ARIZONA'S ECONOMY

JANUARY 1998 WINTER ISSUE

1998/99 OUTLOOK

This is reprinted from the Economic Outlook 1998-99 Luncheon, a talk presented to Tucson community leaders on December 12, 1997, at the Westin La Paloma.

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Forecasting Project Director

" If you see a rabbit, and no one's chasing him, times ain't too bad."

– An Arizona cowboy's commentary on the economy

Is this a New Economy, or have we been here before?

The current business expansion in the United States can best be described as remarkable. It began in April of 1991, almost seven years ago, which makes this the third longest expansion in the past fifty years. Even more important than its longevity is the fact that inflation is lower today than when the expansion began. It's not supposed to happen that way! Typically, as an expansion "grows long in the tooth" and factors of production approach full utilization, factor prices accelerate. Year to date through October, consumer prices have increased by 1.8%, the lowest since 1986. In the third quarter, the price index for GDP increased at an annual rate of only 1.4%!

The absence of accelerating inflation has led to talk of a "new economy" or "new paradigm." This New Era view holds that we have entered a brave new world characterized by stronger growth and perpetually benign inflation. That's real growth of three percent – or even four – rather than two percent, coupled with stable prices. Proponents argue that fundamental structural changes in the economy have broken the classic boom-bust inflation cycle. Here are their arguments:

- ***Globalization of Business***

Capitalism is spreading around the world with the fall of Communism. Free markets and freer trade foster increased competition. That limits domestic producers' ability to increase prices for their products, and foreign capacity alleviates supply constraints at home.

- ***Revolution in Information Technology***

The information age has produced an explosion of entrepreneurial activity as new industries and companies are spawned. During the past few years, information technology has accounted for nearly a third of the nation's economic growth. Developments in information technology are boosting productivity, reducing costs, cutting inventories and changing the way companies do business with one another. Putting a computer on everyone's desk has allowed Corporate America to reengineer and eliminate a cadre of middle managers. The resulting boost in productivity and lowering of costs allows companies to boost profits without raising prices.

- ***Labor Market Conditions***

Declining unionization and a reduction in the number of employees covered by cost of living adjustment clauses reduces the amount of commodity price shocks that become imbedded in wages. The labor force has grown rapidly in the past few years as labor force participation rates, especially for men, have risen. Also, an ever-increasing number of employees are part-timers who can work more hours if conditions warrant, and since the labor market is more elastic, wages don't have to rise when more work becomes available. Finally, workers feel less secure in their jobs today and have moderated their demands for wage increases. As a result, wages have remained stagnant.

- ***Deregulation***

First came deregulation of the airline and telecommunication industries in the 1970's, followed by trucking, railroads and natural gas. Today, deregulation continues in banking, telecom, cable and electric utilities. Deregulation increases innovation, releases

INSIDE

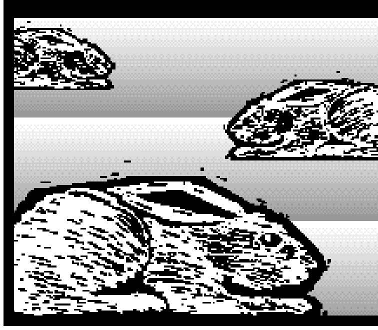


EXHIBIT 1

Unemployment Rate, Monthly

Arizona and United States

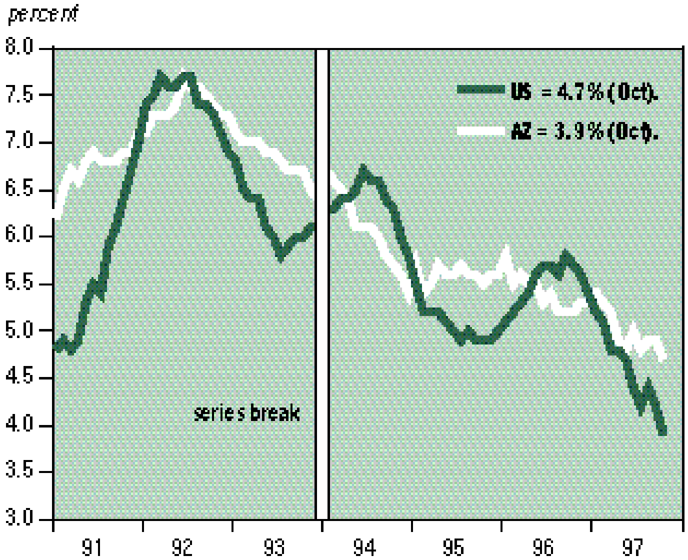
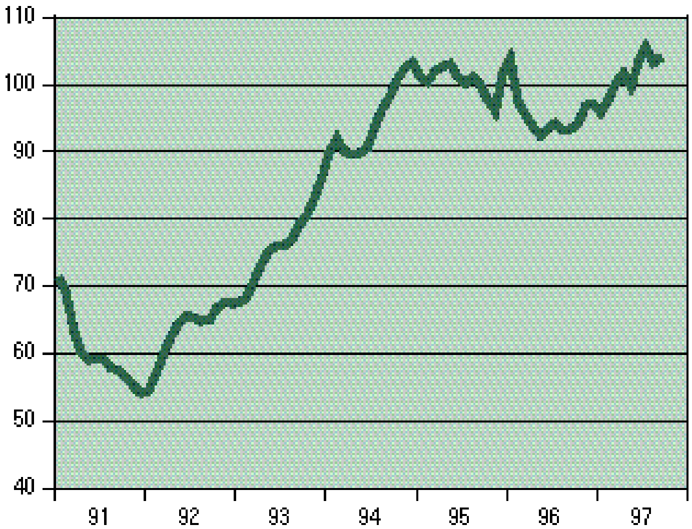


EXHIBIT 2

Index of Help Wanted Ads

Phoenix-Mesa Metro Area



unproductive resources, removes monopoly pricing power, and leads to falling prices.

- ***Inflationary Expectations***

Expectations of future inflation have dropped below three percent for the first time in over 20 years. This lowers inflation in three ways. Workers moderate their expectations for wage increases. Investors are willing to accept lower interest rates on bonds, which lowers the cost of capital for businesses, which in turn raises profitability sans price increases. Business execs are more compelled to control costs if they feel that they can not make price increases stick. Finally, people are increasingly convinced of the Fed's resolve (and ability) to attain price stability.

- ***Defense Spending***

Declining defense spending has freed valuable resources that produced little output for consumption. This outward shift in the supply of resources (for both capital and labor) has played a major role in keeping inflation in check.

Traditionalists — those with strong Keynesian ties — believe that transitory factors (and a bit of good luck) can explain the good news on inflation. These only delay the day of reckoning when classic demand and supply imbalances push prices higher, and when inflation reaches a point that is no longer tolerable, the Federal Reserve will take steps to slow the economy. If history is a reliable guide, the economy risks slipping into recession.

Traditionalist counterpoints for each of the above factors are as follows. Although globalization puts downward pressure on prices, it is only for traded goods, which comprise a small fraction of total output. In the mean time, supply constraints in services are causing service-sector wages to rise. Computers have reduced the cost of communication, but they comprise a small proportion (15%) of the capital stock, and this is insufficient to hold down prices. Concerning the labor market, they note that unionization has been falling for years and did not prevent an uptick of inflation in the 1980's. Moreover, there is a limit to rising participation rates and more hours from part-timers. In the long run, labor force growth is limited to increases in population. Deregulation is good but its impact on inflation is modest — only a quarter to a half percent per year. Inflation expectations are important, but when companies find it difficult to recruit new workers they will outbid other companies for workers by boosting wage offers. Finally, the effects of reduced defense spending are only temporary. Once resources from defense are reemployed elsewhere, traditional supply and demand factors will determine inflation.

Inflation is under control currently, traditionalists argue, because of a confluence of events and a fortuitous dose of good luck. Oil prices have remained steady. Managed care has restrained medical costs. The strong dollar has restrained import prices. The federal government has been able to balance the budget, while avoiding enactment of new regulations and increased compliance costs. Money supply growth has averaged less than three percent per year over the past five years. Finally, we've escaped external shocks. When our good luck runs out, inflation will move higher.

Recent research by the Federal Reserve Bank of San Francisco (FRBSF) on the trade-off between unemployment and prices also calls into question the idea of a new paradigm. The Phillips curve, which has been neglected in recent years, postulates that when unemployment falls below a certain level (NAIRU – the non-accelerating inflation rate of unemployment) wages begin to rise. The appropriate level has been debated in recent years with most agreeing that it falls in the five to six percent range. FRBSF's recent efforts to estimate the relationship show that this relationship is not very strong (and certainly not strong enough to be used for setting policy). More importantly, it shows that today's levels of wage inflation and unemployment are not unusual.

This issue is much more important than simply providing entertainment for academicians. Financial markets appear to have embraced the New Economy idea, which helps explain the doubling of the stock market

EXHIBIT 3

Residential Electrical Customers

TEP, SRP, and APS Service Areas

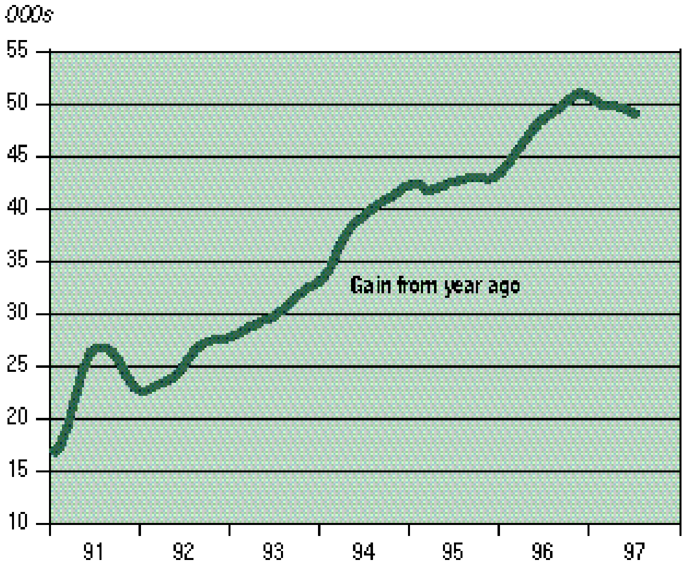
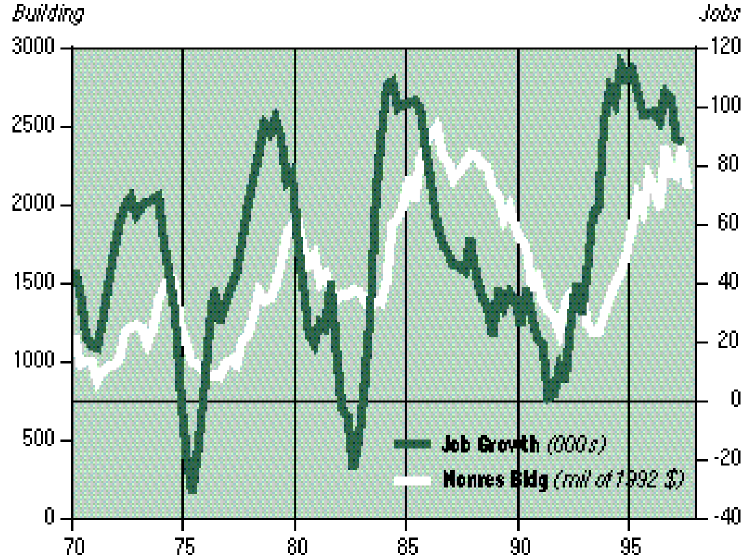


EXHIBIT 4

Jobs Lead New Building Activity

(Arizona)



in the past three years. Although structural changes have positively affected the way that the economy works, it would be naïve to think that the business cycle has been repealed, that inflation is forever under control and that financial markets will rise forever like a beanstalk growing to the sky.

Although this expansion is remarkable, it falls far short of precedent setting. This is not new territory. We've been here before – and it was during the 1960's.

An outburst of inflation is the largest risk factor and will likely be triggered by one of six factors: a rise in wages, energy or food price spikes, a decline in the dollar, a drop in productivity growth, a rise in capacity utilization or an increase in the money supply. Keep an eye on service sector wages and the dollar as the new year progresses.

Real GDP grew by nearly 4.0% during the past year, well above its long-term potential. We expect the nation's economy to slow next year to a more modest 2.5% pace. Recent financial problems in Southeast Asia will curtail growth in US exports and lower overall growth by one-quarter percent or so, according to estimates from The WEFA Group. Although Asian problems will help restrain domestic inflation, expect prices to begin to move upward, which will bring a quick response from the Fed in the form of higher short-term interest rates. The result is a slowing economy, but no recession.

THIS NEW ERA VIEW HOLDS THAT WE HAVE ENTERED A BRAVE NEW WORLD CHARACTERIZED BY STRONGER GROWTH AND PERPETUALLY BENIGN INFLATION... TRADITIONALISTS — THOSE WITH STRONG KEYNESIAN TIES — BELIEVE THAT TRANSITORY FACTORS (AND A BIT OF GOOD LUCK) CAN EXPLAIN THE GOOD NEWS ON INFLATION. THESE ONLY DELAY THE DAY OF RECKONING WHEN CLASSIC DEMAND AND SUPPLY IMBALANCES PUSH PRICES HIGHER.

ARIZONA'S ECONOMY: 1997 IN REVIEW

Nineteen-ninety-seven will go into the record books as another outstanding year for Arizona's economy. With data through the third quarter, we're projecting 85,000 additional jobs and a population gain in excess of 130,000 statewide. Although these measures are down from this cycle's high point, both continue to show Arizona to be among the top two or three fastest-growing states in the country. Unemployment fell throughout the past year from 5.8% one year ago to only 3.9% in October. That's the lowest rate of unemployment since the end of 1969 — 28 years ago **(Exhibit 1)**!

