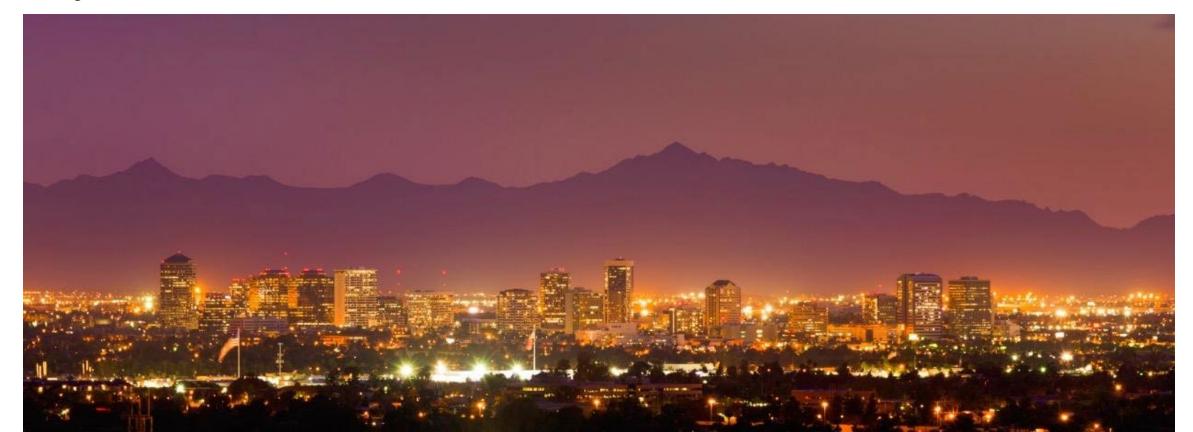


#### **February 18, 2021**

## 2020-2022 Employment Projections

Doug Walls, Labor Market Information Director



# Industry Projections Methodology: Estimation Process

- The short-term projections process estimates employment levels eight quarters (two years) into the future
  - Historic Q2 2020 employment data are used as the base year of the forecast
  - Employment estimates for Q2 2020 are the latest available data published by the BLS QCEW program
  - Projected data are modeled for forecast-year Q2 2022
- Projected employment estimates are created using historical employment trends
- Estimates are refined through a review of current United States and Arizona economic trends



# Industry Projections Methodology: Estimation Process

- The principal data source is the Quarterly Census of Employment and Wages (QCEW) data
  - Near <u>census</u> of all employment subject to unemployment insurance tax law (92%-95% of total Arizona Employment)
- The QCEW industry classification structure differs slightly from the CES industry classification structure
  - Notably:
    - QCEW: State and local government education employment is categorized in the Educational Services sector
    - <u>CES</u>: State and local government education employment is categorized in the Government sector



# Industry Projections Methodology: Data Source

- Industry Projections Estimates Include:
  - Nonfarm employment by subsector group (3-digit NAICS)
  - Self-employed workers who work for profit or fees in their own business, profession, trade, or farm
  - Private household workers employed as domestic workers
  - Railway workers
  - Religious organization employees
  - Farm workers
- Industry Projections Estimates Exclude:
  - Unpaid family workers
  - Active duty military service personnel



# Industry Projections Methodology: Economic Assumptions

- No major economic or political disruptions will occur
- Government agencies will operate within their budgets
- Population distribution will not differ significantly
- The U.S. economic framework will not differ significantly
- Long-term employment patterns will continue in most industries

The projections methodology in its entirety can be found at <a href="https://www.azcommerce.com/media/1545673/lt\_proj\_method.pdf">https://www.azcommerce.com/media/1545673/lt\_proj\_method.pdf</a>



## Substate Regions

Projected employment was estimated for 20 substate regions including:

#### All Fifteen Arizona Counties

#### **Three Multi-County Areas**

- Northeast Arizona: Apache, Navajo, and Gila Counties
- Southeast Arizona: Greenlee, Graham, and Cochise Counties
- Mohave and La Paz Counties

#### Two Sub-County Areas

City of Phoenix and Balance of Maricopa County



## **Arizona Industry Highlights**

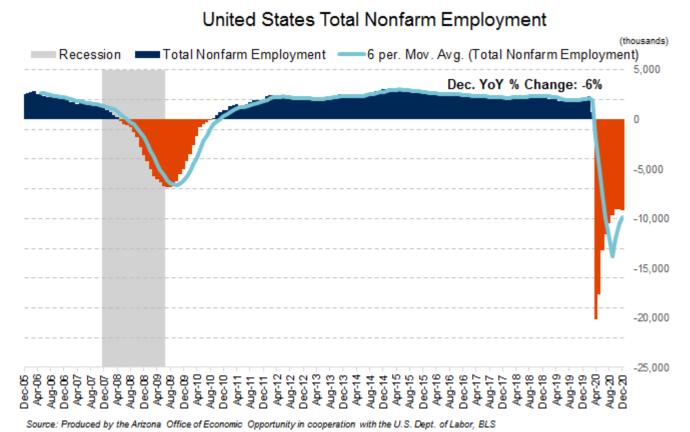
- Arizona employment is projected to grow by 325,040 jobs or 5.5% annually, from 2,853,646 in Q2 2020 to 3,178,686 jobs in Q2 2022
- All private sector industries are projected to add jobs
- Trade, Transportation, and Utilities is projected to add the largest number of jobs (86,473 jobs or 7.8% annualized growth)
- Leisure and Hospitality is projected to record the largest percentage gain, growing 12.8% annually (69,901 jobs)
- Accommodation and Food Services is projected to be the fastest growing industry in 7 of 15 counties



## National Economic Trends



## U.S. Nonfarm Employment



Economic activity has been negatively affected by the COVID-19 pandemic

The COVID-19 pandemic was responsible for the largest one-month job loss on record.

