



# Utah Women in Higher Education: A Progress Report

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## Introduction

Utah's population is growing and changing. While Utah maintains its signature demographics, it is also trending toward the nation in key metrics.<sup>1</sup> Utah is becoming more ethnically diverse, fertility is decreasing, and migration has become a consistent and significant source of population growth. Within this changing context, Utah women and men have made great strides toward increasing postsecondary educational attainment. As an increasing proportion of adults now hold a college degree or trade certificate, the state grows closer to reaching its goal of 66% of the population holding a postsecondary degree or certificate by 2020.<sup>2</sup> Despite these gains, however, Utah faces a shortage of educated workers.<sup>3</sup> In addition, national organizations consistently rank Utah at or near the bottom in evaluations of women's educational attainment<sup>4</sup> and economic equality<sup>5</sup> relative to other states. In this report we outline findings of a year-long project, funded by the Utah Women in the Economy Commission, focused on understanding these issues.

This project builds on a large body of research already conducted in the state by groups such as the Utah Women & Education Initiative (now merged into the Utah Women & Leadership Project), YWCA Utah, the Utah Foundation, and others. These groups have clearly documented the postsecondary education gaps between Utah and US women in enrollment, graduation, and field of study.<sup>6</sup> They have also demonstrated that Utah men outpaced Utah women in bachelor's and graduate degree attainment through the 2000s.<sup>7</sup> In our research we reexamine factors associated with enrollment, persistence, and graduation among Utah men and women, focusing on recent years. This research lays the foundation for a more complete and accurate understanding of educational attainment and degree completion for Utah men and women. This, in turn, helps us work more effectively to increase educational attainment in our state, which is critical to Utah's future strength and prosperity.

We completed this study by performing in-depth analyses of three datasets: the American Community Survey (ACS), the Integrated Postsecondary Education Data System

(IPEDS), and the Utah System of Higher Education (USHE) (see Appendix for a more detailed description of the data and see "[Utah Women in Higher Education, 2000-2017](#)" for the full-length report on this study). Our findings support other research showing progress toward postsecondary certificate and degree attainment, but we identify several key gaps in progress that keep Utah from reaching its educational and economic potential. Specifically, we found that Utah men and women actively pursue postsecondary education, but they do so according to different timelines and may be influenced in different ways by demographic characteristics and family formation behaviors. A greater proportion of women pursue and attain lower-level degrees compared to men, and a greater proportion of men pursue and attain graduate degrees relative to women. While Utah women have made up more than half of students in degree-granting postsecondary institutions since 2009, women in other states have even higher proportional enrollment and Utah fares poorly in nationwide comparisons. Women in Utah are also less likely to pursue higher-paying STEM fields of study compared to women nationally.

### **Why is Higher Education Important for Utah?**

Research consistently demonstrates that higher education contributes in critical ways to more successful life outcomes. Educational attainment is positively associated with improved health, household economic success, marital satisfaction and duration, parenting skills, child wellbeing, civic engagement, and social and cognitive development. At the societal level, a more educated population is a more productive workforce. Worldwide, countries with greater gender equity in education have higher workforce participation, higher gross domestic products (GDPs), better health outcomes (including lower infant mortality), and lower gender-based violence.<sup>8</sup> We strengthen families, communities, and the economy as more Utah women and men attain higher educational levels.

In this research brief we share findings from this study in three sections: State-Level Comparisons, State and National Comparisons, and Life Course of Utah Students.

## State-Level Comparisons

### Enrollment

At a population level, and at first glance, enrollment among Utah men and women is similar. Between 2001 and 2016 the percentage of adults 18 years and older who have been enrolled in postsecondary education in the past three months (the best measure in the ACS for current enrollment) ranges from about 11.5–14.5%. In most years a larger percentage of Utah men have been enrolled, but these differences are relatively small.