With unemployment so low, one might wonder if the slower rates of growth experienced in recent months are related to a limited supply of resources rather than to lower demand. The issue is whether we are about to run out of available workers, which could seriously limit the economy's ability to grow. From around the country, business managers report that workers are increasingly hard to find. Some employers pay rewards to existing workers who recommend someone who is eventually hired. Others recruit in far-away cities for low skilled workers, and offer moving expenses and temporary housing. The simple solution to hiring workers in a tight market is to raise the offered wage. But, employers today are stuck between two unpleasant alternatives.

EXHIBIT 5
Residential Building Permits
(Arizona)

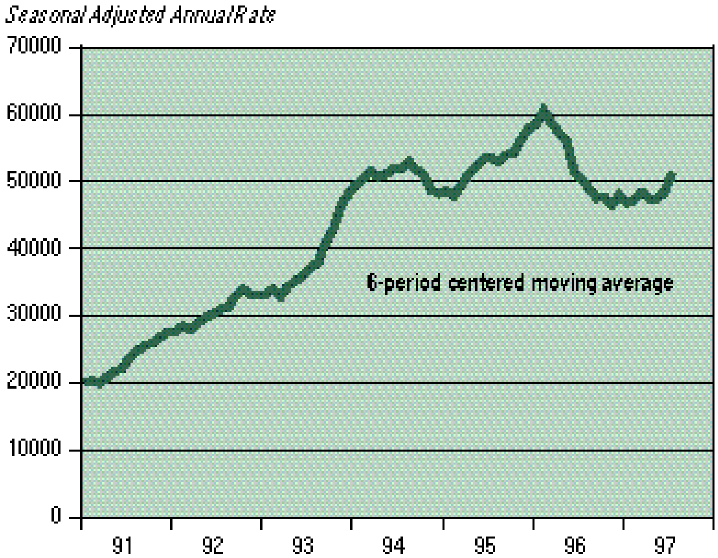
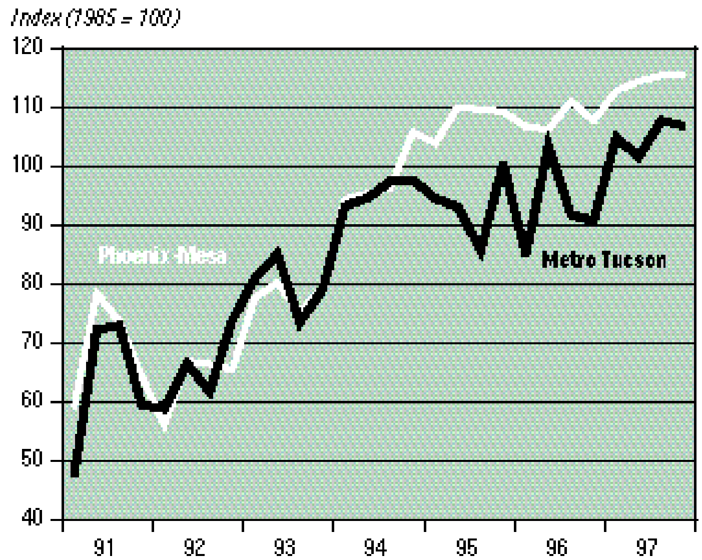


EXHIBIT 6
Consumer Confidence



In an economy that doesn't allow price increases, employers can pay higher wages only at the expense of lowering profits. But if they forgo hiring, their company sacrifices growth.

In the aggregate, year over year job growth in Arizona slowed during the summer to below four percent. Yet, help wanted advertising remains near the high point of this cycle, and has moved upward rather smartly during the past year **(Exhibit 2)**. Locally, shortages of skilled workers are reported in numerous occupations, although a recent survey of retailers found no difficulty in hiring part-time help for the holiday season. It makes sense that Arizona suffers less than other parts of the country from worker shortages since it is relatively easy to attract new residents. People from all over the country find Arizona an attractive place to live. Population growth, as proxied by the numbers of new residential electric customers, remains at high levels although not as high as six months ago **(Exhibit 3)**.

If labor markets are tight, we should see wages accelerating. In 1996, the average wage across all industries in Arizona increased by 3.7%. By the second quarter of 1997, the average wage was 4.1% higher than one year earlier, the largest gain since 1992. The largest increases were reported in manufacturing (up 6.2%), services (5.9%) and whole-sale trade (5.7%). The gains in construction (4.3%) and utilities (4.2%) also were above the aggregate. Additionally, in a recent report from the US Bureau of Economic Analysis, both Tucson and Phoenix experienced average wage increases at or above the national average during 1996. Tucson's increase was 4.6% with 4.0% in Phoenix. The evidence of accelerating wages, although not overwhelming, supports the idea that labor markets are tight in Arizona in spite of the flood of new workers moving to the state.

ONE THING THAT ANALYSTS LEARNED DURING THE PAST YEAR WAS THAT PUBLISHED EMPLOYMENT DATA FOR ARIZONA'S COUNTIES ARE NOT RELIABLE INDICATORS OF SUBSTATE ECONOMIC HEALTH. THAT'S BECAUSE A GROWING NUMBER OF COMPANIES WHO DO BUSINESS AT MULTIPLE LOCATIONS AROUND THE STATE ARE NO LONGER PROVIDING EMPLOYEE COUNTS BY COUNTY.

In addition to labor, a region's growth potential is determined by growth of the capital stock. Here we mean office and industrial buildings rather than financial capital. Nonresidential building in Arizona, after adjusting for inflation, is running at a high two and one-quarter billion dollars per year at an annual rate (expressed in 1992 dollars). That's very near the levels reached during the tax induced explosion of the mid-1980s. As shown in **Exhibit 4,** job growth tends to lead nonresidential building by two or three years. During the past three years, strong nonresidential building has been offsetting modest declines in residential building. A reduction in the numbers of new jobs suggests that nonresidential building may be nearing its peak.

Residential building, as measure by units authorized by the permitting process, has remained relatively steady for the past year, at a 47,000-48,000 annual rate **(Exhibit 5)**. The mix has changed in favor of more single family units, and the 40,000 or so expected

EXHIBIT 7

Metro Growth Rates Diverge

Nonag Jobs

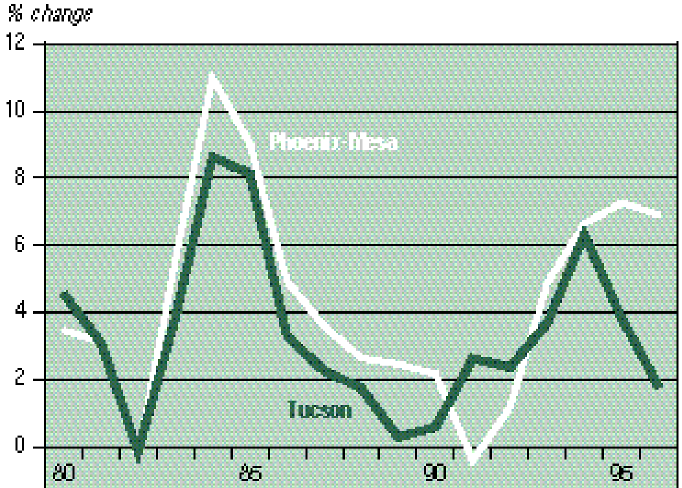
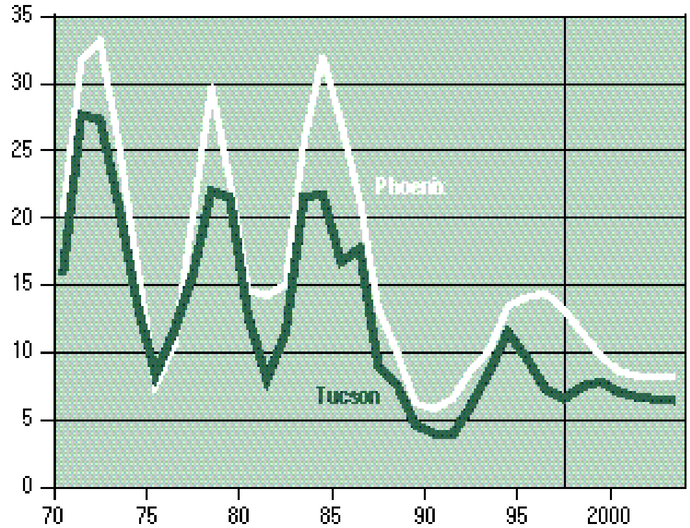


EXHIBIT 9

Residential Building Permits

Units per 1000 Standing Population



for the entire year will nearly match the number permitted in 1996. Multi-family permits will be down nearly 40%, reflecting favorable economics of home ownership and changing demographics. The average price of homes sold in the Metro Phoenix climbed to $135,000 in September, a gain in excess of eight percent during the year. Corresponding numbers for Tucson were $129,000 and 3.5%.

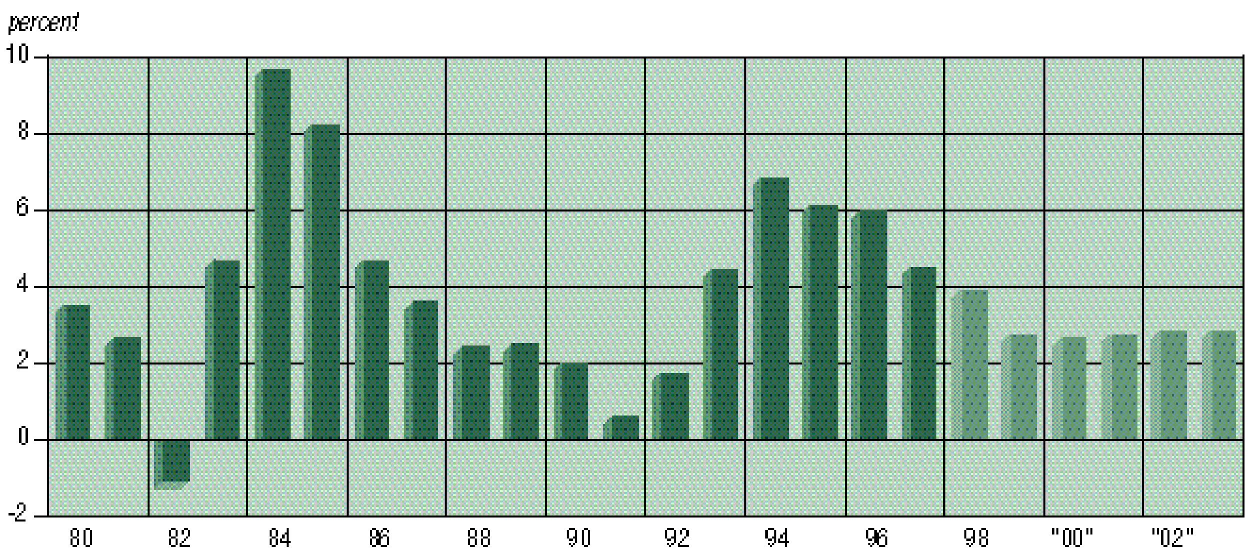
The outlook is very positive heading into the Christmas selling season. With jobs plentiful and wages increasing faster than inflation, consumers remain ebullient. A survey of consumer confidence conducted by the Behavior Research Center for Stockton Capital Management and Trust of Scottsdale shows that Arizonans are more sanguine than at anytime in history **(Exhibit 6)**. Heading into the holiday season, an aggregate measure of retail, which includes car sales, building materials, furniture, apparel & accessories as well as general merchandise gained 8.5% for the three-months ending in August, although the August increase was only 4.7%. Consumers' pent-up demand from the last recession having long since been satisfied, coupled with high levels of consumer debt, will preclude a blockbuster Christmas. Return of the Mexican shopper will boost spending, particularly in Southern Arizona, from year ago levels. A gain of six to seven percent for the holidays is a reasonable expectation. For the entire year (1997), retail sales will increase by seven percent and restaurant and bar sales by a little over five percent. Given that inflation is running below two percent, these represent large gains in the volume of sales.

PHOENIX AND TUCSON METRO AREAS ARE BOTH VIBRANT

One thing that analysts learned during the past year was that published employment data for Arizona's counties are not reliable indicators of substate economic health. That's because a growing number of companies

EXHIBIT 8

Wage & Salary Job Growth, Arizona



who do business at multiple locations around the state are no longer providing employee counts by county. They reason that since reporting of these data are not required by law, they can justifiably avoid these costs. This is entirely rational behavior, but the consequences are disastrous for the quality of published employment information.

The problem began in 1995 as growth rates for Arizona's two largest metro areas began to diverge **(Exhibit 7)**. During the prior 15 years, growth rates for Tucson and Phoenix had tracked pretty closely, with the exception of the late 1980s, when the savings and loan debacle was in the cleanup stage. Areas outside the state's financial center were dealt with first, and this pushed job growth in Tucson well below that of Phoenix for five consecutive years. Both areas recorded growth of over six percent during 1994. But beginning in 1995, job growth in the two areas diverged. By 1996, job growth in metro Tucson was reported at only two percent, compared to seven percent in the Phoenix-Mesa area.

A large portion of the divergence can be explained by the aforementioned reporting problems. For companies that fail to report county breakdowns, their entire statewide total is dumped into one county. For most companies, that is Maricopa County. Actual counts are not available, but several thousand jobs is a reasonable estimate. This tends to overstate growth in Phoenix-Mesa (by a few tenths of a percentage point) and seriously deflates Tucson's pace, perhaps by as much as two full percentage points. This puts a whole new spin on the question, "What is wrong with Tucson?" The answer is "Nothing, other than inaccurate data!"