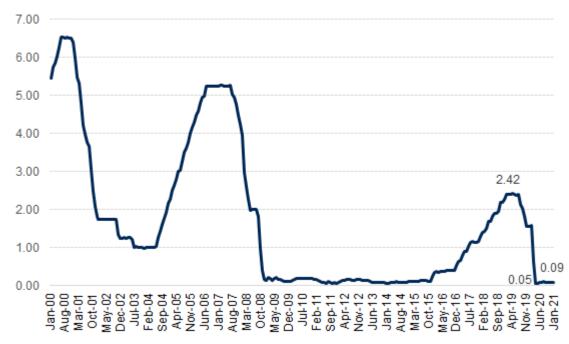
 U.S. nonfarm employment declined by 19.8 million jobs (-13.4%) YoY in Apr. 2020

As of December 2020, U.S. employment was down 6.0% YoY

48 U.S. states recorded YoY job declines



#### Effective Federal Funds Rate Percentage



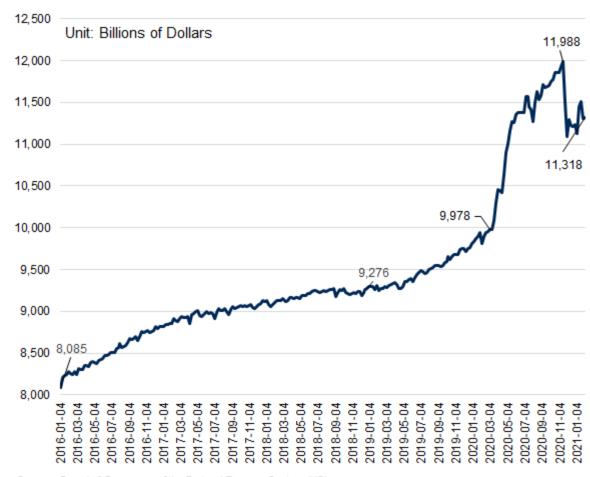
Source: Board of Governors of the Federal Reserve System (US)

Federal institutions have taken action to minimize the economic impact caused by the COVID-19 pandemic

- The Federal Reserve has lowered the effective federal funds rate to near zero.
- This change is expected to have a positive impact on financial lending institutions and residential building companies, among others.



## Total Savings Deposits at all Depository Institutions



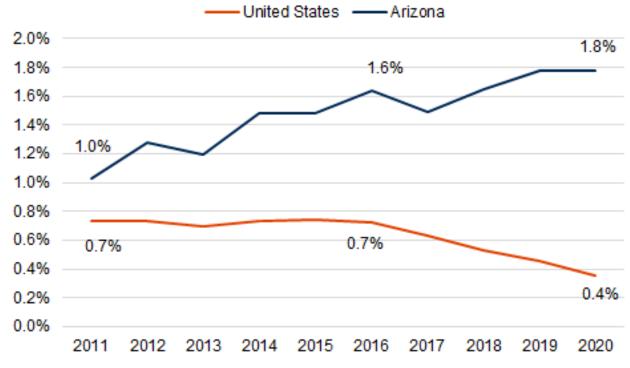
Source: Board of Governors of the Federal Reserve System (US)

People have been saving more than usual during the pandemic

- From week ending 3/2/2020 to week ending 2/1/2021, total savings deposits increased by 13.4%
- The personal savings rate increased to the highest levels since 1975
  - Personal savings as a percentage of disposable income increased to 13.7% in December 2020 from 8.0% in Mar. 2020



## **Population Growth**



Source: U.S. Census Bureau

U.S. population continues to grow, but at a decelerating pace

The slowdown is due, in part, to falling birth rates and declining international migration

 2019 international migration into the United States were the lowest in nine years

Arizona's 2020 population growth rate was four times larger than the U.S. population growth rate

Arizona had the second fastest population growth rate in the nation in 2020

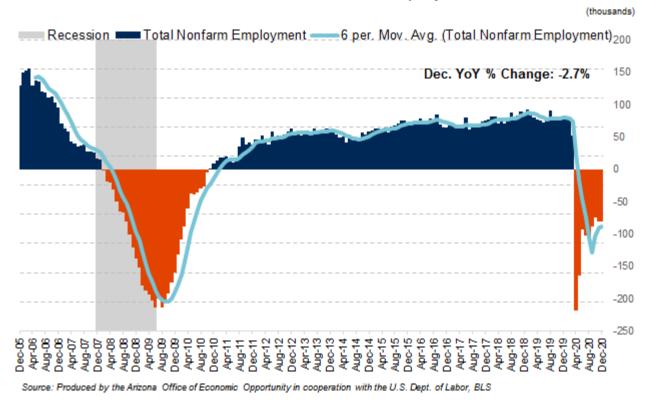


## Arizona Economic Trends



## Arizona Nonfarm Employment

#### Arizona Total Nonfarm Employment



Arizona employment declined in April 2020 because of the COVID-19 pandemic

 Arizona lost nearly 270,000 jobs, declining by 7.5% YoY

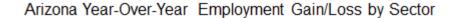
As of December 2020, Arizona employment was down 2.7% YoY

For comparison, at the height of the Great Recession ('07-'09):

- Arizona nonfarm employment declined by 8.2% YoY (Aug. '09)
- U.S. employment declined by 5.0% YoY (Aug. '09)



## Arizona Monthly CES Employment: December 2020





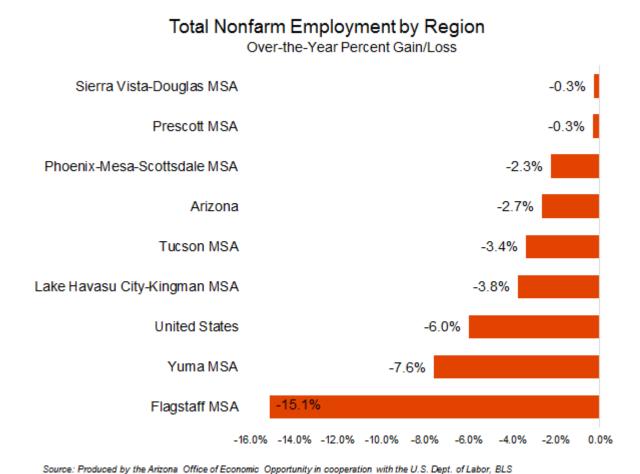
Source: Produced by the Arizona Office of Economic Opportunity in cooperation with the U.S. Dept. of Labor, BLS

