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Modest Employment Growth Projected in 2016 and Continuing Through 2017

Introduction

The Office of Employment and Population Statistics within the Arizona Department of Administration (EPS ADOA) is projecting gradual gains in employment in Arizona for the 2015-2017 time period. An over-the-period gain of 156,535 jobs are projected to be gained over the projected years (2015 Quarter 3 to 2017 Quarter 2). In the current projection period, the rate of growth for total employment is 2.84% (Figure 1).

The overall employment situation in Arizona continues to improve. This is consistent with improvement seen in many economic indicators including population growth. Population grew faster in 2015 at 1.37 percent compared to 2014, based on EPS ADOA population estimate numbers. Population is projected to grow at 1.6 percent in 2016 and 1.7 percent in 2017.

Arizona has recovered 100% of jobs shed since the prerecession peak as of February 2016. However, the recovered gains were not equally shared amongst all industries or all substate areas. Trade, Transportation & Utilities, Natural Resources & Mining, Manufacturing, Construction and Other Services are still recovering jobs shed. Phoenix MSA and Flagstaff MSA have both fully recovered the number of jobs shed while Yuma, Prescott, Tucson, and Lake Havasu-Kingman MSAs are still in the process of recovery. The steady growth was driven by continued expansion in two industries: Professional and Business Services and Education and Health Services. We expect the solid growth to continue in Arizona. Employment is expected to grow at the rate of 2.84 percent during the two year projection period. Eleven major sectors are expected to grow from 2015 Q3 – 2017 Q2. Arizona has historically (1993-1999; 2004-2006) seen stronger Nonfarm employment growth rate than what has been observed in recent years. Although Nonfarm employment has grown in both absolute and relative terms since the recession, this recovery seems weak when examined in the historic context.

Compared to prior recessions, the slower employment recovery is in large part due to lack of new construction and a longer period of economic decline. However, the economic fundamentals continue to improve. Both the US and Arizona unemployment rates continue to decline.

Arizona continues to operate under conditions of military program funding. Various economic sectors have felt the effects of the state's dependence on defense related industries. Federal government military

Figure 1

Total Employment Annual Growth Rate (Compound)

	2013 Q3- 2015 Q2 ^(a)	2015 Q3- 2017 Q2 ^(b)
Arizona	2.41%	2.84%
Phoenix MSA ¹	2.90%	3.15%
Tucson MSA ²	0.56%	1.92%
Balance of State ³	1.84%	2.12%

1) Maricopa and Pinal counties

2) Pima County

3) Arizona less Maricopa, Pinal and Pima counties

a) Historical

b) Project

Figure 1 shows the compounding annual growth rate in Total employment for Arizona, Phoenix MSA, Tucson MSA, and Balance of State. In the 2015 Q3-2017 period all regions are project to have positive annual over-the-period growth rates in employment. Total employment growth rate for Arizona from 2015 Q3-2017 Q2 is expected to be 2.84%. Phoenix is projected to continue growing at a faster pace (3.15%) than Tucson (1.92%), and Balance of State (2.12%).

Total job gains projections are 124,999 jobs in Phoenix MSA, 14,393 jobs in Tucson MSA and 16,933 jobs in Balance of State. (See **Figure 3** on page 4)

expenditures continued to decrease while civilian real expenditures increased in 2015.¹

Factors supporting Arizona's economic growth:

