

Arizona by the Numbers

April 5th, 2016

Paul Shannon, LMI Director

Arizona Department of Administration

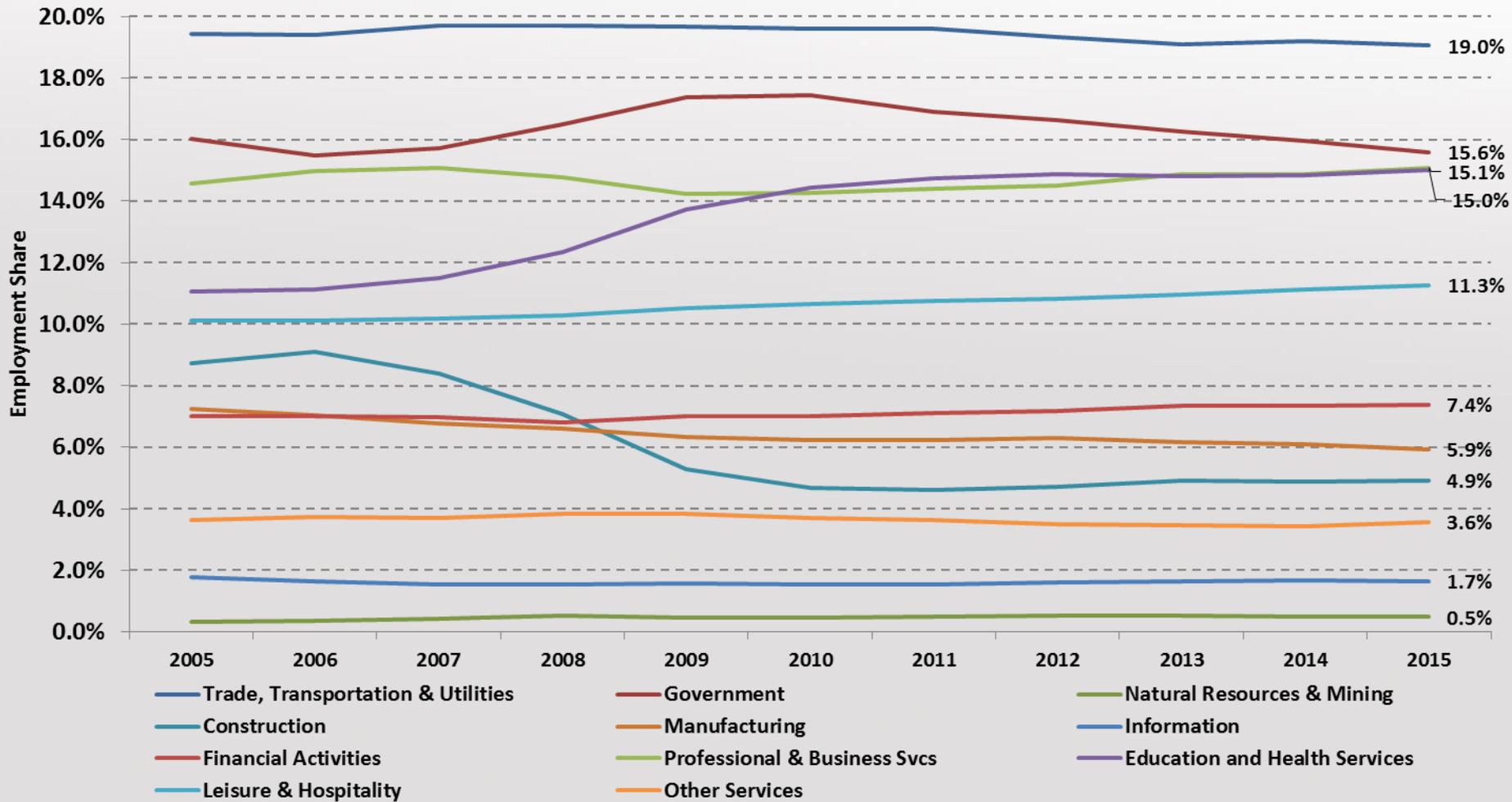
Office of Employment and Population Statistics

Agenda

- Labor Market Information
- Recession Recovery
- February 2016 Employment Highlights
- Real-Time LMI
- How to Use & Where to Find LMI Data
- Organization & Contact Information
- Questions

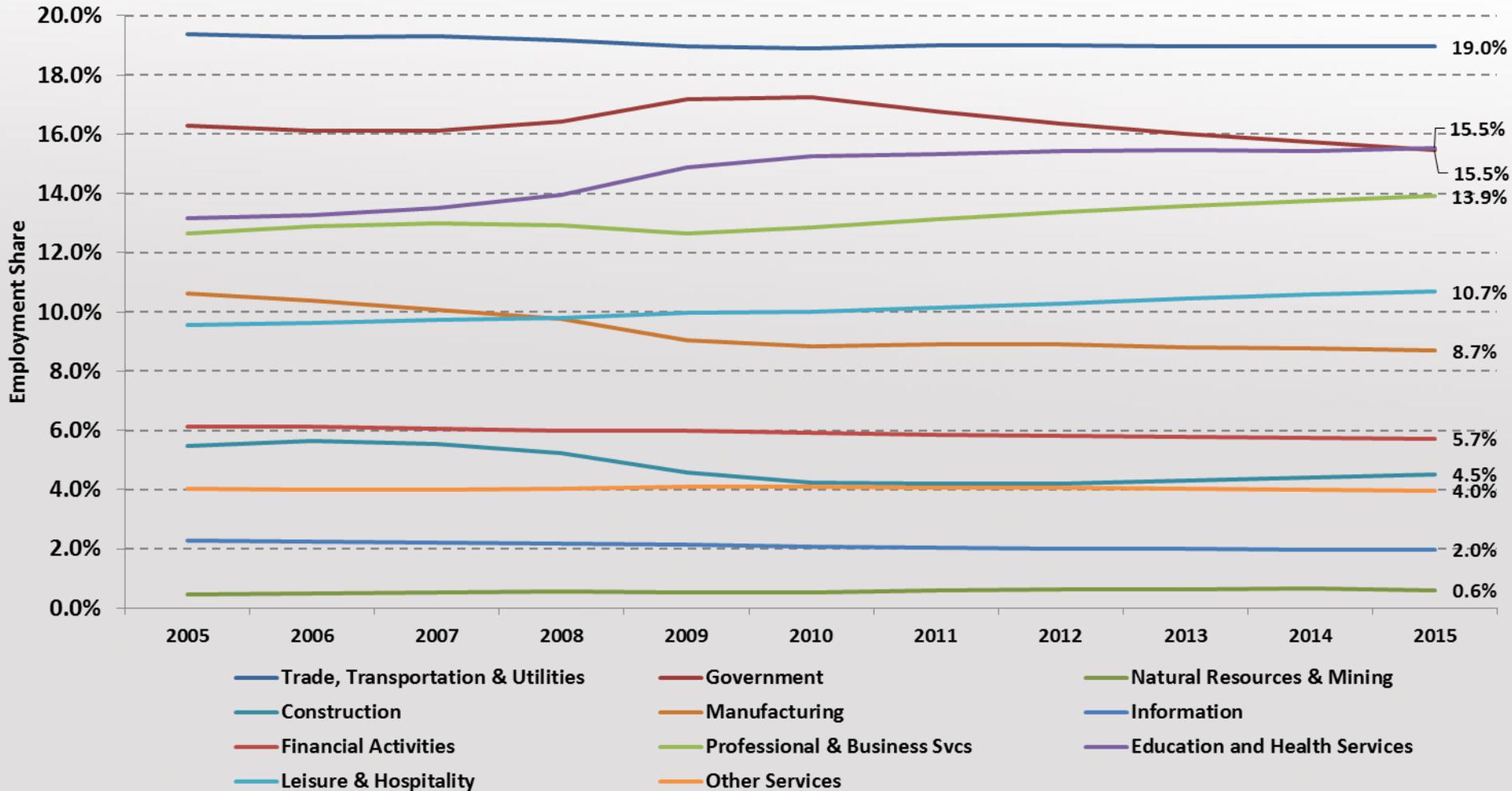
Labor Market Information

Arizona Total Nonfarm Share by Sector



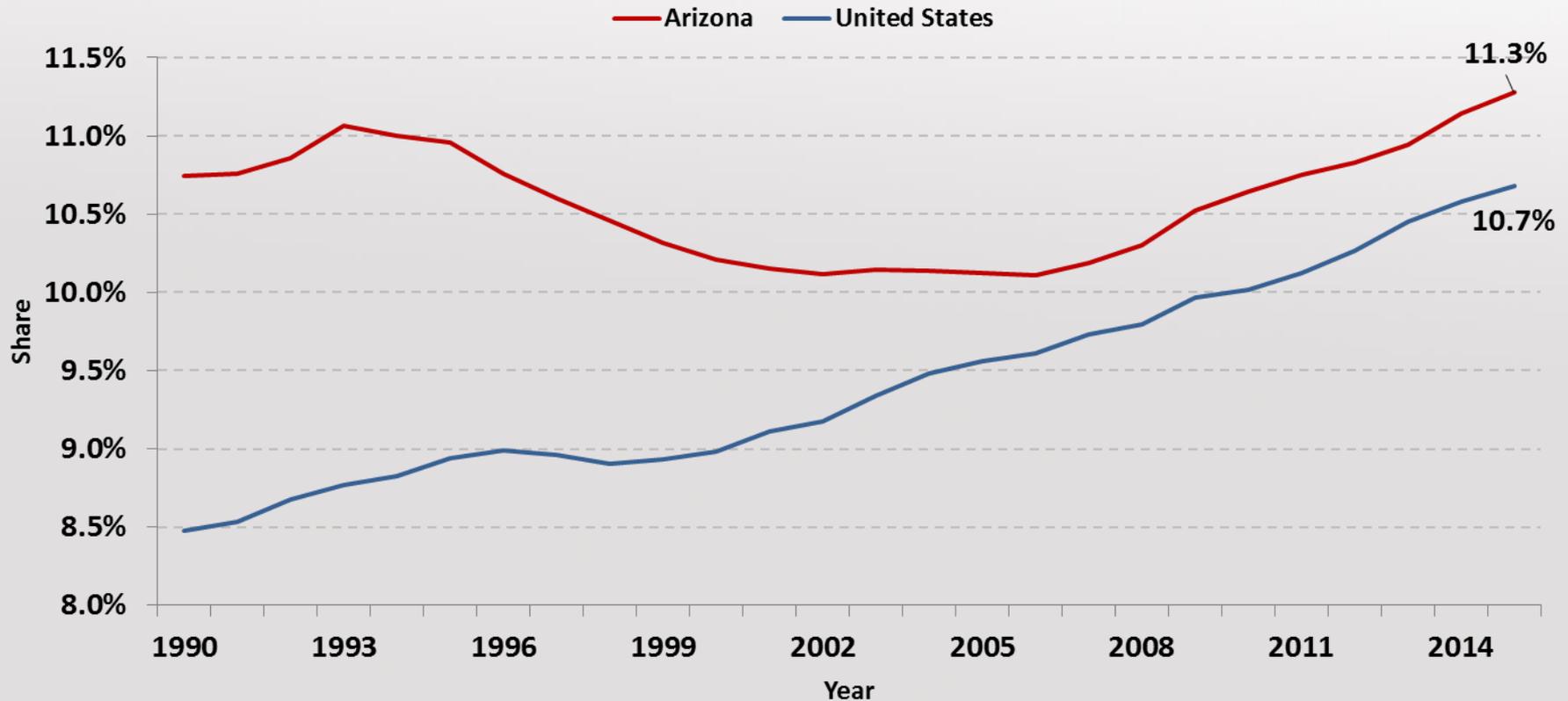
Source: Produced by the Arizona Office of Employment and Population Statistics using CES data in cooperation with the U.S. Dept. of Labor, Bureau of Labor Statistics

US Total Nonfarm Share by Sector



Source: Produced by the Arizona Office of Employment and Population Statistics using CES data in cooperation with the U.S. Dept. of Labor, Bureau of Labor Statistics

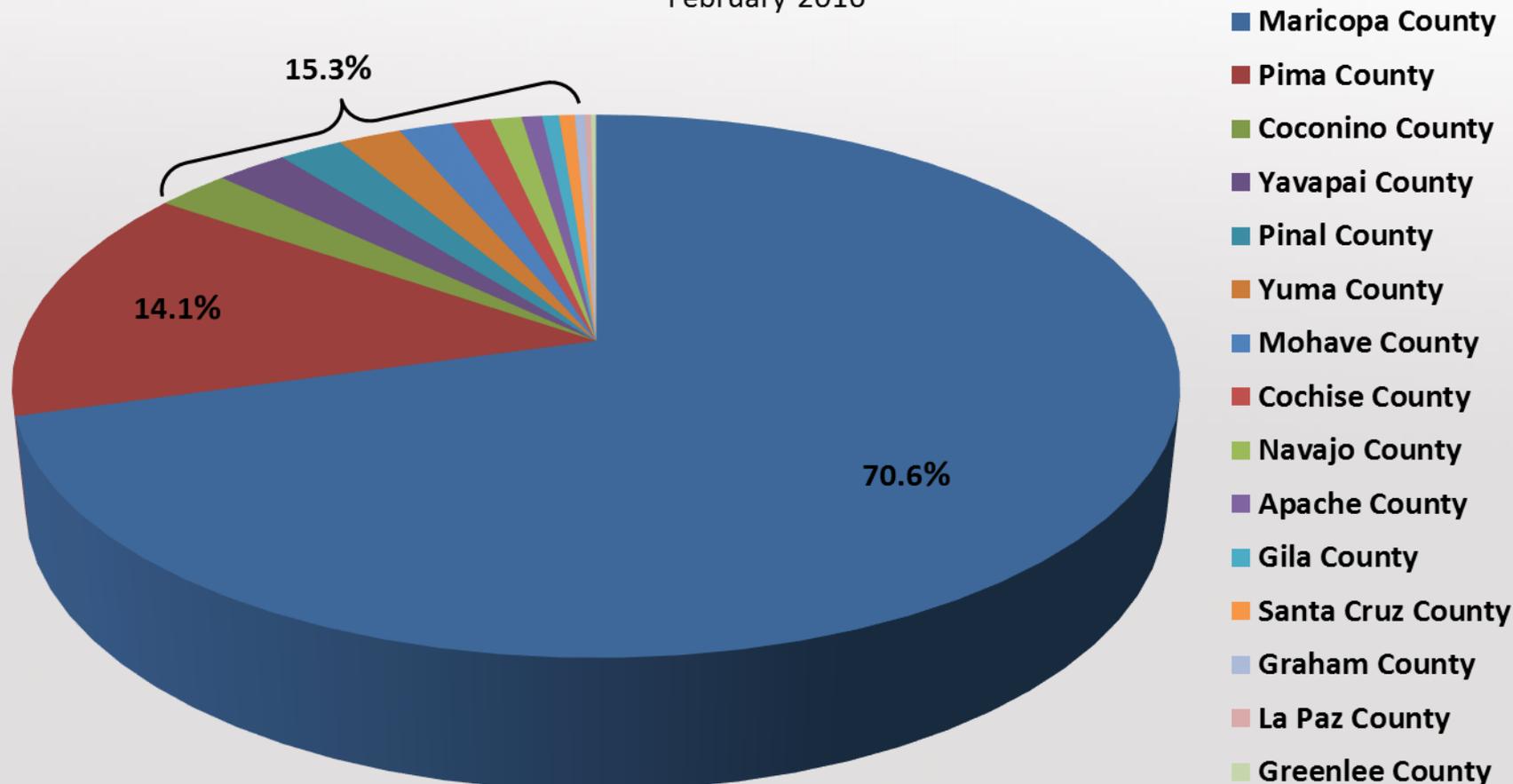
Leisure and Hospitality Employment Share of Nonfarm Employment CES Annual Average