Employment was down in ten of the eleven Arizona supersectors in 2020

By comparison, employment was down in all eleven U.S. supersectors in 2020



## Arizona Monthly CES Employment: December 2020

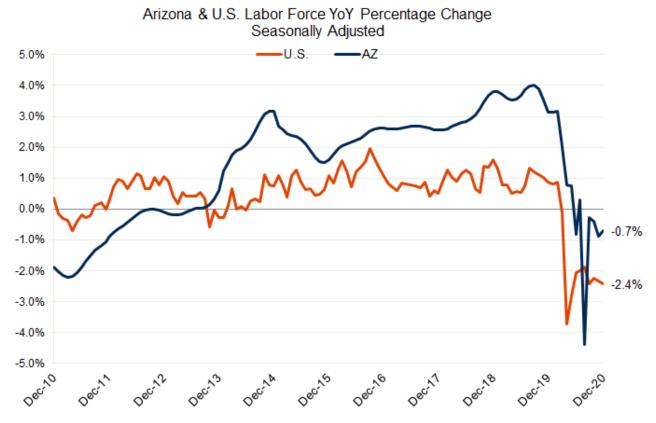


All seven Arizona metro areas recorded negative YoY growth

 Five of seven Arizona metro areas recorded milder YoY losses than the United States



#### **Labor Force Growth**



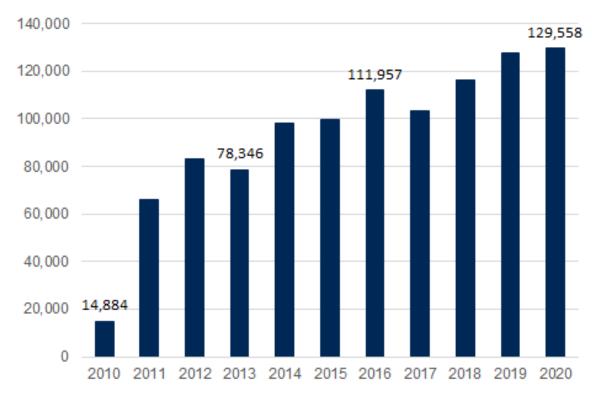
The Arizona labor force grew for more than 6.5 years before the COVID-19 pandemic

The Arizona labor force declined by -0.7% YoY while the U.S. labor force declined by -2.4% YoY in December 2020

Source: Produced by the Arizona Office of Economic Opportunity in cooperation with the U.S. Dept. of Labor, BLS



## Arizona Annual Population Change



Source: U.S. Census Bureau

Arizona has recorded strong population growth in recent years

 Arizona population growth ranked 2<sup>nd</sup> in the nation in 2020 and 3<sup>rd</sup> in 2019

It is anticipated that Arizona's population growth will continue to be among the fastest in the nation through the projected period



## Impact of COVID-19 on Economic Activity

#### **Favorable Developments**

- The Arizona Department of Health Services announced that more than 1 million COVID-19 vaccinations have been administered in Arizona as of February 8
- The United States is expected to secure 600 million COVID-19 vaccine doses by Jul. 2021<sup>1</sup>

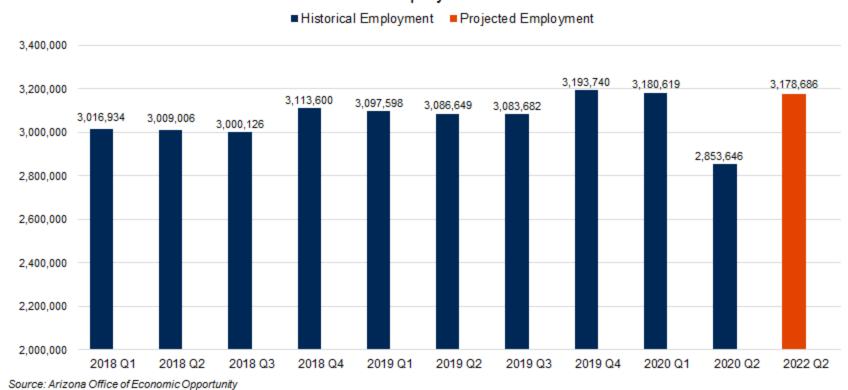
#### Potential Challenge

 The UK COVID-19 variant was recently identified in a number of states, including Arizona<sup>2 3</sup>



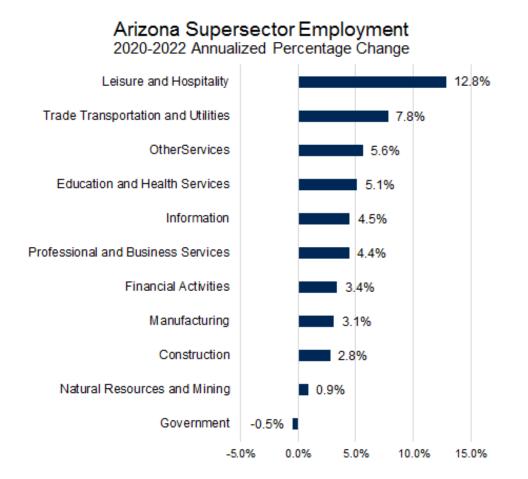
## Arizona Historic and Projected Employment