Analysts must look to other measures to judge the economic health of the two areas. Retail sales, for the 12-month period ending in August, increased by 6.6% in Phoenix-Mesa, and by 4.7% in metro Tucson. Comparable increases for restaurant & bar sales are 5.8% and 3.8%. One-month comparisons for August actually show a larger gain in Tucson for both sales categories. Apartment vacancies in Tucson fell during the third quarter to a seasonally adjusted 8-3/4%, down two full percentage points from one year earlier. In Phoenix-Mesa, vacancies increased to 5.2% from 4.5%. Total residential building permits in both areas were down almost five percent during the 12 months ending September. Using data from CB Commercial, office vacancies in Phoenix are at 9.7% in the second quarter, while Tucson's measures 9.0%. In that same report, Tucson was found to have one of the lowest suburban office vacancy rates of all the cities in their study. Industrial vacancies stood at 7.4% in Phoenix versus 13.1% in Tucson. Unemployment is very low in both areas – 2.5% in Phoenix-Mesa and 2.9% in Tucson, as of October.

All things considered, Tucson's economy is performing much better than commonly believed or reported. Third quarter housing absorption rose to the highest level in six years, and a number of new master-planned communities, complete with golf courses and resorts, are under development. Hotel and retail projects also have been strong and commercial construction awards in real dollars are beginning to strengthen. Tucson appears to be in a stable equilibrium, growing at a rate equal to long-term averages. Manufacturing jobs are increasing as well as other export-based jobs. There is really nothing wrong with Tucson's economy at present, and the need for additional industrial and office construction will soon be recognized.

The Phoenix-Mesa metro area continues to grow at a rapid rate, which is quite remarkable considering its size. It is quickly becoming the Mega City of the southwest, with virtually every facet of a modern economy represented. Phoenix boasts one of the busiest airports in the country. New regional offices of Charles Schwab and The Vanguard Group compliment American Express, the FINOVA Group and numerous credit card and bank data processing operations. Several regional distribution centers including grocery, US Postal Service and Federal Express recently located in the area. The area has an animation studio, a state-of-the-art broadcast center, and the Mayo Clinic. Motorola (with over 20,000 employees), Intel, Honeywell, Allied Signal and a host of other high technology companies have facilities in the Valley, and a number of new semiconductor fabrication plants that are currently under development promise to keep the Phoenix economy bustling for at least the rest of this decade.

THE OUTLOOK

The year is coming to an end on a strong note, and we expect this momentum to carry into 1998. Nevertheless, Arizona's economy will continue to slow, as it has since 1994, toward more normal and sustainable magnitudes. By 1999, the Arizona economy will settle into steady growth more in line with long-term averages. Nonag job growth of just less than four percent is expected in 1998, followed by 2.5-3.0% growth thereafter **(Exhibit 8)**. That means 75,000 net new jobs in 1998 followed by 55,000- 65,000 in 1999 and beyond.

Our forecast calls for some 125,000 net new residents to be added in 1998. By the year 2000 population growth will be back to trend growth of roughly 115,000 per year. As the largest state in the Rocky Mountain region, Arizona's population will surpass the five million mark early in the year 2001 (see forecast tables).

Increases in retail sales will run in the neighborhood of 5.5% throughout the forecast period. This is nearly twice the rate of inflation, which is expected to range between 2.5-3.0% at the consumer level.

Residential building activity will continue to recede to match slower population growth. By the year 2000, the number of new unit permits will rest at 40,000 units, down from 47,500 in 1997. This remains well above the 23,000 units during the 1990-91 recession. The projected decline is gradual rather than a collapse as experienced during prior business cycles. That's because construction has matched the demand for new housing, and inventories of speculative homes are virtually non-existent. Better market information and cautious lending are the principal reasons.

The well-behaved nature of this building cycle can be seen in **Exhibit 9**. On a per capita basis, the number of units being built is half that attained in prior building booms. In each of those prior periods, vacancy rates surged. As noted earlier, vacancies remain well under control today. And, that's good for the economy. A tamer building cycle means a much gentler business cycle.

The Phoenix-Mesa metro area promises to continue posting nation-leading rates of growth, even though the pace is expected to slow to "trend line" or even slightly below by 2000. After adding over 75,000 new jobs this year, the pace should slow to 57,000 in 1998 and to roughly 35,000 in 1999 and beyond. That's a reduction from 5.8% into the neighborhood of 2.5%. After a gain in population of 94,000 this year, the numbers should slow to 75,000 or so. Residential building permits will mirror population and gradually slow from 37,500 in 1997 to 26,000 by 2001. Retail sales gains will remain in the neighborhood of seven percent the next two years.

The outlook for metro Tucson is "trend line" growth, which means 8,000-10,000 new jobs per year and population gains of 16,000-19,000 per year. Residential permits could increase in 1998 as construction of apartments resumes and single family building remains near or slightly above 1997 levels. Retail sales should increase between six and seven percent during the next three years.

Risks to the outlook include a blow-off of inflation followed by a national recession. Less likely, but scarier, is a period of deflation brought on by the financial crisis in Southeast Asia and huge worldwide over-capacity because of too much building and investment in plant and equipment in these same countries. Closer to home, the Mexican peso may be in for another devaluation in the next year or two. But the list of things to worry about is short.

For economists, this is boring territory. There are no storm clouds on the horizon and not much to do except lament over the ever-deteriorating quality of statistics. But this environment is great for businesses and individuals as profits remain at high levels and the standard of living rises.

For state and local governments, the biggest challenges revolve around issues related to growth: how to provide badly lagging infrastructure after seven years of strong growth, what to do about deteriorating air quality (especially in the Phoenix area) and ever increasing traffic congestion. Growing pains in Tucson have manifested in "incorporation fever" as local residents grapple with issues related to local control, tax sharing and water delivery. So, the economy will continue to cooperate in the coming year, giving policymakers time to address these important issues. $

GROWTH AND WATER ISSUES AGAIN TOP LIST OF CONCERNS FOR TUCSON LEADERS

Compiled by Maile Nadelhoffer, *Research Specialist*

At the 17th Annual Economic Outlook Luncheon held in Tucson on December 12th, attendees were asked to express their level of concern about a variety of local and national issues. Twenty-four issues were considered, and attendees were asked to rate each on a scale of 1 to 10 in terms of the anticipated importance of each issue's impact on the quality of life/standard of living in the Tucson community in 1997.

The issues in this survey were suggested, in part, by topics of discussion raised during the GroupSystems dialogue sessions at the Forecasting Project's Annual Meeting, held at the UA College of Business and Public Administration on November 25th. Of the approximately 470 people who attended the Outlook Luncheon, 75 completed and turned in surveys. We do not pretend that this sample is representative of the Tucson area population at large. However, these results do reflect the concerns of a large group of community and business leaders.

When the issues are ranked according to their mean ratings, the top six issues are all growth related issues. "Infrastructure maintenance and development" topped the list with a mean ranking of 8.84, 42% of respondents gave this issue the highest rating of 10. The next five highest ranked issues were also the top five ranked issues last year. "Water supply and usage" almost tied for first place with a mean score of 8.76, this was followed closely by "traffic congestion," "Tucson's ability to attract and expand hi-tech industries," "Tucson's long-term economic development strategy," and "attitudes towards growth," which received a mean score of 8.23. There is then a significant break in the ranking and the next issue, "focusing education on work place skills," follows with a mean rating of only 7.43, and "financing of education" received at rating of 7.41. The quality of life issues of crime and air quality came in at the top of the middle third issues. Tax equity issues as well as the business equipment tax fell into the middle third of the ranking.

Again, just as in last year's poll, local issues take precedence over national and international issues. Concerns over the federal budget deficit, turmoil in Asian economies, and a stock market correction all fell into the bottom third of the list. Interestingly enough, given the vigorous debate over incorporation and annexation this year, this issue also received a low rating.

Outlook Luncheon attendees were told that the following is a list of issues that could affect the quality of life/standard of living in the Tucson community in the years ahead. They were then asked to indicate the level of importance of each issue on a scale of 1 to 10, where 10 denotes "very important," and 1 denotes "not important." Here is the list of issues ranked according to the mean rating they received in the Economic Outlook Poll:

Rank	Issue	Mean Rating
1	infrastructure maintenance and development	8.84
2	water supply and usage	8.76
3	traffic congestion	8.62
4	ability to attract and expand high-tech industries	8.56
5	Tucson's long-term economic development strategy	8.51
6	attitudes toward growth	8.23
7	focusing education on workplace skills	7.43
8	financing of education	7.41
9	crime, gangs, graffiti and road rage	7.38
10	air quality	7.33
11	tax equity issues	7.18
12	affordable housing	7.04
13	personal property (business equipment) tax	6.90
14	tight labor market	6.69
15	impact fees	6.67
16	inadequate wage rates	6.54
17	growing income inequality	6.49
18	debate on local control vs. regional coordination	6.40
19	major correction in the stock market	6.10
20	healthy downtown	5.91
2`	federal budget deficit	5.86
22	foreign competition	5.56
23	deregulation of the electric power industry	5.18
24	turmoil in Asian economies	5.10

Forecasts for Arizona	1997	1998	1999	2000	2001	2002	2003
Personal Income ($ mill)	102,356.2	110,636.5	118,877.8	127,259.2	135,717.0	144,814.0	154,368.1
percent change	8.7	8.1	7.4	7.1	6.6	6.7	6.6
Per Capita Personal Income	22,438.1	23,609.7	24,734.0	25,868.5	26,966.8	28,133.7	29,327.8
percent change	5.5	5.2	4.8	4.6	4.2	4.3	4.2
Aggregate Retail Sales ($ mill)*	42,992.5	45,156.2	47,481.3	49,833.5	52,399.6	55,063.0	57,980.9
percent change	6.3	5.0	5.1	5.0	5.1	5.1	5.3
Population (000s, mid-year)	4,561.7	4,686.1	4,806.3	4,919.5	5,032.8	5,147.3	5,263.5
percent change	3.0	2.7	2.6	2.4	2.3	2.3	2.3
Net Migration (000s)	89.7	83.3	75.7	72.6	74.0	75.0	76.6
Wage & Salary Employment (000s)	1,987.1	2,064.0	2,120.1	2,175.6	2,234.6	2,296.8	2,361.0
percent change	4.5	3.9	2.7	2.6	2.7	2.8	2.8
Goods-Producing	358.3	370.1	371.2	372.8	376.0	380.7	385.6
percent change	3.9	3.3	0.3	0.4	0.9	1.2	1.3
Construction	130.5	132.2	132.0	131.6	133.0	135.7	139.1
percent change	1.8	1.3	-0.2	-0.3	1.1	2.0	2.6
Manufacturing	213.0	222.7	223.9	225.8	227.7	229.7	231.1
percent change	5.3	4.6	0.6	0.8	0.8	0.9	0.6
Service-Providing	1,628.8	1,693.9	1,748.9	1,802.8	1,858.5	1,916.1	1,975.3
percent change	4.6	4.0	3.2	3.1	3.1	3.1	3.1
Trade (Wholesale & Retail)	480.8	493.9	506.8	520.4	534.3	549.1	563.8
percent change	3.3	2.7	2.6	2.7	2.7	2.8	2.7
Services	600.0	633.9	662.8	692.1	722.6	754.2	786.4
percent change	6.5	5.7	4.6	4.4	4.4	4.4	4.3

Forecasts for Phoenix-Mesa Metro Area	1997	1998	1999	2000	2001	2002	2003
Personal Income ($ mill)	71,496.6	77,157.5	82,440.3	87,604.3	93,022.5	98,822.4	105,093.5
percent change	10.1	7.9	6.8	6.3	6.2	6.2	6.3
Per Capita Personal Income	25,155.4	26,334.9	27,393.0	28,407.9	29,462.8	30,573.2	31,761.1
percent change	6.5	4.7	4.0	3.7	3.7	3.8	3.9
Aggregate Retail Sales ($ mill)*	29,108.4	30,895.0	32,822.7	34,636.4	36,516.8	38,358.6	40,500.7
percent change	6.7	6.1	6.2	5.5	5.4	5.0	5.6
Population (000s, mid-year)	2,842.2	2,929.9	3,009.5	3,083.8	3,157.3	3,232.3	3,308.9
percent change	3.4	3.1	2.7	2.5	2.4	2.4	2.4
Net Migration (000s)	67.1	59.9	51.2	45.3	44.4	45.6	46.8
Wage & Salary Employment (000s)	1,390.2	1,447.2	1,484.1	1,514.7	1,547.1	1,583.1	1,621.0
percent change	5.8	4.1	2.5	2.1	2.1	2.3	2.4
Goods-Producing	268.3	278.4	279.4	277.5	277.0	278.7	281.4
percent change	5.9	3.7	0.4	-0.7	-0.2	0.6	1.0
Construction	94.4	94.9	93.5	91.6	91.1	92.4	94.8
percent change	4.6	0.6	-1.5	-2.0	-0.5	1.4	2.6
Manufacturing	166.2	175.8	178.3	178.3	178.2	178.7	178.9
percent change	6.2	5.7	1.4	-0.0	-0.0	0.2	0.1
Service-Providing	1,121.8	1,168.8	1,204.7	1,237.2	1,270.1	1,304.4	1,339.6
percent change	5.8	4.2	3.1	2.7	2.7	2.7	2.7
Trade (Wholesale & Retail)	337.4	347.3	355.4	362.7	370.2	377.9	386.0
percent change	4.0	2.9	2.3	2.1	2.1	2.1	2.1
Services	432.9	456.9	477.2	495.9	514.2	533.5	552.6
percent change	7.5	5.5	4.4	3.9	3.7	3.7	3.6

