Mervin Jebaraj
Director, Center for Business and Economic Research
Walton College of Business, University of Arkansas
State of the National, State and Regional Economy

Mervin Jebaraj, Director
Center for Business and Economic Research
October 25, 2023

Twitter:
#nwasotr @NWArkCouncil @MervinJebaraj
Change in Real GDP
Source: U.S. Bureau of Economic Analysis

- Fayetteville-Springdale-Rogers MSA: 4.7% (2016-2021), 8.5% (2020-2021)
- Austin-Round Rock-Georgetown MSA: 5.6% (2016-2021), 10.5% (2020-2021)
- Des Moines-West Des Moines MSA: 1.8% (2016-2021), 6.2% (2020-2021)
- Madison MSA: 2.2% (2016-2021), 5.7% (2020-2021)
- Durham-Chapel Hill MSA: 3.2% (2016-2021), 7.8% (2020-2021)
- Raleigh-Cary MSA: 4.1% (2016-2021), 9.0% (2020-2021)
- Provo-Orem MSA: 7.3% (2016-2021), 8.3% (2020-2021)
- Peer Average: 4.2% (2016-2021), 8.7% (2020-2021)
- Arkansas: 1.8% (2016-2021), 5.2% (2020-2021)
- US: 2.1% (2016-2021), 5.9% (2020-2021)

Source: U.S. Bureau of Economic Analysis

2016-2021
2020-2021
Evolution of Atlanta Fed GDPNow real GDP estimate for 2023: Q3
Quarterly percent change (SAAR)

Sources: Blue Chip Economic Indicators and Blue Chip Financial Forecasts
Note: The top (bottom) 10 average forecast is an average of the highest (lowest) 10 forecasts in the Blue Chip survey.
Difference between countries’ 2023 real GDP and the IMF’s prepandemic projections

U.S.  Advanced economies  Euro area  World  China  Emerging economies

Source: International Monetary Fund
US: Real GDP Growth Contributions
Q1 2021 - Q2 2023 (%pts, annualized)

Source: BEA; EY-Parthenon
Employment Growth Rate
Source: U.S. Bureau of Labor Statistics

- Fayetteville-Springdale-Rogers MSA: 3.1% (2017-2022), 5.4% (2020-2022)
- Austin-Round Rock-Georgetown MSA: 4.4% (2017-2022), 8.0% (2020-2022)
- Des Moines-West Des Moines MSA: 3.8% (2017-2022), 1.1% (2020-2022)
- Madison MSA: 3.1% (2017-2022), 1.4% (2020-2022)
- Durham-Chapel Hill MSA: 3.6% (2017-2022), 2.8% (2020-2022)
- Raleigh-Cary MSA: 5.3% (2017-2022), 3.5% (2020-2022)
- Provo-Orem MSA: 5.6% (2017-2022), 4.2% (2020-2022)
- Peer Average: 2.8% (2017-2022), 1.3% (2020-2022)
- Arkansas: 3.4% (2017-2022), 0.9% (2020-2022)
- US: 4.0% (2017-2022), 0.0% (2020-2022)
Nominal average hourly earnings, all employees, and headline CPI-U

Percent, year-on-year

Average hourly earnings growth
Headline CPI inflation

Council of Economic Advisers
Sources: Bureau of Labor Statistics; CEA calculations.
Change in Median Income
Source: U.S. Census Bureau

- Fayetteville-Springdale-Rogers MSA: 5.5%
- Austin-Round Rock-Georgetown MSA: 5.1%
- Des Moines-West Des Moines MSA: 3.1%
- Durham-Chapel Hill MSA: 5.3%
- Raleigh-Cary MSA: 5.0%
- Provo-Orem MSA: 6.4%
- Peer Average: 4.7%
- Arkansas: 3.9%
- US: 4.4%

Change in Median Income:
- 2017-2022: 7.2%
- 2020-2022: 8.5%
Present Situation and Expectations Index