#### Arizona Employment Estimates





## Projected Industry Employment Change





(10,000) 10,000 30,000 50,000 70,000 90,000



## Projected Total Employment by Arizona Region

	Historic Change <sup>1</sup> (2018-2020)		Projected Change <sup>2</sup> (2020-2022)		
Region	Numeric Change	% Change (Annual)	Numeric Change	% Change (Annual)	
Arizona	-155,360	-2.6%	325,040	5.5%	
Apache County	-1,809	-4.2%	848	2.1%	
Cochise County	-1,055	-1.4%	2,402	3.2%	
Coconino County	-11,247	-8.3%	6,822	5.6%	
Gila County	-1,158	-3.2%	965	2.8%	
Graham County	12	0.1%	484	2.4%	
Greenlee County	79	0.7%	460	4.1%	
La Paz County	-217	-1.7%	373	3.0%	
Maricopa County	-94,865	-2.3%	248,322	5.9%	
Mohave County	-2,879	-2.7%	4,350	4.1%	
Navajo County	-2,508	-3.8%	1,081	1.7%	
Pima County	-26,580	-3.4%	40,033	5.2%	
Pinal County	-2,166	-1.6%	5,331	4.0%	
Santa Cruz County	-968	-3.3%	1,481	5.2%	
Yavapai County	-6,487	-4.6%	6,770	5.1%	
Yuma County	-3,522	-2.7%	5,385	4.2%	

Pima County is projected to account for 12% of total projected job gains

Source: Arizona Office of Economic Opportunity

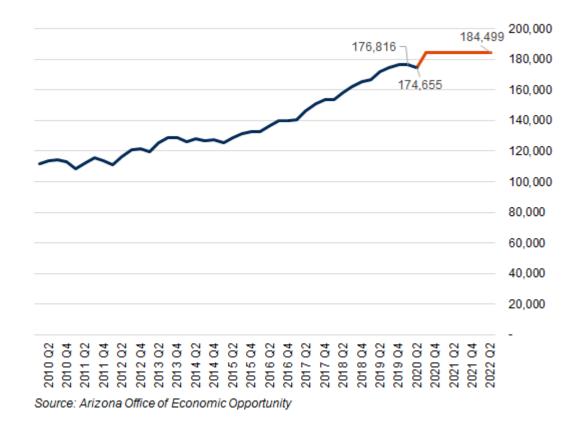


Maricopa County is projected to account for 76% of total projected job gains

<sup>1</sup> Employment change from Q2 2018 - Q2 2020

<sup>2</sup> Employment change from Q2 2020 - Q2 2022

## **Industry Highlight: Construction**



Construction employment had an average annual growth of 7.1% over the past 5 years prior to the pandemic

Construction employment declined by 2,161, or 1.2%, from Q1 2020 to Q2 2020

Construction is projected to grow by 9,844 jobs, or 2.8% annually



### **Industry Highlight: Construction**

	Historic Change <sup>1</sup> (2018-2020)		Projected Change <sup>2</sup> (2020-2022)	
Sector	Numeric Change	% Change (Annual)	Numeric Change	% Change (Annual)
Construction	16,384	5.0%	9,845	2.8%
Construction of Buildings	3,905	6.1%	1,936	2.7%
Heavy and Civil Engineering Construction	3,382	8.2%	1,031	2.2%
Specialty Trade Contractors	9,098	4.2%	6,877	2.9%

<sup>1</sup> Employment change from Q2 2018 - Q2 2020

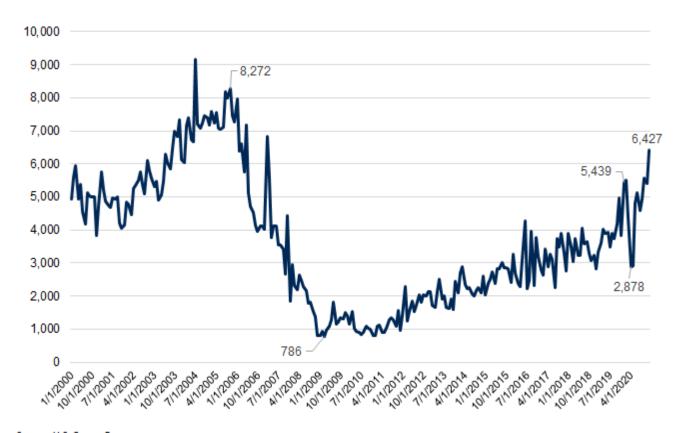
Source: Arizona Office of Economic Opportunity

- Growth in Construction employment is projected to continue into 2022
- Demand for residential housing remains high, although a mild slowdown in commercial construction is projected to slow overall growth in Construction employment



<sup>2</sup> Employment change from Q2 2020 - Q2 2022

## Arizona New Private Housing Units Authorized by Building Permits

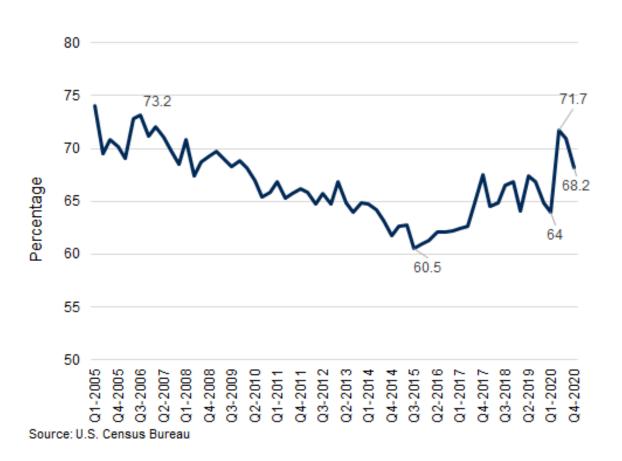


Building permit authorizations reached their highest level in more than 10 years in December 2020.