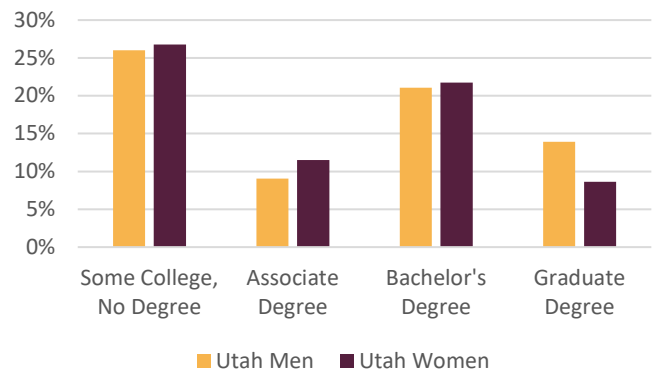
Different patterns emerge when we divide the population into age groups. Women make up a greater proportion of enrollees in the 18–24 and 35–44 age groups, and men represent 60% of enrollees in the 25–34 age group. These differences may reflect Utah cultural patterns such as for The Church of Jesus Christ of Latter-day Saints (LDS) missions for young men (and increasingly young women), participation in childbearing for women, and graduate degree attainment for Utah men. In this 25–34 age group, married men are *more* likely to be enrolled and married women are *less* likely to be enrolled. Both men and women are less likely to be enrolled in postsecondary education if their household includes their own children who are less than five years old,<sup>9</sup> but this association is more than twice as strong for women. Similar patterns exist for graduate school enrollment. We cannot determine causal relationships given the cross-sectional nature of the ACS, but these findings suggest that men’s and women’s educational attainment may have different timelines and may be sensitive in different ways to demographic characteristics and family formation behaviors.

The ACS also asks whether enrolled individuals are pursuing undergraduate or graduate education. Utah women who are divorced, separated, widowed, or who have children under the age of five in the home are less likely to be enrolled in graduate school compared to men with the same characteristics, and women who are in the labor force are more likely to be enrolled in graduate school compared to men in the labor force.

### Completion

Utah men and women also have different attainment and completion patterns. We examined four educational attainment categories in the ACS: some college, no degree; associate degree; bachelor’s degree; and graduate degree (the ACS does not include a category for certificates). The recent data show that women now edge out men in the first three categories, while men surpass women in graduate degree attainment. The percent of the population holding only a bachelor’s degree has been nearly equal for Utah men and women for the past several years, holding steady at about 20% for each since 2010.

**Figure 1: Highest Degree Held by Utah Men and Women in 2016**



As with enrollment, men’s and women’s educational attainment is associated with demographic and family formation characteristics in different ways. Women who are married are more likely to have lower educational attainment, and men who are married are more likely to have graduate degrees (compared to other attainment levels). Women with graduate degrees (compared to other levels) are more likely to be participating in the labor force. We also discovered three additional findings: 1) Utah women pursue shorter programs and lower-paying fields of study than Utah men; 2) Utah women face unique barriers to persistence, and these explain a greater discrepancy between enrollment and completion compared to Utah men (a higher percentage of Utah women have started but not finished a bachelor’s degree compared to Utah men, US men, and US women); and 3) Utah women represent more than half of enrolled students at degree-granting institutions.

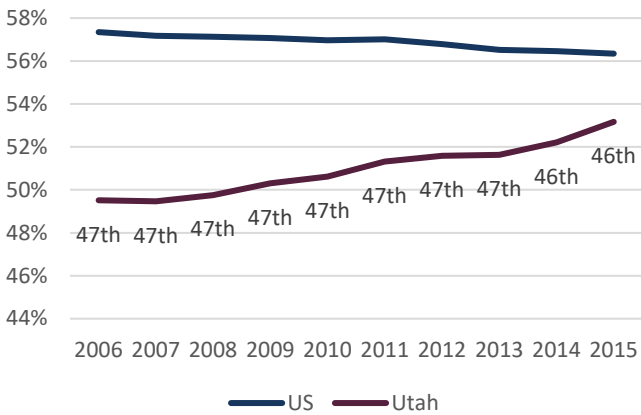
## State and National Comparisons

Given the progress we have made in Utah, why does our state continue to rank toward the bottom of the list compared to other states? Although Utah women actively pursue postsecondary education, their activities have not kept pace with those of US women. Nationally, women represent a greater share of enrollees and have higher degree attainment. Utah women earn lower-level degrees, pursue lower-paying and stereotypically-female fields of study, and have poorer economic outcomes compared to US women.