Source: Produced by the Arizona Office of Employment and Population Statistics using CES data in cooperation with the U.S. Dept. of Labor, Bureau of Labor Statistics

Arizona County Employment Share

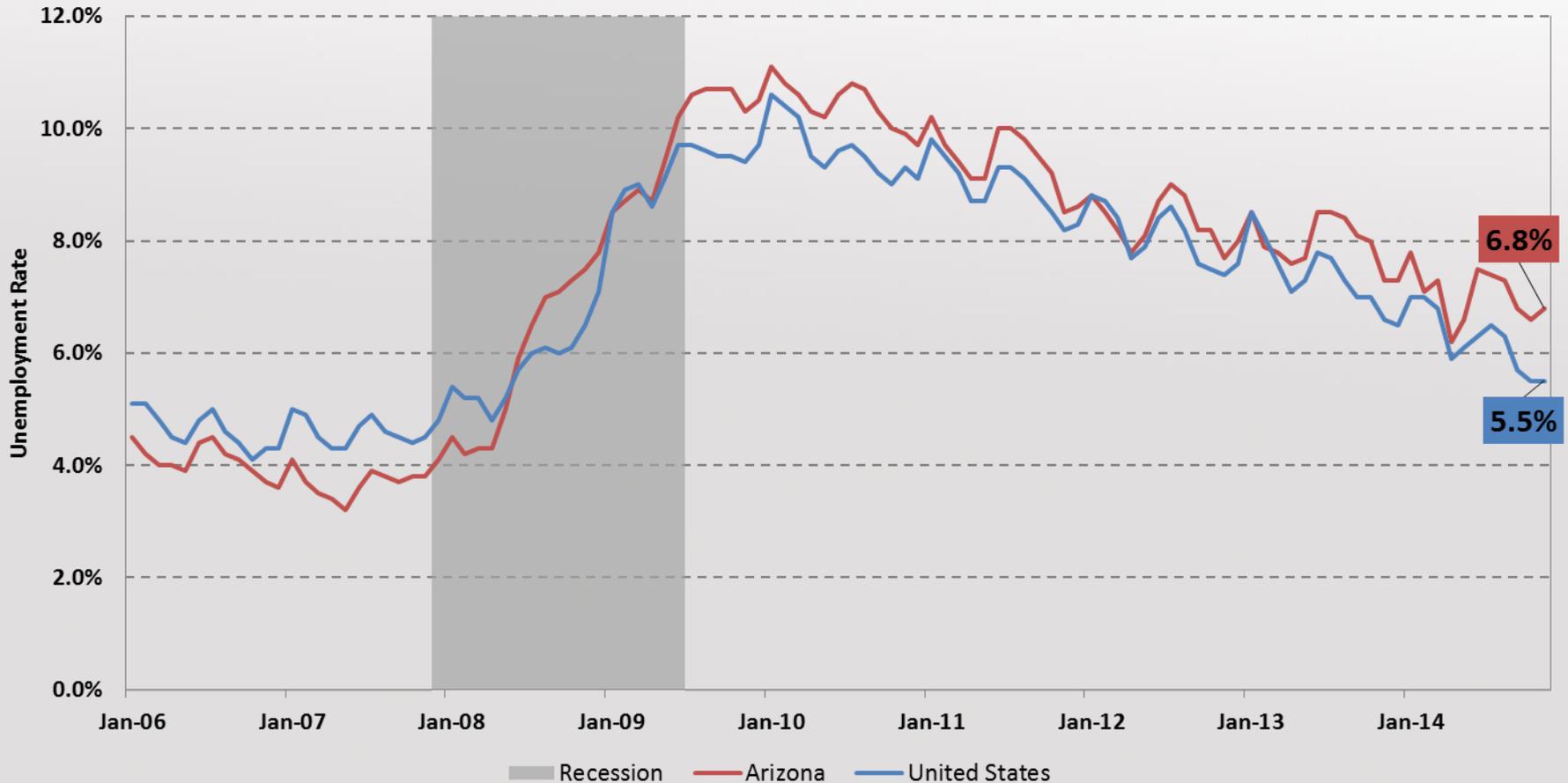
February 2016



Source: Produced by the Arizona Office of Employment and Population Statistics using CES data in cooperation with the U.S. Dept. of Labor, Bureau of Labor Statistics

Unemployment Rate

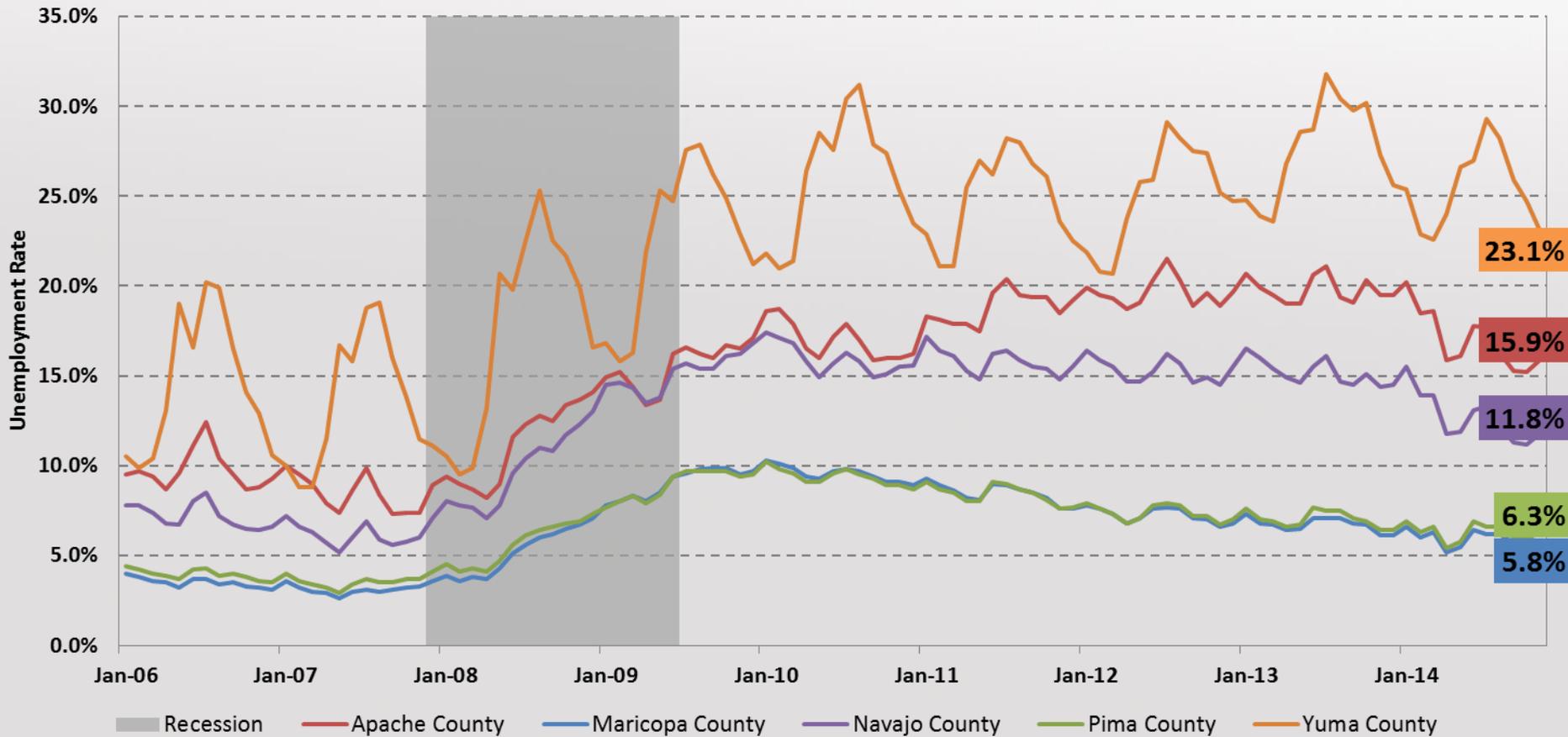
Not Seasonally Adjusted



Source: Produced by the Arizona Office of Employment and Population Statistics using LAUS data in cooperation with the U.S. Dept. of Labor, Bureau of Labor Statistics

Unemployment Rate

Not Seasonally Adjusted

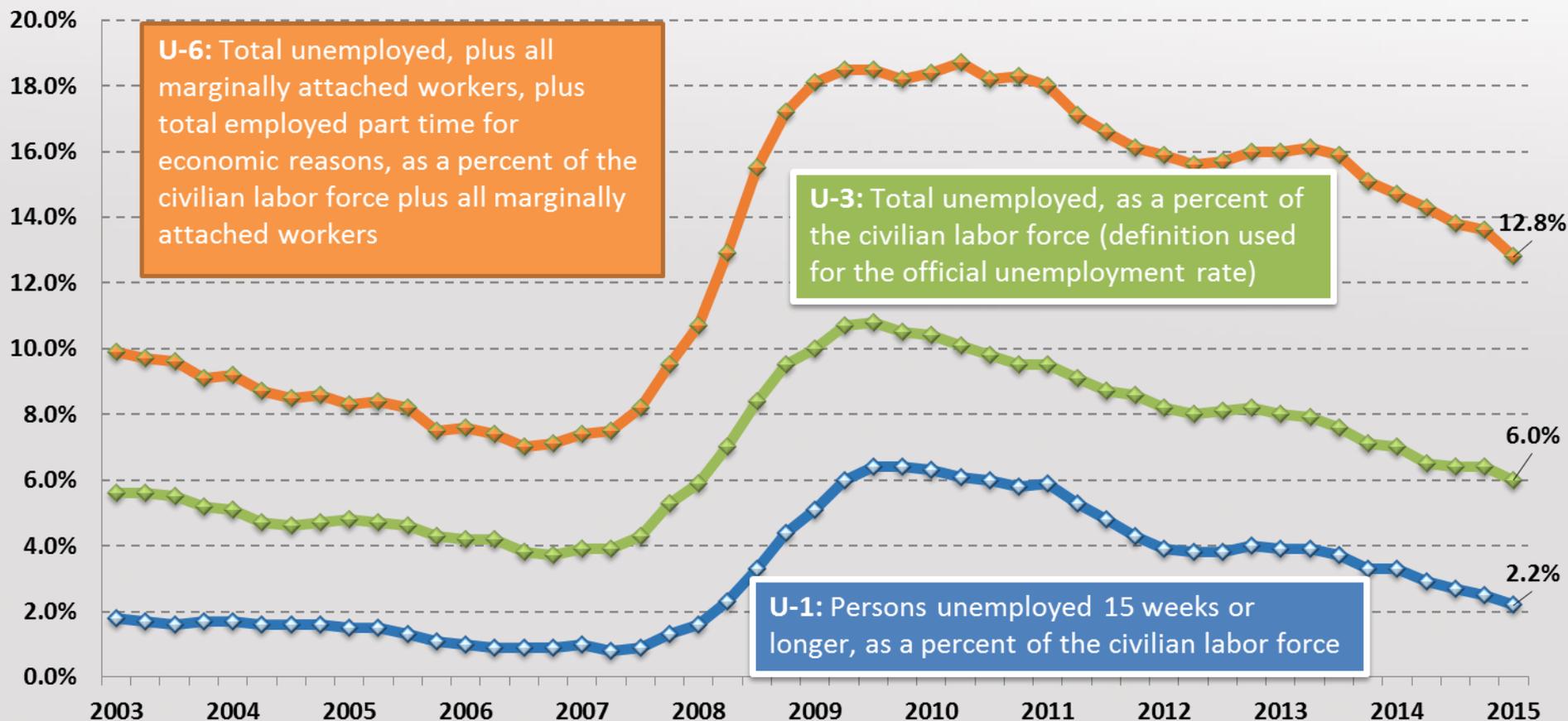


Source: Produced by the Arizona Office of Employment and Population Statistics using LAUS data in cooperation with the U.S. Dept. of Labor, Bureau of Labor Statistics

