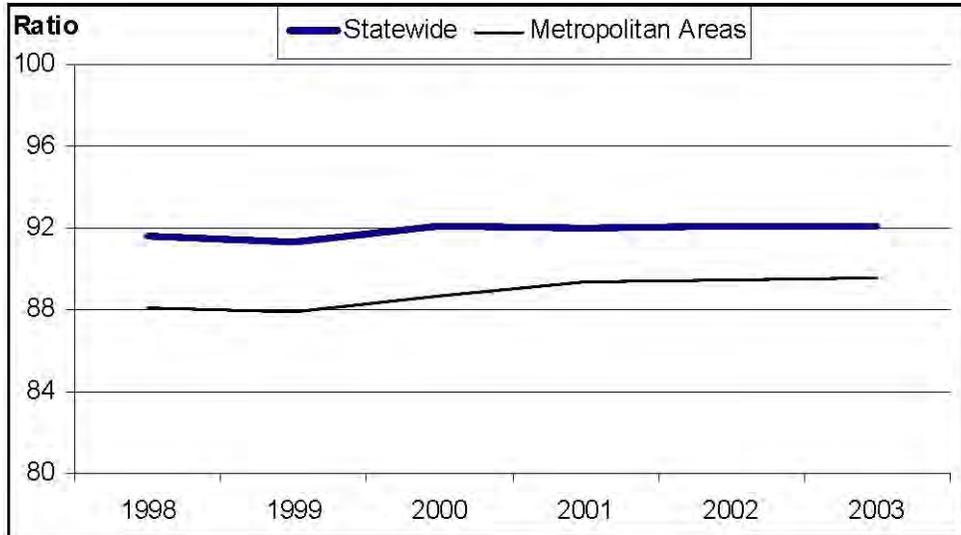
Charts 5, 6 and 7 depict estimates of total compensation per employee for Arizona in comparison to the national average, the 10 competitor states, and the 10 new economy states. Arizona is a little further below each of the comparison areas on average compensation per employee than on average wage (compare Charts 5 through 7 to Chart 3). Thus, Arizona substantially lags behind the comparison areas on components of compensation other than wages and salaries.

CHART 4
RATIO OF GROSS STATE PRODUCT PER EMPLOYEE
IN ARIZONA TO COMPARISON AREAS



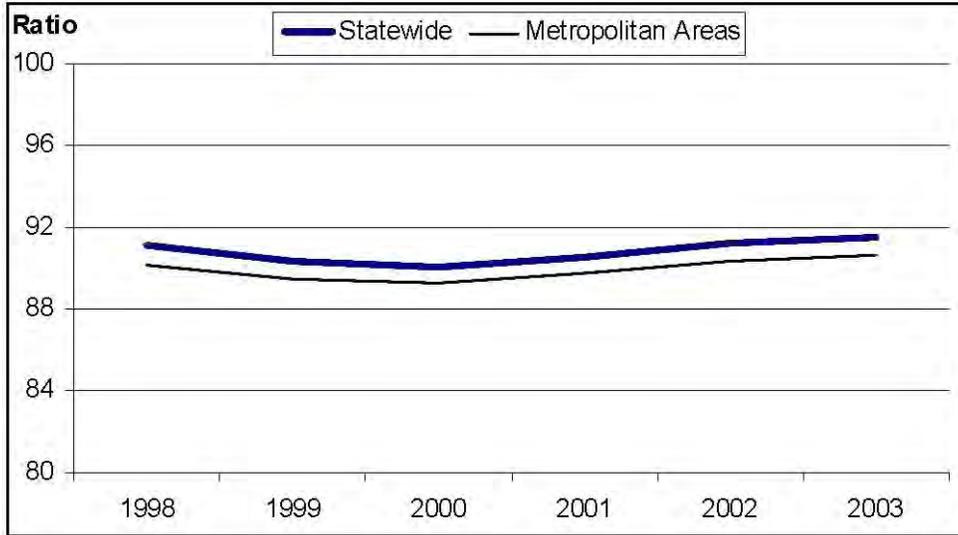
Source: Calculated from U.S. Department of Commerce, Bureau of Economic Analysis.

