

Economic Outlook for 2008-2009 Turbulence Ahead

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Economic conditions have deteriorated significantly in recent months and forecasters have been revising their forecasts downward as 2007 comes to an end. Most forecasts for the U.S. now show the economy teetering on the brink of recession, but remaining in the black. We have revised our forecasts downward as well. Given recent evidence, we believe that Arizona's economy is already in a recession that will stretch well into 2008.

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The nation's economy is struggling to overcome multiple shocks, including a downturn of historic proportions (both activity and prices) in housing markets, turmoil in financial markets that is now spreading well beyond sub-prime mortgages, and oil prices that are marching toward \$100 per barrel. Labor markets are deteriorating and job growth is disappearing. Consumers are losing confidence and are reeling in spending. Business leaders are worried.

Credit market turmoil is especially worrisome since the economy floats on a sea of credit. Financial innovations in recent years led to easy credit and too much lending. With the rise of "securitization," risk could be spread to investors worldwide. Securitization is the pooling of loans and the issuance of a security that provides a nice return. Payments on the underlying loans are used to cover the payments to the security holder. This works as long as the default rate on the underlying loans remains low.

Global Insight, a leader in global economic forecasting, recently wrote that "at best, we are only halfway through the financial crisis." They estimate that roughly \$600 billion in securitized subprime loans reside somewhere in the U.S. financial system. Write downs could total as much as \$120 billion, or 20% of the total.

Because of the complexity, it's impossible to know the extent of the damage, which has led to a "flight to quality." Although treasury yields are falling, spreads between treasuries and corporate securities and mortgages have widened significantly. The commercial paper market has frozen, and SIVs face a severe liquidity crisis. Commercial banks have tightened credit requirements on consumer, commercial, and industrial loans as well as mortgages. This crisis of confidence is placing downward pressure on the dollar, reducing foreign purchases of U.S. securities, and sparking a potential deflationary spiral in stock and housing markets.

The Federal Reserve, in its role as lender of last resort, has taken steps to provide liquidity to keep markets functioning. More measures may be needed. Let's hope they succeed as this is a very treacherous period for the U.S. economy.

According to Economy.com, Arizona along with

Michigan, California, Florida, and Nevada are either in recession or on the brink. Michigan is suffering from cutbacks in auto manufacturing. The other states woes are primarily due to major contractions in homebuilding. All have high concentrations of employment in construction-related industries, and were heavily exposed to real estate speculation and subprime lending.

Labor Market Conditions Deteriorate

As recently as 2005, job growth statewide exceeded 6% annual rates. It's now running below 1.3% and falling rapidly. Official preliminary estimates still show 2.6% growth, but these will be revised significantly downward in coming months. For the entire year 2007, the revisions are expected to trim a full percentage point off annual growth.

The construction industry has trimmed 23,600 jobs since peaking in May 2006 and more losses lie ahead. Manufacturing payrolls are declining and have trimmed over 6,100 jobs since peaking in May 2006. The information industry remains within a few hundred of its low point and has shown no growth over the past 2-1/2 years.

Financial services peaked in March and have trimmed 2,200 jobs, and that number will grow significantly in coming months as the closure of mortgage lending operations and the collapse of First Magnus that occurred in late August are included. We're just beginning to see the fallout of the homebuilding cycle on growth-related support industries, which include mortgage brokers, real estate brokers, title companies, home inspection companies, landscaping, architects, and engineering firms as well as builders and developers. All totaled, these activities comprise close to 30% of total employment.

Employment services (which provide temporary and contract workers) is an excellent leading indicator of the job market as it normally is the first to experience cutbacks. It peaked in February and has trimmed nearly 1,000 jobs so far statewide.

Also, transportation & warehousing jobs, which is an excellent indicator of goods shipments and commerce in general, leveled off a year ago. The only sectors that continue to add jobs are mining, trade, leisure and hospitality, education and health services, and government.

Mining has been on a tear, boosting payrolls by nearly 20% over the past year. Unfortunately, that's only 1,900 jobs. The 12,000 jobs currently employed in mining comprise only 0.4% of the 2.7 million total nonfarm jobs. Although mining is helping to shore up the economy, the effects are small – only one in ten laid off construction workers might find a job in mining.

Initial unemployment insurance claims have been rising over the past year statewide, and are approaching 225,000 per year. The last time this indicator moved up sharply was in 2001, during the last recession. With claims rising, Arizona's low unemployment rate of 3.3% (September) is sure to rise in the months ahead.

Recession in Homebuilding Deepens

A year ago, homebuilders and lenders remained hopeful that the housing downturn would be short. Hopes were dashed, however, as credit market turmoil significantly reduced mortgage lending.

How much longer before the bottom is reached and recovery begins? Exhibit 1 provides a historical perspective by comparing the current housing downturn to four prior episodes dating back into the 1970s.

The graph superimposes prior cycles on top of the current one. Each cycle peak was set to 100 and overlaid to coincide with the peak month of the current cycle.

Since peaking in September 2005, building permits in Arizona have fallen 56%. The rapid falloff so far compares to the downturns of the mid 1970s and early 1980s. Both were severe episodes that led to deep economy-wide national recessions.

In the earlier period, permits peaked in January 1973 and fell nearly 75% over the following 26 months before hitting bottom. Another year-and-a-half passed before the up-leg of the cycle began in earnest.

Permits peaked again in October 1978, prior to the twin recessions of 1980 and 1981-82. Over a 38-month period, permits declined by 69%. After several months of modest increases, activity skyrocketed in response to changes in tax laws that led to the "mother of all" real estate investment bubbles.

The ensuing down cycle that began in February 1984 led to collapse of the savings and loan industry, creation of the Resolution Trust Company (RTC), and bankruptcy for many builders. Over a period of 83 months – nearly seven years – permitting activity fell by 81%.

The cycle associated with the last recession was barely noticeable. After peaking in March 1999, permits fell only 19% over 34 months. The drop was small due to at least three factors: 1) record low interest rates put in place by the Federal Reserve following the terrorist attacks on 9-11, 2) renewed interest in real estate on the part of investors who fled stock markets in the wake of the dot-com bust, and 3) financial innovation that made credit widely available to less-creditworthy homebuyers. The resulting asset bubble in single family homes led to the current bust that unfortunately still has a ways to go.

The home price index published by Standard and Poor's Case-Shiller shows that prices in the metro Phoenix area have declined by 8% during the past twelve months. This index is perhaps the most reliable measure of home prices as it is based on repeat-sales. As additional properties from foreclosures hit the market, prices will dive further. A total decline of 20% is possible.

As the end of 2007 approaches, supply and demand factors remain unfavorable for recovery of homebuilding any time soon. Inventories of homes for sale remain high, and a wave of foreclosures over the next year or two promises to make the inventory problem significantly worse. That will keep downward pressure on home prices and keep buyers on the sidelines as they wait for home prices to fall further. Finally, the credit crunch eliminates a large number of buyers from qualifying for a loan. In short, an overabundance of supply in the face of weak demand will prolong

the housing recovery.

Given these conditions, we look for further declines in homebuilding in the months ahead. Our current forecast calls for a bottom in 2008 with a little over 38,000 units permitted (Exhibit 2). That could easily turn out to be too optimistic if credit markets continue to chill. The bottom may come in 2009 – or even 2010 – after permits have declined by 70-80%. That would put permitting statewide close to 30,000 at an annual rate, or even a bit lower.

Strong nonresidential construction has offset some of the weakness in homebuilding, and there are record amounts of offices, retail, and industrial properties currently under construction. However, construction may be peaking now as tightened credit standards are spreading to commercial development. As current projects are completed, the pipeline will empty. This typically is the case as commercial development lags residential by a year or two.

Consumers are Retrenching

The buying spree by consumers appears to be over – at least for a while. For the past decade and more, consumers have spent more than they earned, resulting in falling savings rates and rising debt. Tax cuts, rising home prices and the ability to tap home equity (the major component of household wealth) have provided piles of additional cash in recent years to support spending. But the main factor was easy access to credit.

Although consumers still have an estimated \$4 trillion in unused borrowing capacity on their credit cards, the ability to access equity in their homes has evaporated as housing prices decline and credit standards tighten. Housing wealth is expected to plunge by an estimated \$2.5 trillion nationwide during the downturn. The wealth effect works on the downside as well as when prices are increasing: for every \$1 decline in home prices, spending falls by an estimated 9 cents. A decline of this magnitude equates to some 2-3% of personal income. Mortgage equity extractions totaled nearly \$400 billion in 2006, but that window has all but closed.

Arizona's economy is in recession because of its high concentration of employment in construction and support industries related to growth, and prior heavy exposure to real estate speculation and subprime lending.

EXHIBIT 1 Housing Not Yet at Bottom

Housing Recessions Compared
Residential Permits, Arizona

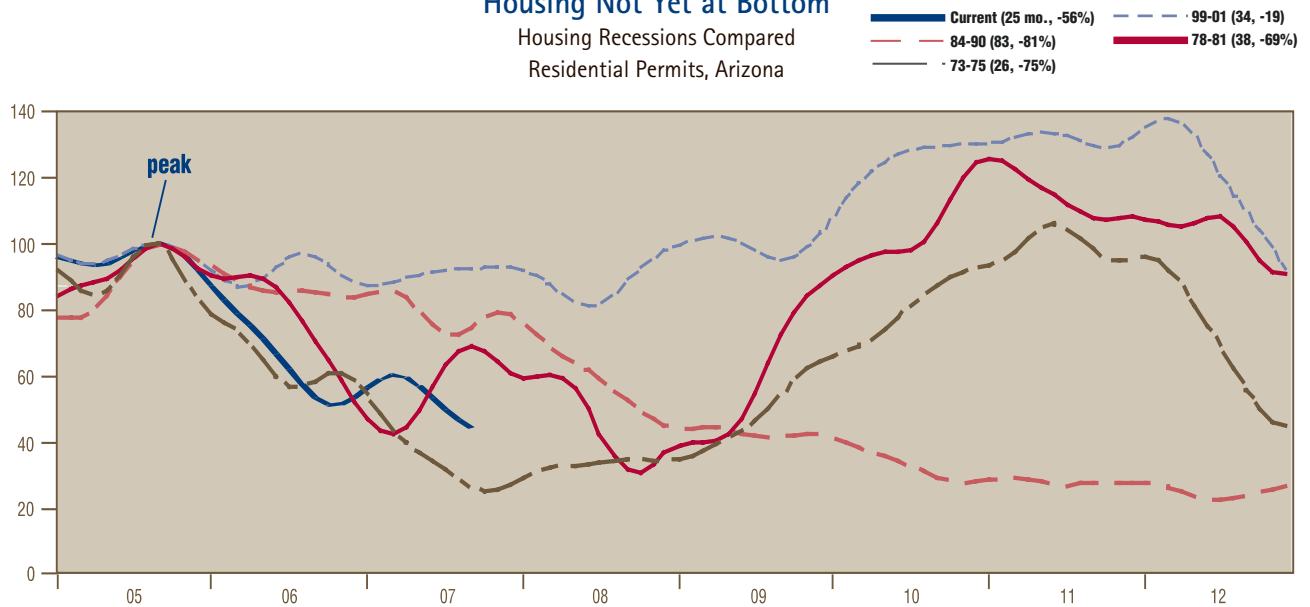
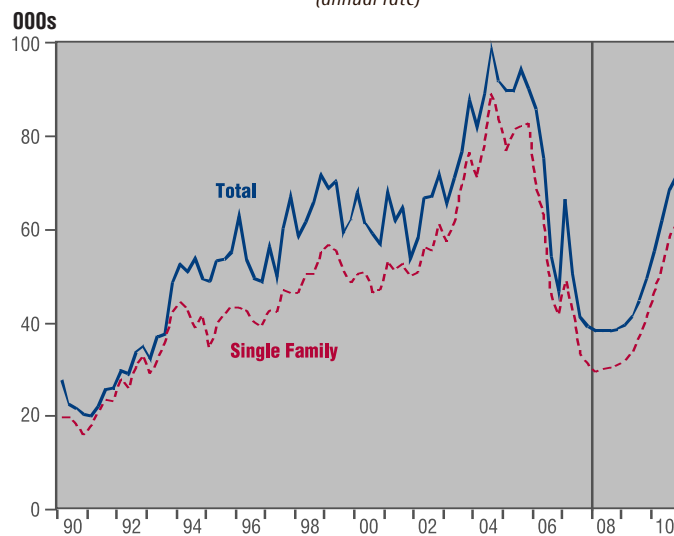


EXHIBIT 2 A U-Shaped Bottom for Homebuilding

Residential Permits, Arizona
(annual rate)



Consumer confidence has fallen precipitously in recent months to the lowest readings since the early 1990s. They're concerned over the deteriorating job market, declining home prices,

and gasoline prices headed above \$3 per gallon. Others worry about tighter credit availability and approaching resets on adjustable rate mortgages. Nationwide, some \$360 billion of sub-prime loans

and another \$150 billion of jumbo loans will reset to higher rates in 2008. With credit much tighter, it will be difficult to refinance, and with prices falling, many will owe more on their home than it is worth. That's a recipe for defaults and foreclosures.

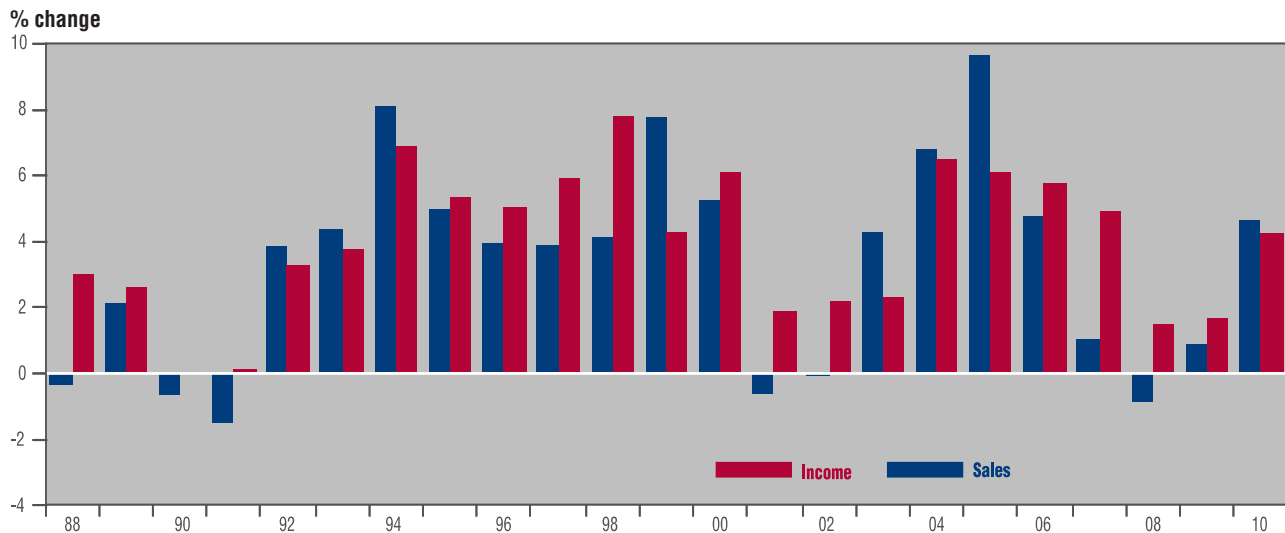
The best measures of spending by Arizonans are retail sales and restaurant and bar (R&B) sales. After adjusting for inflation, both measures peaked in February and were declining during the summer – near double-digit annual rates for retail and by 3-5% rates for R&B.

