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# Gender Development Indicators for Utah:

Based on 2015–2020 Human Development Index

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May 4, 2023

WHITE PAPER | No. 8  
In Partnership with Utah Valley University

**UTAH** WOMEN &  
**LEADERSHIP**  
Project

**UtahStateUniversity.**

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# Gender Development Indicators for Utah:

## Based on 2015–2020 Human Development Index

Dr. Maritza Sotomayor & Dr. Emily S. Darowski | May 4, 2023

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### Executive Summary

Utah's economy is known for its annual growth rate being above national and regional averages, low unemployment rate, and diversified economy.<sup>1</sup> The compound annual growth rate of the real Gross Domestic Product (GDP) between 2010 and 2019 was 3.7%, the third highest in the country. The compound job growth for the same period was 2.0%, ranking eighth in the country.<sup>2</sup> Overall, standard macroeconomic statistics for Utah depict a state with strong economic growth.

However, it is important to determine whether economic growth translates into positive outcomes for the overall welfare of the population.<sup>3</sup> In addition, it is crucial to understand how human development trajectories differ by gender because ongoing gender disparities block sustainable development and negatively affect the labor market, communities, and families.<sup>4</sup>

This white paper examines human development indexes by gender at the state and county levels in Utah and addresses the following questions:

1. What do alternative indicators of the GDP—human development indexes—reveal about Utah's wellbeing?
2. How does Utah compare to other states on human development indexes?
3. How do counties within Utah compare to each other on human development indexes?

Four indexes were used to assess Utah's human development and wellbeing: Human Development Index (HDI), Inequality-adjusted Human Development Index (IHDI), Gender Development Index (GDI), and Gender Inequality Index (GII). This project followed the United Nations Development Programme (UNDP) methodology<sup>5</sup> to calculate the indexes. Analyses focused on 2019/2020 data,<sup>6</sup> but 2015 data is presented in some sections and appendices. The analyses are accompanied by dashboards published on the webpage for [Utah Valley University's Center for Social Impact](#). The online, interactive visualizations portray comparisons by year, geographic location, and index. [Technical notes](#) posted there explain the indexes and calculations in greater detail.

First, the HDI is derived from measures of life expectancy, expected and average years of schooling, and personal income. Utah ranked 15th based on 2020 data, having been ranked 20th in 2015. However, when the HDI was calculated for females and males separately, Utah had the largest gap among all states. This indicates that significant gender-based disparities in human development exist across the measures, which result in Utah women being at a disadvantage compared to Utah men, and this disadvantage is larger than

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<sup>1</sup> Utah Economic Council. (2022). *2022 economic report to the governor*. <https://gardner.utah.edu/wp-content/uploads/ERG2022-Full.pdf?x71849>.

<sup>2</sup> Calculations based on data from the Bureau of Labor Statistics. <https://www.bls.gov/>

<sup>3</sup> Bleys, B. (2012). Beyond GDP: Classifying alternative measures for progress. *Social Indicators Research*, 109, 355–376. <https://doi.org/10.1007/s11205-011-9906-6>

<sup>4</sup> Blau, F. D., & Kahn, L. (2013). Female labor supply: Why is the United States falling behind? *American Economic Review*, 103(3), 251–256. <https://doi.org/10.1257/aer.103.3.251>

<sup>5</sup> UNDP. (2019). *Human development report 2019. Beyond income, beyond averages, beyond today: Inequalities in human development in the 21<sup>st</sup> century. Technical notes*. [https://hdr.undp.org/sites/default/files/data/2020/hdr2019\\_technical\\_notes.pdf](https://hdr.undp.org/sites/default/files/data/2020/hdr2019_technical_notes.pdf)

<sup>6</sup> GII was based on 2019 data only due to data availability. Other indexes were based on 2015 and 2020 data.

it is in other states. When comparing counties within Utah, those with the highest 2020 HDI rankings were concentrated in the Greater Salt Lake region, where 86.5% of the population resides.<sup>7</sup> The full report highlights more details about the HDI among counties, including analyses of life expectancy, education, income, human capital, and labor participation.

Second, the IHDI is derived from the same measures as the HDI (life expectancy, expected and average years of schooling, and personal income) but the calculations adjust for inequality. If there were no change between HDI and IHDI, it would mean that there were no inequalities affecting the initial HDI estimate. Based on 2020 data, Utah's overall IHDI ranked 16th and had improved from being 18th in 2015. The percentage loss between the 2020 HDI and IHDI was 15.4%. This was largely explained by inequalities within the health index (i.e., life expectancy), potentially due to COVID-19 factors. All counties in Utah had a lower IHDI than their HDI, demonstrating that they experienced a loss due to inequality. County-specific comparisons can also be found in the report.

Third, the GDI is the ratio of women's HDI to men's HDI. Lower GDI ratios indicate that women and men do not have equal opportunities to achieve better wellbeing conditions. Utah was ranked relatively high for both HDI and IHDI but was ranked last on GDI (50th) in 2015 and 2020. This suggests that women's potential for human development, compared to men's, has remained stagnant over the last several years. For counties within Utah, all GDI values were below one, indicating that men fared better than women in 2020. However, higher GDI values were not concentrated in urban regions as was the case for HDI. Additional county comparisons and explanations are found in the full report.

Finally, the GII provides another perspective of gender inequality because it is based on a combined score of different measures: maternal mortality, adolescent birth rate, proportion of women and men who have completed at least secondary education, proportion of women and men in elected seats, and labor market participation of women and men. Utah ranked 24th in the GII. More granular data was not available for all GII measures, so we did not complete a county analysis of this index.

In conclusion, Utah ranked relatively high in the HDI, IHDI, and GII in state comparisons, but the state ranked lowest in the GDI in both 2015 and 2020. A closer look at health, education, and income suggested that income gaps were the primary source of gender disparities. However, an examination of human capital (as a combination of the health and education measures) confirmed existing gender gaps, particularly in the low economic development areas, where women seem to face disparities in income conditions but also in health and education conditions. Interestingly, as women's labor participation increased, women's HDI tended to increase as well. In sum, comparisons between the HDI and the IHDI indicate that women are still more disadvantaged than men in achieving better wellbeing conditions. Even though adjustments for what is termed "inequality" reduces these differences between gender, they do not eliminate the disparities, particularly concerning income.

These findings provide a valuable starting point for analyzing human development in Utah and highlight the importance of regularly measuring progress using indexes beyond the Gross Domestic Product. Collecting and analyzing granular data across time, specifically by county, will help community leaders pinpoint areas where specific policies can help reduce gaps. This will enable us to make more informed decisions and develop more effective policies and strategies at the state and local levels that promote sustainable and equitable human development.

## Report Introduction

Utah's economy is known for its annual growth rate being above national and regional averages, low unemployment rate, and diversified economy.<sup>8</sup> The compound annual growth rate of the real Gross Domestic Product between 2010 and 2019 was 3.7%, the third highest in the country and above the average of the Rocky Mountain region. The compound job growth for the same period was 2.0%, ranking 8th in the country.<sup>9</sup> The COVID-19 pandemic proved the resilience of Utah's economy, with an employment rate having returned to pre-COVID levels by October 2020.<sup>10</sup> Additionally, Utah had the third-highest job growth in the nation in 2021 at 4.9%.<sup>11</sup> Overall, standard macroeconomic statistics for Utah depict a place with strong economic growth. However, it is essential to move beyond merely measuring economic performance to determine whether economic growth translates into positive outcomes for the welfare of the state's population.<sup>12</sup>

An enhanced assessment of an economy's status should consider variables other than mere production. Over the past 30 years, researchers and organizations have developed alternative indicators to the GDP to accomplish more nuanced measures. One such indicator is the Human Development Index (HDI),<sup>13</sup> published by the United Nations Development Programme (UNDP) since 1990. The HDI is built on the concept of expanding human capabilities,<sup>14</sup> which views the process of human development as one that aims to increase an individual's capacity to live a long and healthy life, gain knowledge, and attain a decent standard of living. The HDI has been used for decades to rank countries according to their human development. These means of analysis have opened an important international debate about what economic progress means and give policymakers an additional tool to evaluate a country's wellbeing that is not based solely on the production of goods and services.

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<sup>8</sup> Utah Economic Council. (2022). *2022 economic report to the governor*. <https://gardner.utah.edu/wp-content/uploads/ERG2022-Full.pdf?x71849>.