CHART 5
RATIO OF AVERAGE COMPENSATION PER EMPLOYEE
IN ARIZONA TO U.S. AVERAGE



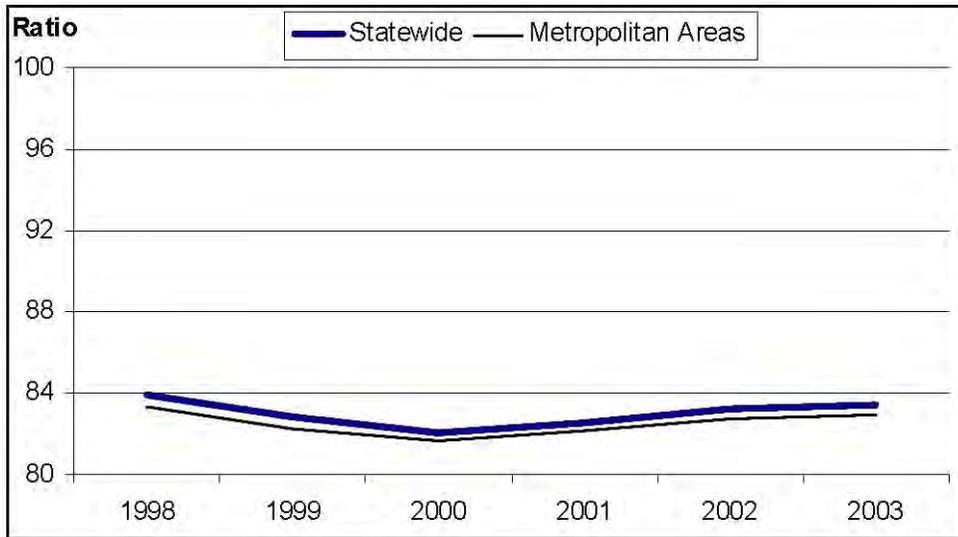
Source: Calculated from U.S. Department of Commerce, Bureau of Economic Analysis.

CHART 6
RATIO OF AVERAGE COMPENSATION PER EMPLOYEE
IN ARIZONA TO AVERAGE OF COMPETITOR STATES



Source: Calculated from U.S. Department of Commerce, Bureau of Economic Analysis.

CHART 7
RATIO OF AVERAGE COMPENSATION PER EMPLOYEE
IN ARIZONA TO AVERAGE OF NEW ECONOMY STATES



Source: Calculated from U.S. Department of Commerce, Bureau of Economic Analysis.

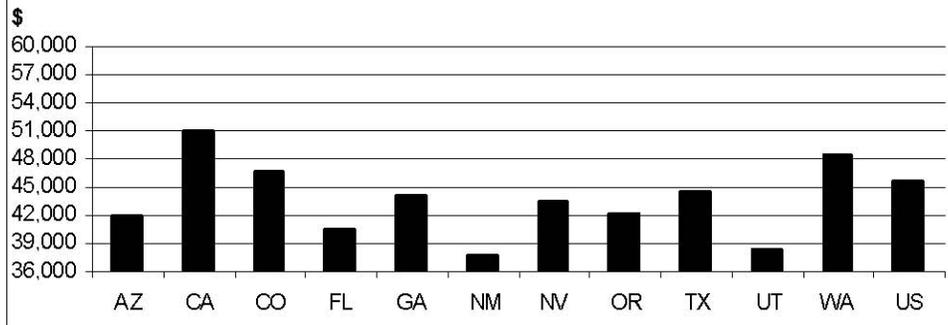
In addition to statewide data, the charts show the averages only for metropolitan areas. In Arizona, five metro areas encompass six of the state's 15 counties: Flagstaff (Coconino), Phoenix-Mesa (Maricopa and Pinal), Prescott (Yavapai), Tucson (Pima), and Yuma (Yuma). In each of the comparisons, Arizona's metropolitan areas are slightly further below the comparison areas than is the state as a whole.

In 2003, average compensation per employee in Arizona exceeded that of only three of the 10 competitor states: Florida, New Mexico and Utah. In comparison with the new economy states, Arizona's compensation figure eclipsed only Utah. Arizona's rank among the states is the same when the comparison focuses exclusively on metro areas (see Chart 8), but Arizona's position erodes in absolute terms: average compensation in 2003 was about \$3,600 below the U.S. average on a statewide basis but about \$5,000 per job below the nation when comparing metro areas.

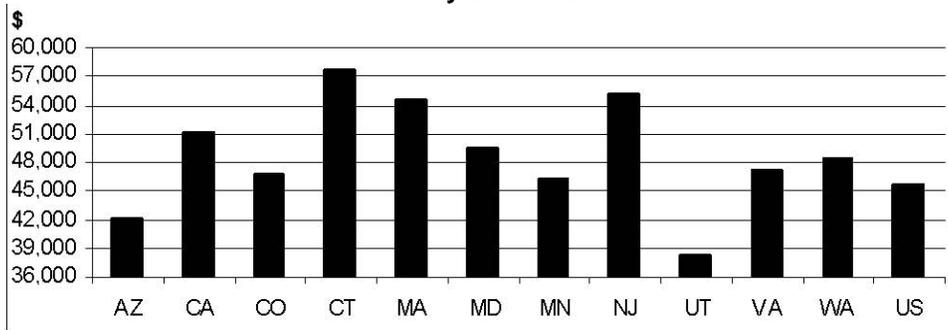
In Chart 9, Arizona's compensation per employee — statewide and for metro areas — is compared to averages for the regions defined by the BEA: the Northeast (NE), Middle East (ME), Great Lakes (GL), Plains (PL), Southeast (SE), Southwest (SW), Rocky Mountain (RM), and Far West (FW) regions. Arizona resides in the Southwest region along with New Mexico, Oklahoma and Texas. The chart reveals that on a statewide comparison, Arizona is slightly ahead of the Plains, Southeast and Rocky Mountain regions in compensation per job. Interestingly, the dominance of Texas pushes the average of the Southwest region above that of Arizona. The comparison erodes for Arizona when the focus is shifted to metro areas within each region. Metro compensation per employee in Arizona is on par only with the Southeast region — behind that of all other regions.