- Continued improvement in real Gross Domestic Product (GDP), real personal income, employment and retail sales at the state and national levels
- Consumer spending saw the largest jump in six years²
- Sustained growth in total wages and salaries³
- Continued increases in private sector employment, increases in private domestic investment, increases in the index of industrial production and rate of capacity utilization, high levels of corporate profit and a gradual resurgence in private residential construction permits
- In 2015, the increase in domestic investment spending is anticipated to begin reducing the amounts of accumulated corporate cash holdings
- Growth in real GDP, real personal income, employment and retail sales
- Continued declines in the US and Arizona unemployment rates
- Labor force participation rates increased while unemployment levels have declined
- Residential and commercial real estate markets in Arizona and Phoenix metropolitan area have shown improvement
- Arizona outpaced US in population, nonfarm employment and real personal income growth in 2015
- Household net worth and US exports continue to increase⁴
- The residential real estate market in Arizona and Phoenix metropolitan area has shown improvement.⁵ Home prices have improved but are still roughly 10 percent off peak prerecession prices. Increases in the construction of primarily apartments, office buildings, and limited single family homes have been observed.⁶ Commercial real estate is gradually improving with lower vacancy rates, higher rental rates and lower rates of default and delinquency in mortgage loans.
- Growth in non-revolving consumer credit levels have been serving as an impetus to expanding economic activity. Consumer spending has improved.⁷ Banks are gradually

¹ See FRED graphs and data for the variables: real government consumption expenditures and gross investment:Federal:National defense(A824RX1A020NBEA); and real government consumption expenditures and gross investment:Federal:Nondefense(A825RX1A020NBEA) At the website: <http://research.stlouisfed.org/fred2/>.

² (a) See FRED graphs and data for the variables: real gross domestic product, 1 decimal (GDPC1); real personal income (RPI); real disposable personal income (DSPIC96); total personal income in Arizona (AZOTOT); per capital personal income in Arizona (AZPCPI); and real retail and food services sales (RRSFS). At the website: <http://research.stlouisfed.org/fred2/>.

(b) The Arizona Republic. Notice construction downtown? That's because Phoenix is playing catch-up with housing. Jiahui Jia. Mar 2, 2016. At the website: <http://www.azcentral.com/story/news/local/phoenix/contributor/2016/03/02/downtown-phoenix-growth-demand-apartments/80781360/>.

(c) The New York Times. Consumer spending surges and home prices climb. Catherine Reagor. Ronald Hansen. May 31, 2016. At the website: <http://www.nytimes.com/2016/06/01/business/economy/consumer-spending-housing-prices-case-shiller.html?ribbon-ad-id=5&rref=business/economy>

³ See FRED graphs and data for the variables: total wages and salaries in Arizona (AZWTOT). At the website: <http://research.stlouisfed.org/fred2/>.

⁴ IHS Global Insight. State report: Payroll growth in Arizona is accelerating along with rise in commercial development activity. At the website: www.ihs.com/products/global-insight/index.aspx.

⁵ (a) The Arizona Republic. Metro Phoenix housing market has best month in a decade. Catherine Reagor. May 27, 2016. At the website:

<http://www.azcentral.com/story/money/real-estate/catherine-reagor/2016/05/27/metro-phoenix-housing-market-has-best-month-decade/84929882/>.

(b) The Arizona Republic. Millennials, boomers, retirees, boomerang buyers all boosting metro Phoenix's housing market again. Catherine Reagor. Ronald Hansen. April 29, 2016. At the website: <http://www.azcentral.com/story/money/real-estate/catherine-reagor/2016/04/29/millennials-boomers-retirees-boomerang-buyers-all-boosting-metro-phoenixs-housing-market-again/83401842/>.

⁶ See FRED graphs and data for the variable: new private housing units authorized by building permits for Arizona(AZBPPRIV); privately owned housing starts authorized by building permits: 1-unit structures for arizona(AZBP1FH); housing starts: total: new privately owned housing units started(HOUST); privately owned housing starts: 1-unit structures(HOUST1F); new privately-owned housing units authorized by building permits: total(PERMITNSA); and new private housing units authorized by building permits - in structures with 1 unit(PERMIT1) . At the website: <http://research.stlouisfed.org/fred2/>.

⁷ See FRED graphs and data for the variables: total revolving credit owned and securitized, outstanding (REVOLSL); total nonrevolving credit owned and securitized, outstanding (NONREVSL); and real personal consumption expenditures (PCECC96). At the website: <http://research.stlouisfed.org/fred2/>.

relaxing their lending requirements. Mortgage rates are low. Bank delinquency and default rates on consumer credit are declining.

