KEM C. GARDNER POLICY INSTITUTE

We are an honest broker of
INFORMED RESEARCH
that guides
INFORMED DISCUSSIONS
and leads to
INFORMED DECISIONS™
Utah spent most of the past 12 months at the top of the U.S. economic leaderboard. Strong job growth, low unemployment, rising wages, and net in-migration fuel an economy that just keeps on going. Informed observers will recognize Utah’s prosperity, but also see the nuance, intrigue, challenge, and even wonder in Utah’s economic script.

Utah Informed takes readers behind the curtains and shares fascinating details about Utah and the nation. For example…

- How did South Dakota surpass Utah’s fertility rate? A precipitous rise in teen pregnancies.
- Why aren’t Utah sales tax revenues keeping pace with economic growth? An aging population that spends a greater share of their income on health care.
- Why is Utah’s per capita water consumption so high? We are the second driest state with low water rates.
- Who has the most engaged NBA fans? Utah, of course.

In addition to sharing compelling trends and ideas, in this fourth edition of Utah Informed we give a nod on the cover to our Institute’s home, the Thomas S. Monson Center. The beautiful neoclassical mansion on South Temple Street was home to Enos A. Wall, the first entrepreneur to mine copper in Utah’s Bingham Canyon (today mined by Rio Tinto). Copper, which is known for its conductivity, provides a useful metaphor for the way Utah Informed transmits light to those who study it.

The Kem C. Gardner Policy Institute serves as an honest broker of informed research, that guides informed discussions, and leads to INFORMED DECISIONS™. We hope this edition of Utah Informed will help you make wise decisions in 2019.

Thanks for your interest,

Natalie Gochnour
Director, Kem C. Gardner Policy Institute

Taylor Randall
Dean, David Eccles School of Business

Derek Miller
President & CEO, Salt Lake Chamber
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Editor-in-chief: Juliette Tennert
Words and phrases to know in 2019

- **2.12** – Utah's current total fertility rate (TFR), the number of children who would be born per woman based on the current schedule of age-specific fertility rates: At 2.12, Utah’s TFR is at an all-time low and approaching the replacement rate.

- **CA·VU** – ceiling and visibility unlimited, a military term indicating an obstruction-free sky, coined by President George H. Bush to mean a clear and visible future where people can “easily identify the objectives and threats” in their paths: Seeking CAVU.

- **con·sum·able ser·vice** – service for which the identification of the place of consumption is straightforward: The State of Utah does not currently tax many consumable services.

- **em·pa·thy** – the ability to identify, understand, and share the feelings and perspectives of others: Microsoft CEO Satya Nadella believes that empathy is essential for innovation.

- **fourth in·dus·tri·al rev·o·lu·tion** – mobile internet, Internet of Things, additive manufacturing, and other innovations that will change our lives: The 4th Industrial Revolution will require policy innovations.

- **in·land port** – crossroads of the west fulfilled: Utah's inland port will provide custom clearance for Chinese goods.

- **juu·ling** – a slang term for the recreational use of a leading brand of electronic cigarettes in the U.S., JUUL: The American Academy of Pediatricians warns that juuling is on the rise, with devastating consequences.

- **mis-in·for·ma·tion** – incorrect or misleading information: The distribution of misinformation—and its close cousin, deliberate disinformation—jeopardizes our ability to make informed decisions. Russian troll farms and others propagate falsehoods on Facebook, Twitter, other social media, and by other means. These untruths imperil our ability to prosper.

- **strike team** – a mission-driven, multi-disciplinary, and well-resourced enterprise: The Utah Coal Country Strike Team will raise incomes in Carbon and Emery counties.

- **YIM·BY** – yes in my backyard, a movement that lays the groundwork for more housing construction for people of all income levels: Can YIMBY overcome NIMBY?
Discoveries in 2018

- **Plague** – The sample of the oldest-known strain of the pneumonic plague, perhaps the world’s first major pandemic, was found in remains in a 5,000-year-old tomb in Sweden.

- **Christmas Salamander** – A newly-discovered aquatic salamander has Christmas-tree-shaped growths from its head, which it uses to breathe underwater.

- **Saw Wasp** – A species of wasp with a saw along its back was discovered. Scientists speculate it uses it to cut its way out of whatever other creature its parents laid its egg in.

- **Hunchback Shrimp** – A round-back and shell-less shrimp discovered in the Antarctic was named *Epimeria quasimodo* after the title character of “The Hunchback of Notre Dame.”

