Working Families
Benchmarking Project 2016
A Comparative Look at Utah & Colorado

Part I — Economic Opportunity

June 2016

VOICES FOR UTAH Children

ACKNOWLEDGEMENTS

This is the inaugural edition of the *Working Families Benchmarking Project*. It was authored by Tess Davis, JD, State Priorities Policy Analyst, and Matthew Weinstein, MPP, State Priorities Partnership Director at Voices for Utah Children, with support from the rest of the staff at Voices for Utah Children. The 2016 edition has been written as a two-part series, with this report representing the first of the two segments. This report is released as part of the *State of Working America* series, more information about which is available at www.stateofworkingamerica.org. Original research for this project was conducted with the assistance of interns provided by the University of Utah Department of Economics: Courtney Dean, Holly Hatfield, Curtis Miller, and Guowang Rao.

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VOICES FOR UTAH CHILDREN is the Utah affiliate of the State Priorities Partnership, a 42-state consortium of independent nonprofit research and policy organizations that use evidence and analysis to advance public policies and investments that reduce poverty and give all people the opportunity to achieve the American Dream.

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Working Families Benchmarking Project: *Utah vs. Colorado*

Part I—Economic Opportunity

SUMMARY OF KEY FINDINGS ("winner" highlighted and bold)

	COLORADO	UTAH
Business Climate avg rank 2010-15	5th place	**3rd place**
Unemployment rate, 2015 (US = 5.3%)	3.9% (10th lowest)	**3.5% (5th lowest)**
Labor Force Participation Rate 2015 (US = 62.7%)	66.7% (14th place)	**68.1% (7th place)**
Decline in LFPR 2007-2015 (US = 3.4 points)	5.5 points	**3.8 points**
Change in real GDP 2009-14 (US=10.1%)	11.7%	**12.5%**
Total change in real per capita GDP 2007-2014 (US = 0.6%)	**0.5%**	-4.0%
Productivity per worker 2014 (US=$93,199)	**$88,828 (19th)**	$79,210 (37th place)
Entrepreneurship: Kauffman Index 2015 Rank: Startup Activity by State	**4th place**	15th place
K-12 $/pupil 2013 (US=$10,700)	**$8,647 (40th)**	$6,555 (50th place)
Enrollment in full-day kindergarten 2013 (US=77%)	**74%**	13%
Enrollment in public preschool 2014-15 (4 yr olds) (US=41%)	**37% (22nd place)**	13% (50th place)
NAEP Rankings: Avg. rank on 4th + 8th grade math + reading scores 2013-15	**14th place**	18th place
Higher ed state $/student FY 2016	$4,754	**$7,752**
Bachelor's degree 2013 ages 25-64 (US = 31.1% overall, Men=29.5%, Women=32.7%)	**38.6%** Men=37.1% Women=40%	31.4% Men=32.5% Women=30.3%
Bachelor's degree 2013, ages 25-34 (US = 32.3% overall, Men=28.3%, Women=36.3%)	**37.7%** Men=33.2% Women=42.1%	29.8% Men=28.5% Women=31.0%
Associate's degree or higher 2014 age 25-64 (US=40.4%)	**48.2%**	41.9%
Status of Women – avg rank	**11th place**	34th place
Gender Wage Gap 2013 (US=21 cents)	**20¢ (18th place)**	30¢ (47th place)
Referral rates of black + Latino students to law enforcement	10th most disproportionate	**23rd most disproportionate**
Income inequality state rank 2014	20th lowest	**3rd lowest**
Intergenerational mobility rank	#19 (Denver metro)	**#1 (SL metro)**

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EXECUTIVE SUMMARY

The goal of the *Working Families Benchmarking Project* is to identify a variety of economic trends affecting Utah families, and then to examine those issues through a comparative lens, evaluating Utah's achievements by using a peer state as a benchmark. Colorado was chosen for this inaugural edition, in part for its geographic proximity to Utah — and thus relatively similar regional identity — as well as for its comparable rates of economic and population growth and similar demographics.

Many existing economic comparison studies and rankings look at the economy as a whole or at its impact on specific sectors or on employers. This project seeks to augment those very useful comparisons by focusing on how the economy is experienced by average- and lower-income families. In particular, it is these families whose children are most at risk for not achieving their potential in school and later in the workplace and in society in general. Thus, how they experience the economy is of particular interest to Voices for Utah Children.

In Part I of the Project, we focus on economic opportunity. The dynamism, flexibility, and competitiveness of a state's economy is a major contributor to economic opportunity, so we look at this topic through a wide range of metrics, from business climate and entrepreneurship rankings to educational attainment and demographic gaps. **Our most significant findings are as follows:**

1) **Utah ranks ahead of Colorado in business climate rankings, GDP growth, unemployment, and labor force participation. Utah also invests far more public dollars per student in its higher education system, refers fewer minority youth to its correctional system, and benefits from lower levels of income inequality and higher levels of social mobility.**
2) **Colorado outpaces Utah in Pre-K and kindergarten enrollment, K-12 investment and performance, higher education attainment, workforce productivity, entrepreneurship, and the status of women in the economy.**

The gaps in educational attainment are perhaps the finding of greatest concern for Utah's long-term future. Utah appears to have reached an unfortunate milestone in 2014, falling behind the national average in the share of the working-age population with a Bachelor's Degree for the first time, continuing a long-term decline relative to the nation. Since education is the foundation of opportunity and prosperity in a modern economy, Colorado's success in educating its population and attracting highly educated migrants from other states may well hold lessons for Utah. Utah is wise to invest more than Colorado in higher education to attempt to make up this gap and should apply a similar lesson in its funding of pre-K-12.

These measures of economic opportunity also relate directly to the questions we address in Part 2: Standard of Living.

As Utah builds on its many assets and grapples with its challenges in the years to come, we hope this benchmarking project may contribute in a constructive way to the broader economic policy conversation among experts, policymakers, and the general public.

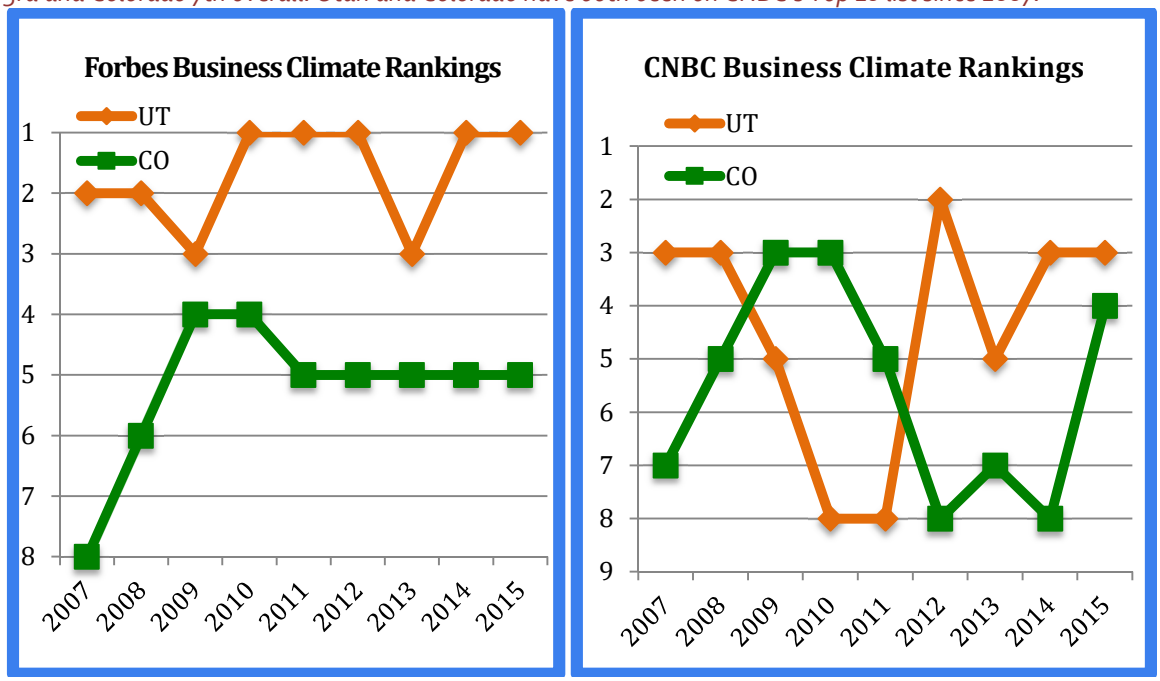
I. ECONOMIC GROWTH

By most accounts, Utah and Colorado have two of the nation's strongest and fastest-growing economies, including thriving technology sectors and bustling start-up scenes.[1] In the subsections below, various measurements of state economic health — particularly when viewed through the comparative lens set forth by this benchmarking series — will both highlight Utah's progress and help to identify those areas in which lessons from a peer state might be applicable.

Business Climate

Several publications release annual reports on the best (and worst) states for doing business. These rankings are determined using a variety of indicators: growth prospects, business friendliness, workforce, cost of living, education, and quality of life, to name a few. In recent years, Forbes' "Best States for Business" and CNBC's "Top States for Business" — two of the most well-known and widely circulated reports of their kind — have consistently placed both Utah and Colorado among the top ten states for doing business.

Figures 1 + 2. *Forbes named Utah the nation's best state for business in five of the last nine years. Colorado has been a close competitor. CNBC released its first "Top States for Business" report in 2007, ranking Utah 3rd and Colorado 7th overall. Utah and Colorado have both been on CNBC's Top 10 list since 2007:*



Forbes' "Best States for Business" Rankings, 2007-2014, CNBC's "Top States for Business" Rankings, 2007-2015
(Source: Forbes.com and CNBC.com)

Impressively, Utah has not fallen below third place on the Forbes list in the last nine years, and has enjoyed the top slot for five of those nine. Colorado has also maintained consistently high rankings, but — having peaked at fourth place in 2009 and 2010 — has not broken through to the top three. While CNBC's annual rankings for Utah and Colorado have fluctuated somewhat more than those of Forbes,

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[1] *See, e.g.*, Eileen Norcross, *Ranking the States by Fiscal Condition*, MERCATUS RESEARCH, MERCATUS CENTER AT GEORGE MASON UNIVERSITY, (July 2015), available at http://mercatus.org/sites/default/files/Norcross-StateFiscal-Condition.pdf (noting that "states that depend on natural resources for revenues" often tend to "place at the top of the [fiscal solvency] rankings"); *see also* The Kauffman Foundation, *State Rankings for Startup Activity* (2015), available at http://www.kauffman.org/microsites/kauffman-index/rankings/state.

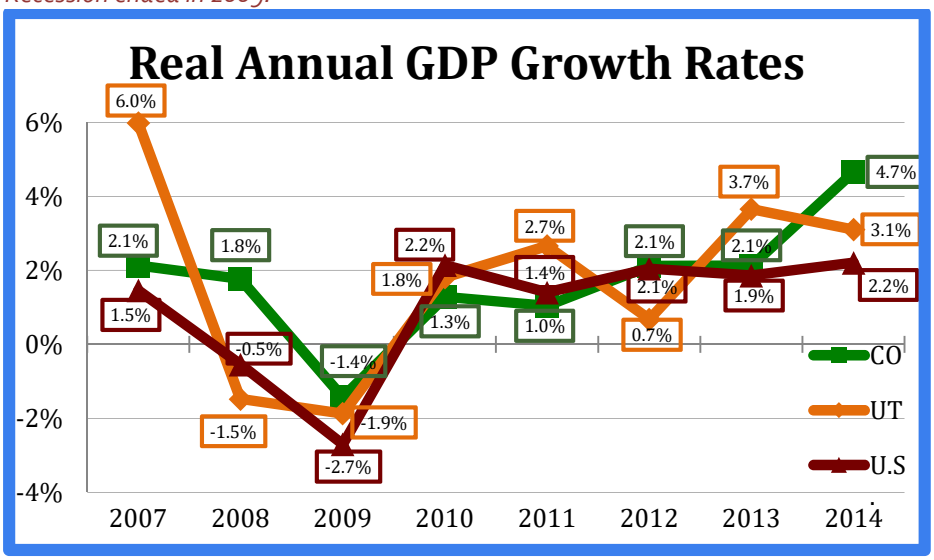
the most recent report (June 2015) places the two side by side, with Utah ranked 3rd and Colorado ranked 4th. Notably, neither Colorado nor Utah has come in below 8th place on either list since 2007.

It is important to note that ranking highly overall does not necessarily mean that a state received high rankings in all of the individual subcategories. For example, CNBC ranked Utah 1st in the nation in 2015 in its "Economy" subcategory, but 31st for "Education" and 30th for "Infrastructure." Conversely, while Colorado ranked 35th in Forbes' "Business Costs" category in 2014, it came in 1st for "Labor Supply," 4th for "Growth Prospects" and 9th for "Quality of Life," all ahead of Utah. (For a breakdown of each state's most recent rankings by category, see ***Figures A & B*** in the Appendix.)