Some factors that could further dampen the growth of the local economy are given below. However, the positive factors listed above outweigh the uncertainties in the sections described below in support of our projection:

- Arizona’s manufacturing sector endured a tumultuous 2015 with slow global growth, lower commodity prices, and a relatively strong dollar.
- Despite some increase in disposable income from lower gas prices, constrained budgets persist for a large majority of households. Real median household income in US and AZ is below the peak level prior to the 2007 recession.⁸
- Arizona’s mining sector has seen sharp declines due to a slowdown in world commodities markets.
- Arizona’s economy has been historically dependent on population growth. Population growth in the state (1.4% in 2015) has been below the growth rate observed historically, limiting the additional demand created for goods and services. In-migration, both domestic and international, to the state has declined over time.

Arizona Industry Employment Projections (2015 – 2017)

The average over-the-period employment percentage change for each sector is presented in **Figure 2** for 2013 Quarter 3 – 2015 Quarter 2, and 2015 Quarter 3 – 2017 Quarter 2. The last full year of employment data (or base year) is 2015. The 2015 employment data used for these projections are prior to benchmark or revisions. Project years are 2016 and 2017. Eleven of the major sectors of the Arizona economy are projected to gain jobs during the project period. The only sector not projected to have positive gains is Natural Resources and Mining. Total employment is expected to grow at a modest rate in 2016, picking up in 2017.

Figure 2		
Arizona Sector Employment		
Annual Growth Rate (Compound)		
	2013 Q3-2015 Q2^(a)	2015 Q3-2017 Q2^(b)
Total All Industries	2.41%	2.84%
Natural Resources & Mining	0.19%	-2.74%
Construction	1.25%	6.66%
Manufacturing	0.53%	0.66%
Trade, Trans. & Utilities	2.20%	2.24%
Information	3.72%	3.27%
Financial Activities	3.19%	3.74%
Professional and Business Svcs	2.34%	4.36%
Educational & Health Svcs	1.91%	2.74%
Leisure & Hospitality	4.04%	3.47%
Other Services (Except Gov)	1.62%	1.21%
Government	-0.45%	0.18%
Unclassified	8.08%	2.18%

a) Historical (BLS Current Employment Statistics)
b) Project

⁸ See FRED graphs and data for the variables: real median household income in the United States(MEHOINUSA672N); and real median household income in Arizona(MEHOINUSAZA672N). At the website: <http://research.stlouisfed.org/fred2/>.

Change in employment by substate area is displayed in **Figure 3**. Projected employment gains across the major sector in Arizona from 2015 to 2017 are displayed in **Figure 4**. Gains are expected in all four areas and in eleven major sectors over the two-year period.

Figure 5 shows the projected percentage change in employment for all major sectors.