- **Extraterrestrial Communications** – Repeating radio burst deep in space flashes sporadically, making some researchers wonder if it’s a black hole or an advanced civilization.

- **Ancient Wealth** – An excavation in where Tenea, Greece once thrived revealed pottery, coins, and marble-clad homes, showing ancient Teneans were far wealthier than previously thought.

- **The Thunderclap** – A fossil of the world’s largest-known animal were uncovered. The “Ledumahadi mafube” or “giant thunderclap at dawn” weighed about 26,000 pounds and lived in Argentina 200 million years ago.

- **Ancient Art** – A 73,000-year-old drawing was found in a stone in South Africa. The unintelligible but deliberate lines are now called the earliest drawing ever found.

- **Shellless Turtle** – A 228 million-year-old fossil revealed turtles once lived without a shell; scientists are now studying how they evolved.

- **Alzheimers** – San Francisco scientists discovered a gene that causes people with it to be far more susceptible to Alzheimer’s.

- **Blindness Cure** – Using a patch of stem cells over the eye, scientists returned the sight of two blind patients.

- **Martian Photos** – NASA’s InSight, a newly landed Mars explorer, sent back clear images of Mars’ landscape, perhaps the next step in unlocking the Red Planet’s past.

- **Exomoon** – Astronomers discovered what may be the first known exomoon (moon outside the solar system).

- **Gene Editing** – A Chinese scientist claimed to have produced “gene-edited babies,” which would be the world’s first.

- **Uterus Donor Success** – A successful birth resulted from a uterus donated by a deceased woman for the first time.
## Signs of our times

**Top Google searches in the United States in 2018**

<table>
<thead>
<tr>
<th>All Searches</th>
<th>News</th>
<th>People</th>
<th>What is...?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) World Cup</td>
<td>1) World Cup</td>
<td>1) Demi Lovato</td>
<td>1) What is Bitcoin?</td>
</tr>
<tr>
<td>2) Hurricane Florence</td>
<td>2) Hurricane Florence</td>
<td>2) Meghan Markle</td>
<td>2) What is racketeering?</td>
</tr>
<tr>
<td>3) Mac Miller</td>
<td>3) Mega Millions</td>
<td>3) Brett Kavanaugh</td>
<td>3) What is DACA?</td>
</tr>
<tr>
<td>4) Kate Spade</td>
<td>4) Election Results</td>
<td>4) Logan Paul</td>
<td>4) What is a government shutdown?</td>
</tr>
<tr>
<td>5) Anthony Bourdain</td>
<td>5) Hurricane Michael</td>
<td>5) Khloé Kardashian</td>
<td>5) What is Good Friday?</td>
</tr>
<tr>
<td>6) Black Panther</td>
<td>6) Kavanaugh Confirmation</td>
<td>6) Eminem</td>
<td>6) What is Prince Harry’s last name?</td>
</tr>
<tr>
<td>7) Mega Millions Results</td>
<td>7) Florida Shooting</td>
<td>7) Urban Meyer</td>
<td>7) What is Fortnite?</td>
</tr>
<tr>
<td>8) Stan Lee</td>
<td>8) Royal Wedding</td>
<td>8) Ariana Grande</td>
<td>8) What is a duck boat?</td>
</tr>
<tr>
<td>9) Demi Lovato</td>
<td>9) Olympic Medal Count</td>
<td>9) Rick Ross</td>
<td>9) What is a Yanny Laurel?</td>
</tr>
<tr>
<td>10) Election Results</td>
<td>10) Government Shutdown</td>
<td>10) Cardi B</td>
<td>10) What is a nationalist?</td>
</tr>
</tbody>
</table>

Source: Google
A new high! Utah voter turnout exceeds US in 2018 midterm elections

**Voter turnout rates**
Counted ballots as a percent of total voting-eligible population

Source: United States Elections Project
Midterm outcomes

Political affiliations of incoming U.S. Congress and Utah Legislature

116th United States Congress

- **Senate**
  - 53 Republicans
    - Up from 51 in 115th Congress
  - 45 Democrats
    - Down from 47 in 115th Congress
  - 2 Independents

- **House**
  - 199 Republicans
    - Down from 241 in 115th Congress
  - 235 Democrats
    - Up from 194 in 115th Congress
  - 1 Disputed
    - North Carolina 9th district

63rd Utah Legislature

- **Senate**
  - 23 Republicans
    - Down from 24 in 62nd Legislature
  - 6 Democrats
    - Up from 5 in 62nd Legislature

- **House**
  - 59 Republicans
    - Down from 62 in 62nd Legislature
  - 16 Democrats
    - Up from 13 in 62nd Legislature

*Party division totals are based on November Election Day results. The actual party division of a particular Congress often changes due to the death or resignation of a Member, contested elections, or changes in Member party affiliations.