CHART 8 AVERAGE COMPENSATION PER EMPLOYEE IN ARIZONA AND OTHER STATES, 2003

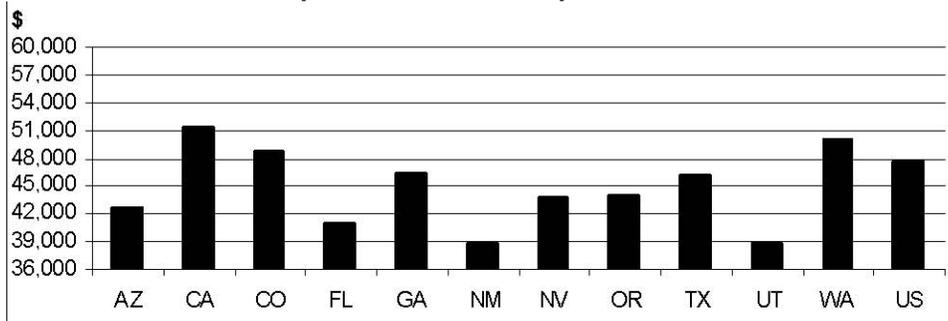
Competitor States: Statewide



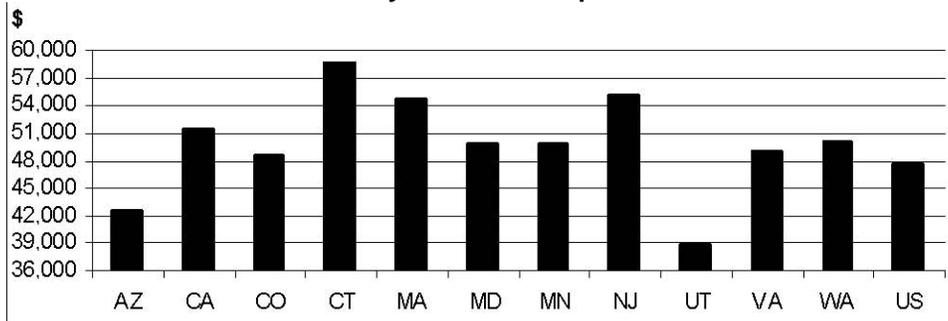
New Economy States: Statewide



Competitor States: Metropolitan Areas

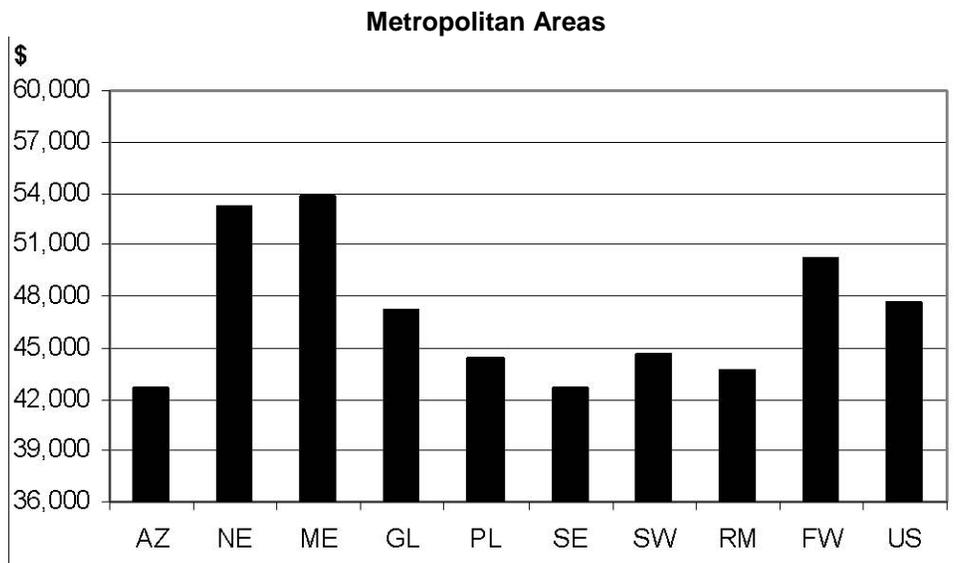
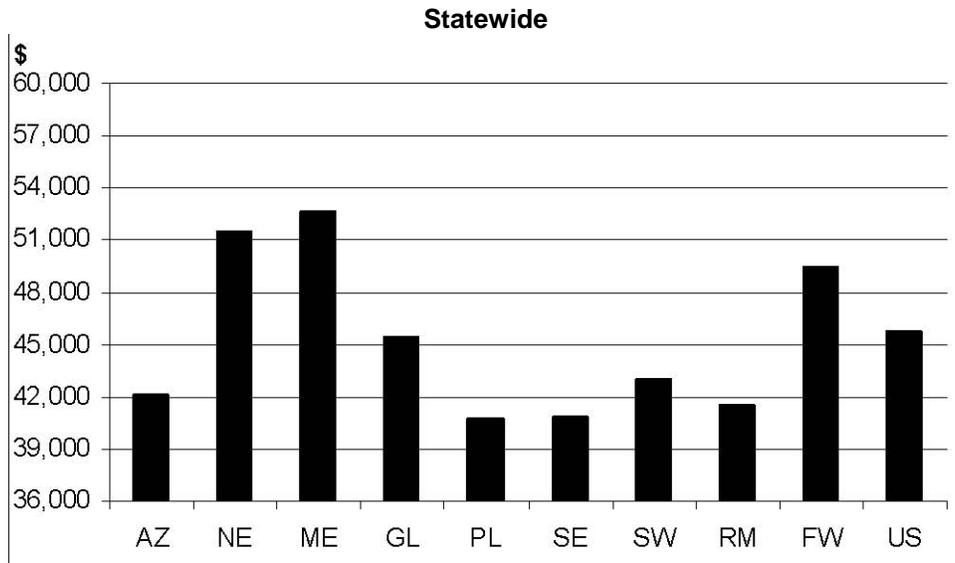