Alternative Measures of Labor Underutilization

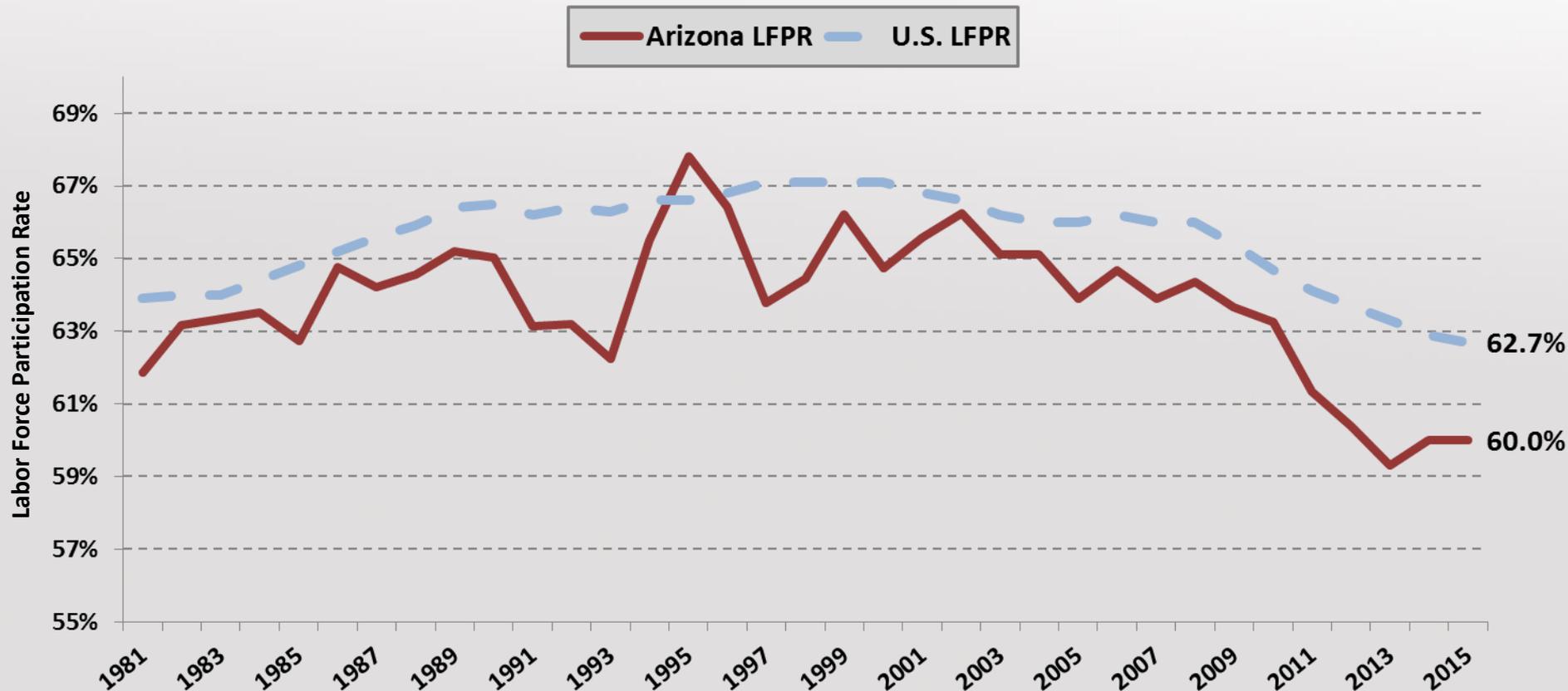
- **U1:** Persons unemployed 15 weeks or longer, as a percent of the civilian labor force
- **U2:** Job losers and persons who completed temporary jobs , as a percent of the civilian labor force
- **U3:** Total unemployed, as a percent of the civilian labor force (official unemployment rate)
- **U4:** U3 + discouraged workers (have given a job-market related reason for not currently looking for work), as a percent of the civilian labor force plus discouraged workers
- **U5:** U4 + all other marginally attached workers (indicate that they want and are available for a job and have looked for work sometime in the past 12 months), as a percent of the civilian labor force plus all persons marginally attached to the labor force
- **U6:** U5 + employed part time for economic reasons, as a percent of the civilian labor force plus all persons marginally attached to labor force

Alternative Measures of Labor Underutilization Arizona Quarterly Averages



Source: Produced by the Arizona Office of Employment and Population Statistics using LAUS data in cooperation with the U.S. Dept. of Labor, Bureau of Labor Statistics

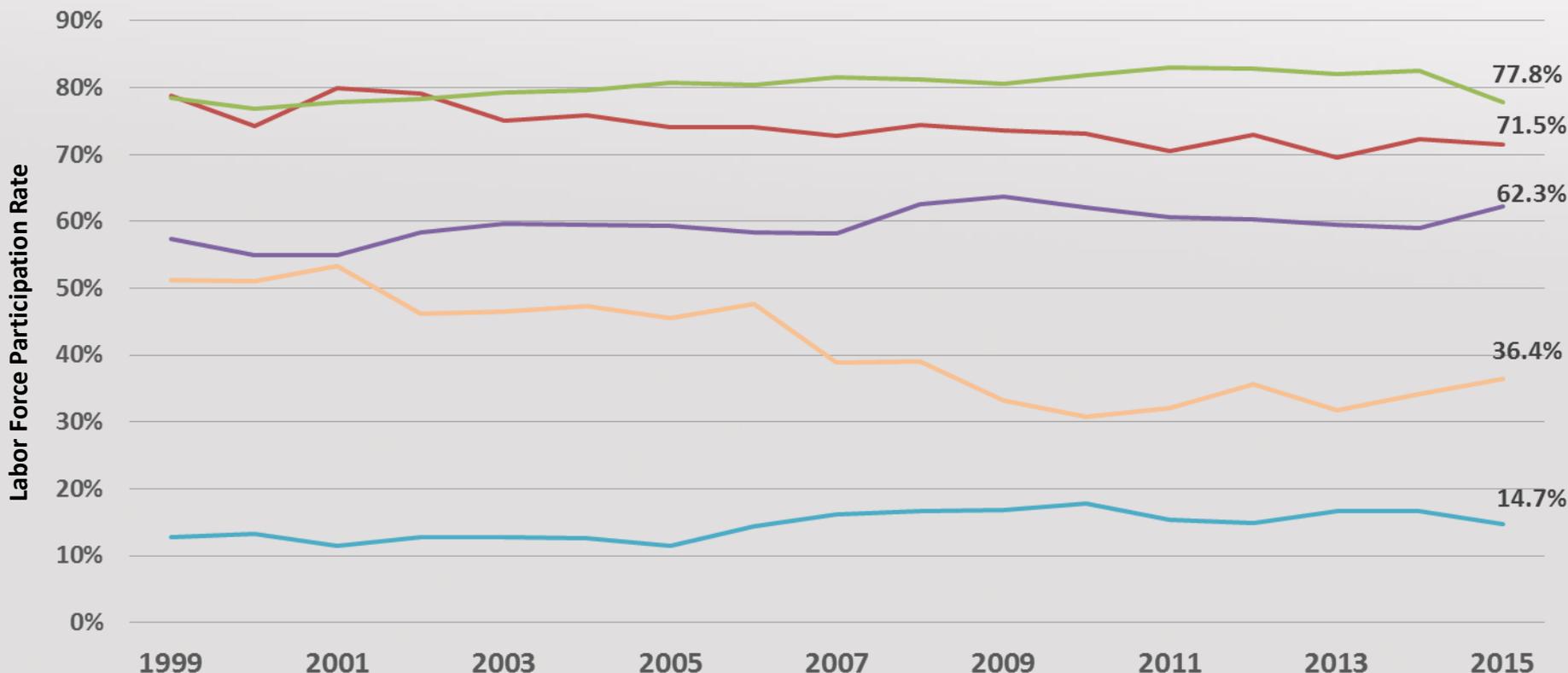
Labor Force Participation Rate 1981-2015



Source: Produced by the Arizona Office of Employment and Population Statistics using GPS data in cooperation with the U.S. Dept. of Labor, Bureau of Labor Statistics

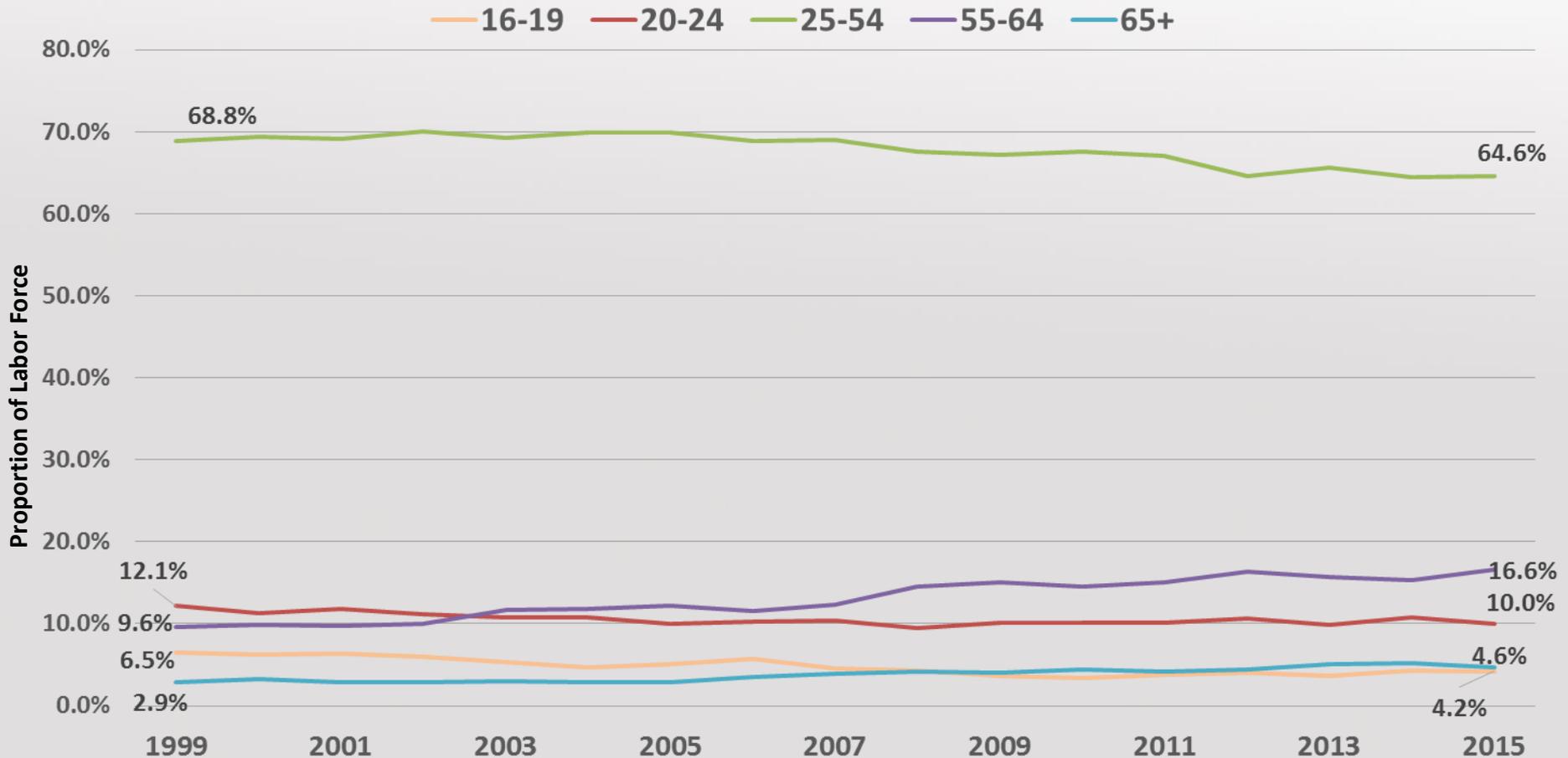
Labor Force Participation Rate by Age Group Arizona Annual Averages

16-19 20-24 25-54 55-64 65+



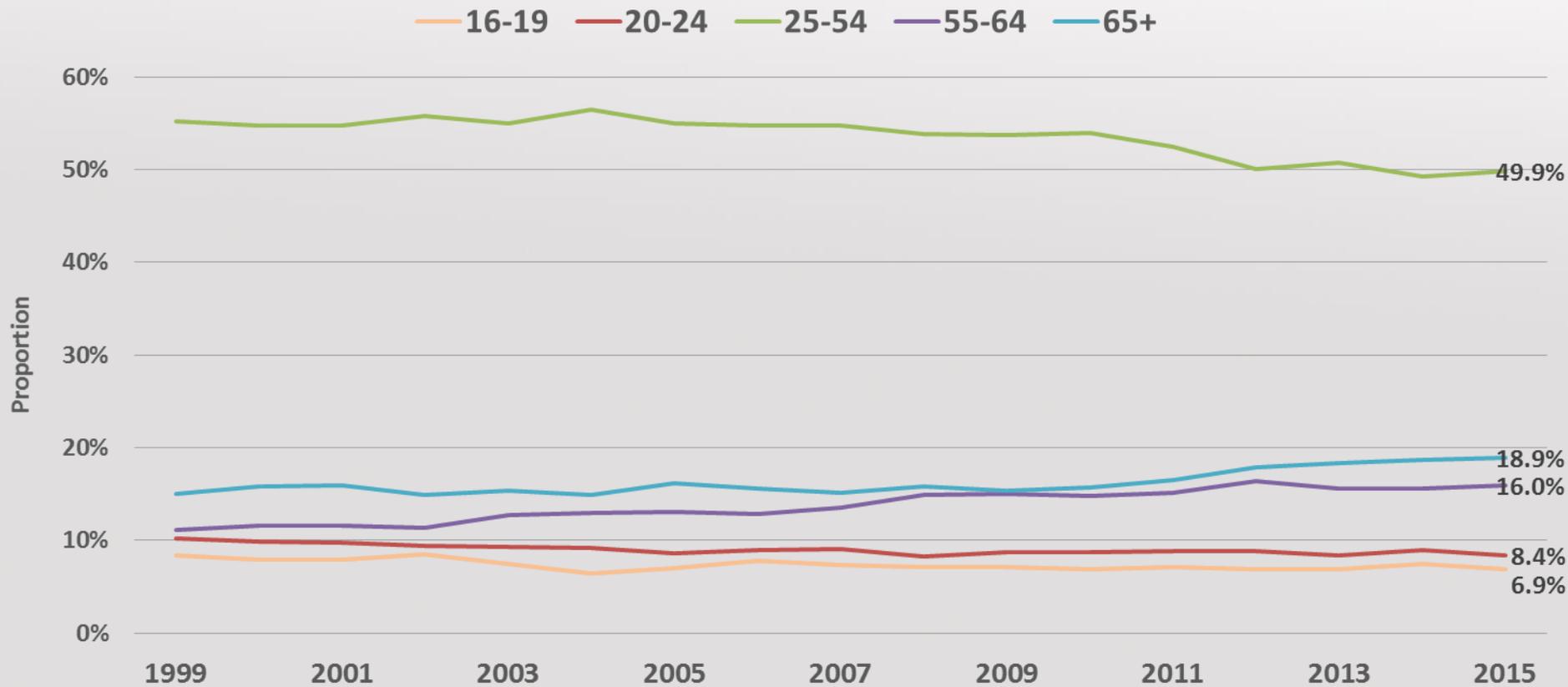
Source: Produced by the Arizona Office of Employment and Population Statistics using GPS data in cooperation with the U.S. Dept. of Labor, Bureau of Labor Statistics