Forecasts for Tucson Metro Area	1997	1998	1999	2000	2001	2002	2003
Personal Income ($ mill)	17,133.8	18,304.6	19,530.3	20,792.1	22,062.2	23,359.7	24,729.2
percent change	7.8	6.8	6.7	6.5	6.1	5.9	5.9
Per Capita Personal Income	21,535.4	22,464.1	23,442.6	24,455.1	25,449.0	26,436.8	27,467.0
percent change	5.2	4.3	4.4	4.3	4.1	3.9	3.9
Aggregate Retail Sales ($ mill)*	6,925.6	7,296.9	7,729.1	8,175.2	8,625.4	9,050.3	9,523.4
percent change	5.6	5.4	5.9	5.8	5.5	4.9	5.2
Population (000s, mid-year)	795.6	814.8	833.1	850.2	866.9	883.6	900.3
percent change	2.4	2.4	2.2	2.1	2.0	1.9	1.9
Net Migration (000s)	14.1	14.6	13.6	12.3	11.9	11.8	11.8
Wage & Salary Employment (000s)	324.1	335.7	345.0	353.5	361.8	370.0	378.4
percent change	3.9	3.6	2.8	2.4	2.4	2.3	2.3
Goods-Producing	51.6	53.7	55.2	56.3	57.1	57.8	58.6
percent change	3.7	4.1	2.8	2.0	1.4	1.3	1.3
Construction	19.6	19.9	20.6	21.1	21.4	21.8	22.1
percent change	-0.9	1.8	3.4	2.3	1.7	1.5	1.6
Manufacturing	29.5	31.1	31.6	32.1	32.5	32.9	33.3
percent change	6.9	5.5	1.7	1.4	1.2	1.2	1.2
Service-Providing	272.5	282.0	289.8	297.2	304.7	312.2	319.8
percent change	3.9	3.5	2.8	2.5	2.5	2.5	2.4
Trade (Wholesale & Retail)	69.9	71.0	72.5	74.1	75.7	77.3	78.8
percent change	1.3	1.6	2.0	2.2	2.3	2.1	1.9
Services	102.8	108.3	113.3	117.7	122.2	126.7	131.2
percent change	5.8	5.4	4.6	4.0	3.8	3.7	3.5

** Aggregate Retail Sales includes retail, food, restaurant & bars and gasoline sales*

Source: Economic and Business Research Program, Karl Eller Graduate School of Management, College of Business and Public Administration, The University of Arizona

ARIZONA AGRICULTURE: A LOOK AHEAD

Harry W. Ayer, Ph.D.

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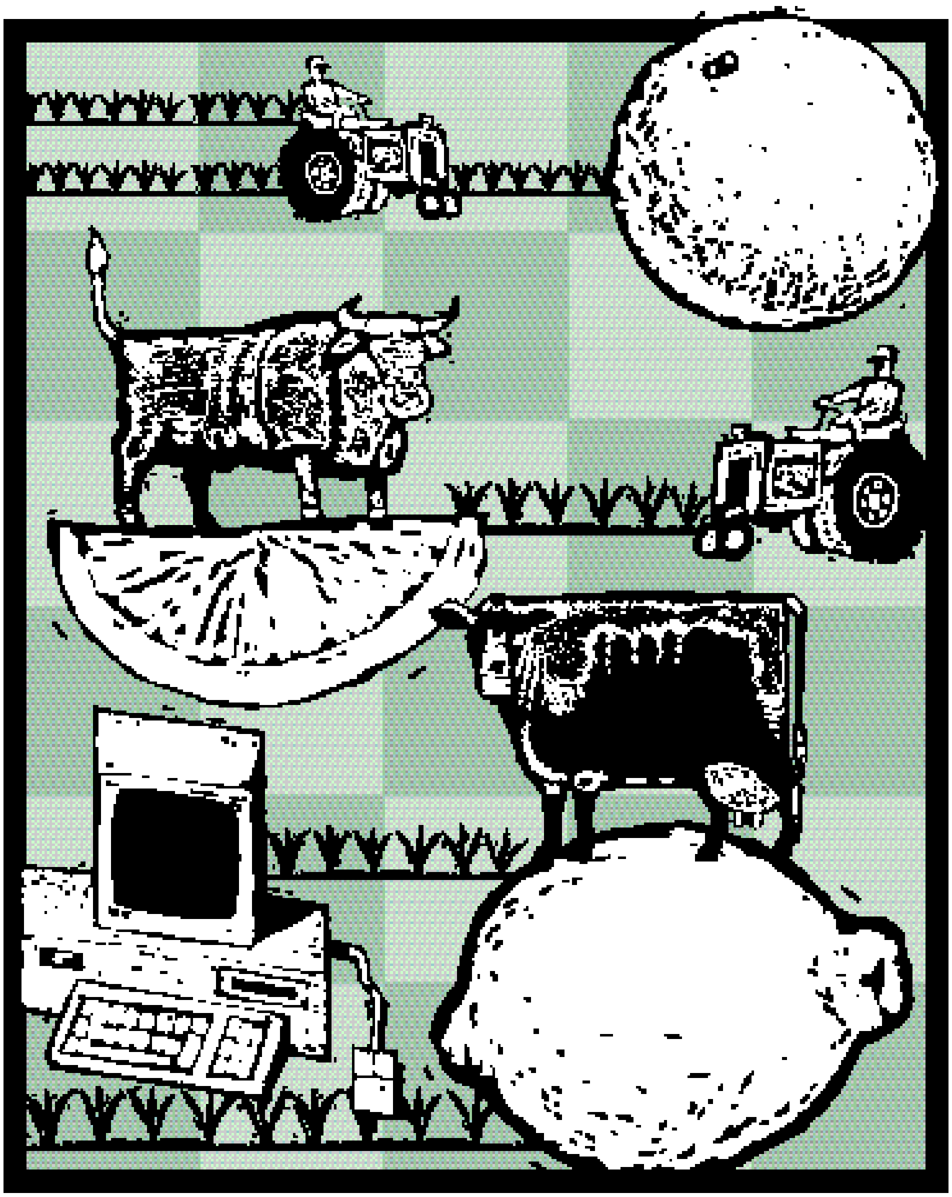
What might Arizona Agriculture be like ten years from now? Past trends and known challenges for the future give some clues. In the end, I expect new technology, shifting crop patterns, and increased vertical integration to meet the challenges of increased international competition, more environmental regulations, and increased risk, and that ten years from now Arizona will continue to have a healthy but changed agriculture.



A GLANCE BACK

Agriculture always faces challenges. The real price of some of Arizona's most important commodities – cotton, milk, and beef for example – show persistent long term down-trends **(Figures 1, 2 and 3)**. At the same time, the cost of water in some areas has increased. Government regulations increased as society became more concerned about the environment and food safety. And to these add the challenges of pests and periodic drought.

By most measures, Arizona agriculture successfully met these challenges. Although the ranching industry declined over the last 15 years **(Figure 4)**, the dairy sector expanded **(Figure 5)** with urban growth, and since 1983 total crop acreage has gone up and down but overall shows no long term trend **(Figure 6)**. Farm numbers declined from about 7,200 in 1982 to about 7,000 in 1992, but most of these were lost from the very small hobby farms that produce under $10,000 in gross sales per year **(Figure 7)**. The few hundred largest farms, those producing over a half million dollars in gross sales per year and which account for over 80% of all agricultural sales **(Figure 8)**, actually increased. And although real net farm income fluctuated up and down, it too shows no clear trend and averaged nearly $650 million per year (in constant 1992 dollars) over the last ten years **(Figure 9)**.

NEW CHALLENGES AHEAD

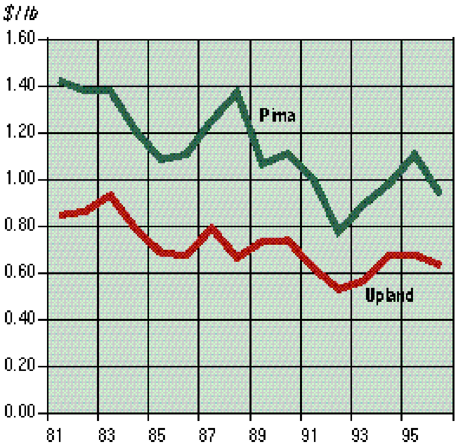
A host of challenges loom rather clearly on the horizon, and will help shape the future of Arizona agriculture.

New International Challenges

For nearly 25 years now, foreign countries have provided important markets for U.S. agricultural products. During the 1990s, U.S. agricultural exports averaged over 23% of cash marketing receipts. Most of Arizona's cotton and wheat go to foreign markets. The new GATT, WTO, and NAFTA trade agreements, and others expected in the near future, pose important challenges for Arizona agriculture, as do other world events.

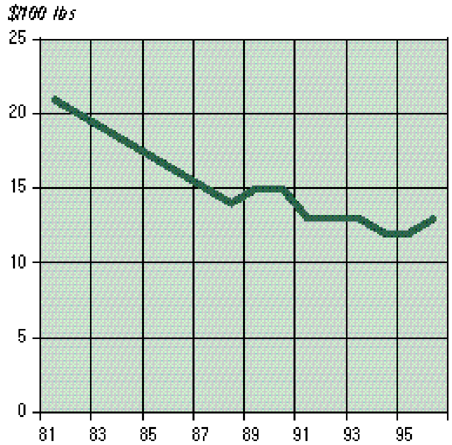
On the one hand, the new trade agreements reduce barriers to trade faced by our producers, and coupled with rising international populations and incomes, Arizona

FIGURE 1
Real Upland and Pima Prices, AZ



Source: Arizona Agricultural Statistics, various years
Note: Price deflated by GNP price index, 1992=100

FIGURE 2
Real Milk Prices, AZ



Source: Arizona Agricultural Statistics, various years
Note: Price deflated by GNP price index, 1992=100

FIGURE 3
Real Steer and Heifer, Calve Prices, AZ

Source: Arizona Agricultural Statistics, various years
Note: Price deflated by GNP price index, 1992=100

agriculture will be challenged to expand and develop new markets for some of its products. For example, NAFTA reduced the barriers to our milk exports – and Mexico's large, young, and expanding population, coupled with expected increases in income over the next decade, may provide marketing opportunities.

Trade agreements also make some U.S. markets more accessible to foreign competition. NAFTA reduces our own restrictions on fruit and vegetable imports. At the same time, Mexico is working to improve its financial and legal infrastructure, and NAFTA reduces restrictions on capital (including new seed varieties and chemicals) going from this country into Mexico. Or, alternatively, large international agricultural companies are using direct foreign investment to enter foreign agricultural input markets with high-technology seeds and other factors of production. These activities, combined with a favorable climate and low wage rates, suggest increased Mexican production of labor-intensive fruit and vegetable crops in the future.

The world-wide shift to more market-oriented economies will add to the competition. Budget problems and the rigors of the new trade agreements will likely force the European Union (EU) to a more market-oriented agriculture in the future. I expect Europe will continue to be a major player adding to world wheat supplies and putting downward pressure on wheat prices.

THE FEDERAL AGRICULTURAL IMPROVEMENT AND REFORM ACT (FAIR) OF 1996 REMOVES GOVERNMENT PROGRAMS FROM MOST FARM PRODUCTION DECISIONS – AGRICULTURE WILL BE MORE MARKET-ORIENTED OVER THE NEXT FIVE YEARS.

The former Soviet Union (FSU), Egypt and China, to name a few, have moved towards more market-oriented economies and agricultural sectors. Considerable room for improvement remains, and over 10 years I expect more progress. How might our cotton market be affected as market conditions improve in the FSU, Egypt and China?

Many Latin American economies are making the change to more market-oriented economies. The new trade association, Mercusur, illustrates this shift. Might Mexico, Argentina, and Brazil compete with our beef industry? In the long run, might our labor-intensive dairy operations face competition from Mexico, especially as NAFTA makes grain supplies available at lower prices for Mexican dairy producers?

Finally, the new trade agreements will lower barriers to trade, but as the recent case of tomatoes from Mexico shows, interest groups will try to circumvent the new rules. Arizona import firms are harmed by the new restrictions on Mexican tomato imports. Some observers believe that Arizona wheat trade has been negatively affected not so much because of the dangers of Karnal Bunt, but because of the self-interest political actions of competitor exporters.