New Economy States: Metropolitan Areas



Source: Calculated from U.S. Department of Commerce, Bureau of Economic Analysis.

**CHART 9
AVERAGE COMPENSATION PER EMPLOYEE
IN ARIZONA AND REGIONS, 2003**



Source: Calculated from U.S. Department of Commerce, Bureau of Economic Analysis.

LONGITUDINAL DATA

Aggregated data can tell some of the story about the economic well-being of Arizonans but survey data on individuals from the decennial census (the Public Use Microdata Sample) also can be informative. Wage and salary income — that is, money received as an employee — for the previous calendar year were analyzed from the 1980, 1990 and 2000 censuses. This measure includes wages, salaries, commissions, cash bonuses, tips, and other money income received from an employer, but does not include any payments-in-kind or reimbursements for business expenses. Data for Arizona and the entire nation were tabulated by age of the respondent for workers between the ages of 25 and 64. The number of observations approached 100,000 for Arizona in 2000 and was in the millions for the nation. Four analyses were conducted using this dataset.

The first analysis looked at the overall average of reported wages and salaries. Arizona's figure was 3.0 percent below the national average in 1979, 4.0 percent below average in 1989, and 3.5 percent below average in 1999. These differentials are not as great as those for the same years from the BEA average wage data, especially in 1989 and 1999. In each census year, the average wage in Arizona was less than the national average throughout the 25-to-64 age range, with no significant differences by age.

The second analysis used a subset of the dataset used for the first analysis, focusing only on those respondents who reported residential stability in their home state. The average wages of those people aged 25 to 64 who reported living in their home state at least five years prior to the date of the survey in each of the survey years were examined. The results are similar to the sample of all respondents, with the Arizona average 2.5 percent below the U.S. average in 1979, 5.1 percent below average in 1989, and 3.2 percent below average in 1999.

A third analysis of the census data was designed to measure how average incomes progress over an individual's life in Arizona in comparison with the nation, by comparing wages earned by people exactly 10 years apart in age at each of the census years. Specifically, people 25 through 45 years of age in 1980 were compared to people 35 through 55 in 1990 and 45 through 65 in 2000, measuring the average annual rate of growth of wages from 1980 to 1990, 1990 to 2000, and over the entire 20-year period. (No attempt was undertaken to adjust for inflation. The presumption underlying the analysis is that inflation rates in the nation and Arizona were comparable over the decade-long spans.)

The samples collected a decade apart are comprised of different sets of individuals. However, the samples are large and statistically random. The exercise is designed to test the hypothesis that individuals in Arizona have realized faster growth in their incomes than individuals in other states. If income creation over actual life cycles is disproportionately different in Arizona to what is happening in the nation, such a finding should be revealed in this experiment. The results indicate that relative to the national average, marginally lower average annual growth occurred in Arizona from 1980 to 1990, followed by fractionally higher growth in Arizona from 1990 to 2000. These results are consistent with the BEA average wage results discussed in the previous section. In the 20-year span, U.S. incomes grew 0.04 percent per year faster than in Arizona. No significant differences were noted by age.

The fourth analysis repeated the third analysis for the subset of those people aged 25 to 64 who reported living in their home state at least five years prior to the date of the survey in each of the survey years. As in the second analysis, the results for this subset did not reveal changes in income in Arizona being different from the national average. From 1980 to 1990, Arizona residents lost 0.6 percent per year to the national average while from 1990 to 2000 the average income of Arizona residents grew faster than the U.S. average by 0.5 percent per year. (Given sampling error, such small numbers should not be interpreted to be significant.) Over the 20-year span, the differential between U.S. and Arizona residents that reported five-year same-state stability was a shortfall by Arizona residents of 0.03 percent per year.