Sources: House.gov; Senate.gov

Source: le.utah.gov
Slated for the longest expansion on record

Duration of United States economic expansions
Length of expansion and average annual job growth

- October 1945: 37 months (5.1%)
- October 1949: 45 months (4.3%)
- May 1954: 39 months (2.5%)
- April 1958: 24 months (3.6%)
- February 1961: 106 months (3.2%)
- November 1970: 36 months (3.4%)
- March 1975: 58 months (3.5%)
- December 1982: 92 months (2.8%)
- March 1991: 120 months (2.0%)
- November 2001: 73 months (0.9%)
- July 2009: 113 months (1.5%)

Economy expands, federal budget deteriorates

Federal budget balance as a percent of GDP

Note: Balance is the 4-quarter moving sum; Q4 2018 and beyond are forecast.
Source: Wells Fargo Securities
Yielding the yield

A history of yield curve inversion as a recession warning
Since pre-recession peak in 2005

<table>
<thead>
<tr>
<th>Date of inversion</th>
<th>S&amp;P 500 performance over next 12 months</th>
<th>Months to recession</th>
</tr>
</thead>
<tbody>
<tr>
<td>February 20, 2006</td>
<td>13.2%</td>
<td>22</td>
</tr>
<tr>
<td>September 10, 1998</td>
<td>37.1%</td>
<td>30</td>
</tr>
<tr>
<td>May 29, 1989</td>
<td>12.2%</td>
<td>14</td>
</tr>
<tr>
<td>September 1, 1980</td>
<td>0.9%</td>
<td>11</td>
</tr>
<tr>
<td>July 4, 1978</td>
<td>7.7%</td>
<td>18</td>
</tr>
<tr>
<td>February 12, 1973</td>
<td>-21.6%</td>
<td>9</td>
</tr>
<tr>
<td>December 19, 1968</td>
<td>-15.3%</td>
<td>12</td>
</tr>
<tr>
<td>September 8, 1966</td>
<td>24.3%</td>
<td>False Alarm</td>
</tr>
<tr>
<td>January 12, 1966</td>
<td>-9.3%</td>
<td>False Alarm</td>
</tr>
</tbody>
</table>

Note: Inversion date is when the 3-month Treasury yield rises above the 10-year yield.
Source: Refinitiv, as published in the Wall Street Journal, December 6, 2018
Inversion season

Extra yield on long over short-dated treasuries

Source: Federal Reserve Bank of St. Louis
Do you believe in spirits?

Animal Spirits Index

Note: Index includes S&P 500 index, Conference Board consumer confidence index, yield spread, VIX index, and economic policy uncertainty index; the Animal Spirits Index seeks to "shed light on economic agents' expectations about the near-term economic outlook."
Source: Wells Fargo Securities
Utah CEOs less optimistic

Utah CEOOutlook Confidence Index
What is your expectation for the economy six months from now?

Source: Salt Lake Chamber CEOoutlook composite score
Holding on to #1 for job growth in current expansion

Industry-adjusted state-to-U.S. employment growth ratios
Growth since end of recession, 2009-2017

Note: Ratio of actual employment growth to the employment growth the state would have experienced if its industries grew at the same rate as those of the rest of the nation. Numbers above 1 indicate outperforming the nation. Source: U.S. Bureau of Economic Analysis and the Kem C. Gardner Policy Institute.
Unemployment limbo

Unemployment and other measures of labor underutilization
Current and previous economic peak

- Involuntary Part-time Rate
- Discouraged/Marginally Attached Worker Unemployment Rate
- Headline Unemployment Rate

<table>
<thead>
<tr>
<th></th>
<th>Utah</th>
<th>United States</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q4 2007</td>
<td>5.0%</td>
<td>8.3%</td>
</tr>
<tr>
<td>Q3 2018</td>
<td>6.2%</td>
<td>7.8%</td>
</tr>
</tbody>
</table>

Strength in diversity

Hachman Index of Economic Diversity, 2017

Note: Value of 100 would mean that state's economic activity is distributed exactly like the nation's; more diverse economies have a higher index score.
Source: Kem C. Gardner Policy Institute analysis of U.S. Bureau of Economic Analysis GDP data
Life sciences boom (bloom?) in Utah

