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Arizona Growth: Better, But Not Very Good

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The Arizona economy is growing, with jobs, income, retail sales, and population on the rise. Even the unemployment rate has begun to descend. However, growth remains slow compared to historical averages and the housing sector remains a major concern.

The forecast calls for the state to gradually pick up speed, with growth accelerating in 2012 and 2013. By mid-decade, most major indicators of the economy are expected to return to something close to trend growth.

Growth during 2012-2013 is likely to be relatively slow, in part because of uncertainty related to the resolution of the U.S. fiscal cliff and the prospects for major financial market disruptions originating in the Eurozone. In addition, the state housing sector is expected to continue its recovery, but it will likely be mid-decade before activity gets back to anything like normal.

The Global Context: Grinding Out Growth in a Risky Environment

The U.S. economy continues to grow, but not fast enough to satisfy anyone and certainly not fast enough to erase the massive output gap generated by the Great Recession. Thus, the U.S. unemployment rate remains high (and labor force participation low) and capacity utilization remains below pre-recession levels.

The forecast calls for the U.S. economy to continue to struggle to pick up steam. Real GDP growth is expected to be 2.1% in 2012 and 1.8% in 2013, well below average growth during the past 50 years of about 3.0% per year. Consumption spending remains sluggish, as households continue to consolidate balance sheets, deal with low house prices and modest job growth, and remain concerned about the long-run fiscal outlook.

Nationally, the housing market is expected to continue to improve, with rising investment in residential structures (finally!) and housing starts expected to hit 1.0 million in 2013.

Inflation is expected to remain subdued, with the CPI-U rising by 2.0% in 2012 and just 1.3% in 2013. Combined with the relatively high unemployment rate, this gives the Federal Reserve plenty of room to keep the federal funds rate within the 0.0%-0.25% range until mid-2015, in line with its guidance. This translates into low long-term interest rates as well. Indeed, the AAA corporate rate is expected to be just 4.0% in 2013.

So, the baseline U.S. outlook calls for continued slow growth. However, that forecast faces significant risks. In particular, the looming fiscal cliff presents particularly acute concerns. While it is unlikely that we will suffer the full brunt of running off the cliff, there will be significant uncertainty about how a deal will play out. This will undermine consumer confidence and entrepreneurial risk taking into 2013.

Further, the crisis in Europe is not over and major concerns will blast to the surface periodically during the next year, creating additional uncertainty that will sap growth.

Overall, these concerns suggest that U.S. growth will be modest through 2013, with stronger growth waiting around the corner in 2014 and 2015.

Arizona Gradually Picks Up Speed

Arizona job growth has accelerated nicely during 2012, with current seasonally adjusted data showing annualized growth of 3.6%, 1.7%, and 2.9% in the first three quarters of the year. As Exhibit 1 shows, the state added jobs at a sluggish 1.0% rate in 2011, but growth on a four-quarter-moving-average basis has accelerated to 1.8% through the third quarter of 2012. As this suggests, we expect Arizona job growth to hit 2.0% in

IN THIS ISSUE

Arizona Growth: Better, But Not Very Good 1
Poverty Measures Rank Arizona Poorly 5
Can Tax Cuts Pay For Themselves by Stimulating Growth? . . . 7
Local Area Personal Income Data for 2011 14
Forecast Tables. 16
Arizona Economic Indicators 17

"Nationally, the housing market is expected to continue to improve...and inflation is expected to remain subdued...."

Exhibit 1: Arizona Emerging Trends In 2012

Arizona Statewide	Most Recent Data	Calendar Year Percent Change 2010-2011	4 Qtr. Moving Average Percent Change from Prior 4 Qtr. Moving Average
Nonfarm Employment (CES)	2012q3	1.0	1.8
Real Personal Income	2012q2	2.0	1.1
Real Retail Sales	2012q2	6.1	3.7
Construction Jobs (CES)	2012q3	0.2	5.4
Total Residential Permits	2012q3	6.4	49.4
Real FHFA House Price Approx.	2012q2	-13.6	-7.6
		Level	
		2011	*Avg. Most Recent 4 Qtr.*
Unemployment Rate	2012q3	9.5	8.6

2012 and stay there in 2013. Even though a rough doubling in job growth is certainly welcome, it leaves us well below average annual job growth during the 1976-2011 period of 3.4%.

The state unemployment rate has posted a significant decline from 9.5% on a calendar year average during 2011 to 8.6% on a four-quarter-average ending in the third quarter of 2012. However, the news on this score is not as good as we would hope, since the declining unemployment rate was driven by a shrinking state labor force. In other words, the unemployment rate declined in large part because unemployed residents dropped out of the labor force, not because large numbers of residents found employment. We expect the unemployment rate decline to continue, with the rate dropping to 8.3% for 2012 and again to 8.0% in 2013, but for labor force growth to be negative or modestly positive. Overall, the labor market is likely to remain anemic through 2013.

Real personal income growth was sluggish during the first half of 2012, with the four-quarter moving average ending in June hitting just 1.1%, compared to 2.0% from 2010 to 2011 on a calendar year basis. We expect growth to rebound during the second half of the year, with annual personal income growth on a calendar year

Exhibit 2: Continued House Price Appreciation in Phoenix and Tucson

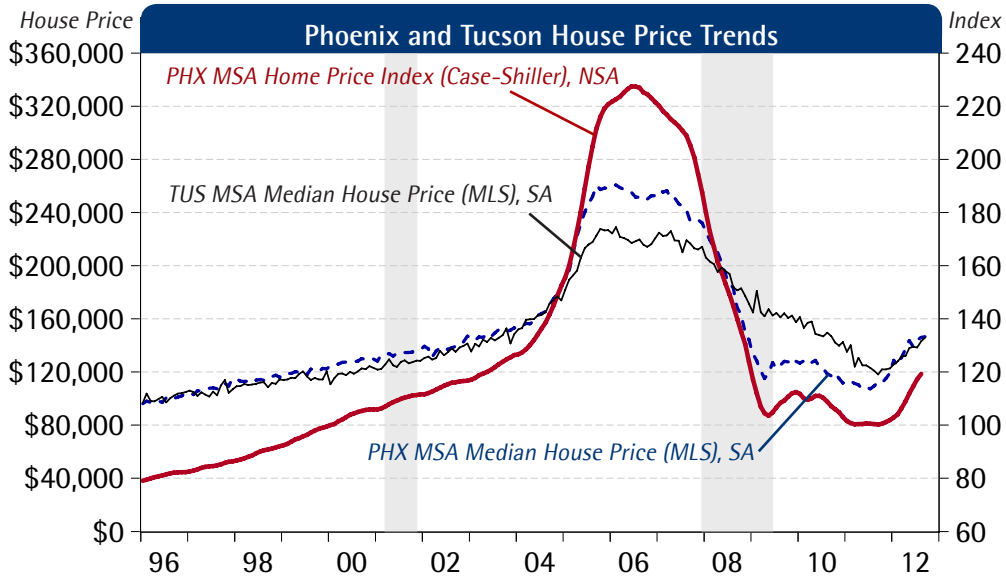


Exhibit 3: The Arizona Economy is Headed Upward

	2011	2012	Forecast 2013
Growth Rate			
Nonfarm Employment	1.0	2.0	2.0
Real Personal Income	2.0	2.7	2.8
Real Retail Sales	6.1	3.6	3.2
Population	0.6	0.7	0.9
Level			
Unemployment Rate	9.5	8.3	8.0
Housing Permits	13,310	20,345	24,833

basis at 2.7% in 2012 and 2.8% in 2013. Even with that acceleration, real income growth is expected to remain well below the 4.1% average experienced during the 1976-2011 period.

