

INDICATOR INSIGHT

ECONOMY ◀•▶ AN EXPERT'S INSIGHT ON THE ISSUE IN ARIZONA

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Know Your Economy: Arizona's Basic Characteristics

Arizona's economy is complex and multifaceted. This Indicator Insight presents an overview of some basic characteristics of Arizona's economy and the ways in which it is measured. The size and growth of Arizona's population and economy are regularly reported, with Arizona usually ranking near the top of states for the rate of growth. In a matter of a few decades, Arizona has been transformed from one of the nation's less-populous states (33rd in 1970) to one of the more populated (14th in 2008).

The economic well-being of the state's residents and productivity of its workforce generally receive less attention, but ultimately are the key measures of economic performance. Arizona is below the national average on measures of prosperity and productivity and is not making any progress on catching up.

The economic indicators provided on the "Economy" tab of *Arizona Indicators* are divided into two categories:

- ▶ Aggregate measures of the size and growth of the overall economy.
- ▶ Measures of prosperity and productivity – economic performance per employee and per capita.

Indicators of the industrial and occupational composition of the Arizona workforce are included in the "Innovation" tab.

Arizona's Industrial and Occupational Mixes

The distribution of employment across the industrial sectors is somewhat different in Arizona than the national average, as is the occupational mix. A disproportionately high percentage of Arizona's jobs are in industries and/or occupations that pay below-average wages. Meanwhile, there is a below-average share of jobs in high-paying industries and/or occupations. (See Figure 1.)

By industry, Arizona has considerably larger-than-average shares of its workforce employed in the real estate, construction, administrative support, and retail trade sectors. Earnings per employee in 2008 were below the overall Arizona average in each of these sectors except construction, which had a figure slightly above average. Most of the other 16 sectors had below-average employment shares, particularly manufacturing. Many of these sectors, including manufacturing, provide earnings per employee greater than the overall state average.

By occupation, two of the 22 occupational groups account for considerably larger-than-average shares of the Arizona workforce. Compared to the overall Arizona median wage, the median wage is 7 percent below in the construction and extraction group and 22 percent below in the office and administrative support group. In five of the six lowest-paying groups, the share of employment is higher in Arizona than the national average.



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Arizona Indicators is an online information resource and analysis tool that centralizes data about the state and its communities. Arizona Indicators presents data in 11 major topic areas, interactive visualizations, clear data descriptions, and public opinion data.

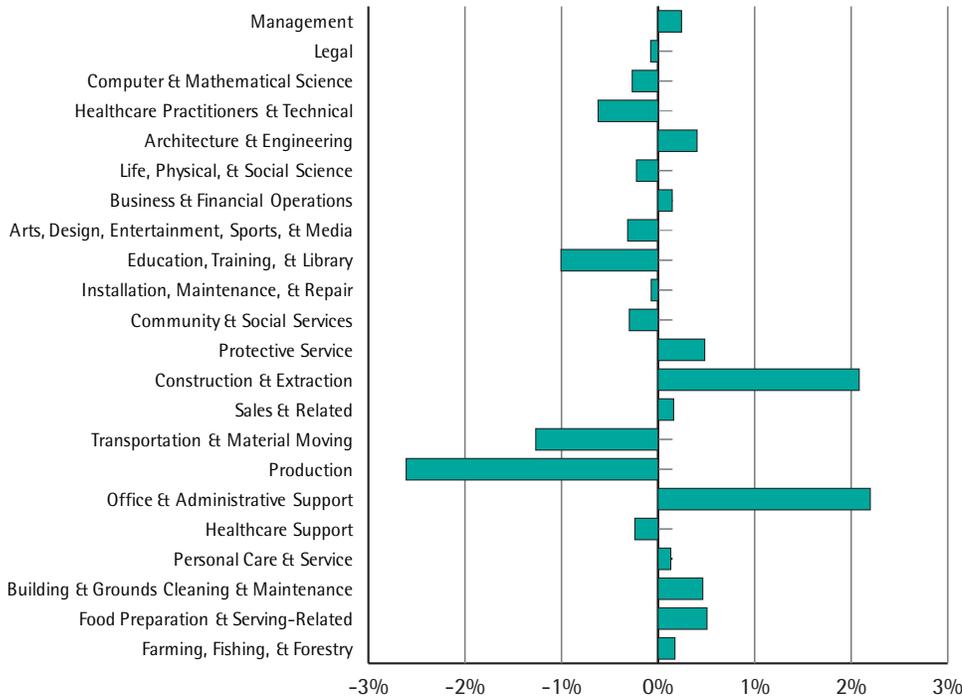
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Figure 1. Percent Difference Between Arizona and U.S. Occupational Groups, 2008
Occupational Groups Displayed From Highest Paying (Top) to Lowest Paying (Bottom)