Aggregate retail spending, which includes sales for restaurant and bar, gasoline and food as well as general merchandise, autos, hardware and other categories normally included in retail, grew by only 1.1% in 2007, after adjusting for inflation. The coming year will bring the first decline since 2001 – a drop of almost one percent. The following year spending will remain subdued with an increase of only 0.9%. It will be 2010 before spending begins to accelerate once again (Exhibit 3).

After registering a gain of almost 5% in 2007, inflation adjusted personal income will increase by only 1.5% per year in both 2008 and 2009. Again, recovery is delayed until 2010.

Supply and demand factors remain unfavorable for recovery of homebuilding any time soon.

EXHIBIT 3
Spending and Incomes Will Languish
 Real Consumer Spending and Income Growth, Arizona



Near-Term Outlook

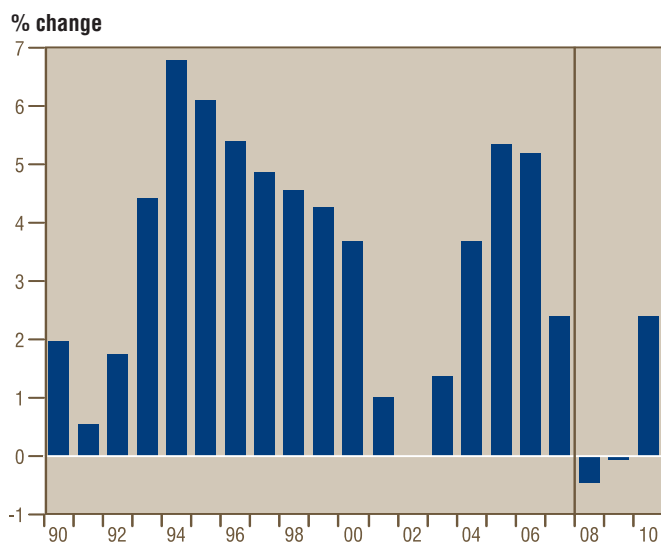
Arizona's economy is probably in recession now. We need more data and a round of revisions before we will be able to identify exact timing, but with the data we have now, a case can be made that the economy peaked as early as the second quarter of 2007. More likely, the data eventually will show that recession began in the third quarter, punctuated by the collapse of the mortgage lending industry.

The recession of 2007-08 should last a year, give or take a few months, and be relatively mild. Causes are threefold: a classical inventory cycle (in housing), a credit squeeze, and an energy shock. Arizona will be hit worse than most states because of its reliance on growth-related activities and exposure to imploding mortgage loans.

Sectors related to growth will be especially hard hit and a number of growth-dependent firms will fail. Consumer spending will suffer as job growth and wage increases languish. The public sector will struggle to balance budgets as tax revenues shrink. Fortunately, population will continue to grow, but at a much slower pace as potential newcomers are unable to sell their homes in other parts of the country.

EXHIBIT 4

Jobs Stop Growing During Recessions
 Nonfarm Job Growth, Arizona



Nonfarm job growth will disappear and turn negative for several months. Job growth for all of 2007 on an annual average basis will register 2.4 percent, and then decline slightly by 0.4% next year. The following year, 2009, will see virtually no gain (Exhibit 4).

If housing markets dive deeper, the credit crunch persists, oil prices stay above \$100, or if consumers pull back more, the downturn could extend another year and revive the severe recessions of the 1970s and 1980s. ■

Consumer confidence has fallen precipitously in recent months to the lowest readings since the early 1990s.

ARIZONA ECONOMIC INDICATORS

| Arizona | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|-----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Personal Income (\$ mill) | 197,535.4 | 212,788.8 | 219,958.7 | 227,557.0 | 241,833.3 | 262,253.8 | 287,453.3 |
| percent change | 9.2 | 7.7 | 3.4 | 3.5 | 6.3 | 8.4 | 9.6 |
| Wage per Employee | 41,598 | 43,689 | 44,985 | 46,224 | 47,867 | 49,788 | 51,952 |
| percent change | 4.6 | 5.0 | 3.0 | 2.8 | 3.6 | 4.0 | 4.3 |
| Aggregate Retail Sales (\$ mill)* | 80,874.8 | 83,914.2 | 84,717.9 | 86,986.5 | 92,790.1 | 100,633.6 | 109,525.1 |
| percent change | 8.2 | 3.8 | 1.0 | 2.7 | 6.7 | 8.5 | 8.8 |
| Population (000s, mid-year) | 6,305.2 | 6,525.0 | 6,698.1 | 6,845.7 | 7,012.4 | 7,210.9 | 7,438.1 |
| percent change | 4.3 | 3.5 | 2.7 | 2.2 | 2.4 | 2.8 | 3.2 |
| Residential Permits | 65,459 | 49,366 | 38,420 | 43,853 | 64,442 | 79,780 | 91,103 |
| percent change | -28.1 | -24.6 | -22.2 | 14.1 | 46.9 | 23.8 | 14.2 |
| Non Farm Employment (000s) | 2,638.6 | 2,701.7 | 2,689.5 | 2,688.2 | 2,753.0 | 2,878.9 | 3,037.9 |
| percent change | 5.2 | 2.4 | -0.4 | 0.0 | 2.4 | 4.6 | 5.5 |
| Goods-Producing | 436.1 | 419.2 | 375.7 | 344.9 | 349.5 | 383.7 | 424.8 |
| percent change | 6.3 | -3.9 | -10.4 | -8.2 | 1.3 | 9.8 | 10.7 |
| Service-Providing | 2,202.4 | 2,282.7 | 2,314.1 | 2,343.4 | 2,403.7 | 2,495.3 | 2,613.3 |
| percent change | 5.0 | 3.6 | 1.4 | 1.3 | 2.6 | 3.8 | 4.7 |
| Trade, Trans., & Utilities | 511.2 | 531.9 | 532.6 | 533.5 | 547.3 | 572.8 | 604.8 |
| percent change | 4.6 | 4.0 | 0.1 | 0.2 | 2.6 | 4.7 | 5.6 |
| Prof. & Business Services | 394.5 | 412.7 | 413.0 | 410.6 | 420.3 | 442.1 | 472.2 |
| percent change | 7.8 | 4.6 | 0.1 | -0.6 | 2.4 | 5.2 | 6.8 |
| Leisure & Hospitality | 266.4 | 274.6 | 279.4 | 288.4 | 298.7 | 310.3 | 322.8 |
| percent change | 4.8 | 3.1 | 1.8 | 3.2 | 3.6 | 3.9 | 4.0 |
| Government | 410.0 | 420.4 | 427.4 | 432.1 | 438.5 | 446.0 | 456.6 |
| percent change | 1.7 | 2.5 | 1.7 | 1.1 | 1.5 | 1.7 | 2.4 |
| Phoenix-Mesa Metro Area | | | | | | | |
| Personal Income (\$ mill) | 138,635.6 | 150,255.2 | 155,228.5 | 162,709.6 | 173,530.5 | 188,312.3 | 205,047.7 |
| percent change | 10.3 | 8.4 | 3.3 | 4.8 | 6.7 | 8.5 | 8.9 |
| Wage per Employee | 47,198 | 49,712 | 51,538 | 53,460 | 55,566 | 57,735 | 59,980 |
| percent change | 4.0 | 5.3 | 3.7 | 3.7 | 3.9 | 3.9 | 3.9 |
| Aggregate Retail Sales (\$ mill)* | 56,337.1 | 58,495.3 | 58,452.8 | 61,799.7 | 66,181.9 | 72,037.4 | 78,069.9 |
| percent change | 8.3 | 3.8 | -0.1 | 5.7 | 7.1 | 8.8 | 8.4 |
| Population (000s, mid-year) | 4,092.6 | 4,221.9 | 4,327.4 | 4,444.6 | 4,575.7 | 4,726.3 | 4,885.6 |
| percent change | 5.1 | 3.2 | 2.5 | 2.7 | 2.9 | 3.3 | 3.4 |
| Residential Permits | 44,280 | 34,291 | 24,229 | 36,887 | 47,152 | 59,979 | 67,880 |
| percent change | -29.3 | -22.6 | -29.3 | 52.2 | 27.8 | 27.2 | 13.2 |
| Non Farm Employment (000s) | 1,890.9 | 1,936.7 | 1,917.6 | 1,931.6 | 1,981.0 | 2,076.5 | 2,185.5 |
| percent change | 5.8 | 2.4 | -1.0 | 0.7 | 2.6 | 4.8 | 5.2 |
| Goods-Producing | 323.1 | 309.5 | 269.7 | 269.5 | 268.3 | 299.4 | 320.2 |
| percent change | 6.8 | -4.2 | -12.9 | -0.1 | -0.5 | 11.6 | 7.0 |
| Service-Providing | 1,568.0 | 1,627.2 | 1,647.9 | 1,662.1 | 1,712.7 | 1,777.2 | 1,865.3 |
| percent change | 5.6 | 3.8 | 1.3 | 0.9 | 3.0 | 3.8 | 5.0 |
| Trade, Trans., & Utilities | 379.5 | 395.2 | 390.1 | 392.7 | 406.5 | 425.2 | 445.8 |
| percent change | 4.8 | 4.1 | -1.3 | 0.7 | 3.5 | 4.6 | 4.8 |
| Prof. & Business Services | 319.2 | 336.8 | 344.8 | 337.1 | 343.2 | 355.6 | 379.7 |
| percent change | 7.6 | 5.5 | 2.4 | -2.2 | 1.8 | 3.6 | 6.8 |
| Leisure & Hospitality | 182.1 | 188.1 | 191.1 | 198.1 | 205.9 | 214.4 | 222.9 |
| percent change | 6.9 | 3.3 | 1.6 | 3.6 | 4.0 | 4.1 | 4.0 |
| Government | 230.8 | 236.6 | 240.1 | 243.9 | 249.3 | 255.3 | 262.2 |
| percent change | 2.4 | 2.5 | 1.5 | 1.6 | 2.2 | 2.4 | 2.7 |
| Tucson Metro Area | | | | | | | |
| Personal Income (\$ mill) | 29,118.1 | 31,645.7 | 33,215.3 | 35,156.4 | 37,676.1 | 40,331.3 | 43,039.4 |
| percent change | 9.0 | 8.7 | 5.0 | 5.8 | 7.2 | 7.0 | 6.7 |
| Wage per Employee | 39,813 | 42,009 | 43,553 | 44,969 | 46,666 | 48,619 | 50,689 |
| percent change | 4.5 | 5.5 | 3.7 | 3.3 | 3.8 | 4.2 | 4.3 |
| Aggregate Retail Sales (\$ mill)* | 11,636.2 | 12,207.7 | 12,656.9 | 13,263.4 | 14,090.4 | 14,964.6 | 15,799.7 |
| percent change | 6.0 | 4.9 | 3.7 | 4.8 | 6.2 | 6.2 | 5.6 |
| Population (000s, mid-year) | 981.3 | 1,006.0 | 1,026.9 | 1,050.3 | 1,076.5 | 1,103.4 | 1,129.7 |
| percent change | 2.5 | 2.5 | 2.1 | 2.3 | 2.5 | 2.5 | 2.4 |
| Residential Permits | 8,522 | 5,938 | 5,689 | 7,845 | 10,133 | 10,420 | 10,208 |
| percent change | -26.8 | -30.3 | -4.2 | 37.9 | 29.2 | 2.8 | -2.0 |
| Non Farm Employment (000s) | 380.1 | 390.9 | 392.9 | 399.9 | 412.6 | 426.5 | 438.8 |
| percent change | 3.7 | 2.8 | 0.5 | 1.8 | 3.2 | 3.4 | 2.9 |
| Goods-Producing | 58.4 | 57.7 | 55.0 | 54.6 | 57.2 | 60.2 | 61.7 |
| percent change | 5.4 | -1.1 | -4.7 | -0.8 | 4.8 | 5.2 | 2.4 |
| Service-Providing | 321.8 | 333.2 | 337.9 | 345.3 | 355.4 | 366.3 | 377.1 |
| percent change | 3.4 | 3.5 | 1.4 | 2.2 | 2.9 | 3.1 | 3.0 |
| Trade, Trans., & Utilities | 62.0 | 64.3 | 65.1 | 66.7 | 68.6 | 70.6 | 72.5 |
| percent change | 4.2 | 3.6 | 1.3 | 2.4 | 2.9 | 2.9 | 2.7 |
| Prof. & Business Services | 49.3 | 52.4 | 53.9 | 54.0 | 55.4 | 57.7 | 60.1 |
| percent change | 7.3 | 6.3 | 2.9 | 0.2 | 2.6 | 4.2 | 4.1 |
| Leisure & Hospitality | 40.5 | 42.5 | 43.2 | 44.8 | 46.7 | 48.6 | 50.4 |
| percent change | 2.0 | 4.8 | 1.6 | 3.8 | 4.2 | 4.0 | 3.7 |
| Government | 76.9 | 78.3 | 78.3 | 79.2 | 80.4 | 81.4 | 82.4 |
| percent change | -0.2 | 1.8 | -0.1 | 1.2 | 1.6 | 1.2 | 1.3 |

* Aggregate Retail Sales includes retail, food, restaurant & bars and gasoline sales.
Source: Economic and Business Research Center, Eller College of Management, The University of Arizona

Capturing Imagination – Generating Jobs:

Impact of astronomy, planetary,
and space sciences research on
Arizona's economy

By Vera Pavlakovich-Kochi, Senior Regional Scientist
Alberta H. Charney, Senior Research Economist
and Lora Mwaniki-Lyman, Research Economist and
Data Manager

Introduction

Most people associate astronomy, planetary, and space sciences (APSS) with planets, stars, galaxies, exploration of far away and beyond-our-wildest-dreams spaces, and thousands of those breath-taking images sent back to Earth from man-made Pioneers, Voyagers, and space shuttles, and now to the excitement surrounding the Phoenix Mars Mission.¹

On a more practical, earthly level, astronomy, planetary, and space sciences are also regarded as one of the most innovative fields benefiting a large number of industries. There have been numerous applications of astronomical techniques and instrumentation such as processing software in automobile and aircraft labs, communication antenna testing, development of highly sensitive photographic films, and X-ray baggage scanners at airports.²

From a regional economic point of view, the interest in astronomy, planetary, and space sciences (APSS) research is primarily as an activity or a combination of activities that generate wealth in a regional economy. The nature of projects is such that it requires substantial funding by federal agencies such as NASA and Department of Defense. Grants and awards directly support highly educated research personnel and thus contribute to region's overall human capital. The scale of the projects requires close working relations with industry; moreover, APSS research drives new technology and creates important new opportunities for industry. The

complexity of projects requires a combination of advanced fields such as optics, electronics, computer control, and compact construction, among others, and thus greatly contributes to the formation of regional industry clusters.