Gross Domestic Product

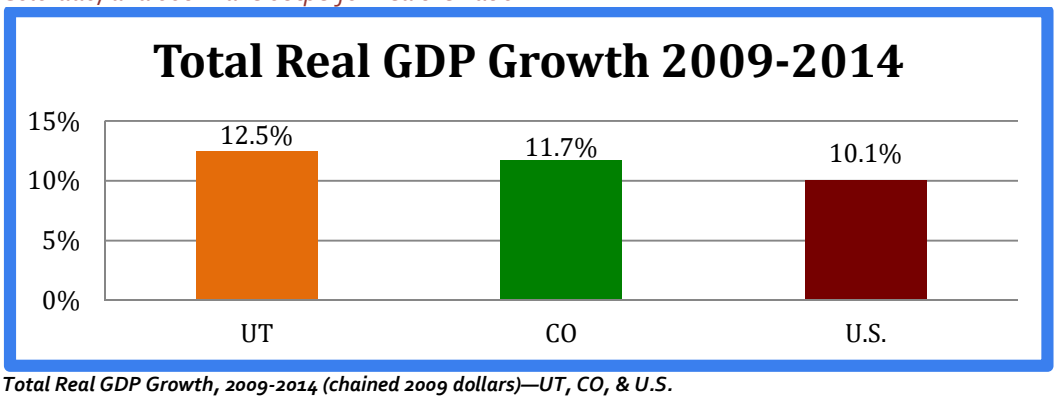
Of the various ways to gauge the overall health of an economy, Gross Domestic Product (GDP) is among the most common. GDP can also be a fairly reliable indicator of standard of living.

Figure 3. *Both Utah and Colorado have experienced rapid growth in real state GDP since the Great Recession ended in 2009:*



Real GDP Growth Rates, 2007-2014 (chained 2009 dollars)—UT, CO, & U.S.
(Source: U.S. Bureau of Economic Analysis, http://www.bea.gov)

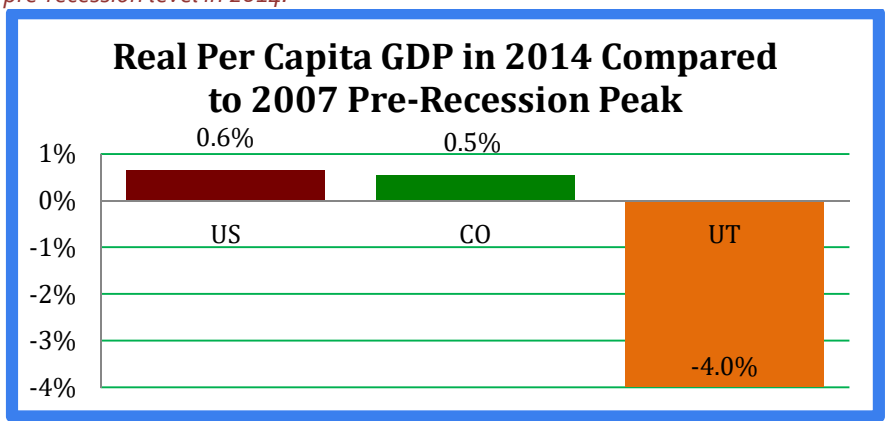
Figure 4. *In terms of overall GDP growth since the recession ended in 2009, Utah has slightly outperformed Colorado, and both have outperformed the nation.*



Total Real GDP Growth, 2009-2014 (chained 2009 dollars)—UT, CO, & U.S.
(Source: U.S. Bureau of Economic Analysis, http://www.bea.gov)

Adjusting GDP growth for population allows us to see a slightly different comparison of the two state's overall economic performance. Utah's per capita GDP has always been lower than the national level simply because of our unique demographics – we have the highest share of children in our population of any state. But looking at how that has changed over time opens a window into whether we are rising or falling by this metric compared both to Colorado and the nation as a whole.

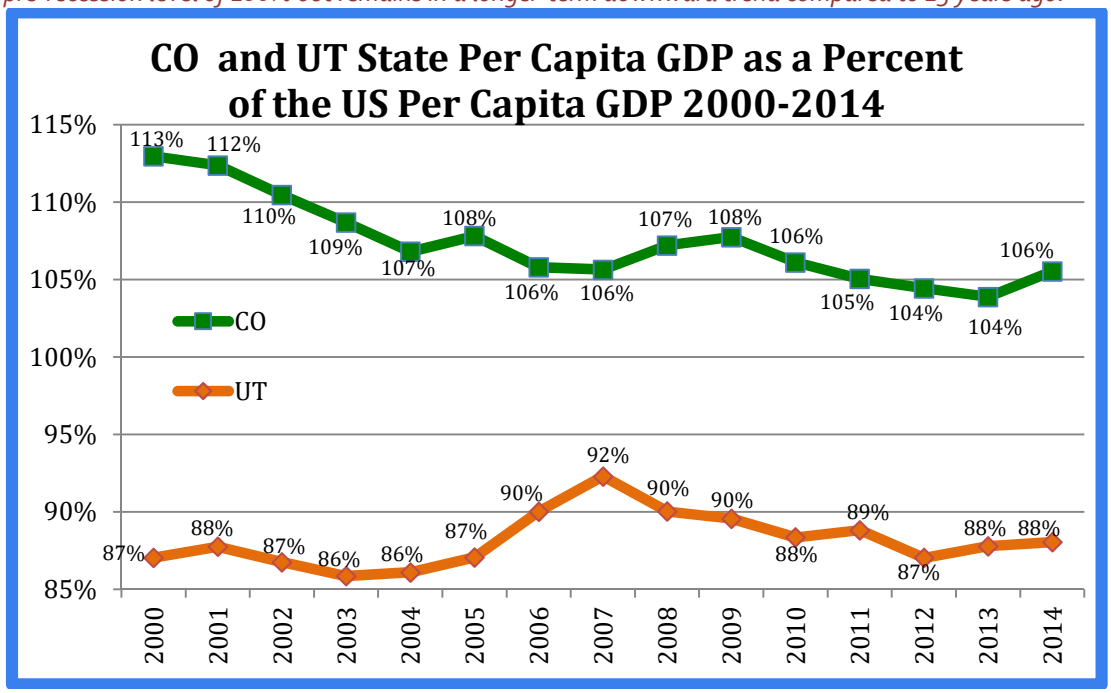
Figure 5: *On a per-capita basis, Utah has struggled to recover to its pre-recession level of GDP. While Colorado has matched the nation in its growth in per capita economic output, Utah remained 4% below its pre-recession level in 2014.*



Real Per Capita GDP in 2014 Compared to 2007 (chained 2009 dollars)—UT, CO, & U.S.
(Source: U.S. Bureau of Economic Analysis, U.S. Census Bureau)

The same trend is evident if we look at how each state's per capita economic output compares to the national level over time.

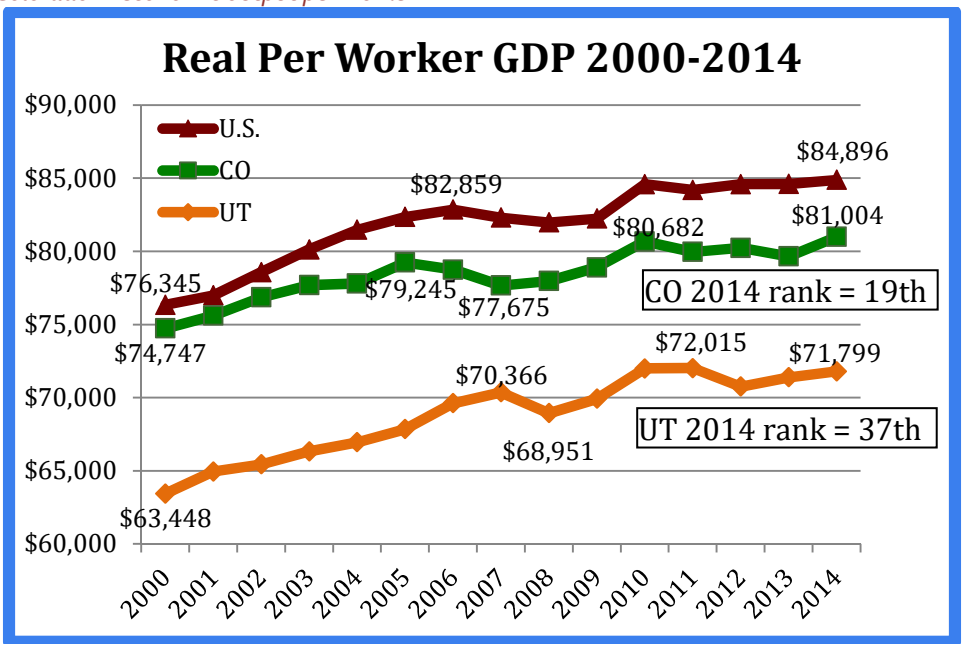
Figure 6: *Utah climbed as high as 92% of the federal level of per capita GDP before the Great Recession but has remained closer to its 2000-2006 trend level since then. Colorado, on the other hand, has returned to its pre-recession level of 106% but remains in a longer-term downward trend compared to 15 years ago.*



Real Per Capita GDP in 2014 Compared to 2007 (chained 2009 dollars)—UT, CO, & U.S.
(Source: U.S. Bureau of Economic Analysis, U.S. Census Bureau)

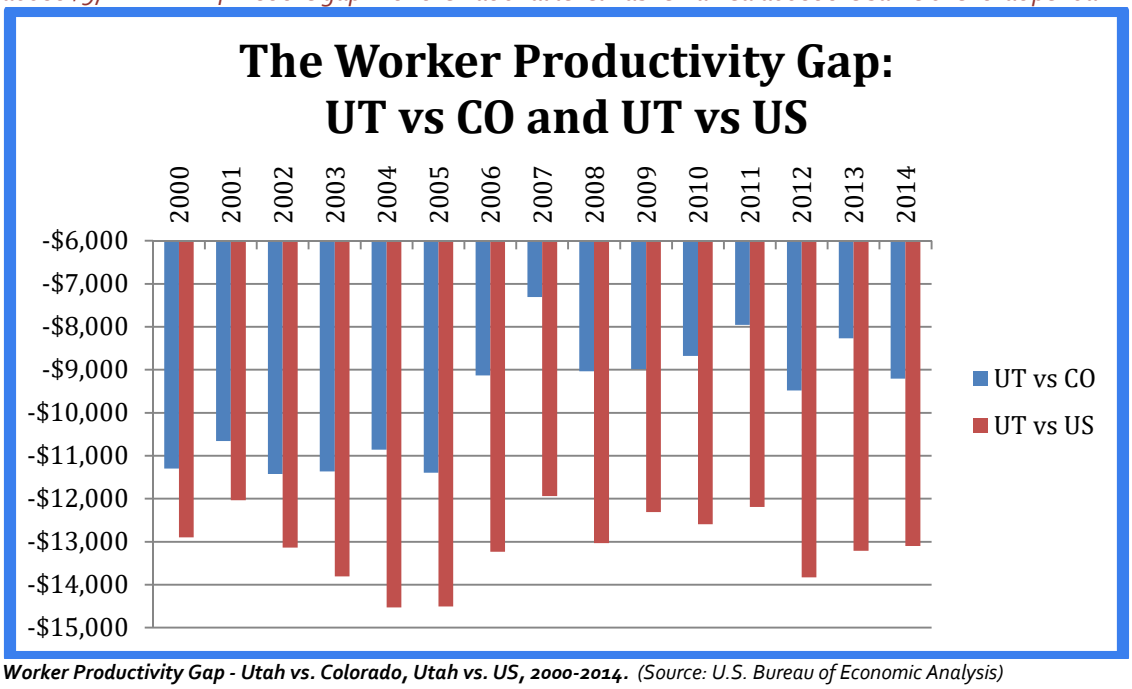
Economic output per worker is another telling indicator of productivity and workforce competitiveness. In 2014, Colorado ranked 19th highest for this measure of worker productivity, while Utah was much farther back in 37th place. Utah has made progress relative to Colorado in the last 15 years, but not relative to the nation.