Source: U.S. Census Bureau



## Arizona Homeownership Rate

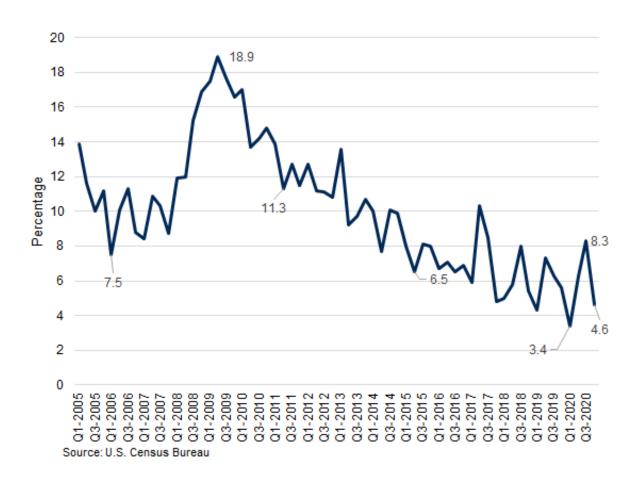


#### Demand for residential housing continues

- Homeownership rates have continued to increase over the past five years
- Homeownership rates rebounded from historic lows of 60.5% in 2015 to 68.2% in Q4-2020



## Arizona Rental Vacancy Rate



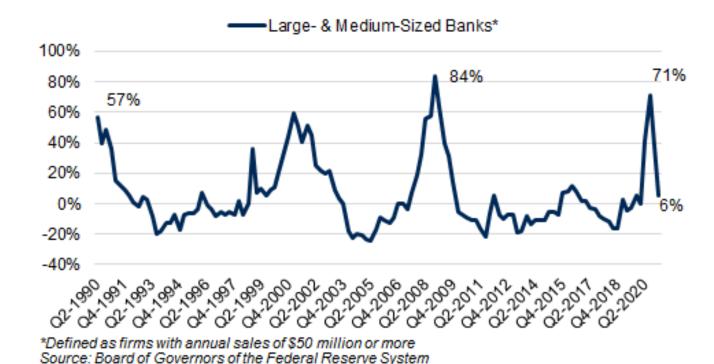
Demand for rental housing continues to outpace supply

 Rental vacancy rates have declined to historic lows over the past decade

Construction employment is projected to increase as new residential housing is needed to meet demand



### Lending Standards for Commercial & Industrial Loans

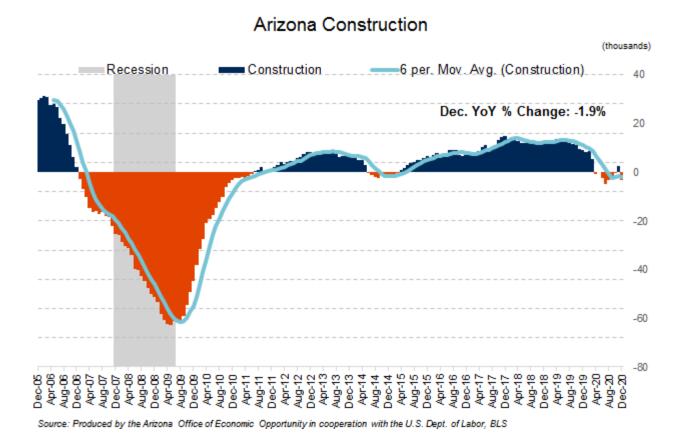


The U.S. Federal Reserve surveys loan officers from U.S. banks each quarter

- Of those surveyed, 71% reported stricter lending standards for commercial and industrial loans in Q3 2020 compared to Q2 2020
- In Q1 2021, 6% of loan officers reported stricter standards compared to Q4 2020, while none reported looser standards



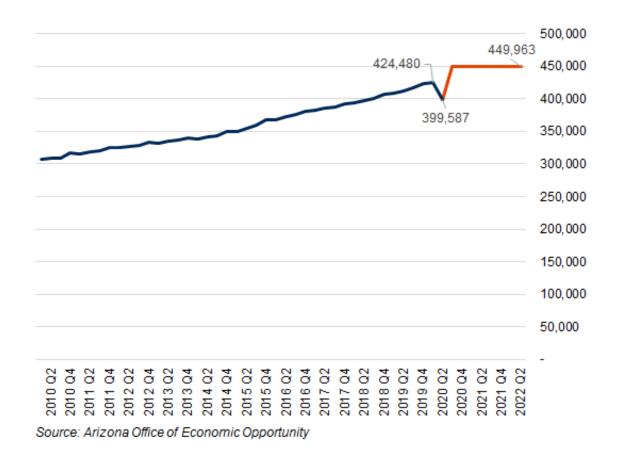
## Arizona CES Employment Series



Arizona Construction employment declined by 3,300 jobs YoY in December 2020



## Industry Highlight: Health Care and Social Assistance



Health Care and Social Assistance had an average annual growth of 3.9% in the past 5 years prior to the pandemic

Health Care and Social Assistance employment declined by 24,893, or 5.9%, from Q1 2020 to Q2 2020

It is projected to increase by 50,376 jobs, or 6.1% annually



## The Aging U.S. Population



- The number of people reaching retirement age will begin to increase dramatically in 2021 and 2022<sup>4</sup>
- Research has shown that nearly half of lifetime medical expenditures is incurred during the senior years (age 65+)<sup>5</sup>
- Health care job growth will be driven, in part, by increasing demand for health care services from older adults



## Industry Highlight: Health Care and Social Assistance

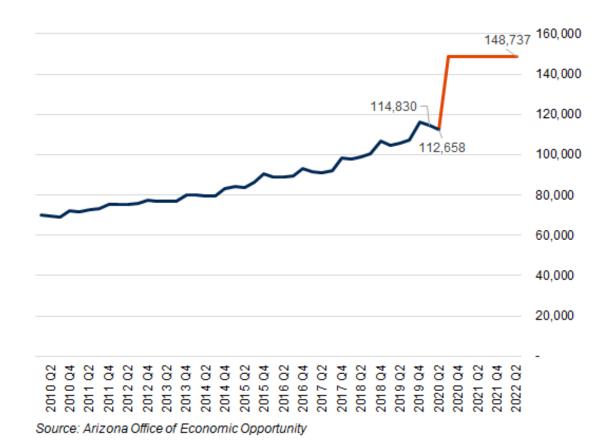
	Pandemic Decline (Q1 2020-Q2 2020)		Projected Change (Q2 2020-Q2 2022)	
Sector	Numeric Change	% Change (Quarterly)	Numeric Change	% Change (Annual)
Health Care and Social Assistance	-24,893	-5.9%	50,376	6.1%
Ambulatory Health Care Services	-12,911	-7.2%	27,905	8.0%
Hospitals	-2,873	-2.5%	8,203	3.6%
Nursing and Residential Care Facilities	-2,836	-4.7%	7,791	6.6%
Social Assistance	-6,273	-9.3%	6,477	5.1%