<sup>9</sup> Calculations based on data from the Bureau of Labor Statistics. <https://www.bls.gov/>

<sup>10</sup> Calculations based on data from the Bureau of Economic Analysis. <https://www.bea.gov/>

<sup>11</sup> Statista. (2022, March). *Rate of job growth in the United States between 2020 and 2021, by state*. <https://www.statista.com/statistics/312639/job-growth-in-the-united-states-by-state/>

<sup>12</sup> Bleys, B. (2012). Beyond GDP: Classifying alternative measures for progress. *Social Indicators Research*, 109, 355–376. <https://doi.org/10.1007/s11205-011-9906-6>; Felice, E. (2016). The misty grail: The search for a comprehensive measure of development and the reasons of GDP primacy. *Development and Change*, 47(5), 967–994. <https://doi.org/10.1111/dech.12257>; van den Bergh, J. C. J. M. (2009). The GDP paradox. *Journal of Economic Psychology*, 30(2), 117–135. <https://doi.org/10.1016/j.joep.2008.12.001>

<sup>13</sup> UNDP. (n.d.). *Human development index (HDI)*. <https://hdr.undp.org/data-center/human-development-index#/indicies/HDI>; Other well-known indexes include the Index of Sustainable Economic Welfare (ISEW; Daly & Cobb, 1989), the Genuine Progress Indicator (Cobb et al., 1995), the Quality-of-Life Index (The Economist Intelligence Unit, 2005), the Happy Planet Index (Marks et al., 2006), the Better Life Index (Organisation for Economic Cooperation and Development, 2011), the Human Well-Being Index (Summers et al., 2017), and the Human Life Indicator (Ghishlandi et al., 2019). Cobb, C., Halstead, T., & Rowe, J. (1995, October). If the GDP is up, why is America down? *The Atlantic*. <https://cdn.theatlantic.com/media/archives/1995/10/276-4/132669575.pdf>; Daly, H. E., & Cobb, J. B., Jr. (1989). *For the common good: Redirecting the economy toward community, the environment, and a sustainable future*. Beacon Press.; Ghishlandi, S., Sanderson, W. C., & Scherbov, S. (2019). A simple measure of human development: The Human Life Indicator. *Population and Development Review*, 45(1), 219–233. <https://doi.org/10.1111/padr.12205>; Marks, N., Simms, A., & Thompson, S. (2006). *The (un)happy planet index: An index of human well-being and environmental impact*. New Economics Foundation. <https://neweconomics.org/2006/07/happy-planet-index>; Organisation for Economic Cooperation and Development. (2011). *Better Life Index*. <https://www.oecdbetterlifeindex.org/>; Summers, J. K., Smith, L. M., Harwell, L. C., & Buck, K. D. (2017). The development of a Human Well-Being Index for the United States. In A. A. Vilas Boas (Ed.), *Quality of life and quality of working life* (pp. 97–135). IntechOpen. <https://doi.org/10.5772/intechopen.68596>; The Economist Intelligence Unit. (2005). *The Economist Intelligence Unit's Quality-of-Life Index*. [https://www.economist.com/media/pdf/QUALITY\\_OF\\_LIFE.pdf](https://www.economist.com/media/pdf/QUALITY_OF_LIFE.pdf)

<sup>14</sup> Sen, A. (1985). *Commodities and capabilities*. North-Holland.

Gender is another important variable to include, particularly because reports continue to rank gender equality in Utah very low compared to other states.<sup>15</sup> As an example, for many years WalletHub has ranked Utah last compared to other states when combining factors related to workplace environment, education and health, and political empowerment.<sup>16</sup>

Because ongoing gender disparities become a block to sustainable development and negatively affect the labor market, communities, and families,<sup>17</sup> it is crucial to understand whether human development trajectories differ by gender, and if so, how much. This white paper fills a critical gap in the literature by examining human development indexes by gender at the state and county levels. While human development indexes are often used at the international level, measuring them at the domestic level is equally important because it reveals regional disparities that aggregate measures such as GDP miss. More specifically, this white paper addresses the following questions:

1. What do alternative indicators of the GDP, such as HDI, reveal about Utah's wellbeing?
2. How does Utah compare to other states on human development indexes?
3. How do counties within Utah compare to each other on human development indexes?

By looking at several human development indexes and breaking data down by gender, Utahns can better understand inequities within the state and develop strategies to mitigate disparities.

## Context

Contextual aspects of the origin and background of human development indicators are significant. In 1995, UNDP introduced a new index to complement the HDI: the Gender Development Index. The GDI is the ratio between the HDI of women and men. The dimensions considered are the same as the HDI, but the goalposts for life expectancy are adjusted to account for women living longer than men, on average. GDI accounts for existing gaps between women and men with respect to the HDI, measuring the disparity between men's and women's achievements. Higher gender disparity in human development levels results in a lower GDI value compared to the overall HDI; a GDI value greater than one shows that females have a higher HDI than males.<sup>18</sup> The GDI received criticism for its high correlation with GDP per capita, which suggested that the indicator did not provide new evidence about the problem of gender disparity.<sup>19</sup> Also, because the GDI is based on HDI, it cannot be used as an independent indicator of inequality. However, the advantage of GDI is that its measures are published at the state and sub-national levels, which makes GDI relatively easy to calculate.

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<sup>15</sup> McCann, A. (2022, August 22). *Best & worst states for women's equality*. WalletHub. <https://wallethub.com/edu/best-and-worst-states-for-women-equality/5835>; Georgetown Institute for Women, Peace, and Security. (2020) *The best and worst states to be a woman: Introducing the U.S. women, peace, and security index 2020*. <https://giwps.georgetown.edu/wp-content/uploads/2020/10/The-Best-and-Worst-States-to-Be-a-Woman.pdf>

<sup>16</sup> Madsen, S. R., & Madsen, G. P. (2021, December 2). *Women's equality in Utah: Why Utah is ranked as the worst state, and what can be done*. Utah Women & Leadership Project. <https://www.usu.edu/uwlp/files/wp/no-4.pdf>

<sup>17</sup> Blau, F. D., & Kahn, L. (2013). Female labor supply: Why is the United States falling behind? *American Economic Review*, 103(3), 251–256. <https://doi.org/10.1257/aer.103.3.251>; Cuberes, D., & Teignier, M. (2016). Aggregate effects of gender gaps in the labor market: A quantitative estimate. *Journal of Human Capital*, 10(1), 1–32. <https://doi.org/10.1086/683847>

<sup>18</sup> UNDP. (2022). *Human development: Report 2021/2022. Uncertain times, unsettled lives: Shaping our future in a transforming world*. [https://hdr.undp.org/system/files/documents/global-report-document/hdr2021-22pdf\\_1.pdf](https://hdr.undp.org/system/files/documents/global-report-document/hdr2021-22pdf_1.pdf)

<sup>19</sup> Klugman, J., Rodriguez, F., & Choi, H.-J. (2011). *Human development research paper 2011/01. The HDI 2010: New controversies, old critiques*. UNDP. <http://hdr.undp.org/en/content/hdi-2010-new-controversies-old-critiques>; Kovacevic, M. (2010). *Human development research paper 2010/33. Review of HDI critiques and potential improvements*. UNDP. <https://hdr.undp.org/system/files/documents/hdrp201033pdf.pdf>

In 2010, the UNDP introduced two indexes to address criticisms and extend the HDI. One of those indexes was the Inequality-adjusted Human Development Index.<sup>20</sup> Since the HDI measures average achievements, it masks the distribution across the population for each dimension, where some regions may have greater inequality than others. Inequality is a significant factor to consider when examining the human development and welfare of a community or region. The IHDI aims to account for inequalities: if there is no inequality, the IHDI and the HDI are the same; if there is inequality, the value of the IHDI decreases. The difference between the two indexes is the loss of human development potential due to the unequal distribution between and within each of the HDI's three dimensions.

The other index UNDP introduced in 2010 was the Gender Inequality Index.<sup>21</sup> This index draws on different measures for the following dimensions: long and healthy life, empowerment, and labor market. The long and healthy life dimension is represented by two measures: maternal mortality and adolescent (15–19 years) birth rates. The empowerment dimension is represented by two measures: the number of women in legislative seats and the population with at least a secondary education, differentiated between females and males. The labor market dimension is represented by one measure: labor force participation, distinguishing between females and males. A composite index combines these measures to assess inequality across the three dimensions.<sup>22</sup>

## Research Methods

Throughout the white paper, the four described indexes are calculated to assess Utah's human development and wellbeing. They are referred to by the following acronyms throughout: Human Development Index, Inequality-adjusted Human Development Index, Gender Development Index, and Gender Inequality Index. This project followed UNDP's methodology<sup>23</sup> to calculate the HDI, IHDI, and GDI by states and counties and the GII by states. Analyses focused on 2019/2020 data,<sup>24</sup> but 2015 data is presented in some sections and appendices. Since UNDP's approach was conceived to compare countries, it was necessary to adjust calculations at the sub-national level and modify the goalposts to account for Utah's developed economy. For instance, we adjusted the upper goalpost for each education metric to reflect the more extensive range of educational outcomes seen in United States (US) counties.<sup>25</sup>

The analyses reported here are accompanied by dashboards published on the webpage for [Utah Valley University's Center for Social Impact](#). The online, interactive visualizations help portray comparisons by year, geographic location, and index. [Technical notes](#) posted there explain the indexes and calculations in greater detail. For each index, Table 1 provides a summary of the dimensions, measures, and data sources. Table 2 specifies the range of values for each index and how to interpret them.

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<sup>20</sup> Klugman, J., et al. (2011).

<sup>21</sup> Klugman, J., et al. (2011).

<sup>22</sup> UNDP. (2010). *Human development report 2010. The real wealth of nations: Pathways to human development*. <https://hdr.undp.org/content/human-development-report-2010>

<sup>23</sup> UNDP. (2019). *Human development report 2019. Beyond income, beyond averages, beyond today: Inequalities in human development in the 21<sup>st</sup> century. Technical notes*. [https://hdr.undp.org/sites/default/files/data/2020/hdr2019\\_technical\\_notes.pdf](https://hdr.undp.org/sites/default/files/data/2020/hdr2019_technical_notes.pdf)

<sup>24</sup> Due to data availability, GII was compiled based on 2019 data only; other indexes were compiled based on 2015 and 2020 data.