Total Labor Force Proportions by Age Group Over Time Arizona Annual Averages



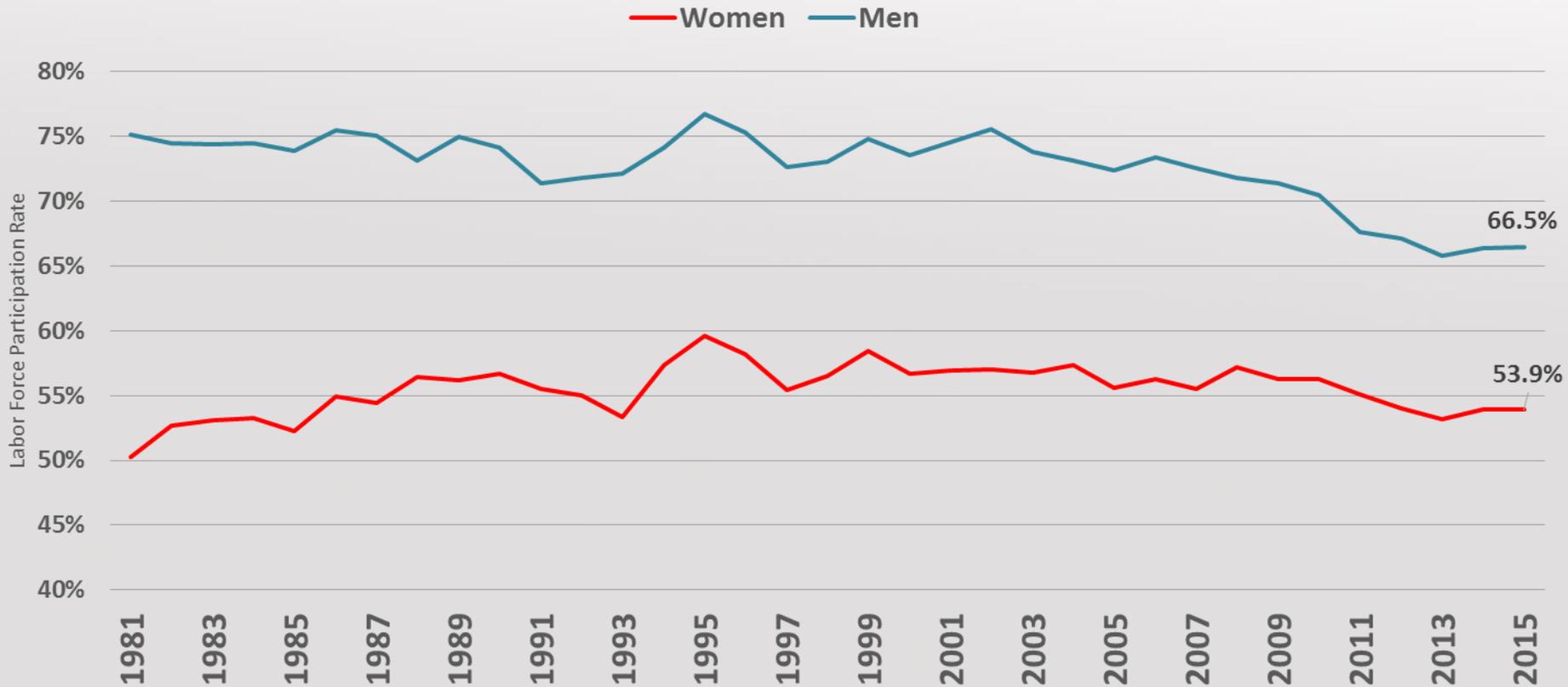
Source: Produced by the Arizona Office of Employment and Population Statistics using GPS data in cooperation with the U.S. Dept. of Labor, Bureau of Labor Statistics

Civilian Non-Institutional Population Proportions by Age Group Over Time Arizona Annual Averages



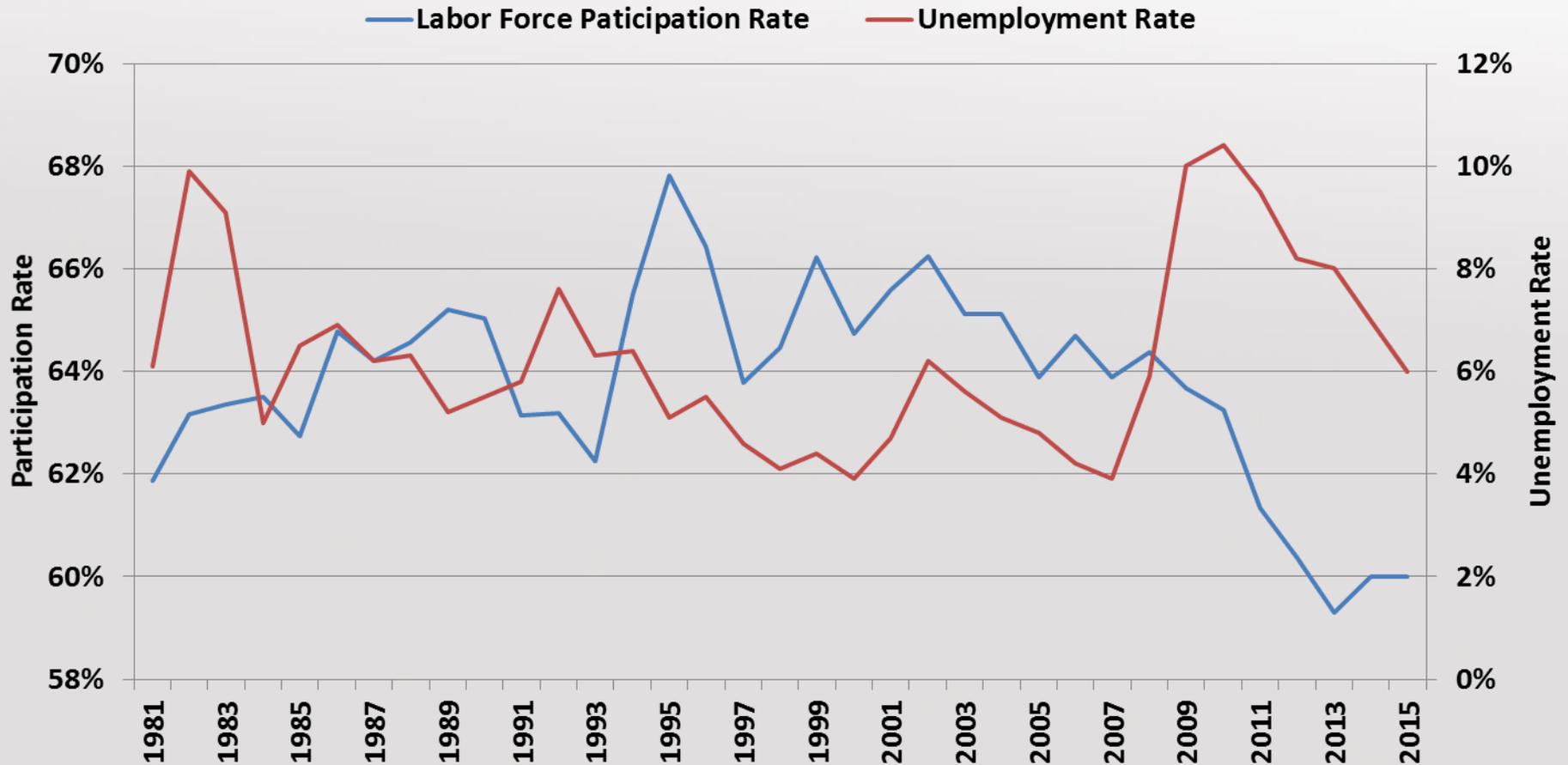
Source: Produced by the Arizona Office of Employment and Population Statistics using GPS data in cooperation with the U.S. Dept. of Labor, Bureau of Labor Statistics

Labor Force Participation Rates by Sex Arizona Annual Averages



Source: Produced by the Arizona Office of Employment and Population Statistics using GPS data in cooperation with the U.S. Dept. of Labor, Bureau of Labor Statistics

Labor Force Participation Rate and Unemployment Rate Arizona Annual Averages



Source: Produced by the Arizona Office of Employment and Population Statistics using GPS data in cooperation with the U.S. Dept. of Labor, Bureau of Labor Statistics

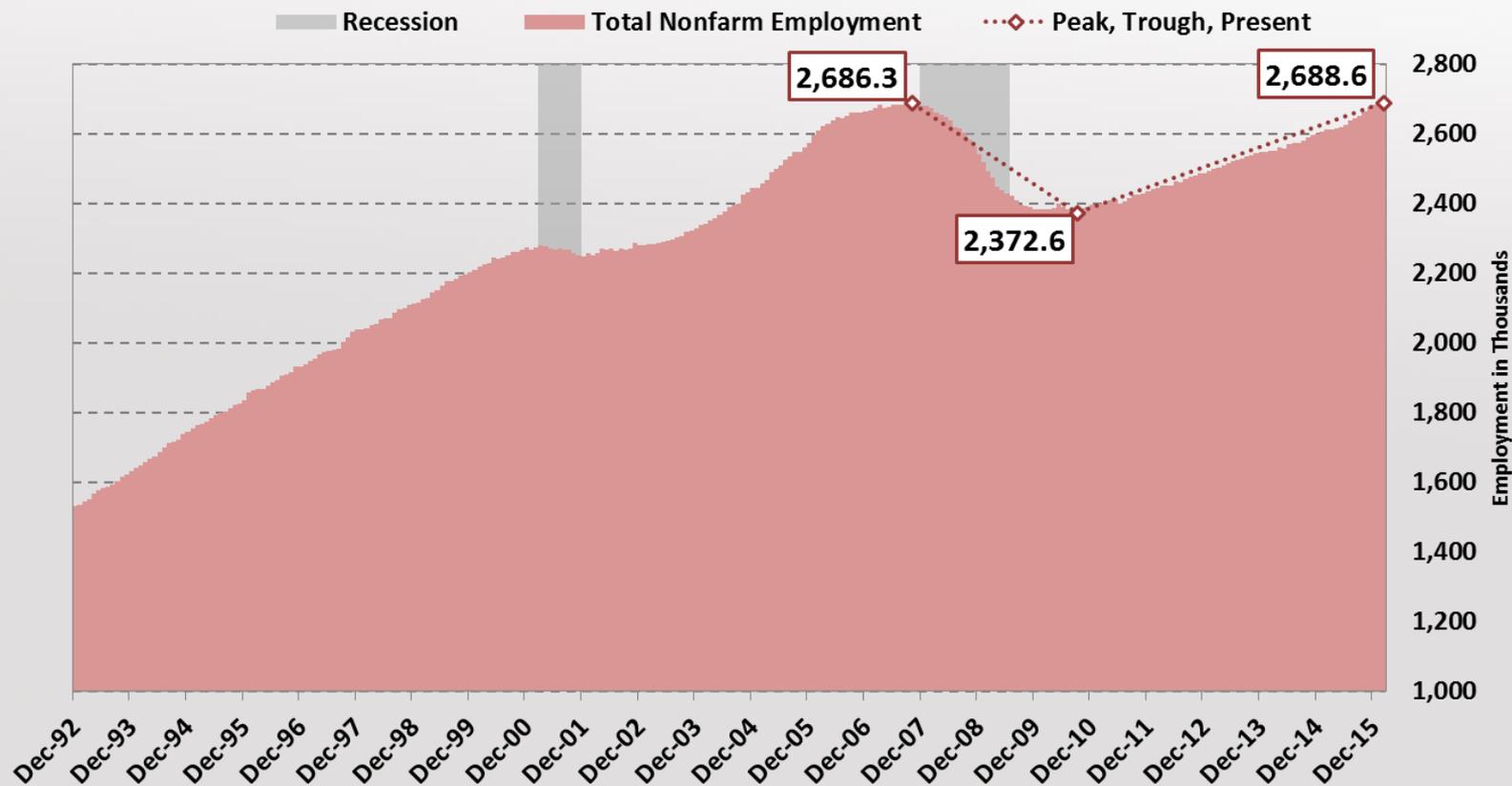
Recession --- Recovery

Employment Recession Defined

- **Pre-Recession Peak-** Signals the beginning of a recession; the month in which seasonally-adjusted employment reaches the highest levels before declining
- **Post-Recession Trough-** Signals the end of the recession; the month in which seasonally-adjusted employment reaches the lowest levels before increasing
- **Recession Replacement Rate-** The jobs recovered since the end of the recession as a share of the jobs lost during the recession
 - Greater than 100%: all jobs lost during the recession have been recovered
 - Less than 100%: not all jobs lost during the recession have been recovered

Arizona Industry Employment

Seasonally Adjusted



Source: Produced by the Arizona Office of Employment and Population Statistics in cooperation with the U.S. Dept. Of Labor, Bureau of Labor Statistics

Total nonfarm employment levels surpassed pre-recession peak employment levels in February 2016

United States

Recession	Employment Peak Date	Employment Trough Date
Recession I	June 1990	August 1991
Recession II	February 2001	August 2003
Recession III	January 2008	February 2010

Arizona

Recession	Employment Peak Date	Employment Trough Date
Recession I	January 1991	May 1991
Recession II	March 2001	December 2001
Recession III	October 2007	September 2010

United States			
Recession Period	Decline Period	Recovery Date	Recovery Period
Recession I	14	February 1993	18
Recession II	30	February 2005	18
Recession III	25	April 2014	50

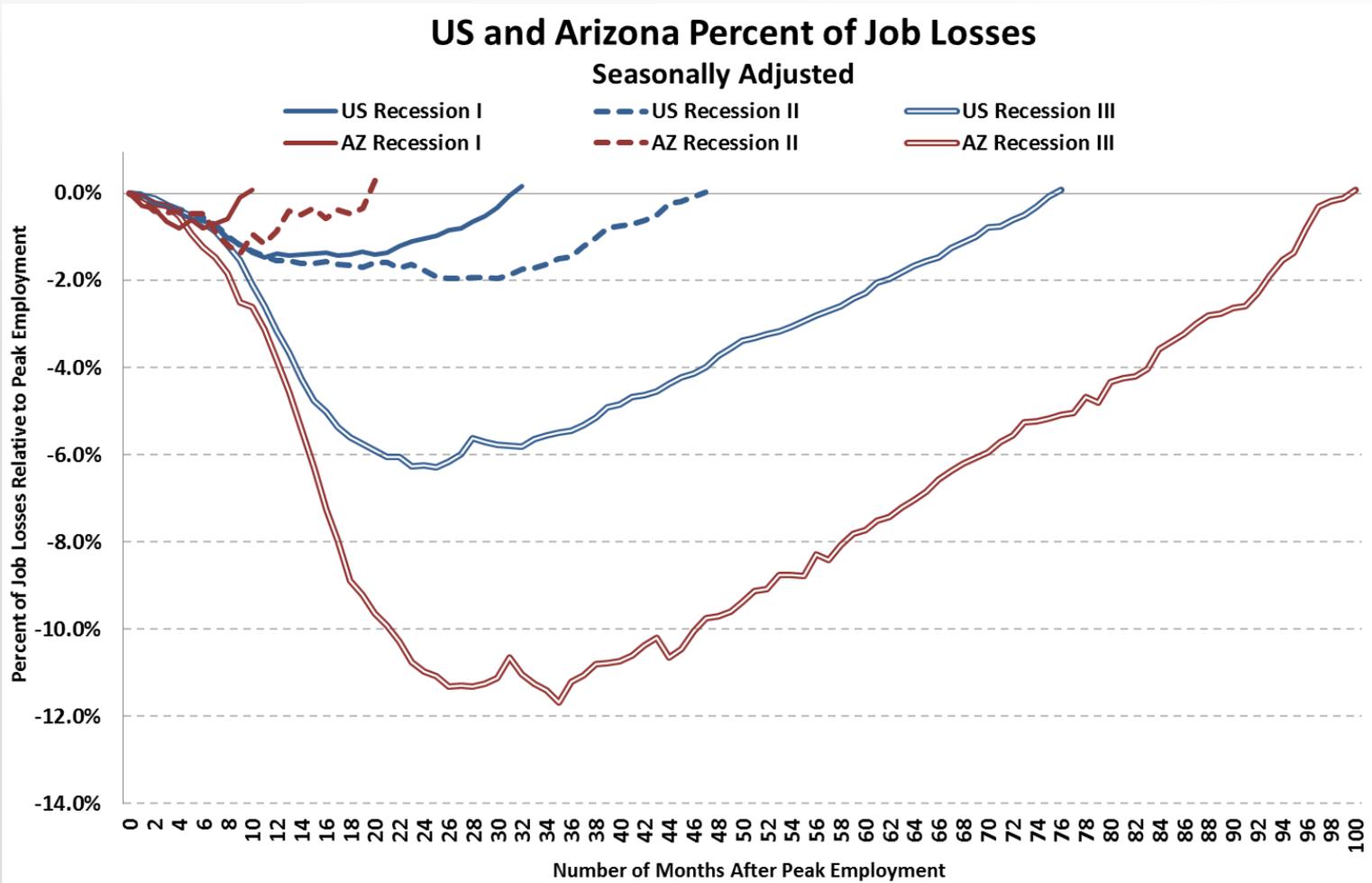
Arizona			
Recession Period	Decline Period	Recovery Date	Recovery Period
Recession I	4	November 1991	6
Recession II	9	January 2003	13
Recession III	35	February 2016	65