In the latest assessments of Arizona's economic foundations by the Battelle Institute,³ space sciences were identified as one of the six core competencies critical for economic development based on research innovation. Building on the assessment and recommendations of the Battelle report, the Arizona Arts, Sciences, and Technology Academy (AASTA) requested a study of economic and tax revenue impacts of astronomy, planetary, and space sciences research on the State's economy.⁴

Background

Since the early beginnings of Lowell Observatory in Flagstaff in 1896, Arizona has become a leader in astronomy, planetary, and space sciences research. Arizona is home to world-renowned observatories, state-of-art telescopes, and leading university departments and centers carrying out research in astronomy, planetary, and space sciences.

A combination of factors has contributed to the development of astronomy, planetary, and space sciences research in Arizona. Mountain peaks, dryness, and wide-open clear skies had been and still are important factors for the location of telescopes. Arizona also benefited from the stimulus for space exploration and increases in federal government funding for astronomical research since the mid 1950s. But it is also a result of quality of researchers able to attract both funding and talent.

From 2002 to 2005, Arizona observatories and academic organizations carrying astronomy, planetary, and space sciences research attracted more than \$600 million in grants and contracts. The total cumulative investment in instruments, land, and facilities, as reported in the recent survey of APSS organizations, was worth \$1.2 billion.⁵

Astronomy, planetary, and space sciences research generates jobs, wages, sales, and tax revenues in Arizona's economy

Astronomy, planetary, and space sciences research is predominantly supported by funding

from federal institutions, such as the National Aeronautics and Space Administration (NASA) and the National Science Foundation (NSF). By definition, these funds are injected into Arizona's economy, and thus capable of creating jobs, wages, and output, i.e., economic "impacts."

Economic impacts are generated through four main sources that can be reasonably quantified. These include (a) spending by employees in observatories, related research organizations, and university departments and research centers; (b) operations-related purchase of goods and services from Arizona businesses; (c) construction and capital investment, and (d) spending by visitors such as visiting scholars, conference attendees, and general public attracted to observatories, planetariums, and specialty museums.

Because expenditure data were not readily available, a combination of methods was applied. Financial data from observatories and related research organizations were collected through a survey instrument detailing operations-related and capital investment-related expenditures in Arizona. Data also included payroll, benefits, and number of employees. For university departments and research centers, financial data on expenditures were obtained from respective central offices; procurement offices provided information needed to extract only purchases made in Arizona. Additional data about university departments and research centers were also collected through a survey instrument.

A total of 22 organizations responded to the survey: eleven observatories, three related research organizations, and eight university departments/centers/labs are included in the economic impact analysis. For simplicity, in this article these organizations will be referred to as APSS organizations.

Economic impacts – jobs, wages, and output (sales) were estimated by using the IMPLAN⁶ input-output model for Arizona, and tax revenue estimates were produced via Economic and Business Research's Arizona tax revenue models.

Expenditures in fiscal year (FY) 2006

In FY 2006, APSS organizations spent a total of \$233.6 million on employee payroll, benefits, capital investment, and daily operations including

Today Arizona has close to 30 observatories, with the state's largest and world's most-visited cluster of telescopes located on Kitt Peak.

utilities, supplies, and professional and technical services. Payroll and benefits accounted for \$84.0 million and \$21.2 million respectively, while operations-related expenditures were close to \$100 million. An additional \$28.4 million was spent on capital investment.

However, not all of it was spent in Arizona. One reason is that some goods and services are not available in Arizona, and therefore purchases are made from businesses outside the state. Another reason is that projects are complex and require collaboration with out-of-Arizona organizations. Also, a portion of employee payroll leaks out in the form of federal taxes and contribution to federal programs such as Social Security and Medicare.

Direct jobs in APSS organizations

The participating APSS organizations employed more than 1,800 persons. The field is characterized by a large percentage of Ph.D.s (more than 24 percent), and professional and technical personnel (about 41 percent). Graduate and undergraduate students represented about 25 percent of all employees. The remaining 10 percent included employees in administrative and support positions (Table 1).

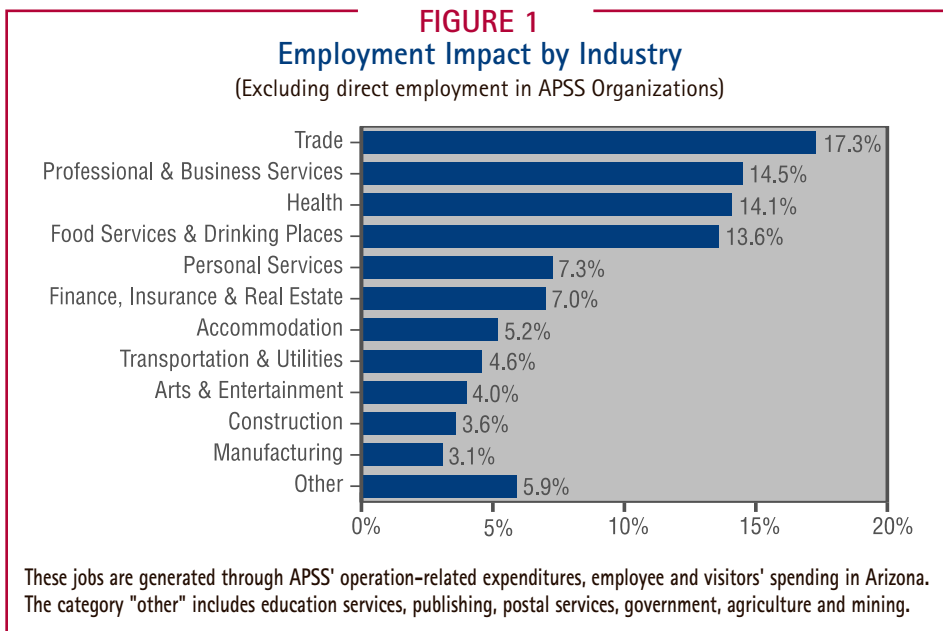
TABLE 1
APSS: Human capital

| | |
|-----------------------------------|------|
| Ph.D.s /Faculty | 24 % |
| Professional & technical | 41 % |
| Graduate & undergraduate students | 25 % |
| Administrative & support | 10 % |

Source: Survey of APSS organizations

Impact of employee spending

Employee spending was the largest source of economic impact associated with APSS organizations. The amount of payroll that was actually spent in Arizona was estimated at \$64.8 million. Applying a recent University of Arizona survey⁷ of local consumption patterns of faculty, staff, and students, it was estimated that APSS employee spending generated 720 jobs and \$26.3 million in wages in Arizona. It was also taken into account that a portion of employee benefits on health



services was spent in Arizona which generated an additional 81 jobs and \$3.5 million in wages.

Impact of operations-related purchases of goods and services

Direct operations-related spending (excluding wages and salaries) of the participating APSS organizations in Arizona was \$21.4 million. This spending generated 274 jobs and \$10.8 million in wages.

Impact of construction/capital investments

In FY 2006, APSS organizations spent \$11.8 million on construction/capital-related investment in Arizona, which generated 137 jobs and \$5.9 million in wages.

Impact of visitor spending

Based on our survey, APSS organizations attracted more than 201,000 visitors in FY 2006, out of which about 7,000 were professional visitors and 194,000 were public visitors. Twenty-two percent of the public visitors were from outside Arizona. For the purpose of this study, only the economic activities of professional visitors and public visitors from outside Arizona were assessed to determine the effects of new money injected into Arizona's economy.

Out-of-Arizona visitors spent an estimated \$16.1 million, generating an economic impact of \$25.7 million in total. The out-of-state visitors' spending generated 286 jobs and \$8.1 million in wages and salaries in Arizona in FY 2006.

Tax revenue impacts associated with Arizona's APSS organizations

APSS organizations generated close to \$11.9 million in revenues to state and local governments. Approximately \$2.6 million is attributable to the operations of university departments and research centers, \$5.9 million to observatories and related organizations, and \$2.1 million to visitors. Capital investment in 2006 generated approximately \$1.2 million in revenues.

The state of Arizona received 57 percent of the revenues (\$6.8 million); Arizona counties received 16 percent (\$2.0 million), while cities received 26 percent (\$3.1 million).

Summary of economic and tax revenue impacts in FY 2006

The total dollar impact (sales or output) in Arizona that was attributed to Arizona's APSS organizations was estimated at \$252.8 million in FY 2006. This includes \$138.6 million in wages, and \$11.9 million in tax revenues (Table 2).

The economic activity of astronomy, planetary, and space science research, as represented by the APSS organizations, generated more than 3,300 jobs. Of those, more than 1,800 were direct jobs in APSS organizations, while close to 1,500 jobs or 44.8 percent were indirect and induced jobs spread throughout all sectors of the state economy.

Each of the three state universities has at least one major department of astronomy, planetary, and/or space sciences.

TABLE 2

Economic and Tax Revenue Impacts of
Astronomy, Planetary and Space Sciences
In Arizona, FY 2006, at glance

| Non-earnings expenditures (dollars in millions) | |
|---|-------------------------------|
| Operations-related expenditures in Arizona | \$21.4 |
| Capital investment | \$11.8 |
| Locally spent benefits | \$5.2 |
| Out-of-state visitor spending | \$16.1 |
| Total direct expenditures | <u>\$54.5</u> |
| Earnings (dollars in millions) | |
| Earnings in APSS organizations | \$84.0 |
| Indirect and induced earnings | \$54.6 |
| Total earnings impact | <u>\$138.6</u> |
| Tax revenues (dollars in millions) | |
| State revenues | \$6.8 |
| County revenues | \$2.0 |
| City revenues | \$3.1 |
| Total tax revenue impact | <u>\$11.9</u> |
| Additional value added | <u>\$47.8</u> |
| Total monetary impact | <u>\$252.8 million</u> |
| Employment impact | |
| Direct jobs in APSS organizations | 1,830 |
| Indirect and induced jobs | 1,483 |
| Total employment impact | <u>3,328</u> |

Impacts revisited 1: Linkages with industry through purchases of operations-related goods and services

The \$42.7 million⁸ impact of direct and indirect spending in FY 2006 was distributed throughout the economy; practically every industry sector was affected. The largest economic benefit was to professional, scientific, and technical services (\$10.8 million), followed by the trade sector (combined wholesale and retail, \$8.6 million),

manufacturing (\$6.0 million), construction (\$4.9 million), and administrative, support, and waste management services (\$3.7 million). Other sectors benefited as well, such as transportation and utilities (\$2.6 million), finance, insurance and real estate services (\$2.3 million), and information services (\$1.6 million). The remaining \$2.2 million was spread over a variety of sectors, such as repair and maintenance services, accommodation and food services, and government services.

Impacts revisited 2: Indirect and induced employment by sector

Figure 1 shows the distribution of the 1,483 jobs that depend on APSS research but are outside of the APSS research organizations. The majority of jobs (17.3 percent) are in trade, including retail and wholesale. More than 14 percent of jobs is in each, professional and business services, and health services, followed by food services and drinking places (13.6 percent). Personal services account for 7.3 percent, followed closely by finance, insurance, and real estate with 7 percent. Accommodation services, transportation and utilities, arts and entertainment, construction, and manufacturing account for between 3.1 and 5.2 percent. All other sectors account for the remaining 5.9 percent.

Conclusions

While this study is the first one to present the most comprehensive assessment of the economic activity of Arizona's astronomy, planetary, and space sciences to date, the scope of the study was limited to measurable impacts. This study only traces money associated with APSS organizations in Arizona and visitors to those organizations.

An important segment of APSS-related activity in the state is not measured, specifically manufacturers and other industries that are the result of APSS activity in the state. This study measures the impact on the private sector only if APSS organizations purchase goods or services from them or if employees make purchases from them. But there are many more private sector impacts associated with astronomy, planetary, and space sciences. In some instances, entire economic

sectors, e.g., the optics industry, are the direct result of the strong presence of APSS organizations in Arizona. In other instances, parts of certain Arizona industries, such as missiles, electronics and computers, scientific instruments, engineering services, and robotics have close connections to astronomy, planetary, and space sciences. Sometimes the connections are due to graduates in these scientific fields working in the private sector. Skills learned in these sciences are surprisingly transferable to the private sector.⁹ Sometimes the relationships involve APSS scientists working with private sector companies.

In addition, this study does not capture all the broad benefits that the APSS organizations bring to the state of Arizona. For many years, these organizations have increased the visibility of the state to the rest of the country and the world. It is not possible to place a monetary value on the role APSS has played in helping to establish Arizona as a center of research and technology.

The full report "Astronomy, Planetary, and Space Sciences in Arizona; An Economic and Tax revenue Impact Study" is available at www.ebr.eller.arizona.edu

- 1 Launched in August 2007; The University of Arizona is the first public university to lead a mission to Mars. <http://phoenix.lpl.arizona.edu>
- 2 American Academy of Sciences, 1991 American Decadal Review of Astronomy and Astrophysics.
- 3 Battelle report 2003.
- 4 The economic and tax revenue study is an integral part of a larger document "Astronomy, Planetary Sciences and Space Sciences research: Opportunities for Arizona's Economic Growth" produced by AASTA with a purpose of increasing the awareness of this important field.
- 5 Source: AASTA report based on survey 2007.
- 6 Developed and maintained by the Minnesota IMPLAN Group, Inc.
- 7 Pavlakovich-Kochi, V., A.H. Charney, L. Mwaniki-Lyman and S. Umashankar. The University of Arizona Economic and Tax Revenue Impacts, Fiscal Year 2004. <http://ebr.eller.arizona.edu>
- 8 Includes direct \$21.4 million and indirect \$6.2 million in operations-related expenditures combined with \$11.8 million direct and \$3.3 million indirect construction/capital investments in FY 2006.
- 9 ARA Group. 1999. A Division of KPMG Consulting LP. Estimation of the Economic Impacts of Canadian Astronomy. Report prepared for the National Research Council. Accessed at <http://www.casca.ca/lrp/vol2/economic/Economic.htm> on 2/6/2006

More than 350 scientists with doctoral degrees and another 600 professional and technical personnel conduct research and educational activities in Arizona's observatories and academic institutions.