Environmental Regulations

The national elections of 1994 brought new members to the House and Senate committed to reduced environmental regulation. In my view, however, several factors suggest that over the next 10 years environmental

FIGURE 4
Beef Cows, AZ

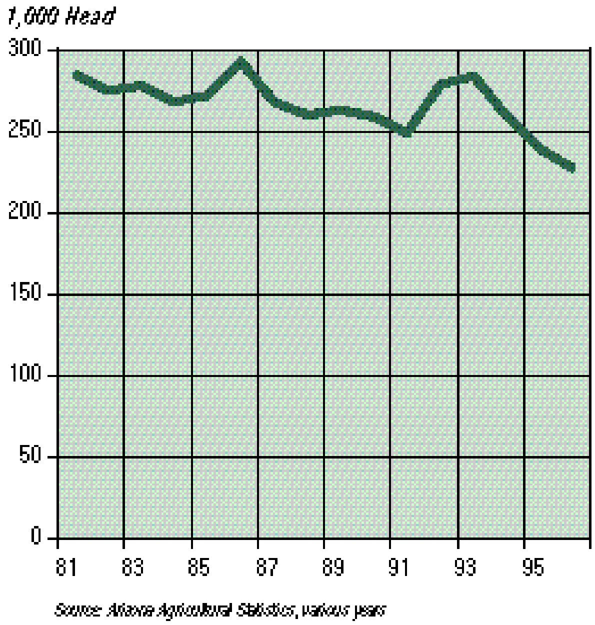
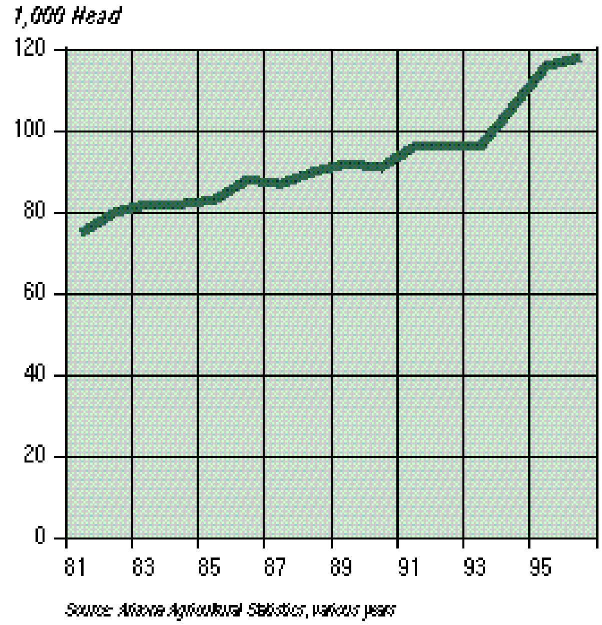


FIGURE 5
Milk Cows, AZ



regulation will become more, rather than less, challenging. First, a 1995 Gallop Poll shows that a dominant majority of the American public strongly favors environmental improvement for agriculture and expects more regulation of the sector, not less. Second, Federal budget pressures – even though the deficit recently improved markedly – will likely increase over the next 10 years because legislation to cut our long term deficits loads program cuts into the later years. As a consequence, efforts to meet environmental goals may shift from voluntary, cost-shared programs to more regulation.

By this logic, the provisions of the 1996 Federal Agriculture Improvement and Reform (FAIR) Act, which basically maintain the status quo through voluntary, subsidized, programs such as CRP and EQIP, may be compromised by budget pressures in favor of stiffer regulations. Third, further international linkages between agriculture and the environment will increase regulation. The Montreal Protocol illustrates how global regulations may work. In that case, the guidelines of the Montreal Protocol were incorporated in our 1991 Clean Air Act amendments, and subsequent regulations banned methyl bromide and freon. New detection and measurement technologies may make so-called nonpoint pollution more subject to regulation.

A 1995 GALLOP POLL SHOWS THAT A DOMINANT MAJORITY OF THE AMERICAN PUBLIC STRONGLY FAVORS ENVIRONMENTAL IMPROVEMENT FOR AGRICULTURE AND EXPECTS MORE REGULATION OF THE SECTOR, NOT LESS.

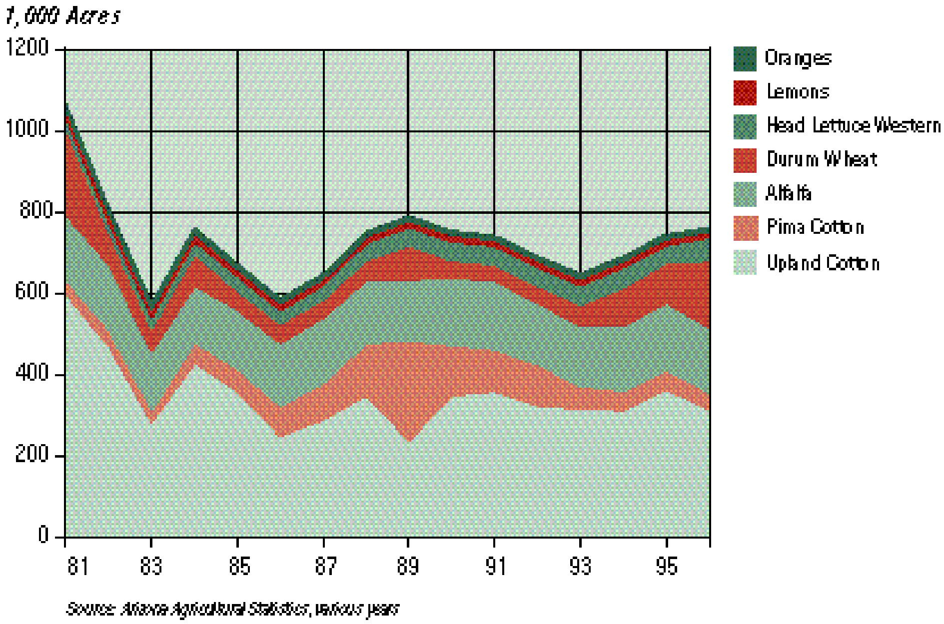
Keeping Pace with the New Industrialization of Agriculture

Through "industrialization," farms consolidate and become more vertically integrated with other stages in the food and fiber production chains. Changes in consumer demand, production technology, and international competition drive the industrialization process. Production in the dairy, fruit, vegetable, broiler, and turkey sectors has already moved markedly in this direction. About 20% of beef and pork production now takes place under contracts. Grain production is moving in this direction as well*(Offutt)*.

Consumer demand and changing scanner/computer/communication technologies promote industrialization. Through Efficient Consumer Response (ECR), scanners read electronic bar codes and computers analyze the retail sales data. The resulting information can be quickly passed to producers. In the past, warehousing played a dominant role in the food and fiber system, with excess supplies being warehoused and then sold through special promotions to retailers and consumers. ECR allows a more direct link to consumers, including short-order changes in consumer preferences *(Kinsey and Senauer)*.

Producers will be challenged to keep abreast of new technologies and instruments of vertical coordination.

FIGURE 6
Acreage of Major Crops, AZ



New Farm Legislation and Increased Price Risk

The FAIR act of 1996 removes government programs from most farm production decisions – agriculture will be more market-oriented over the next five years, and probably beyond. Thus FAIR directly affects cotton, wheat and dairy agriculture. But, like its predecessor farm programs, FAIR does not directly affected our alfalfa, fruit, vegetable, or beef sectors.

In contrast to past years when market prices below government targets triggered deficiency payments to participating program farmers, FAIR farm legislation provides no such price security for Arizona cotton and wheat producers. Over 80% of Arizona's cotton acreage was enrolled in the federal cotton program in recent years, and a large portion of wheat acreage. In Arizona, cotton farmers received by far the lion's share of all government program payments. Dairy farmers also face more price risk over time. In the past, all dairy producers benefited by the government's milk price support program under which government purchase and storage of dry milk, cheese and butter provided a minimum milk support price. Under FAIR, the minimum support price for milk declines from \$10.35 per cwt. in 1996 to \$9.90 in 1999, and disappears altogether after December 31, 1999.

The new farm bill is in effect through 2002. Farm policy observers wonder, of course, how congress will react, even before the year 2002, if commodity prices tumble and farmers fall on hard times. People make convincing arguments on both sides, some saying that government would resume its traditional subsidies, and others arguing that traditional programs will not return. My guess is that they will not return. The 1996 legislation continued past trends to decouple program payments from cropping decisions. The GATT, WTO, NAFTA, and new agreements yet to come, did, and likely will, discourage domestic programs which in effect provide farm subsidies for export crops – a perceived restraint of fair trade. And finally, budgetary constraints will also help shape farm support at a time when the government wrestles with Medicare, Medicaid and welfare payments more generally.

MEETING THE CHALLENGES: ACTIONS BY INDIVIDUAL PRODUCERS

I believe individual producers and groups related to Arizona agriculture will respond to these challenges. Individuals will adopt new technologies, shift cropping patterns, and vertically integrate through more contracts and ownership arrangements.

New Technology

Adoption of new technology will help meet several of the challenges named above, including international competition, environmental regulation, industrialization, and risk. Historically, Arizona farmers have been early adapters of new technologies, including laser leveling, drip irrigation, Bt cottons and insect growth regulators (IGRs). Informed, innovative farm managers, as well as price and yield incentives, helped spur early, widespread adoption. Progressive farm management already in place will help assure the use of new technology in the next decade.

New developments in precision implements, communication, and computer technology promise to change some farming activities. Data from precision implements will be analyzed and shared through on-line tools, permitting improved interaction between farmers and various other players in the food and fiber production system. GPS and GIS will be an important part of precision farming. Several elements of GPS and GIS are already available, including reliable yield monitors, GPS accuracy to within six inches, computer capacity and speed, communications systems using fiber optics, cellular and satellite transmissions, and agribusiness firms already gearing up to offer precision agriculture technology. Agribusinesses will be more closely linked by these technologies to the farm and provide inputs tailored to individual field and feedlot needs.

Farms will use more biotechnology. According to a recent report in Agri-Finance, some 300 genetically engineered products will soon be ready for farm use. Bt and Roundup Ready cotton provide good examples of ways that biotechnology will help meet the challenge of long-run price declines and environmental challenges. These technologies can cut input cost, raise yields, increase quality, and presumably reduce chemical impacts on the environment.

Biotechnology will also promote, and sometimes force, greater vertical integration between producers and seed suppliers. Biotechnology and new legislation provide seed developers increased proprietary control over their seeds. As a result, seed companies may require that farmers sign a contract specifying, for example, how farmers may

FIGURE 7
Number of Farms by Value of Sales, AZ

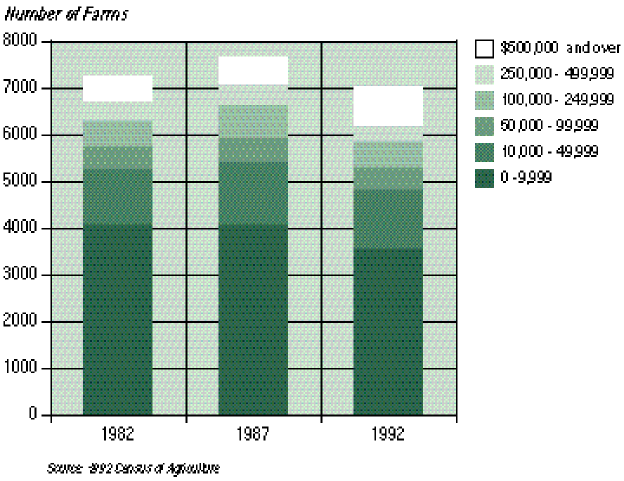
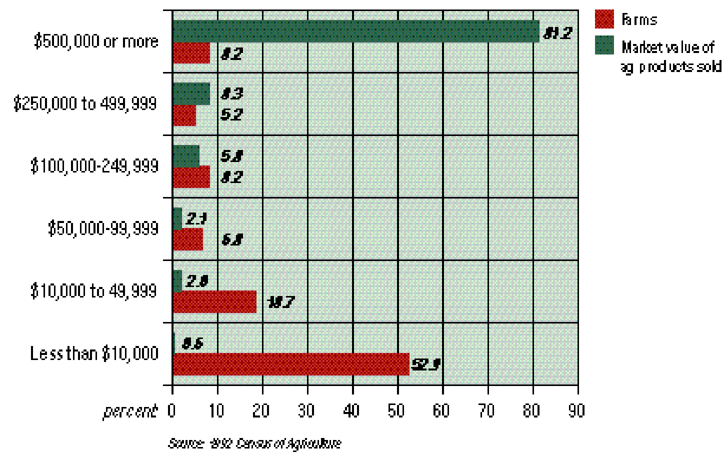


FIGURE 8
Percent of Farms and of Market Value Ag Products Sold: Arizona, 1992



use or market the crop produced with the new seeds.

As hinted above, farmers will often try to adopt complementary technologies which not only increase short run profits, but also simultaneously meet environmental goals. A number of farm technologies already in use illustrate this profit/environmental complement: conservation tillage, soil nutrient testing, IPM, and Bt and IGR technologies. Precision farming will be another complementary tool.

Shift Cropping Patterns

In the past, Arizona farmers shifted not only the acreage of individual crops produced, as shown in **Figure 7**, but also the location of production. While some areas such as Pinal and Cochise Counties reduced crop acreage in response to higher water costs, cropped acreage on reservations with low-cost water increased. Reservation cropped acreage may increase in the future. But other kinds of shifts may also take place, as they have in the past. Vegetable production already moves from one climatic or even micro-climatic zone to another, taking advantage of marketing windows and seeds developed for very specific microclimates. Production moves not only within Arizona, but also between Arizona and California and Mexico.

More Vertical Integration

Like the adoption of new technologies, I expect more vertical integration in Arizona agriculture. Integration will help meet the challenges of international competition and price risk.

The form of integration will vary and include forward contracts for produce, contracts for input use, alliances of various kinds which promote cooperation and coordination, alternative means of ownership, and control of more than one part of the food/fiber system. In some cases integration will allow farm producers to capture the gains from "value-added" products.

In many ways, vertical coordination reduces risk. Contracts or ownership or other forms of vertical strategic alliances help assure adequate input supplies at favorable prices and a market and price for the firm's produce. To successfully make cooperative agreements, farm managers may need to acquire added skills, including communication skills and those which build trust and commitment, as they seek to form versical alliances and negotiate contracts, instead of hauling their harvest to a local or regional market *(van Duren, Howard, and McKay)*.