Average annual employment change in the life sciences industry, 2012 to 2017
20 states with most life sciences jobs

Job Tetris, growth and decline in Utah’s counties

Annual employment growth and decline in Utah’s counties

Note: 2018 through second quarter.
Construction employment back to pre-bubble levels

Construction jobs as a percent of all Utah jobs

Note: e = estimate
The importance of educational attainment, a family perspective

Percent of Utah families with income below poverty status by educational attainment of householder

Source: Kem C. Gardner Policy Institute analysis of U.S. Census Bureau 5-year 2013-2017 American Community Survey data
Families rising

The nation’s largest commuting zones with most intergenerational mobility
Average income percentile at age 30 of those whose parent’s income was in the 25th percentile

Source: Raj Chetty, Nathaniel Hendren, Patrick Kline, and Emmanuel Saez “Where is the Land of Opportunity? The Geography of Intergenerational Mobility in the United States”
Women finish what they start
(and improve higher education graduation rates)

Utah System of Higher Education (USHE) graduation rates, 2017

Note: Graduation rates are measured by the percentage of first-time, full-time students who graduate within 150% of the published time for the program (six years for a four-year baccalaureate degree and three years for an associate degree).
Source: Utah System of Higher Education
The STEM gap

Female share of the workforce in STEM and other occupations, 2017

- Utah: 20.6% (STEM) vs. 46.0% (Other)
- United States: 29.3% (STEM) vs. 48.2% (Other)

Note: STEM = science, technology, engineering, and mathematics
Source: Kem C. Gardner Policy Institute analysis of U.S. Census Bureau American Community Survey data
Larger classroom sizes in the West

Utah public elementary and secondary school pupil-teacher ratios, Fall 2015

United States = 16.0

Note: The pupil-teacher ratio includes teachers for students with disabilities and other special teachers, while these teachers are generally excluded from class size calculations; ratios reflect totals reported by states and differ from totals reported for schools or school districts; data are most recent available for national comparisons.

Source: U.S. Department of Education National Center for Education Statistics Common Core of Data
Provo has the highest student to teacher ratio in the state.

**Utah public elementary and secondary school pupil-teacher ratios, FY 2017**
Utah average = 21.8

**Districts with highest ratios**
- Provo: 25.2
- Morgan: 24.8
- Alpine: 24.6
- Davis: 24.0
- Cache: 23.6
- Uintah: 23.3
- Juab: 23.2
- Nebo: 23.1
- Box Elder: 23.0
- Jordan: 23.0

**Districts with lowest ratios**
- Kane: 17.6
- San Juan: 17.2
- Park City: 16.6
- Grand: 15.9
- Garfield: 15.9
- Rich: 14.2
- Wayne: 13.9
- Tintic: 12.4
- Piute: 10.2
- Daggett: 10.2

**Note:** District average = 19.8; Charter school average = 22.1
Source: Utah State Board of Education

**QAMO AWARD WINNER**

Why student-teacher ratios matter
- Higher amounts of engagement and retention
- More individualized attention
- Accommodation of different learning styles

Submitted by David Eccles School of Business QAMO (Quantitative Analysis of Markets & Organizations) students Jessie Rabe and Jonathan White.
Utahns behind the wheel

Total miles driven per driving-age population

Note: Driving age population aged 15 and above.
Source: Kem C. Gardner Policy Institute analysis of U.S. Federal Highway Administration and U.S. Census Bureau data
Utah Jazz player salaries
Annual and cumulative since 1985

Source: Utah Jazz
Opportunity Zones

- Part of the Tax Cuts and Jobs Act of 2017
- Economically-distressed communities designated by the governor of each state for preferential tax treatment to spur new investment. Investors can defer capital gains until sale or exchange, through 2026
- 10% exclusion of deferred gains for investments held longer than 5 years
- 15% exclusion of deferred gains for investments held longer than 7 years
- 100% exclusion of deferred gains for investments held longer than 10 years

Source: U.S. Department of Treasury Community Development Financial Institutions Fund Opportunity Zones Resources and Internal Revenue Service Opportunity Zones Frequently Asked Questions
How will Utah leverage opportunity zones?

Qualified opportunity zones in Utah

High-growth company density
Number of private businesses with at least $2 million in annual revenue reaching three years of 20 percent annual revenue growth, normalized by total business population

Source: Kauffman Foundation 2017 Kauffman Index of Growth Entrepreneurship State Trends
Start me up

Startup density
Startups per 1,000 firm population

Note: Startup businesses here are defined as firms less than one-year-old employing at least one person besides the owner.
Source: Kauffman Foundation 2017 Kauffman Index of Startup Activity State Trends
Rural economic development incentives - time for an update?