### Enrollment

The IPEDS data allow us to compare Utah degree-granting institutions with those in the nation as a whole. We find that women make up a greater proportion of Utah enrollees over time, with women representing about 53% of all fall-enrolled students in 2015. But Utah still ranks toward the bottom of all states on this metric (rankings are denoted in Figure 2) because women also make up a larger share of enrollees in other states.

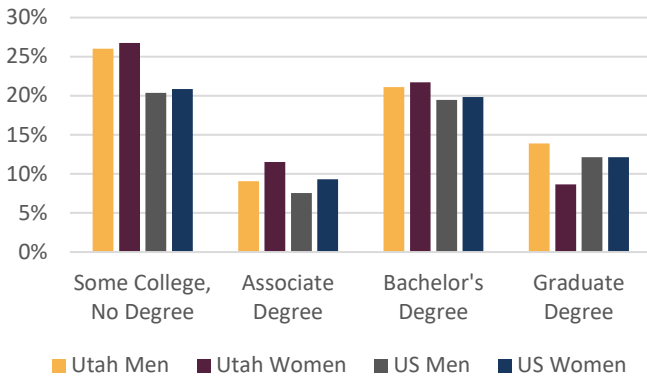
**Figure 2: Percent of Fall Female Enrollment in Degree-Granting Postsecondary Institutions**



**Completion**

Even though Utah men and women are about equal in their possession of bachelor’s degrees and are faring better in this category compared to US men and women, a greater percentage of Utah women fall into the “some college but no degree” and “associate degree” categories, while Utah men lead all groups in graduate degree possession (see Figure 3).

**Figure 3: Highest Degree Held in 2016 By Utah and US Men and Women**



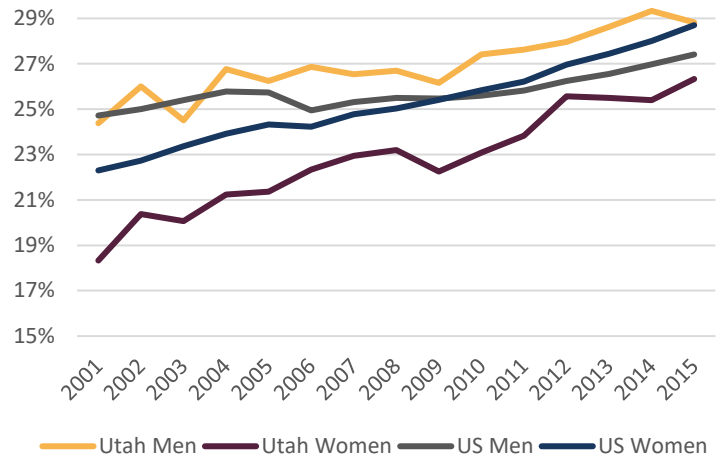
Among adults with *at least* a bachelor’s degree (including those who have earned graduate degrees), Utah women rank lower than Utah men, US women, and US men even though these differences are decreasing over time (see Figure 4). This metric, and the association between higher degree levels and higher wages, greater job flexibility, and greater job satisfaction, likely contribute to Utah’s poor outcomes in national comparisons of women’s equality and opportunity.