Recession III lasted 10 months longer in Arizona than it did for the US

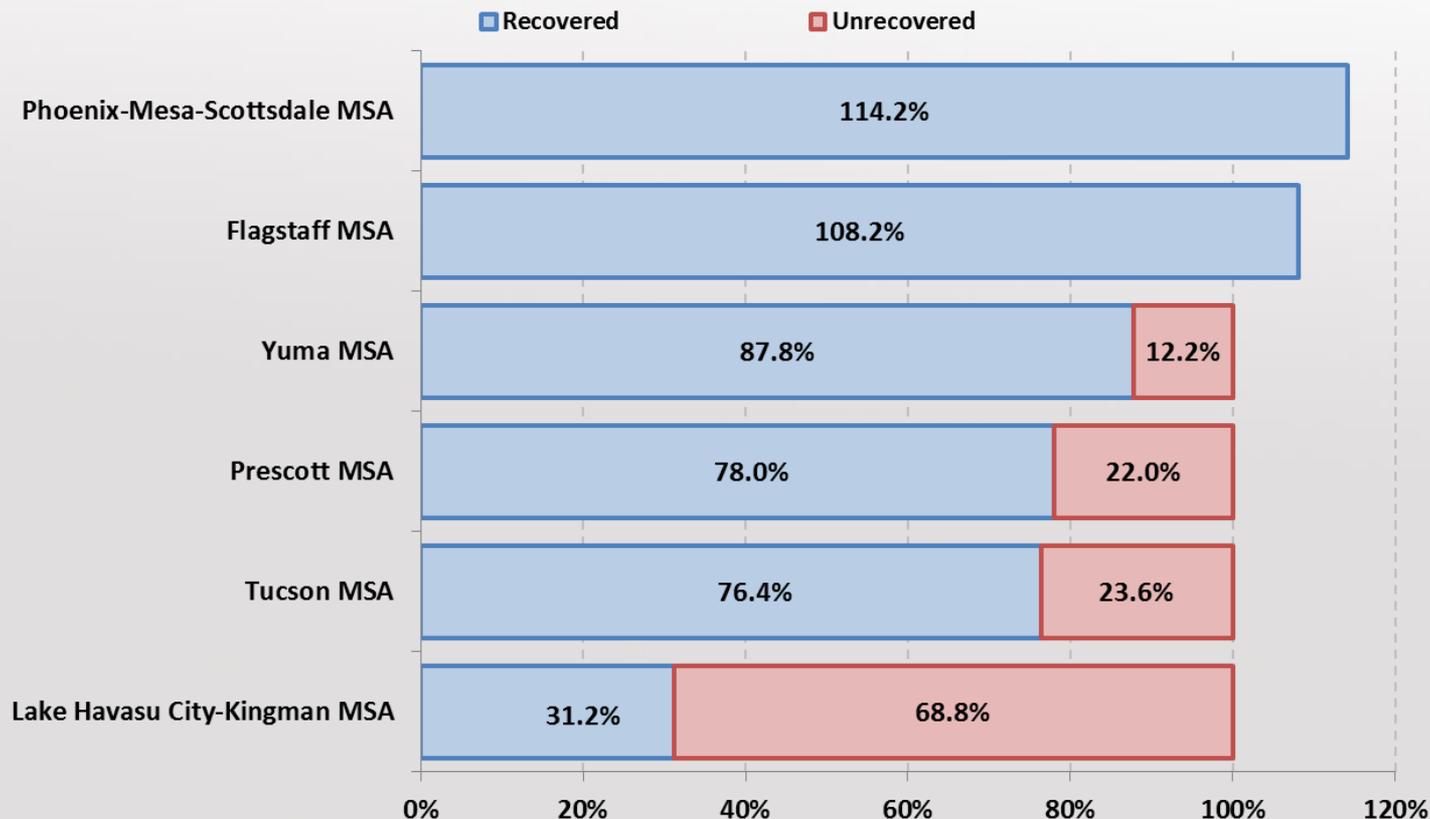
United States				
<i>(in thousands)</i>				
Recession Period	Employment Level		Jobs Lost	
	Peak	Trough	Number	Percentage
Recession I	109,822.0	108,255.0	-1,567.0	-1.4%
Recession II	132,617.0	129,919.0	-2,698.0	-2.0%
Recession III	138,056.0	129,320.0	-8,736.0	-6.3%

Arizona				
<i>(in thousands)</i>				
Recession Period	Employment Level		Jobs Lost	
	Peak	Trough	Number	Percentage
Recession I	1,497.4	1,485.1	-12.3	-0.8%
Recession II	2,278.2	2,246.5	-31.7	-1.4%
Recession III	2,687.1	2,373.2	-313.9	-11.7%

Arizona lost a larger percentage of total employment than the US during Recession III
For Recession



Nonfarm Employment Replacement Rate by Substate Area (Oct '07 to Feb '16; Seasonally Adjusted)

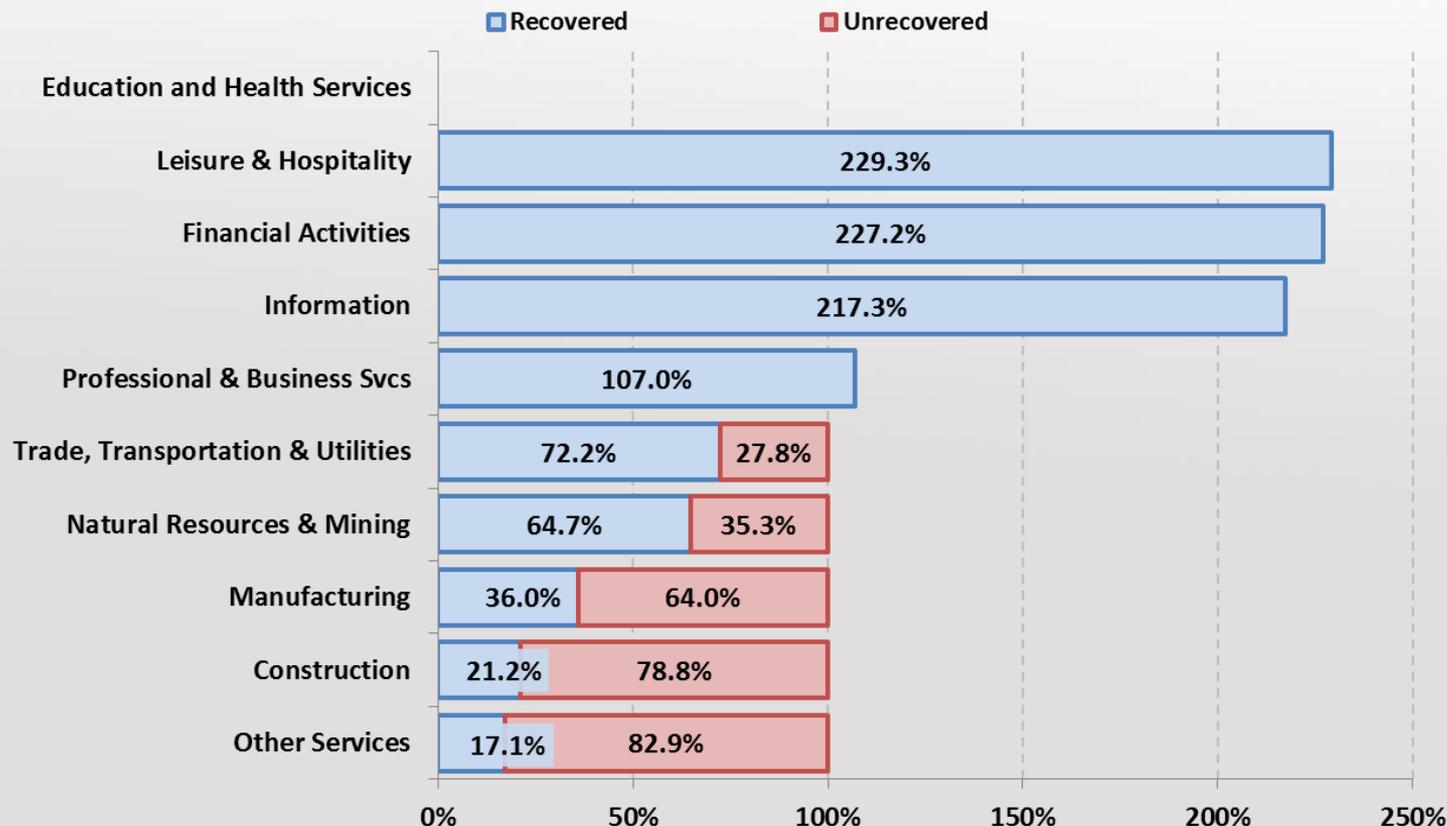


Source: Produced by the Arizona Office of Employment and Population Statistics in cooperation with the U.S. Dept. Of Labor, Bureau of Labor Statistics

Recession recovery has not been even throughout substate regions

Arizona Replacement Rate by Sector

(Seasonally Adjusted Nonfarm Employment)



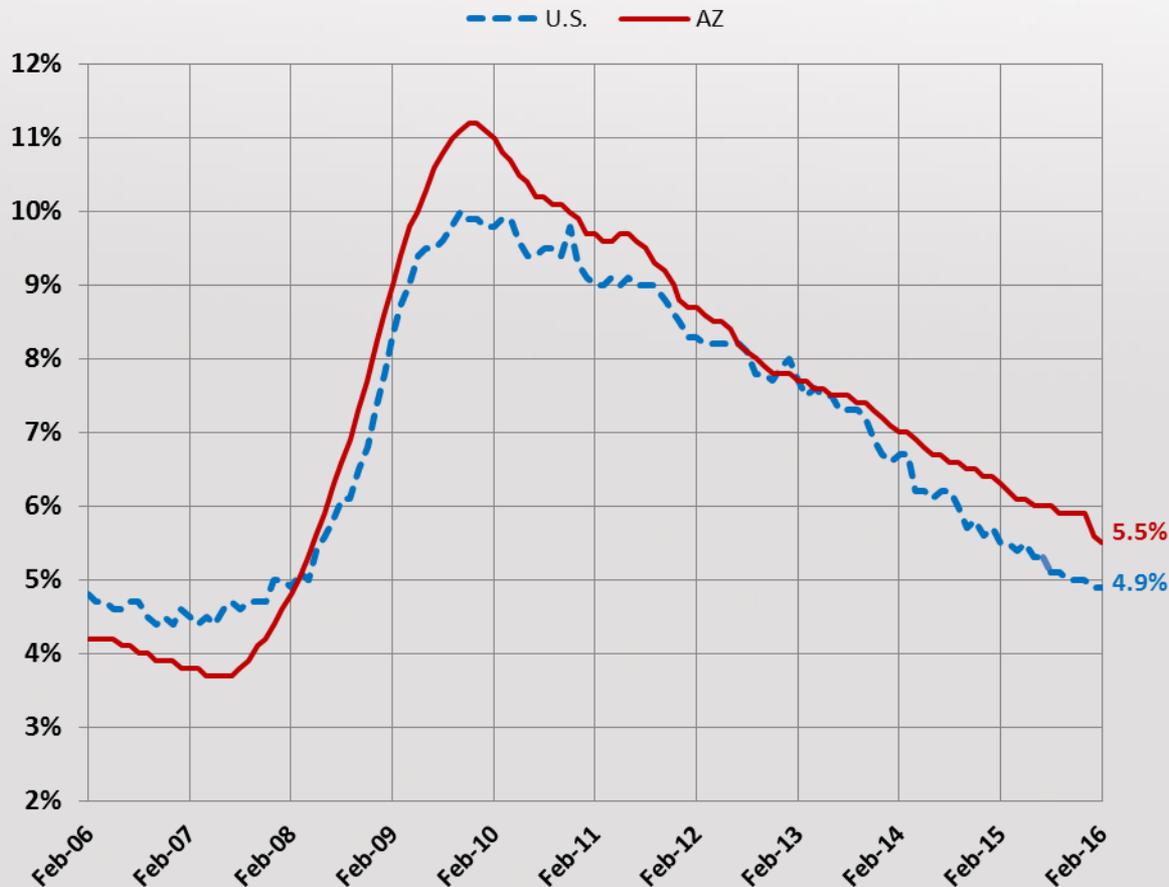
Source: Produced by the Arizona Office of Employment and Population Statistics in cooperation with the U.S. Dept. Of Labor, Bureau of Labor Statistics

Recession recovery has not been even throughout all sectors of the economy

February 2016

Employment Report Highlight

Arizona & U.S. Unemployment Rate Seasonally Adjusted



- AZ unemployment rate declined to 5.5%
- U.S. unemployment rate remained unchanged at 4.9%

Source: Produced by the Arizona Office of Employment and Population Statistics using LAUS data in cooperation with the U.S. Dept. of Labor, Bureau of Labor Statistics