Source: Arizona Workforce Informer and U.S. Bureau of Labor Statistics, September 2009.

Size of Economy

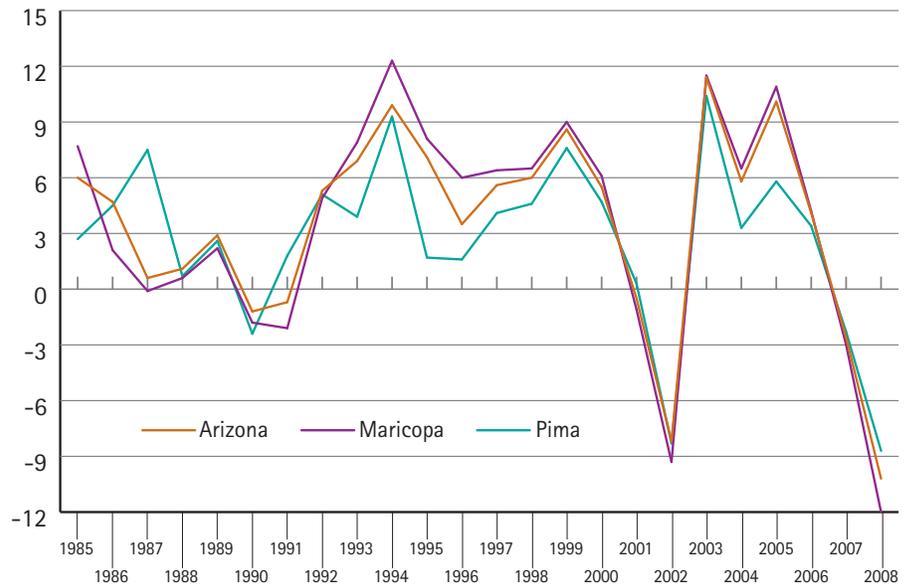
Employment is the most-watched economic indicator, in part because a monthly estimate is released on a timely basis. Arizona typically ranks near or at the top of states in percentage growth in employment. During the current recession, however, Arizona (along with Michigan) has been at the bottom of the rankings.

But employment is not the best measure of economic growth. The employment estimates do not differentiate between a part-time job and a full-time position. A position paying \$100,000 per year counts the same as a job paying \$20,000 per year.

The best measures of the economy are those expressed in dollars. Various dollar measures are available – most notably gross product and personal income – but most of these indicators are updated only annually, frequently with a several month lag. Arizona usually ranks near the top of the states on the growth rate of dollar measures, but may rank quite low during a recession.

In addition to these measures of the overall economy, some indicators are available for components of the economy. For example, retail sales and housing units authorized (an indicator of construction activity) are reported in *Arizona Indicators*. (See Figure 2.)

Figure 2. Inflation-Adjusted Percent Change in Taxable Retail Sales



Source: Arizona Department of Revenue.

Rapid aggregate growth generally is perceived quite favorably in Arizona. However, rapid population and business growth place significant burdens on the public sector. In periods of fast growth, governments struggle to provide new schools, adequate roads, and other demanded services. Revenues that might otherwise be used to provide direct services to individuals and businesses instead are used to pay the capital costs of infrastructure building.