**Field of Study**

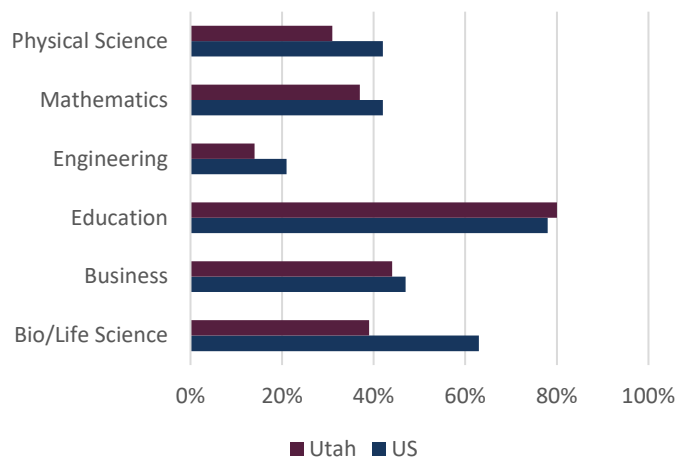
Finally, Utah women represent a smaller proportion of students enrolled in higher-paying undergraduate fields of study compared to enrollees in the US. These fields include engineering, sciences, mathematics, and business

(see Figure 5). In education, a field of study linked to lower wages, Utah women represent a higher proportion of undergraduate enrollees compared to US women. Utah and US women still pursue gendered fields of study, but Utah ranks lower compared to the rest of the nation in this area; US women have made up more ground over time. Utah women also make up a lower proportion of all fields at the graduate level when compared to US women.

**Figure 4: Percent of Adults 18+ Holding at Least a Bachelor’s Degree**

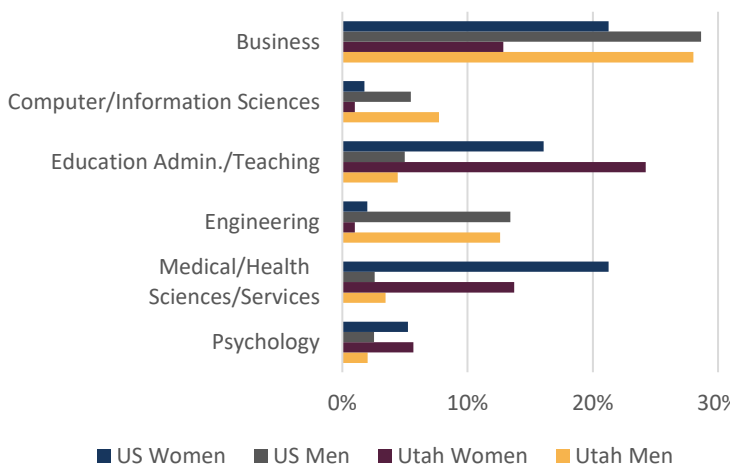


**Figure 5: Percent Female Enrollment by Undergraduate Field of Study in 2016**



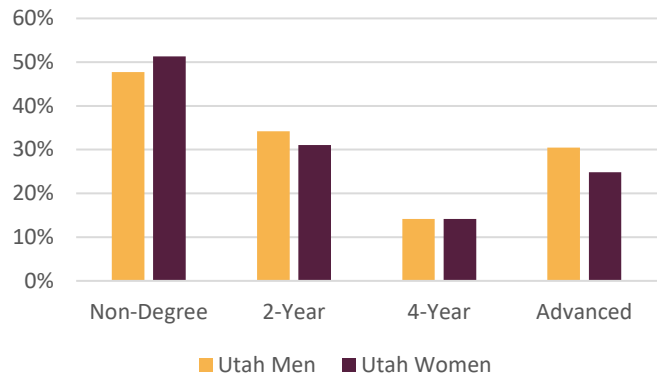
These enrollment patterns, not surprisingly, closely match completion patterns. The ACS records field of study for men and women who have earned a bachelor’s degree. The differences between Utah and US men and women in these fields are striking, especially in education, engineering, medical and health sciences (including health and nursing majors), and business (see Figure 6).