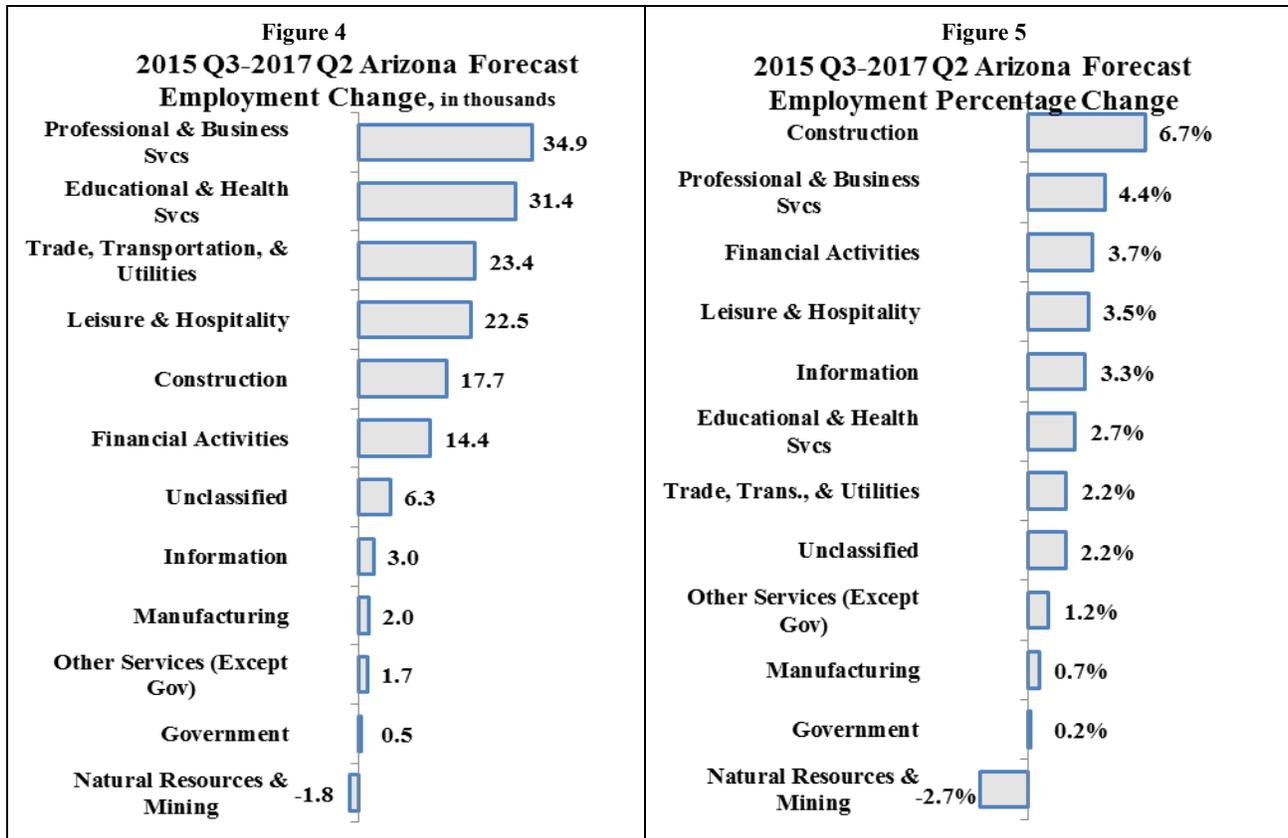
For the 2015 to 2017 projection time period, the major sectors with the largest projected employment gains are: Professional and Business Services (34,902 jobs), Educational and Health Services (31,428 jobs), Trade, Transportation and Utilities (23,414 jobs), Leisure and Hospitality (22,594 jobs) and Construction (17,732 jobs). Smaller gains are projected in these sectors: Unclassified (6,390 jobs), Information (3,099 jobs), Manufacturing (2,066 jobs), Other Services (1,765 jobs) and Government (554 jobs). Natural Resources and Mining is the only major sector that is expected to see a loss (-1,821 jobs).

Figure 3
Total Employment by Substate Area
Employment Change

	2015 Q2^(a)	2017 Q2^(b)	Employment Change
Arizona	2.41%	2.84%	156,535
Phoenix MSA ¹	2.90%	3.15%	124,999
Tucson MSA ²	0.56%	1.92%	14,393
Balance of State ³	1.84%	2.12%	16,933

1) Maricopa and Pinal counties
2) Pima County
3) Arizona less Maricopa, Pinal and Pima counties
a) Historical
b) Project

During the two-year projection time period, five sectors are projected to grow at a faster rate than the overall total employment rate of 2.84%, and six sectors are expected to grow at a slower rate. The major sectors with higher expected growth rate are Construction (6.66%), Professional and Business Services (4.36%), Financial Activities (3.74%), Leisure and Hospitality (3.47%) and Information (3.27%). The major sectors expected to grow at a slower rate than Nonfarm employment are Education and Health Services (2.74%) Trade, Transportation, and Utilities (2.24%), Unclassified (2.18%), Other Services (1.21%), Manufacturing (0.66%), Government (0.18%) and Natural Resources and Mining (-2.74%).