Fast growth often provides lesser benefits to the private sector than is commonly perceived. “Export” businesses, which in the long term drive the local economy, do not benefit from the growth in the local population and economy. Companies that serve the local population do benefit from population increases and from gains in income of residents, but such benefits may be transitory. Fast growth attracts competition, sometimes more competition than is justified. For example, it is common for two new companies to enter the local market at the same time, though market conditions are strong enough for only one additional company to be successful. Rather than one of the new companies being the one that fails during the next economic downturn, a pre-existing company may be the one that is forced out of business.

While Arizona generally ranks at or near the top of the states on aggregate economic and population growth, Arizona has one of the most cyclical economies in the nation. Not only does growth in Arizona slow with the rest of the nation when the economy slumps, but Arizona’s aggregate growth rank falls – sometimes to below the median of states. In 2006, Arizona’s personal income growth ranked third fastest in the nation; in 2008, it ranked 46th.

The volatile cyclicity of the Arizona economy causes problems for the public sector. Taxes and other revenues that are adequate to fund government operations during periods of fast growth fall dramatically during periods of economic recession. The public sector is left with difficult decisions on which services to reduce or suspend, or alternatively, on whether to increase revenues via taxes and fees.

In the current environment of economic recession, many of Arizona’s economic indicators are going down. With time, however, this cyclical downturn will transition into another economic expansion marked by strong aggregate economic and population growth.

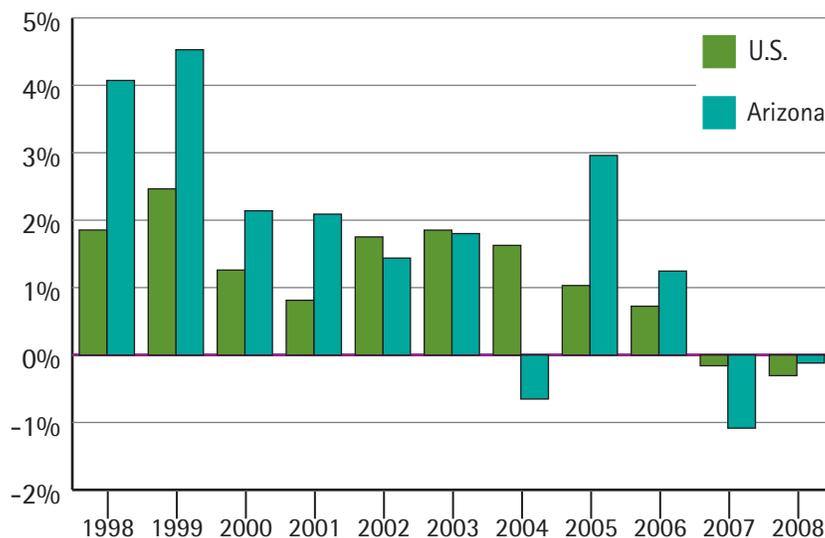
The Connection Between Prosperity and Productivity

Productivity gains are the primary source of real per person economic growth and of rising real incomes. No true measure of productivity is available by state; the closest proxy is gross product per employee.

Earnings per employee also might be considered a proxy for productivity. Other per employee indicators that can be used to measure prosperity include the average wage per job.

On each of the per employee measures, Arizona’s level is less than the national average – generally by 5 to 10 percent since the mid-1980s. The gap is not being reduced over time. (See Figure 3.) Back in the 1970s and early 1980s, the state compared more favorably to the national average on these measures. (See Figure 4.) Arizona’s economy performed poorly in the late 1980s and early 1990s, and only a portion of the decline relative to the U.S. average has since been made up. Arizona typically experiences stronger per employee gains than the national average during economic expansions, but weaker gains (or larger losses) at other times. In most economic cycles, Arizona has ranked in the top 10 in one or more years during the expansionary phase but in the bottom 10 in other years. In 2005 and 2006, Arizona ranked 11th, but in 2008 the rank was 43rd.

Figure 3. Inflation-Adjusted Percent Change in Gross Domestic Product Per Employee



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

Arizona is further below the national average on per capita measures, such as per capita personal income, which has ranged from 11 to 15 percent below average since 1989. Like the per employee measures, the per capita indicators are further below the national average than in the 1970s and early 1980s. Relative to the national average, the per capita measures in Arizona rise faster during economic expansions but slower during recessions and recoveries. Arizona's gain in per capita personal income ranked sixth in 2005, but was 48th in 2007 and 51st in 2008.