The evidence suggests that income creation over simulated life cycles was about the same in Arizona as the national average. In general, wages in Arizona lag U.S. wages, but the rate of wage growth was only barely slower in Arizona than it was across the nation.

INCOME DISTRIBUTION DATA

To understand the pace of quality job growth, it would be useful to order all wage and salary jobs from highest to lowest wages and then monitor the pace of additions to this wage distribution, measuring the percent of new jobs that are being created at wage levels above relevant thresholds, such as the 60th or 70th percentile. But data simply are not compiled in this fashion. Employment data are categorized before release, with detail available only for occupational or industrial categories.

An alternative is data from the Internal Revenue Service's Statistics of Income. Data for income tax filers reporting wage and salary income at particular adjusted gross income levels are available by state for returns filed between 1997 and 2002. Data by state on overall average wage and salary income by wage and salary filer are available for a longer time period.

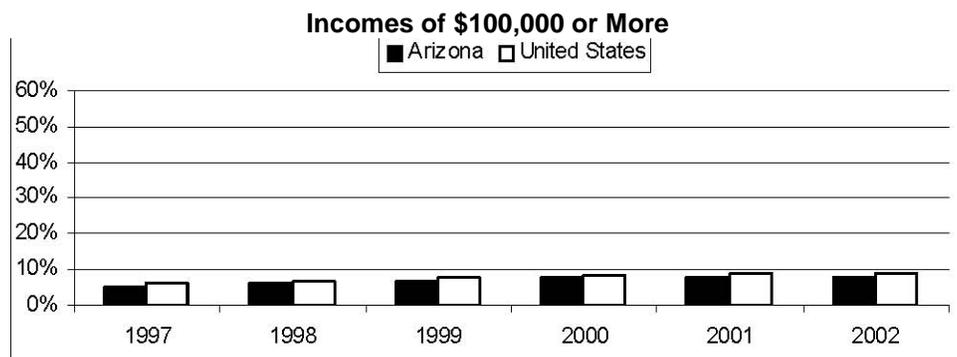
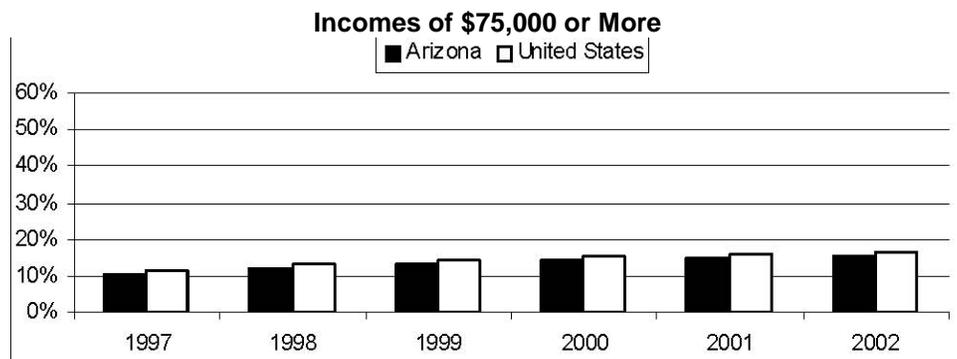
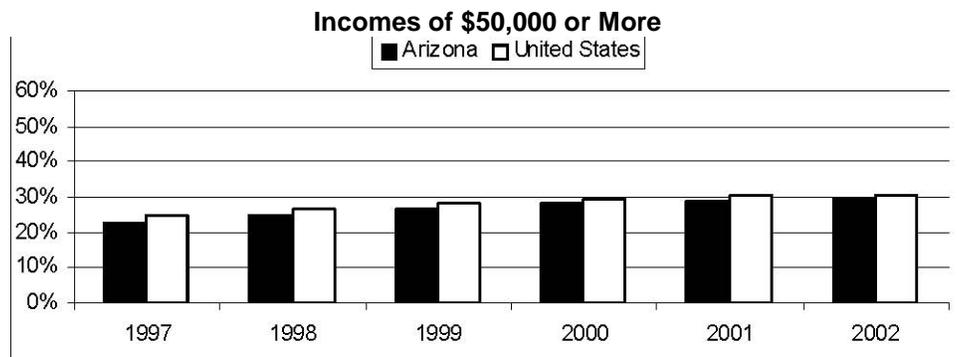
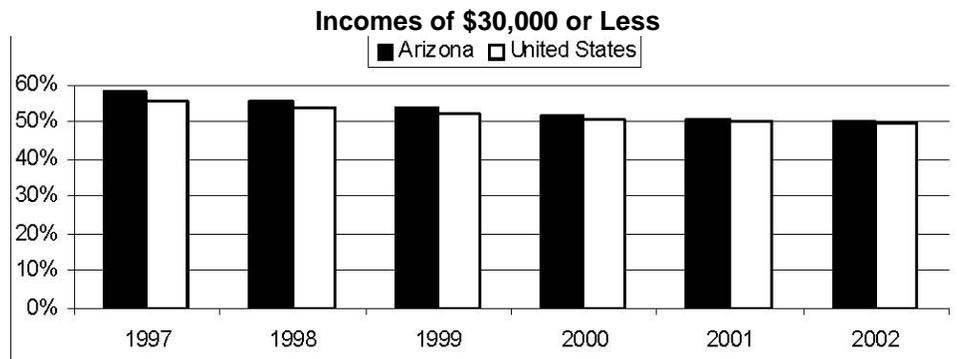
Average wage and salary income reported by Arizona filers was 94.5 percent of the national average in 1983. The ratio fell to 90.5 percent in 1992, recovered to 94.4 percent by 1998, and drifted upward slightly to 94.7 percent in 2002. This is the same general pattern revealed by the BEA average wage data discussed earlier, though the differential from the national average was slightly greater from the IRS data in 1983 but slightly smaller in 1998 and 2002.