All subsectors are expected to gain back jobs lost in the pandemic and grow beyond pre-pandemic levels

Source: Arizona Office of Economic Opportunity



## Industry Highlight: Transportation and Warehousing



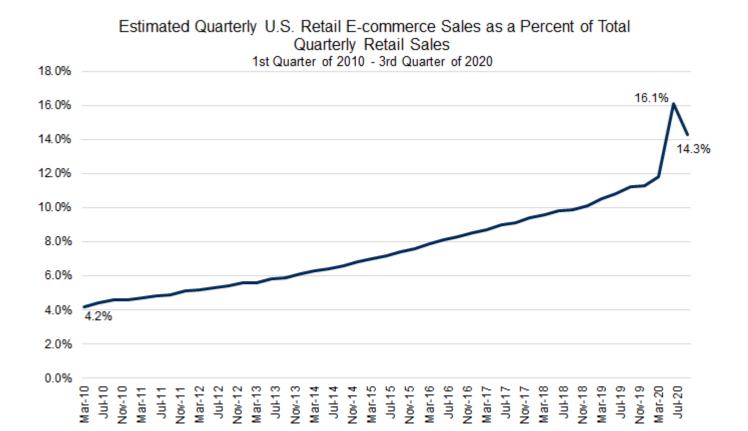
Transportation and Warehousing had an average annual growth of 6.4% in the past 5 years prior to the pandemic

Transportation and Warehousing employment declined by 2,172, or 1.9%, from Q1 2020 to Q2 2020

It is projected to increase by 36,079 jobs, or 14.9% annually



### Industry Highlight: Transportation and Warehousing



- Consumers continue to increase the amount of shopping done online
- This trend was accelerated in 2020 due to the pandemic



## Industry Highlight: Transportation and Warehousing

	Historic Change <sup>1</sup> (2018-2020)		Projected Change <sup>2</sup> (2020-2022)	
Sector	Numeric Change	% Change (Annual)	Numeric Change	% Change (Annual)
Transportation and Warehousing	13,961	6.8%	36,079	14.9%
Warehousing and Storage	11,949	23.9%	16,196	21.3%
Couriers and Messengers	4,394	17.8%	9,540	26.8%
Air Transportation	-1,110	-3.9%	565	2.1%
Truck Transportation	1,708	3.9%	3,921	8.0%
Support Activities for Transportation	210	0.7%	3,739	12.4%
Transit and Ground Passenger Transportation	-2,480	-12.5%	2,092	12.2%
Scenic and Sightseeing Transportation	-313	-28.7%	163	22.6%

Strong job growth is projected for all subsectors within Transportation and Warehousing

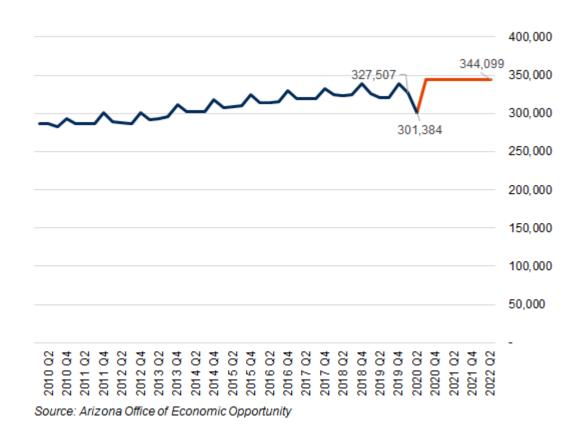
Source: Arizona Office of Economic Opportunity



<sup>1</sup> Employment change from Q2 2018 - Q2 2020

<sup>2</sup> Employment change from Q2 2020 - Q2 2022

## Industry Highlight: Retail Sales



Retail Trade had an average annual growth of 1.2% in the past 5 years prior to the pandemic

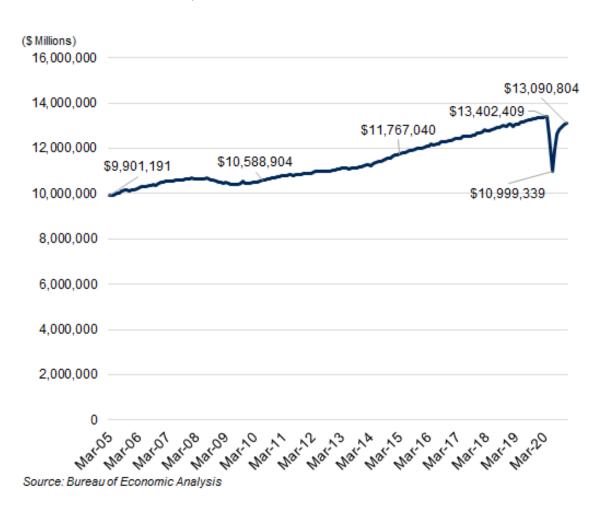
Retail Trade employment declined by 26,123, or 8.0%, from Q1 2020 to Q2 2020

It is projected to increase by 42,715 jobs, or 6.9% annually



### U.S. Real Personal Consumption Expenditures

#### Annualized Rate; Chained 2012 dollars



Personal consumption expenditures declined by 17.9% from \$13.4 trillion in Feb. 2020 to \$11.0 trillion in Apr. 2020