Professional and Business Services (PBS): The PBS sector is projected to have an increase of 34,902 jobs (4.4%) over the two year projection period. The Administrative and Support and Waste Management and Remediation Services sub-sectors are expected to have the largest job gains (24,285 jobs, 5.1%) over the projection period. Job gains are projected in the sub-sectors of Professional, Scientific and Technical Services and Management of Companies and Enterprises.

Educational and Health Services (EHS): The EHS sector is project to gain 31,428 jobs (2.7%) over the projection period. Increases are expected in all subsectors of Health Care and Social Assistance with the largest projected employment increase in Social Assistance. Demographic changes coupled with state and federal spending associated with the ACA is likely to increase employment growth in these subsectors.

Trade, Transportation and Utilities (TTU): The TTU sector is project to gain 23,414 jobs (2.2%) over the two year period. Retail Trade is expected to have the most employment gains within TTU subsectors projecting gains. Fewer gains are project in Wholesale Trade and Transportation, Warehousing and Utilities. Utilities is expected to see a small gain of 255 jobs over the two-year period and Transportation and Warehousing is project to gain 4,445 jobs as a result of overall economic growth.

Leisure and Hospitality (L&H): The L&H sector is projected to gain 22,594 jobs (3.5%) over the two year period. The largest projected job gain is expected in the Food Services and Drinking Places sub-sector with 15,800 jobs (3.6%). Fewer gains are project in the sub-sectors of Accommodations and Arts, Entertainment

and Recreation. An improving economy, tourism and population increases are expected to bolster employment in the L&H sector.

Construction: This sector is project to gain 17,731 jobs (6.7%) over the two year period. Specialty Trade Contractors is expected to have the largest employment gain at 16,602 jobs (9.1%). Home repair and maintenance, rising building permits and population growth are factors that support some growth in this sector. Heavy and Civil Engineering Construction is the only Construction sub-sector with projected job losses from 2015 to 2017.

Financial Activities (FA): Projected employment growth in FA over the two-year period is expected to increase by 14,407 jobs (3.7%) over the two year period. Finance and Insurance sub-sectors are expected to see the largest gains in the Financial Activities industry with an increase of 12,512 jobs (4.3%). Insurance Carriers, Credit Intermediation and Real Estate are expected to see the largest gains.

Unclassified: Projections indicate a gain of 6,390 jobs (2.2%) over two years.

Information: This sector is projected to have a gain in employment of 3,099 jobs (3.3%) over two years. The largest job gains are projected in the Telecommunications sub-sector.

Manufacturing: This sector is projected to have an employment increase of 2,066 jobs (0.7%) over two years. Growth is project in both Durable Goods and Nondurable Goods. Gains in Durable Goods are expected from Fabricated Metal Products and other unreported sectors.

Other Services (Except Government) (OS): OS is projected to gain 1,765 jobs (1.2%) over two years. An improving economy with gradually rising levels of business and consumer spending is projected to bolster the demand and employment for the services provided by this sector.

Government: Government is projected to have a small gain of 554 jobs (0.2%) over the two year period. All subsectors except Federal (State and Local Government) are expected to have gains over the two-year period.

Natural Resources and Mining (NRM): The NRM sector is project to lose 1,821 jobs (-2.7%) over the two year period.

Industry Employment Shares

Figure 6 details Arizona’s industry employment shares, which are projected to have minor changes by the end of the projection period. Industries like Construction, Financial Activities, and Leisure & Hospitality are forecasted to expand their share of the Arizona economy.

Conclusion

Arizona is projected to gain 156,535 jobs over the two projected years (2015 Quarter 2 through 2017 Quarter 2). This represents a growth rate of 2.84 percent over the two

projected years. This is consistent with improvement seen in other economic indicators.