ARIZONA ECONOMIC INDICATORS

| | JUN 2007 | JUL 2007 | AUG 2007 | SEP 2007 | OCT 2007 | % change versus year ago for most recent: | |
|--|-------------|-------------|-------------|-------------|-------------|--|-----------|
| | | | | | | month | 12-months |
| APACHE COUNTY | | | | | | | |
| Civilian Labor Force, ADES | | | | | | | |
| Employment | 19,750 | 19,875 | 20,225 | 19,950 | 20,100 | -0.1 | -0.6 |
| Unemployment | 1,775 | 2,125 | 1,850 | 1,425 | 1,425 | -24.0 | -8.2 |
| Unemployment Rate (%) | 9.0 | 10.7 | 9.1 | 7.1 | 7.1 | -23.9 | -7.5 |
| Employees on Nonagricultural Payrolls, ADES | | | | | | | |
| Total | 19,900 | 19,275 | 20,625 | 20,650 | 20,675 | 1.6 | 0.8 |
| <i>Total Private</i> | 7,550 | 7,550 | 7,675 | 7,675 | 7,625 | 3.4 | 3.5 |
| Goods-Producing | 950 | 1,000 | 975 | 975 | 1,050 | 16.7 | 12.7 |
| Service-Providing | 18,950 | 18,275 | 19,650 | 19,675 | 19,625 | 0.9 | 0.3 |
| Trade, Transportation, and Utilities | 1,850 | 1,850 | 1,825 | 1,800 | 1,775 | -10.1 | -2.3 |
| Other Private Service-Providing | 4,750 | 4,700 | 4,875 | 4,900 | 4,800 | 6.7 | 4.3 |
| <i>Government</i> | 12,350 | 11,725 | 12,950 | 12,975 | 13,050 | 0.6 | -0.8 |
| Federal Government | 3,325 | 3,050 | 3,275 | 3,250 | 3,225 | -2.3 | -0.3 |
| State and Local Government | 9,025 | 8,675 | 9,675 | 9,725 | 9,825 | 1.6 | -0.9 |
| Sales (\$000s) ADOR | | | | | | | |
| Gross Retail | 14,627 | 14,820 | 13,247 | 13,927 | ... | 4.1 | -5.7 |
| Retail | 7,223 | 6,921 | 6,284 | 7,661 | ... | 10.7 | -0.4 |
| Restaurants & Bars | 1,172 | 1,257 | 1,042 | 989 | ... | -11.8 | -3.6 |
| Gasoline, EBR | 6,232 | 6,643 | 5,921 | 5,276 | ... | -1.0 | -11.4 |
| Gallons (000s) ADOT | 2,130 | 2,454 | 2,359 | 2,048 | ... | -9.6 | -10.0 |
| Contracting | 9,281 | 7,977 | 9,881 | 7,980 | ... | -10.0 | 8.3 |
| Hotel/Motel | 1,408 | 1,714 | 1,282 | 1,378 | ... | -6.5 | 2.5 |
| NAVAJO COUNTY | | | | | | | |
| Civilian Labor Force, ADES | | | | | | | |
| Employment | 36,725 | 37,100 | 37,200 | 37,600 | 37,350 | -0.9 | -2.2 |
| Unemployment | 2,375 | 2,775 | 2,375 | 2,025 | 2,150 | -17.3 | -10.5 |
| Unemployment Rate (%) | 6.5 | 7.5 | 6.4 | 5.4 | 5.8 | -16.6 | -8.4 |
| Employees on Nonagricultural Payrolls, ADES | | | | | | | |
| Total | 29,000 | 28,825 | 29,925 | 30,075 | 29,850 | -0.7 | -1.5 |
| <i>Total Private</i> | 19,775 | 19,800 | 20,000 | 19,925 | 19,675 | -1.5 | -0.1 |
| Goods-Producing | 4,175 | 4,225 | 4,250 | 4,225 | 4,100 | -2.4 | 2.6 |
| Mining and Construction | 3,325 | 3,425 | 3,425 | 3,400 | 3,275 | 0.0 | 6.7 |
| Manufacturing | 850 | 800 | 825 | 825 | 825 | -10.8 | -10.7 |
| Service-Providing | 24,825 | 24,600 | 25,675 | 25,850 | 25,750 | -0.4 | -2.1 |
| Trade, Transportation, and Utilities | 6,125 | 6,200 | 6,100 | 6,050 | 6,100 | -2.4 | 2.5 |
| Information | 775 | 775 | 775 | 750 | 725 | -12.1 | 0.0 |
| Financial Activities | 625 | 625 | 600 | 600 | 575 | -11.5 | -3.5 |
| Professional and Business Services | 1,100 | 1,100 | 1,100 | 1,075 | 1,100 | 0.0 | -9.0 |
| Educational and Health Services | 3,275 | 3,175 | 3,425 | 3,500 | 3,475 | 3.0 | 3.5 |
| Leisure and Hospitality | 2,875 | 2,950 | 3,025 | 3,000 | 2,925 | 4.5 | -7.0 |
| Other Services | 825 | 750 | 725 | 725 | 675 | -12.9 | -7.3 |
| <i>Government</i> | 9,225 | 9,025 | 9,925 | 10,150 | 10,175 | 1.0 | -4.0 |
| Federal Government | 1,750 | 1,625 | 1,700 | 1,750 | 1,650 | 0.0 | -3.1 |
| State and Local Government | 7,475 | 7,400 | 8,225 | 8,400 | 8,525 | 1.2 | -4.2 |
| Sales (\$000s) ADOR | | | | | | | |
| Gross Retail | 97,208 | 96,404 | 91,623 | 87,322 | ... | -8.2 | 2.0 |
| Retail | 72,540 | 71,560 | 68,394 | 64,301 | ... | -6.1 | 1.8 |
| Restaurants & Bars | 9,104 | 9,378 | 9,364 | 9,578 | ... | 3.2 | 5.8 |
| Gasoline, EBR | 15,564 | 15,465 | 13,864 | 13,443 | ... | -22.2 | 0.8 |
| Gallons (000s) ADOT | 5,319 | 5,714 | 5,522 | 5,218 | ... | -29.0 | 1.5 |
| Contracting | 28,465 | 25,348 | 26,520 | 26,541 | ... | 26.3 | 8.2 |
| Hotel/Motel | 3,496 | 3,718 | 3,232 | 3,740 | ... | 5.4 | 7.9 |
| New Housing Units Authorized, Census C-40 | | | | | | | |
| Total Units | 53 | 39 | 28 | 31 | 30 | -34.8 | -21.7 |
| Single Family Units | 47 | 35 | 28 | 31 | 30 | -34.8 | -22.2 |

See sources and abbreviations at the bottom of page 16. • For additional detail and history, subscribe to *Arizona Economic Indicators Data Book*.

ARIZONA ECONOMIC INDICATORS

| | JUN 2007 | JUL 2007 | AUG 2007 | SEP 2007 | OCT 2007 | % change versus year ago for most recent: | |
|--|-------------|-------------|-------------|-------------|-------------|--|-----------|
| | | | | | | month | 12-months |
| GRAHAM COUNTY | | | | | | | |
| Civilian Labor Force, ADES | 14,325 | 14,475 | 14,800 | 14,900 | 15,175 | 8.0 | 10.9 |
| Employment | 13,725 | 13,825 | 14,200 | 14,375 | 14,625 | 8.9 | 12.0 |
| Unemployment | 600 | 650 | 600 | 525 | 550 | -12.0 | -9.5 |
| Unemployment Rate (%) | 4.2 | 4.5 | 4.1 | 3.5 | 3.6 | -18.5 | -18.4 |
| Employees on Nonagricultural Payrolls, ADES | | | | | | | |
| Total | 8,500 | 8,375 | 8,775 | 8,950 | 9,100 | 6.4 | 11.1 |
| <i>Total Private</i> | 6,100 | 6,075 | 6,050 | 6,075 | 6,150 | 9.3 | 16.0 |
| Goods-Producing | 1,450 | 1,525 | 1,450 | 1,425 | 1,425 | 35.7 | 76.4 |
| Service-Providing | 7,050 | 6,850 | 7,325 | 7,525 | 7,675 | 2.3 | 4.1 |
| Trade, Transportation, and Utilities | 1,800 | 1,775 | 1,750 | 1,775 | 1,775 | 6.0 | 7.0 |
| Other Private Service-Providing | 2,850 | 2,775 | 2,850 | 2,875 | 2,950 | 1.7 | 4.7 |
| <i>Government</i> | 2,400 | 2,300 | 2,725 | 2,875 | 2,950 | 0.9 | 1.8 |
| Federal Government | 475 | 475 | 450 | 450 | 450 | 5.9 | 7.2 |
| State and Local Government | 1,925 | 1,825 | 2,275 | 2,425 | 2,500 | 0.0 | 0.9 |
| Sales (\$000s) ADOR | | | | | | | |
| Gross Retail | 27,328 | 27,607 | 27,391 | 25,695 | ... | 12.9 | 18.4 |
| Retail | 22,142 | 22,461 | 22,228 | 20,484 | ... | 9.5 | 18.3 |
| Restaurants & Bars | 2,363 | 2,194 | 2,267 | 2,343 | ... | 24.4 | 17.8 |
| Gasoline, EBR | 2,822 | 2,952 | 2,896 | 2,867 | ... | 31.6 | 19.7 |
| Gallons (000s) ADOT | 965 | 1,091 | 1,153 | 1,113 | ... | 20.2 | 21.5 |
| Contracting | 4,670 | 3,178 | 5,969 | 4,694 | ... | 25.6 | 18.9 |
| COCONINO COUNTY | | | | | | | |
| Civilian Labor Force, ADES | 69,600 | 71,000 | 69,400 | 70,300 | 70,400 | 0.4 | -0.1 |
| Employment | 67,100 | 68,100 | 66,800 | 68,100 | 68,200 | 1.2 | 0.5 |
| Unemployment | 2,500 | 2,900 | 2,600 | 2,200 | 2,200 | -18.5 | -12.1 |
| Unemployment Rate (%) | 3.6 | 4.1 | 3.7 | 3.1 | 3.1 | -18.9 | -11.9 |
| Employees on Nonagricultural Payrolls, ADES | | | | | | | |
| Total | 65,100 | 65,400 | 65,300 | 66,100 | 66,000 | 0.0 | 0.5 |
| <i>Total Private</i> | 45,700 | 46,200 | 45,900 | 45,900 | 45,500 | -0.4 | 0.7 |
| Goods-Producing | 7,400 | 7,500 | 7,300 | 7,300 | 7,300 | -1.4 | 1.5 |
| Mining and Construction | 3,500 | 3,600 | 3,500 | 3,500 | 3,500 | -5.4 | -4.2 |
| Manufacturing | 3,900 | 3,900 | 3,800 | 3,800 | 3,800 | 2.7 | 7.3 |
| Service-Providing | 57,700 | 57,900 | 58,000 | 58,800 | 58,700 | 0.2 | 0.4 |
| Trade, Transportation, and Utilities | 10,100 | 10,100 | 10,200 | 10,300 | 10,300 | 4.0 | 2.0 |
| Information | 400 | 400 | 400 | 400 | 400 | -20.0 | -12.1 |
| Financial Activities | 1,700 | 1,700 | 1,700 | 1,700 | 1,700 | -5.6 | -1.9 |
| Professional and Business Services | 3,500 | 3,400 | 3,400 | 3,300 | 3,200 | -5.9 | -0.7 |
| Educational and Health Services | 7,000 | 6,900 | 7,100 | 7,200 | 7,200 | 0.0 | -0.5 |
| Leisure and Hospitality | 13,600 | 14,100 | 13,800 | 13,700 | 13,400 | -0.7 | 1.0 |
| Other Services | 2,000 | 2,100 | 2,000 | 2,000 | 2,000 | 0.0 | 2.2 |
| <i>Government</i> | 19,400 | 19,200 | 19,400 | 20,200 | 20,500 | 1.0 | 0.1 |
| Federal Government | 3,100 | 3,000 | 3,100 | 3,000 | 2,900 | 0.0 | -4.2 |
| State and Local Government | 16,300 | 16,200 | 16,300 | 17,200 | 17,600 | 1.1 | 0.9 |
| Sales (\$000s) ADOR | | | | | | | |
| Gross Retail | 159,268 | 156,807 | 155,288 | 145,638 | ... | -9.2 | 1.8 |
| Retail | 99,336 | 94,627 | 98,053 | 91,951 | ... | -13.2 | 1.5 |
| Restaurants & Bars | 33,916 | 34,897 | 32,648 | 31,098 | ... | -0.2 | 6.7 |
| Gasoline, EBR | 26,016 | 27,283 | 24,586 | 22,589 | ... | -3.1 | -2.6 |
| Gallons (000s) ADOT | 8,891 | 10,080 | 9,793 | 8,768 | ... | -11.6 | -0.3 |
| Contracting | 46,400 | 37,439 | 36,723 | 42,031 | ... | 27.1 | 10.5 |
| Hotel/Motel | 26,048 | 26,715 | 25,283 | 25,022 | ... | 9.0 | 8.8 |
| New Housing Units Authorized, Census C-40 | | | | | | | |
| Total Units | 40 | 50 | 58 | 25 | 25 | -68.4 | -59.5 |
| Single Family Units | 40 | 50 | 58 | 25 | 25 | -68.4 | -45.4 |

See sources and abbreviations at the bottom of page 16. • For additional detail and history, subscribe to *Arizona Economic Indicators Data Book*.