Index, 1985 = 100

*Shaded areas represent periods of recession.
Sources: The Conference Board; NBER
© 2023 The Conference Board. All rights reserved.
Month-over-month percent change in consumer price index (CPI)
January 2020 - September 2023

Source: BLS; EY-Parthenon
U.S. Field Production of Crude Oil

Data source: U.S. Energy Information Administration
Shelter Inflation is Set to Moderate Much More

% change year ago

Sources: Yardi, Moody’s Analytics
Median Price of Single Family Homes
Source: National Association of Realtors

1-year (4-quarter) Appreciation (2023 Q2)
3-year (12-quarter) Appreciation (2023 Q2)
Monthly mortgage payment on median-price existing home
January 2019 - September 2023

- Impact of mortgage rate change
- Impact of price change
- Mortgage payment in 2019

Price: $396k
Rate: 7.7%
Payment: $2,272

Price: $249k
Rate: 4.5%
Payment: $1,008

Source: National Association of Realtors; EY-Parthenon
Selected Cities Multifamily Average Vacancy Rates by City

- Bentonville: 3.2%
- Fayetteville: 1.2%
- Rogers: 3.6%
- Siloam Springs: 4.5%
- Springdale: 2.5%
Shaded areas indicate U.S. recessions.

Sources: Board of Governors; FHLMC

fred.stlouisfed.org
Effective outstanding mortgage rate around 3.6%
U.S. Office Market: Supply, Demand & Vacancy

Source: Colliers
Commutes Hinder Office Return

Source: U.S. Census Bureau 2019 American Community Survey (travel time); Kastle Systems (office occupancy)
Commuting: Percent of Workers Traveling Fewer than 30 Minutes
Source: U.S. Census Bureau

- Fayetteville-Springdale-Rogers MSA: 74.3% (2018), 75.8% (2020), 74.5% (2022)
- Austin-Round Rock-Georgetown MSA: 76.7% (2018), 77.3% (2020), 76.8% (2022)
- Des Moines-West Des Moines, MSA: 77.3% (2018), 78.0% (2020), 77.8% (2022)
- Madison MSA: 72.7% (2018), 72.6% (2020), 74.9% (2022)
- Durham-Chapel Hill MSA: 67.2% (2018), 65.6% (2020), 67.7% (2022)
- Raleigh-Cary MSA: 61.0% (2018), 59.9% (2020), 60.5% (2022)
- Provo-Orem MSA: 72.8% (2018), 72.5% (2020), 73.0% (2022)
- Fayetteville-Springdale-Rogers MSA: 72.8% (2018), 72.7% (2020), 72.3% (2022)
- US: 61.1% (2018), 61.6% (2020), 62.6% (2022)
Percentage of paid full days worked from home

*We estimate the pre-COVID rate using the 2019 American Time Use Survey
*The break in the series in November 2020 reflects a change in the survey question.
US: Real GDP Growth Contributions
Q1 2021 - Q2 2023 (%pts, annualized)

Source: BEA; EY-Parthenon
Real Construction Spending: Manufacturing

Note: Chart is in inflation-adjusted 2023 dollars.
Source: BLS, Census Bureau
**Green giant**

United States, federal government spending on climate change, $bn

Annual average

- **Total**
- CHIPS and Science Act
- Infrastructure Investment and Jobs Act
- Inflation Reduction Act

<table>
<thead>
<tr>
<th>Year</th>
<th>Prior legislation</th>
<th>Inflation Reduction Act</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000-08</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2009-17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2020-29</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sources: RMI; Credit Suisse

**United States, tax credits and other incentives for selected clean technologies**

As % of average total cost, 2022

- Carbon capture and storage
- Green hydrogen
- Utility solar
- Onshore wind
- Utility battery storage
- Efficiency in homes
- Residential solar
- Offshore wind
- New EV* purchases

Source: Goldman Sachs

*Electric vehicle
Bachelor's Degree or Higher in Adult Population
Source: U.S. Census Bureau