Figure 7: *Utah has closed the productivity gap somewhat over the last 15 years but remains well behind Colorado in economic output per worker.*



Real Per-Worker GDP, 2000-2014 (chained 2009 dollars)—UT, CO, & U.S. *(Source: U.S. Bureau of Economic Analysis)*

Figure 8: *The worker productivity gap between Utah and Colorado has shrunk from about $11,000 in 2000 to about $9,000 in 2014. But the gap with the national level has remained about the same over that period.*



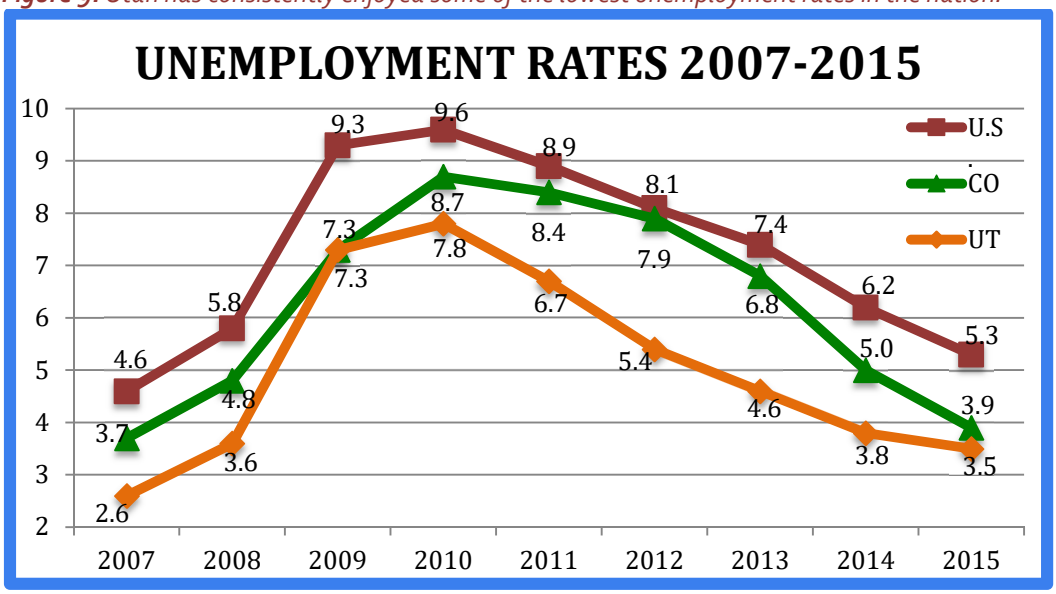
Worker Productivity Gap - Utah vs. Colorado, Utah vs. US, 2000-2014. *(Source: U.S. Bureau of Economic Analysis)*

II. EMPLOYMENT PROSPECTS

Unemployment

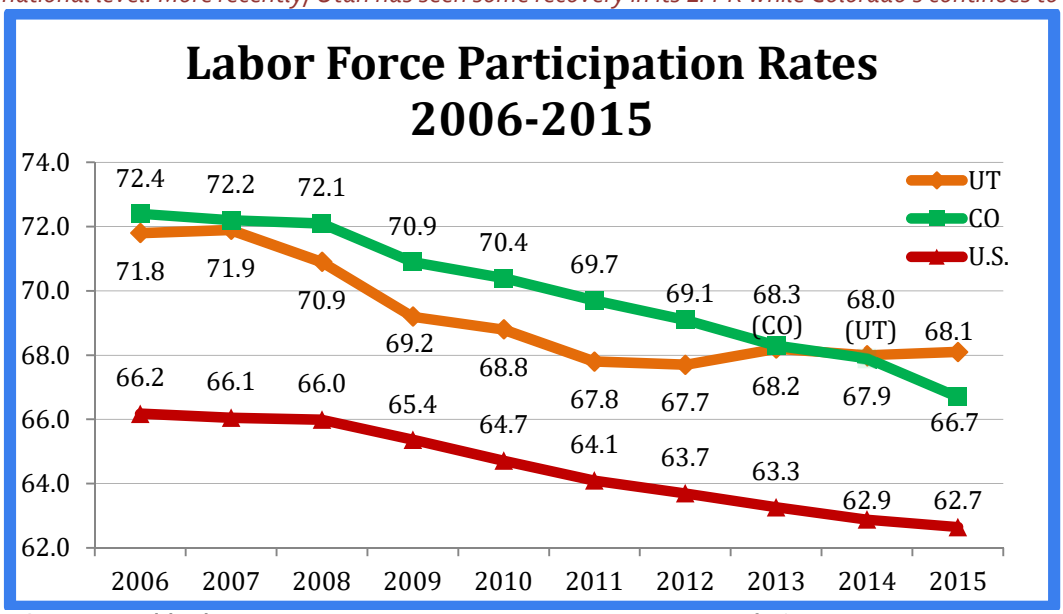
Across the country, unemployment rates peaked in 2010. Colorado's peak unemployment rate (8.7) was considerably closer to the national level (9.6) than Utah's, which peaked at a rate of 7.8%. Since then rates have fallen steadily, and in 2014 Utah had the 4th lowest unemployment rate in the nation, compared to 15th place for Colorado.

Figure 9: *Utah has consistently enjoyed some of the lowest unemployment rates in the nation.*



Unemployment Rates, 2007-2015—UT, CO, & U.S. *(Source: U.S. Bureau of Labor Statistics)*

Figure 10. *Labor Force Participation Rates (LFPR) have declined nationally and at the state level. Utah and Colorado both enjoy high LFPRs, yet both have experienced LFPR declines even steeper than that at the national level. More recently, Utah has seen some recovery in its LFPR while Colorado's continues to decline.*



Labor Force Participation Rates: 2006-2015 — UT, CO, & U.S. *(Source: U.S. Bureau of Labor Statistics)*

Colorado's 5.7 percentage point decline in labor force participation is 63% larger than that of the nation as a whole. Utah's 3.8 point drop, while smaller than Colorado's, is larger than that of the nation as a whole. As the Utah Economic Council wrote in its *2015 Economic Report to the Governor*, "While a large portion of the decline nationally can be attributed to demographic factors (primarily baby boomers entering retirement), this is not the case in Utah. Analysis of participation rates reveals the greatest drop in participation occurred among younger workers."

> ***"Achieving a labor force participation rate of 100 percent is not the goal, since many people who leave the labor force are engaged in important nonmarket activities, such as schooling, raising children, or retirement. However, discouraged workers dropping out of the labor force would be a cause for concern and would motivate enacting policies to return these workers to the labor force."[2]***

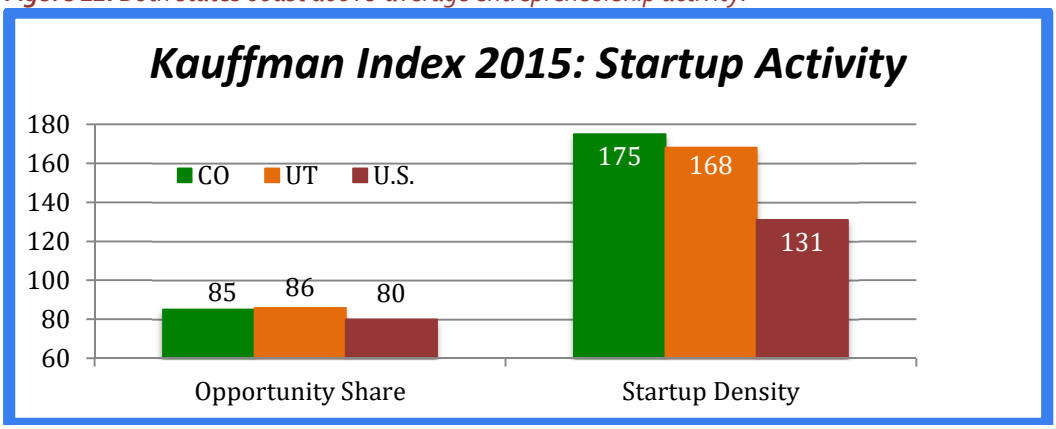
Entrepreneurship

Entrepreneurship is a key component of economic opportunity for families of modest means. A strong culture of entrepreneurship enables families to have greater control over their own economic destiny while also fostering conditions for dynamic growth, such as a greater ability for a state economy to rapidly adapt to changes in technology and consumer demand.

According to the Kauffman Foundation, which publishes annual state rankings for startup activity, both Utah and Colorado have new entrepreneurship rates[3] that are higher than the national average (0.29 percent). Additionally, both states were well within the top 20 on the Kauffman Index in 2014 and 2015.

Utah	***Colorado***
Utah ranked 15th on the 2015 Kauffman Index for startup activity, moving up two places, with a new entrepreneurship rate of 0.3% and a startup density of 168 startups per 100,000 residents.	Colorado ranks highly in startup activity, climbing from 7th in 2014 to 4th place in 2015, with a new entrepreneurship rate of 0.35% and a startup density of 175 startups per 100,000 residents.

Figure 11. *Both states boast above-average entrepreneurship activity:*



Kauffman Index 2015: State Rankings for Startup Activity—UT, CO, & U.S.
(Source: Ewing Marion Kauffman Foundation, http://www.kauffman.org/microsites/kauffman-index/rankings/state)

Utah's opportunity share — the percent of new entrepreneurs who were *not* unemployed prior to starting their business — sits at nearly 86%; Colorado's opportunity share trailed Utah's by just 1%. With regard to startup density, roughly 7 more startups per 100,000 residents are being created in Colorado than in Utah.

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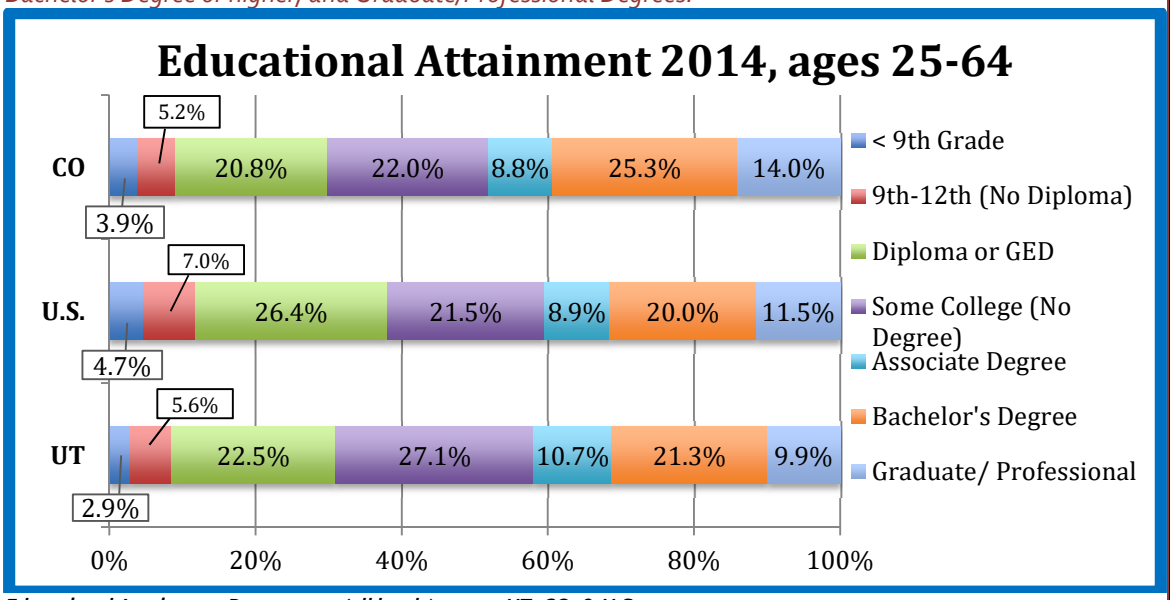
[2] Executive Office of the President of the US, *The Labor Force Participation Rate Since 2007: Causes & Policy Implications* (July 2014).
[3] "Rate of New Entrepreneurs" is the percentage of the adult population that became entrepreneurs in a given month. "Startup Density" is the number of startup firms (businesses less than one year old, employing at least one person in addition to the owner) per 100,000 residents.

III. EDUCATIONAL OPPORTUNITIES

An overview of educational attainment shows that Utah matches Colorado in the share of population that started college, but then Utah falls behind.

Figure 12. *Colorado far outpaces Utah in percentage of adult population with Associate's Degree or higher, Bachelor's Degree or higher, and Graduate/Professional Degrees.*

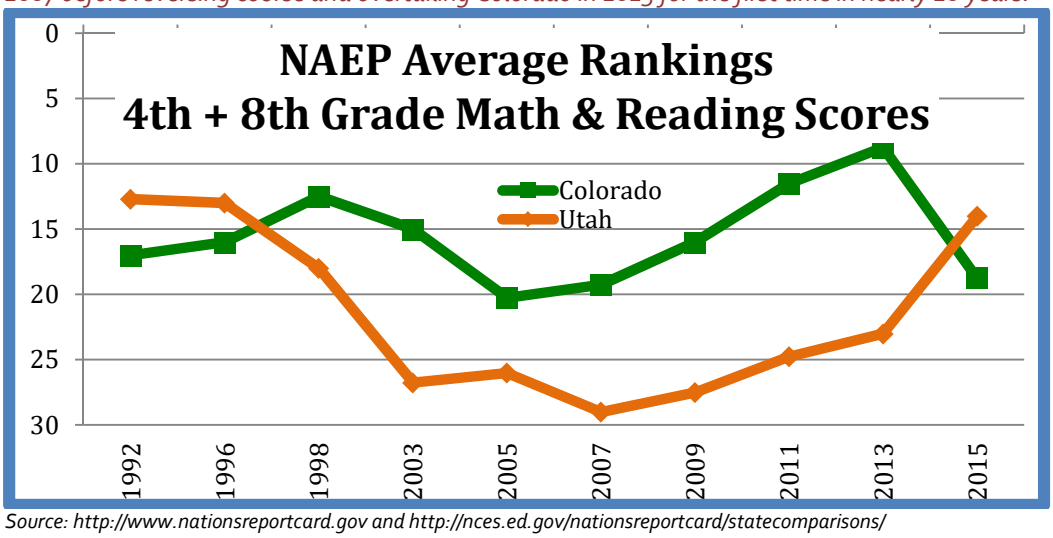


Educational Attainment Percentages (all levels), 2013—UT, CO, & U.S.
(Source: Lumina Foundation analysis of U.S. Census Bureau/ACS data, http://strongernation.luminafoundation.org/report/#nation)

Primary & Secondary Education

Utah fell behind Colorado in NAEP state rankings for 4th and 8th grade math and reading performance in the late 1990s, falling at one point as low as 29th place nationally, while Colorado broke into the top 10 in 2013. But 2015 saw a reversal as Colorado fell from 9th to 19th while Utah climbed from 23rd to 14th.

Figure 13. *Utah's ranking in the National Assessment of Educational Progress fell as low at 29th place in 2007 before reversing course and overtaking Colorado in 2015 for the first time in nearly 20 years.*



Source: http://www.nationsreportcard.gov and http://nces.ed.gov/nationsreportcard/statecomparisons/

While this apparent turnaround is encouraging news, evidence old and new suggests that Utah continues to underperform its demographic peers. For example, a 2010 report from the Utah Foundation found that "Utah is underperforming compared to states with similar demographics."[4] More recently, an October 2015 analysis compared state NAEP performance while controlling for demographic differences and found that Utah's true rank among the states only improved in 2015 from 47th to 44th place.[5] This is of particular concern as Utah rapidly diversifies, with its minority population already exceeding 20% among the general population and 25% among children.