ARIZONA ECONOMIC INDICATORS

| | JUN 2007 | JUL 2007 | AUG 2007 | SEP 2007 | OCT 2007 | % change versus year ago for most recent: | |
|--|-------------|-------------|-------------|-------------|-------------|--|-----------|
| | | | | | | month | 12-months |
| GREENLEE COUNTY | | | | | | | |
| Civilian Labor Force, ADES | | | | | | | |
| Employment | 4,075 | 4,150 | 4,225 | 4,250 | 4,325 | 7.5 | 11.1 |
| Unemployment | 3,950 | 4,000 | 4,100 | 4,150 | 4,225 | 9.0 | 11.9 |
| Unemployment Rate (%) | 125 | 150 | 125 | 100 | 100 | -33.3 | -7.2 |
| Unemployment Rate (%) | 3.1 | 3.6 | 3.0 | 2.4 | 2.3 | -38.0 | -16.4 |
| Employees on Nonagricultural Payrolls, ADES | | | | | | | |
| Total | 4,950 | 4,975 | 5,250 | 5,300 | 5,300 | 12.2 | 16.8 |
| <i>Total Private</i> | 4,375 | 4,450 | 4,700 | 4,750 | 4,725 | 12.5 | 18.4 |
| Goods-Producing | 3,625 | 3,700 | 3,950 | 4,025 | 4,050 | 20.0 | 22.3 |
| Service-Providing | 1,325 | 1,275 | 1,300 | 1,275 | 1,250 | -7.4 | 3.7 |
| Trade, Transportation, and Utilities | 350 | 325 | 350 | 325 | 300 | -7.7 | 12.9 |
| Other Private Service-Providing | 400 | 425 | 400 | 400 | 375 | -25.0 | -4.8 |
| <i>Government</i> | 575 | 525 | 550 | 550 | 575 | 9.5 | 5.8 |
| Federal Government | 50 | 50 | 50 | 50 | 50 | 0.0 | 0.0 |
| State and Local Government | 525 | 475 | 500 | 500 | 525 | 10.5 | 6.3 |
| Sales (\$000s) ADOR | | | | | | | |
| Gross Retail | 11,555 | 13,588 | 14,095 | 12,300 | ... | 27.0 | -39.4 |
| Retail | 10,553 | 12,503 | 13,081 | 11,211 | ... | 24.9 | -44.1 |
| Restaurants & Bars | 252 | 403 | 355 | 404 | ... | 64.1 | 26.8 |
| Gasoline, EBR | 750 | 681 | 659 | 685 | ... | 48.8 | -4.2 |
| Gallons (000s) ADOT | 256 | 252 | 263 | 266 | ... | 35.9 | -1.7 |
| Contracting | 10,604 | 7,454 | 6,666 | 8,583 | ... | 51.1 | 99.6 |
| Hotel/Motel* | 1,327 | 705 | 693 | 777 | ... | 13.2 | 41.6 |
| * Includes Graham County data. | | | | | | | |
| YAVAPAI COUNTY | | | | | | | |
| Civilian Labor Force, ADES | | | | | | | |
| Employment | 97,900 | 98,700 | 97,600 | 99,000 | 99,900 | 2.3 | 2.3 |
| Unemployment | 94,500 | 95,000 | 94,100 | 95,800 | 96,500 | 2.8 | 2.7 |
| Unemployment Rate (%) | 3,400 | 3,700 | 3,500 | 3,200 | 3,400 | -10.5 | -5.7 |
| Unemployment Rate (%) | 3.5 | 3.7 | 3.6 | 3.2 | 3.4 | -12.5 | -7.8 |
| Employees on Nonagricultural Payrolls, ADES | | | | | | | |
| Total | 65,100 | 65,100 | 66,600 | 67,000 | 66,800 | 2.3 | 3.2 |
| <i>Total Private</i> | 54,200 | 54,100 | 54,500 | 54,400 | 54,000 | 0.9 | 2.7 |
| Goods-Producing | 13,100 | 13,300 | 13,000 | 12,900 | 12,600 | -4.5 | 0.1 |
| Mining and Construction | 9,300 | 9,400 | 9,200 | 9,100 | 8,900 | -4.3 | 0.4 |
| Manufacturing | 3,800 | 3,900 | 3,800 | 3,800 | 3,700 | -5.1 | -0.4 |
| Service-Providing | 52,000 | 51,800 | 53,600 | 54,100 | 54,200 | 4.0 | 3.9 |
| Trade, Transportation, and Utilities | 12,600 | 12,600 | 12,600 | 12,700 | 12,700 | 3.3 | 3.5 |
| Information | 600 | 600 | 600 | 600 | 600 | 0.0 | 0.0 |
| Financial Activities | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 4.2 | 3.5 |
| Professional and Business Services | 5,500 | 5,400 | 5,600 | 5,400 | 5,300 | 3.9 | 6.2 |
| Educational and Health Services | 9,300 | 9,100 | 9,500 | 9,700 | 9,800 | 2.1 | 4.2 |
| Leisure and Hospitality | 8,600 | 8,600 | 8,700 | 8,600 | 8,600 | 4.9 | 3.8 |
| Other Services | 2,000 | 2,000 | 2,000 | 2,000 | 1,900 | -9.5 | -4.3 |
| <i>Government</i> | 10,900 | 11,000 | 12,100 | 12,600 | 12,800 | 8.5 | 5.2 |
| Federal Government | 1,300 | 1,300 | 1,300 | 1,300 | 1,300 | 0.0 | 3.5 |
| State and Local Government | 9,600 | 9,700 | 10,800 | 11,300 | 11,500 | 9.5 | 5.4 |
| Sales (\$000s) ADOR | | | | | | | |
| Gross Retail | 185,067 | 173,366 | 176,083 | 167,308 | ... | -3.6 | 0.4 |
| Retail | 140,428 | 130,758 | 134,905 | 124,967 | ... | -5.5 | -0.1 |
| Restaurants & Bars | 23,665 | 23,129 | 23,176 | 24,180 | ... | 8.2 | 5.7 |
| Gasoline, EBR | 20,974 | 19,478 | 18,003 | 18,161 | ... | -5.0 | -1.8 |
| Gallons (000s) ADOT | 7,168 | 7,197 | 7,171 | 7,049 | ... | -13.2 | 0.3 |
| Contracting | 69,450 | 66,064 | 57,418 | 58,102 | ... | -26.3 | -14.0 |
| Hotel/Motel | 9,978 | 8,553 | 8,475 | 9,260 | ... | 11.7 | 10.3 |
| New Housing Units Authorized, Census C-40 | | | | | | | |
| Total Units | 140 | 119 | 124 | 95 | 103 | -27.5 | -52.6 |
| Single Family Units | 138 | 117 | 124 | 93 | 90 | -35.3 | -52.5 |

See sources and abbreviations at the bottom of page 16. • For additional detail and history, subscribe to *Arizona Economic Indicators Data Book*.

ARIZONA ECONOMIC INDICATORS

| | JUN 2007 | JUL 2007 | AUG 2007 | SEP 2007 | OCT 2007 | % change versus year ago for most recent: | |
|--|-------------|-------------|-------------|-------------|-------------|--|-----------|
| | | | | | | month | 12-months |
| GILA COUNTY | | | | | | | |
| Civilian Labor Force, ADES | 21,150 | 21,450 | 21,725 | 21,225 | 21,350 | 2.3 | 1.2 |
| Employment | 20,250 | 20,500 | 20,825 | 20,425 | 20,475 | 3.3 | 2.1 |
| Unemployment | 900 | 950 | 900 | 800 | 875 | -16.7 | -15.1 |
| Unemployment Rate (%) | 4.3 | 4.4 | 4.1 | 3.8 | 4.1 | -18.5 | -16.0 |
| Employees on Nonagricultural Payrolls, ADES | | | | | | | |
| Total | 14,850 | 14,775 | 15,125 | 14,975 | 14,950 | 2.7 | 2.3 |
| <i>Total Private</i> | 10,175 | 10,150 | 10,225 | 10,075 | 10,075 | 2.8 | 3.4 |
| Goods-Producing | 2,925 | 3,025 | 2,975 | 2,925 | 2,975 | 11.2 | 12.2 |
| Service-Providing | 11,925 | 11,750 | 12,150 | 12,050 | 11,975 | 0.8 | 0.2 |
| Trade, Transportation, and Utilities | 2,375 | 2,325 | 2,350 | 2,350 | 2,375 | 1.1 | 0.7 |
| Other Private Service-Providing | 4,875 | 4,800 | 4,900 | 4,800 | 4,725 | -1.0 | 0.1 |
| <i>Government</i> | 4,675 | 4,625 | 4,900 | 4,900 | 4,875 | 2.6 | 0.1 |
| Federal Government | 550 | 550 | 550 | 525 | 450 | -10.0 | -5.6 |
| State and Local Government | 4,125 | 4,075 | 4,350 | 4,375 | 4,425 | 4.1 | 0.8 |
| Sales (\$000s) ADOR | | | | | | | |
| Gross Retail | 41,921 | 41,512 | 39,148 | 37,156 | ... | 3.2 | 3.9 |
| Retail | 27,893 | 27,967 | 27,429 | 25,417 | ... | 2.7 | 3.4 |
| Restaurants & Bars | 5,743 | 5,598 | 5,036 | 5,097 | ... | -3.2 | 6.2 |
| Gasoline, EBR | 8,285 | 7,947 | 6,683 | 6,642 | ... | 11.0 | 3.8 |
| Gallons (000s) ADOT | 2,831 | 2,936 | 2,662 | 2,578 | ... | 1.4 | 5.3 |
| Contracting | 8,300 | 10,280 | 9,885 | 9,032 | ... | 2.6 | 5.8 |
| Hotel/Motel | 1,716 | 1,738 | 1,463 | 1,409 | ... | 15.5 | 13.2 |
| MOHAVE COUNTY | | | | | | | |
| Civilian Labor Force, ADES | 92,125 | 92,400 | 91,725 | 91,525 | 91,050 | -0.8 | 0.2 |
| Employment | 88,225 | 88,075 | 87,350 | 87,575 | 86,925 | -0.9 | -0.1 |
| Unemployment | 3,900 | 4,325 | 4,375 | 3,950 | 4,125 | 1.2 | 7.5 |
| Unemployment Rate (%) | 4.2 | 4.7 | 4.8 | 4.3 | 4.5 | 2.0 | 7.3 |
| Employees on Nonagricultural Payrolls, ADES | | | | | | | |
| Total | 54,775 | 53,950 | 54,700 | 54,400 | 54,025 | -2.1 | -0.4 |
| <i>Total Private</i> | 46,625 | 45,750 | 45,850 | 45,500 | 45,125 | -3.4 | -1.7 |
| Goods-Producing | 10,500 | 10,350 | 10,225 | 10,000 | 9,900 | -13.2 | -8.9 |
| Mining and Construction | 6,850 | 6,750 | 6,625 | 6,500 | 6,375 | -14.1 | -9.1 |
| Manufacturing | 3,650 | 3,600 | 3,600 | 3,500 | 3,525 | -11.3 | -8.4 |
| Service-Providing | 44,275 | 43,600 | 44,475 | 44,400 | 44,125 | 0.8 | 1.9 |
| Trade, Transportation, and Utilities | 11,425 | 11,350 | 11,350 | 11,200 | 11,200 | -2.4 | -2.0 |
| Information | 1,075 | 1,000 | 1,025 | 1,000 | 975 | -4.9 | 1.5 |
| Financial Activities | 2,825 | 2,825 | 2,775 | 2,825 | 2,775 | 5.7 | 8.8 |
| Professional and Business Services | 3,850 | 3,625 | 3,600 | 3,575 | 3,550 | -5.3 | -6.9 |
| Educational and Health Services | 7,350 | 7,200 | 7,500 | 7,550 | 7,625 | 5.2 | 5.3 |
| Leisure and Hospitality | 6,800 | 6,750 | 6,725 | 6,675 | 6,475 | -1.5 | 0.4 |
| Other Services | 2,800 | 2,650 | 2,650 | 2,675 | 2,625 | 1.0 | 3.9 |
| <i>Government</i> | 8,150 | 8,200 | 8,850 | 8,900 | 8,900 | 5.0 | 7.8 |
| Federal Government | 550 | 525 | 525 | 500 | 500 | 0.0 | -2.8 |
| State and Local Government | 7,600 | 7,675 | 8,325 | 8,400 | 8,400 | 5.3 | 8.5 |
| Sales (\$000s) ADOR | | | | | | | |
| Gross Retail | 172,925 | 160,785 | 158,550 | 147,838 | ... | -4.7 | -2.9 |
| Retail | 125,416 | 112,098 | 116,060 | 108,378 | ... | -5.8 | -3.7 |
| Restaurants & Bars | 18,719 | 20,240 | 17,057 | 16,457 | ... | -6.4 | 5.0 |
| Gasoline, EBR | 28,790 | 28,448 | 25,433 | 23,003 | ... | 2.5 | -4.6 |
| Gallons (000s) ADOT | 9,839 | 10,511 | 10,130 | 8,929 | ... | -6.4 | -3.1 |
| Contracting | 52,820 | 44,536 | 50,962 | 37,032 | ... | -34.4 | -22.6 |
| Hotel/Motel | 4,865 | 5,005 | 4,556 | 3,986 | ... | -9.6 | -2.1 |
| New Housing Units Authorized, Census C-40 | | | | | | | |
| Total Units | 75 | 118 | 137 | 132 | 61 | -51.2 | -51.6 |
| Single Family Units | 73 | 101 | 91 | 123 | 61 | -38.4 | -49.3 |

See sources and abbreviations at the bottom of page 16. • For additional detail and history, subscribe to *Arizona Economic Indicators Data Book*.