Real retail sales growth, broadly defined, is also running at a modest rate through the second quarter of 2012, with growth in the four-quarter-moving average at 3.7% through the second quarter of 2012. That's slower than the year-to-year growth rate in 2011 of 6.1%, but in the range of its central tendency (between the mean and the median growth rate) during the 1976-2011 period. We expect real retail sales growth to come in at 3.6% in 2012 and 3.2% in 2013.

The housing sector continues to improve, but remains in an "altered state." Residential permits are up by nearly 50% comparing the past four quarters to the previous four-quarter average. That's much faster than the 6.4 percent increase posted in calendar year 2011 and well above the long-term average.

Housing prices, measured by the FHFA through the second quarter of the year, remain weak on a four quarter moving average basis, but are up 2.8% on a year-over-year basis from the second quarter of 2011 to the same quarter 2012. Monthly data for Phoenix and Tucson suggest continued house price appreciation through September, as Exhibit 2 shows. After hitting bottom in May 2011, the Phoenix median house price increased by 3.68% through September 2012. This increase is reflected in the Case-Shiller index for Phoenix, which is up 18.8% from May 2011 to August 2012 (most recent month). Tucson experienced a more modest median house price increase of 16.6%.

However, residential real estate markets face significant headwinds. Mortgage foreclosures have fallen but delinquencies remain high and a significant amount of recent demand is from investors and real-estate investment funds. This is not likely to be a stable source of demand in the longer-term. Further, with house prices still far below pre-crisis levels, many homeowners find themselves holding mortgages that are under water. This continues to impede residential mobility.

Housing absorption remains the critical concern, but the recent data is scarce and based on surveys with very small sample sizes. According to data from the Census Bureau for the third quarter of 2012, rental vacancy rates for the state hit 11.1%, down slightly from the second quarter. Likewise, homeowner vacancy rates fell in the third quarter to 2.0%, from 2.8% in the second. Even with recent declines, these vacancy rates remain above pre-crisis levels. We expect continued improvement in housing activity in 2012 and 2013, but it is likely to be the middle of the decade before housing activity sheds its "altered state."

Arizona Outlook and Risks

As Exhibit 3 shows, the Arizona economy is headed upward. The forecast calls for a gradual acceleration in job, income, and population growth during the next

"The housing sector continues to improve, but remains in an "altered state"..."

"Residential permits are up by nearly 50% comparing the past four quarters to the previous four-quarter average."

two years, with retail sales growth in the neighborhood of income gains. Further, the unemployment rate gradually trends down and the housing sector picks up steam, particularly after 2013.

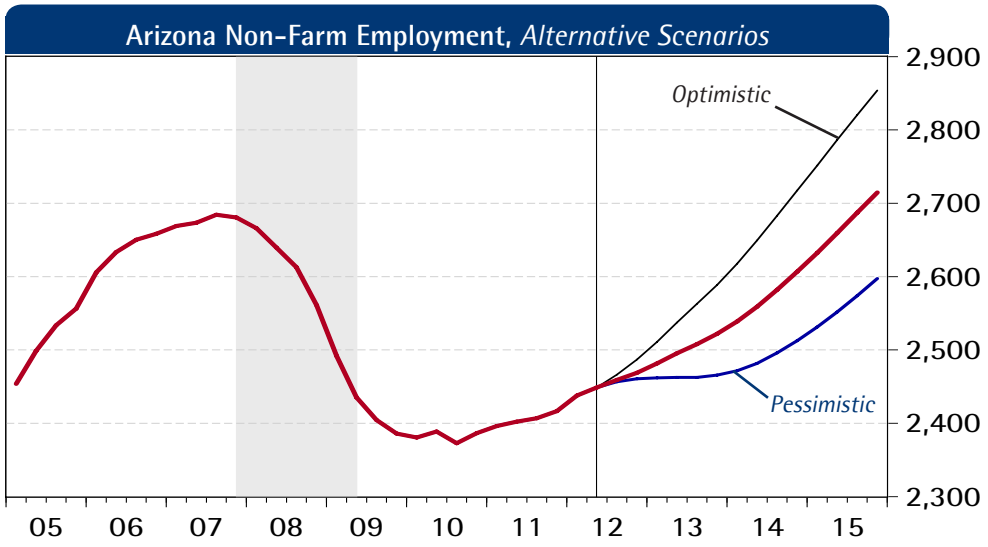
Even though the forecast calls for the state to continue growing, gains are likely to be well below long-term average growth until 2014-2015. In part, this is due to the relative weakness of the U.S. economy, as uncertainty regarding the U.S. fiscal cliff and the Eurozone crisis weigh on growth.

The baseline (most probable) scenario assumes that the fiscal cliff is largely avoided with little damage to consumer and business confidence and that the European recession turns out to be relatively modest. However, this may not be how events play out. In order to assess the impact of these assumptions, we explore two alternative scenarios, one more pessimistic than the baseline and one more optimistic than the baseline.

The pessimistic scenario assumes that the U.S. sails off the fiscal cliff, with no tax and spending deal reached until early 2013. This generates a significant and extended drop in consumer and business confidence. Meanwhile the European debt crisis spirals out of control and into a financial crisis. The decline in demand created by the lost confidence and more severe European recession in turn generates much slower U.S. growth in late 2012 and an outright contraction during the first half of 2013. Exhibit 4 suggests that this scenario would stop Arizona job growth in its tracks, leaving jobs flat-lined until 2014.

Exhibit 4 also shows the impact on Arizona of an optimistic scenario for the national economy. In this case, the fiscal cliff is handled smoothly before 2013 and the European Union avoids a financial crisis (no countries exit the Eurozone). In addition, residential construction is assumed to bounce back much faster than under baseline assumptions. As we might expect, Arizona job growth leaps ahead in 2012 and 2013 under these assumptions.

Exhibit 4: Forecast Scenarios Compared



Poverty Measures Rank Arizona Poorly

by Marshall J. Vest

Recent releases from the U.S. Census Bureau show that Arizona tied with Alabama with the 6th worst poverty rate in the nation. The percentage of people living below the poverty level in 2011 was 19.0%, representing over 1.2 million Arizona residents, according to the American Community Survey's 1-year estimates. Poverty was highest in Mississippi at 22.6%, followed by New Mexico (21.5%), Louisiana (20.4%), Arkansas (19.5%), Georgia and Kentucky (both 19.1%), and Alabama and Arizona (both 19.0%). Nationwide, 15.9% of the population was living in poverty.

Poverty rates rose over the past decade, increased significantly during the recession, and continued climbing through 2011. Nationwide, poverty increased by 3.5 percentage points over the past 11 years, from 12.4% in 2000 to 15.9%. In Arizona, the increase measured 5.1 points, rising from 13.9% to 19.0%.

Data for metro areas and counties also are included in the tabulations. Local headlines declared that Tucson was "Among the Nation's Poorest Regions," and "Tucson Sixth Poorest in the Nation." The misleading headlines failed to reveal that metro Tucson ranked 6th among metro areas with more than 500,000 population. The rankings of the largest metros showed McAllen-Edinburg-Mission, Texas with the worst concentration of poverty at 37.7%. The top 10 worst are shown in Exhibit 1.

If the entire collection of the nation's 548 micro and metro areas are included, Pima County (metro Tucson) ranks 105th. Moreover, Pima County is not the worst in Arizona. The Show Low micropolitan area is the third worst in the nation, with 33% residing in poverty. Exhibit 2 shows Arizona's micro and metro areas (each defined as an entire county or as two counties for Metro Phoenix) and their national ranking among some 548 areas that were included in the rankings.