Where the state can help rural Utah
Items identified in rural county economic development plans

<table>
<thead>
<tr>
<th>Incentive Update</th>
<th>Infrastructure</th>
<th>Economic Development Capacity Building</th>
<th>Recruitment/Investment</th>
<th>Regulation/Policy</th>
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<tr>
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<tr>
<th>Inter-Government &amp; Business Relationships</th>
<th>Transportation</th>
<th>Higher Education Funding &amp; Aligning</th>
<th>Workforce Development</th>
<th>Housing Quality/Affordability</th>
<th>State Job Relocation</th>
<th>Energy/Natural Resources</th>
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<td>6</td>
<td>6</td>
<td>3</td>
<td>3</td>
<td>2</td>
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Note: Circle size and number identify count of plans mentioning each item.
Source: Kem C. Gardner Policy Institute analysis of rural county economic development plans submitted to the Utah Governor's Office of Economic Development
### Economic Development Logic Model

<table>
<thead>
<tr>
<th>Initial/Baseline Conditions</th>
<th>Inputs</th>
<th>Outputs (Program Activities)</th>
<th>Capacity Outcomes (Shorter-term)</th>
<th>Realized Outcomes (Longer-term)</th>
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<tbody>
<tr>
<td></td>
<td>EDA Funding</td>
<td>Events, Networking &amp; Referrals</td>
<td>Markets &amp; Business Networks</td>
<td>Job Growth</td>
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<td></td>
<td>Other Funding</td>
<td>R&amp;D &amp; Commercialization Support</td>
<td>Innovation, Technology Transfer, &amp; Commercialization</td>
<td>Earnings/Wage Growth</td>
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<td>Client/Participant Resources</td>
<td>Financing Support</td>
<td>Financing &amp; Investment</td>
<td>Revenue/Sales Growth</td>
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<tr>
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<td>Mentoring, Coaching, &amp; Training</td>
<td>Human Capital &amp; Workforce</td>
<td>Opportunities/ Equity</td>
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<tr>
<td></td>
<td></td>
<td>Planning &amp; Institutional Development</td>
<td>Organizational Capacity</td>
<td>Increased Share of Cluster Activity</td>
</tr>
<tr>
<td>Industry/Cluster Conditions, Competitiveness &amp; Levels of Definition/ Development</td>
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<tr>
<td>Existing Regional Networks &amp; Innovation Ecosystems</td>
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<tr>
<td>Existing Workforce Skills &amp; Knowledge</td>
<td></td>
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</tbody>
</table>

Source: U.S. Economic Development Administration
You miss 100% of the shots you don’t take

Utah Jazz 3-point shots
Attempts and makes

Source: Basketballreference.com
Can the cycle be broken?

Vicious tax cycle

- Tax Base Gets Narrower and Narrower
- Insufficient Tax Revenue
- Pressure to Increase Taxes
- Increased Pressure for Exemptions and Deductions

Source: Utah Governor’s Office of Management and Budget
Utah’s narrowing sales tax base

Utah sales tax base as a percent of personal income

Note: 2018 and beyond are forecasted.
Source: Utah Governor’s Office of Management and Budget and Kem C. Gardner Policy Institute
No more fiscal wiggle room...

Composition of state funds for higher education in Utah
Education Fund and General Fund contributions

Note: Fiscal years; 2019 and 2020 figures are based on Governor Herbert’s budget recommendations.
Source: Utah Governor’s Office of Management and Budget
Considerations for broadening the base

Number of services, by category, subject to state sales and use taxes
Maximum, median, and Utah counts

Note: Total services equal to maximum taxed in all categories but Admissions/Amusements (15 services) and Other Services (47 services); the most recent counts for AZ, LA, MD, MA, NM, and OK are from 2007; all other counts are from 2017.
Source: Federation of Tax Administrators Sales Taxation of Services Survey; Medians calculated by Kem C. Gardner Policy Institute
It’s all relative

Sales tax rates and total tax burden

Combined State and Local Sales Tax Rates

All State and Local Taxes as a Percent of Personal Income

Note: Tax rates are as of 2018 and tax burden estimates as of 2015, the most recent comparable data available; severance tax collections are excluded from tax burden analysis.