ARIZONA ECONOMIC INDICATORS

| | JUN 2007 | JUL 2007 | AUG 2007 | SEP 2007 | OCT 2007 | % change versus year ago for most recent: | |
|--|-------------|-------------|-------------|-------------|-------------|--|-----------|
| | | | | | | month | 12-months |
| LA PAZ COUNTY | | | | | | | |
| Civilian Labor Force, ADES | | | | | | | |
| Employment | 7,475 | 7,750 | 7,650 | 7,675 | 7,450 | -3.2 | -0.4 |
| Unemployment | 7,100 | 7,350 | 7,275 | 7,325 | 7,075 | -2.7 | 0.4 |
| Unemployment Rate (%) | 375 | 400 | 375 | 350 | 375 | -11.8 | -12.3 |
| Unemployment Rate (%) | 5.0 | 5.2 | 4.9 | 4.6 | 5.0 | -8.8 | -12.1 |
| Employees on Nonagricultural Payrolls, ADES | | | | | | | |
| Total | 5,400 | 5,450 | 5,475 | 5,475 | 5,350 | -4.0 | 1.1 |
| <i>Total Private</i> | 2,725 | 2,750 | 2,700 | 2,700 | 2,625 | -9.5 | -6.3 |
| Goods-Producing | 375 | 375 | 350 | 350 | 350 | -26.3 | -13.4 |
| Service-Providing | 5,025 | 5,075 | 5,125 | 5,125 | 5,000 | -2.0 | 2.6 |
| Trade, Transportation, and Utilities | 1,325 | 1,325 | 1,325 | 1,325 | 1,300 | -3.7 | 0.5 |
| Other Private Service-Providing | 1,025 | 1,050 | 1,025 | 1,025 | 975 | -9.3 | -11.0 |
| <i>Government</i> | 2,675 | 2,700 | 2,775 | 2,775 | 2,725 | 1.9 | 10.1 |
| Federal Government | 300 | 325 | 325 | 325 | 325 | 0.0 | 3.4 |
| State and Local Government | 2,375 | 2,375 | 2,450 | 2,450 | 2,400 | 2.1 | 11.1 |
| Sales (\$000s) ADOR | | | | | | | |
| Gross Retail | 19,469 | 18,340 | 16,750 | 14,956 | ... | -0.7 | 11.5 |
| Retail | 8,697 | 8,307 | 8,122 | 7,425 | ... | -6.4 | 0.7 |
| Restaurants & Bars | 2,357 | 2,149 | 1,876 | 1,658 | ... | 7.1 | 6.5 |
| Gasoline, EBR | 8,415 | 7,885 | 6,752 | 5,873 | ... | 5.3 | 30.2 |
| Gallons (000s) ADOT | 2,876 | 2,913 | 2,689 | 2,280 | ... | -3.9 | 29.2 |
| Contracting | 2,353 | 3,100 | 2,014 | 2,432 | ... | 12.0 | 7.0 |
| Hotel/Motel | 500 | 572 | 483 | 360 | ... | -22.0 | -2.1 |
| YUMA METROPOLITAN REGION | | | | | | | |
| Civilian Labor Force, ADES | | | | | | | |
| Employment | 75,900 | 79,500 | 79,300 | 77,100 | 75,800 | 0.9 | -0.6 |
| Unemployment | 63,600 | 64,000 | 63,200 | 65,000 | 65,500 | 2.3 | 0.0 |
| Unemployment Rate (%) | 12,300 | 15,500 | 16,100 | 12,100 | 10,300 | -7.2 | -4.0 |
| Unemployment Rate (%) | 16.2 | 19.5 | 20.3 | 15.7 | 13.6 | -8.1 | -3.4 |
| Employees on Nonagricultural Payrolls, ADES | | | | | | | |
| Total | 51,700 | 49,400 | 50,800 | 51,400 | 52,400 | 1.4 | 0.6 |
| <i>Total Private</i> | 37,000 | 36,500 | 36,100 | 36,300 | 37,200 | 0.8 | -0.1 |
| Goods-Producing | 7,300 | 7,100 | 7,100 | 6,900 | 7,000 | -7.9 | -5.8 |
| Mining and Construction | 4,700 | 4,600 | 4,600 | 4,500 | 4,500 | -15.1 | -8.8 |
| Manufacturing | 2,600 | 2,500 | 2,500 | 2,400 | 2,500 | 8.7 | 0.0 |
| Service-Providing | 44,400 | 42,300 | 43,700 | 44,500 | 45,400 | 2.9 | 1.7 |
| Trade, Transportation, and Utilities | 9,900 | 9,800 | 9,700 | 9,800 | 10,200 | 4.1 | 0.2 |
| Information | 1,400 | 1,400 | 1,300 | 1,400 | 1,400 | 16.7 | 15.2 |
| Financial Activities | 1,500 | 1,500 | 1,400 | 1,400 | 1,500 | -6.3 | -4.2 |
| Professional and Business Services | 3,600 | 3,600 | 3,500 | 3,500 | 3,600 | 0.0 | -2.7 |
| Educational and Health Services | 6,100 | 6,100 | 6,100 | 6,200 | 6,200 | 1.6 | 3.6 |
| Leisure and Hospitality | 5,700 | 5,500 | 5,500 | 5,600 | 5,800 | 7.4 | 3.9 |
| Other Services | 1,500 | 1,500 | 1,500 | 1,500 | 1,500 | -6.3 | -2.1 |
| <i>Government</i> | 14,700 | 12,900 | 14,700 | 15,100 | 15,200 | 2.7 | 2.4 |
| Federal Government | 3,400 | 3,400 | 3,400 | 3,400 | 3,400 | 3.0 | 5.2 |
| State and Local Government | 11,300 | 9,500 | 11,300 | 11,700 | 11,800 | 2.6 | 1.7 |
| Sales (\$000s) ADOR | | | | | | | |
| Gross Retail | 133,011 | 121,413 | 124,110 | 133,496 | ... | 7.3 | 3.1 |
| Retail | 95,177 | 86,864 | 91,459 | 100,734 | ... | 4.3 | 3.6 |
| Restaurants & Bars | 16,014 | 13,994 | 13,967 | 14,197 | ... | 6.8 | 6.7 |
| Gasoline, EBR | 21,820 | 20,555 | 18,684 | 18,565 | ... | 28.4 | -2.4 |
| Gallons (000s) ADOT | 7,457 | 7,595 | 7,442 | 7,207 | ... | 17.2 | -1.3 |
| Contracting | 37,286 | 33,262 | 31,954 | 29,942 | ... | -35.3 | -4.2 |
| Hotel/Motel | 2,908 | 2,718 | 3,297 | 4,354 | ... | 17.2 | 8.8 |
| New Housing Units Authorized, Census C-40 | | | | | | | |
| Total Units | 74 | 94 | 55 | 49 | 84 | -21.5 | -46.4 |
| Single Family Units | 74 | 94 | 55 | 49 | 84 | -17.6 | -45.6 |

See sources and abbreviations at the bottom of page 16. • For additional detail and history, subscribe to *Arizona Economic Indicators Data Book*.

ARIZONA ECONOMIC INDICATORS

| | JUN 2007 | JUL 2007 | AUG 2007 | SEP 2007 | OCT 2007 | % change versus year ago for most recent: | |
|--|-------------|-------------|-------------|-------------|-------------|--|-----------|
| | | | | | | month | 12-months |
| SANTA CRUZ COUNTY | | | | | | | |
| Civilian Labor Force, ADES | | | | | | | |
| Employment | 16,100 | 16,550 | 16,525 | 16,350 | 16,300 | -1.7 | 0.7 |
| Unemployment | 1,075 | 1,525 | 1,700 | 1,525 | 1,475 | -9.2 | 1.3 |
| Unemployment Rate (%) | 6.7 | 9.2 | 10.3 | 9.3 | 9.0 | -7.7 | 0.6 |
| Employees on Nonagricultural Payrolls, ADES | | | | | | | |
| Total | 13,475 | 13,300 | 13,325 | 13,200 | 13,225 | -2.0 | 0.6 |
| <i>Total Private</i> | 10,100 | 9,925 | 9,725 | 9,550 | 9,550 | -4.5 | 0.2 |
| Goods-Producing | 1,100 | 1,100 | 1,125 | 1,075 | 1,025 | -10.9 | -2.6 |
| Service-Providing | 12,375 | 12,200 | 12,200 | 12,125 | 12,200 | -1.2 | 0.9 |
| Trade, Transportation, and Utilities | 4,925 | 4,700 | 4,525 | 4,475 | 4,600 | -7.1 | -2.5 |
| Other Private Service-Providing | 4,075 | 4,125 | 4,075 | 4,000 | 3,925 | 0.6 | 4.8 |
| <i>Government</i> | 3,375 | 3,375 | 3,600 | 3,650 | 3,675 | 5.0 | 1.9 |
| Federal Government | 1,400 | 1,400 | 1,400 | 1,400 | 1,400 | 1.8 | 8.5 |
| State and Local Government | 1,975 | 1,975 | 2,200 | 2,250 | 2,275 | 7.1 | -2.0 |
| Sales (\$000s) ADOR | | | | | | | |
| Gross Retail | 45,305 | 41,637 | 38,752 | 38,003 | ... | -0.9 | 6.0 |
| Retail | 34,199 | 32,289 | 29,786 | 28,568 | ... | -1.1 | 5.9 |
| Restaurants & Bars | 5,000 | 3,842 | 3,195 | 4,146 | ... | 5.1 | 14.0 |
| Gasoline, EBR | 6,106 | 5,507 | 5,770 | 5,289 | ... | -4.3 | 1.3 |
| Gallons (000s) ADOT | 2,087 | 2,035 | 2,298 | 2,053 | ... | -12.6 | 2.0 |
| Contracting | 10,306 | 7,885 | 6,007 | 8,453 | ... | -5.5 | -4.7 |
| Hotel/Motel | 1,146 | 971 | 1,022 | 1,031 | ... | 32.4 | -2.1 |
| New Housing Units Authorized, Census C-40 | | | | | | | |
| Total Units | 48 | 64 | 25 | 22 | 23 | -34.3 | -39.4 |
| Single Family Units | 48 | 59 | 25 | 22 | 21 | -40.0 | -39.0 |
| COCHISE COUNTY | | | | | | | |
| Civilian Labor Force, ADES | | | | | | | |
| Employment | 56,400 | 56,625 | 56,425 | 56,600 | 56,975 | 0.8 | 0.3 |
| Unemployment | 2,250 | 2,425 | 2,300 | 2,050 | 2,175 | -13.0 | -8.0 |
| Unemployment Rate (%) | 4.0 | 4.3 | 4.1 | 3.6 | 3.8 | -13.7 | -8.3 |
| Employees on Nonagricultural Payrolls, ADES | | | | | | | |
| Total | 37,900 | 37,425 | 37,800 | 37,950 | 38,050 | 0.3 | 0.9 |
| <i>Total Private</i> | 25,975 | 25,800 | 25,650 | 25,650 | 25,750 | 0.4 | 1.6 |
| Goods-Producing | 3,725 | 3,650 | 3,575 | 3,500 | 3,450 | -7.4 | 0.9 |
| Mining and Construction | 2,800 | 2,750 | 2,675 | 2,575 | 2,525 | -9.8 | -1.4 |
| Manufacturing | 925 | 900 | 900 | 925 | 925 | 0.0 | 8.1 |
| Service-Providing | 34,175 | 33,775 | 34,225 | 34,450 | 34,600 | 1.2 | 0.9 |
| Trade, Transportation, and Utilities | 6,850 | 6,800 | 6,725 | 6,725 | 6,850 | 2.2 | 2.2 |
| Information | 425 | 425 | 425 | 425 | 425 | 0.0 | -4.7 |
| Financial Activities | 950 | 975 | 950 | 975 | 950 | -7.3 | -6.6 |
| Professional and Business Services | 5,000 | 4,950 | 5,000 | 5,050 | 4,975 | 3.1 | 5.1 |
| Educational and Health Services | 4,000 | 4,075 | 4,050 | 4,100 | 4,100 | 1.9 | 2.2 |
| Leisure and Hospitality | 4,075 | 3,975 | 4,000 | 3,950 | 4,075 | 3.8 | 1.7 |
| Other Services | 950 | 950 | 925 | 925 | 925 | -7.5 | -6.7 |
| <i>Government</i> | 11,925 | 11,625 | 12,150 | 12,300 | 12,300 | 0.2 | -0.6 |
| Federal Government | 4,750 | 4,800 | 4,800 | 4,775 | 4,675 | -3.1 | -4.3 |
| State and Local Government | 7,175 | 6,825 | 7,350 | 7,525 | 7,625 | 2.3 | 1.9 |
| Sales (\$000) ADOR | | | | | | | |
| Gross Retail | 92,004 | 87,470 | 88,931 | 85,567 | ... | 0.2 | 4.9 |
| Retail | 68,040 | 64,600 | 66,744 | 64,167 | ... | -5.6 | 4.3 |
| Restaurants & Bars | 10,670 | 10,045 | 9,880 | 9,912 | ... | 5.9 | 11.5 |
| Gasoline, EBR | 13,294 | 12,824 | 12,307 | 11,489 | ... | 42.4 | 3.2 |
| Gallons (000s) ADOT | 4,543 | 4,738 | 4,902 | 4,460 | ... | 30.0 | 4.7 |
| Contracting | 28,836 | 24,251 | 27,852 | 28,051 | ... | 9.0 | 6.4 |
| Hotel/Motel | 3,990 | 3,329 | 3,448 | 3,617 | ... | 44.3 | 26.0 |
| New Housing Units Authorized, Census C-40 | | | | | | | |
| Total Units | 35 | 66 | 55 | 21 | 54 | -14.3 | -37.0 |
| Single Family Units | 35 | 66 | 55 | 21 | 54 | -14.3 | -36.7 |

See sources and abbreviations at the bottom of page 16. • For additional detail and history, subscribe to *Arizona Economic Indicators Data Book*.