Exhibit 1: Large Metro Areas with the Highest Poverty Rates in 2011

1. McAllen-Edinburg-Mission, Texas	37.70%
2. Fresno, CA	25.80%
3. El Paso, TX	24.70%
4. Bakersfield-Delano, CA	24.50%
5. Modesto, CA	23.80%
6. Tucson, AZ	20.40%
7. Albuquerque, NM	20.40%
8. Toledo, OH	20.20%
9. New Orleans-Metairie-Kenner, LA	19.50%
10. Lakeland-Winter Haven, FL	19.40%

Source: 2011 American Community Survey 1-Year Estimates

Poverty in Arizona is high due to the large portions of the population that are American Indian or Hispanic. Statewide, some 5.2% of the population is American Indian, representing some 22 tribes and 21 reservations. Poverty and unemployment on reservations are chronically high. Data for the period 2006-2010 (ACS 5-year estimates) shows poverty rates for some of Arizona's reservations to be 39.4% for the Pascua Pueblo Yaqui Reservation and 41.2% for the Tohono O'odham Nation Reservation (both in Pima County), Fort Apache Reservation 46.7%, Gila River Indian Reservation 47.8%, Havasupai Reservation 36.6%, Hopi Reservation 35.2%, Hualapai Indian Reservation 41.2, Maricopa (Ak Chin) Indian Reservation 42.4%, San Carlos

Exhibit 2: Poverty in Arizona's Micro and Metro Areas

National Rank		*Percent*
3	Show Low Micro	33.00%
67	Flagstaff Metro	21.90%
72	Yuma Metro	21.80%
73	Lake Havasu City-Kingman Micro	21.70%
105	Tucson Metro	20.40%
138	Sierra Vista- Douglas Micro	19.40%
154	Prescott Metro	19.00%

Source: 2011 American Community Survey 1-Year Estimates

Reservation 46.0%, and Yavapai-Apache Nation Reservation 42.4%. The Hispanic population represents 30% of Arizona's 6.4 million residents and 29.6% live in poverty.

Rates that net out the effects of these two groups significantly lower overall poverty rates. For example, without American Indians in the computation, we estimate that poverty rates would be a full percentage point lower statewide and over 10 percentage points in Show Low. Arizona would rank 15th rather than 6th. Metro Tucson would rank around 130 rather than 105. If Hispanics are excluded, Arizona's rates would be 14.4% and its ranking 29th. The rate for metro Tucson would be 15.5% and its ranking 315th.

So, high poverty rates among American Indians and Hispanics combine to boost poverty rates and exacerbate Arizona's rankings to other states. Programs targeting those populations are the best way to reduce poverty in Arizona.

Other often-cited reasons for high poverty in Arizona are low wage levels across many occupations, high unemployment, lack of jobs relative to the supply of labor, mediocre job skills, and poor public education results.

Measures of poverty are collected by the Census Bureau through several major household surveys and programs. The Current Population Survey Annual Social and Economic Supplement (CPS ASEC), a survey of some 100,000 addresses across the nation is the source of official national poverty estimates and includes measures of income and health insurance coverage as well. The American Community Survey (ACS) provides estimates for smaller areas such as cities and metro areas. Quoting from the latter, "poverty status is determined by comparing annual income to a set of dollar values called poverty thresholds that vary by family size, number of children, and age of householder ... Poverty thresholds are updated annually to allow for changes in the cost of living ... They do not vary geographically."

For current and historical thresholds, visit:

http://www.census.gov/hhes/www/poverty/data/threshld/index.html.

Can Tax Cuts Pay For Themselves by Stimulating Growth?

by Alberta H. Charney, Ph.D.

The phrases "cutting taxes will grow the economy out of the recession" and "cutting taxes pay for themselves because the economy will grow enough to make up the lost revenue" are commonly used arguments for reducing tax rates because they imply there will be no reduction in public expenditures or public services when cuts are made. The following discussion begins by using simple numerical examples of various tax cuts to determine the size of the multipliers needed for a tax cut to grow the economy sufficiently to recoup the lost revenue for a tax cut. Those same calculations are then applied to Arizona and it's two major taxes -- individual income and sales tax.

Hypothetical Examples

Simple numerical examples are used in the following discussion to demonstrate whether a tax cut is likely to provide sufficient stimulus to make up for the lost revenues of the tax cut.

Suppose there is a Tax Base of $1,000,000. This can be the income tax base (taxable income) or it can be the sales tax base (taxable sales) or any other tax base. Suppose there is an initial 10% tax on this tax base, so the tax generates total revenues of $100,000.

Suppose, in an attempt to "stimulate" the economy, the tax rate is cut to 5% and revenues initially fall to $50,000 and the remaining $50,000 is returned to taxpayers. This $50,000 will be spent in the state and will provide a stimulative effect, but will it be enough to recoup the lost $50,000 in revenues?

In order to address this question, we address a different but related question: How much stimulus is required in order to recoup the lost revenues of the tax cut and how big does the economic multiplier have to be in order to create enough stimulus? With the lower 5% tax rate, a total Tax Base of $2,000,000 is required in order to generate $100,000 in revenue. The amount of money that was injected back into the economy through the tax cut is the $50,000 that is retained by taxpayers and this money must generate an additional $1,000,000 of tax base. In other words, the money given back to taxpayers, when it is spent, must have a multiplier effect of 20 in order to make up the lost revenue ($1,000,000 required additional tax base / $50,000 retained by taxpayers) (Table X).

Table X contains other examples of different tax rates and tax cuts and computes the multiplier necessary to restore revenues to their previous levels. Consider the same $1,000,000 tax base but the initial tax is 8%, which generates $80,000 per year in revenues. If that rate is reduced to 6%, then revenues fall to $60,000 and $20,000 is retained by the taxpayer. In this example, the tax base has to grow to $1,333,333 in order for the lower 6% tax rate to generate the original $80,000 and the necessary multiplier has to be 16.7 ($333,333 additional base / $20,000 retained by taxpayers).

Several other numerical examples are in Table X. Note that the size of the multiplier required to recoup all the revenues from a rate reduction decreases as the initial tax rates increase. Comparing Column 4 and Column 6 shows that a 25% rate reduction (i.e., 20% tax rate reduced to 15% in Column 4 and a 40% tax rate reduced to 30% in Column 6), shows that when the initial rate is comparatively lower, the multiplier must be larger to generate the same revenues as before the tax cut. A relatively small reduction in a tax rate requires smaller multipliers to make up

"Cutting taxes will grow the economy out of recession" is a commonly used argument for reducing tax rates. It implies there will be no reduction in public expenditures or public services when cuts are made....What mulitpliers are needed for this to be true?"

Table X: Hypothetical Tax Bases, Tax Rates, Tax Cuts and the Required Multiplier When the Tax Base is the Whole Economy

		Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8
A	Initial Size of the Economy	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000
B	Initial Tax Base	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000
C	Initial Tax Rate	10%	10%	5%	20%	20%	40%	40%	40%
D=B*C	Initial Revenue	$100,000	$100,000	$50,000	$200,000	$200,000	$400,000	$400,000	$400,000
E	New Tax Rate	5%	9%	4%	15%	18%	30%	20%	38%
F=E*B	New Revenue	$50,000	$90,000	$40,000	$150,000	$180,000	$300,000	$200,000	$380,000
G=D-F	Returned to Taxpayer (stimulus)	$50,000	$10,000	$10,000	$50,000	$20,000	$100,000	$200,000	$20,000
H=D/E	Tax Base Required to Restore Initial Revenue	$2,000,000	$1,111,111	$1,250,000	$1,333,333	$1,111,111	$1,333,333	$2,000,000	$1,052,632
I=H-B	Required Change in Tax Base	$1,000,000	$111,111	$250,000	$333,333	$111,111	$333,333	$1,000,000	$52,632
J=I/G	Required Multiplier	20.0	11.1	25.0	6.7	5.6	3.3	5.0	2.6

lost revenues than a larger cut in the tax rate (pairwise compare Columns 1 and 2, Columns 4 and 5, and Columns 6, 7 and 8), a non-surprising result. In this hypothetical example, the required multipliers range from 2.6 to 25, meaning that the stimulus must multiply the tax base by 2.6 fold to 25 fold in order for the tax cuts to pay for themselves.