However, broad averages don't reveal all activity at the tails of the income distribution. Chart 10 compares Arizona and national percentages of wage and salary filers reporting wage and salary incomes in various adjusted gross income categories: **less than \$30,000**, **greater than \$50,000**, **greater than \$75,000**, and **greater than \$100,000**. These adjusted gross income categories are respectively about the 50th percentile (\$30,000), just below the 70th percentile (\$50,000), just below the 85th percentile (\$75,000), and just above the 90th percentile (\$100,000) as of 2002 for the nation. Data are available for each year from 1997 through 2002, but are **not** adjusted for inflation.

Over time, as nominal wages rise, filers will cross thresholds into higher income categories. The exercise is designed to reveal whether Arizona is experiencing this "cross over" effect at a rate that is slower or faster than observed nationwide. Because the data are not inflation adjusted, the apparent improvement in incomes over time implied by the graphs in Chart 10 is overstated.

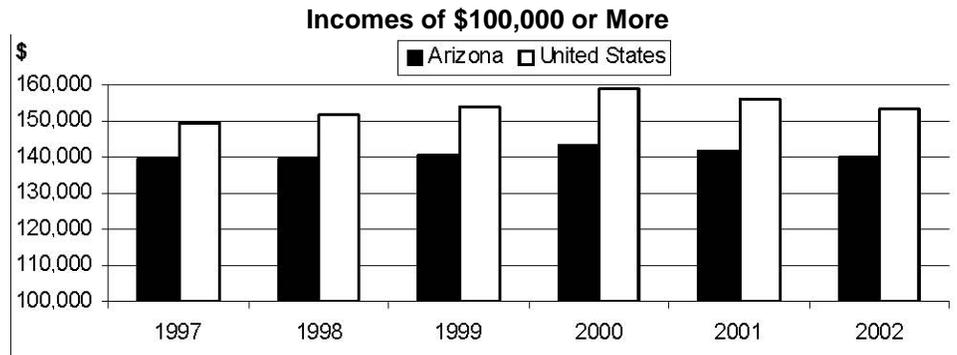
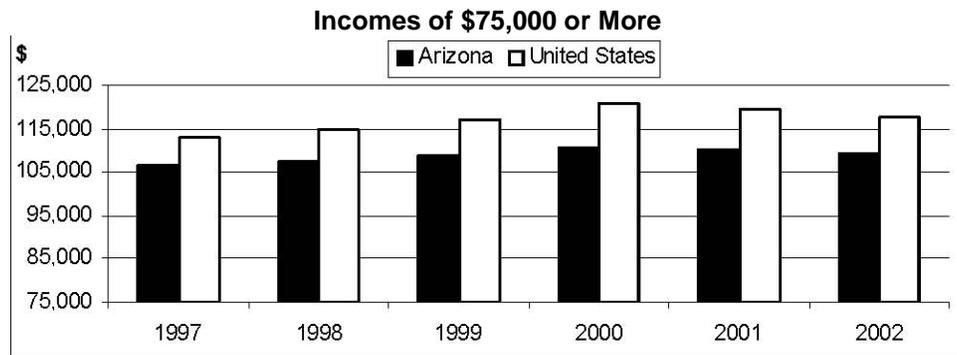
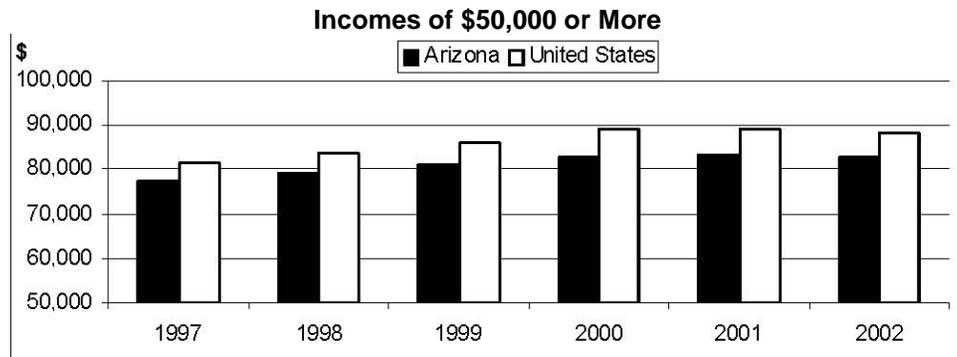
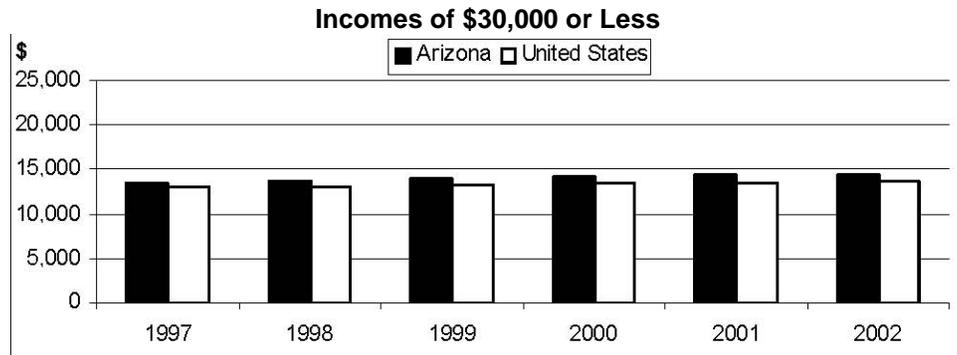
Arizona had a greater percentage (as a share of total wage and salary earners) of wage and salary filers at the \$30,000 and below threshold in each year from 1997 to 2002, but the shrinking differential between Arizona and the nation indicates that filers moved up to higher brackets (out of the \$30,000 and below group) at a slightly faster pace in Arizona than nationally. An additional 6.4 percent of Arizona filers crossed the \$50,000 and above threshold while the gain in the U.S. was 5.9 percent of the filers over the six years. However, as seen in Chart 11, the average income in Arizona in the \$50,000 and higher income category was less than the U.S. average throughout the period, with the differential increasing from 5 percent in 1997 to more than 6 percent in 2002. The average wage in the greater than \$50,000 group grew faster in the U.S. from 1997 to 2000 and then dropped back slightly, with the differential in salaries between Arizona and the nation widening by about \$1,500 over the six-year period.