<sup>25</sup> The UNDP uses an upper goalpost of 15 years for average years of schooling and 18 years for expected years of schooling. We extend the upper goalposts to 17 and 20 years for average and expected years of schooling, respectively.

**Table 1. Summary of Indexes**

Index	Dimensions	Measures	Descriptions	Data Sources
HDI IHDI GDI	Health	Life expectancy	Crude death rates	Centers for Disease Control and Prevention
	Education	Expected years of schooling	School enrollment by type of school by age for the population 3 years and over	American Community Survey's five-year estimates
		Average years of schooling	Educational attainment of the population 25 years and over	
	Income	Personal income	Inflation-adjusted dollars for the population 16 years and over with earnings in the past 12 months	American Community Survey's five-year estimates
GII	Health	Maternal mortality	Maternal mortality ratio	Centers for Disease Control and Prevention
		Adolescent birth rate	Adolescent birth rate	
	Empowerment	Female and male population with at least secondary education	At least secondary education for the population 25 years and over	American Community Survey's five-year estimates
		Female and male shares of elected seats	Share of parliamentary seats held by gender	
	Labor Market	Female and male labor force participation rates	Labor force participation rates by gender.	American Community Survey's five-year estimates

**Table 2. Index Values**

Index	Range	Calculation of Overall Score	Value Range & Interpretation
HDI	0 to 1	Geometric mean of normalized scores of each measure.	Values closer to one reflect greater human development.
IHDI	0 to 1	Geometric mean of inequality-adjusted scores of each measure. Loss due to inequality is the percentage change between HDI and IHDI	Values closer to the HDI value reflect lower levels of inequality. Smaller values reflect lower levels of inequality.
GDI	0 to more than 1	Ratio of HDI for females over the HDI for males.	Values closer to one reflect greater parity between genders. Values under one reflect that females are disadvantaged.
GII	0 to 1	See technical notes. Shows loss in potential human development due to inequality between males and females.	Higher values reflect greater inequality.

## Analyses & Findings

Although the focus of this white paper is on Utah, a brief overview of US standings on human development indexes will provide an important backdrop. The UNDP reports the HDI for 189 countries. In 2021, the US ranked 21st for HDI,<sup>26</sup> much lower than its ranking for GDP per capita (9th position in 2021, according to the World Bank).<sup>27</sup> When HDI was adjusted for inequality, IHDI, the US ranked 26th. The overall loss due to inequality was 11.1%, one of the highest levels of loss among the top 25 countries categorized as having very high human development (trailed only by Israel, 11.5% loss; Singapore, and Hong Kong, each with 13.0% loss).<sup>28</sup> However, the US was in the top group of countries for GDI in 2021, with a value score of 1.001, which means that the HDI for females was slightly higher than the HDI for males. It was the first time since the publication of GDI that the US had a value greater than one.<sup>29</sup> Conversely, the UNDP calculation of GII places the US in the 44th position of 189 countries. This score puts the US behind countries with much lower HDI, such as Turkmenistan (91st ranking). Overall, this suggests that the US is strong in human development, but there is evidence of unequal distribution among the population, particularly in the income dimension. US women and men are faring comparably when it comes to life expectancy and education, but there are disparities related to maternal mortality, adolescent birth rates, political engagement, labor force participation, and income.

The first set of findings that follows are state comparisons: Utah is compared to other states, not including the District of Columbia. For ease of visual interpretation, not all states are listed in every figure. States other than Utah are represented by their two-letter abbreviation. The second set of findings are county comparisons within Utah. In both main sections, numbers greater than one are rounded to the tenth decimal place; numbers less than one are rounded to the thousandth decimal place. Rankings are based on unrounded numbers. Where specified, supplemental comparisons are provided in appendices.

### State Comparisons

The state comparison findings are presented in the following order: 1) 2020 HDI, 2) 2020 IHDI, 3) 2020 Loss Due to Inequality, 4) 2020 HDI and IHDI by Gender, 5) 2020 GDI and 2019 GII, and 6) Comparisons Between All Indexes by Year & State.

#### 1. 2020 HDI

In 2020, Utah ranked 15th in the nation for the HDI, which places the state in the high development group. This is the compounded result of the three dimensions of the index. Life expectancy in Utah is relatively high compared to other states. In the education dimension, Utah's ranking for expected years of education is above the median but lower than Utah's ranking for the average years of schooling. Income is the only dimension where Utah places below the median, negatively affecting the state's overall HDI. Figure 1 below shows the top and bottom ranked states for the overall HDI value and each measure. The median value of each is included, as well as Utah's value. The difference in the overall HDI value between the highest and lowest ranked state was not large. Massachusetts had an HDI of 0.88, while West Virginia had an HDI of 0.82. Larger gaps were more evident in the life expectancy and personal income measures. See Appendix A for the HDI values of all 50 states for both 2015 and 2020.

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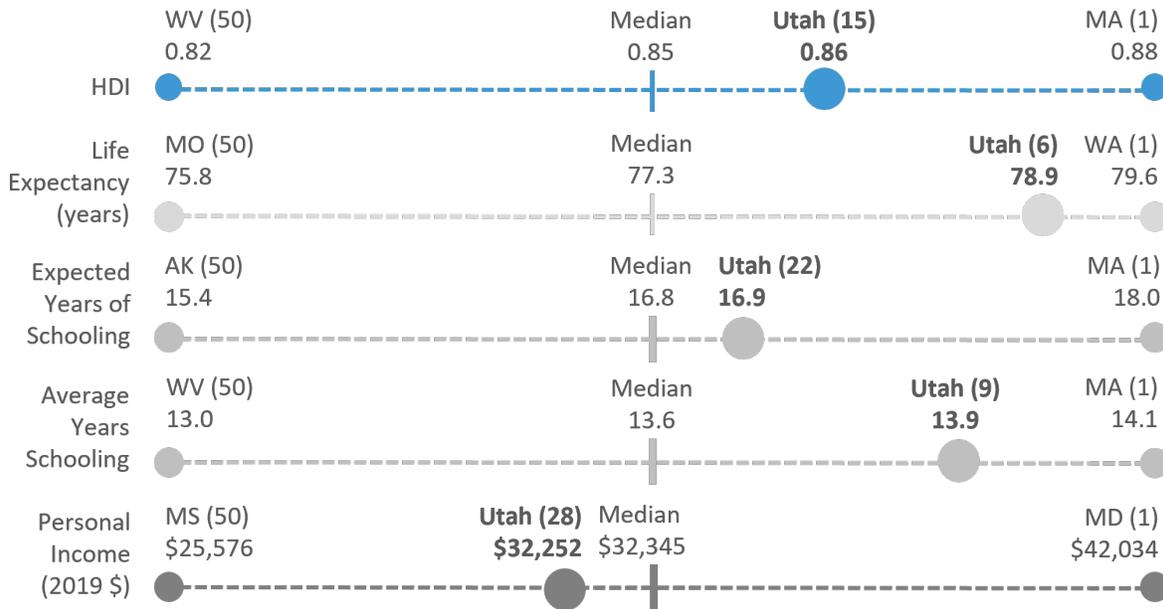
<sup>26</sup> UNDP. (2022).

<sup>27</sup> The World Bank. (n.d.). *GDP per capita (current US\$)*. <https://data.worldbank.org/indicator/NY.GDP.PCAP.CD>

<sup>28</sup> UNDP. (2022).

<sup>29</sup> UNDP. (n.d.). *Gender Development Index (GDI)*. <https://hdr.undp.org/gender-development-index#/indicies/GDI>

**Figure 1. 2020 HDI for Utah and the Highest and Lowest Ranking States**



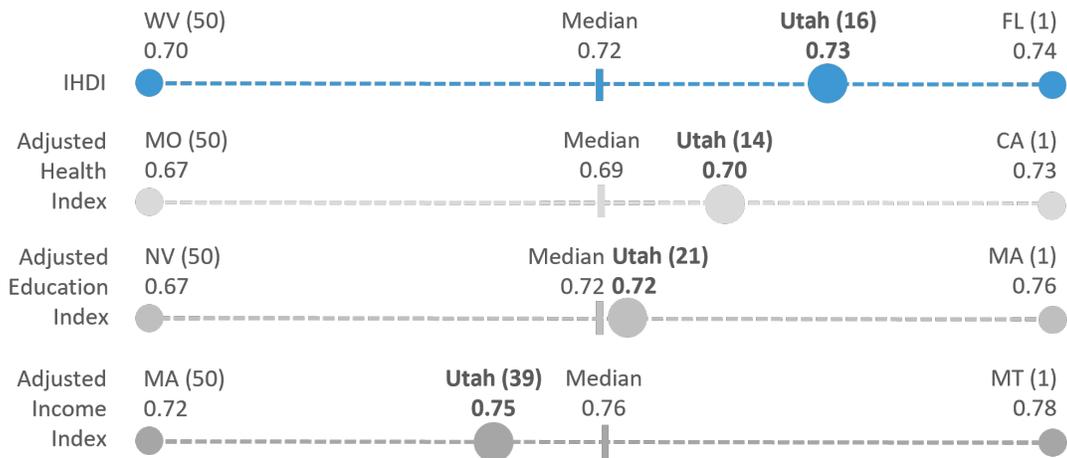
Note: AK = Alaska, MA = Massachusetts, MD = Maryland, MO = Missouri, MS = Mississippi, WA = Washington, and WV = West Virginia.