Tax Bases are Subsets of the Overall Economy

All of the required multipliers computed in the examples in Table X are considerably lower than they actually have to be because tax bases typically only represent a portion of an overall economy. Taxable income, for example, is only a subset of total state income because of numerous exemptions, deductions and special treatment of certain types of income (e.g., capital gains, social security). Similarly, the sales tax is imposed primarily on the purchases of goods (usually not services) so only a portion of total purchases is contained in the tax base, i.e., taxable sales. Because tax bases are subsets of the total economy, the stimulative effect of the tax cut has to be large enough to grow the whole economy by substantially more than the necessary increase in the tax base.

In Table Y, the computations in Table X are repeated under the assumption that the hypothetical tax base of $1,000,000 is one-half the size of the overall economy. In this case, the total economy must be $2,000,000 in order for the hypothetical tax base to be $1,000,000. When the tax base is half the size of the economy as a whole, then the amount of money returned to taxpayers must grow (stimulate) the overall economy by twice as much as in Table X in order to create the same change in the tax base as in Table X. As a result, all of the computed required multipliers

Table Y: Hypothetical Tax Bases, Tax Rates, Tax Cuts and the Required Multiplier When the Tax Base is One-Half of the Economy

		Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8
A	Initial Size of the Economy	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000
B	Initial Tax Base	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000
C	Initial Tax Rate	10%	10%	5%	20%	20%	40%	40%	40%
D=B*C	Initial Revenue	$100,000	$100,000	$50,000	$200,000	$200,000	$400,000	$400,000	$400,000
E	New Tax Rate	5%	9%	4%	15%	18%	30%	20%	38%
F=E*B	New Revenue	$50,000	$90,000	$40,000	$150,000	$180,000	$300,000	$200,000	$380,000
G=D-F	Returned to Taxpayer (stimulus)	$50,000	$10,000	$10,000	$50,000	$20,000	$100,000	$200,000	$20,000
H=D/E	Tax Base Required to Restore Initial Revenue	$2,000,000	$1,111,111	$1,250,000	$1,333,333	$1,111,111	$1,333,333	$2,000,000	$1,052,632
I=H-B	Required Change in Tax Base	$1,000,000	$111,111	$250,000	$333,333	$111,111	$333,333	$1,000,000	$52,632
J=I*A/B	Required Change in the Economy	$2,000,000	$222,222	$500,000	$666,667	$222,222	$666,667	$2,000,000	$105,263
I=J/G	Required Multiplier	40.0	22.2	50.0	13.3	11.1	6.7	10.0	5.3

in Table Y are double those in Table X, ranging from 5.6 to 50. If a tax base is only one-third of the overall economy, then the required multipliers would have to be three times the size of those in Table X.

From the hypothetical examples, the multiplier necessary to recoup a cut in a tax rate is larger when a) the tax rate is large to start with, b) the tax cut is proportionally large and c) the tax base is a relatively small share of the economy.

Calculations for Arizona

Before any attempt can be made to compute potential required multipliers for tax rate changes in Arizona, the "size" of the state of Arizona must be determined. Two different measures are typically used to measure the size of a state: personal income and gross state product. Although there is considerable overlap between these two measures, specifically labor and proprietor's income, there are some differences, as well. For the purposes of these calculations, personal income will be used simply because it is the smaller of the two, thereby resulting in smaller required multipliers.

Table Z provides a few years of data for Arizona's gross state product and personal income. Taxable sales (excluding the severance and use tax sales) were approximately $85 million in 2011, which was approximately 38% of total state personal income. In 2007, just before the beginning of the massive recession, taxable sales were strong, representing 49% of total state personal income. The sales tax

Table Z: Numerical Examples for Arizona

(all dollar figures are in $millions)	2011	2010	2009	2008	2007
Gross State Product (millions of current dollars)	$258,447	$249,824	$245,664	$261,128	$259,157
State Personal Income	$227,287	$216,590	$212,873	$226,465	$218,588
Taxable Sales in Arizona (sales tax base)[1]	$85,492	$80,558	$82,969	$98,220	$107,040
Share of State Personal Income	0.38	0.37	0.39	0.43	0.49
State & Local Sales Tax Rate, percent[2]	9.10	8.60	8.10	8.10	8.10
Taxable Income in Arizona (income tax base)[3]				$81,633	$88,548
Share of State Personal Income				0.36	0.41
Individual Income Tax Rate (average), percent[4]				3.29	3.38
Reduce State Sales Tax Rate by 1 percent					
Original Collections	$7,780	$6,928	$6,720	$7,956	$8,670
New Sales Tax Rate After Rate Reduction	8.10	7.60	7.10	7.10	7.10
Collections After Sales Tax Rate Reduction	$6,925	$6,122	$5,891	$6,974	$7,600
Amount Retained by Taxpayers	$855	$806	$830	$982	$1,070
Sales Tax Base Required to Generate Previous Revenues	$96,046	$91,158	$94,655	$112,054	$122,116
State Personal Income Required to Generate Higher Sales	$255,347	$245,089	$242,855	$258,361	$249,374
Required Change in State Personal Income	$28,060	$28,499	$29,982	$31,896	$30,787
Required Multiplier	33	35	36	32	29
Reduce Income Tax Rate by 1 percent					
Original Collections				$2,689	$2,989
New Income Tax Rate After Rate Reduction				2.29	2.38
Collections After Income Tax Rate Reduction				$1,872	$2,103
Amount Retained by Taxpayers				$816	$885
Taxable income required to generate previous revenues				$117,225	$125,829
State Personal Income Required to Generate Higher Taxable Income				$325,201	$310,619
Required Change in State Personal Income				$98,736	$92,032
Required Multiplier				121	104

[1]Excludes the Mining and Timbering Severance Tax base and the Use Tax base from these totals.

[2]Assumes the ongoing 5.6% state tax, the 1% temporary tax, a common 2% local tax and 0.5% transportation tax that applies in Arizona's largest two metropolitan areas. The temporary tax began in mid-2010 and will end in mid-2013.

[3]Obtained from the 2008 Individual Income Tax Statistics from the Arizona Department of Revenue, the most recent report available.

[4]Arizona has an increasing block rate structure so the rate varies by taxable income. This is an average "effective" rate computed

rate is assumed to be 9.1% in 2011, 8.6% in 2010 and 8.1% in 2009 and before. This combined rate 9.1% rate consists of the 5.6% state sales tax rate, a common 2% local sales tax rate, a ½% transportation sales tax rate that is imposed in the two major metropolitan areas, and the 1% temporary sales tax rate that began in mid-2010 and will end in mid-2013. The 8.1% rates are prior to the temporary tax rate and the 8.6% is an average of the 9.1% and 8.1% since the temporary tax started near the middle of the year.

Taxable income, the tax base for the Individual Income Tax, was $81,633 million in 2008 and $88, 548 million in 2007, which was 36% and 41% of total personal income in the state for the two years, respectively. The tax rates shown, 3.29% and 3.38% are the average tax rates for 2008 and 2007, computed by dividing total tax liability by total taxable income for those two years.