CHART 10
SHARE OF TAX FILERS BY INCOME LEVEL
WAGE AND SALARY INCOME, ARIZONA AND UNITED STATES



Source: Calculated from Internal Revenue Service, Statistics of Income.

CHART 11
AVERAGE INCOME OF TAX FILERS BY INCOME LEVEL
WAGE AND SALARY INCOME, ARIZONA AND UNITED STATES



Source: Calculated from Internal Revenue Service, Statistics of Income.

An additional 4.8 percent of filers crossed the \$75,000 and above threshold both in Arizona and the nation between 1997 and 2002. At the \$100,000 threshold, an additional 2.7 percent of the distribution crossed into the higher-income category in Arizona as compared with an additional 2.9 percent nationally. Thus, the slightly faster progression into the \$50,000 and higher category in Arizona did not extend to the higher income categories. The wage and salary income gap between Arizona and the nation widened by \$2,000 per wage and salary worker in the \$75,000 and above category (from 6 to more than 7 percent) and by more than \$3,000 per wage and salary worker in the \$100,000 and above category (from 7 to 9 percent) over the six-year period.

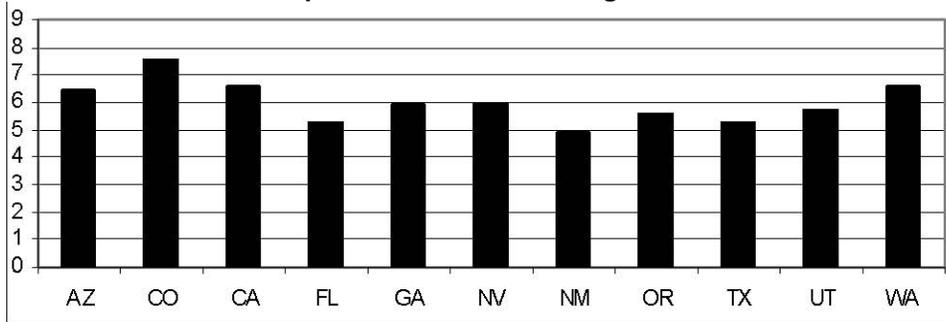
While this discussion focuses on wage and salary income, an analysis of total adjusted gross incomes yielded similar conclusions — another indication that Arizona’s retiree population does not substantially affect the analysis of economic well-being in the state relative to other areas. Similar results were obtained when focusing exclusively on households filing jointly.

Chart 12 presents the percentage point change from 1997 to 2002 in the proportion of filers in the \$50,000 or higher income category. Arizona’s increase was greater than that of seven of the 10 competitor states but only four of the 10 new economy states. However, Arizona’s dollar gain in average wage and salary income in the \$50,000 or more category was greater than that of only one state in each comparison group (Utah).