Gaining efficiencies in state government

State government employment per 1,000 population

Note: Excludes higher education.
Source: Utah Governor’s Office of Management and Budget
State of Utah budget stress test

State budget could withstand stagflation and moderate recessions; another Great Recession would be more challenging

Hypothetical budget gaps vs. reserve availability as a percent of state fund appropriations

Source: Kem C. Gardner Policy Institute analysis of Utah Office of the Legislative Fiscal Analyst data
Pray for rain...

Mountain states’ average annual precipitation, 2013–2017
Inches per year

<table>
<thead>
<tr>
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<td>Idaho</td>
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</table>

Source: National Oceanic and Atmospheric Administration
Frequency of floods and flash floods in Utah

...but not all at once

Source: National Oceanic and Atmospheric Administration National Climatic Data Center
**Variation in water pricing**

Residential water bill for 30,000 gallons of water across the state

<table>
<thead>
<tr>
<th>Rank</th>
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<tr>
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<td>119</td>
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</tbody>
</table>

Note: Base rates plus the incremental costs for each 1,000 gallons.
Source: Utah Governor’s Office of Management and Budget
Dry but thirsty

Mountain states’ domestic water consumption
Gallons per capita per day

- Idaho: 184
- Utah: 169
- Wyoming: 156
- Arizona: 145
- Nevada: 126
- Colorado: 123
- Montana: 106
- New Mexico: 81

Source: USGS Estimated Use of Water in the United States in 2015
Top 20 for energy industry jobs

Energy industry employment as a percent of total employment, 2017

Source: U.S. Department of Energy
Energy is one of our state’s many exports

Utah energy production and consumption
Gigawatt hours

Note: e = estimate
Source: Utah Geological Survey
Solar gains momentum

Renewable energy electricity generation in Utah, 2017
Percent of total electricity generation

Source: U.S. Energy Information Administration
Best air quality is in the fall

Salt Lake County average days per week in each air quality category
November 2013 to October 2018

Note: Unhealthy air days are characterized by high ozone levels in the summer and high levels of particulate matter in the winter. “Unhealthy” category includes the less severe “unhealthy for sensitive groups” category. Index is based on ozone, particulate matter, carbon monoxide, sulfur dioxide, and nitrogen dioxide content. Source: Kem C. Gardner Policy Institute analysis of U.S. Environmental Protection Agency data
Utah 4th healthiest in the nation

Health ranking

Source: United Health Foundation 2017 America's Health Rankings Annual Report
Another way to look at quality of life

Life expectancy at birth by Utah small area, 2012–2016

Note: Life expectancy can be used to gauge the overall health of a community.
Source: Utah Department of Health, Center for Health Data and Informatics
Variation in Utah’s uninsured rates pre-Medicaid expansion

County uninsured rates, 2016
Percent of population aged 65 and younger without health insurance

Source: Kem C. Gardner Policy Institute analysis of U.S. Census Bureau Small Area Health Insurance Estimates
Harder to keep up

Average annual growth in Utah’s family income and health insurance costs, 2006-2016

Note: Income is median family income; premiums and deductibles represent average employee contributions and deductibles for private-sector employees enrolled in single and family coverage; data are inflation-adjusted (2016).
Source: Kem C. Gardner Policy Institute analysis of Medical Expenditure Panel Survey and U.S. Census Bureau Current Population Survey data
Income and health, a strong correlation

Percent of adult Utahns in fair or poor health by income, 2016

<table>
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<tr>
<th>Percent of population</th>
<th>Income</th>
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<td>27.7%</td>
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<td>$25,000 - $49,999</td>
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<tr>
<td>14.2%</td>
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<tr>
<td></td>
<td>$50,000 - $74,999</td>
</tr>
<tr>
<td>7.2%</td>
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<tr>
<td></td>
<td>$75,000 +</td>
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<tr>
<td>7.0%</td>
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</table>

Note: Each square represents three percent of the adult population (age 18+) with fair or poor general health; data is age-adjusted.
Source: Utah Department of Health Office of Public Health Assessment Behavioral Risk Factor Surveillance System
Vaccination worries

Percent of kindergarteners with an exemption from one or more vaccines
2016–17 school year

Note: Non-medical exemptions in Utah rose from 3.6 percent in 2009–2010 to 4.9 percent in 2016–2017. Medical exemptions have remained stable at 0.2 percent. Sample designs vary by state. Medical and non-medical exemptions may not be mutually exclusive, and some children may have both exemptions.