The lower portion of **Table Z** shows the Arizona computations for the multiplier necessary for a tax cut to pay for itself, i.e., for the tax cut to stimulate the economy sufficiently to restore total tax revenues to their previous levels before the tax cut. A cut in the sales tax rate by 1%, from 9.1% to 8.1% in 2011 would reduce collections by $855 million, an amount that would be retained by taxpayers, which would be spent locally. In order for the lower 8.1% sales tax to generate the original amount of revenues ($7,780 million), the sales tax base would have to grow from the original $85,492 million to $96,046 million. Since the sales tax base comprises approximately 38% of the total state economy, the total state economy (personal income) would have to grow from $227,287 million to $255,347 million to generate that higher level of the sales tax base. This additional $28,060 million in state personal income is the required amount of growth that must be created by the original tax cut of $855 million in order for the tax cut to pay for itself by growing the economy. The multiplier necessary to generate this amount of economic change is 33. Similar computations for 2007 through 2010 indicate that the multipliers necessary for cuts in sales taxes to pay for themselves range from 29 to 36. These vary mostly due to the share of the total economy represented by the tax base, although the level of the original tax rate and the relative size of the tax cut also play a role.

The bottom portion of **Table Z** computes the necessary multipliers for a 1% decrease in the income tax rate, from 3.29% to 2.29% in 2008 and from 3.38% to 2.38% in 2007. Using the 2008 cut in the tax rate, collections fall from $2,689 million to $1,872 million, returning $816 million to taxpayers. Tax bases have to grow substantially to make up the lost revenue associated from this rate reduction, mainly because the cut represents almost a third of the initial total tax rate. The 2008 income tax base of $81,633 million has to grow to $117,225 million in order to recoup the revenue losses from the tax cut and personal income must grow from $226,465 million to $325,201 million to generate that change in the tax base. In order for the original tax cut of $816 million (the dollar amount returned to tax payers) to stimulate a change in personal income of $98,736 million, the economic multiplier must be a staggering 121. That the required multiplier for this income tax example is much higher than the required multiplier for the sales tax example is primarily due to the fact that the 1% cut in the income tax is proportionally a much larger cut than is the sales tax cut.

Multipliers

The calculations in **Tables Z** represent what the multipliers have to be in Arizona for tax cuts to be self-financing, i.e., to grow the economy sufficiently to offset the loss of revenues due to a reduction in a tax rate. But how large are the relevant multipliers in Arizona? Using an Input-Output model for Arizona developed by IMPLAN, income multipliers for a variety of sectors were computed. Averaging income multipliers across categories of spending most likely to be affected by an increase in taxpayer spending yielded a 1.86 multiplier. These categories of spending include construction, retailing, amusements, private education, medical and repair and personal services.

Table W: Arizona Calculations if the Multipliers were 2.0

	2011	2010	2009	2008	2007
Reduce State Sales Tax Rate by 1.0%					
Original State Personal Income	$227,287	$216,590	$212,873	$226,465	$218,588
Original Sales Tax Base	$85,492	$80,558	$82,969	$98,220	$107,040
Original Sales Tax Collections	$7,780	$6,928	$6,720	$7,956	$8,670
New Sales Tax Rate After Rate Reduction	8.10	7.60	7.10	7.10	7.10
Collections After Sales Tax Rate Reduction	$6,925	$6,122	$5,891	$6,974	$7,600
Amount Retained by Taxpayers	$855	$806	$830	$982	$1,070
Change in Personal Income with Multiplier of 2.0	$1,710	$1,611	$1,659	$1,964	$2,141
State Personal Income After Tax Cut with Change Added	$228,997	$218,201	$214,532	$228,429	$220,728
Sales Tax Base After Tax Cut	$86,135	$81,158	$83,616	$99,072	$108,089
Sales Tax Revenue After Tax Cut	$6,977	$6,168	$5,937	$7,034	$7,674
Additional Revenue Due to "Stimulus of the Tax Cut"	$52	$46	$46	$60	$74
Final Sales Tax Revenue After Tax Cut	$6,977	$6,168	$5,937	$7,034	$7,674
Reduce Income Tax Rate by 1.0%					
Original State Personal Income	$227,287	$216,590	$212,873	$226,465	$218,588
Original Taxable Income (Income Tax Base)				$81,633	$88,548
Original Income Tax Collections				$2,689	$2,989
New Income Tax Rate After Rate Reduction				2.29	2.38
Collections After Income Tax Rate Reduction				$1,872	$2,103
Amount Retained by Taxpayers				$816	$885
Change in Personal Income with Multiplier of 2.0				$1,633	$1,771
State Personal Income After Tax Cut with Change Added				$228,098	$220,358
Taxable Income After Tax Cut				$82,222	$89,265
Income Tax Revenue After Tax Cut				$1,886	$2,120
Additional Revenue Due to "Stimulus of the Tax Cut"				$13	$17
Final Income Tax Revenue After Tax Cut				$1,886	$2,120

Income multipliers are not the appropriate multipliers to use for an analysis of an increase in taxpayer spending because they implicitly assume that a person is working in a particular industry (the direct industry) earning $X. Income multipliers therefore also include $Y in income in industries that sell to that direct industry (the indirect industries) as well as the effects of when ($X+$Y) is spent locally (the induced income $Z). The total income multiplier is then ($X + $Y + $Z)/$X. The average income multiplier of 1.86 is not an accurate measure of assessing the effects of an increase in local spending because it should really only consider the effects of the initial income $X on induced income $Z. One way of assessing that is to use just the induced component, relative to direct and indirect income, i.e., ($X + $Y + $Z)/($X+$Y), which falls in the 1.46-1.47 multiplier range. Even these aren't perfect measures of an increase in local spending because substantial federal taxes (federal income and payroll taxes) are removed from the impacts of the income before it is initially spent in the model but, in the present example, these taxes have already been paid on the money taxpayers would get back from a state tax cut so the initial impact of $X in spending is

larger than the initial impact of $X income. Without knowing precisely in which sectors this additional spending will occur and for the purposes of this article, it is assumed that the multiplier is approximately 2.

Table W contains calculations of revenues created due to the stimulating effect of the tax cut and the final revenue after the tax cut. For the sales tax rate cut from 9.1% to 8.1% in 2011, the additional money retained by taxpayers is doubled in the economy (assuming all of it is spent locally) and the $1,710 million added to personal income generates approximately $52 million more in revenues. Therefore, the cut in the sales tax rate from 9.1% to 8.2% does not reduce revenues from $7,780 million to $6,925 million as was initially estimated; rather revenues are only reduced from $7,780 million to $6,977 million due to the small stimulus of the additional taxpayer spending.

Again, assuming the multiplier is 2, the 1% reduction in the state income tax rate returns $816 million to taxpayers, which is doubled in the economy to add $1,633 to income in the state (2008 example). The additional income tax revenues generated from the change in income is approximately 13 million. Thus, instead of income tax revenues falling from $2,689 million to $1,872 million, the stimulative effect of the cut restores only 13 million and tax revenues are reduced from $2,689 million to $1,886 million.

Conclusion

Under the assumption of a reasonable multiplier of 2, tax cuts result in reductions in revenues that are slightly less than what would otherwise be expected as a result of a small stimulative effect of the tax cut. The multipliers necessary for tax cuts to pay for themselves are extraordinarily high and substantially out of the range of any multipliers computed for the type of sectors in which consumers spend. It is simply not reasonable to believe that tax rate cuts will not reduce the amount of revenue collected by the state. Instead, tax rate cuts will reduce revenues by almost the full amount implied by the rate cut.