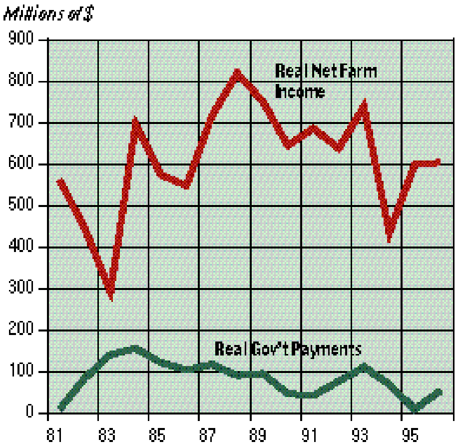
> NEW DEVELOPMENTS IN PRECISION IMPLEMENTS, COMMUNICATION, AND COMPUTER TECHNOLOGY PROMISE TO CHANGE SOME FARMING ACTIVITIES. DATA FROM PRECISION IMPLEMENTS WILL BE ANALYZED AND SHARED THROUGH ON-LINE TOOLS, PERMITTING IMPROVED INTERACTION BETWEEN FARMERS AND VARIOUS OTHER PLAYERS IN THE FOOD AND FIBER PRODUCTION SYSTEM.

MEETING THE CHALLENGES: COLLECTIVE ACTIONS BY FARM-RELATED GROUPS

Collective actions, in contrast to individual producer actions described above, will also affect farming in the next decade, perhaps even more so than in the past. Three groups, and the actions they take, will all affect

FIGURE 9

Real Net Farm Income and Government Payments, AZ



Source: USDA, ERS, Economic Indicators of the Farm Sector
Note: Prices deflated by GNP price index, 1992=100

Arizona agriculture: 1) the government, 2) the educational/research system – especially the land grant colleges, and 3) grass roots groups of farmers who jointly make decisions.

Government Actions

At the federal level, economic policies seem on track to foster low interest rates, a crucial factor for capital-intensive agriculture, and a growing economy. Higher incomes will encourage demand for value-added and specialty agricultural products. Federal monetary policy has discouraged over-valued exchange rates, an action which promotes our agricultural exports. USDA research and services will help develop profitable, environmentally sound production technologies, provide needed market data for expanding world market opportunities, and promote further reductions in world trade barriers. Farm revenue assurance programs, now being piloted in some states, may be expanded to reduce price and yield risks. Research and extension activities at the federal and state levels will provide information to reduce producer risk. State government will make rules to reduce pest problems and promote the interests of Arizona agriculture in federal legislation.

Public Education and Research

Public education and research will be an important part of agriculture over the next decade as it helps create the new technologies and prepare those working in agriculture to respond to the international market and increased industrialization. Continuing education at off-campus locations using new computer/communication-based technologies will increase *(Salant, et. al)* and become more accessible to farm and agribusiness managers and employees. And the institutional structure through which we do agriculture research will continue to change, especially as both private firms and public institutions are better able to capture the benefits of new technologies through property rights.

Grass Roots Group Action

Grass roots collective action by farmers will affect the next 10 years of Arizona agriculture. Example groups already in place include the Farm Bureau, the Cotton Growers, pest control districts, and marketing cooperatives. Many goods and services can be better provided by groups than individuals. Take market development as a case in point. An individual farmer will not find it profitable to single-handedly create a cotton advertising campaign. The cost is great, and the increase in cotton price which may result as consumers shift their demand to cotton and away from other fibers will not likely compensate the single-farmer advertising campaign. But thousands of farmers would benefit, and if the campaign raises the price enough, it's quite possible that the collective gains would outweigh advertising costs.

Similar stories could be told about efforts to develop new international markets, secure more favorable environmental legislation, create better management techniques, obtain government approval for new pesticides, control pests through IPM and pest-control districts, or reach accords on access to public lands. It seems to me that issues relating to these more public goods are increasing, and that grass roots collectives of farmers will play an increasing role in issues surrounding trade regulations, international markets, and environmental regulations.

A SUMMARY VIEW OF THE FUTURE

Through ups and downs, most of Arizona agriculture has prospered over the last 10 to 15 years by successfully meeting the challenges of declining real commodity prices, increasing input prices, serious pest problems, drought, and increasing government regulations. This capacity to meet challenges bodes well for the future. Over the next 10 years, Arizona agriculture will likely be challenged by more international competition, more environmental regulation, changes in technologies in the food and fiber production chain, and increased risk. But I expect both individual management decisions and actions by government, land grant colleges, and grass roots groups of agricultural producers to meet these challenges. Progressive, innovative and financially strong owners and managers will play crucial roles because many of the challenges require adopting new technologies and institutions – often ones which require substantial financial resources. Ten years from now I speculate that Arizona agriculture will have about the same number of very large farms producing most of the state's agricultural production; the dairy sector will continue to expand; ranching may decline somewhat; and cropped acreage will be at about its present level, although the acreage of individual crops may change over the years. More noticeable changes will be made in production technologies, the degree of vertical integration, and increased interaction with the international market. $

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	JUN 97	JUL 97	AUG 97	SEP 97	OCT 97	% change versus year ago for: most recent month	most recent 12-months
YUMA METROPOLITAN REGION							
Civilian Labor Force, ADES	69,675	71,175	74,225	71,725	68,575	-5.3	-0.7
Employment	47,975	46,950	47,675	47,725	49,700	3.8	1.9
Unemployment	21,700	24,225	26,550	24,000	18,875	-23.0	-6.7
Unemployment Rate (%)	31.1	34.0	35.8	33.5	27.5	-18.7	-5.0
Employees on Nonagricultural Payrolls, ADES							
Total	36,000	34,800	35,300	37,100	37,500	3.9	3.8
Mining	0	0	0	0	0	...	...
Construction	2,000	2,000	2,000	2,000	2,300	21.1	8.4
Manufacturing	1,600	1,600	1,600	1,700	1,600	0.0	2.1
Trans., Comm. & Publ. Util.	1,900	1,900	1,700	1,900	2,100	16.7	2.2
Trade	11,100	10,900	10,900	11,200	11,100	-1.8	0.4
Finance, Ins. & Real Estate	1,100	1,100	1,100	1,100	1,200	0.0	-7.4
Services	9,000	9,000	9,000	9,200	9,500	10.5	9.4
Government	9,300	8,300	9,000	10,000	9,700	0.0	4.2
Sales ($000s) ADOR							
Gross Retail	60,888	58,814	59,658	64,026	...	4.7	9.2
Retail	48,053	45,742	46,504	50,787	...	3.9	10.7
Restaurants & Bar	6,338	6,586	6,269	6,475	...	9.2	6.9
Gasoline, EBR	6,497	6,486	6,885	6,764	7,505	14.2	1.7
Gallons (000s) ADOT	5,211	5,402	5,442	5,089	5,698	8.7	0.4
Contracting	11,200	12,176	15,281	16,875	...	43.9	2.9
Value of Construction Contract Awards ($000s) F.W. Dodge							
Total	12,636	14,705	19,899	24,231	11,340	-40.7	35.9
Residential Building	5,664	5,410	5,500	6,929	6,865	-55.1	-4.0
Non-Residential Building	5,132	4,468	13,927	5,446	2,303	142.2	141.3
Non-Building	1,840	4,827	472	11,856	2,172	-25.4	-16.1
Number of Dwelling Units Awarded, F.W. Dodge							
Total	72	58	69	83	93	-61.1	-9.6
One Family Houses	72	58	69	80	93	-6.1	7.8
MOHAVE-LA PAZ REGION							
Civilian Labor Force, ADES	71,675	71,850	71,725	71,225	70,875	-1.5	2.0
Employment	68,025	68,175	68,225	67,575	67,500	4.4	4.1
Unemployment	3,650	3,675	3,500	3,650	3,375	-53.8	-23.2
Unemployment Rate (%)	5.1	5.1	4.9	5.1	4.8	-53.1	-24.7
Employees on Nonagricultural Payrolls, ADES							
Total	40,600	40,500	41,100	41,500	41,200	5.4	4.4
Mining	200	200	200	200	200	0.0	0.0
Construction	3,500	3,400	3,400	3,500	3,400	13.3	7.5
Manufacturing	3,100	3,100	3,200	3,200	3,200	0.0	-1.3
Trans., Comm. & Publ. Util.	1,900	2,000	1,900	1,900	1,900	0.0	4.0
Trade	11,700	11,700	11,700	11,700	11,500	2.7	-0.1
Finance, Ins. & Real Estate	1,900	1,800	1,800	1,900	1,800	-5.3	3.2
Services	10,800	10,600	10,700	10,800	10,800	8.0	11.0
Government	7,500	7,700	8,200	8,300	8,400	9.1	4.4
Sales ($000s) ADOR							
Gross Retail	85,272	82,184	82,681	75,523	...	-0.2	1.9
Retail	63,380	58,373	58,647	55,303	...	5.4	4.2
Restaurants & Bar	10,323	11,468	10,742	9,252	...	-8.9	-0.7
Gasoline, EBR	11,569	12,343	13,292	10,968	10,117	-15.9	-7.7
Gallons (000s) ADOT	9,280	10,279	10,507	8,252	7,681	-19.9	-7.4
Contracting	17,108	15,689	15,656	15,711	...	0.0	10.7
Value of Construction Contract Awards ($000s) F.W. Dodge							
Total	16,744	29,248	16,393	13,642	18,929	7.0	17.5
Residential Building	11,972	10,719	11,204	11,334	13,915	16.2	12.8
Non-Residential Building	940	1,686	3,518	1,720	4,859	12.1	64.7
Non-Building	3,832	16,843	1,671	588	155	-88.8	-0.1
Number of Dwelling Units Awarded, F.W. Dodge							
Total	124	116	116	125	149	5.7	5.1
One Family Houses	120	116	116	117	147	4.3	7.4

See notes at bottom of Arizona - Quarterly table.

	JUN 97	JUL 97	AUG 97	SEP 97	OCT 97	% change versus year ago for: most recent month	most recent 12-months
COCHISE-SANTA CRUZ REGION							
Civilian Labor Force, ADES	55,125	56,100	56,775	56,800	55,925	-5.1	-3.9
Employment	48,675	49,425	49,325	49,150	49,075	0.0	-2.2
Unemployment	6,450	6,675	7,450	7,650	6,850	-30.6	-14.0
Unemployment Rate (%)	11.7	11.9	13.1	13.5	12.2	-26.9	-10.6
Employees on Nonagricultural Payrolls, ADES							
Total	39,500	39,500	39,800	40,700	40,600	1.5	0.3
Mining	100	100	100	100	100	0.0	0.0
Construction	1,700	1,700	1,700	1,900	1,900	18.7	-1.5
Manufacturing	2,300	2,300	2,300	2,400	2,500	0.0	1.4
Trans., Comm. & Publ. Util.	2,300	2,300	2,300	2,400	2,400	4.3	1.8
Trade	11,200	11,200	11,200	11,200	11,200	1.8	1.6
Finance, Ins. & Real Estate	1,200	1,200	1,100	1,100	1,100	-8.3	7.8
Services	8,500	8,800	8,500	8,500	8,500	2.4	-2.3
Government	12,200	11,900	12,600	13,100	12,900	-0.8	0.0
Sales ($000s) ADOR							
Gross Retail	67,973	64,825	63,311	64,915	...	10.2	6.8
Retail	53,872	50,029	48,193	50,495	...	9.5	8.7
Restaurants & Bar	7,419	8,055	7,966	7,467	...	8.2	1.8
Gasoline, EBR	6,682	6,741	7,152	6,953	8,326	34.3	1.5
Gallons (000s) ADOT	5,360	5,614	5,653	5,231	6,321	27.8	0.7
Contracting	10,870	16,364	11,432	13,820	...	27.1	-2.3
Value of Construction Contract Awards ($000s) F.W. Dodge							
Total	14,517	9,422	9,686	9,230	12,639	-56.1	-35.8
Residential Building	7,682	8,000	7,665	7,918	10,562	-13.3	-25.6
Non-Residential Building	6,782	60	372	1,156	1,631	-88.5	-56.3
Non-Building	53	1,362	1,649	156	446	-81.4	-46.2
Number of Dwelling Units Awarded, F.W. Dodge							
Total	83	75	84	99	152	-44.7	-24.2
One Family Houses	81	75	84	86	89	12.7	-7.9
GILA-GRAHAM-GREENLEE REGION							
Civilian Labor Force, ADES	34,300	34,325	34,725	34,500	34,700	-2.0	-1.3
Employment	31,450	31,550	32,150	31,775	32,150	0.4	-0.6
Unemployment	2,850	2,775	2,575	2,725	2,550	-25.0	-8.5
Unemployment Rate (%)	8.3	8.1	7.4	7.9	7.3	-23.4	-7.3
Employees on Nonagricultural Payrolls, ADES							
Total	24,700	24,400	25,100	25,400	25,500	0.8	2.7
Mining	3,000	3,000	3,000	3,000	3,000	-3.2	0.8
Construction	2,000	1,900	1,900	1,900	1,900	-9.5	6.2
Manufacturing	1,900	1,900	1,900	1,900	1,900	0.0	2.7
Trans., Comm. & Publ. Util.	800	800	800	800	800	0.0	4.3
Trade	5,900	5,900	5,900	5,900	6,000	3.4	0.7
Finance, Ins. & Real Estate	500	500	500	500	500	0.0	11.5
Services	4,000	4,000	4,100	4,000	4,000	-2.4	2.3
Government	6,600	6,400	7,000	7,400	7,400	5.7	3.6
Sales ($000s) ADOR							
Gross Retail	42,496	42,265	43,110	40,231	...	3.4	4.4
Retail	33,090	32,050	32,519	31,141	...	4.9	5.5
Restaurants & Bar	5,350	5,913	5,640	4,778	...	-4.9	1.4
Gasoline, EBR	4,056	4,302	4,951	4,312	4,617	9.8	0.0
Gallons (000s) ADOT	3,253	3,583	3,913	3,245	3,506	4.5	0.1
Contracting	14,514	11,988	10,848	10,233	...	-30.2	16.0
Value of Construction Contract Awards ($000s) F.W. Dodge							
Total	7,310	16,033	7,320	8,255	6,576	-53.6	-14.5
Residential Building	3,102	5,650	4,557	6,552	5,376	39.5	22.4
Non-Residential Building	972	1,882	743	1,603	0	-100.0	-55.3
Non-Building	3,236	8,501	2,020	100	1,200	-34.1	-43.0
Number of Dwelling Units Awarded, F.W. Dodge							
Total	34	50	50	60	53	55.9	20.9
One Family Houses	34	50	44	60	53	55.9	7.6

See notes at bottom of Arizona - Quarterly table.