**Figure 6: Selected Fields of Study Among Utah and US Men and Women 25+ with a Bachelor's Degree in 2016**



may make it more difficult for the student to complete a degree.<sup>10</sup> For example, the 2002 fall cohort of Utah men and women enrolled in USHE institutions reported similar degree intentions, with a smaller proportion of women stating an intention to reach the highest levels of postsecondary education (see Figure 7; “non-degree” students are enrolled for credit but have not specified a desired degree).<sup>11</sup>

**Figure 7: First Term Degree Intentions in Fall 2002**



**Life Course of Utah Students**

At an individual level, our analysis of the USHE data helped us view a student’s “life course” of educational attainment. While we are limited in this dataset to only the eight USHE institutions, individual-level data provided insights not available at a population (ACS) or institutional (IPEDS) level. We also followed individual students over time to determine when they enrolled, when (and for how long) they stopped attending, and when they completed a certificate or degree.

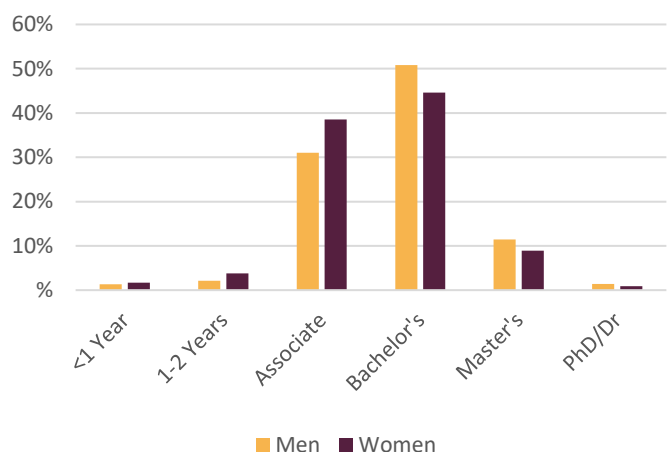
*Enrollment*

Students who enter a USHE institution for the first time are grouped into one of three categories: early freshman (within 12 months of graduating from high school), later freshman (outside of 12 months from graduating from high school), or transfer student. Women represented more of the later freshmen (about 69% in 2017) and fewer of the early freshmen (about 45% in 2017). Beyond the first term, they made up more than half of freshmen and sophomore students at most USHE institutions. Women also made up at least 50% of junior and senior students at all institutions except for Utah Valley University and the University of Utah. Since about 2007 the gap in representation among class levels has narrowed. In 2017 women made up between 47–55% of all undergraduate class levels.

*Completion*

As these same students continued to pursue their postsecondary activities, in many cases the certificate/degree award levels they eventually earned did not match their first-term intentions. For example, a greater percentage of women completed an associate degree than had intended (38.5% versus 31.0%). Additionally, though the percentages of men and women intending to earn a bachelor’s degree were nearly identical in their first term, about 51% of men who completed a certificate or degree by 2017 had earned a bachelor’s degree compared to 44.7% for women (see Figure 8).

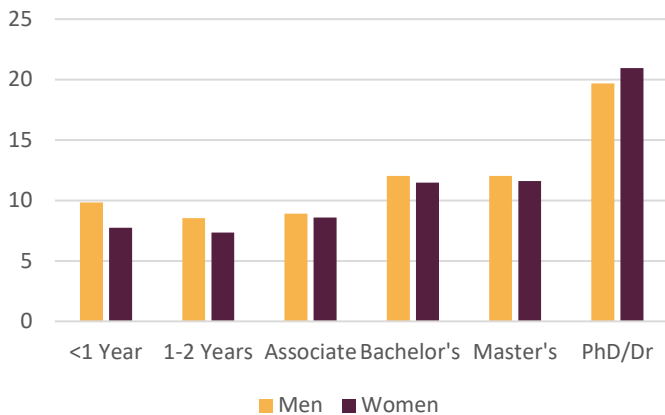
**Figure 8: Certificate and Degree Completions by 2017 for Fall 2002 First-Term Cohort**