## 2. 2020 IHDI

As mentioned, the IHDI is calculated to measure the population’s wellbeing after adjusting for disparities in the distribution of each dimension. Thus, the IHDI is considered to be the more accurate indicator of a population's wellbeing, and the HDI is considered to be the aspirational level of wellbeing that would be achieved without inequality. See Appendix B for the IHDI values of all 50 states. Figure 2 below shows the top and bottom ranked states for the overall IHDI value and each measure. The median value of each is included, as is Utah’s value. The IHDI’s highest value is 0.74 for Florida, which was a decrease of 14.0% compared to the highest HDI value (Massachusetts, 0.88). Regarding the rankings, Utah lost one place for the overall IHDI (ranked 16th) after the inequality adjustments but remained in the group of high development states. Utah’s IHDI rankings on health, education, and income were lower when compared to the HDI, particularly with income (IHDI rank of 39th compared to HDI rank of 28th).<sup>30</sup>

<sup>30</sup> A note of caution regarding income: For the top income bracket, we used a value of \$125,000 (making the range of the top bracket the same size as the bracket immediately preceding it). This value likely underestimated the median income of the top bracket. However, in the absence of a better estimate, we accepted that our estimate of inequality may understate the true value.

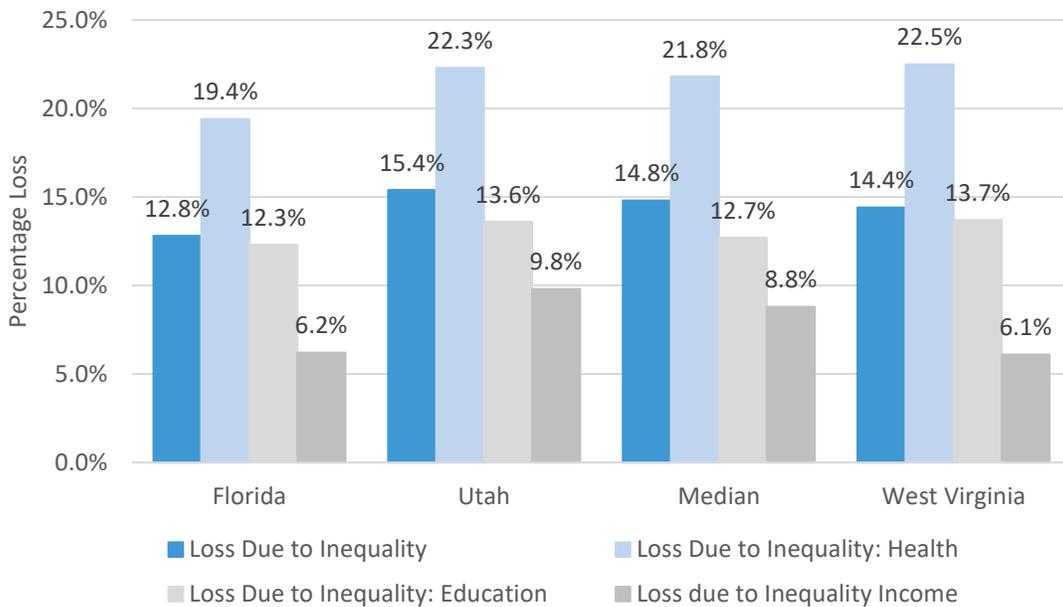
**Figure 2. 2020 IHDI for Utah and the Highest and Lowest Ranking States**



### 3. 2020 Loss Due to Inequality

The difference between HDI and IHDI is the loss due to inequality. Figure 3 below highlights the overall percentage loss and the percentage loss for each dimension for the states with the top and bottom IHDI rankings (Florida and West Virginia, respectively), the median, and Utah. The highest losses occurred in health. Utah's percentage loss in health (22.3%) was slightly higher than the median (21.8%) and just barely below that of West Virginia (22.5%). It is likely that COVID-19 affected life expectancy in 2020. Although the educational losses were comparable for these three states, Utah showed the highest loss in income (9.9%), which was higher than the median (8.8%) and West Virginia (6.1%). This can be explained by the concentration of high earners in income levels above \$100,000. Appendix B shows the loss due to inequality for all states.

**Figure 3. 2020 Loss Due to Inequality for Utah and the Highest and Lowest Ranking States**

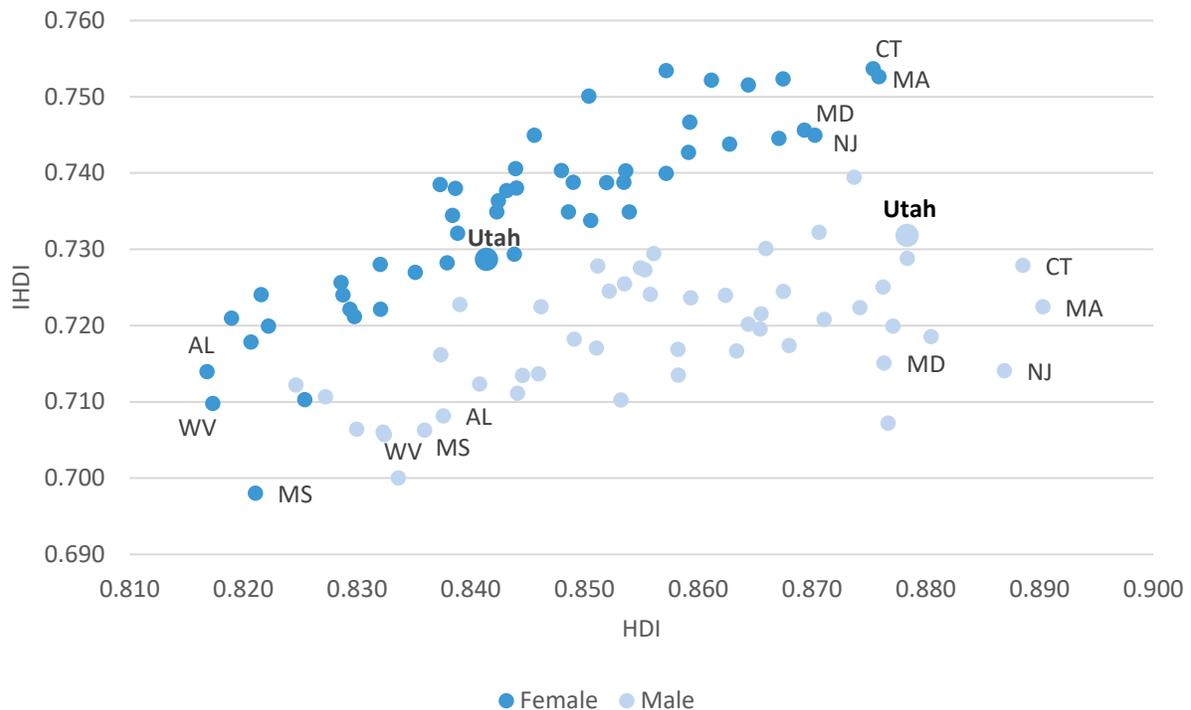


#### 4. 2020 HDI and IHDI by Gender

Data for the overall HDI and IHDI were disaggregated by gender to assess disparities. Figure 4 below plots the 2020 HDI and IHDI by gender for all 50 states. Data points for several states are labeled, including Utah (see Appendix C for a table of values for each state). Women’s HDI was typically lower than men’s HDI. The differences between women and men for the HDI are demonstrated by the horizontal gap between state data points. The disparity is noticeable for states with a low HDI, such as Mississippi and Alabama, but is even present for states with an overall high HDI, such as Connecticut and Massachusetts. In the case of Utah, the difference between the HDI for women and men is the largest among all states.

Regarding IHDI, the differences between women and men are demonstrated by the vertical gap between state data points. The IHDI for women in Maryland and New Jersey was significantly higher than the IHDI for men. The gap was minimal for Alabama and West Virginia. In contrast, the IHDI for women in Utah and Mississippi was lower than for men, meaning women in these states were in a disadvantaged position even when the numbers were corrected by inequality. Across all states, the median IHDI for women (0.737) was higher than the median IHDI for men (0.720). Put another way, the median loss due to inequality was higher for men (15.8%) than for women (13.0%). The data suggests this loss occurred to a greater extent in the health and education dimensions, where women have performed better (see Appendix D). However, in the income dimension, women tended to experience greater loss than men.

**Figure 4. 2020 HDI and IHDI by State and Gender**



Note: AL = Alabama, CT = Connecticut, MA = Massachusetts, MD = Maryland, MS = Mississippi, NJ = New Jersey, and WV = West Virginia.

## 5. 2020 GDI and 2019 GII

Table 3 shows the 2020 GDI and 2019 GII<sup>31</sup> for the 10 top and bottom states according to the GDI rankings (Appendix E lists GDI and GII for all states). The GDI is based on the ratio between men’s and women’s HDI scores. All GDI values were below one, indicating that women’s HDI was lower than men’s HDI. However, the GDI values were close to one, and the difference between the top and bottom states was 0.03, suggesting lower disparities on this index. Another characteristic of the GDI ranking was that states with very high HDI were not in the top 10 of the GDI, except for Vermont. Utah ranked relatively high for both HDI (15th) and IHDI (16th), but last on GDI (50th). The GII provides another perspective of gender inequality because it is based on different metrics (e.g., labor market participation, maternal mortality, political representation). GII values range from zero to one, where zero indicates no inequality and one indicates extreme inequality.<sup>32</sup> Several states showed large ranking differences between GDI and GII. For example, Washington ranked 46th in the GDI but 8th in the GII. Utah ranked 50th in the GDI but 24th in the GII. Other states showed similar positions in the rankings for the two indexes, such as Maine, South Carolina, Alabama, and Wyoming.