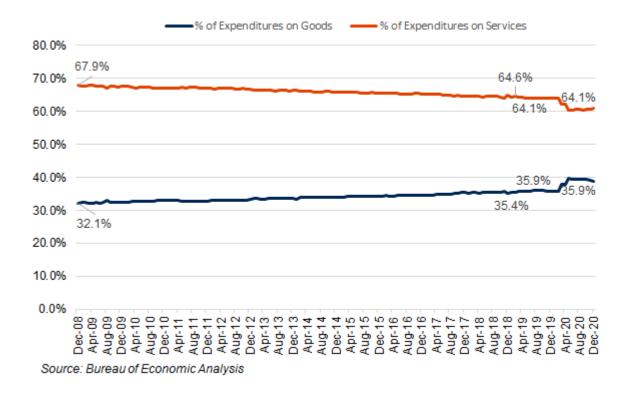
Personal consumption expenditures increased by 17.5% from April 2020 to December 2020

 In December 2020, personal consumption expenditures were 96% of pre-pandemic level

The near-recovery of personal consumption spending will help drive future job growth in Retail Sales



### Share of U.S. Personal Consumption Expenditure by Spending Category



Consumer spending habits have shifted away from services and towards goods purchasing since the start of the pandemic

- Services spending as a percentage of total spending declined by 3.8 percentage points over a three-month period (Feb. 2020 to May 2020)
- To illustrate how dramatic a shift this is in consumer preferences, it took more than 11 years (Dec. 2008 to Feb. 2020) for services spending to decline by a similar amount (3.7 percentage points)



### Industry Highlight: Retail Sales

	Pandemic Decline (Q1 2020-Q2 2020)		Projected Change (Q2 2020-Q2 2022)	
Sector	Numeric Change	% Change (Quarterly)	Numeric Change	% Change (Annual)
Retail Trade	-26,123	-8.0%	42,715	6.9%
Motor Vehicle and Parts Dealers	-4,665	-9.3%	5,968	6.4%
Furniture and Home Furnishings Stores	-2,743	-26.7%	1,683	10.6%
Electronics and Appliance Stores	-855	-8.3%	1,485	7.6%
Building Material and Garden Equipment and Supplies	1,240	4.5%	3,041	5.1%
Food and Beverage Stores	3,018	5.1%	4,252	3.4%
Health and Personal Care Stores	-2,053	-10.4%	2,667	7.3%
Gasoline Stations	-523	-3.0%	-143	-0.4%
Clothing and Clothing Accessories Stores	-9,930	-50.1%	6,195	27.6%
Sporting Goods, Hobby, Book, and Music Stores	-2,953	-27.1%	1,956	11.7%
General Merchandise Stores	-2,904	-4.5%	3,364	2.7%
Miscellaneous Store Retailers	-4,640	-21.3%	5,830	15.8%
Nonstore Retailers	885	5.4%	6,417	17.2%

Retail Trade is projected to reach pre-pandemic employment levels in the forecast period

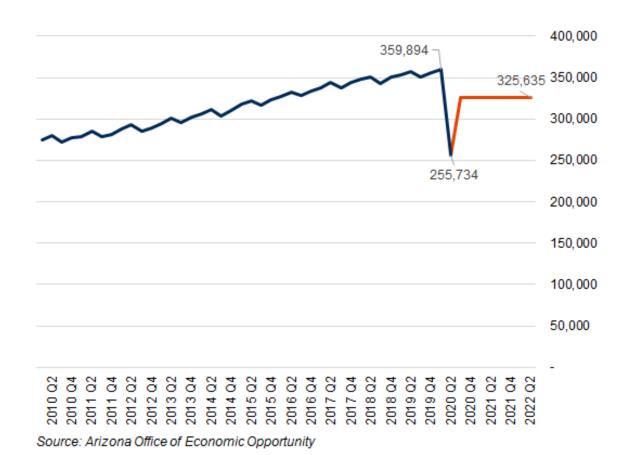
Nonstore Retailers is projected to record the largest job gains (6,417 jobs)

Clothing and Clothing Accessories Stores is projected to record the fastest job growth (27.6%)



Source: Arizona Office of Economic Opportunity

### Industry Highlight: Leisure and Hospitality



Leisure and Hospitality had an average annual growth of 2.5% in the past 5 years prior to the pandemic

Leisure and Hospitality employment declined by 104,160 or 28.9% from Q1 2020 to Q2 2020

Leisure and Hospitality is projected to gain 69,901 jobs or grow by 12.8% annually



#### Industry Highlight: Leisure and Hospitality

	Pandemic Decline (Q1 2020-Q2 2020)		Projected Change (Q2 2020-Q2 2022)	
Sector	Numeric Change	% Change (Quarterly)	Numeric Change	% Change (Annual)
Leisure and Hospitality	-104,160	-28.9%	69,901	12.8%
Arts, Entertainment, and Recreation	-19,938	-31.1%	11,863	12.6%
Performing Arts, Spectator Sports, and Related Industries	-4,869	-44.2%	2,983	21.8%
Museums, Historical Sites, and Similar Institution	-1,057	-25.6%	757	11.6%
Amusement, Gambling, and Recreation Industries	-14,012	-28.6%	8,123	11.0%
Accommodation, including Hotels and Motels	-19,277	-36.6%	13,410	18.4%
Food Services and Drinking Places	-64,945	-26.7%	44,628	11.8%

Source: Arizona Office of Economic Opportunity

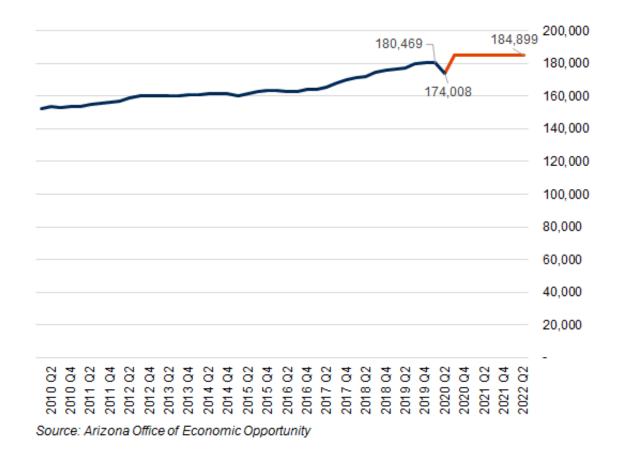
Leisure and Hospitality is not projected to reach pre-pandemic employment levels in the forecast period