Figuring in 'The Sunshine Factor'

Multiple factors contribute to Arizona's poor performance on the various per person and per employee indicators. The overall quality of Arizona's jobs is somewhat below the national average, with the industrial mix below average and the occupational mix slightly subpar. The state has a higher-than-average percentage of low-paying jobs and relatively few high-paying positions – in part due to a limited number of manufacturing facilities and corporate headquarters.

However, even after adjusting for job quality, Arizona's measures of prosperity are below the national average. Another reason why per employee measures are below average is that wages in Arizona in many occupations in most industries are lower than those for an identical position located elsewhere. These lower wages are present even after adjusting for geographic differences in the cost of living (Arizona's living costs are near the national average). It appears that some individuals are willing to work for lower real wages in Arizona because of the perceived qualitative amenities of living in the state – "The Sunshine Factor."

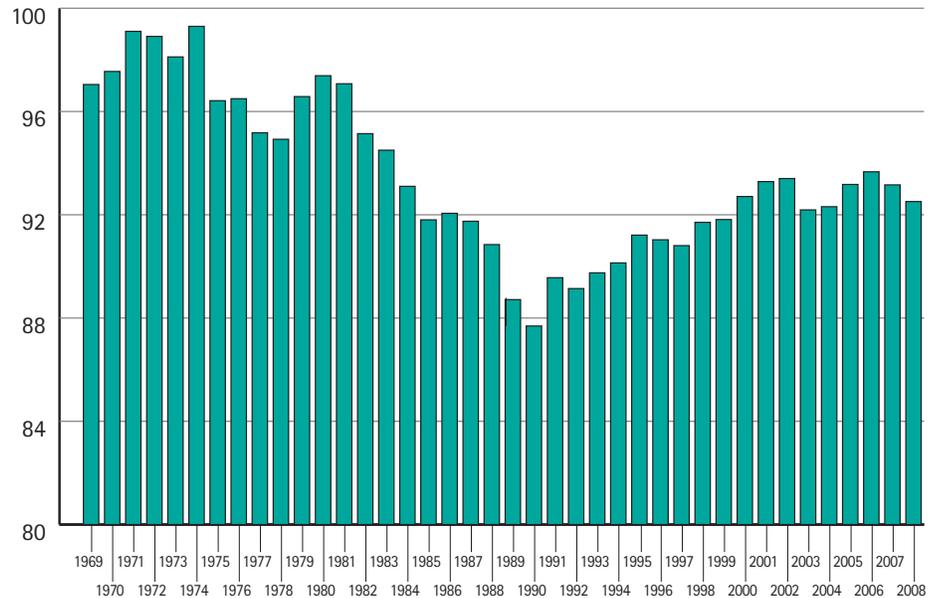
Not Everyone Is Working or Claiming Unemployment

Per capita indicators are further below the national average than per employee measures in part due to lower-than-average income in Arizona from non-wage sources. However, per capita incomes are low largely because a disproportionately small share of Arizonans participate in the workforce.

The slightly above-average shares of both children and senior citizens living in Arizona partially explain the low workforce participation rate. However, even among the working-age population, workforce participation rates are below average. Yet the reported unemployment rate (however imprecise) usually is lower in Arizona than the national average. Instead, the low workforce participation rate may result from such factors as cultural and religious values that limit the participation rate of females, limited educational attainments and work skills of some Arizonans that keep those individuals out of the workforce, and residing in a remote area with few jobs nearby.

The below-average workforce participation rates and the low wages of those who do work result in a larger-than-average share of the Arizona population living in near-poverty or poverty. Residents with limited incomes contribute little to the public sector in the way of taxes and disproportionately use public services, such as health and welfare services. A relatively poor population also results in per capita spending at local merchants being below average.

Figure 4. Earnings per Employee in Arizona as a Percentage of the National Average



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