Figure 14. *Demographically-adjusted NAEP ranking finds that Utah continues to underperform its demographic peers.*

State NAEP Rank When Adjusted for Demographic Differences		
	2013	**2015**
Colorado	12th place	22nd place
Utah	47th place	44th place

Urban Institute, "Breaking the Curve: Promises and Pitfalls of Using NAEP Data to Assess the State Role in Student Achievement," October 2015.
(Source: Urban Institute: http://www.urban.org/sites/default/files/alfresco/publication-pdfs/2000484-Breaking-the-Curve-Promises-and-Pitfalls-of-Using-NAEP-Data-to-Assess-the-State-Role-in-Student-Achievement.pdf and http://www.urban.org/urban-wire/how-do-states-really-stack-2015-naep)

The section below details Colorado and Utah's status, improvement efforts, and challenges in the area of educational opportunity.

Utah

Here are several notable facts about Utah's public education system:

- Utah's per-pupil spending during the 2012-2013 school year (data released June 2015) was the nation's lowest, amounting to $6,555 annually; nationally, the average amount spent per pupil that year was $10,700.
  - *In the 2015 and 2016 General Sessions, the Utah legislature voted to raise per-pupil spending substantially, which should contribute to closing the gap with Idaho, currently ranked 49th for per-pupil spending.*
- 13% of Utah 4-year-olds attended public preschool in 2014-15.
  - *During the 2014 General Session, the Utah legislature passed House Bill 96, which allowed private investors to finance preschool and receive results-based reimbursements from the state. This innovative approach makes high-quality Pre-K available to just a few hundred children each year. The encouraging initial results led the*

Colorado

Colorado's educational rankings saw fairly consistent improvement from the late 1990s through 2013. A recent Utah Foundation report[7] identified those policies that played a role:

1) Per-Pupil Spending
- While still well below the national average, Colorado's per-pupil spending — $8,647 — is close to 30 percent higher than the amount spent per pupil in Utah.

2) Early Childhood Interventions
- On average, Colorado students entering 3rd grade have received nearly 18 months more instructional time than their Utah counterparts:
  - 34 percent of Colorado's 4-year-olds are enrolled in public preschool (compared to only 13 percent in Utah). Another 15 percent attend private preschool, bringing combined total enrollment to 49 percent.
  - 74 percent of 5-year-olds in Colorado are enrolled in full-day kindergarten (compared, again, to 13 percent in Utah); the nationwide

[4] Source: http://www.utahfoundation.org/reports/school-testing-results-how-utah-compares-to-states-with-similar-demographics/
[5] Source: http://www.urban.org/sites/default/files/alfresco/publication-pdfs/2000484-Breaking-the-Curve-Promises-and-Pitfalls-of-Using-NAEP-Data-to-Assess-the-State-Role-in-Student-Achievement.pdf and http://www.urban.org/urban-wire/how-do-states-really-stack-2015-naep
[7] See http://www.utahfoundation.org/reports/lessons-from-our-neighbor/

legislature in 2016 to enact SB 101, allocating $11 million to expand high-quality programs statewide, which will make the myriad benefits of preschool available to an additional 4,000 children in the intergenerational poverty cohort.

- Kindergarten is not mandatory in Utah; of those 5-year-olds who do attend, only 13 percent were enrolled in full-day kindergarten as of 2013 (down from 18 percent in 2010).[6]
  - *In 2013, legislators approved a $7.5 million initiative to fund optional extended-day kindergarten on an ongoing basis.*
  - *In 2016, HB 42 would have allocated an additional $10 million in ongoing funds to create or expand optional extended day kindergarten. The bill passed the House but not the Senate.*
- As of 2013, less than 40 percent of Utah 4th graders were able to read at proficient levels.
  - *Gov. Herbert has set an ambitious goal to have 90 percent of Utah third-graders achieve reading proficiency by 2020.*
- Utah came in at # 29 for education on the Annie E. Casey Foundation's annual *Kids Count* state rankings in both 2014 and 2015 (*see **Figure D** in the Appendix*).

average for full-day kindergarten enrollment is 77 percent.

3) Rigorous Standards & Frequent Assessment

- In 1993, Colorado passed the ***Standards-Based Education Reform Bill*** requiring district standards to be at least as stringent as the state's. Districts then had the choice of either:
  - Designing their own, equally stringent standards; or
  - Adopting/incorporating the ***Colorado Model Content Standards***
- Colorado then crafted assessments that aligned with the standards, and—upon request from districts—developed a method to measure performance (called the ***Colorado Growth Model***).
  - Roughly half of U.S. states use some variation of the Colorado Growth Model.

The most recent *Kids Count* rankings also suggest improvement (*see **Figure D** in the Appendix*); between 2014 and 2015, Colorado moved up 2 places in the education category, from 11th to 9th.

Postsecondary Education & Training

Opportunities to pursue higher education are important in securing a bright economic future, at individual, state, and national levels alike. It is projected that by 2020, 65 percent of all jobs nationwide will require some form of postsecondary education—up from a mere 28 percent in 1973.[8]

Figure 15. *In response to predicted future workforce demands, Utah[9] and Colorado have set similarly ambitious statewide higher education attainment goals. Unlike Utah, however, Colorado has made narrowing demographic gaps in educational attainment a stated priority:*

State	Goal Statement	Goal Setting Entity
Colorado	Increase the number of Coloradans aged 25-34 who hold high-quality postsecondary credentials (degrees or certificates) to 66 percent by 2025 as well as reduce attainment gaps among students from underserved communities	Colorado Department of Higher Education
Utah	"66 By 2020" - To have 66% of Utah's men and women age 25 to 64 with a postsecondary degree or certificate by the year 2020	Governor and Board of Regents

States with Higher Education Attainment Goals as of September 2014 *(Source: Strategy Labs/Lumina Foundation, strategylabs.luminafoundation.org/wp-content/uploads/2013/10/State-Attainment-Goals.pdf)*

Much like early childhood education programming, however, achieving these laudable higher education

[6] See http://www.utahfoundation.org/reports/lessons-from-our-neighbor/

[8] See Anthony Carnevale et al., *Recovery: Job Growth & Education Requirements Through 2020* (2013) ("[a]t the current production rate in higher education, we will fall 5 million short of the workers with postsecondary credentials we will need by 2020").

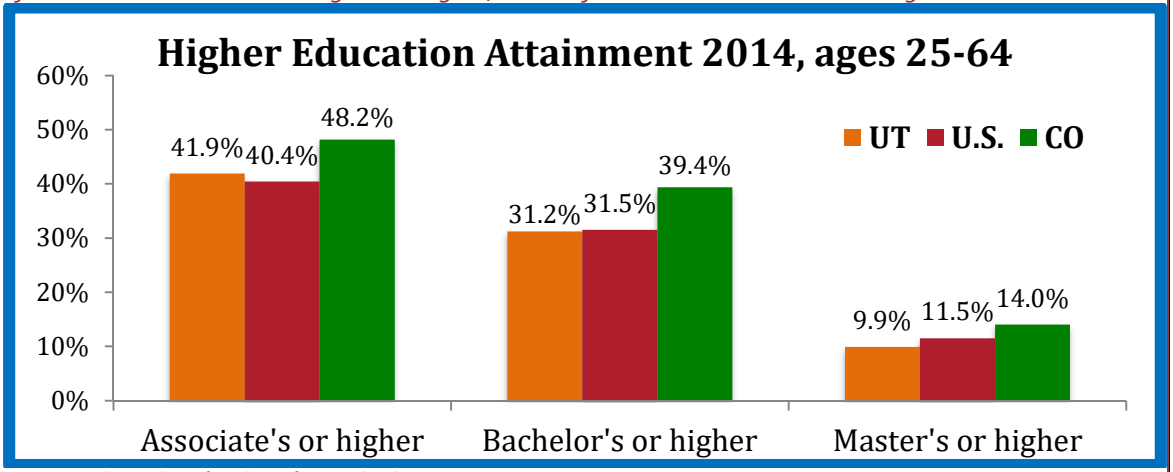
[9] ***Figure E*** in the Appendix contains more recent revisions to Utah's degree attainment goals.

goals will require significant up-front investment.

I. Degree Programs

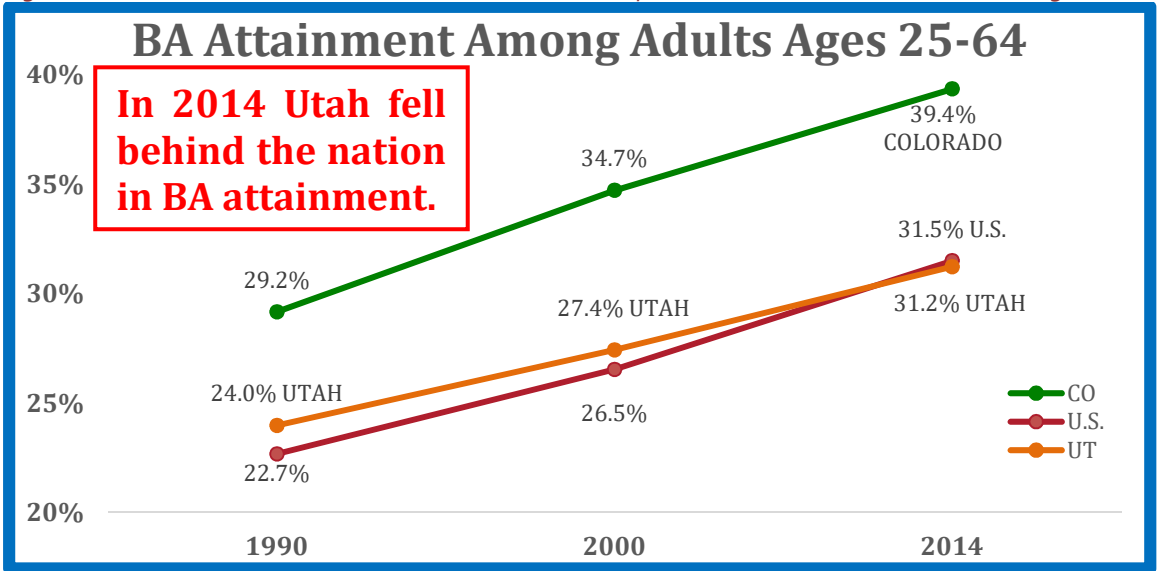
Year over year, the percentage of working-age adults (ages 25-64) across the nation who hold an Associate's Degree or higher is gradually increasing.

Figure 16. *Colorado's degree attainment percentages are well above Utah's and the nation's. Utah is ahead of the nation on Associate's Degrees or higher, but has fallen behind on Bachelor's Degrees and above:*



Postsecondary educational attainment by degree type, 2014—UT, CO, & U.S.
(Source: Lumina Foundation analysis of U.S. Census Bureau ACS data, http://strongernation.luminafoundation.org/report/#nation)

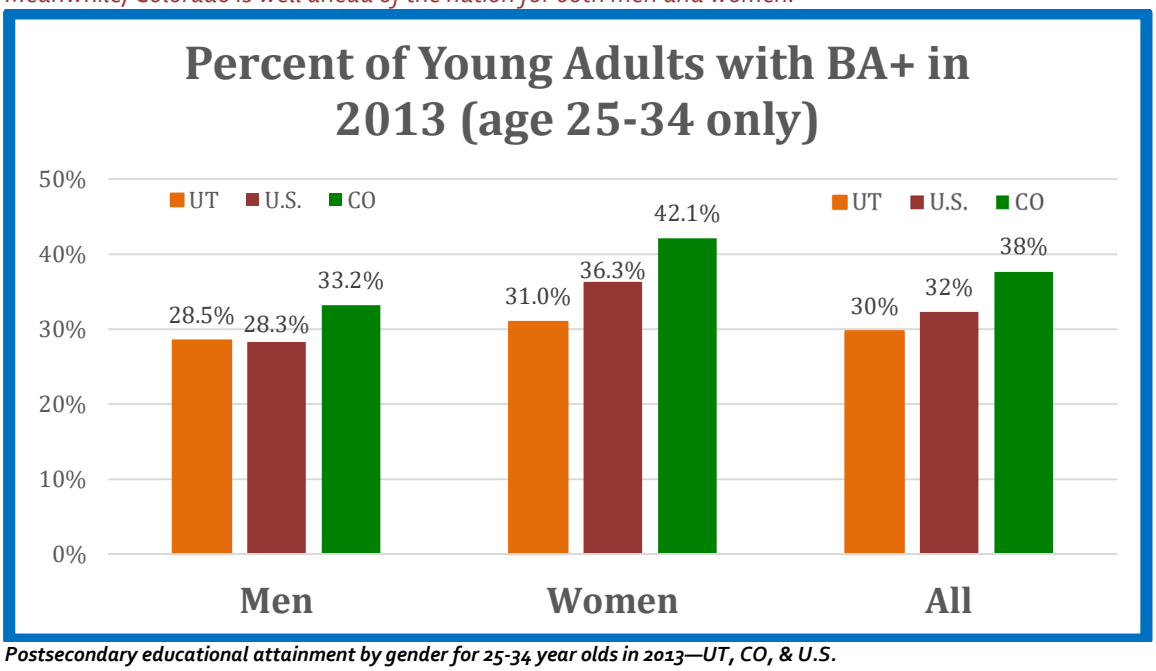
Figure 17. *In 2014, for the first time on record, Utah fell behind the nation for the percent of working-age adults with a Bachelor's degree. This continues a long-term decline relative to the nation and relative to higher-education leaders like Colorado. Over the same time period, Colorado's lead over the nation grew.*