These statistics align with what we see in the other data sources. But the USHE dataset also allowed us to see how men’s and women’s experiences at USHE institutions differ. We know that, while enrolled, USHE students in general tend to experience multiple changes in major, intended degree, and even institution. Also, these changes

We also found that the average number of terms between first enrollment and certificate/degree completion was higher for men compared to women at each award/degree level except for the “PhD/Dr” level (see Figure 9). We also discovered that men seem to take longer (or more frequent) breaks from school before graduating.<sup>12</sup>

**Figure 9: Average Number of Terms Enrolled Until Award Level**



### Fields of Study

As we have shown in other sections, men and women pursue gendered fields of study, with men having higher participation in fields such as engineering and business, and women having higher participation in fields such as education. In general, Utah women pursue gendered fields of study and are underrepresented in STEM fields. However, our USHE analyses show that in most institutions the distribution of men and women across fields of study is becoming more diverse over time.

### Conclusion

Our goals when undertaking this project were to use high-quality data to document the state of women’s educational attainment in Utah accurately, paying special attention to how men and women are faring in the state and in relation to the rest of the country.

### Concerns

We find that Utah men and women are highly engaged in postsecondary educational activities, and in some ways Utah women are faring better than are Utah men. However, we have several concerns. First, Utah women are not doing well compared to US women. Utah is near the bottom of all states in fall female enrollment, and Utah women’s postsecondary educational attainment is still gendered by program length and field of study—both of which are linked to less favorable economic outcomes. We are also concerned that barriers keep men and women from exercising their preferences in higher education. For example, our analyses suggest that men’s persistence

toward certificates and degrees has been lagging over time, and that family formation is associated with lower postsecondary education behavior and attainment for women in Utah. Although in-depth explanations for these findings are beyond the scope of our analyses, several Utah Women and Education Project briefs provide rich qualitative insights into these patterns.<sup>13</sup>

### Recommendations

We conclude with three recommendations that may help Utah attain its goal of 66% of adults holding a postsecondary certificate or degree and that may help provide a more educated workforce in Utah. First, more research into the barriers facing men and women in their postsecondary educational activities is needed. We were surprised to see examples of men being slower to complete their certificates and degrees compared to women, and we do not have the data to determine whether this is because of concurrent employment, family responsibilities, religious mission service, or some other reason. In-depth qualitative research can help identify how to help men and women complete their certificates and degrees more efficiently.

Second, we need to provide support to parents (especially mothers) of young children who are pursuing postsecondary education. The Institute for Women’s Policy Research finds that resources such as availability of affordable, campus-based childcare, lactation rooms, and baby-friendly study rooms improve mothers’ access to higher education.<sup>14</sup> Providing these resources may also help make it more normative for women to continue their educational activities alongside family formation activities.

Third, we need to create and advertise family-friendly work policies in all occupational fields. Qualitative research<sup>15</sup> suggests that women pursue lower-paying fields of study because they hope for flexible employment in the future (such as working only while children are in school), but these fields are linked to poorer economic outcomes. In reality, however, workers with *more* education tend to have more workplace flexibility and autonomy. Women in Utah are working; about 70% of women with school-aged children and 50% of women with preschool- and school-aged children participate in the labor force, and Utah women have higher labor force participation rates compared to US women.<sup>16</sup> However, more than 40% of Utah women work in just two occupational groups.<sup>17</sup> Desegregating the female labor force may help solve the educated labor shortage in Utah if we can communicate to women and families the economic opportunities available through more varied paths.