**Table 3. 2020 GDI and 2019 GII for Top 10 and Bottom 10 States**

States	GDI Rank	GDI 2020	Female HDI	Male HDI	GI Rank	GI 2019
Florida	1	0.995	0.846	0.851	18	0.152
Maine	2	0.994	0.848	0.855	6	0.112
North Carolina	3	0.994	0.838	0.846	20	0.155
Alaska	4	0.993	0.842	0.853	30	0.181
New York	5	0.993	0.867	0.878	11	0.131
Nevada	6	0.992	0.832	0.841	22	0.168
Maryland	7	0.992	0.869	0.876	10	0.124
Mississippi	8	0.991	0.821	0.836	48	0.282
Delaware	9	0.991	0.854	0.858	32	0.184
Vermont	10	0.991	0.863	0.874	3	0.092
...	...	...	...	...	...	...
Iowa	41	0.983	0.849	0.864	23	0.168
Oregon	42	0.983	0.849	0.849	13	0.135
Minnesota	43	0.983	0.867	0.880	12	0.131
Michigan	44	0.982	0.839	0.856	16	0.147
South Carolina	45	0.978	0.829	0.837	42	0.255
Washington	46	0.978	0.857	0.877	8	0.123
Wyoming	47	0.977	0.844	0.862	41	0.240
Alabama	48	0.975	0.817	0.838	50	0.307
Idaho	49	0.971	0.830	0.856	25	0.173
Utah	50	0.961	0.841	0.878	24	0.170

<sup>31</sup> Due to data availability, GII was compiled based on 2019 data; other indexes were compiled based on 2020 data.

<sup>32</sup> UNDP. (2019).

## Section Summary

To summarize the state comparisons, Table 4 provides the HDI, IHDI, and GDI rankings for 2015 and 2020, and the GII for 2019. States are listed from highest to lowest ranking and are divided into very high, high, medium, and low development quartiles using the UNDP development classification. Utah’s rankings are highlighted in blue. The table portrays changes that have occurred in the last five years.

Utah’s position in the HDI ranking improved between the two time points and would have made it into the very high development group had it surpassed Hawaii and California. An improvement in the ranking in suggests that Utah has the conditions to achieve a higher level of wellbeing for its population.

Comparing HDI rankings to IHDI rankings, states in the low and very high quartiles did not see many variations after adjustments for inequality. In other words, most states in the low or very high development category for HDI were still considered low or very high after IHDI was calculated. Utah ranked in the high development category for HDI and IHDI in both years. In 2015, Utah gained two places in the ranking for IHDI compared to HDI. This means that after adjusting for disparities in the distribution of the three index dimensions, Utah did comparatively better than other states. In 2020, Utah lost one place in the ranking for IHDI compared to HDI, but overall showed a slight improvement in the IHDI between 2015 and 2020, rising two places in the rankings.

The GDI is the ratio of HDI differentiated by gender. A value of less than one means that the aspirations and achievements for the HDI are lower for females. Interestingly, states with low HDI had a very high GDI (i.e., Mississippi). Utah ranked as the 50th state for GDI in 2015 and did not change in 2020, even though it was in the high development group for HDI and IHDI. This result confirms what other data shows about women’s challenges for equity: improvements in HDI or IHDI do not necessarily mean a reduction in the differences between genders.<sup>33</sup>

Although the GDI can be used as a first approach to examine gender disparities, analyses need to go beyond this index. The GII is useful because it uses different measures to calculate the index. The GII rankings were more in line with HDI and IHDI rankings. States with low HDI also had low GII. Utah’s GII placed it in the high development group, which was consistent with its HDI and the IHDI rankings.

**Table 4. Rank Order by State for 2015 and 2020 HDI, IHDI, GDI, and 2019 GII**

2015 HDI	2020 HDI	2015 IHDI	2020 IHDI	2015 GDI	2020 GDI	2019 GII
<b>Very High Development</b>						
Massachusetts	Massachusetts	California	Florida	Hawaii	Florida	Massachusetts
Connecticut	Connecticut	Massachusetts	Vermont	Maryland	Maine	New Hampshire
New Jersey	New Hampshire	New York	California	Arizona	North Carolina	Vermont
Maryland	Minnesota	Colorado	Wisconsin	Mississippi	Alaska	California
New York	New Jersey	Wisconsin	New Hampshire	New Mexico	New York	Connecticut
New Hampshire	Maryland	New Hampshire	Colorado	Florida	Nevada	Maine
Minnesota	Colorado	Vermont	Maine	Delaware	Maryland	Illinois
Colorado	Washington	Delaware	Connecticut	Kentucky	Mississippi	Washington
Virginia	Vermont	Maryland	Massachusetts	Vermont	Delaware	Rhode Island
Vermont	Virginia	New Jersey	Rhode Island	North Carolina	Vermont	Maryland
California	Rhode Island	Arizona	Hawaii	South Dakota	Oklahoma	New York
Washington	New York	Illinois	Virginia	South Carolina	Georgia	Minnesota

<sup>33</sup> For example, the Utah Department of Workforce Services publishes a [data dashboard](#) that illustrates gender differences in the Utah labor force.

<b>High Development</b>						
Rhode Island	California	Minnesota	Oregon	Georgia	Hawaii	Oregon
Illinois	Hawaii	Virginia	New York	Nevada	Arkansas	Pennsylvania
Iowa	Utah	Washington	Minnesota	Minnesota	California	Colorado
North Dakota	Wisconsin	Rhode Island	Utah	Louisiana	Arizona	Michigan
Wisconsin	Oregon	Florida	Michigan	Missouri	New Mexico	New Jersey
Delaware	Illinois	Utah	North Carolina	Arkansas	North Dakota	Florida
Nebraska	Nebraska	Oregon	Wyoming	New York	Connecticut	Virginia
Utah	Delaware	Michigan	Arizona	Colorado	Illinois	North Carolina
Hawaii	Maine	Hawaii	Maryland	Maine	Wisconsin	Wisconsin
Wyoming	Iowa	New Mexico	Texas	Tennessee	Ohio	Nevada
Kansas	North Dakota	Iowa	Idaho	West Virginia	Montana	Iowa
Oregon	Florida	North Dakota	Washington	Oklahoma	Tennessee	Utah
South Dakota	Wyoming	Texas	Nebraska	Alabama	Texas	Idaho
<b>Medium Development</b>						
Pennsylvania	Pennsylvania	Wyoming	Georgia	Alaska	New Jersey	Hawaii
Arizona	Alaska	Kansas	South Dakota	Connecticut	Louisiana	Nebraska
Alaska	Kansas	Georgia	Kansas	Wisconsin	Kentucky	Ohio
Maine	Michigan	Maine	Ohio	California	Missouri	Arizona
Michigan	Arizona	North Carolina	Montana	Massachusetts	New Hampshire	Alaska
Florida	Idaho	Connecticut	Illinois	New Hampshire	South Dakota	Montana
Texas	South Dakota	Nebraska	Delaware	Montana	Colorado	Delaware
Ohio	Montana	South Dakota	South Carolina	Texas	Rhode Island	North Dakota
Georgia	North Carolina	Pennsylvania	Iowa	Ohio	Massachusetts	Kansas
Idaho	Georgia	Ohio	Indiana	Rhode Island	Virginia	New Mexico
Montana	Ohio	Alaska	Alaska	Illinois	Indiana	Texas
North Carolina	Texas	Missouri	Kentucky	Pennsylvania	Pennsylvania	South Dakota
<b>Low Development</b>						
Missouri	South Carolina	Indiana	North Dakota	Virginia	Kansas	Missouri
Indiana	Missouri	Idaho	New Mexico	Indiana	Nebraska	Indiana
Nevada	Mississippi	Montana	New Jersey	North Dakota	West Virginia	Georgia
New Mexico	Indiana	Nevada	Arkansas	Oregon	Iowa	Wyoming
South Carolina	Oklahoma	Louisiana	Tennessee	Iowa	Oregon	South Carolina
Oklahoma	Alabama	South Carolina	Pennsylvania	New Jersey	Minnesota	Tennessee
Tennessee	Tennessee	Arkansas	Alabama	Nebraska	Michigan	Oklahoma
Louisiana	New Mexico	Kentucky	Missouri	Kansas	South Carolina	West Virginia
Mississippi	Nevada	Tennessee	Mississippi	Michigan	Washington	Louisiana
Alabama	Louisiana	Alabama	Louisiana	Wyoming	Wyoming	Kentucky
Kentucky	Kentucky	West Virginia	Nevada	Washington	Alabama	Mississippi
West Virginia	Arkansas	Mississippi	Oklahoma	Idaho	Idaho	Arkansas
Arkansas	West Virginia	Oklahoma	West Virginia	Utah	Utah	Alabama

## Comparisons of Counties in Utah

The following sections show the results for Utah at the county level. To our knowledge, no previous studies have conducted county-level analyses of the HDI, IHDI, and GDI. As such, the findings presented here provide a new look at economic and human development wellbeing.<sup>34</sup> The indexes were constructed for Utah counties following the UNDP methodology. Analyses included 27 counties, excluding Piute and Daggett, because of calculation problems related to their small populations. In heat maps, these two counties were colored white; they were not included in tables or other figures. As mentioned in the methods section, because some indexes were built to measure disparities at the national level, goalposts were adjusted as needed to account for the regional scope of the analyses. Counties were classified into quartiles of economic development (very high, high, medium, and low). In some analyses, counties were grouped into six economic regions based on categorization by the Kem C. Gardner Policy Institute.<sup>35</sup>

The county comparison findings are presented in the following order: 1) 2020 HDI by County, 2) 2020 IHDI and Loss due to Inequality by County, 3) 2020 HDI, IHDI, and Loss by Gender and County, 4) 2020 HDI by Gender and Index Dimensions, 5) 2020 HDI and IHDI Income Dimension by Gender and Development Quartile, and 6) Human Capital: Combined 2020 Health and Education HDI Dimensions, 7) 2020 Women's HDI and Labor Participation Rates, and 8) 2020 GDI by County.