Bachelor's degree attainment 1990, 2000, 2014—UT, CO, & U.S.
(Source: Census Bureau for 1990 and 2000, 2014 from Lumina Foundation analysis of U.S. Census Bureau ACS data)

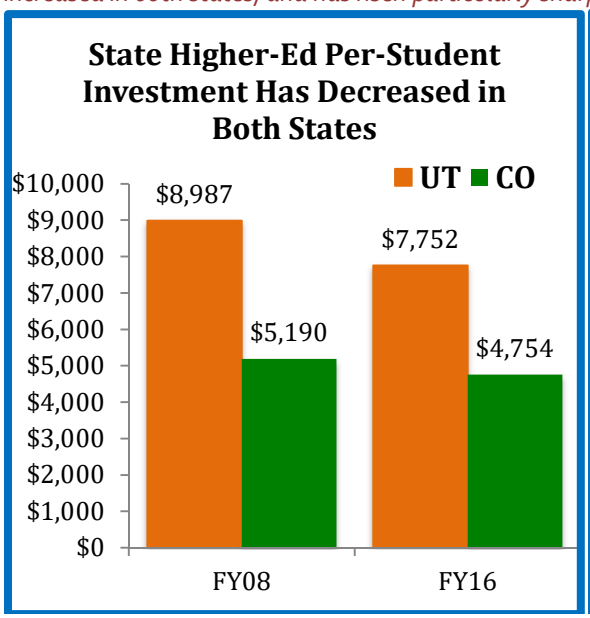
This trend of Utah falling behind the nation for college completion seems likely to continue, as data for the youngest adult cohort, those aged 25-34 years, indicate that the younger generation of Utahns has fallen farther behind the national average than Utah has among the working-age population as a whole.

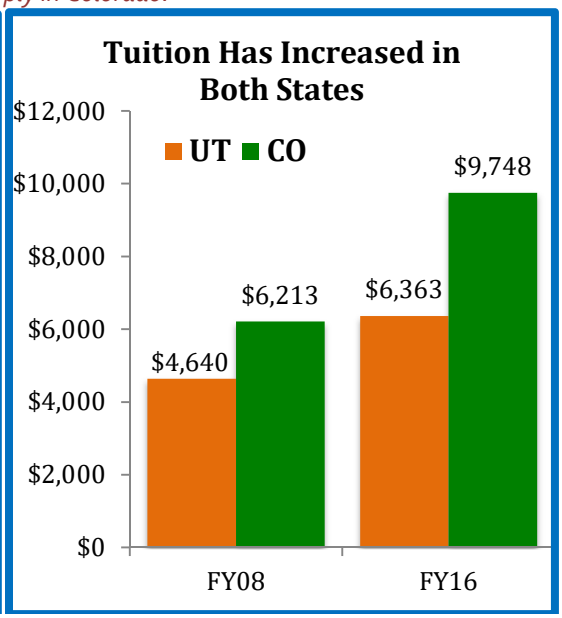
Figure 18. College degree attainment data for Millennials indicate that the younger generation of Utahns has fallen behind the nation's advances in college completion. Utah men have lost the considerable advantage they enjoyed a generation ago, while Utah women are five points behind women nationally. Meanwhile, Colorado is well ahead of the nation for both men and women.

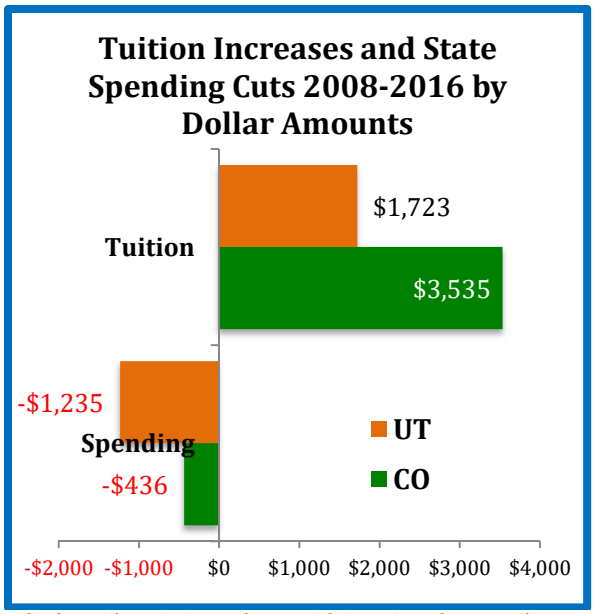


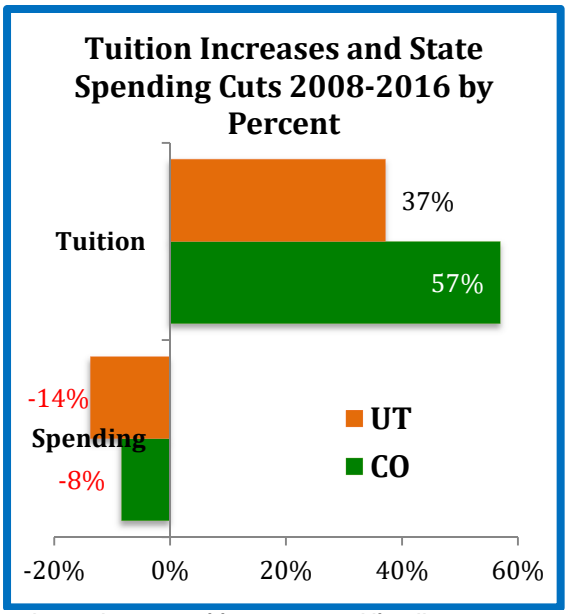
Postsecondary educational attainment by gender for 25-34 year olds in 2013—UT, CO, & U.S.
(Source: Institute for Women's Policy Research based on analysis of Census Bureau ACS IPUMS microdata)

Figures 19-22. Per-student state higher education funding remains well below pre-recession levels in Utah and Colorado; in response to cuts in higher education funding, tuition at public colleges & universities has increased in both states, and has risen particularly sharply in Colorado:









Inflation-adjusted change in state higher education spending per student and average tuition at 4-year public colleges, FY08-FY16 (in constant 2015 $) — UT vs. CO. *(Source: Center on Budget & Policy Priorities (CBPP), http://www.cbpp.org/research/state-budget-and-tax/years-of-cuts-threaten-to-put-college-out-of-reach-for-more-students)*

Although spending per student has decreased in both states, these figures do indicate that while Colorado spends more per pupil than Utah on PK-12 education, Utah spends considerably more per student on higher education. Utah's lower tuition costs are due in no small part to this additional per-student funding.

Utah

Despite the financial obstacles many students have been facing, state institutions across Utah have nonetheless seen significant increases in enrollment since the recession.[10] The average Utah college student now pays over $1,700 more per year than their pre-recession counterparts.[11] Furthermore, the state is supporting students with over $1,200 less than at the beginning of the recession — a cut of 14%.[12]

To compensate for such financial challenges, at least some institutions have implemented programs to help students afford — and complete — their degrees:

- Weber State University's ***Dream Weber*** program combines need-based aid with performance metrics, propelling students toward college completion by tying student aid to factors such as course loads and grades.[13]

Colorado

Colorado's higher education spending cuts have led not only to tuition hikes, but to reductions in faculty and staff and elimination of programs, as well: Colorado State University–Fort Collins, for example, cut more than 350 faculty and staff positions between 2009 and 2013.[15]

Unlike Utah, however, Colorado has continued year over year to maintain or increase the amount of need-based financial aid available to students enrolling in state colleges and universities.[16] (For a comparative look at changes in need-based aid, see ***Figure F*** in the Appendix.)

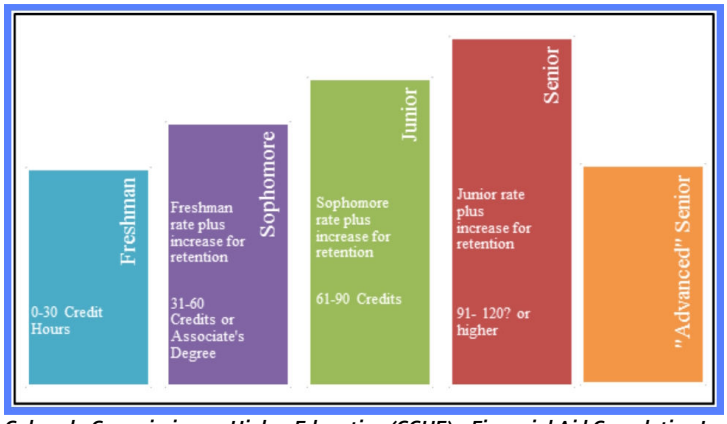
As illustrated in Figure 23 below, Colorado will add a yearly "retention increase" to a student's

[10] *See also* Bryan Schott, *Dream Weber—A Model for Improving College Access and Completion*, UTAH PULSE, (Jul. 22, 2015), available at http://utahpulse.com/index.php/features/business/2499-dream-weber-a-model-for-improving-college-access-and-completion.
[11] *Id.*
[12] *Id.*
[13] *Id.*
[15] *See* Jeff Tucker, *Fort Collins Campus has Suffered Cutbacks*, THE PUEBLO CHIEFTAIN, (Jan. 17, 2014), available at http://www.chieftain.com/news/region/2196652-120/csu-pueblo-budget-million.

- Another new initiative, ***SLCC Promise***, aims to "remove economic barriers and to provide a pathway" for Salt Lake Community College students to complete their degrees. The goal of the Promise initiative is to help cover educational expenses for eligible students — Utah residents who have received federal Pell grants and are enrolled full-time at SLCC — by making up the difference between the amount of the grant and the total cost of attendance.[14]

financial aid base rate, provided that the recipient continues to accumulate the requisite number of academic credit hours. The stated objective behind Colorado's "Completion Incentives" model is to "directly support the master plan goals of increased credit hour accumulation, timely degree completion, and improving outcomes for historically underserved students."[17]

Figure 23. *Under Colorado's need-based aid framework, financial aid awards increase alongside credit accumulation:*



Colorado Commission on Higher Education (CCHE)—Financial Aid Completion Incentives
(Source: Colorado Department of Higher Education, Strategic Plan FY 2013-14
http://highered.colorado.gov/Publications/General/StrategicPlanning/201314_HED_Strategic_Plan.pdf)

II. Trade Certification

Economies with significant manufacturing sectors require large numbers of skilled-trades workers—such as welders, electricians, and machinists[18]—to meet their labor demands. In recent years, however, workers have been "aging out" of these fields at a rate more rapid than those coming in at entry level.[19] Moreover, in addition to the reality that people are entering the skilled-trades sector at a lower rate than they are retiring from it, the over-45 age group accounts for more than half of the nation's total skilled-trades workforce.[20] As a result, meeting these labor demands is becoming increasingly difficult nationwide, and analysts predict that the "skills gap is likely to become more acute."[21]

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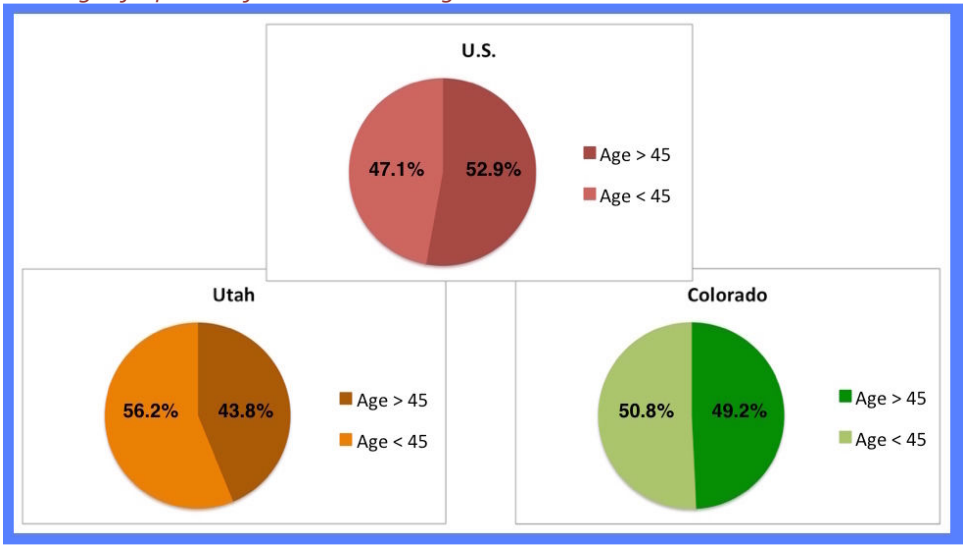
[16] *See* Colorado Dept. of Higher Educ., *Higher Education Strategic Plan FY 2013-14*, (Jan. 2013), at 13 ("While recent year budget cuts have resulted in tuition increases, such revenues have allowed institutions to maintain operations and increase institution-based financial aid.").
[14] https://www.slcc.edu/promise/
[17] *Id.* at 14.
[18] The accepted definition of "skilled trades occupations" was set forth by the Virginia Manufacturers Association; for the complete list, see ***Figure G*** in the Appendix.
[19] Joshua Wright, *America's Skilled Trades Dilemma: Shortages Loom As Most-In-Demand Group Of Workers Ages*, FORBES, (Mar. 7, 2013), available at http://www.forbes.com/sites/emsi/2013/03/07/americas-skilled-trades-dilemma-shortages-loom-as-most-in-demand-group-of-workers-ages/ (noting also that the "skills gap" problem is compounded by the fact that the physical demands associated with jobs in this sector often necessitate earlier-than-average retirement).
[20] *See id.*
[21] *Id.* Wright also indicates that the skills gap has deepened in part because "American high schools have largely shifted their focus to preparing students for four-year colleges rather than vocational school."