It is important to note that all of the calculations in Tables X, Y, Z and W assume that there are zero negative impacts of state spending cuts associated with the tax rate cuts. If the negative effects of cuts in state spending are considered, they would likely offset or more than offset the small stimulative effect of the tax cut. If the effect of government expenditures exactly offsets the small stimulative effect, then revenues fall by the full amount of the tax cut. If the economic effects of government expenditures are larger than the stimulative effect of the tax cut, then revenues will fall by more than then initial amount.

“It is simply not reasonable to believe that tax rate cuts will not reduce the amount of revenue collected by the state. Instead, tax rate cuts will reduce revenues by almost the full amount implied by the rate cut.”

Local Area Personal Income Data for 2011

by Valorie Rice

Local area personal income data for 2011 were released by the Bureau of Economic Analysis on November 26th. Personal income grew by 4.9 percent in Arizona between 2010 and 2011 while the U.S. as a whole saw income growth of 5.2 percent. Most Arizona counties experienced a better than 3 percent growth over the year, with only Apache County falling below that mark. The one-year change for Arizona was in line with the 4.75 percent compound annual growth over the decade (Table 1).

Arizona's per capita personal income for 2011 was $35,062. Maricopa county enoys the highest per capita personal income among Arizona counties with $38,071. The only other county to best the state figure for 2011 is Cochise with $35, 738, which puts it in second place, above Pima at $34,961. Historically, Pima has consistently been right behind Maricopa in per capita income, but there are a number of changes in the rankings when looking at the last ten years. Despite having the largest growth over the decade, both in income and population, Pinal now has the smallest per capita personal income in the state. It is an interesting contrast in that the two counties forming the Phoenix-Mesa-Glendale Metropolitan Statistical Area should be at opposite ends of the income spectrum (Table 2).

Table 1: Personal Income - Arizona & Counties

($000s)	2011	% Change 2010-2011	Annual Growth 2001-2011
Arizona	227,286,519	4.94	4.75
Apache, AZ	1,868,915	2.32	5.39
Cochise, AZ	4,763,499	5.01	6.32
Coconino, AZ	4,620,811	3.91	4.78
Gila, AZ	1,692,440	3.90	4.88
Graham, AZ	936,660	3.68	6.37
Greenlee, AZ	269,655	8.18	4.73
La Paz, AZ	593,229	9.72	5.56
Maricopa, AZ	147,724,392	5.25	4.37
Mohave, AZ	5,290,530	4.30	5.16
Navajo, AZ	2,744,408	3.19	5.63
Pima, AZ	34,596,360	3.96	4.67
Pinal, AZ	9,301,723	6.40	9.90
Santa Cruz, AZ	1,193,646	3.61	5.20
Yavapai, AZ	6,248,490	3.88	5.06
Yuma, AZ	5,441,761	4.92	6.10

Table 2: 2011 Rankings by Per Capita Income and Change Over Time

Ranked by 2011 Per Capita Personal Income			How County Rankings Have Changed		
	Arizona	35,062	2001	2007	2011
1	Maricopa, AZ	38,071	Maricopa, AZ	Maricopa, AZ	Maricopa, AZ
2	Cochise, AZ	35,738	Pima, AZ	Pima, AZ	Cochise, AZ
3	Pima, AZ	34,961	Coconino, AZ	Coconino, AZ	Pima, AZ
4	Coconino, AZ	34,353	Yavapai, AZ	Cochise, AZ	Coconino, AZ
5	Gila, AZ	31,846	Cochise, AZ	Greenlee, AZ	Gila, AZ
6	Greenlee, AZ	31,333	Gila, AZ	Yavapai, AZ	Greenlee, AZ
7	Yavapai, AZ	29,490	Greenlee, AZ	Gila, AZ	Yavapai, AZ
8	La Paz, AZ	29,053	Mohave, AZ	Mohave, AZ	La Paz, AZ
9	Yuma, AZ	27,091	Pinal, AZ	Yuma, AZ	Yuma, AZ
10	Mohave, AZ	26,145	Yuma, AZ	La Paz, AZ	Mohave, AZ
11	Apache, AZ	25,813	Santa Cruz, AZ	Santa Cruz, AZ	Apache, AZ
12	Navajo, AZ	25,554	La Paz, AZ	Pinal, AZ	Navajo, AZ
13	Graham, AZ	25,215	Apache, AZ	Graham, AZ	Graham, AZ
14	Santa Cruz, AZ	25,037	Navajo, AZ	Navajo, AZ	Santa Cruz, AZ
15	Pinal, AZ	24,287	Graham, AZ	Apache, AZ	Pinal, AZ

Forecast and Indicator Tables

Forecast Tables 16

Arizona Indicators

Arizona and US 17
Metropolitan Statistical Areas 18
Counties 20

TABLES: SOURCES AND ABBREVIATIONS

ADHS: Arizona Department of Health Services
ADOA: Arizona Department of Administration, Office of Employment and Population Statistics
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
Micropolitan SA: Micropolitan Statistical Area must have at least one urban cluster of at least 10,000, but less than 50,000 inhabitants.
EBR: The Economic and Business Research Center, The University of Arizona.
MSA: Metropolitan Statistical Area must have at least one core urbanized area of 50,000 or more inhabitants.
PSHIA: Phoenix Sky Harbor International Airport
SAAR: Seasonally adjusted at annual rates
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

* All Aggregate Retail Sales figures reported by EBR include retail, food, restaurant & bars and gasoline sales.
Source: Economic and Business Research Center, Eller College of Management, The University of Arizona.

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Forecasting Project is a community-sponsored research unit within the Economic and Business Research Center producing quarterly economic forecasts for Arizona and its metro areas. These forecasts are recognized as among the most accurate in the Western states.

Forecast Tables

Arizona	2011	2012	2013	2014	2015
Personal Income ($mill)	227,287	237,590	247,936	262,633	280,550
% change	4.9	4.5	4.4	5.9	6.8
Retail Sales ($mill)	77,388	81,627	85,513	90,686	96,190
% change	9.1	5.5	4.8	6.0	6.1
Non Farm Employment (000s)	2,405.5	2,453.6	2,501.7	2,571.5	2,673.4
% change	1.0	2.0	2.0	2.8	4.0
Population (000s)	6,438.2	6,481.8	6,540.0	6,625.6	6,743.2
% change	0.6	0.7	0.9	1.3	1.8
Residential Permits (units)	13,310	20,345	24,833	35,843	48,552
% change	6.4	52.9	22.1	44.3	35.5

Phoenix-Mesa MSA	2011	2012	2013	2014	2015
Personal Income ($mill)	159,127	166,387	174,228	184,853	197,229
% change	4.9	4.6	4.7	6.1	6.7
Retail Sales ($mill)	53,463	56,158	59,117	62,617	66,662
% change	9.9	5.0	5.3	5.9	6.5
Non Farm Employment (000s)	1,712.8	1,756.2	1,793.9	1,850.2	1,922.4
% change	1.4	2.5	2.1	3.1	3.9
Population (000s)	4,227.6	4,266.4	4,313.5	4,374.2	4,452.8
% change	0.6	0.9	1.1	1.4	1.8
Residential Permits (units)	9,081	15,501	18,198	23,790	32,870
% change	9.4	70.7	17.4	30.7	38.2

Tucson MSA	2011	2012	2013	2014	2015
Personal Income ($mill)	35,921	37,220	38,860	40,952	43,299
% change	4.5	3.6	4.4	5.4	5.7
Retail Sales ($mill)	11,498	12,201	12,619	13,056	13,488
% change	7.6	6.1	3.4	3.5	3.3
Non Farm Employment (000s)	354.6	357.3	362.1	368.9	378.1
% change	0.1	0.8	1.3	1.9	2.5
Population (000s)	986.1	991.3	1,000.1	1,011.5	1,025.8
% change	0.5	0.5	0.9	1.1	1.4
Residential Permits (units)	2,242	2,899	3,814	4,580	5,806
% change	15.7	29.3	31.6	20.1	26.8