Seasonally Adjusted

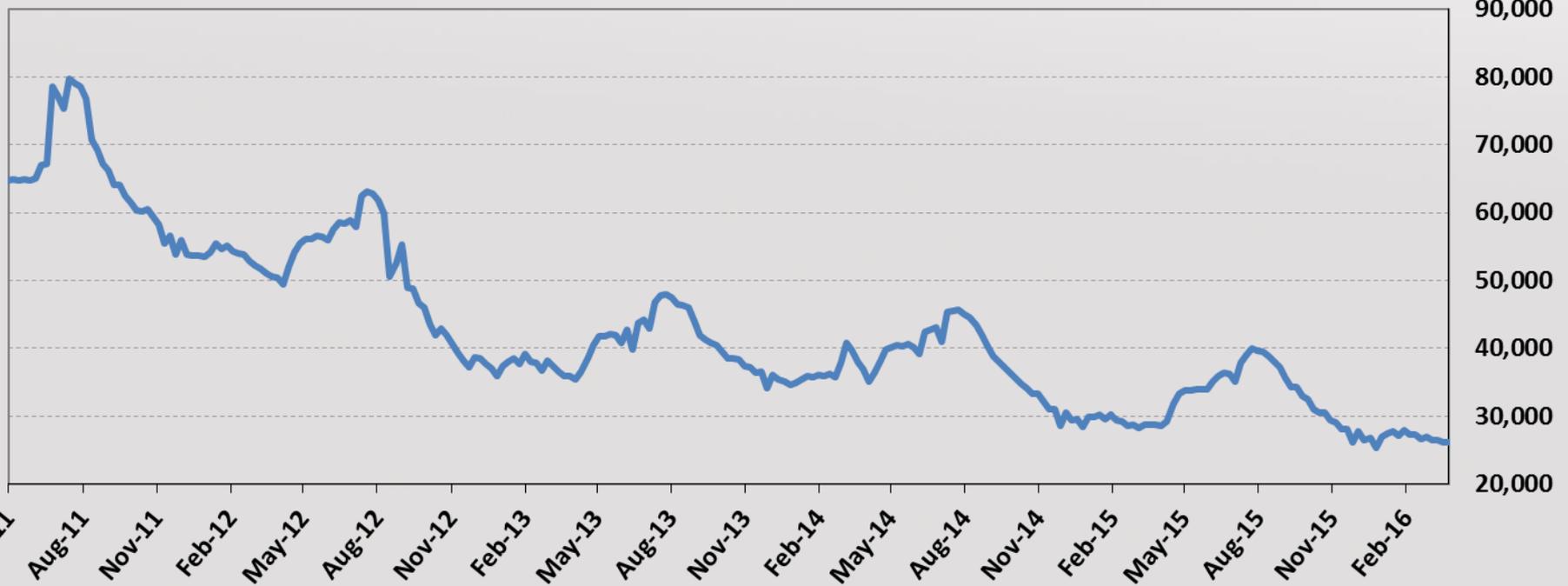
	Labor Force Employment		Unemployment	
	Level	Level	Level	Rate
Jan	3,187,561	3,008,409	179,152	5.6%
Feb	3,213,060	3,036,750	176,310	5.5%
Change	25,499	28,341	(2,842)	(0.1)%

Not Seasonally Adjusted

	Labor Force Employment		Unemployment	
	Level	Level	Level	Rate
Jan	3,188,974	3,019,089	169,885	5.3%
Feb	3,219,406	3,052,661	166,745	5.2%
Change	30,432	33,572	(3,140)	(0.1)%

Regular Weekly UI Claims in Arizona

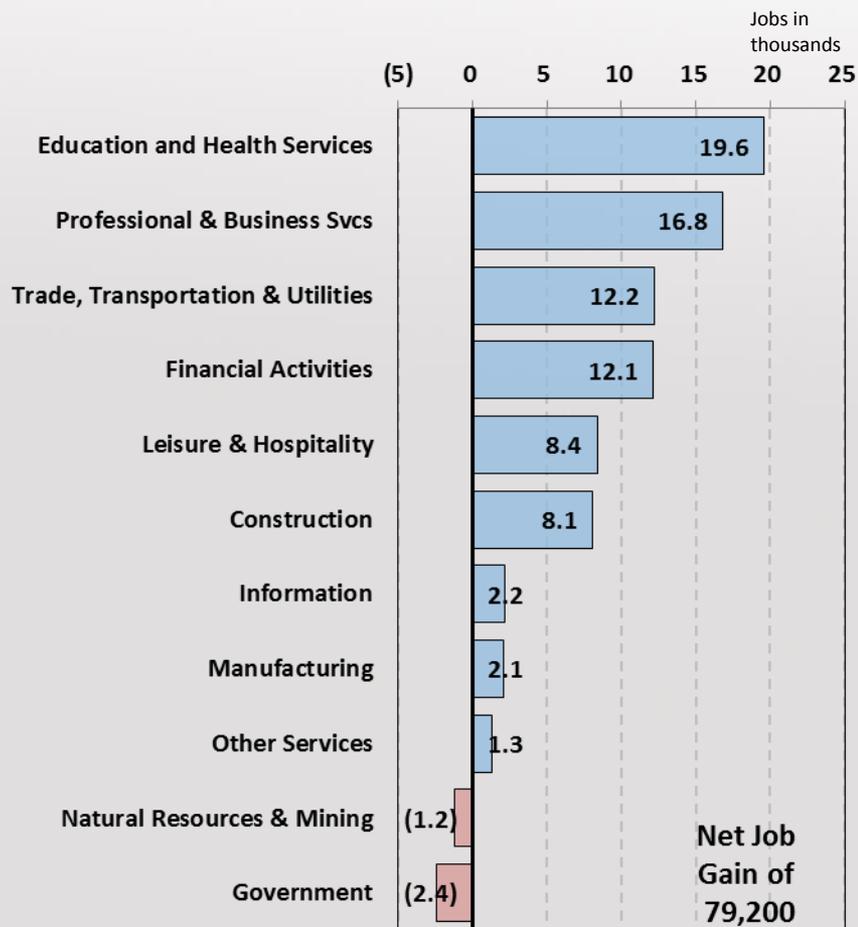
Total UI Claims Filed



Source: Produced by the Arizona Office of Employment and Population Statistics using ETA data in cooperation with the Arizona Dept. of Economic Security and using LAUS data in cooperation with the U.S. Dept. of Labor, Bureau of Labor Statistics

Over-the-Year Job Gain/Loss by Sector

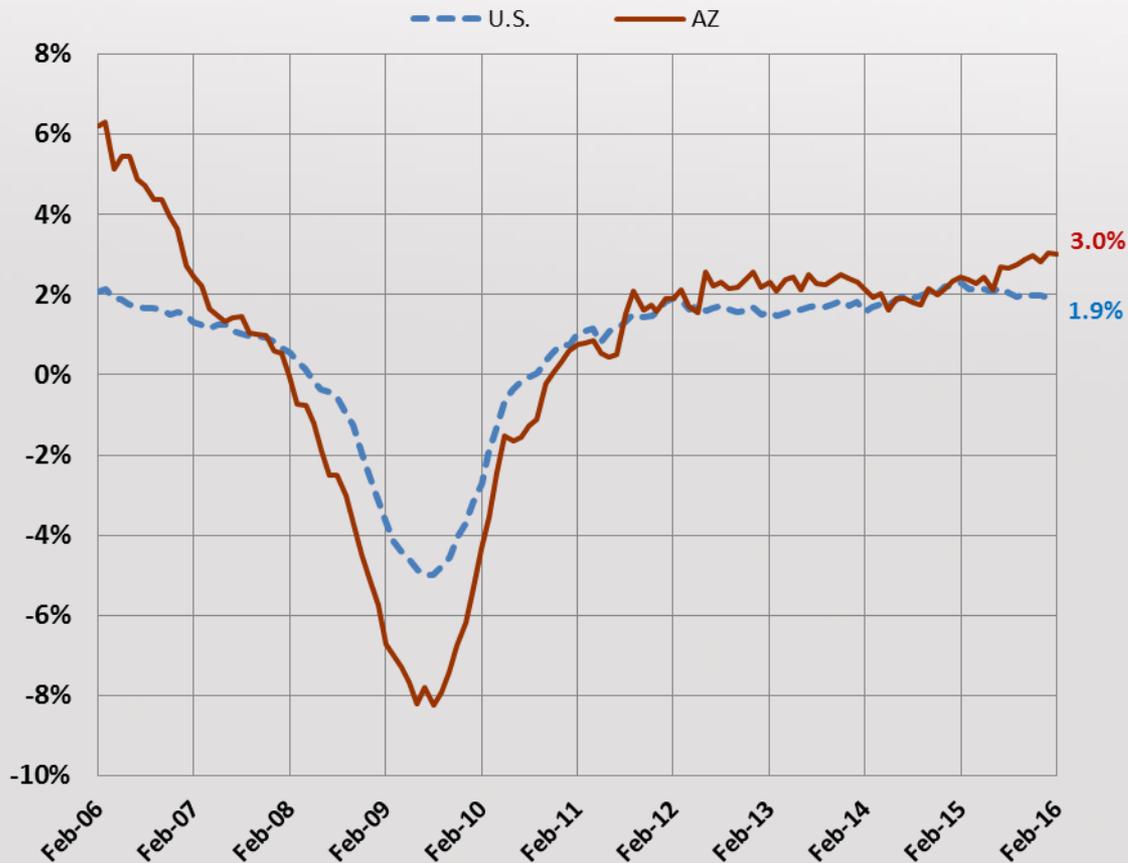
Arizona, Feb. 2015 to Feb. 2016



- Arizona added 79,200 Nonfarm jobs
- February OTY Nonfarm growth rate of 3.0%
- Private Sector gains: 81,600 jobs
Government losses: 2,400 jobs
- Nine of the eleven major sectors added jobs and two lost jobs
- Largest Supersector gains:
 - Professional and Business Services (16,800 jobs)
 - Education and Health Services (19,600 jobs)
 - Trade, Transportation, & Utilities (12,200)
 - Financial Activities (12,100 jobs)
- Supersector losses:
 - Natural Resources & Mining (1,200 jobs)
 - Government (2,400 jobs)

Source: Produced by the Arizona Office of Employment and Population Statistics using CES data in cooperation with the U.S. Dept. of Labor, Bureau of Labor Statistics

Arizona & U.S. Nonfarm Employment Year-to-Year Percent Change



- AZ over-the-year employment increase was 3.0% in February
- U.S. over-the-year employment increase was 1.9% in February

Source: Produced by the Arizona Office of Employment and Population Statistics using LAUS data in cooperation with the U.S. Dept. of Labor, Bureau of Labor Statistics

U.S. States Ranked by Over-the-Year Percent Change in Nonfarm Employment

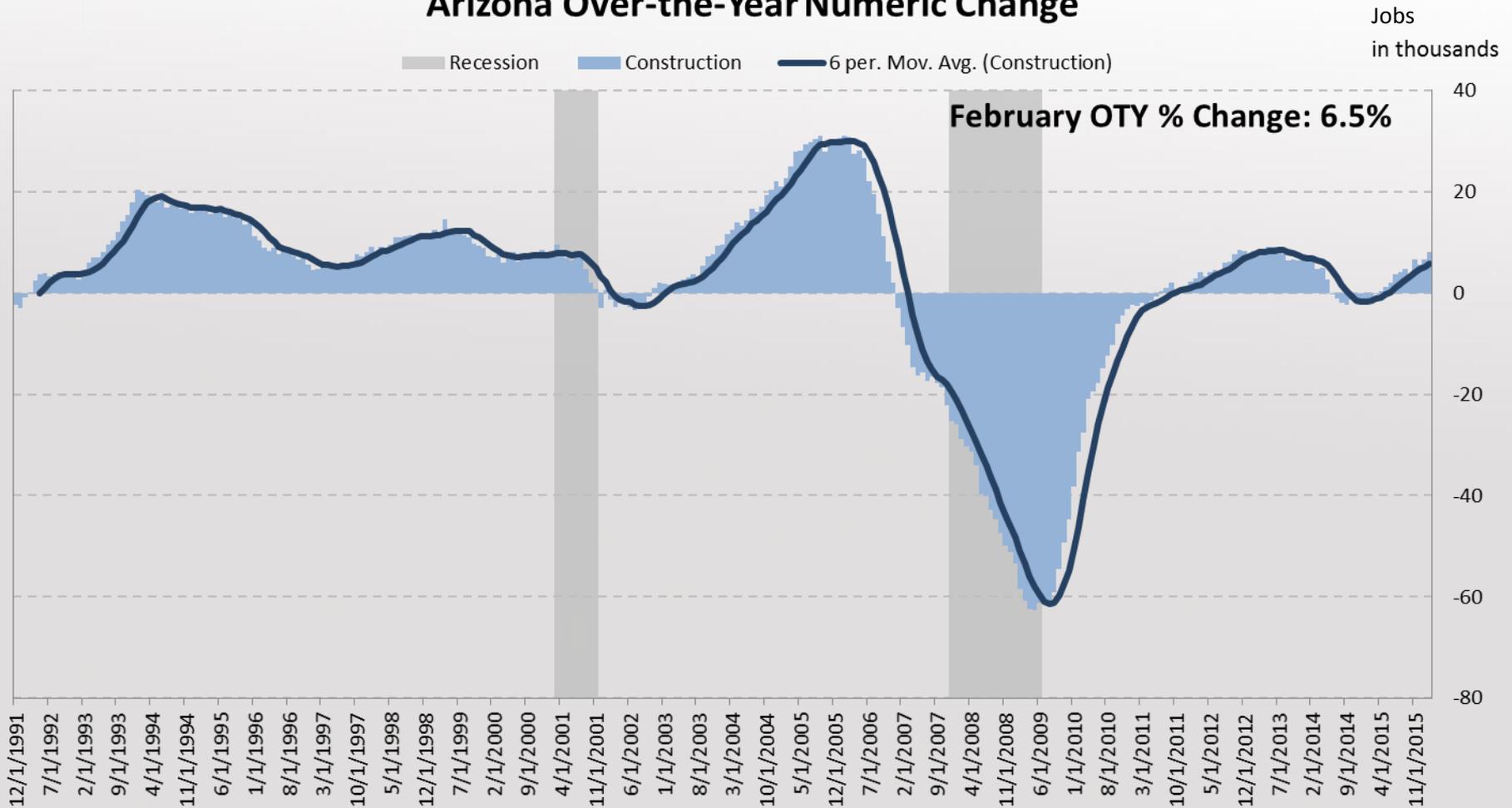
(employment in thousands, not seasonally adjusted)

Percentage of 50 States Total^(a)