### **Funding**

This research was funded by the Utah State Legislature through the Women in the Economy Commission. The [Utah Women & Leadership Project](#), with Dr. Susan R. Madsen at Utah Valley University, was commissioned to conduct the research and analyze the data. For more information on anything in this report, please see "[Utah Women in Higher Education, 2000–2017.](#)"

### **About the Women in the Economy Commission**

The Women in the Economy Commission (WIEC) increases public and government understanding of the current and future impact and needs of the state's women in the economy and how those needs may be most effectively and efficiently met. The commission identifies and recommends policies, procedures, and programs to respond to the rights, needs, and impacts of women. It facilitates coordination of the functions of public and private entities concerned with women in the economy. More details can be found on the WIEC website at <https://www.utah.gov/women/>.

the factors associated with recent educational participation among individuals and within households in Utah. This dataset provides invaluable insights at a *population* level.

In the second phase we analyzed Integrated Postsecondary Education Data System (IPEDS) data for the years 2000–2016 to provide an update to previous reports produced by the Office of the Utah Women and Education Project. The IPEDS data are comprised of several surveys conducted by the National Center for Education Statistics (NCES) under the direction of the United States Department of Education.<sup>19</sup> These surveys are administered three times per year to every postsecondary institution that participates in federal student financial aid to document enrollments, completions, graduations, financial aid, and institutional characteristics. We used these data to discuss enrollment and completion trends for men and women across institutions and over time, garnering unique insights about Utah and US behavior from a *comparative* perspective.

Finally, we worked on site at the Utah System of Higher Education (USHE) offices to analyze the individual- and institutional-level data on postsecondary educational activities between 2000 and 2017 at the eight public colleges and universities in Utah (Dixie State University, Salt Lake Community College, Snow College, Southern Utah University, The University of Utah, Utah State University, Utah Valley University, and Weber State University). We used these data to show demographic and educational differences across and within institutions over time, paying special attention to changes in participation and completion (including certificate/degree level and field of study) for men and women. These data are invaluable for providing an *individual-level* perspective (though all data were anonymized before reports were generated).

## **APPENDIX**

### **Description of Data**

We completed this research in three phases. We first performed an in-depth analysis of the American Community Survey (ACS), a survey that provides a continual "snapshot" of American households in one-year, three-year, and five-year samples (Public-Use Microdata Samples, or PUMS)<sup>18</sup> from the years 2000 through 2016. We combined questions about student status and educational attainment with demographic information for men and women on age, marital status, Hispanic origin, birthplace, household composition, children, workforce participation, and economic status to better understand

<sup>1</sup> Davidson, Lee. 2017, June 21. "New Census Data Point to a New Utah: A 'Mixed-Heritage, Multicultural Tapestry.'" *The Salt Lake Tribune*. <http://archive.sltrib.com/article.php?id=5425002&itype=CMSID>

<sup>2</sup> Lumina Foundation. 2016. "A Stronger Nation: In Utah, Postsecondary Learning Builds the Talent That Helps Us Rise." [https://www.luminafoundation.org/files/publications/stronger\\_nation/2016/utah-brief-2016.pdf](https://www.luminafoundation.org/files/publications/stronger_nation/2016/utah-brief-2016.pdf)

<sup>3</sup> Utah Foundation. 2017. "Help Wanted: Workforce Participation, Wages, Job Desirability, and Skills Gaps." Research report number 746. <http://www.utahfoundation.org/uploads/rr746.pdf>

<sup>4</sup> Bernardo, Richie. 2017. "2017's Best and Worst States for Women's Equality." WalletHub. <https://wallethub.com/edu/best-and-worst-states-for-women-equality/5835/>

<sup>5</sup> US News and World Report. n.d. "Best States." <https://www.usnews.com/news/best-states/rankings/opportunity/equality>; Institute for Women's Policy Research. 2015. "Status of Women in the States." <https://statusofwomendata.org/explore-the-data/state-data/utah/>