Arizona Economic Indicators

Arizona Summary - Monthly	Jul 2012	Aug 2012	Sep 2012	Oct 2012	Nov 2012
Civilian Labor Force (seas. adj.), BLS	3,005,601	3,003,137	3,006,831	3,011,092	3,013,031
Unemployment Rate (seas. adj.), BLS	8.3	8.3	8.2	8.1	7.8
Total Nonfarm Employment (000s, Seas. Adj.), BLS	2,460	2,462.50	2,467.20	2,464.10	2,476.80
Private	2,033.50	2,043.90	2,047.60	2,058	2,079.80
Government	362.4	400.7	424.7	426.4	427.3
Aggregate Retail Sales ($000), EBR	6,186,712.51	6,419,041.49		6,588,229	
New Residential Permits (units), Census C-40	1,996	2,199	1,626	1,758	1,479
Arizona Summary - Quarterly	**2011 Q3**	**2011 Q4**	**2012 Q1**	**2012 Q2**	**2012 Q3**
Population* (seas. adj.), ADOA & EBR	6,444,142	6,455,550	6,465,992	6,476,384	6,488,762
% Chg from Year Ago	0.59%	0.63%	0.65%	0.66%	0.69%
Natural Increase, ADHS/EBR	11,278	9,660	8,481	8,633	11,391
Birth Rate (per 1,000), ADHS & EBR	14	13.3	12.7	12.5	14
Net Migration, ADHS & EBR	649	1,230	1,512	2,158	2,571
Total Personal Income ($, SAAR), BEA	227,350	229,168	232,019	235,121	240,350
% Chg from Year Ago	4.50%	4.58%	2.85%	3.56%	5.72%
Per Capita Pers. Inc. ($ mil, SAAR), BEA & EBR	35,280	35,499	35,883	36,304	37,041
Civilian Nonag Wage Rate, ($, SAAR), BEA	47,333	47,671	47,872	48,170	49,025
All Transactions House Price Index, FHFA	235.43	240.33	238.27	241	249.93
% Chg from Year Ago	-11.61%	-7.39%	-2.61%	3.52%	6.16%

*Population numbers are based on ADOA annual estimates through July 2011, EBR then makes quarterly middle of quarter estimates and projections.
SAAR: seasonally adjusted annual rate

Inflation and Prices	Jul 2012	Aug 2012	Sep 2012	Oct 2012	Nov 2012
U.S. Consumer Price Indices (seas. adj.), BLS					
All Urban Consumers: All Items	228.723	230.102	231.414	231.751	231.025
% Chg from Year Ago	1.42%	1.70%	2.00%	2.18%	1.77%
Western States - All Urban Consumers: All items	231.893	233.001	234.083	234.966	233.206
% Chg from Year Ago	1.79%	2.09%	2.15%	2.52%	1.94%
U.S. Producer Price Index: All Commodities (seas. adj.), BLS	200.1	202.6	204.5	203.5	201.8
% Chg from Year Ago	-2.20%	-0.30%	0.39%	1.19%	0.20%

Arizona Economic Indicators - *Metropolitan Statistical Areas*

Phoenix-Mesa-Glendale, MSA, Summary - Monthly	Jul 2012	Aug 2012	Sep 2012	Oct 2012	Nov 2012
Civilian Labor Force, BLS	2,017,988	2,030,028	2,037,343	2,039,856	2,045,476
Unemployment Rate, BLS	7.5	7.4	6.9	6.9	6.5
Total Nonfarm Employment (000s), BLS	1,714.20	1,747.70	1,767.30	1,778.30	1,796.90
Private	1,513.50	1,522.80	1,526.50	1,535.60	1,553.70
Government	200.7	224.9	240.8	242.7	243.2
Average Hourly Earnings, Total Private, $, BLS	23.26	23.14	23.4	23.3	23.2
Aggregate Retail Sales ($000s), EBR & ADOR		4,397,233.81		4,495,713.51	
Total New Residential Permits (units), Census C-40	1,473	1,707	1,031	1,159	1,021
Phoenix-Mesa-Glendale MSA, Summary - Annual	**2008**	**2009**	**2010**	**2011**	**2012**
Population, ADOA*	4,167,019	4,186,131	4,200,427	4,227,601	4,273,897
% Chg from Year Ago	1.95%	0.46%	0.34%	0.65%	1.10%
Total Personal Income ($000), BEA	156,755,410	146,163,794	149,093,883	157,026,115	
% Chg from Year Ago	2.41%	-6.76%	2.00%	5.32%	
Average Wage per Job, $, BEA	45,455	45,753	46,311	47,599	
% Chg from Year Ago	1.72%	0.66%	1.22%	2.78%	
Consumer Price Index (Phx-Mesa-Glndle MSA) All Urban Consumers: All items, BLS	119.264	117.568	118.227	121.483	
% Chg from Year Ago	3.45%	-1.42%	0.56%	2.75%	

*Population counts as of July 1st of each year. ADOA population estimates differ from the official Census Bureau estimates.

Tucson MSA, Summary - Monthly	Jul 2012	Aug 2012	Sep 2012	Oct 2012	Nov 2012
Civilian Labor Force, BLS	447,320	452,897	456,749	456,121	455,429
Unemployment Rate	7.7	7.6	7	7.1	6.6
Total Nonfarm Employment (000s), BLS	342.8	352.4	357.7	359.4	361.9
Private	277	278.1	278.9	280.3	282.2
Government	65.8	74.3	78.8	79.1	79.7
Average Hourly Earnings, Total Private, $, BLS	22.27	22.17	22.41	22.51	22.52
Aggregate Retail Sales ($000), EBR & ADOR	944,293.77	968,076.72	954,870.81	985,427.87	
Total New Residential Permits (units), Census C-40	291	255	325	328	273
Tucson MSA, Summary - Annual	**2008**	**2009**	**2010**	**2011**	**2012**
Population, ADOA*	984,032	984,274	981,168	986,081	990,380
% Chg from Year Ago	0.69%	0.02%	-0.32%	0.50%	0.44%
Total Personal Income ($000), BEA	35,067,808	32,977,680	33,277,952	34,596,360	
% Chg from Year Ago	6.04%	-5.96%	0.91%	3.96%	
Average Wage per Job, $, BEA	40,646	40,748	41,304	42,398	
% Chg from Year Ago	3.51%	0.25%	1.36%	2.65%	

*Population counts as of July 1st of each year. ADOA population estimates differ from the official Census Bureau estimates.

Arizona Economic Indicators- *Metropolitan Statistical Areas*

Flagstaff MSA (Coconino County), Summary - Monthly	Jul 2012	Aug 2012	Sep 2012	Oct 2012	Nov 2012
Civilian Labor Force, ADOA	70,745	70,439	70,688	70,771	70,959
Unemployment Rate	8.4	8.4	8.2	8.2	7.9
Total Nonfarm Employment (000s), ADOA	60.7	61.1	62.7	62.4	61.6
Private	42.1	42.1	42.4	42	41.5
Government	18.6	19	20.3	20.4	20.1
Average Hourly Earnings, Total Private, $, BLS	16.04	16.17	15.93	16.22	16.8
Gross Retail Sales ($000), EBR & ADOR	222,122.65	228,291.10	223,317.17	206,645.34	
Total New Residential Permits (units), Census C-40	34	19	65	31	7
Flagstaff MSA (Coconino County), Summary - Annual	**2008**	**2009**	**2010**	**2011**	**2012**
Population, ADOA*	132,864	133,626	134,679	134,162	134,313
% Chg from Year Ago	0.27%	0.57%	0.79%	-0.38%	0.11%
Total Personal Income ($000), BEA	4,539,992	4,448,866	4,446,722	4,620,811	
% Chg from Year Ago	7.14%	-2.01%	-0.05%	3.91%	
Average Wage per Job, $, BEA	35,866	36,512	37,186	37,927	
% Chg from Year Ago	1.63%	1.80%	1.85%	1.99%	

*Population counts as of July 1st of each year. ADOA population estimates differ from the official Census Bureau estimates.