Source: Centers for Disease Control and Prevention, National Center for Immunization and Respiratory Diseases
Utah leads single-family housing recovery

**States with most growth in detached single-family home permits**
Since pre-recession peak in 2005

- **Utah**: 72%
- **Texas**: 68%
- **Colorado**: 61%
- **Idaho**: 57%
- **Washington**: 56%
- **US**: 49%
- **Oregon**: 44%
- **Georgia**: 44%
- **Florida**: 40%
- **California**: 37%
- **Arizona**: 35%
- **Nevada**: 34%

Note: Most recent data is for 2017.
Source: U.S. Census Bureau
Growth in Utah home values far outpacing income growth

Ratio of the median value of owner-occupied housing units to median household income, 2017

United States = 3.5

Source: Kem C. Gardner Policy Institute analysis of U.S. Census Bureau 1-year American Community Survey data
Apartment boom in Salt Lake City

Composition of building permits for residential units by housing type, 2000–2017
Share of residential building permits

<table>
<thead>
<tr>
<th></th>
<th>Salt Lake City</th>
<th>Balance of Salt Lake County</th>
<th>Balance of Wasatch Front</th>
<th>Ring Counties</th>
<th>Balance of the State</th>
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<td>75%</td>
<td>21%</td>
<td>14%</td>
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<tr>
<td>Single-Family Detached</td>
<td>14%</td>
<td>59%</td>
<td>71%</td>
<td>74%</td>
<td>69%</td>
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<tr>
<td>Condo/Townhome/Duplex</td>
<td>11%</td>
<td>19%</td>
<td>15%</td>
<td>8%</td>
<td>13%</td>
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<tr>
<td>Other</td>
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<td>1%</td>
<td>1%</td>
<td>2%</td>
<td>9%</td>
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</tbody>
</table>

Balance of Wasatch Front = Davis, Utah, and Weber counties; Ring counties = Juab, Morgan, Tooele, and Summit counties
Note: Other includes group quarters, mobile homes, manufactured homes, cabins, accessory dwelling units, and any other dwelling unit type not covered by apartments, condominiums, townhomes, duplexes, or detached single-family homes; regions are mutually exclusive.
Source: Kem C. Gardner Policy Institute analysis of Ivory-Boyer Construction Database data
Retail dives, apartments soar

**Wasatch Front commercial real estate under construction by property type**
Percent of total stock

Note: 2018 as of the third quarter.
Source: Kem C. Gardner Policy Institute analysis of CoStar Group Inc. data
Double whammy of rising interest rates and home prices

Utah median monthly mortgage payment and 30-year mortgage rates

Note: Median monthly payment is based on median sales price for single-family homes.
Source: Kem C. Gardner Policy Institute analysis of UtahRealEstate.com, Freddie Mac, and Mortgage Bankers Association data
Utah mortgage debt among highest in nation

Mortgage debt balance per capita, 2017
States with highest and lowest rankings

**Top Ten**
- HI $54,680
- CA $54,640
- MD $50,900
- CO $50,900
- VA $47,370
- WA $47,110
- MA $45,760
- UT $41,830
- CT $41,790
- AK $41,580

**Bottom Ten**
- MI $23,130
- IN $22,810
- OH $21,500
- AL $21,000
- LA $20,820
- KY $20,010
- OK $19,830
- AR $18,200
- WV $15,240
- MS $15,230

Note: Population is ages 18 years and older with an Equifax credit file; District of Columbia mortgage debt per capita = $62,080.
Source: Federal Reserve Bank of New York State Level Household Debt Statistics 2003-2017
Utah’s growth in mortgage debt burden second in nation

Growth in mortgage debt balance per capita, 2016-2017
United States = 4.3%

Note: Population is ages 18 years and older with an Equifax credit file; District of Columbia mortgage debt per capita = $62,080.
Source: Federal Reserve Bank of New York State Level Household Debt Statistics 2003-2017
What happens in Vegas happens elsewhere too

Visitor spending as a percent of state GDP, 2017

Source: Kem C. Gardner Policy Institute analysis of U.S. Travel Association and U.S. Bureau of Economic Analysis data
Travel and tourism drives over a third of all jobs in six counties

Private leisure and hospitality sector jobs in Utah’s counties, 2017
Percent of total private employment and top ten for job growth


- San Juan: 30.7%
- Utah: 26.6%
- Iron: 23.0%
- Grand: 22.1%
- Wasatch: 21.7%
- Box Elder: 21.4%
- Sanpete: 21.3%
- Millard: 21.1%
- Juab: 20.7%
- Davis: 18.8%

Source: Kem C. Gardner Policy Institute analysis of Utah Department of Workforce Services data
Tax exporting