<sup>6</sup> Madsen, Susan R., Cheryl Hanewicz, Susan Thackeray, and A. David King. 2010. "Women and Higher Education in Utah: A Glimpse at the Past and Present." Utah Women and Education Project Brief 204. <https://www.uvu.edu/uwlp/docs/uwlpbrief2.pdf>; Hess, Cynthia and Claudia Williams. 2014. "The Well-Being of Women in Utah: An Overview." YWCA Utah and Institute for Women's Policy Research. [http://www.ywcautah.org/site/c.emJ1KgOQJhlaG/b.8283937/k.596C/Utah\\_Womens\\_WellBeing\\_Initiative.htm](http://www.ywcautah.org/site/c.emJ1KgOQJhlaG/b.8283937/k.596C/Utah_Womens_WellBeing_Initiative.htm) or <https://iwpr.org/publications/the-well-being-of-women-in-utah-an-overview/>

<sup>7</sup> Madsen, Susan R. and Heather Bertotti Sarin. 2013. "Educational Attainment: A Utah Women and Education Update." Utah Women &

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Education Initiative Brief 2013:1. <https://www.uvu.edu/uwlp/docs/uweibrief1.pdf>

<sup>8</sup> Madsen, Susan R., Cheryl Hanewicz, and Susan Thackeray. 2010. "The Value of Higher Education for Women in Utah." Utah Women and Education Project Brief 2010-201. <https://www.uvu.edu/uwlp/docs/uwlpbrief1.pdf>

<sup>9</sup> This is the measure in the ACS for whether a respondent lives with their own children. It does not include respondents who live with children not their own, and so it does not include everyone who may have responsibility for childcare.

<sup>10</sup> Curtin, Joseph A. 2017. "Issue Brief: Student Swirling." Utah System of Higher Education Issue Brief no. 2017-5. <https://higheredutah.org/pdf/reports/2017-5-Swirling-Joe-Curtin.pdf>

<sup>11</sup> Curtin, Joseph A. 2017.

<sup>12</sup> See the full report for more information on this trend: "[Utah Women in Higher Education, 2000–2017.](#)"

<sup>13</sup> See Utah Women and Education Project Briefs, Snapshots, and Reports. 2011. <https://www.uvu.edu/uwlp/education/research.html>

<sup>14</sup> Eckerson, Eleanor, Lauren Talbourdet, Lindsey Reichlin Cruse, Mary Sykes, Elizabeth Noll, and Barbara Gault. 2016. "Child Care for Parents in College: A State-by-State Assessment." Institute for Women's Policy Research. <https://iwpr.org/publications/child-care-for-parents-in-college-a-state-by-state-assessment/>; Institute for Women's Policy Research. 2018. "Is Your Campus Family Friendly? Data and Tools to Promote Student Parent Success." <https://iwpr.org/wp-content/uploads/2018/01/Family-Friendly-Campus-Webinar-Slides-Jan-24-2018.pdf>

<sup>15</sup> Meppen, Dianne and Anna Bergevin. 2017. "The Status of Women in Utah: Economic Choices and Challenges." Women in the Economy Commission Research Brief. <https://www.utah.gov/women/documents/Status-of-Women-in-Utah-2017.pdf>

<sup>16</sup> Utah Department of Workforce Services. 2014. "Hard at Work: Women in the Utah Labor Force." <https://jobs.utah.gov/wi/pubs/womencareers/factsheet.html>

<sup>17</sup> Madsen, Susan R. and Robbyn T. Scribner. 2016. "Labor Force Participation Among Utah Women." Utah Women & Leadership Project. [https://www.uvu.edu/uwlp/docs/uws\\_laborforce.pdf](https://www.uvu.edu/uwlp/docs/uws_laborforce.pdf)

<sup>18</sup> Ruggles, Steven, Katie Genadek, Ronald Goeken, Josiah Grover, and Matthew Sobek. 2015. *Integrated Public Use Microdata Series: Version 6.0* [Machine-readable database]. Minneapolis: University of Minnesota, 2015.

<sup>19</sup> See <https://nces.ed.gov/ipeds/>