### 1. 2020 HDI by County

Figure 5 below provides a visual heat map representation of the 2020 HDI by county. The counties with the highest HDI rankings in 2020 were concentrated in the Greater Salt Lake region. Notably, in 2020, 86.5% of Utah's population lived in this region.<sup>36</sup> The only county in this region with a low ranking was Juab (23rd). Overall, the counties with the highest HDI were Summit and Morgan. The counties with the lowest HDI were Carbon and Uintah. See Appendix F for the HDI values of the 27 counties analyzed for both 2015 and 2020.

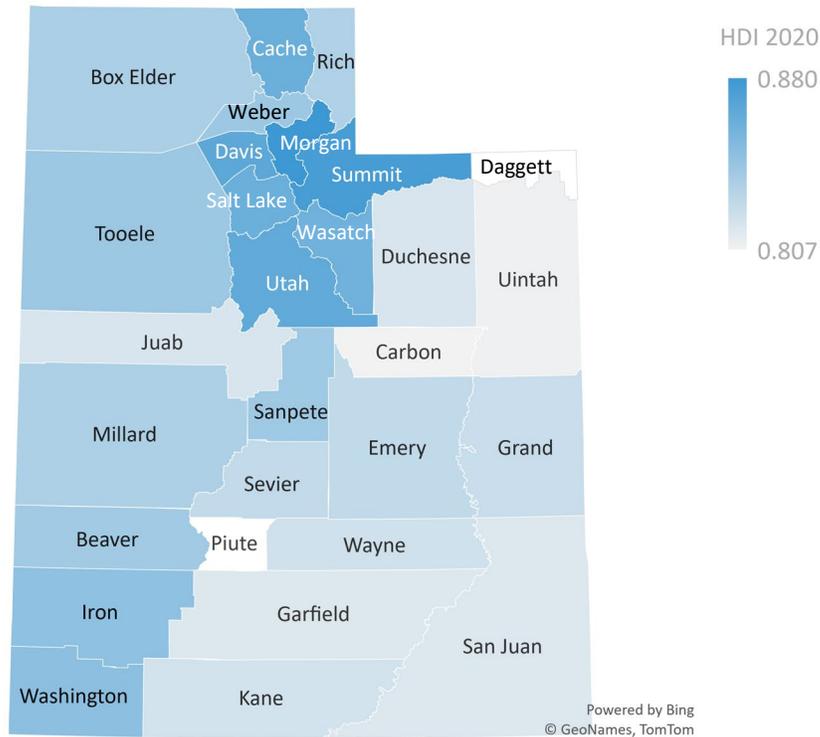
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<sup>34</sup> GII is not reported at the county level because not all measures had data at this level of granularity.

<sup>35</sup> The six regions are the following: 1) East Central: Carbon and Emery; Greater Salt Lake: Box Elder, Cache, Davis, Juab, Morgan, Rich, Salt Lake, Summit, Tooele, Utah, Wasatch, and Weber; Southeast: Grand and San Juan; Southwest: Beaver, Garfield, Iron, Kane, and Washington; Uintah Basin: Duchesne, Uintah, Daggett; and West Central: Millard, Piute, Sanpete, Sevier, Wayne. Hogue, M. (2020, November). *Utah's economic regions*. Informed Decisions: Kem C. Gardner Policy Institute. <https://gardner.utah.edu/wp-content/uploads/EconRegions-Nov2020.pdf?x71849>

<sup>36</sup> U.S. Census Bureau. (2022). *County population totals: 2020–2021*. <https://www.census.gov/data/tables/time-series/demo/popest/2020s-counties-total.html>

**Figure 5. Heat Map of 2020 HDI by County**



## 2. 2020 IHDI and Loss Due to Inequality by County

Although Utah’s population is concentrated in areas with high HDI, actual levels of human development—and the wellbeing of Utah’s counties—are more accurately assessed using the IHDI, which adjusts for inequality in the distribution of the index dimensions. In Table 5 below, Utah’s counties are sorted by 2020 HDI rankings and classified into HDI economic development quartiles. Economic regions are listed. The 2020 IHDI is presented, along with the percentage loss due to inequality and the change in quartile after the adjustment.

The IHDI ranged from a maximum value of 0.735 (Summit) to a low of 0.623 (Beaver). All counties demonstrated a loss due to inequality, ranging from a loss of 14.3% (Washington) to 25.7% (Beaver). These loss estimates help identify gaps in development that need to be addressed. The final column in Table 5 shows what development quartile counties were in based on the IHDI and is shaded to represent increasing (green), staying the same (yellow), or decreasing in quartile placement (red). For example, Carbon moved from the low to a medium development quartile. Garfield stayed in the same quartile (low) but improved relative to other counties in that quartile. Wayne moved down from medium to low development. Even after the adjustment, urban counties in the Great Salt Lake economic region kept their position in the very high development quartile, except for Morgan, which dropped to the high economic development quartile, and Washington (southwest economic region), which moved up to the very high development quartile. Many counties in the medium and low development quartiles swapped places and were primarily in more rural regions.

Among the most noteworthy cases was Beaver’s changes in IHDI. Before the adjustment, it was part of the high HDI quartile, but it fell to the low IHDI quartile. Examining each dimension, the source of the decline comes from the income dimension, which had a 40.1% loss due to inequality (see Appendix G for the percentage loss for each county by each index dimension). Overall, Utah counties

demonstrated divergences in the HDI, the aspirational goal of wellbeing, and the IHDI, the actual level of wellbeing.

**Table 5. Utah’s Counties by 2020 HDI Ranking, Including IHDI and Loss Due to Inequality**

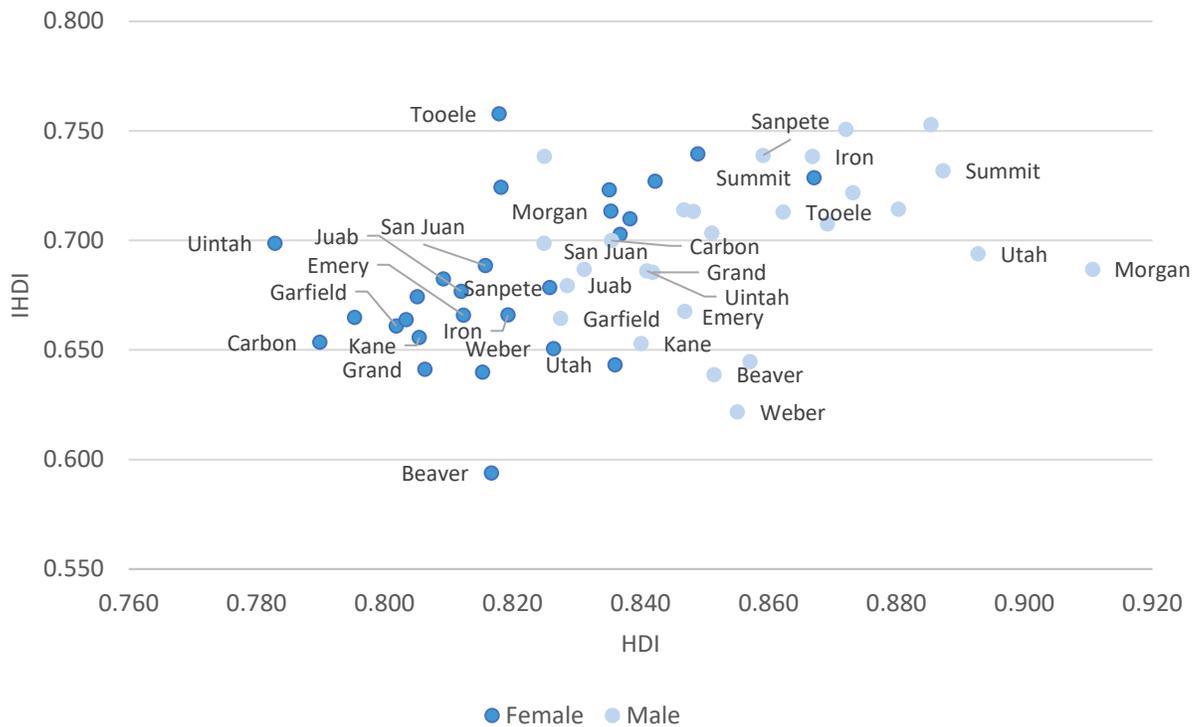
Economic Region	County	HDI Rank	HDI 2020	IHDI 2020	Loss	IHDI Quartile
Very High Development						
Great Salt Lake	Morgan	1	0.880	0.708	19.5%	High
Great Salt Lake	Summit	2	0.876	0.735	16.1%	Very High
Great Salt Lake	Davis	3	0.867	0.724	16.5%	Very High
Great Salt Lake	Utah	4	0.866	0.732	15.5%	Very High
Great Salt Lake	Cache	5	0.862	0.734	14.8%	Very High
Great Salt Lake	Salt Lake	6	0.862	0.731	15.2%	Very High
High Development						
Great Salt Lake	Wasatch	7	0.860	0.710	17.4%	High
Southwest	Washington	8	0.849	0.728	14.3%	Very High
Southwest	Iron	9	0.847	0.704	16.9%	High
Great Salt Lake	Tooele	10	0.842	0.694	17.6%	Medium
Great Salt Lake	Weber	11	0.841	0.716	14.9%	High
West Central	Sanpete	12	0.841	0.706	16.1%	High
Southwest	Beaver	13	0.839	0.623	25.7%	Low
Medium Development						
Great Salt Lake	Box Elder	14	0.836	0.696	16.7%	High
West Central	Millard	15	0.835	0.699	16.3%	High
Great Salt Lake	Rich	16	0.834	0.641	23.1%	Low
East Central	Emery	17	0.827	0.666	19.5%	Low
West Central	Sevier	18	0.827	0.692	16.3%	Medium
Southeast	Grand	19	0.824	0.664	19.4%	Low
West Central	Wayne	20	0.821	0.632	23.0%	Low
Low Development						
Southwest	Kane	21	0.820	0.653	20.4%	Low
Uintah Basin	Duchesne	22	0.818	0.674	17.6%	Medium
Great Salt Lake	Juab	23	0.818	0.674	17.6%	Medium
Southeast	San Juan	24	0.816	0.691	15.3%	Medium
Southwest	Garfield	25	0.816	0.664	18.6%	Low
Uintah Basin	Uintah	26	0.809	0.666	17.7%	Medium
East Central	Carbon	27	0.807	0.673	16.6%	Medium