Figure 24. *As of 2013, workers under age 45 made up more than half of the skilled-trades workforce in both Utah and Colorado, indicating that both states enjoy an advantage over the nation in addressing the challenge of a possible future skills shortage:*[22]



2012 Skilled-Trade Employment Demographics—UT, CO, & U.S. *(Source: EMSI)*

Utah

Because Utah has a younger-than-average population, its over-45 share of the skilled-trades labor force is considerably lower than in both Colorado and the nation. Realizing, however, that employers in this sector will find it increasingly difficult to acquire the skilled talent their companies need if the trend continues unabated, Utah is taking steps to avoid a future skills gap.

In 2010, the State Board of Regents adopted its ***66 by 2020*** goal (see ***Figure 15*** on page 14). That 66 percent was then broken down by certificate and degree type, based on projected workforce demands; these individual category percentages are revisited annually and revised as needed (see ***Figure E*** in the Appendix).

In the context of trade certification, Utah has begun implementing initiatives geared toward workforce training based on both current and projected local demand:

- The ***Custom Fit Training Program***—funded via legislative appropriation and administered by the Utah College of Applied Technology (UCAT)—provides customized training to employees based on the needs of employers, as a way to "attract new businesses and aid in the

Colorado

In Colorado, workers over age 45 make up almost exactly half of the skilled-trades labor force. Aware of the potential long-term consequences of such a trend, then-Governor Bill Ritter, Jr., signed ***Executive Order B 2010-012—Reconstituting the Colorado Workforce Development Council***. In it, he wrote:

> Our ability to grow the economy, support businesses and industry, and create quality jobs hinges on the knowledge, productivity, and ingenuity of our people. Over time, silos have arisen, making it difficult to align the interests of the business community with those of the workforce development and education communities. The future of our workforce system depends on our ability to create a demand-driven system by working with business to determine the upcoming workforce needs.

Executive Order B 2010-012 directed the CWDC to develop strategic workforce plans, at both statewide and regional levels, so as "to more effectively align current initiatives in education, workforce training and economic development in order to … meet the needs of a growing and changing economy during the next ten years."

[22] It merits additional mention that a fair percentage of these skilled-trades workers are, in fact, over the age of 55 — 15.7 percent in Utah and 17.9 percent in Colorado, compared to 20.6 percent nationwide. *See id.*

retention and expansion of existing businesses."[23] The Custom Fit program, through which UCAT provides participating companies with a 50 percent funds match for on-the-job employee training, served 14,029 trainees and 1,421 businesses across the state during fiscal year 2014.[24]

- In response growing labor force demands within Utah's sizeable aerospace industry, the Governor's Office of Economic Development has been collaborating with a variety of private- and public-sector partners to launch an ***Aerospace Manufacturing Certificate*** pilot program.[25] Beginning in 2015, high school seniors in Davis and Granite School Districts are eligible to enter the program with the expectation of receiving an aerospace manufacturing certificate upon graduation.[26] Students who earn this certificate during their senior year can qualify for entry level positions at:
  - Boeing
  - Harris
  - Hexcel
  - Janicki Industries
  - Orbital ATK
  - Hill Air Force Base

Though targeted toward high school seniors during the pilot phase, the eligibility criteria for this program may ultimately be extended to include unemployed or underemployed adults as well).[27]

With similar objectives in mind, the Colorado legislature passed the ***Skills for Jobs Act*** in 2012. Designed to align Colorado's job openings with education and training outcomes and reduce the state's skills gap, a key objective of the Act was to highlight "the workforce needs that are not being met by colleges and identify institutions that can expand or create programs to address those needs."[28]

In the FY2014-15 Colorado Skills for Jobs Report, analysts projected that 74 percent of Colorado jobs will require some form of postsecondary education by 2020, ranking the state third nationally in terms of anticipated postsecondary training needs.[29] Colorado's response to these projections has been broad, and has utilized public-private partnerships similar to Utah's ***Custom Fit*** training program. Currently, Colorado has:

- *5 active manufacturing sector partnerships*
- *5 active healthcare sector partnerships*
- *Additional emerging partnerships in progress such as* the ***Greater Metro Denver Healthcare Partnership*** "serves as a pilot for the creation of Career Pathway templates in building out a statewide Career Pathway System."[30]

[23] *Key State Economic Development Incentives & Programs*, July 2015, available at http://le.utah.gov/interim/2015/pdf/00003250.pdf.
[24] *See id*.
[25] *See* Michael Sullivan, *Aerospace Manufacturing Takes Off in Utah*, UTAH GOVERNOR'S OFFICE OF ECONOMIC DEVELOPMENT, (Jul. 22, 2015), available at http://business.utah.gov/news/aerospace-manufacturing-takes-off-in-utah/.
[26] For more information on program specifics, contact Sandra Hemmert (Granite School District) at *smhemmert@graniteschools.org*, or Neil Hancey (Davis School District) at *nhancey@dsdmail.net*.
[27] Based on statements made during a presentation by GOED to the Utah Legislature's Economic Development & Workforce Services Interim Committee on July 15, 2015.
[28] Ed Sealover, *New law seeks to match Colorado workforce needs, skills*, DENVER BUSINESS JOURNAL, (Apr. 2, 2012), available at http://www.bizjournals.com/denver/news/2012/04/02/new-law-seeks-to-match-colorado.html.
[29] *See* Lauren Victor, *Legislative Report on the Skills for Jobs Act*, (Jan. 2015), prepared on behalf of the Colorado Department of Higher Education (breaking down the 74 percent projection into "baccalaureate or higher" (42 percent of jobs) and "associate's degree or certificate award" (32 percent of jobs) by 2020).
[30] *See id*. at 25.

IV. DEMOGRAPHIC AND SOCIAL FACTORS

Certain demographic and social factors — gender, ethnicity, or disability status, for example — are associated with varying degrees of diminished economic opportunity due to challenges including educational disparities, reduced social capital, underrepresentation in government, and employment discrimination.

Gender

Figure 25. *Women in Colorado fare better than in Utah in all but one of the five categories below:*

Report Card Summary

Utah	Rank	Grade
Employment & Earnings	39	D
Political Participation	50	F
Poverty & Opportunity	29	C-
Health & Well-Being	4	B
Work & Family	50	F

Report Card Summary

Colorado	Rank	Grade
Employment & Earnings	12	B
Political Participation	19	C-
Poverty & Opportunity	8	B-
Health & Well-Being	6	B
Work & Family	11	C+

The Status of Women in the States (2015) *(Source: Institute for Women's Policy Research, www.statusofwomendata.org)*

According to the 2015 *Status of Women in the States* report, published by the Institute for Women's Policy Research, Utah ranked in the bottom 50 percent in 4 out of 5 specified categories, ranking dead last in 2 of them: *Political Participation*[31] and *Work & Family*.[32] Utah's strongest category was *Health & Well-Being*,[33] in which it currently ranks 2 places higher than Colorado, at number 4. Colorado received its lowest ranking in the *Political Participation* category, coming in at 19th overall, but was ranked within the top 10 in both *Health & Well-Being* (6th) and *Poverty & Opportunity*[34] (8th).

I. Political Participation

Women in Utah are underrepresented in public office at all levels. Several organizations have formed a collaborative nonpartisan initiative called ***Real Women Run***, the goal of which is to inspire and assist women in running for all levels of public office across the state. [35]

Colorado has some room for improvement in this category, as well, and a number of organizations are making efforts to increase political participation among Colorado women. The ***Colorado Women's Agenda***, for example, "is a statewide network that champions economic security, social justice and political power for all Colorado women through public education, political advocacy, communications and grassroots activism."[36]

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[31] The report's *Political Participation* category is based upon (1) voter registration and turnout, (2) female state and federal elected and appointed representation, and (3) state-based institutional resources for women.

[32] The category of *Work & Family* is based upon available supports for work and family at the state level, including: (1) paid leave, (2) elder and dependent care, (3) motherhood and work, (4) female breadwinners, and (5) childcare and preschool education.

[33] The *Status of Women in the States* report determines rankings in the *Health & Well-Being* category using nine component indicators: mortality rates from (1) heart disease, (2) breast cancer, and (3) lung cancer; incidence of (4) diabetes, (5) chlamydia, and (6) AIDS; average number of days per month (7) that mental health was not good, and/or (8) that activities were limited due to health status; and (9) suicide mortality rates.

[34] The *Poverty & Opportunity* category is discussed at greater length in Part II of this report.

[35] Participating organizations include YWCA Utah; University of Utah Hinckley Institute of Politics; AAUW of Utah; League of Women Voters; Utah Women & Leadership Project; Zions Bank; Salt Lake Community College; Weber State University's Walker Institute; Vision 2020; and SpringBoard Utah. For more information, visit www.realwomenrun.org.

[36] Information about the Colorado Women's Agenda, and other recommended resources for women seeking political office in Colorado, is listed on the Democratic Women of Boulder County website: http://www.dw-bc.org/#!run-for-office/c1ji5.

II. Work & Family

Work and family are top priorities for most Utahns; thus, being ranked 50th in this particular category should be a matter of concern for state policymakers.

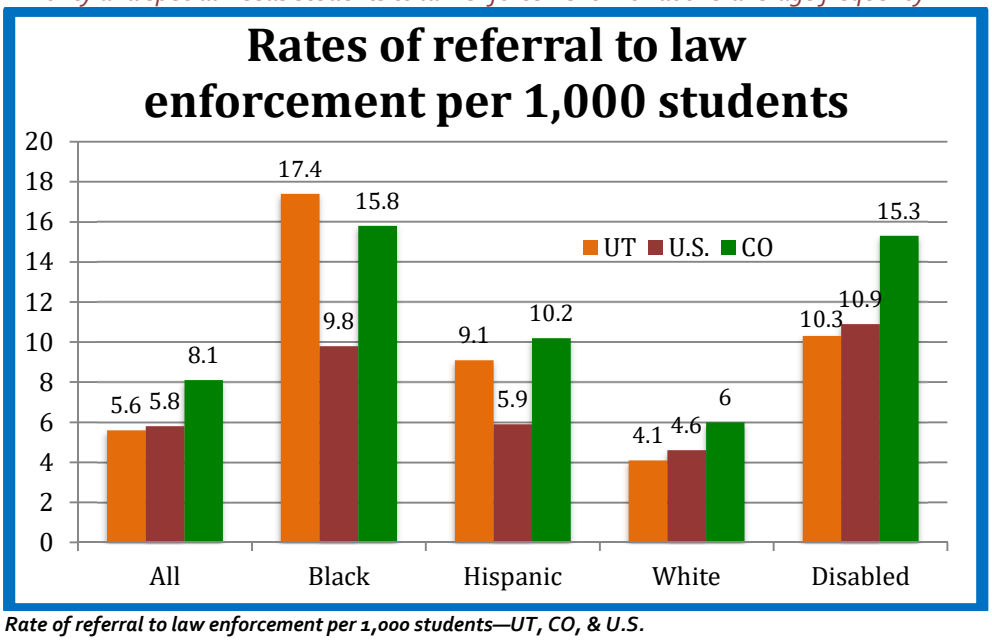
III. Employment & Earnings

Utah ranked 39th in the nation in terms of women's employment and earnings. New research with regard to the gender wage gap published in 2015 by Voices for Utah Children found the disparity between men's and women's wages in Utah to be much larger than the same disparity at both national and regional levels. While discrimination was found to be the largest contributor to the wage gap both nationally and in Utah, the research also found that Utah's gap is so much larger than the nation's because of how women's qualifications and characteristics – such as educational disparities – put them at a much larger disadvantage in Utah than elsewhere.

Race, Ethnicity & Disability Status

Across the United States, people of color face a disproportionate number of obstacles to achieving educational and economic success—often beginning even before kindergarten[37] and frequently persisting well into adulthood.[38] In a number of contexts, many of the same obstacles faced by racial/ethnic minorities hold true for individuals with disabilities as well.

Figure 26. *Across the U.S., students of color and students with disabilities are disproportionately referred to police and courts as a result of in-school disciplinary issues; in Utah and Colorado, K-12 public schools refer minority and special-needs students to law enforcement with above-average frequency:*



Rate of referral to law enforcement per 1,000 students—UT, CO, & U.S.
(Source: Center for Public Integrity analysis of U.S. Dept. of Education Civil Rights Data Collection 2011-12 enrollment & discipline data, http://www.publicintegrity.org/2015/04/10/17074/state-state-look-students-referred-law-enforcement)

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[37] *See, e.g.*, Lindsey Cook, *U.S. Education: Still Separate and Unequal*, U.S. NEWS & WORLD REPORT, (Jan. 28, 2015), available at http://www.usnews.com/news/blogs/data-mine/2015/01/28/us-education-still-separate-and-unequal ("By age 2, disparities already show between black and white children. Fewer black children demonstrate proficiency in development skills such as receptive vocabulary, expressive vocabulary, matching, early counting, math, color knowledge, numbers and shapes.").