ARIZONA ECONOMIC INDICATORS

| | JUN 2007 | JUL 2007 | AUG 2007 | SEP 2007 | OCT 2007 | % change versus year ago for most recent: | |
|--|-------------|-------------|-------------|-------------|-------------|--|-----------|
| | | | | | | month | 12-months |
| TUCSON METROPOLITAN REGION (PIMA) | | | | | | | |
| Civilian Labor Force (000s) ADES | | | | | | | |
| Employment | 453.5 | 456.1 | 452.4 | 459.7 | 464.7 | 1.9 | 2.5 |
| Unemployment | 437.6 | 438.7 | 435.9 | 444.3 | 448.4 | 2.4 | 2.9 |
| Unemployment Rate, Seas. Adj. (%) | 15.9 | 17.4 | 16.5 | 15.4 | 16.3 | -9.9 | -7.9 |
| | 3.3 | 3.5 | 3.6 | 3.2 | 3.5 | -10.3 | -10.2 |
| Employees on Nonagricultural Payrolls (000s) ADES | | | | | | | |
| Total | 382.9 | 381.3 | 385.3 | 392.6 | 393.9 | 1.7 | 3.1 |
| Natural Resources and Mining | 1.9 | 2.0 | 2.1 | 2.2 | 2.3 | 43.8 | 23.0 |
| Construction | 28.1 | 27.9 | 27.8 | 27.6 | 27.1 | -7.2 | 1.3 |
| Manufacturing | 29.0 | 29.1 | 29.2 | 29.1 | 29.2 | 0.0 | -0.4 |
| Computer and Electronic Prod. | 4.0 | 3.9 | 3.9 | 3.9 | 3.8 | -11.6 | -9.8 |
| Aerospace Products and Parts | 12.0 | 12.1 | 12.2 | 12.2 | 12.1 | 2.5 | 0.7 |
| Wholesale Trade | 9.8 | 9.9 | 10.0 | 10.0 | 10.0 | 6.4 | 5.4 |
| Retail Trade | 44.0 | 44.0 | 44.6 | 44.8 | 45.3 | 3.9 | 2.6 |
| Transp., Warehousing, and Utilities | 9.2 | 9.3 | 9.3 | 9.3 | 9.2 | 1.1 | 1.9 |
| Information | 6.0 | 5.9 | 5.8 | 5.7 | 5.7 | -16.2 | -13.5 |
| Financial Activities | 17.8 | 17.7 | 16.4 | 16.4 | 16.4 | -6.3 | 1.0 |
| Professional and Business Services | 51.2 | 51.4 | 51.7 | 51.7 | 51.4 | 2.4 | 5.6 |
| Educational and Health Services | 54.5 | 54.6 | 55.7 | 56.3 | 56.6 | 4.4 | 4.7 |
| Arts, Entertainment, and Recreation | 6.0 | 5.5 | 5.6 | 5.9 | 5.7 | 5.6 | 13.9 |
| Accommodation | 8.0 | 8.0 | 8.1 | 8.3 | 8.5 | 11.8 | 8.8 |
| Food Svcs and Drinking Places | 29.0 | 28.0 | 28.5 | 28.9 | 29.0 | 4.3 | 4.5 |
| Other Services | 16.9 | 16.7 | 16.6 | 16.6 | 16.8 | 4.3 | 5.8 |
| Federal Government | 10.7 | 10.8 | 10.8 | 10.7 | 10.7 | 3.9 | 5.0 |
| State and Local Government | 60.8 | 60.5 | 63.1 | 69.1 | 70.0 | 0.9 | 1.4 |
| State and Local Government Education | 32.7 | 32.4 | 35.5 | 41.6 | 42.4 | -2.3 | -1.1 |
| Sales (\$000s) ADOR | | | | | | | |
| Aggregate Retail Sales | 985,962 | 941,919 | 968,501 | 940,953 | ... | 5.0 | 3.5 |
| Retail | 642,641 | 611,501 | 643,297 | 609,406 | ... | 2.4 | 2.2 |
| Food, EBR | 140,544 | 134,991 | 134,976 | 138,372 | ... | 7.4 | 7.5 |
| Restaurants & Bars | 115,638 | 114,430 | 110,017 | 115,612 | ... | 5.0 | 8.1 |
| Gasoline, EBR | 87,139 | 80,997 | 80,211 | 77,563 | ... | 25.2 | 1.2 |
| Contracting | 210,797 | 199,979 | 181,872 | 213,006 | ... | -2.9 | 7.6 |
| Hotel/Motel | 22,426 | 20,239 | 20,377 | 22,491 | ... | 7.4 | 1.5 |
| New Housing Units Authorized, Census C-40 & EBR | | | | | | | |
| Total Units | 638 | 533 | 500 | 333 | 541 | 1.5 | -34.6 |
| Single Family Units | 610 | 511 | 473 | 313 | 316 | -36.1 | -35.1 |
| 2-5-plus Unit Structures | 28 | 22 | 27 | 20 | 225 | 488.9 | -28.2 |
| Housing Sales and Prices, TAR | | | | | | | |
| Total Sales (\$000s) | 365,933 | 295,343 | 279,137 | 190,574 | ... | -30.3 | -15.6 |
| Total Units | 1,226 | 1,098 | 1,019 | 683 | ... | -36.6 | -16.7 |
| Average Price (\$) | 298,477 | 268,983 | 273,932 | 279,025 | ... | 9.9 | 1.3 |
| Tucson International Airport, TAA | | | | | | | |
| Total Passengers | 361,922 | 364,717 | 349,839 | ... | ... | 11.6 | 2.5 |
| Total Aircraft Movements | 21,512 | 20,115 | 20,497 | ... | ... | -15.3 | -8.9 |

TUCSON METROPOLITAN REGION (PIMA COUNTY) - QUARTERLY DATA

| | III 2006 | IV 2006 | I 2007 | II 2007 | III 2007 | % change versus year ago for most recent: | |
|--|-------------|------------|-----------|------------|-------------|--|------------|
| | | | | | | quarter | 4-quarters |
| Demographics & Vital Statistics (000s, seas adj) ADHS & EBR | | | | | | | |
| Population | 984.3 | 990.5 | 996.7 | 1,002.9 | 1,009.1 | 2.5 | 2.5 |
| Natural Increase | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | -0.1 | -0.2 |
| Births | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 0.3 | 0.9 |
| Deaths | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 0.6 | 1.7 |
| Net Migration | 4.8 | 4.9 | 4.9 | 4.9 | 4.9 | 1.9 | 5.1 |
| Personal Income by Source (\$mil, SAAR) EBR | | | | | | | |
| Total Personal Income | 29,453 | 30,081 | 30,698 | 31,330 | 31,962 | 8.5 | 8.8 |
| Earnings by Place of Work | 20,158 | 20,567 | 20,974 | 21,376 | 21,778 | 8.0 | 8.1 |
| Less: Contributions for Social Insurance | 2,291 | 2,336 | 2,383 | 2,428 | 2,473 | 8.0 | 8.0 |
| Plus: Adjustment for Residence | 148 | 151 | 153 | 156 | 158 | 7.0 | 6.5 |
| Plus: Dividends, Interest & Rents | 5,997 | 6,136 | 6,265 | 6,420 | 6,574 | 9.6 | 11.4 |
| Plus: Transfer Payments | 5,441 | 5,564 | 5,687 | 5,806 | 5,924 | 8.9 | 8.6 |
| Per Capita Personal Income (\$, SAAR) EBR | 29,922 | 30,368 | 30,799 | 31,239 | 31,674 | 5.9 | 6.2 |

ARIZONA ECONOMIC INDICATORS

| | JUN 2007 | JUL 2007 | AUG 2007 | SEP 2007 | OCT 2007 | % change versus year ago for most recent: month 12-months | |
|--|-------------|-------------|-------------|-------------|-------------|---|-------|
| PHOENIX-MESA METROPOLITAN REGION (MARICOPA AND PINAL) | | | | | | | |
| Civilian Labor Force (000s) ADES | | | | | | | |
| Employment | 2,057.8 | 2,075.2 | 2,052.4 | 2,078.6 | 2,082.0 | 1.9 | 3.0 |
| Unemployment | 1,995.3 | 2,007.7 | 1,986.7 | 2,018.2 | 2,018.4 | 2.4 | 3.4 |
| Unemployment Rate, Seas. Adj. (%) | 62.5 | 67.5 | 65.7 | 60.4 | 63.6 | -10.5 | -8.2 |
| | 2.9 | 3.1 | 3.2 | 2.8 | 3.0 | -11.8 | -10.8 |
| Employees on Nonagricultural Payrolls (000s) ADES | | | | | | | |
| Total | 1,936.8 | 1,922.3 | 1,947.8 | 1,964.6 | 1,967.6 | 1.8 | 3.9 |
| Natural Resources and Mining | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 14.3 | 18.8 |
| Construction | 184.6 | 184.7 | 182.7 | 180.7 | 177.5 | -7.8 | 2.1 |
| Durable Goods | 111.8 | 111.7 | 111.5 | 111.6 | 111.2 | -1.8 | -0.7 |
| Computer and Electronic Prod. | 39.9 | 39.9 | 39.8 | 39.6 | 39.5 | -3.9 | -2.5 |
| Aerospace Products and Parts | 14.8 | 14.8 | 14.8 | 14.8 | 14.8 | 0.7 | 0.1 |
| Non-Durable Goods | 27.2 | 27.2 | 27.1 | 27.2 | 27.2 | 0.0 | -0.6 |
| Wholesale Trade | 90.2 | 90.9 | 91.1 | 91.3 | 91.7 | 3.7 | 4.3 |
| Retail Trade | 235.0 | 235.4 | 237.5 | 237.1 | 238.2 | 3.9 | 4.8 |
| Utilities | 8.8 | 8.8 | 8.8 | 8.9 | 8.8 | 1.1 | 3.4 |
| Transportation and Warehousing | 55.1 | 55.3 | 55.4 | 55.7 | 55.7 | -0.9 | -0.6 |
| Information | 32.4 | 32.5 | 31.9 | 31.5 | 31.7 | -2.8 | -3.9 |
| Finance and Insurance | 116.1 | 117.1 | 116.6 | 116.6 | 116.3 | -0.1 | 2.5 |
| Real Estate, Rental, and Leasing | 41.4 | 41.3 | 41.1 | 41.0 | 41.3 | 2.0 | 4.8 |
| Professional and Business Services | 339.1 | 338.5 | 341.7 | 344.5 | 344.4 | 4.5 | 6.6 |
| Educational Services | 34.9 | 33.8 | 34.4 | 34.7 | 34.7 | 4.8 | 7.6 |
| Health Care and Social Assistance | 167.9 | 167.4 | 168.5 | 169.5 | 170.1 | 3.0 | 3.4 |
| Arts, Entertainment, and Recreation | 26.4 | 25.4 | 25.9 | 26.4 | 26.9 | 9.3 | 10.4 |
| Accommodation | 28.7 | 27.7 | 27.5 | 27.7 | 28.5 | 1.4 | 1.9 |
| Food Svcs and Drinking Places | 135.1 | 132.0 | 133.2 | 136.0 | 137.0 | 5.7 | 5.6 |
| Other Services | 77.7 | 77.1 | 77.7 | 78.5 | 78.0 | 5.3 | 7.0 |
| Federal Government | 21.6 | 21.8 | 21.8 | 21.8 | 21.9 | 0.9 | 0.5 |
| State and Local Government | 199.6 | 190.5 | 210.2 | 220.7 | 223.3 | 1.9 | 3.5 |
| State and Local Government Education | 93.2 | 83.9 | 104.7 | 116.1 | 118.2 | 1.5 | 3.7 |
| Sales (\$000s) ADOR | | | | | | | |
| Aggregate Retail Sales | 4,814,747 | 4,438,915 | 4,439,675 | 4,480,956 | ... | -0.2 | 3.0 |
| Retail | 3,219,665 | 2,948,297 | 2,956,980 | 2,945,870 | ... | -3.3 | 1.3 |
| Food, EBR | 629,219 | 604,357 | 604,291 | 619,497 | ... | 7.3 | 7.8 |
| Restaurants & Bars | 544,418 | 489,698 | 497,340 | 542,444 | ... | 3.7 | 6.5 |
| Gasoline, EBR | 421,445 | 396,562 | 381,064 | 373,146 | ... | 8.9 | 5.0 |
| Contracting | 1,436,948 | 1,336,740 | 1,307,368 | 1,308,348 | ... | -13.4 | 1.9 |
| Hotel/Motel | 90,685 | 65,928 | 71,843 | 94,221 | ... | 4.2 | 6.7 |
| New Housing Units Authorized, Census C-40 & EBR | | | | | | | |
| Total Units | 4,259 | 2,677 | 2,620 | 2,623 | 1,332 | -40.6 | -21.9 |
| Single Family Units | 2,902 | 2,278 | 2,147 | 1,220 | 1,166 | -33.0 | -27.6 |
| 2-4 Unit Structures | 163 | 139 | 149 | 57 | 60 | -41.3 | -17.8 |
| 5-plus Unit Structures | 1,193 | 259 | 323 | 1,346 | 106 | -73.6 | 9.4 |
| Housing Sales and Prices, ARMLS | | | | | | | |
| Total Sales (\$000s) | 1,900,103 | 1,621,458 | 1,488,430 | 1,050,713 | ... | -40.7 | -20.3 |
| Total Units | 5,439 | 4,727 | 4,350 | 3,421 | ... | -36.9 | -21.1 |
| Average Price (\$) | 349,348 | 343,020 | 342,168 | 307,136 | ... | -6.0 | 0.7 |
| Phoenix Sky Harbor International Airport, PSHIA | | | | | | | |
| Total Passengers | 3,660,192 | 3,725,800 | 3,602,595 | 3,265,912 | 3,501,614 | 4.0 | 2.2 |
| Total Aircraft Movements | 43,371 | 44,519 | 45,320 | 42,559 | 45,393 | -1.0 | -1.5 |

SOURCES AND ABBREVIATIONS:

ADES: Arizona Department of Economic Security
ADHS: Arizona Department of Health Services
ADOR: Arizona Department of Revenue
ADOT: Arizona Department of Transportation
ARMLS: Arizona Regional Multiple Listing Service
ASPB: Arizona State Parks Board
BEA: Bureau of Economic Analysis, U.S. Department of Commerce

BLS: Bureau of Labor Statistics, U.S. Department of Labor
Census C-40: U.S. Census Bureau, U.S. Department of Commerce
EBR: Economic & Business Research Center, The University of Arizona
NPS: National Park Service, U.S. Department of the Interior

PSHIA: Phoenix Sky Harbor International Airport
SAAR: Seasonally adjusted at annual rates
TAA: Tucson Airport Authority
TAR: Tucson Association of Realtors
U.S. Bankruptcy Court: District of Arizona
USCBP: U.S. Customs and Border Protection, U.S. Department of Homeland Security

| | III 2006 | IV 2006 | I 2007 | II 2007 | III 2007 | % change versus year ago for most recent: | |
|--|-------------|------------|-----------|------------|-------------|--|------------|
| | | | | | | quarter | 4-quarters |
| PHOENIX-MESA METROPOLITAN REGION (MARICOPA AND PINAL COUNTY) - QUARTERLY DATA | | | | | | | |
| Demographics & Vital Statistics (000s, seas adj) ADHS & EBR | | | | | | | |
| Population | 4,108.4 | 4,140.9 | 4,173.3 | 4,205.7 | 4,238.1 | 3.2 | 3.5 |
| Natural Increase | 10.2 | 10.3 | 10.4 | 10.4 | 10.5 | 3.7 | 3.5 |
| Births | 17.1 | 17.3 | 17.4 | 17.6 | 17.8 | 4.0 | 4.2 |
| Deaths | 6.9 | 7.0 | 7.1 | 7.2 | 7.2 | 4.4 | 5.2 |
| Net Migration | 26.4 | 22.3 | 22.1 | 21.9 | 21.8 | -17.4 | -39.3 |
| Personal Income by Source (\$mil, SAAR) EBR | | | | | | | |
| Total Personal Income | 140,266 | 143,091 | 145,898 | 148,803 | 151,708 | 8.2 | 8.8 |
| Earnings by Place of Work | 113,271 | 115,405 | 117,547 | 119,736 | 121,925 | 7.6 | 8.2 |
| Less: Contributions for Social Insurance | 12,498 | 12,719 | 12,944 | 13,168 | 13,393 | 7.2 | 7.6 |
| Plus: Adjustment for Residence | -143 | -144 | -145 | -147 | -148 | -3.2 | -5.3 |
| Plus: Dividends, Interest & Rents | 21,946 | 22,416 | 22,864 | 23,378 | 23,892 | 8.9 | 10.3 |
| Plus: Transfer Payments | 17,691 | 18,134 | 18,576 | 19,004 | 19,431 | 9.8 | 9.6 |
| Per Capita Personal Income (\$, SAAR) EBR | 34,141 | 34,556 | 34,960 | 35,381 | 35,797 | 4.8 | 5.0 |