Fayetteville-Springdale-Rogers MSA
Austin-Round Rock-Georgetown MSA
Des Moines-West Des Moines MSA
Madison MSA
Durham-Chapel Hill MSA
Raleigh-Cary MSA
Provo-Orem MSA
Peer Average
Arkansas begins construction of US national Multi-User Silicon Carbide Research and Fabrication Facility

9 August 2023
<table>
<thead>
<tr>
<th>INDICATOR</th>
<th>MOST RECENT ANNUAL DATA</th>
<th>VALUE FROM 2 YEARS PRIOR</th>
<th>2-YEAR PERCENT CHANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population Estimate, July 2022</td>
<td>576,403</td>
<td>549,566</td>
<td>4.9%</td>
</tr>
<tr>
<td>Real GDP (millions of chained 2012 dollars), 2021</td>
<td>$28,042</td>
<td>$24,961</td>
<td>12.3%</td>
</tr>
<tr>
<td>Avg. Annual Unemployment Rate, 2022</td>
<td>2.4%</td>
<td>4.6%</td>
<td>-2.2%</td>
</tr>
<tr>
<td>Total Nonfarm Employment, 2022</td>
<td>303,000</td>
<td>272,600</td>
<td>11.2%</td>
</tr>
<tr>
<td>Median Household Income, 2022</td>
<td>$73,364</td>
<td>$61,761</td>
<td>18.8%</td>
</tr>
<tr>
<td>Average Annual Wages, 2022</td>
<td>$53,810</td>
<td>$50,470</td>
<td>6.6%</td>
</tr>
<tr>
<td>Business Establishments, 2022</td>
<td>15,050</td>
<td>14,121</td>
<td>6.6%</td>
</tr>
<tr>
<td>% of Adult Population w/ a bachelor's degree or Higher, 2022</td>
<td>36.3%</td>
<td>33.2%</td>
<td>3.1%</td>
</tr>
<tr>
<td>Poverty Rate, 2022</td>
<td>10.9%</td>
<td>12.1%</td>
<td>-1.2%</td>
</tr>
<tr>
<td>R&amp;D Expenditures (thousands), 2021</td>
<td>$164,443</td>
<td>$180,225</td>
<td>-8.8%</td>
</tr>
<tr>
<td>Average Domestic Airfare, 2022</td>
<td>$499</td>
<td>$374</td>
<td>33.5%</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-------------------------------</td>
<td>-----------------------------</td>
<td>-------------------------------------</td>
</tr>
<tr>
<td>Fayetteville-Springdale-Rogers MSA</td>
<td>4.9%</td>
<td>5.3%</td>
<td>2.6%</td>
</tr>
<tr>
<td>Austin-Round Rock-Georgetown MSA</td>
<td>2.6%</td>
<td>7.1%</td>
<td>2.2%</td>
</tr>
<tr>
<td>Des Moines-West Des Moines MSA</td>
<td>0.8%</td>
<td>3.6%</td>
<td>3.2%</td>
</tr>
<tr>
<td>Madison MSA</td>
<td>2.0%</td>
<td>8.8%</td>
<td>3.2%</td>
</tr>
<tr>
<td>Durham-Chapel Hill MSA</td>
<td>4.5%</td>
<td>7.2%</td>
<td>3.1%</td>
</tr>
<tr>
<td>Raleigh-Cary MSA</td>
<td>5.9%</td>
<td>13.2%</td>
<td>2.1%</td>
</tr>
<tr>
<td>Phoenix-Mesa MSA</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**RANKING SCALE**

1st, 2nd, 3rd, 4th, 5th, 6th, 7th
Questions and Comments?

The 2023 State of the Northwest Arkansas Region Report is available at [http://cber.uark.edu](http://cber.uark.edu).

Business Forecast 2024 is January 26, 2024
Sponsorship opportunities are available

Contact at [mjebaraj@walton.uark.edu](mailto:mjebaraj@walton.uark.edu)
or on Twitter: @MervinJebaraj