Nonfarm Employment

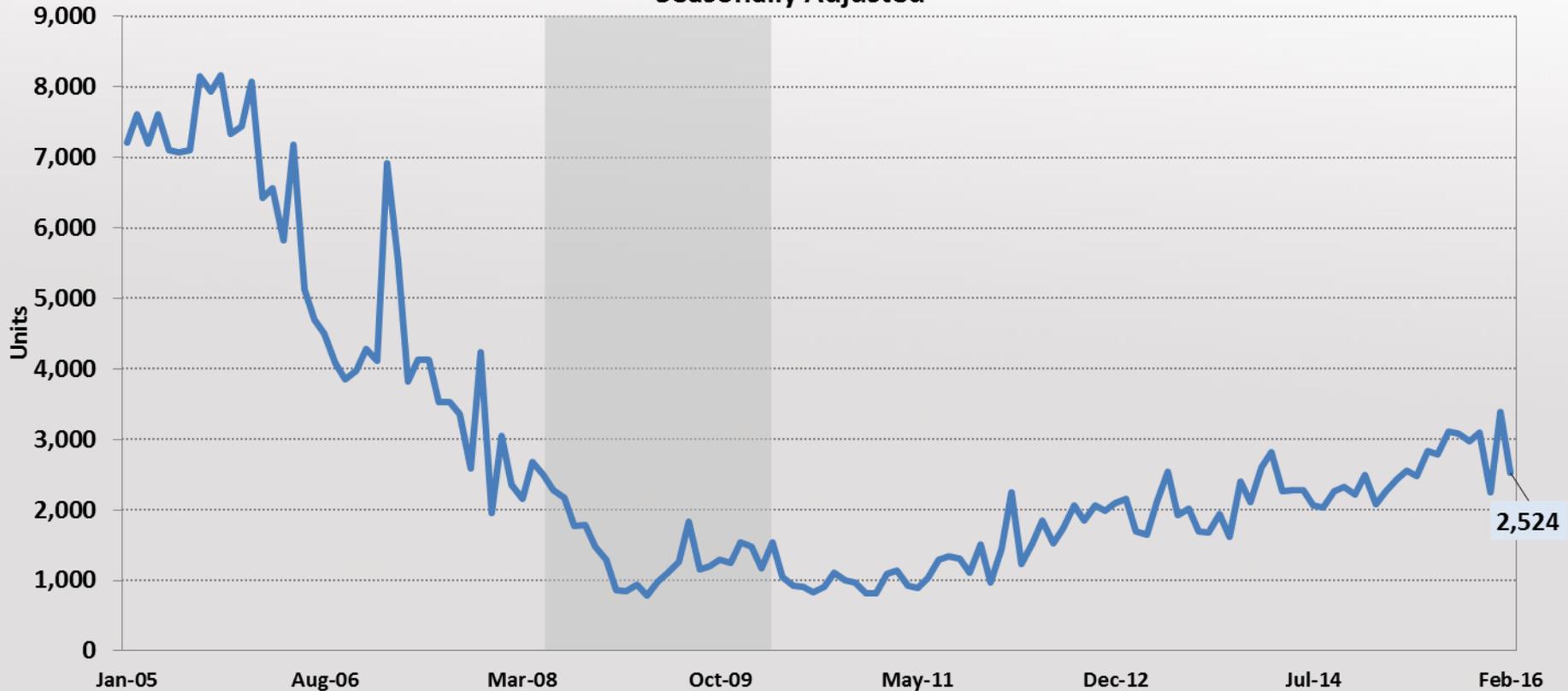
RANK	STATE	February	February	<u>Over-the-Year Change</u>		February	February
		2016(p)	2015	Amount	Percentage ^(b)	2016(p)	2015
1	Idaho	678.0	652.6	25.4	3.9%	0.5%	0.5%
2	Utah	1,395.1	1,350.4	44.7	3.3%	1.0%	1.0%
3	Oregon	1,797.6	1,740.9	56.7	3.3%	1.3%	1.3%
4	Tennessee	2,923.3	2,831.7	91.6	3.2%	2.1%	2.0%
5	Florida	8,267.1	8,013.6	253.5	3.2%	5.8%	5.8%
6	Washington	3,180.2	3,084.2	96.0	3.1%	2.2%	2.2%
7	Arizona	2,700.1	2,620.9	79.2	3.0%	1.9%	1.9%
8	Georgia	4,308.1	4,188.1	120.0	2.9%	3.0%	3.0%
9	California	16,219.4	15,770.9	448.5	2.8%	11.5%	11.4%
10	Colorado	2,565.9	2,499.1	66.8	2.7%	1.8%	1.8%
11	Delaware	445.7	434.5	11.2	2.6%	0.3%	0.3%
12	Nevada	1,265.2	1,234.1	31.1	2.5%	0.9%	0.9%
13	South Carolina	2,009.1	1,960.2	48.9	2.5%	1.4%	1.4%
14	Virginia	3,859.4	3,766.5	92.9	2.5%	2.7%	2.7%
15	Hawaii	648.2	633.4	14.8	2.3%	0.5%	0.5%

Arizona Over-the-Year Numeric Change



Source: Produced by the Arizona Office of Employment and Population Statistics in cooperation with the U.S. Dept. of Labor, Bureau of Labor Statistics

New Private Housing Building Permits for Arizona Seasonally Adjusted



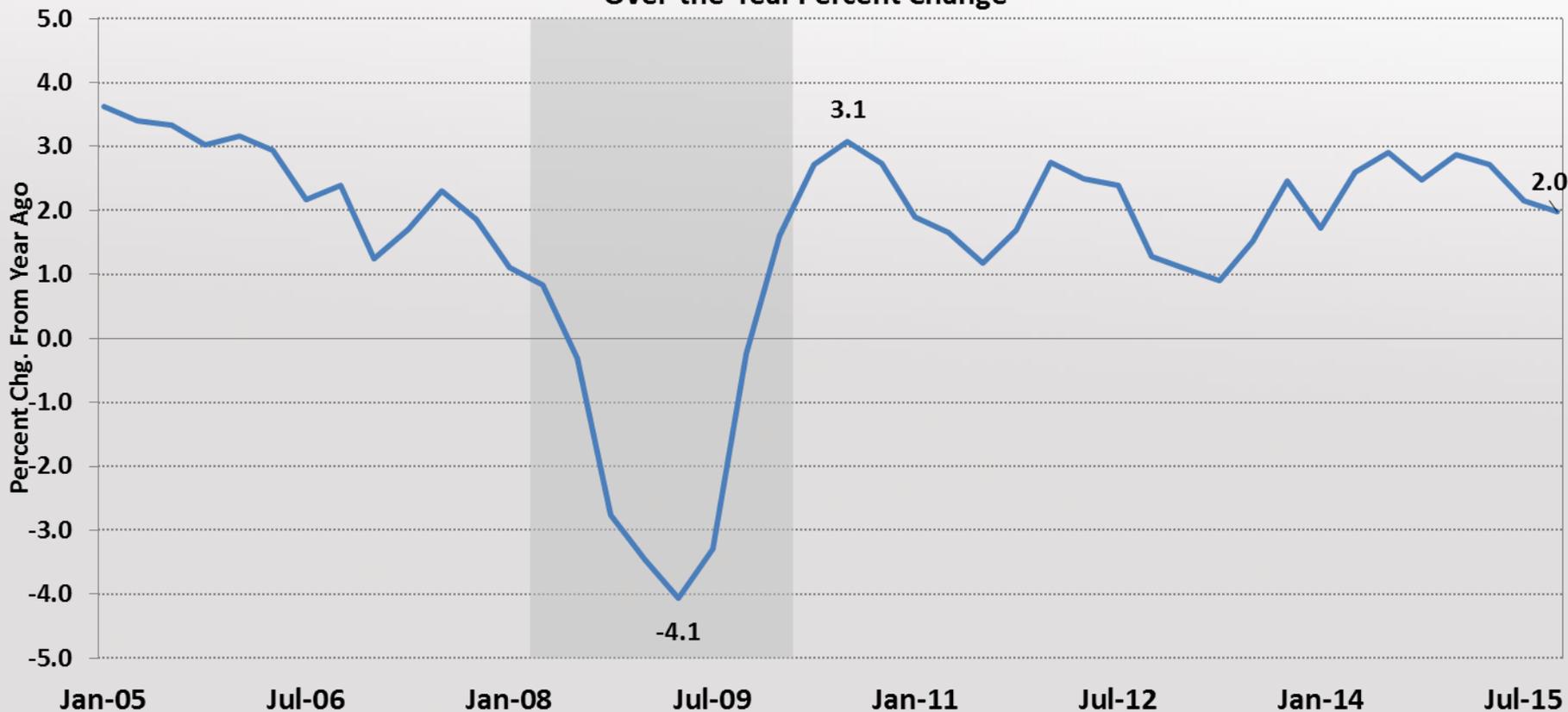
Source: Federal Reserve Bank of St. Louis/FRED

S&P/Case-Shiller AZ-Phoenix Home Price Index© Jan. 2000- Jan. 2016



Source: S&P Dow Jones Indices LLC/FRED

Real Gross Domestic Product Over-the-Year Percent Change



Source: U.S. Department of Commerce: Bureau of Economic Analysis/FRED

Retail Trade Earnings in Arizona



Source: US. Bureau of Economic Analysis/FRED

The Conference Board's Help Wanted Online

What is Help Wanted Online?

- HWOL is produced by the Conference Board as a time series of new and total volume of monthly online job ads
- Job postings are compiled from online job boards, company websites, and newspapers using spidering technology (e.g. Monster, CareerBuilder, Employer and Government Job Boards)
- Postings are collected and continually updated at regular frequency and de-duplication logic applied
- Data are parsed to produce information on hiring requirements including education, experience, skills, and certifications
- Geographically comprehensive (State, MSA, County)

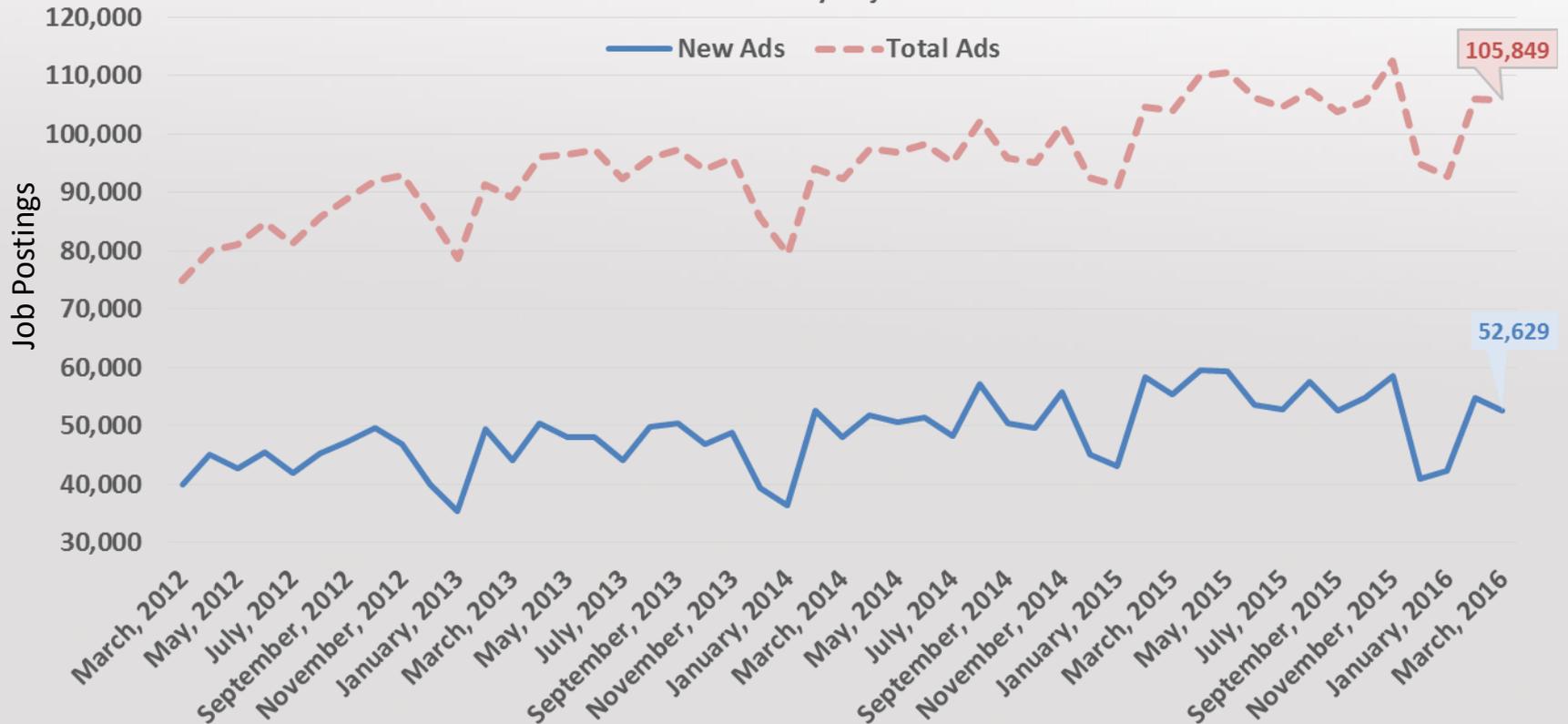
How should I use HWOL?