### 3. 2020 HDI, IHDI, and Loss by Gender and County

Data for the overall HDI and IHDI were disaggregated by gender to assess disparities. Figure 6 below plots the 2020 HDI and IHDI by gender for the 27 counties analyzed. Data points for several counties are labeled (see Appendix H for a table of values for each county). The differences between women and men for the HDI are demonstrated by the horizontal gap between a state's data points. Women's HDI was lower than men's HDI in all counties. Counties with the largest gap included Utah and Uintah. Counties with the smallest gap were San Juan and Wayne. As noted earlier, Utah was the state with the biggest difference between the HDI for women and men.

Regarding IHDI, the differences between women and men are demonstrated by the vertical gap between a state's data points. In most counties, women had a lower IHDI value than men. The largest gaps were in Iron and Sanpete counties. However, in seven counties women were slightly higher than men (e.g., Tooele and Weber), and some counties had very small IHDI gaps between women and men (e.g., Emery, Summit, Garfield).

**Figure 6. 2020 HDI and IHDI by County and Gender**



Women in Utah faced a double disadvantage because their HDI values were lower than men's (i.e., a gender disadvantage), and they experienced loss due to inequality when IHDI was calculated (i.e., a disadvantage attributable to inequalities in the distribution of the three dimensions of health, education, and income). Appendix H includes the percentage losses for the overall IHDI and each dimension by gender.

For women, losses due to inequality tended to be higher in rural areas; the highest loss for women was in Beaver (27.3%). Losses due to inequality tended to be higher in the Great Salt Lake region for men (i.e., Rich, 24.8%; Morgan and Weber, both 24.6%), although the greatest loss for men was also in Beaver (25.0%). Furthermore, when the HDI was adjusted for inequality, the loss tended to be

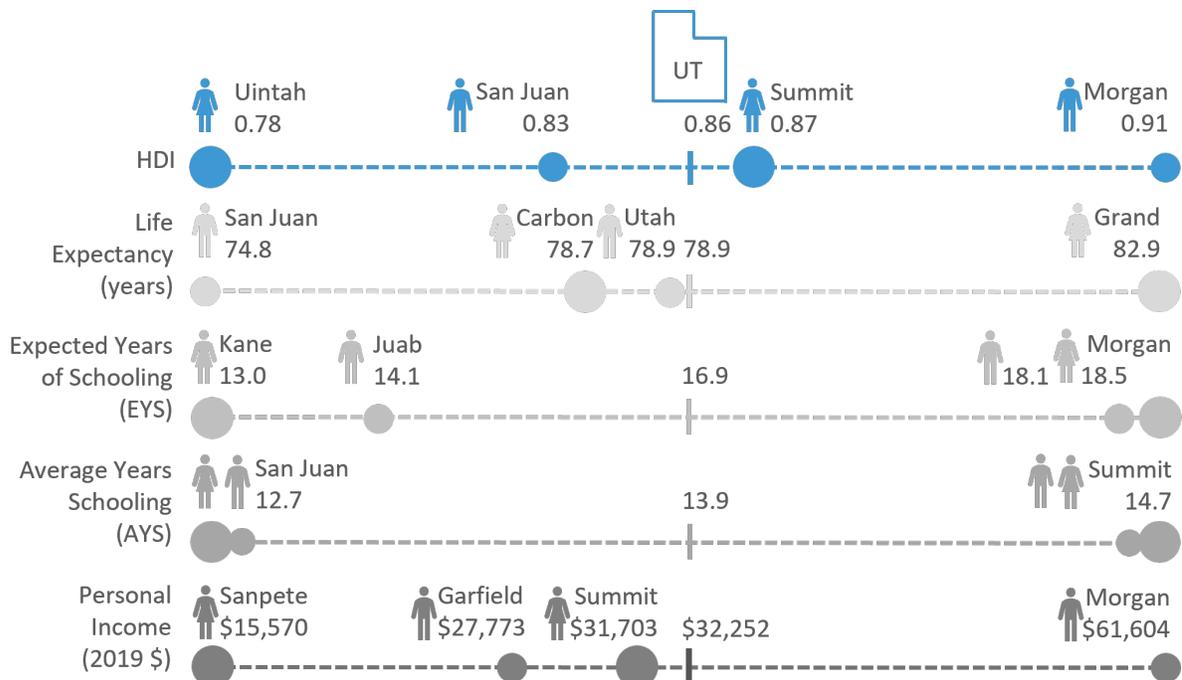
higher for men than for women in some counties. For instance, in the Great Salt Lake economic region, only in two counties did women have a higher loss than men (16.0% vs. 13.9% in Cache and 17.8% vs. 17.5% in Utah). In contrast, women experienced more loss than men did in the West Central and Southeast economic regions, except for in Wayne. These results do not mean that women have improved in their position relative to men; they still experienced losses due to inequality in all three dimensions. However, for women, the primary loss occurred in income, while for men it was a combination of health and income.

Women’s losses due to inequality in the income dimension varied significantly among some economic regions. For instance, loss due to inequality in income was 44.0% women in Beaver, which is part of the Southwest economic region. In the Great Salt Lake economic region, loss due to inequality in income was smaller for women in urban counties (except Cache), while rural counties showed double-digit losses (Rich, 29.0%; Juab, 16.0%; and Morgan, 11.0%). The remaining economic regions also showed double-digit losses for women in the income dimension, except for Washington (6.0%) in the Southwest economic region.

#### 4. 2020 HDI by Gender and Index Dimensions

To further explore gender discrepancies, Figure 7 shows the breakdown of HDI into its three dimensions: health (life expectancy), education (expected and average years of schooling), and income (in 2019 dollars). The figure displays the lowest and highest county values by gender. Utah’s overall value is situated in the center of each line of the figure for comparison; however, note that this value is not the midpoint between the lowest and highest county.

**Figure 7. 2020 HDI for Utah and the Highest and Lowest Counties by Gender**



As expected, women showed a higher life expectancy than men.<sup>37</sup> Grand, in the southeast region of Utah, had the highest life expectancy for women (82.9 years). Utah county had the highest life

<sup>37</sup> Even after we adjust the goalposts to account for higher life expectancy for women.

expectancy for men (78.9 years), which was just ahead of the county with the lowest life expectancy for women: Carbon (78.7 years). Carbon was ranked in the low development quartile for overall HDI. San Juan had the lowest life expectancy for men (74.8 years) and was also in the low development quartile.

Women performed better on the education measures (expected and average years of schooling). The highest values came from two counties in the Great Salt Lake region—Morgan and Summit), while the lowest values came from counties in rural areas (Kane, Juab, and San Juan). Interestingly, the average years of schooling for men and women resulted in ties after rounding. Summit had the highest average (14.7 years), and San Juan had the lowest average (12.7 years). The findings suggest that educational aspirations and achievement for women and men in rural areas are reduced compared to the state, even before adjusting for inequality.

Larger disparities between genders occurred in the income measure, which aligns with previous research.<sup>38</sup> It is an essential element of the HDI because of the capability aspect of the income: access to a decent living standard increases the opportunities for higher wellbeing conditions.