Employment Shares Through Time				
Industry Code	Industry Title	2005 Q2	2015 Q2	2017 Q2
000000	Total All Industries	100%	100%	100%
101100	Natural Resources and Mining	1.2%	1.2%	1.1%
101200	Construction	8.5%	4.7%	5.1%
101300	Manufacturing	7.0%	5.8%	5.5%
102100	Trade, Transportation, and Utilities	19.5%	19.0%	18.8%
102200	Information	1.8%	1.7%	1.7%
102300	Financial Activities	6.7%	7.0%	7.1%
102400	Professional and Business Services	14.2%	14.4%	14.8%
102500	Education and Health Services	17.0%	20.8%	20.8%
102600	Leisure and Hospitality	10.7%	11.8%	11.9%
102700	Other Services (Except Government)	2.7%	2.7%	2.6%
102800	Government	5.7%	5.5%	5.3%
102900	Unclassified	4.9%	5.3%	5.3%

In February of 2016, Arizona recovered 100% of the jobs shed from the prerecession peak. Many economic fundamentals in Arizona continue to improve. Eleven of the twelve major sectors are expected to grow over the two project years. Home prices continue to increase but are still roughly 10 percent below prerecession peak levels. Population is expected to grow gradually through 2016.

11 of the major sectors of the Arizona economy are projected to gain jobs during the 2015-2017 project time period. Professional and Business Services (34,902 jobs), Educational and Health Services (31,428 jobs), Trade, Transportation and Utilities (23,414 jobs), Leisure and Hospitality (22,594 jobs) and Construction (17,732 jobs). Smaller gains are project in these sectors: Unclassified (6,390 jobs), Information (3,099 jobs), Manufacturing (2,066 jobs), Other Services (1,765 jobs) and Government (554 jobs). Natural Resources and Mining is the only major sector that is expected to see a loss (-1,821 jobs).

Some sectors are project to have a higher employment growth rate while others have a lower rate when compared to the overall employment growth rate of 2.84 percent. The growth rate over the 2015-2017 project period for the five sectors projected to grow at a faster rate than the overall employment rate in descending order of magnitude are Construction (6.7%), Professional and Business Services (4.4%), Financial Activities (3.7%), Leisure and Hospitality (3.5%), and Information (3.3%). The remaining six sectors project to grow at a slower rate than Nonfarm employment are Education and Health Services (2.7%), Trade, Transportation, and Utilities (2.2%), Unclassified (2.2%), Other Services (1.2%), Manufacturing (0.7%) and Government (0.2%). Natural Resources and Mining is expected to show a decline of -2.7%.

Although Arizona's economy continues to feel some after effects of policies that were enacted post-recession, the major impacts of these policies are behind us and Federal Government spending cuts do not appear to be a strong drag on the economy. Compared to prior recessions, the weak employment recovery is in large part due to lack of new construction. However, economic fundamentals continue to improve.

There are many positive indicators suggesting improvement in the overall economy and this momentum will continue through 2017. Nonfarm employment is rising modestly and more workers are returning to participate in the labor force. Economic indicators such as: GDP, employment, industrial production, wholesale and retail sales, capacity utilization rate, household net worth, income levels, consumer spending, residential real estate markets and private domestic investment are showing improvements since the recession.

Despite some job growth and lowering in the unemployment rate, many consumers both in the US and Arizona continue to face employment insecurity, lower wages and high debt. Constrained budgets persist for a large majority of households inhibiting their spending ability. The lower gas prices are expected to provide some relief and increase the disposable household income. Federal, state and local governments face headwinds regarding budget uncertainty. Uncertainty causes challenges in investment as assessment of effective demand in the economy become difficult. Although the US exports are growing, a rising dollar could hurt exports. On the positive side, it is expected to make imports cheaper and help control inflation. There are also risks associated with uncertainties as mentioned above, but we believe the positive factors listed above outweigh the uncertainties in support of our projections.