[38] *See, e.g.*, Janell Ross, *African Americans With College Degrees Are Twice As Likely to Be Unemployed as Other Graduates*, THE NATIONAL JOURNAL, (May 27, 2014), available at http://www.nationaljournal.com/next-america/education/african-americans-with-college-degrees-are-twice-as-likely-to-be-unemployed-as-other-graduates-20140527 ("A new study [found] that 12.4 percent of black college graduates were unemployed. For all college graduates, the unemployment rate stood at just 5.6 percent.").

Postsecondary credential attainment is regarded as a key solution for reducing poverty, and for narrowing the disparities of wealth faced by people of color in the United States.[39] This solution, however, first requires completion of high school (or its equivalent), and students who are subject to law enforcement referrals at school are significantly less likely to achieve this milestone.[40]

Utah

According to enrollment and discipline statistics from the U.S. Department of Education Civil Rights Data Collection, the overall rate of referral to law enforcement in Utah public schools is **5.6 referrals per 1,000 students**; the Center for Public Integrity has ranked Utah 23rd in terms of disproportionality of referrals to police and courts.[41]

Utah's data is on par with the national average in terms of overall referral rate, as well as referral rates of white students and students with disabilities. Rates of referral for black and Latino students in Utah, however, are significantly higher than the national average.[42] As of the 2011-2012 school year:

- White students made up 77 percent of Utah's K-12 public school population, but accounted for only 56.9 percent of referrals to law enforcement.
- Black students made up only 1.4 percent of Utah's K-12 public school population, but accounted for 4.5 percent of referrals to law enforcement.
- Latino students made up 15.3 percent of Utah's K-12 public school population, but accounted for 24.8 percent of referrals to law enforcement.
- Students with disabilities made up 13 percent of Utah's K-12 public school population, but accounted for 23.9 percent of referrals to law enforcement.

Colorado

According to the Center for Public Integrity, Colorado public schools' referrals to police and courts are the nation's 10th most disproportionate. The overall rate of referral to law enforcement in Colorado's public schools is **8.1 referrals per 1,000 students**.

Across the board, Colorado's law enforcement referral rates exceed the national averages, a fact that should prompt state policymakers to take a serious look at the problem in order to identify and address the root causes. As of the 2011-2012 school year:

- White students made up 56.1 percent of Colorado's K-12 public school population, but accounted for only 41.5 percent of referrals to law enforcement.
- Black students made up only 4.8 percent of Colorado's K-12 public school population, but accounted for 9.4 percent of referrals to law enforcement.
- Latino students made up 31.7 percent of Colorado's K-12 public school population, but accounted for 39.8 percent of referrals to law enforcement.
- Students with disabilities made up 10.8 percent of Colorado's K-12 public school population, but accounted for 20.4 percent of referrals to law enforcement.

Unfortunately, to factor out such discipline concerns still would not level the educational playing field. Far too many minority high school students graduate without being adequately prepared for the rigors of the postsecondary experience.

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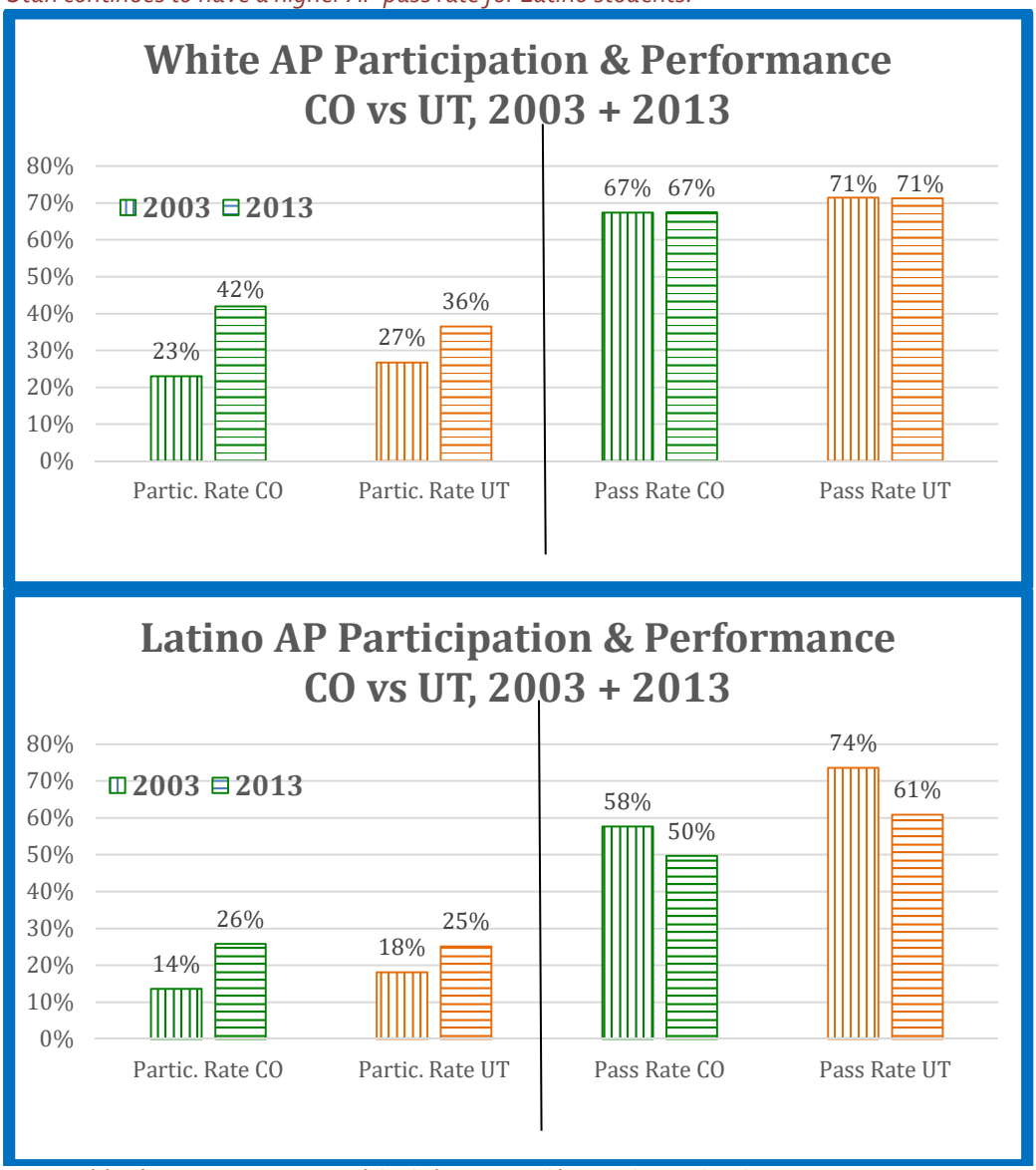
[39] *See* Rhonda Bryant, *College Preparation for African American Students: Gaps in the High School Educational Experience*, CENTER FOR LAW & SOCIAL POLICY, (Feb. 2015) (on file with author).

[40] According to research by the Public Policy Institute at U of U's S.J. Quinney College of Law, a single suspension in 9th grade doubles the likelihood that a student will drop out of high school (see ***Figure H*** in the Appendix).

[41] Just prior to the publication of this report, local media announced that the Salt Lake City School District is presently under federal investigation by the U.S. Department of Education due to "allegations of discrimination, retaliation, and unfair treatment of minority students." *See* Benjamin Wood, *Feds investigating claims of racial discrimination in Salt Lake City schools*, THE SALT LAKE TRIBUNE, (Aug. 19, 2015), available at http://www.sltrib.com/home/2855172-155/federal-education-managers-looking-into-claims ("Included in [school board member Michael Clara's] complaint were allegations that students of color are targeted for disciplinary action and that school-based police officers are disproportionately assigned to areas with high racial diversity.").

[42] For additional information on the "school-to-prison pipeline" in Utah, see ***Figure H*** in the Appendix.

Figure 27. Between 2003 and 2013, Advanced Placement (AP) test participation rates increased in both Colorado and Utah for both white and Latino students. But while pass rates (defined as the share of students scoring 3 or higher) held steady for white students, they declined in both states for Latino students, though Utah continues to have a higher AP pass rate for Latino students.



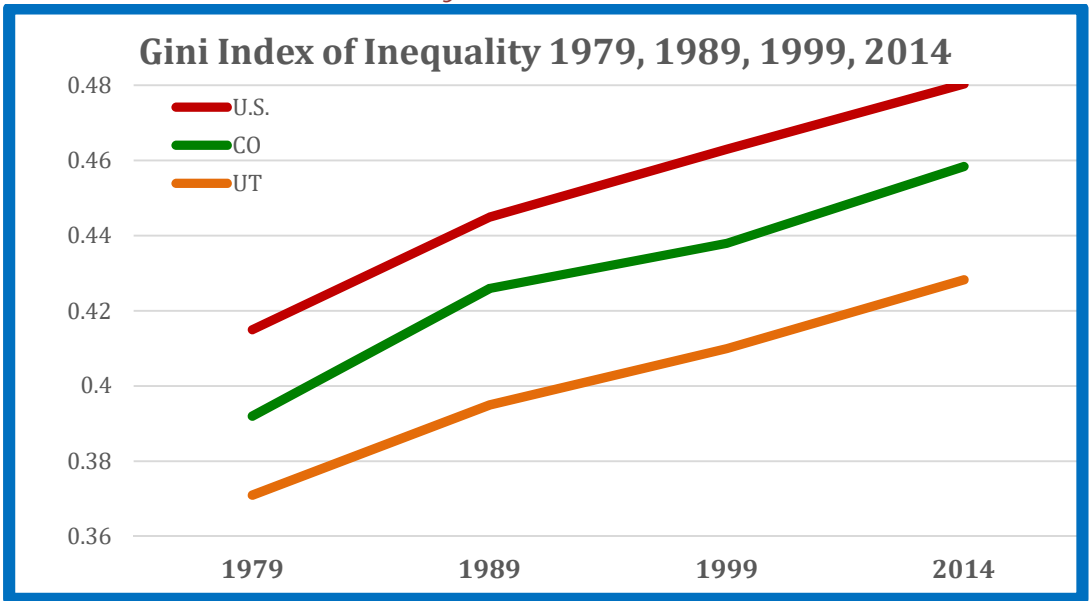
AP® Participation & Success Across Racial/Ethnic Demographics—Utah vs. Colorado
(Source: The College Board 10th Annual AP® Report to the Nation (UT & CO Supplements), 2014)

Another area worth examining in this regard would be the varying rates at which different groups graduate from high school, enroll in college, and complete college. But comparisons of college enrollment and completion rates are difficult because of the missionary phenomenon in Utah, where a large portion of the young adult population delays post-secondary education for 1.5-2 years in order to complete an LDS mission.

Income Inequality & Social Mobility

In recent years social scientists have begun to draw a link between increased income inequality and reduced social mobility.

Figure 28. *As measured by the Gini Index, income inequality has grown rapidly in the US. Even in Utah, which had the 3rd lowest Gini inequality score among the 50 states in 2014 (vs 20th for Colorado), the level has risen to where the nation was in the 1980s.*



Gini Index of Household Income—Utah vs. Colorado vs. U.S.
(Source: 1979, 1989, 1999 data from, 1980, 1990, and 2000 Censuses of Population accessed at www.census.gov/hhes/www/income/data/historical/state/state4.html. 2014 data from 2014 ACS 1-year estimates accessed at factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_14_1YR_B19083&prodType=table)

Utah has important advantages that promote greater social mobility, including:

- Low poverty rates
- A history of avoiding geographic concentration of poverty
- Effective public and private institutions that help keep lower-income families from becoming socially and economically isolated

Figure 29. *Among the top 50 metro areas in the nation, Salt Lake ranks at the very top for upward mobility, while Denver ranks 19th.*

Upward Mobility Ranking among the largest 50 metro areas	Metro Area/ "Commuting Zone"	Population in 2000 Census	"Absolute Upward Mobility" Score
#1	Salt Lake City	1,426,729	46.2
#19	Denver	2,449,044	42.2

Upward Mobility Ranking/ Absolute Upward Mobility Score "is a measure of the average economic outcome of a child from a below-median income family. Statistically, we define absolute upward mobility as the average percentile in the national income distribution of a child who is born to parents at the 25th percentile in the national income distribution. In areas with higher absolute upward mobility, children from low-income parents earn higher incomes on average as adults."
(Source: Chetty, Hendren, Kline, and Saez, "Where is the Land of Opportunity? The Geography of Intergenerational Mobility in the United States," Quarterly Journal of Economics 129(4): 1553-1623, June 2014, Table III: Intergenerational Mobility in the 50 Largest Commuting Zones. Accessible at http://www.equality-of-opportunity.org/index.php/papers .)

SOURCES & METHODOLOGY

Most of the information presented in this report is based on the two nationwide surveys conducted by the U.S. Census Bureau – the Current Population Survey (CPS) and the American Community Survey (ACS). Most of the state-level data is from the ACS because it surveys about one percent of the U.S. population each year, which is a large enough sample to reduce the margin of error to a very low level. In many instances we have relied on calculations and microdata analysis of these data sources conducted by Voices for Utah Children, Economic Policy Institute, Institute for Women's Policy Research, the Kids Count Data Center of the Annie E. Casey Foundation, and others as noted in the text.