- A general indicator of hiring
- A useful resource to assess new and emerging occupations, and their skill/education requirements

Considerations when using HWOL

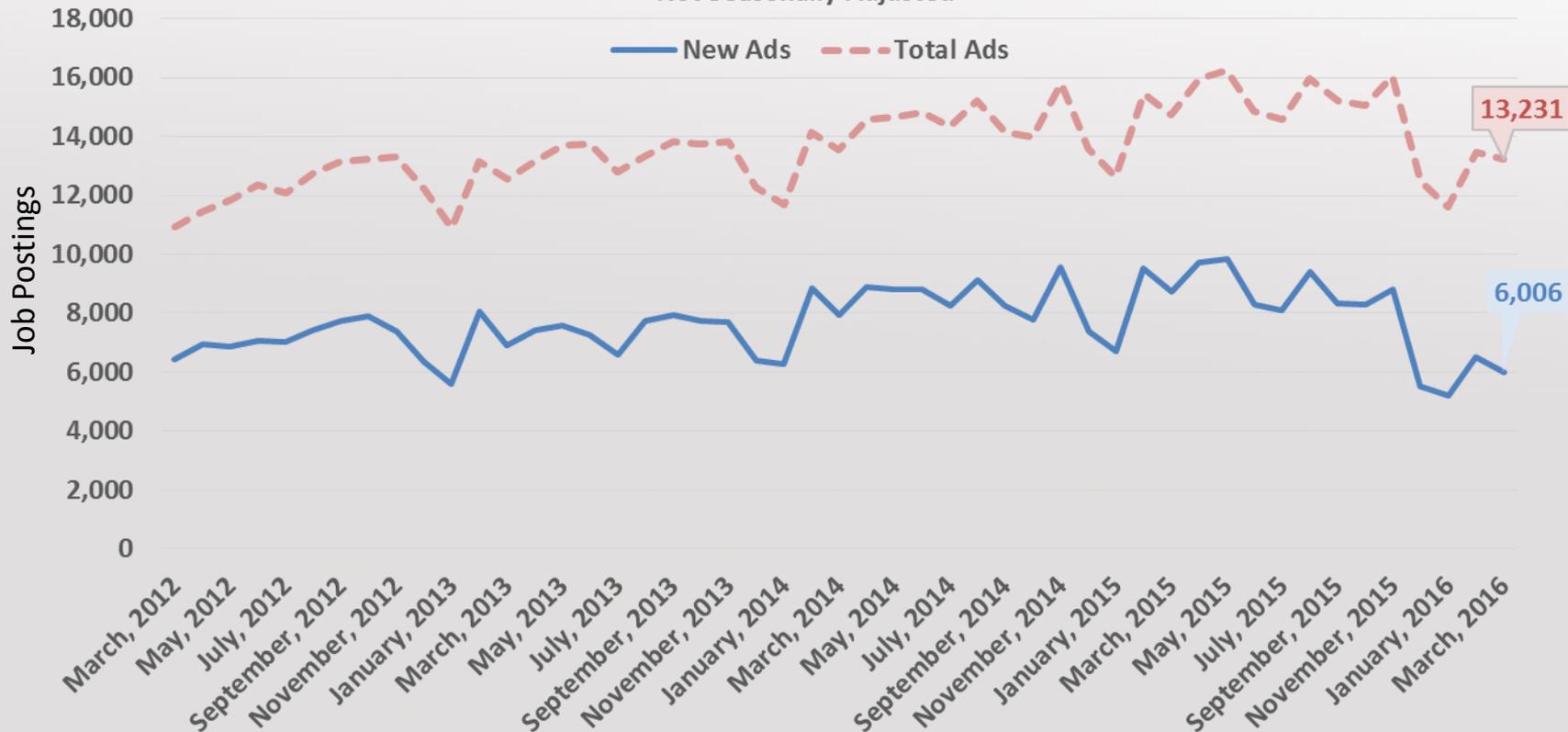
- Seasonality
- Mismatch between ads and actual hiring
- Structural changes in hiring/job seeking practices
 - Decrease in posting costs
 - Increase in job recruitment sites
- Methodological changes in the data series

Arizona Job Postings Not Seasonally Adjusted



The Conference Board; Help Wanted Online

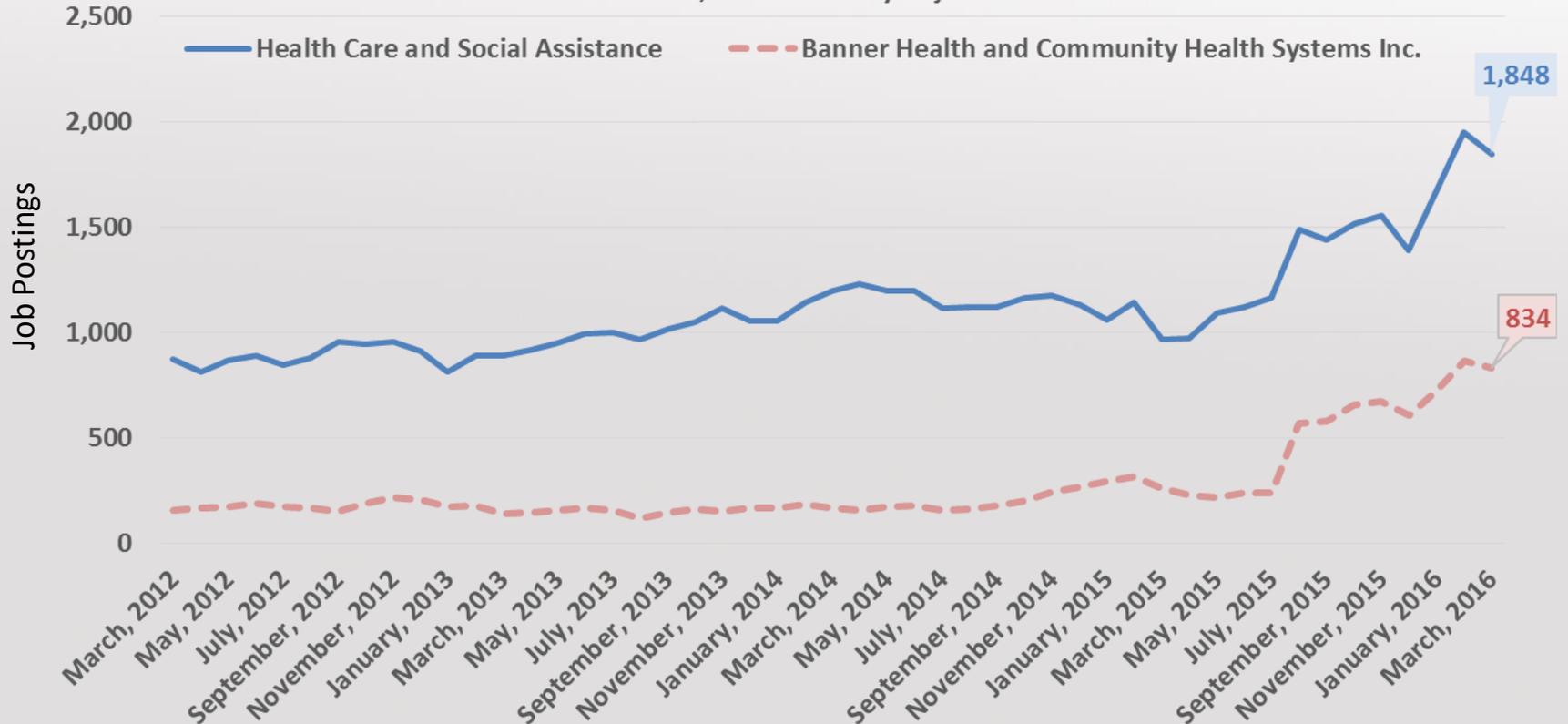
Tucson Metro Job Postings Not Seasonally Adjusted



The Conference Board; Help Wanted Online

Tucson Metro Health Care Job Postings

Total Ads; Not Seasonally Adjusted



The Conference Board; Help Wanted Online

Top Employers: Health Care and Social Assistance

February 2016; Total Ads

Advertiser	Volume
Banner Health	522
Community Health Systems Inc	282
The Hospitals of Providence	224
Northwest Medical Center	76
ADVANTAGE SOLUTIONS INC	36
BROOKDALE	35
Tucson Medical Center	28
Oro Valley Hospital	20
Atria Senior Living	20
Gentiva Health Services	19
Unspecified	9
Others (154)	603
Total (165)	1,874

Source: The Conference Board; Help Wanted Online

Top Occupations: Health Care and Social Assistance February 2016; Total Ads	
Occupation	Volume
Registered Nurses	564
Medical and Health Services Managers	87
Medical Assistants	57
Medical Scientists, Except Epidemiologists	49
Licensed Practical and Licensed Vocational Nurses	46
Social and Human Service Assistants	43
Physical Therapists	43
Surgical Technologists	40
Medical Secretaries	37
Radiologic Technologists	35
Others (150)	873
Total (160)	1,874

Source: The Conference Board; Help Wanted Online

The Conference Board Help Wanted OnLine®



THE CONFERENCE BOARD

Banner Health; Community Health Systems Inc

Tucson, AZ

excluding Miscellaneous

Methodology:

summary

listing

Banner Health; Community Health Systems Inc in Tucson, AZ excluding Miscellaneous



477-027 Transporter - PRN - Nights w/rotation

Last Seen February 09, 2016

Community Health Systems Inc - Tucson, Arizona

Facilitates the efficient functioning of the patient care unit by performing transportation of patients, supplies, specimen...

from: LinkedIn

contact lookups D&B

Banner Health Registry: Specialist RN, Tucson, AZ

Last Seen February 28, 2016

Banner Health - Tucson, Arizona

Job Description: POSITION SUMMARY This position applies specialized knowledge to assess, develop, implement...

from: ZipRecruiter

contact lookups D&B

Child Life Specialist - Women's & Children's

Last Seen February 13, 2016

Banner Health - Tucson, Arizona

Log back in! Child Life Specialist - Women's & Children's - 158107 Facility Banner - University Medical Center Tucson...

from: JobNetwork

contact lookups D&B

Registered Nurse Open House

Last Seen February 05, 2016

Banner Health - Tucson, Arizona

Log back in! Registered Nurse Open House - 158293 Facility Banner - University Medical Center Tucson Shift Varied...

from: JobNetwork

contact lookups D&B

How to Use & Where to Find LMI Data

How can labor market information data help companies make data-driven decisions?

- Occupation Questions
 - What is considered a competitive wage for a particular occupation?
 - What is the turnover rate for a particular occupation?
- Labor Supply Questions
 - What is the potential labor supply level for a region?
 - What is the education level of the labor supply in a region?
- Industry Questions
 - How many firms in my industry are already located in that region?
 - What is the average wage for my industry?
 - What are the characteristics of the new hires in that industry?

Where do I get the data?

- Employment and Population Statistics
 - <https://laborstats.az.gov/>
- Bureau of Labor Statistics
 - <http://www.bls.gov/>
- Census Bureau
 - <http://www.census.gov/>

Where do I get the data?

Employment and Population Statistics Products

- Population
- Employment
- Unemployment
- Wages & Occupations
- Industry Projections
- Occupations Projections
- Education Related Products
- Other Economic Products

**Many products are unique to EPS*

Where do I get the data?

Bureau of Labor Statistics Products

- Employment
- Unemployment
- Pay & Benefits
- Education Related Products
- Inflation & Prices
- Spending & Time Use
- Productivity
- International

**Most of the data available is county or statewide*

Where do I get the data?

Census Bureau Products

- Population
- American Fact Finder: Decennial Census and Survey Data
- LEHD Origin-Destination Employment Statistics : On the Map
- LED Extraction Tool: Quarterly Workforce Indicators

**Some of the products combine industry data and census information*

How relevant/up to date is the data?

- Lag times vary widely from one month to several years. Generally, the more detailed information you want, the longer the lag time.
- Even data with long lag times can be very useful. Trends tend to change only slowly over time.

How should I use this data?

- **Craft your question carefully** – the more muddled the question, the more difficulty you will have in finding the answer
- **Become familiar with different data sets (or someone who is)** – there is no one place to find all the data you need
- **Know the limitations of your data set** – it’s easy to accidentally misuse data and draw erroneous conclusions
- **Use more than one source of data** – don’t lock yourself into a single estimate, consider all of the available data to get the most accurate picture

“A single model is no substitute for judicious consideration of the various indicators”

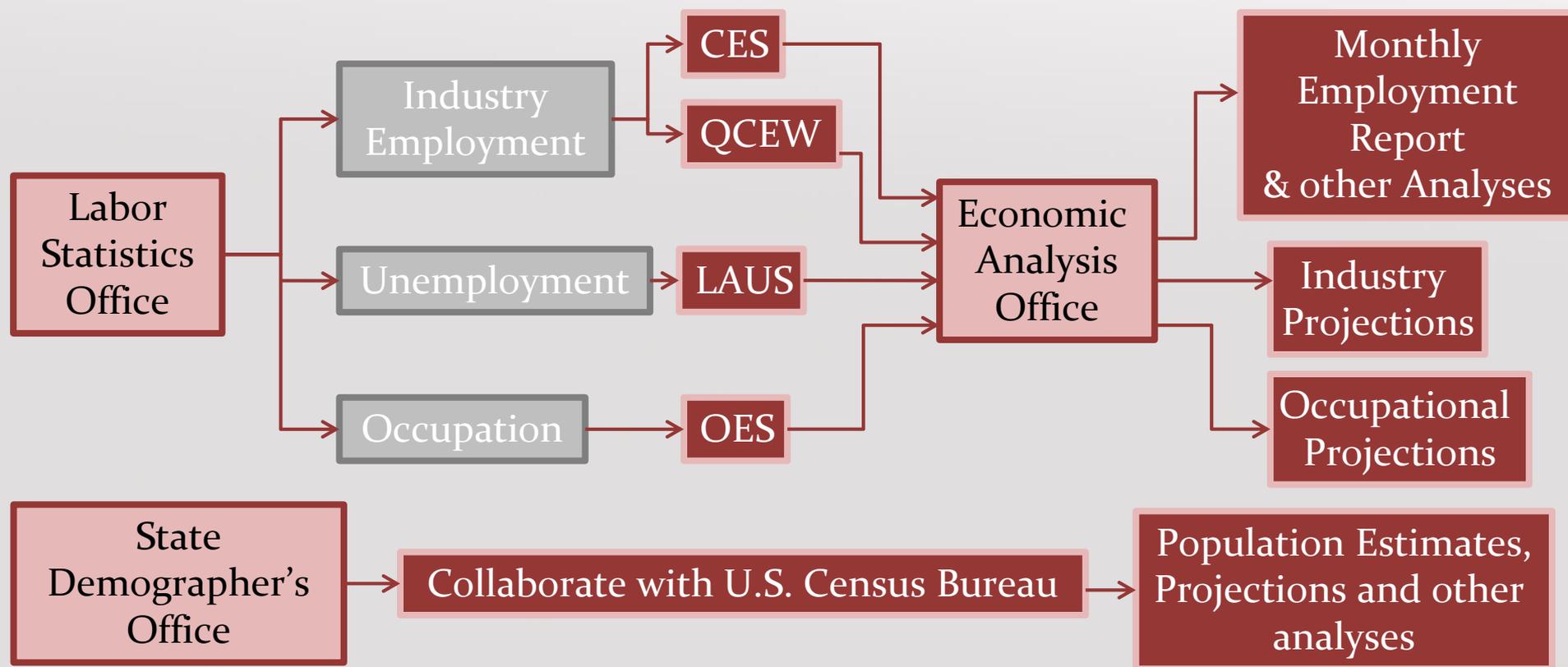
-Federal Reserve

Find the presentation online:

1. Go to the office of Employment and Population Statistics website:
<https://laborstats.az.gov/>
2. Select
 - a) Research and Analysis
 - b) Presentations
 - c) AAED Presentation 1-6-2015

Organization & Contact Information

Office of Employment and Population Statistics, Arizona Department of Administration



LMI Data Products & Services

(include but not limited to)

Products

- Employment Estimates
- Unemployment Rate Estimates
- Wage & Income Estimates
- Industry Projections
- Occupation Projections
- Other Publications

Services

- Labor Market Analysis
- Presentation: Regional Analysis
- Presentation: Using/Understanding Labor Market data
- Presentation: Using Web-Based Data Tools
- Specialized Models/Analysis

Arizona Department of Administration

Employment and Population Statistics

Contact Information

Website: <https://laborstats.az.gov/>

Phone: 602.771.2222

Email: labor.info@azstats.gov