	JUN 97	JUL 97	AUG 97	SEP 97	OCT 97	% change versus year ago for: most recent month	most recent 12-months
APACHE-NAVAJO REGION							
Civilian Labor Force, ADES	53,075	52,700	51,600	49,925	49,575	-6.6	-2.5
Employment	42,575	42,325	43,475	42,900	42,900	-2.3	-1.9
Unemployment	10,500	10,375	8,125	7,025	6,675	-26.8	-5.2
Unemployment Rate (%)	19.8	19.7	15.7	14.1	13.5	-21.7	-2.9
Employees on Nonagricultural Payrolls, ADES							
Total	39,600	38,800	40,300	40,800	40,700	-1.0	0.8
Mining	900	900	900	900	900	0.0	-5.3
Construction	2,200	2,200	2,200	2,200	2,200	4.8	14.4
Manufacturing	1,800	1,800	1,900	1,900	1,800	5.9	-4.1
Trans., Comm. & Publ. Util.	2,800	2,700	2,700	2,700	2,600	-0.0	2.3
Trade	7,300	7,400	7,500	7,400	7,400	0.0	1.6
Finance, Ins. & Real Estate	1,200	1,200	1,200	1,200	1,200	0.0	-4.0
Services	8,300	8,500	8,500	8,000	8,000	-2.4	3.7
Government	15,100	14,100	15,400	16,500	16,600	-2.4	-1.4
Sales ($000s) ADOR							
Gross Retail	61,183	58,847	54,585	58,471	...	3.2	-8.0
Retail	48,173	45,735	40,243	45,832	...	8.1	-7.3
Restaurants & Bar	6,656	6,185	6,338	5,453	...	1.1	0.6
Gasoline, EBR	6,354	6,927	8,004	7,186	7,221	-17.0	-17.5
Gallons (000s) ADOT	5,097	5,769	6,327	5,407	5,482	-21.0	-17.2
Contracting	8,817	8,940	9,445	10,324	...	-26.0	-8.3
Value of Construction Contract Awards ($000s) F.W. Dodge							
Total	19,251	11,305	10,258	17,541	13,772	14.5	2.4
Residential Building	4,409	4,953	3,437	7,497	5,286	6.5	-20.6
Non-Residential Building	3,423	2,380	4,139	4,325	6,394	21.0	34.0
Non-Building	11,419	3,972	2,682	5,719	2,092	17.3	15.6
Number of Dwelling Units Awarded, F.W. Dodge							
Total	54	53	37	69	50	-7.4	-16.3
One Family Houses	54	53	37	69	48	-11.1	-16.8
COCONINO-YAVAPAI REGION							
Civilian Labor Force, ADES	126,700	128,825	127,275	125,175	125,925	0.3	1.1
Employment	118,200	120,425	120,025	118,575	119,750	1.9	1.8
Unemployment	8,500	8,400	7,250	6,600	6,175	-22.6	-9.6
Unemployment Rate (%)	6.7	6.5	5.7	5.3	4.9	-22.8	-10.4
Employees on Nonagricultural Payrolls, ADES							
Total	93,000	93,900	94,300	95,200	96,900	3.1	4.6
Mining	800	800	900	900	800	-11.1	-4.6
Construction	6,500	6,500	6,700	6,500	6,500	3.2	1.9
Manufacturing	6,500	6,500	6,500	6,400	6,600	1.5	5.6
Trans., Comm. & Publ. Util.	3,000	3,000	2,800	2,800	3,000	0.0	-3.9
Trade	26,000	26,500	26,600	26,300	26,300	3.1	3.7
Finance, Ins. & Real Estate	2,700	2,700	2,700	2,700	2,800	3.7	5.2
Services	26,400	26,800	27,200	27,100	26,700	6.4	7.9
Government	21,100	21,100	20,900	22,500	24,200	0.8	3.1
Sales ($000s) ADOR							
Gross Retail	183,257	176,370	185,276	179,513	...	1.5	5.0
Retail	134,532	125,277	133,635	125,561	...	-0.8	5.9
Restaurants & Bar	33,135	32,620	31,234	35,673	...	12.4	4.7
Gasoline, EBR	15,590	18,473	20,407	18,279	17,119	-6.0	-1.8
Gallons (000s) ADOT	12,505	15,384	16,131	13,753	12,998	-10.5	-1.1
Contracting	40,868	42,988	42,990	48,099	...	2.6	-5.6
Value of Construction Contract Awards ($000s) F.W. Dodge							
Total	50,000	65,405	41,318	39,268	54,220	29.4	-13.9
Residential Building	25,865	25,261	26,727	26,416	32,013	14.3	-6.7
Non-Residential Building	5,320	19,004	12,594	7,939	15,831	56.7	-28.9
Non-Building	18,815	21,140	1,997	4,913	6,376	68.4	-14.5
Number of Dwelling Units Awarded, F.W. Dodge							
Total	249	240	277	253	310	29.2	-4.6
One Family Houses	245	220	225	242	245	12.9	7.3

See notes at bottom of Arizona - Quarterly table.

% change versus year ago for:

	JUN 97	JUL 97	AUG 97	SEP 97	OCT 97	most recent month	most recent 12-months
PHOENIX-MESA METROPOLITAN REGION (MARICOPA AND PINAL)							
Civilian Labor Force (000s) ADES	1,505.0	1,517.5	1,507.4	1,514.5	1,526.1	3.4	2.7
Employment	1,459.5	1,471.6	1,462.2	1,467.0	1,483.3	4.8	3.3
Unemployment	45.5	45.9	45.2	47.5	42.8	-28.9	-13.8
Unemployment Rate, Seas. Adj. (%)	2.9	2.9	3.0	2.9	2.5	-34.2	-14.6
Employees on Nonagricultural Payrolls (000s) ADES							
Total	1,369.2	1,365.7	1,368.3	1,400.6	1,424.4	6.4	6.0
Mining	7.8	8.1	8.2	8.1	8.1	19.1	14.8
Construction	96.4	96.9	97.5	97.0	98.6	5.8	5.3
Manufacturing	158.5	160.0	161.1	162.3	163.5	6.0	2.6
Durable	121.0	122.6	123.7	124.6	125.7	8.1	3.6
Nondurable	37.5	37.4	37.4	37.7	37.8	-0.5	-0.6
Trans., Comm. & Publ. Util.	72.6	73.2	71.3	73.8	75.3	6.1	5.9
Trade	340.4	339.4	340.3	344.6	349.7	7.5	5.8
Wholesale	87.4	86.6	86.5	87.3	88.6	7.9	7.4
Retail	253.0	252.8	253.8	257.3	261.1	7.3	5.3
Finance, Ins. & Real Estate	102.9	103.3	103.9	104.6	105.6	8.6	8.8
Services	429.8	429.7	427.6	430.7	437.2	6.2	7.8
Government	160.8	155.1	158.4	179.5	186.4	4.0	4.3
Sales ($000s) ADOR							
Aggregate Retail Sales	2,473,778	2,217,576	2,256,064	2,364,792	...	8.5	6.7
Retail	1,776,011	1,571,707	1,580,382	1,665,866	...	9.8	7.0
Food, EBR	314,823	298,242	303,390	313,170	...	6.3	7.4
Restaurants & Bars	260,148	229,159	240,850	256,167	...	5.4	5.7
Gasoline, EBR	122,796	118,468	131,443	129,590	141,095	-4.6	0.9
Contracting	545,691	481,143	499,226	547,545	...	16.6	8.6
Value of Construction Contract Awards ($000s) F.W. Dodge							
Total Awards	799,363	480,864	551,322	629,891	590,131	-3.2	-4.7
Residential Building	377,567	340,981	339,140	396,417	350,817	-2.0	-7.3
Non-Residential Building	279,686	106,367	127,832	193,458	195,187	19.6	-14.3
Non-Building	142,110	33,516	84,350	40,016	44,127	-49.9	38.7
New Housing Units Authorized, Census C-40							
Total Units	2,790	2,980	3,867	4,112	4,047	26.4	-4.1
Single Family Units	2,576	2,888	2,867	3,137	2,620	22.8	2.0
2-4 Unit Structures	29	8	21	12	56	69.7	16.2
5-plus Unit Structures	185	84	979	963	1,371	32.3	-22.3
Housing Sales and Prices, ARMLS							
Total Sales ($000s)	536,833	625,098	604,036	452,201	549,878	20.7	12.7
Total Units	3,756	4,405	4,374	3,332	3,932	9.7	3.4
Average Price ($)	142,927	141,906	138,097	135,715	139,847	10.0	8.7
Phoenix Skyharbor International Airport, PSIA							
Total Passengers	2,536,618	2,349,567	2,554,589	2,198,082	...	-4.5	3.3
Total Aircraft Movements	42,118	42,915	44,538	40,519	...	-2.8	-1.0

PHOENIX-MESA METROPOLITAN REGION (MARICOPA AND PINAL) - QUARTERLY DATA

% change versus year ago for:

	III 96	IV 96	I 97	II 97	III 97	most recent quarter	most recent 4-quarters
Demographics & Vital Statistics (000s, seas adj) ADHS & EBR							
Population	2,760.4	2,783.7	2,807.1	2,830.5	2,853.9	3.4	3.4
Natural Increase	6.6	6.6	6.6	6.7	6.7	2.1	2.9
Births	11.9	12.0	12.1	12.1	12.2	2.4	3.2
Deaths	5.4	5.4	5.4	5.5	5.5	2.7	3.5
Net Migration	16.7	16.7	16.7	16.7	16.7	0.0	3.5
Personal Income by Source ($mil, SAAR) EBR							
Total Personal Income	65,835	67,443	69,038	70,677	72,316	9.8	10.5
Earnings by Place of Work	47,831	49,066	50,296	51,533	52,770	10.3	10.8
Less: Contributions for Social Insurance	3,273	3,344	3,415	3,486	3,556	8.6	8.9
Plus: Adjustment for Residence	-92	-92	-93	-92	-92	-0.4	1.5
Plus: Dividends, Interest & Rents	11,472	11,746	12,016	12,308	12,600	9.8	11.1
Plus: Transfer Payments	9,897	10,068	10,234	10,414	10,594	7.0	7.8
Per Capita Personal Income ($, SAAR) EBR	23,850	24,228	24,594	24,970	25,339	6.2	6.8

See notes at bottom of Arizona - Quarterly table

	JUN 97	JUL 97	AUG 97	SEP 97	OCT 97	% change versus year ago for: most recent month	most recent 12-months
TUCSON METROPOLITAN REGION (PIMA)							
Civilian Labor Force (000s) ADES	381.0	372.9	375.5	379.6	381.3	-0.3	-1.0
Employment	368.2	360.2	363.0	366.4	369.2	0.7	-0.6
Unemployment	12.8	12.7	12.5	13.2	12.1	-24.4	-11.0
Unemployment Rate, Seas. Adj. (%)	3.2	3.1	3.3	3.2	2.9	-23.7	-9.1
Employees on Nonagricultural Payrolls (000s) ADES							
Total	311.6	301.5	306.8	315.6	320.2	2.8	2.2
Mining	2.3	2.5	2.4	2.3	2.4	4.3	2.5
Construction	18.8	19.2	19.4	19.2	19.4	0.5	-2.7
Manufacturing	29.6	29.4	29.7	29.8	29.8	1.7	3.3
Durable	23.7	23.6	23.8	23.9	23.9	2.1	4.1
Nondurable	5.9	5.8	5.9	5.9	5.9	0.0	0.3
Trans., Comm. & Publ. Util.	13.6	13.4	13.2	13.3	13.4	1.5	-1.2
Trade	67.9	67.9	68.3	68.5	69.2	3.9	1.7
Wholesale	10.4	10.5	10.6	10.6	10.7	3.9	1.8
Retail	57.5	57.4	57.7	57.9	58.5	3.9	1.7
Finance, Ins. & Real Estate	12.5	12.6	12.7	12.8	12.8	5.8	2.2
Services	99.7	99.3	98.2	99.3	100.5	1.8	4.4
Government	67.2	57.2	62.9	70.4	72.7	3.7	1.3
Sales ($000s) ADOR							
Aggregate Retail Sales	580,615	528,481	548,862	544,575	...	3.4	4.4
Retail	404,483	359,569	372,092	365,502	...	3.7	4.7
Food, EBR	80,407	76,172	77,487	79,985	...	4.0	4.4
Restaurants & Bars	61,856	58,651	62,258	63,907	...	4.5	3.8
Gasoline, EBR	33,869	34,088	37,025	35,182	36,989	-4.8	1.6
Contracting	92,050	89,556	89,466	89,618	...	-7.1	-4.6
Value of Construction Contract Awards ($000s) F.W. Dodge							
Total Awards	134,579	78,168	79,843	93,028	86,191	-36.8	-19.3
Residential Building	54,185	46,941	43,924	53,728	52,817	-6.8	-27.1
Non-Residential Building	75,755	21,096	9,410	32,195	23,884	-65.0	-10.1
Non-Building	4,639	10,131	26,509	7,105	9,490	-17.7	1.4
New Housing Units Authorized, Census C-40							
Total Units	562	392	407	739	403	3.3	-3.3
Single Family Units	548	384	361	481	403	5.2	0.9
2-4 Unit Structures	5	1	5	18	0	-100.0	9.8
5-plus Unit Structures	9	7	41	240	0	...	-36.1
Housing Sales and Prices, TAR							
Total Sales ($000s)	106,778	102,976	93,933	97,392	...	25.0	-0.9
Total Units	805	782	729	705	...	13.2	-4.5
Average Price ($)	132,643	131,683	128,852	138,145	...	10.4	4.2
Tucson International Airport, TAA							
Total Passengers	277,970	280,818	274,726	246,049	289,765	0.9	-0.1
Total Aircraft Movements	20,103	19,012	19,582	17,383	20,946	4.1	-2.1