| ARIZONA - QUARTERLY DATA | | | | | | | |
|--|---------|---------|---------|---------|---------|-------|-------|
| Demographics & Vital Statistics (000s, seas adj) ADHS & EBR | | | | | | | |
| Population | 6,335.8 | 6,395.2 | 6,450.3 | 6,500.8 | 6,548.1 | 3.4 | 3.7 |
| Natural Increase | 14.5 | 14.7 | 14.5 | 14.7 | 14.4 | -0.8 | 7.8 |
| Births | 25.6 | 25.9 | 25.6 | 25.6 | 25.7 | 0.3 | 3.0 |
| Deaths | 11.2 | 11.3 | 11.1 | 10.9 | 11.4 | 1.9 | -2.6 |
| Net Migration | 46.8 | 42.8 | 38.1 | 33.7 | 31.9 | -31.9 | -27.6 |
| Personal Income Derivation (\$mil, SAAR) BEA & EBR | | | | | | | |
| Total Personal Income | 199,985 | 202,319 | 208,572 | 211,615 | 214,372 | 7.2 | 8.1 |
| Earnings by Place of Work | 150,554 | 152,676 | 157,007 | 158,974 | 160,602 | 6.7 | 7.6 |
| Less: Contributions for Social Insurance | 16,656 | 16,835 | 17,350 | 17,523 | 17,662 | 6.0 | 7.0 |
| Plus: Adjustment for Residence | 709 | 719 | 740 | 749 | 757 | 6.8 | 7.7 |
| Plus: Dividends, Interest & Rents | 34,530 | 34,363 | 35,368 | 36,301 | 36,944 | 7.0 | 7.7 |
| Plus: Transfer Payments | 30,850 | 31,397 | 32,811 | 33,119 | 33,736 | 9.4 | 10.6 |
| Components of Earnings (\$mil, SAAR) BEA & EBR | | | | | | | |
| Wages and Salaries | 110,744 | 112,649 | 116,054 | 117,531 | 118,748 | 7.2 | 8.3 |
| Other Labor Income EBR | 23,829 | 24,038 | 24,601 | 24,904 | 25,163 | 5.6 | 6.7 |
| Proprietor's Income | 15,815 | 15,715 | 15,977 | 15,898 | ... | -1.4 | 0.5 |
| Farm | 89 | 103 | 249 | 179 | ... | 141.9 | -15.2 |
| Nonfarm | 15,726 | 15,612 | 15,729 | 15,719 | ... | -2.0 | 0.6 |
| Per Capita Personal Income (\$, SAAR) EBR | 31,564 | 31,636 | 32,335 | 32,552 | 32,738 | 3.7 | 4.2 |
| Average Wage Per Employee, Annual Rate (\$) EBR | 40,968 | 41,302 | 41,838 | 42,221 | ... | 4.8 | 3.7 |

| TRAVEL AND TOURISM - MONTHLY DATA | | | | | | | |
|---|-------------|-------------|-------------|-------------|-------------|--|-----------|
| | JUN 2007 | JUL 2007 | AUG 2007 | SEP 2007 | OCT 2007 | % change versus year ago for most recent: | |
| | | | | | | month | 12-months |
| Visits to Parks & Other Recreational Areas, NPS & ASPB | | | | | | | |
| Northern Arizona | 2,229,546 | 2,525,417 | 2,199,619 | 1,647,854 | 1,412,124 | -0.1 | -1.2 |
| Historical | 130,705 | 138,902 | 130,204 | 129,531 | 126,186 | -3.4 | 0.7 |
| Scenic | 731,674 | 835,979 | 785,089 | 608,600 | 525,198 | 4.3 | 2.3 |
| Water Based Recreation | 1,367,167 | 1,550,536 | 1,284,326 | 909,723 | 760,740 | -2.3 | -3.5 |
| Southern Arizona | 159,409 | 159,854 | 130,557 | 161,814 | 200,202 | 8.1 | 3.1 |
| Historical | 18,058 | 20,325 | 18,195 | 19,372 | 25,729 | -3.1 | -2.1 |
| Scenic | 99,751 | 97,806 | 84,098 | 108,163 | 143,212 | 9.2 | 3.5 |
| Water Based Recreation | 41,600 | 41,723 | 28,264 | 34,279 | 31,261 | 13.5 | 6.8 |
| International Border Crossings, USCBP | | | | | | | |
| U.S. Citizens | 896,805 | 909,638 | 651,774 | 885,138 | 940,280 | 63.8 | 22.2 |
| Aliens | 1,703,078 | 1,883,356 | 1,931,193 | 1,626,280 | 1,755,586 | 5.0 | 10.2 |
| Vehicles | 712,365 | 703,378 | 687,794 | 657,609 | 711,682 | -3.0 | -6.4 |

| MEASURES OF INFLATION AND PRICES - MONTHLY DATA | | | | | | | |
|--|-------|-------|-------|-------|-------|-----|-----|
| Consumer Price Index (1982-1984=100) BLS | | | | | | | |
| U.S. - All Urban | 208.4 | 208.3 | 207.9 | 208.5 | 208.9 | 3.5 | 2.6 |
| U.S. - Wage Earners | 203.9 | 203.7 | 203.2 | 203.9 | 204.3 | 3.7 | 2.5 |

See sources and abbreviations at the bottom of page 16. • For additional detail and history, subscribe to *Arizona Economic Indicators Data Book*.

ARIZONA ECONOMIC INDICATORS

| | JUN 2007 | JUL 2007 | AUG 2007 | SEP 2007 | OCT 2007 | % change versus year ago for most recent: month 12-months | |
|--|-------------|-------------|-------------|-------------|-------------|--|-------|
| ARIZONA MONTHLY DATA | | | | | | | |
| Civilian Labor Force (000s) ADES | | | | | | | |
| Employment | 3,022.9 | 3,050.9 | 3,021.4 | 3,054.8 | 3,062.9 | 1.7 | 2.5 |
| Unemployment | 2,912.9 | 2,928.6 | 2,902.5 | 2,948.8 | 2,953.7 | 2.3 | 2.9 |
| Unemployment Rate, Seas. Adj. (%) | 110.0 | 122.3 | 118.9 | 106.0 | 109.2 | -10.3 | -7.3 |
| | 3.4 | 3.7 | 3.7 | 3.3 | 3.5 | -14.4 | -9.7 |
| Employees on Nonagricultural Payrolls (000s) ADES | | | | | | | |
| Total | 2,690.3 | 2,670.7 | 2,708.5 | 2,732.5 | 2,737.5 | 1.7 | 3.4 |
| Natural Resources and Mining | 11.5 | 11.6 | 11.9 | 12.1 | 12.2 | 17.3 | 17.1 |
| Construction | 244.7 | 244.9 | 242.2 | 239.9 | 235.8 | -7.4 | 1.5 |
| Durable Goods Manufacturing | 150.8 | 150.7 | 150.6 | 150.6 | 150.3 | -1.4 | -0.5 |
| Fabricated Metal Products | 19.7 | 19.6 | 19.6 | 19.6 | 19.5 | 1.0 | 2.4 |
| Computer and Electronic Prod. | 44.5 | 44.5 | 44.3 | 44.2 | 44.1 | -3.9 | -2.7 |
| Aerospace Products and Parts | 27.4 | 27.6 | 27.7 | 27.8 | 27.8 | 2.6 | 1.2 |
| Non-Durable Goods Manufacturing | 35.9 | 35.8 | 35.7 | 35.8 | 35.8 | 1.4 | 0.9 |
| Wholesale Trade | 109.5 | 110.0 | 110.1 | 110.5 | 110.8 | 4.0 | 4.6 |
| Retail Trade | 329.7 | 330.4 | 332.8 | 332.3 | 334.0 | 3.2 | 4.0 |
| Utilities | 12.4 | 12.5 | 12.5 | 12.5 | 12.5 | 1.6 | 1.4 |
| Transportation and Warehousing | 70.7 | 70.7 | 70.7 | 71.1 | 71.4 | -0.1 | -0.2 |
| Information | 43.4 | 43.4 | 42.9 | 42.6 | 42.8 | -3.2 | -4.6 |
| Finance and Insurance | 133.1 | 134.0 | 132.0 | 132.1 | 131.8 | -1.2 | 2.1 |
| Real Estate, Rental, and Leasing | 54.1 | 54.1 | 53.9 | 53.8 | 54.1 | 2.5 | 4.7 |
| Professional and Business Services | 416.7 | 415.9 | 419.5 | 422.0 | 421.4 | 4.0 | 6.4 |
| Educational Services | 44.1 | 42.4 | 44.7 | 45.8 | 46.0 | 3.8 | 5.4 |
| Health Care and Social Assistance | 254.9 | 254.4 | 256.4 | 257.8 | 258.8 | 3.0 | 3.6 |
| Arts, Entertainment, and Recreation | 37.0 | 36.0 | 36.5 | 37.0 | 37.5 | 10.9 | 9.3 |
| Accommodation | 48.2 | 47.1 | 46.7 | 47.1 | 47.9 | 1.7 | 2.2 |
| Food Svcs and Drinking Places | 193.7 | 189.5 | 191.4 | 194.4 | 195.4 | 4.4 | 4.4 |
| Other Services | 106.7 | 105.8 | 106.4 | 107.3 | 107.0 | 5.0 | 6.4 |
| Federal Government | 53.1 | 52.5 | 53.1 | 52.8 | 52.4 | 0.8 | 0.4 |
| State and Local Government | 340.1 | 329.0 | 358.5 | 375.0 | 379.6 | 1.7 | 2.7 |
| State and Local Government Education | 159.4 | 147.9 | 179.8 | 198.2 | 202.0 | 0.6 | 1.6 |
| | 40.4 | 40.9 | 41.3 | 40.6 | 40.8 | 0.7 | 0.9 |
| Hours Worked Per Week, Manufacturing, ADES | | | | | | | |
| Average Hourly Earnings (\$) ADES | | | | | | | |
| Construction | 17.76 | 17.94 | 17.99 | 18.04 | 18.21 | 6.7 | 6.2 |
| Manufacturing | 15.76 | 15.85 | 15.96 | 16.18 | 16.43 | 8.5 | 4.7 |
| Trade, Transportation, Utilities | 15.95 | 15.83 | 15.76 | 15.78 | 15.79 | 1.3 | 3.5 |
| Retail Trade | 12.36 | 11.99 | 11.90 | 11.98 | 11.98 | -0.6 | -1.1 |
| Wholesale Trade | 19.47 | 19.79 | 20.12 | 19.95 | 20.40 | 9.5 | 7.0 |
| Sales (\$000s) ADOR | | | | | | | |
| Aggregate Retail Sales | 6,964,777 | 6,492,467 | 6,510,109 | 6,492,956 | ... | 0.3 | 2.9 |
| Retail | 4,573,951 | 4,230,754 | 4,282,922 | 4,210,540 | ... | -2.6 | 1.3 |
| Food, EBR | 934,143 | 897,233 | 897,136 | 919,710 | ... | 6.3 | 7.7 |
| Restaurants & Bars | 789,031 | 731,254 | 727,220 | 778,116 | ... | 3.7 | 6.9 |
| Gasoline, EBR | 667,652 | 633,227 | 602,832 | 584,590 | ... | 9.4 | 3.3 |
| Gallons (000s) ADOT | 228,179 | 233,965 | 240,115 | 226,920 | ... | -0.1 | 5.2 |
| Utilities | 894,538 | 853,103 | 897,130 | 1,005,138 | ... | 17.5 | 9.2 |
| Communications | 301,438 | 311,875 | 293,763 | 299,301 | ... | 4.7 | 6.7 |
| Amusements | 95,074 | 86,937 | 73,266 | 75,671 | ... | 12.9 | 6.3 |
| Rentals - Personal Property | 322,491 | 332,933 | 315,719 | 312,739 | ... | 3.9 | 6.1 |
| Contracting | 1,956,516 | 1,807,494 | 1,761,091 | 1,784,226 | ... | -12.1 | 1.5 |
| Mining - Metal, Oil & Gas | 172,345 | 192,386 | 174,470 | 160,095 | ... | -12.9 | 2.8 |
| Hotel/Motel | 170,490 | 141,905 | 145,455 | 171,646 | ... | 6.3 | 6.4 |
| New Housing Units Authorized, Census C-40 & EBR | | | | | | | |
| Total Units | 5,425 | 3,763 | 3,627 | 3,382 | 2,309 | -34.5 | -29.1 |
| Single Family Units | 4,047 | 3,325 | 3,094 | 1,989 | 1,872 | -36.8 | -33.9 |
| 2-4 Unit Structures | 201 | 169 | 164 | 74 | 160 | 3.1 | -21.1 |
| 5-plus Unit Structures | 1,177 | 270 | 369 | 1,319 | 277 | -31.6 | 7.7 |
| Bankruptcy Filings, U.S. Bankruptcy Court | | | | | | | |
| Total | 895 | 889 | 1,021 | 908 | 1,117 | 62.6 | 70.1 |
| Chapter 7 | 667 | 695 | 783 | 683 | 842 | 61.9 | 65.7 |
| Chapter 11 | 15 | 21 | 18 | 13 | 29 | 190.0 | 61.9 |
| Chapter 13 | 213 | 173 | 220 | 212 | 245 | 56.1 | 87.3 |

See sources and abbreviations at the bottom of page 16. • For additional detail and history, subscribe to *Arizona Economic Indicators Data Book*.

| | III 2006 | IV 2006 | I 2007 | II 2007 | III 2007 | % change versus year ago for most recent: quarter 4-quarters | |
|---|-------------|------------|-----------|------------|-------------|--|-----|
| MEASURES OF INFLATION AND PRICES -QUARTERLY DATA | | | | | | | |
| Consumer Price index (1982-84=100) BLS | | | | | | | |
| Western Region (U.S.) | 207.3 | 206.5 | 209.2 | 212.6 | 212.6 | 2.6 | 2.9 |
| U.S. - All Urban Consumers | 203.4 | 201.7 | 203.8 | 207.7 | 208.2 | 2.4 | 2.4 |
| U.S. - Urban Wage Earners | 199.1 | 197.0 | 198.9 | 203.2 | 203.6 | 2.3 | 2.3 |
| Price Indexes (2000=100) BEA | | | | | | | |
| Gross Domestic Product | 117.0 | 117.5 | 118.8 | 119.5 | 119.8 | 2.4 | 2.7 |
| Personal Consumption Expenditures | 115.4 | 115.1 | 116.1 | 117.3 | 117.8 | 2.1 | 2.2 |

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