Accomodations is projected to record the largest job gains (13,410 jobs)

Performing Arts, Spectator Sports and Related is projected to record the fastest job growth (21.6%)



### Industry Highlight: Manufacturing



Manufacturing had an average annual growth of 2.4% in the past 5 years prior to the pandemic

Manufacturing employment declined by 6,461, or 3.6%, from Q1 2020 to Q2 2020

It is projected to grow by 10,891 jobs, or 3.1% annually



### Largest Manufacturing Subsectors

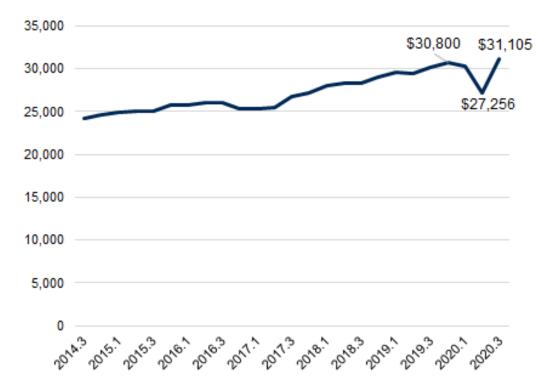
	Pandemic Decline (Q1 2020-Q2 2020)		Projected Change (Q2 2020-Q2 2022)	
Sector	Numeric Change	% Change (Quarterly)	Numeric Change	% Change (Annual)
Manufacturing	-6,461	-3.6%	10,891	3.1%
Transportation Equipment	-988	-2.8%	3,102	4.4%
Computer and Electronic Product	-90	-0.3%	889	1.3%
Fabricated Metal Product Manufacturing	-382	-1.8%	375	0.9%
Miscellaneous Manufacturing	-1,188	-9.0%	1,619	6.6%
Nonmetallic Mineral Product	-210	-2.7%	227	1.5%
Machinery Manufacturing	-215	-2.8%	265	1.7%
Chemical Manufacturing	-121	-1.6%	350	2.3%
Furniture and Related Product	-351	-5.7%	417	3.5%
Plastics and Rubber Products	-34	-0.6%	342	3.0%
Printing and Related Support Activities	-501	-8.8%	558	5.2%

The ten largest manufacturing subsectors are all projected to gain jobs over the projected period

Source: Arizona Office of Economic Opportunity



# Arizona Real Manufacturing GDP Seasonally Adjusted (in \$billions)



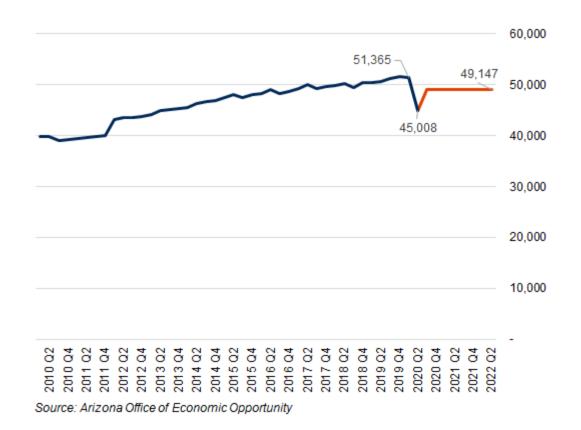
Source: U.S. Bureau of Economic Analysis

Arizona manufacturing GDP surpassed prepandemic levels (\$31.1 billion compared to \$30.8 billion) in Q3 2020

U.S. manufacturing GDP has recovered a majority of the lost GDP, though it remains below pre-pandemic levels (\$2.21 trillion compared to \$2.24 trillion)



### **Industry Highlight: Information**



Information had an average annual growth of 1.6% in the past 5 years prior to the pandemic

Information employment declined by 6,357 or 12.4% from Q1 2020 to Q2 2020

It is projected to gain 4,139 jobs or grow by 4.5% annually



### **Industry Highlight: Information**

	Pandemic Decline (Q1 2020-Q2 2020)		Projected Change (Q2 2020-Q2 2022)	
Sector	Numeric Change	% Change (Quarterly)	Numeric Change	% Change (Annual)
Information	-6,357	-12.4%	4,139	4.5%
Publishing Industries (except Internet)	-357	-3.5%	334	1.7%
Motion Picture and Sound Recording Industries	-4,291	-64.0%	2,302	39.8%
Broadcasting (except Internet)	-354	-9.4%	128	1.9%
Telecommunications	-616	-4.0%	-247	-0.8%
Data Processing, Hosting and Related Services	-123	-1.2%	1,187	5.7%
Other Information Services	-616	-11.9%	435	4.6%

Information is not projected to reach prepandemic employment levels in the forecast period

Motion Picture and Sound Recording and Data Processing, Hosting and Related Services are projected to record the largest job gains

Source: Arizona Office of Economic Opportunity



## Report Summary

- Total employment is projected to grow by 5.5% annually from Q2 2020 Q2 2022
- All private sector industries are projected to add jobs, though some are not projected to reach pre-pandemic employment levels
- All 15 Arizona counties are projected to add jobs
- Growth is projected to be led by Leisure and Hospitality (12.8% annually), Trade Transportation and Utilities (7.8% annually), Other Services (5.6% annually) and Education and Health Services (5.1% annually)
- Accommodation and Food Services is projected to be the fastest growing industry in 7 of the 15 counties



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## **Questions?**

## <u>Upcoming Release Schedule:</u>

January Employment Report on March 11<sup>th</sup> February Employment Report on March 25<sup>th</sup>

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