TUCSON METROPOLITAN REGION (PIMA) - QUARTERLY DATA	III 96	IV 96	I 97	II 97	III 97	% change versus year ago for: most recent quarter	most recent 4-quarters
Demographics & Vital Statistics (000s, seas adj) ADHS & EBR							
Population	779.3	783.9	788.6	793.3	797.9	2.4	2.4
Natural Increase	1.1	1.1	1.1	1.1	1.1	1.5	0.7
Births	2.8	2.8	2.8	2.8	2.9	1.0	1.1
Deaths	1.7	1.7	1.7	1.7	1.7	0.7	1.4
Net Migration	3.5	3.6	3.5	3.5	3.5	-0.6	-2.5
Personal Income by Source ($mil, SAAR) EBR							
Total Personal Income	16,055	16,365	16,671	16,980	17,288	7.7	7.8
Earnings by Place of Work	9,870	10,082	10,291	10,495	10,699	8.4	8.1
Less: Contributions for Social Insurance	684	698	711	724	738	7.8	7.5
Plus: Adjustment for Residence	161	165	170	175	179	11.2	9.6
Plus: Dividends, Interest & Rents	3,491	3,549	3,607	3,669	3,731	6.9	7.8
Plus: Transfer Payments	3,217	3,266	3,315	3,366	3,417	6.2	6.7
Per Capita Personal Income ($, SAAR) EBR	20,602	20,875	21,140	21,404	21,666	5.2	5.3

See notes at bottom of Arizona - Quarterly table

	JUN 97	JUL 97	AUG 97	SEP 97	OCT 97	% change versus year ago for: most recent month	most recent 12-months
ARIZONA MONTHLY DATA							
Civilian Labor Force (000s) ADES	2,296.5	2,305.3	2,299.3	2,303.5	2,313.0	1.7	1.5
Employment	2,184.5	2,190.6	2,186.1	2,191.1	2,213.6	3.6	2.2
Unemployment	112.0	114.7	113.2	112.4	99.4	-28.1	-11.6
Unemployment Rate, Seas. Adj. (%)	4.4	4.2	4.4	4.2	3.9	-31.6	-12.8
Employees on Nonagricultural Payrolls (000s) ADES							
Total	1,952.4	1,937.5	1,947.5	1,990.4	2,022.2	4.3	4.6
Mining	14.9	15.2	15.2	15.1	15.2	4.8	4.9
Construction	132.8	134.2	134.7	134.0	135.6	4.4	4.1
Manufacturing	205.6	206.6	207.9	208.9	209.6	4.1	2.7
Durable	156.5	157.7	158.8	159.4	160.1	5.3	3.4
Nondurable	49.1	48.9	49.1	49.5	49.5	0.4	0.5
Trans., Comm. & Publ. Util.	100.1	100.5	97.6	100.6	102.2	4.0	4.3
Transportation	63.1	63.6	60.7	63.6	64.7	6.8	6.8
Trade	481.1	479.0	480.8	483.9	490.2	4.1	4.3
Wholesale	107.4	105.0	105.2	106.1	107.1	5.1	5.4
Retail	373.7	374.0	375.6	377.8	383.1	3.8	4.0
Finance, Ins. & Real Estate	123.0	123.6	124.3	124.7	126.2	7.9	6.7
Services	593.8	594.6	590.6	596.3	605.4	5.2	6.4
Government	301.1	283.8	296.4	326.9	337.8	2.2	2.7
Federal	41.7	41.9	41.6	43.0	42.6	-0.9	-2.8
State & Local	259.4	241.9	254.8	283.9	295.2	2.6	3.6
Schools	138.3	119.1	133.9	163.9	175.1	3.4	5.5
Hours Worked Per Week, Manufacturing, ADES	41.1	40.6	40.9	41.1	41.3	-2.1	-3.9
Average Hourly Earnings ($) ADES							
Copper Mining	18.89	15.25	15.65	16.57	16.21	-7.4	2.5
Construction	14.58	14.39	14.37	14.62	14.29	9.3	11.1
Manufacturing	11.70	11.96	11.74	11.82	11.78	1.5	2.7
Utilities	17.26	17.27	17.81	17.84	17.55	-3.5	2.4
Retail Trade	11.43	11.48	11.37	11.50	11.39	7.5	7.0
Wholesale Trade	13.28	13.37	13.31	13.57	13.22	5.6	2.1
Sales ($000s) ADOR							
Aggregate Retail Sales	3,641,115	3,310,505	3,376,089	3,477,251	...	6.8	5.8
Retail	2,561,594	2,288,482	2,312,215	2,390,487	...	7.9	6.2
Food, EBR	480,884	455,557	463,419	478,359	...	5.5	6.3
Restaurants & Bars	391,225	358,637	371,297	389,172	...	5.3	5.0
Gasoline, EBR	207,412	207,829	229,158	219,234	232,989	-4.0	-0.4
Gallons (000s) ADOT	166,369	173,076	181,138	164,949	176,895	-8.6	-0.6
Utilities	436,909	481,846	506,452	510,214	...	6.4	2.4
Communications	162,921	143,134	139,346	177,792	...	29.2	15.4
Amusements	52,658	50,486	61,247	41,443	...	25.7	29.7
Rentals - Real Property	284,846	26,502	-31,505	9,020	...	-97.1	-7.9
Rentals - Personal Property	248,548	198,864	187,904	227,938	...	10.9	12.7
Contracting	741,118	678,844	694,344	752,225	...	10.6	6.3
Mining - Metal, Oil & Gas	137,769	135,443	119,353	115,549	...	-2.4	-4.3
Hotel/Motel	103,861	86,558	86,917	112,427	...	6.6	8.9
Value of Construction Contract Awards ($000s)							
Total Awards	1,054,400	705,150	736,039	835,086	793,798	-9.7	-6.6
Residential Building	490,446	447,915	442,154	516,791	477,651	-2.7	-9.5
Non-Residential Building	378,010	156,943	172,535	247,842	250,089	-9.0	-11.5
Non-Building	185,944	100,292	121,350	70,453	66,058	-41.9	19.9
New Housing Units Authorized, Census C-40							
Total Units	3,925	3,892	4,956	5,507	5,113	20.3	-7.7
Single Family Units	3,645	3,777	3,694	4,155	3,563	16.5	0.2
2-4 Unit Structures	54	19	105	54	81	-12.9	-8.3
5-plus Unit Structures	256	96	1,157	1,298	1,469	33.7	-34.5
Bankruptcy Filings, U.S. Bankruptcy Court							
Total	2,154	2,301	2,129	2,157	2,248	16.6	27.1
Chapter 7	1,699	1,807	1,676	1,725	1,782	22.7	30.0
Chapter 11	18	28	33	32	22	0.0	-1.0
Chapter 13	436	465	420	399	444	-2.0	19.4

See notes at bottom of Arizona - Quarterly table.

	III 96	IV 96	I 97	II 97	III 97	% change versus year ago for: most recent quarter	most recent 4-quarters
ARIZONA - QUARTERLY DATA							
Demographics & Vital Statistics (000s, seas adj) ADHS & EBR							
Population	4,446.5	4,479.8	4,512.9	4,545.5	4,577.5	2.9	3.0
Natural Increase	9.7	10.0	9.1	9.6	9.7	-0.3	0.9
Births	18.6	19.0	18.7	19.0	19.0	2.5	2.7
Deaths	8.9	9.0	9.6	9.4	9.3	5.5	4.7
Net Migration	23.3	23.6	23.5	22.9	22.0	-5.9	-3.0
Personal Income Derivation ($mil, SAAR) EBR							
Total Personal Income	94,838	96,812	99,271	101,346	103,358	9.0	8.7
Earnings by Place of Work	65,401	66,876	68,516	70,044	71,515	9.3	8.9
Less: Contributions for Social Insurance	4,505	4,596	4,707	4,801	4,891	8.5	8.1
Plus: Adjustment for Residence	298	303	308	313	318	6.6	6.6
Plus: Dividends, Interest & Rents	17,000	17,351	17,784	18,175	18,506	8.9	9.0
Plus: Transfer Payments	16,644	16,877	17,370	17,613	17,910	7.6	7.4
Components of Earnings ($mil, SAAR) BEA							
Wages and Salaries	53,512	54,223	55,657	57,068	...	9.0	8.7
Other Labor Income	5,635	5,625	5,708	5,828	...	4.2	2.7
Proprietor's Income	6,734	6,752	6,870	7,085	...	6.3	5.4
Farm	512	464	485	588	...	33.3	11.2
Nonfarm	6,222	6,288	6,385	6,497	...	4.4	5.0
Per Capita Personal Income ($, SAAR) EBR	21,329	21,611	21,997	22,296	22,579	5.9	5.5
Average Wage Per Employee, Annual Rate ($) EBR	27,433	27,525	28,016	28,472	...	4.1	3.4

TRAVEL AND TOURISM - MONTHLY DATA	JUN 97	JUL 97	AUG 97	SEP 97	OCT 97	% change versus year ago for: most recent month	most recent 12-months
Visits to Parks & Other Recreational Areas, ADOT, NPS & ASPB							
Northern Arizona	2,221,820	2,677,087	2,461,427	1,978,945	1,573,232	-10.5	-3.4
Historical	203,491	211,370	213,393	185,993	176,414	-1.0	-1.3
Scenic	790,583	998,558	830,209	768,384	601,797	10.7	3.1
Water Based Recreation	1,227,746	1,467,159	1,417,825	1,024,568	795,021	-23.2	-7.1
Southern Arizona	178,922	167,243	145,197	143,751	209,941	-7.2	-2.8
Historical	28,426	26,978	26,037	31,980	36,374	-22.8	-5.7
Scenic	106,141	93,969	87,234	84,045	143,722	-4.9	-2.6
Water Based Recreation	44,355	46,296	31,926	27,726	29,845	6.0	0.9
International Border Crossings, USINS & USCS							
U.S. Citizens	722,656	717,859	652,269	628,858	...	-6.1	4.2
Aliens	1,873,859	1,874,132	1,963,646	1,922,374	...	10.0	-1.4
Vehicles	790,204	560,787	778,635	...	...	6.7	5.0

MEASURES OF INFLATION AND PRICES - MONTHLY DATA	JUN 97	JUL 97	AUG 97	SEP 97	OCT 97	% change versus year ago for: most recent month	most recent 12-months
Consumer Price Index (1982-1984=100) BLS							
U.S. - All Urban	160.3	160.5	160.8	161.2	161.6	2.1	2.6
U.S. - Wage Earners	157.4	157.5	157.8	158.3	158.5	1.9	2.5

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
ASBD: Arizona State Banking Department
ASPB: Arizona State Parks Board
ASU: Arizona State University, College of Business, Research Centers
BEA: Bureau of Economic Analysis, U.S. Department of Commerce
BLS: Bureau of Labor Statistics, U.S. Department of Labor
Census C-40, Bureau of the Census, U.S. Department of Commerce
EBR: Economic & Business Research Program, The University of Arizona
F.W. Dodge, Division of McGraw Hill Information Systems Co. (proprietary data provided by special permission)
NPS: National Park Service, U.S. Department of the Interior
NSCCC: Nogales-Santa Cruz Chamber of Commerce
PSIA: Phoenix Skyharbor International Airport
SAAR: Seasonally adjusted at annual rates
TAA: Tucson Airport Authority
TAR: Tucson Association of Realtors
USINS: U.S. Immigration & Naturalization Service, U.S. Department of Justice
U.S. Bankruptcy Court, District of Arizona
USCS: U.S. Customs Service, U.S. Department of the Treasury

MEASURES OF INFLATION AND PRICES

	III 96	IV 96	I 97	II 97	III 97	% change versus year ago for: most recent quarter	most recent 4-quarters
Consumer Price Index (1982-84=100) ASU & BLS							
Metropolitan Phoenix	167.6	168.6	171.3	173.9	174.4	4.1	4.2
Western Region (U.S.)	158.6	158.7	160.8	161.0	162.1	2.2	2.5
U.S. - All Urban Consumers	157.4	158.5	159.6	160.2	160.8	2.2	2.7
U.S. - Urban Wage Earners	154.6	155.8	156.7	157.3	157.9	2.1	2.6
Price Indexes (1992=100) BEA							
Gross Domestic Product	110.6	111.1	111.8	112.3	112.8	2.0	2.2
Personal Consumption Expenditures	110.8	111.6	112.2	112.5	112.9	1.9	2.4

See notes at bottom of Arizona - Quarterly table.

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