Sources for Summary of Key Findings on page 3:

1) Business Climate Rankings: see Appendix below
2) Unemployment Rates: U.S. Bureau of Labor Statistics
3) LFPR: U.S. Bureau of Labor Statistics
4) GDP data: U.S. Bureau of Economic Analysis
5) Kauffman Index: Ewing Marion Kauffman Foundation, http://www.kauffman.org/microsites/kauffman-index/rankings/state
6) K-12 $/pupil: U.S. Census Bureau: https://www.census.gov/govs/school/
7) Enrollment in kindergarten: Utah Foundation: "Lessons from Our Neighbor: Learning from Colorado's Educational Success," 2015 http://www.utahfoundation.org/reports/lessons-from-our-neighbor/
8) Enrollment in public preschool: National institute for Early Education Research, "The State of Preschool 2015," 2016 http://nieer.org/research/state-preschool-2015
9) NAEP Rankings: http://www.nationsreportcard.gov and http://nces.ed.gov/nationsreportcard/statecomparisons/
10) Higher education state $/student: Center on Budget & Policy Priorities www.CBPP.org
11) Bachelor's degree % 2013: Voices for Utah Children analysis of Census ACS microdata
12) Associates Degree % 2014: Lumina Foundation analysis of U.S. Census Bureau ACS microdata, http://strongernation.luminafoundation.org/report/#nation
13) Status of Women rank: Institute for Women's Policy Research: "The Status of Women in the States 2015" www.IWPR.org or http://statusofwomendata.org/
14) Gender Wage Gap: Voices for Utah Children: "Utah's Gender Opportunity: An examination of the difference between the earnings of Utah men and women," 2015 http://www.utahchildren.org/newsroom/press-releases/item/553-utah-s-gender-opportunity-an-examination-of-the-difference-between-the-earnings-of-utah-men-and-women
15) Referral rates of black + Latino students to law enforcement: Center for Public Integrity analysis of U.S. Dept. of Education Civil Rights Data
16) Income inequality: Census Bureau. 1979, 1989, 1999 data from https://www.census.gov/hhes/www/income/data/historical/state/state4.html from 1970, 1980, and 1990 Censuses of Population. 2014 data from http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_14_1YR_B19083&prodType=table from 2014 ACS 1-year estimates
17) Social mobility: Chetty, Hendren, Kline, and Saez, "Where is the Land of Opportunity? The Geography of Intergenerational Mobility in the United States," Quarterly Journal of Economics 129(4): 1553-1623, June 2014, Table III: Intergenerational Mobility in the 50 Largest Commuting Zones. Accessible at http://www.equality-of-opportunity.org/index.php/papers .

APPENDIX

Figure A. *Forbes' "Best States for Business" 2014—Categorical Rankings:*

	UTAH	COLORADO
OVERALL	**1**	**5**
Business Costs	*5*	*35*
Labor Supply	*4*	*1*
Regulatory Environment	*9*	*13*
Economic Climate	*6*	*8*
Growth Prospects	*10*	*4*
Quality of Life	*16*	*9*

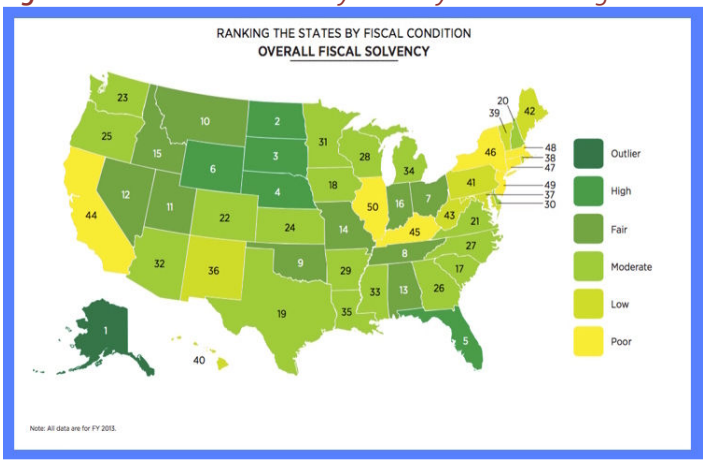
(Source: http://www.forbes.com/best-states-for-business/list/)

Figure B. *CNBC's "Top States for Business" 2015—Categorical Rankings:*

	UTAH	COLORADO
OVERALL	**3**	**4**
Workforce	*29*	*16*
Cost of Doing Business	*13*	*36*
Infrastructure	*30*	*14*
Economy	*1*	*3*
Quality of Life	*20*	*9*
Technology & Innovation	*15*	*5*
Education	*31*	*24*
Business Friendliness	*5*	*18*
Cost of Living	*11*	*31*
Access to Capital	*21*	*8*

(Source: http://www.cnbc.com/id/101747925)

Figure C. *Overall Fiscal Solvency State-by-State Rankings—FY 2013:*



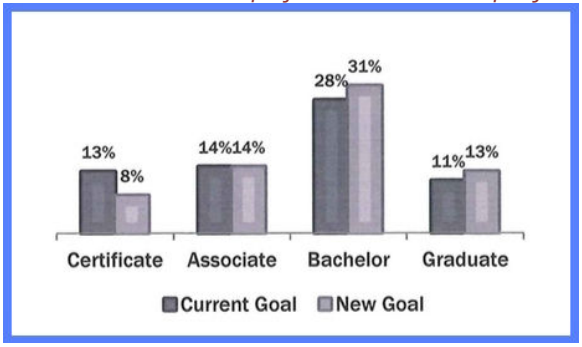
(Source: Eileen Norcross, "Ranking the States by Fiscal Condition," Mercatus Research Center at George Mason University, Arlington, VA, July 2015)

Figure D. *Kids Count State Rankings 2014-2015—UT vs. CO:*

	UTAH		COLORADO	
	2014	2015	2014	2015
OVERALL RANK	**11**	**9**	**22**	**21**
Economic Well-Being Rank	10	8	18	13
Education Rank	29	29	11	9
Health Rank	4	7	39	44
Family & Community Rank	2	2	21	22

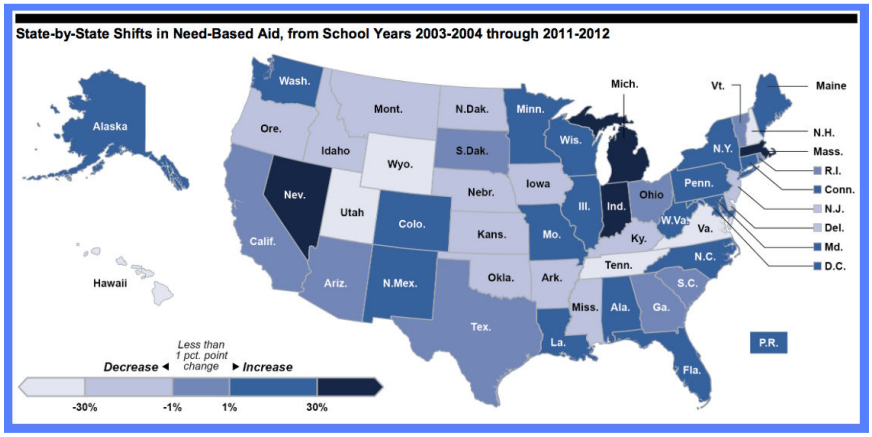
(Source: The Annie E. Casey Foundation, www.acef.org)

Figure E. *In 2014, the Utah System of Higher Education (USHE) refined its educational attainment goals based on both national projections and state-specific workforce demands:*



Refining Degree Allocation within the 2020 Goal of 66 Percent College Attainment
(Source: Memorandum to the State Board of Regents from the Commissioner of Higher Education, May 7, 2014)

Figure F. *Undergraduate & graduate students in Colorado saw an overall increase in need-based aid between 2003-04 and 2011-12, whereas Utah cut need-based aid by 30 percent or more*[43] *during the same period:*



GAO analysis of Nat'l Assoc. of State Student Grant & Aid Programs (NASSGAP) data, 2003-2012
(Source: U.S. Government Accountability Office, http://www.gao.gov/assets/670/667557.pdf)

Figure G. *List of Virginia Manufacturers Association (VMA) traditional skilled trades occupations:*

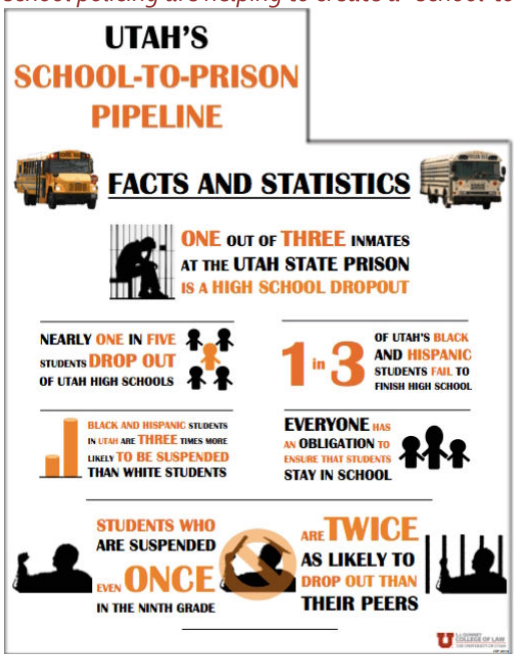
Traditional skilled trades occupations can be summarized as follows:

- Chemical Equipment Operators
- Chemical Technicians
- Computer-Controlled Machine Tool Operators
- Electricians and Electrical Technicians
- Extruding and Drawing Machine Setters
- Machine Maintenance Specialists
- Machinists
- Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic
- Printing Machine Operators
- Stationary Engineers and Boiler Operators
- Tool and Die Makers
- Welders

VMA Skilled Trades Occupational Survey of Manufacturers
(Source: VMA Skilled Trades Gap Analysis Report, 2007)

[43] *See also* Schott, *supra* note 7 ("According to data from 2011-2012, Utah provides only $50 in state [need-based] aid per full time equivalent undergraduate student, far below the national average of $482.").

Figure H. *By criminalizing behavior better dealt with outside the legal system, zero tolerance policies and school policing are helping to create a "school-to-prison pipeline," both in Utah and around the country:*



Utah's School-to-Prison Pipeline: Facts & Statistics (2014)
(Source: Utah Public Policy Clinic, The Univ. of Utah S.J. Quinney College of Law, https://uofu.app.box.com/s/gogjxdhozxcnctf4w44e)

Figure I. *Advanced Placement (AP) testing statistics show that inclusion in college prep courses is increasing among historically underserved minority populations:*[44]

Black/African American Graduates

	2003			2008			2012			2013		
	% of Graduating Class	% of AP Exam Takers	% of Successful AP Exam Takers	% of Graduating Class	% of AP Exam Takers	% of Successful AP Exam Takers	% of Graduating Class	% of AP Exam Takers	% of Successful AP Exam Takers	% of Graduating Class	% of AP Exam Takers	% of Successful AP Exam Takers
UTAH	0.7	0.3	0.2	0.8	0.4	0.3	1.2	0.7	0.6	1.1	0.8	0.6
U.S.	13.2	5.8	2.9	14.4	7.8	3.5	14.9	9.2	4.4	14.5	9.2	4.6
COLORADO	4.4	2.2	1.4	5.4	3.3	1.7	4.7	3.8	2.3	4.7	3.9	2.2

Hispanic/Latino Graduates

	2003			2008			2012			2013		
	% of Graduating Class	% of AP Exam Takers	% of Successful AP Exam Takers	% of Graduating Class	% of AP Exam Takers	% of Successful AP Exam Takers	% of Graduating Class	% of AP Exam Takers	% of Successful AP Exam Takers	% of Graduating Class	% of AP Exam Takers	% of Successful AP Exam Takers
UTAH	5.4	3.6	3.7	7.3	5.1	4.6	10.2	7.4	6.1	10.1	7.0	6.1
U.S.	12.4	12.4	13.0	15.0	14.8	13.8	18.4	17.8	15.9	18.8	18.8	16.9
COLORADO	14.8	9.0	7.9	18.3	11.0	8.1	23.6	15.3	11.6	23.1	15.3	12.2

American Indian/Alaska Native Graduates

	2003			2008			2012			2013		
	% of Graduating Class	% of AP Exam Takers	% of Successful AP Exam Takers	% of Graduating Class	% of AP Exam Takers	% of Successful AP Exam Takers	% of Graduating Class	% of AP Exam Takers	% of Successful AP Exam Takers	% of Graduating Class	% of AP Exam Takers	% of Successful AP Exam Takers
UTAH	1.2	0.4	0.3	1.4	0.5	0.3	1.3	0.6	0.5	1.1	0.7	0.6
U.S.	1.0	0.5	0.3	1.1	0.6	0.4	1.1	0.6	0.5	1.0	0.6	0.5
COLORADO	0.9	0.4	0.3	1.0	0.5	0.5	0.9	0.8	0.6	0.8	0.7	0.6

Equity Gaps in Participation & Success Among Traditionally Underserved Students, 2003-2013—UT, CO, & U.S.
(Source: The College Board 10th Annual AP® Report to the Nation, 2014)

[44] In this context, the phrase "historically underserved minority populations" refers to students who are Black/African American, Hispanic/Latino, and American Indian/Alaska Native.