**County Transient Room Tax revenue**
Annual change and top ten collectors

Source: Kem C. Gardner Policy Institute analysis of Utah State Tax Commission data
### International visitor spending by country, 2016-2017

$ millions and year-over-year change

- **Canada**: $180 million (2016), $180 million (2017), +9.9%
- **China**: $160 million (2016), $160 million (2017), -0.5%
- **France**: $120 million (2016), $120 million (2017), -0.2%
- **Germany**: $140 million (2016), $140 million (2017), +4.0%
- **United Kingdom**: $120 million (2016), $120 million (2017), -5.2%
- **Australia**: $100 million (2016), $100 million (2017), +7.8%
- **Japan**: $110 million (2016), $120 million (2017), +11.0%
- **South Korea**: $100 million (2016), $110 million (2017), +13.2%
- **Brazil**: $30 million (2016), $33 million (2017), +10.6%
- **Taiwan**: $20 million (2016), $26 million (2017), +31.5%

Source: Tourism Economics
Utah’s national parks: efficiency, understaffing, or both?

Utah national park and monument indicators

Jobs and visits

Note: e = estimate
Taking advantage of the greatest snow on earth

Utah skier/snowboarder place of origin and stats

- California 10%
- International 7%
- Texas 5%
- Florida 4%
- New York 4%
- Utah 37%
- All other states 33%

- Average age: 40.3 years
- Length of stay: 5.8 nights
- Stay in commercial lodging: 67%
- Average lodging rate: $431/night
- First time visit to Utah: 33%

Source: RRC Associates
Utah natural increase continues descent

Utah population components of change

Oh mother, where art thou?

Total fertility rate, 2017
Births per woman

Note: The total fertility rate is the expected number of births per woman based on the current schedule of age-specific birth rates.
Source: National Center for Health Statistics National Vital Statistics System Births: Final Data for 2017
South Dakota’s fertility rate driven, in part, by teen births

**Birth rates by age of mother, 2017**
Births per 1,000 women

*South Dakota does not meet standards of reliability; fewer than 20 births.
Source: National Center for Health Statistics National Vital Statistics System Births: Final Data for 2017*
More new Utahns arriving from Asia than any other region

Utah’s foreign born population
Recent arrivals by region of birth

<table>
<thead>
<tr>
<th>Entered</th>
<th>Asia</th>
<th>Latin America</th>
<th>Europe</th>
<th>Africa</th>
<th>Northern America</th>
<th>Oceania</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990-2000</td>
<td>16.5%</td>
<td>64.9%</td>
<td>10.9%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>after 2000</td>
<td>20.2%</td>
<td>62.9%</td>
<td>7.4%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>after 2010</td>
<td>44.5%</td>
<td>34.3%</td>
<td>9.5%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Utah’s capital city population reaches a milestone; still shrinking in proportion to county

Source: U.S. Census Bureau Population Division Estimates
Median-aged Utahns still can’t run for president, getting closer

Median age in Utah and the United States

Source: U.S. Census Bureau
From *Leave it to Beaver* to *Modern Family*

**Cumulative change in Utah persons per household since 1920**

Persons per household was 4.5 in 1920, 3.1 at last census

Source: Kem C. Gardner Policy Institute analysis of IPUMS USA: Version 8.0 data
Cities with the most- and least-engaged NBA fans.

Source: WalletHub ranking based on ticket prices, stadium accessibility, fan engagement, and NBA and NCAA team performance.
It’s a small world

Utah Jazz Facebook followers by country

<table>
<thead>
<tr>
<th>Rank</th>
<th>Country</th>
<th>Followers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>USA</td>
<td>475,791</td>
</tr>
<tr>
<td>2</td>
<td>Philippines</td>
<td>475,570</td>
</tr>
<tr>
<td>3</td>
<td>India</td>
<td>193,418</td>
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<tr>
<td>4</td>
<td>Nigeria</td>
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<td>Brazil</td>
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<td>Mexico</td>
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<tr>
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<tr>
<td>16</td>
<td>Mongolia</td>
<td>12,872</td>
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</table>

<table>
<thead>
<tr>
<th>Rank</th>
<th>Country</th>
<th>Followers</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>Spain</td>
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<td>Argentina</td>
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<td>29</td>
<td>Portugal</td>
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<td>Peru</td>
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<tr>
<td>32</td>
<td>New Zealand</td>
<td>5,209</td>
</tr>
</tbody>
</table>

Source: Facebook
The whole point

Accurate data and information

Probability of making an informed decision
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