Lake Havasu City - Kingman MSA (Mohave County) Summary - Monthly	Jun 2012	Jul 2012	Aug 2012	Sep 2012	Oct 2012
Civilian Labor Force, ADOA	85,367	85,398	85,400	85,317	85,316
Unemployment Rate	9.8	9.7	9.7	9.4	9.3
Total Nonfarm Employment, (000s), ADOA	45.9	45.6	45.9	45.9	45.6
Private	37.9	37.8	37.7	37.4	37
Government	8	7.8	8.2	8.5	8.6
Average Hourly Earnings, Total Private, $, BLS	16.65	16.77	16.63	16.87	16.96
Gross Taxable Sales ($000), EBR & ADOR	200,453.54	194,735.87	199,577.52	199,302.99	
Total New Residential Permits (units), Census C-40	25	19	45	29	38

Prescott MSA (Yavapai County), Summary - Monthly	Jul 2012	Aug 2012	Sep 2012	Oct 2012	Nov 2012
Civilian Labor Force, ADOA	90,403	90,085	89,694	89,600	89,661
Unemployment Rate	8.8	8.8	8.6	8.5	8.3
Total Nonfarm Employment (000s), ADOA	53.1	54.4	54.2	54.6	55.1
Private	43.5	44.1	43.5	43.8	44.3
Government	9.6	10.3	10.7	10.8	10.8
Average Hourly Earnings, Total Private, $, BLS	16.99	16.57	17.03	17.39	17.44
Gross Taxable Sales ($000), EBR & ADOR	234,644.30	244,511.11	242,961.84	238,287.59	
Total New Residential Permits (units), Census C-40	44	47	35	35	38

Yuma MSA (Yuma County), Summary - Monthly Data	Jul 2012	Aug 2012	Sep 2012	Oct 2012	Nov 2012
Civilian Labor Force, BLS	95,190	92,722	91,357	92,406	90,038
Unemployment Rate	31.4	30.2	29.7	29.8	27.5
Total Nonfarm Employment (000s), ADOA	47.3	48.4	49	49.4	50.1
Private	33.3	33.3	33.2	33.4	34
Government	14	15.1	15.8	16	16.1
Average Hourly Earnings, Total Private, $, BLS	21.07	21.14	21.05	20.9	21
Gross Taxable Sales ($000s), EBR & ADOR	181,791.98	201,197.06	183,806.90	182,837.88	
New Residential Permits (units), Census C-40	35	42	42	111	49

Arizona Economic Indicators – *Counties*

Apache County, Summary – Monthly Data	Jul 2012	Aug 2012	Sep 2012	Oct 2012	Nov 2012
Civilian Labor Force, ADOA	23,069	22,888	22,371	22,096	21,688
Unemployment Rate	20.1	19	17.7	18.7	17.9
Total Nonfarm Employment (000s), ADOA	19,225	19,725	19,600	19,175	19,050
Total Private	7,700	7,700	7,675	7,625	7,575
Government	11,525	12,025	11,925	11,550	11,475
Gross Taxable Sales ($000s), EBR & ADOR	27,377.99	17,158.75	32,088.11	31,519.10	

Cochise County (Sierra Vista – Douglas Micropolitan SA) Summary – Monthly Data	Jul 2012	Aug 2012	Sep 2012	Oct 2012	Nov 2012
Total Civilian Labor Force, ADOA	59,917	59,821	59,588	59,506	59,457
Unemployment Rate	8.2	8.2	7.7	7.8	7.4
Total Nonfarm Employment, ADOA	35,900	36,625	36,825	36,900	37,200
Total Private	23,875	23,875	23,925	24,000	24,350
Government	12,025	12,750	12,900	12,900	12,850
Gross Taxable Sales ($000), EBR & ADOR	151,705.44	154,827.21	157,912.99	162,868.39	

Graham County Summary – Monthly Data	Jul 2012	Aug 2012	Sep 2012	Oct 2012	Nov 2012
Total Civilian Labor Force, ADOA	14,318	14,392	14,574	14,342	14,179
Unemployment Rate	9.7	9.5	8.8	8.7	8.4
Total Nonfarm Employment, ADOA	8,025	8,300	8,700	8,500	8,475
Total Private	5,475	5,475	5,475	5,475	5,475
Government	2,550	2,825	3,225	3,025	3,000
Gross Retail Sales ($000), EBR & ADOR	26,198.35	26,420.02	24,886.73	27,623.49	

Greenlee County Summary – Monthly Data	Jul 2012	Aug 2012	Sep 2012	Oct 2012	Nov 2012
Total Civilian Labor Force, ADOA	3,966	3,986	4,055	4,021	3,944
Unemployment Rate	6.3	6.1	5.7	6.4	5.4
Total Nonfarm Employment, ADOA	3,650	3,750	3,725	3,775	3,725
Total Private	3,125	3,150	3,125	3,150	3,100
Government	525	600	600	625	625
Gross Taxable Sales ($000), EBR & ADOR	35,539.84	36,379.11	33,454.26	36,581.74	

La Paz County, Summary – Monthly Data	Jul 2012	Aug 2012	Sep 2012	Oct 2012	Nov 2012
Civilian Labor Force, ADOA	7,595	7,391	7,235	7,201	7,202
Unemployment Rate	9.6	9.8	9.3	9.5	8.8
Total Nonfarm Employment, ADOA	4,700	4,700	4,700	4,675	4,750
Total Private	2,700	2,700	2,725	2,700	2,775
Government	2,000	2,000	1,975	1,975	1,975
Gross Taxable Sales (000$), EBR & ADOR	20,983.41	19,510.26	19,560.96	18,381.76	

Arizona Economic Indicators - *Counties*

Navajo County (Show Low Micropolitan SA) Summary - Monthly Data	Jul 2012	Aug 2012	Sep 2012	Oct 2012	Nov 2012
Total Civilian Labor Force, ADOA	41,069	40,884	40,377	39,821	39,367
Unemployment Rate	15.5	14.9	13.8	14.4	13.9
Total Nonfarm Employment, ADOA	27,600	28,200	28,375	27,900	27,900
Total Private	18,100	18,100	18,000	17,575	17,575
Government	9,500	10,100	10,375	10,325	10,325
Gross Taxable Sales ($000), EBR & ADOR	122,388.36	111,491.95	112,527.17	107,367.66	

Santa Cruz County, Summary - Monthly Data	Jul 2012	Aug 2012	Sep 2012	Oct 2012	Nov 2012
Total Civilian Labor Force, ADOA	18,352	18,482	18,247	18,594	18,588
Unemployment Rate	18.3	18.5	17.7	18.3	16.3
Total Nonfarm Employment, ADOA	12,625	12,950	12,975	13,225	13,600
Private	8,800	8,750	8,775	9,025	9,400
Government	3,825	4,200	4,200	4,200	4,200
Gross Taxable Sales ($000), EBR & ADOR	40,996.36	39,876.43	42,132.85	42,109.21	

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