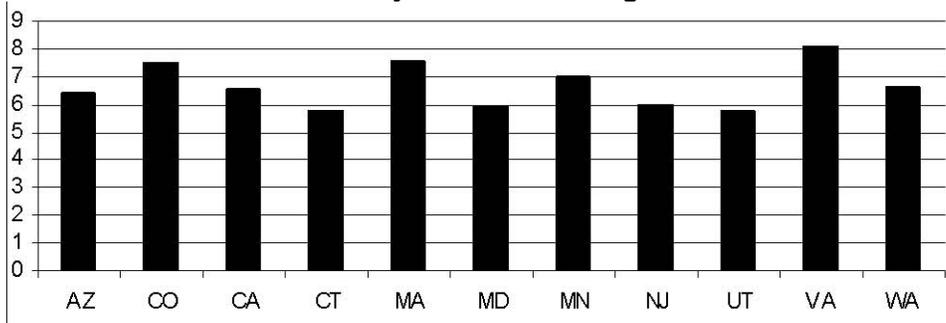
Thus, the wage and salary income distribution data are consistent with the other data analyzed. Arizona has higher proportions of wage and income filers below lower-income thresholds and fewer above higher-income thresholds when compared with the national average. The trend over the last six years has seen growth in Arizona filers out of the lower segment and into the higher-income segment at rates slightly faster than the national average. However, average wages and salaries in the higher-income categories fell further below the U.S. average.

CHART 12
1997-TO-2002 CHANGE IN SHARE OF TAX FILERS
AND CHANGE IN INCOME FOR INCOMES OF \$50,000 OR MORE
WAGE AND SALARY INCOME, ARIZONA AND UNITED STATES

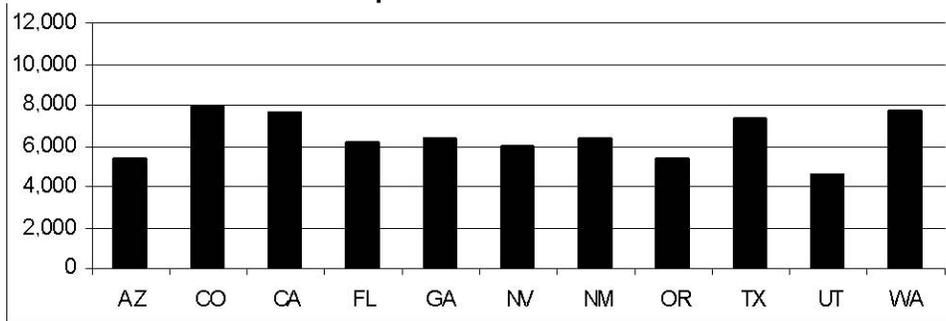
Competitor States: Percentage Points



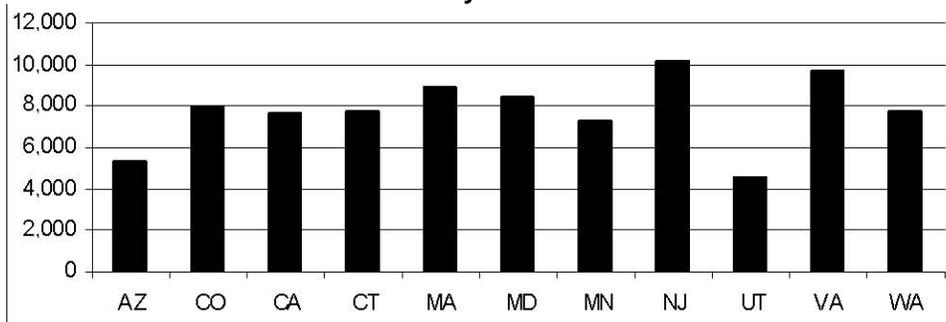
New Economy States: Percentage Points



Competitor States: Dollars



New Economy States: Dollars



Source: Calculated from Internal Revenue Service, Statistics of Income.

THE PRODUCTIVITY AND PROSPERITY PROJECT

The Productivity and Prosperity Project: An Analysis of Economic Competitiveness (P3) is an ongoing initiative begun in 2005, sponsored by Arizona State University President Michael M. Crow. P3 analyses incorporate literature reviews, existing empirical evidence, and economic and econometric analyses.

Enhancing productivity is the primary means of attaining economic prosperity. Productive individuals and businesses are the most competitive and prosperous. Competitive regions attract and retain these productive workers and businesses, resulting in strong economic growth and high standards of living. An overarching objective of P3's work is to examine competitiveness from the perspective of an individual, a business, a region, and a country.

THE CENTER FOR COMPETITIVENESS AND PROSPERITY RESEARCH

The Center for Competitiveness and Prosperity Research is a research unit of the L. William Seidman Research Institute in the W. P. Carey School of Business, specializing in applied economic and demographic research with a geographic emphasis on Arizona and the metropolitan Phoenix area. The Center conducts research projects under sponsorship of private businesses, nonprofit organizations, government entities and other ASU units. In particular, the Center administers both the Productivity and Prosperity Project, and the Office of the University Economist.

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