The last row in Figure 7 shows the gaps. The personal income of men in the highest county (Morgan) was almost double the income of women in the highest county (Summit). Furthermore, the personal income of women in the highest county (Summit) was double that of the personal income of women in the lowest county (Sanpete). Examining Utah's women participation in the labor force may help explain the sources of the disparities and what policies should be implemented to reduce the gap.<sup>39</sup>

## 5. 2020 HDI and IHDI Income Dimension by Development Quartile and Gender

The HDI and IHDI data have shown that women face greater disparities in the income dimension of these indexes. Figure 8 below shows the disparities in each of the economic development quartiles. The first panel of Figure 8 shows the income index for the 2020 HDI. For women, the highest HDI was 0.772, whereas men were above 0.850 in all quartiles, and the highest HDI was 0.889. Also, there were no key differences for women between the economic development quartiles; in each one, the income index was lower for women compared to men.

The second panel of Figure 8 shows the income index for the 2020 IHDI. There were noticeable differences between the low and very high economic development quartiles, and the difference in the income index by gender was smaller for the very high quartile. Put another way, the change in the income index after adjusting for inequality was less in the very high quartile, at least for women. Women in this quartile experienced a slight decline after the adjustment (from 0.772 to 0.738); for men, the decrease was greater (from 0.889 to 0.765).

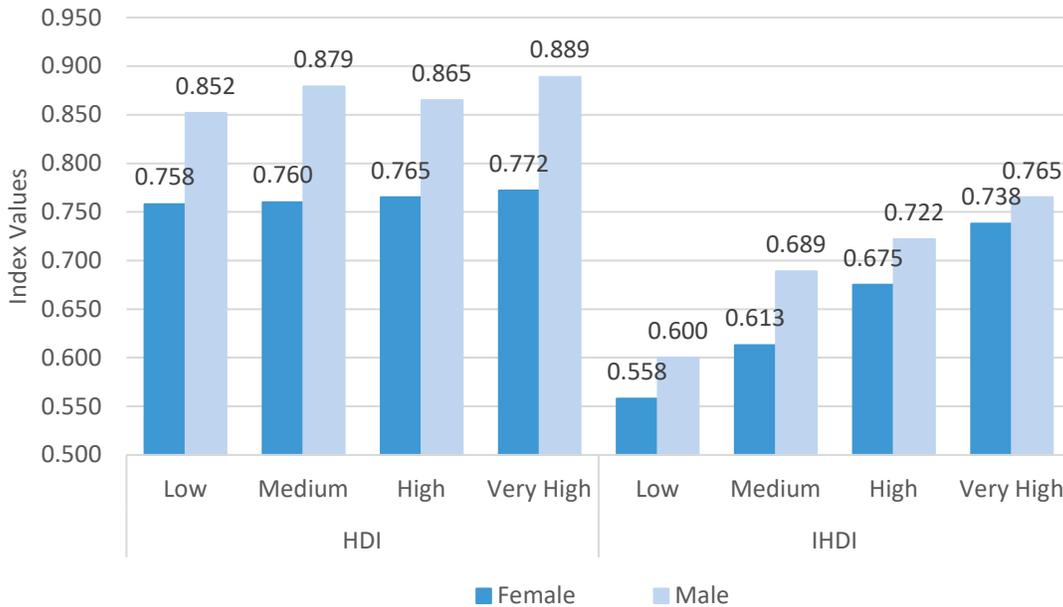
In sum, from the comparison between the HDI and the IHDI by dimensions and quartiles, it can be concluded that women are still more disadvantaged than men in achieving better wellbeing conditions. Even though the adjustment for inequality reduces these differences between gender, it does not eliminate the disparities, particularly those concerning income.

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<sup>38</sup> McCann, A. (2022, August 22); Madsen, S. R., & Madsen, G. P. (2021, December 2).

<sup>39</sup> Women in Utah show high participation in the labor force, but they are often concentrated in low-paying jobs with reduced opportunities for advancement. Madsen, S. R., & Scribner, R. T. (2019, December 19). Labor force participation among Utah women. *Utah Women's Health Review*. <https://doi.org/10.26054/0K4TDRE9TQ>

**Figure 8. Utah’s 2020 HDI and IHDI Income Dimension by Quartiles and Gender**

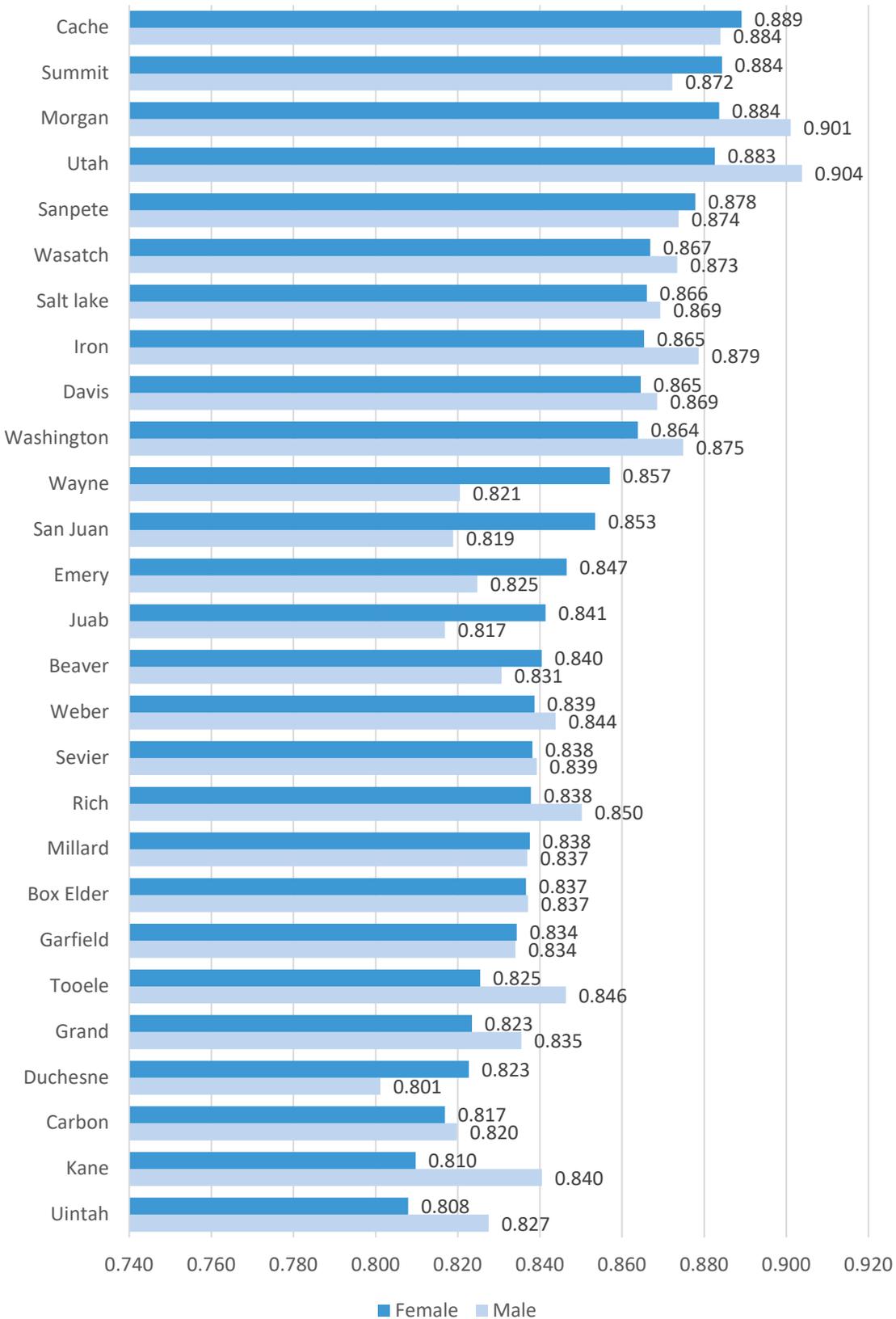


## 6. Human Capital: Combined 2020 Health and Education HDI Dimensions

To contrast with the income dimension on its own, the health and education dimension of the HDI were combined to form a measure of human capital. In Figure 9 below, the human capital values are displayed by gender and county; the data are sorted from the county with the highest human capital for women (Cache) to the county with lowest human capital for women (Uintah). The order did not coincide with the overall HDI rankings for females, except for Uintah’s bottom position. For instance, Salt Lake was in seventh place for human capital, but it was in second for HDI, and Sanpete was in fifth place for human capital, but it ranked 10th for HDI. In both instances, income played a determining role in lower overall HDI ranking for females.

However, taking the income dimension out of the calculation of HDI did not eliminate gender differences altogether. Human capital values were almost the same in some rural and low economic development counties for both genders (e.g., Garfield, Box Elder, Millard, and Sevier), which leaves income as the main driver in disparity of overall HDI. Human capital for women was better than for men in some counties (Duchesne, Beaver, Juab, Emery, San Juan, Wayne, Summit, and Cache), most of which are rural. Most of these were also in the middle of the range for human capital, although Summit and Cache were at the top. In these two cases, women’s better health and education outcomes may have compensated for their income disparities. Counties where women’s human capital values were lower than men’s included Morgan, Utah, Tooele, Kane, and Uintah.

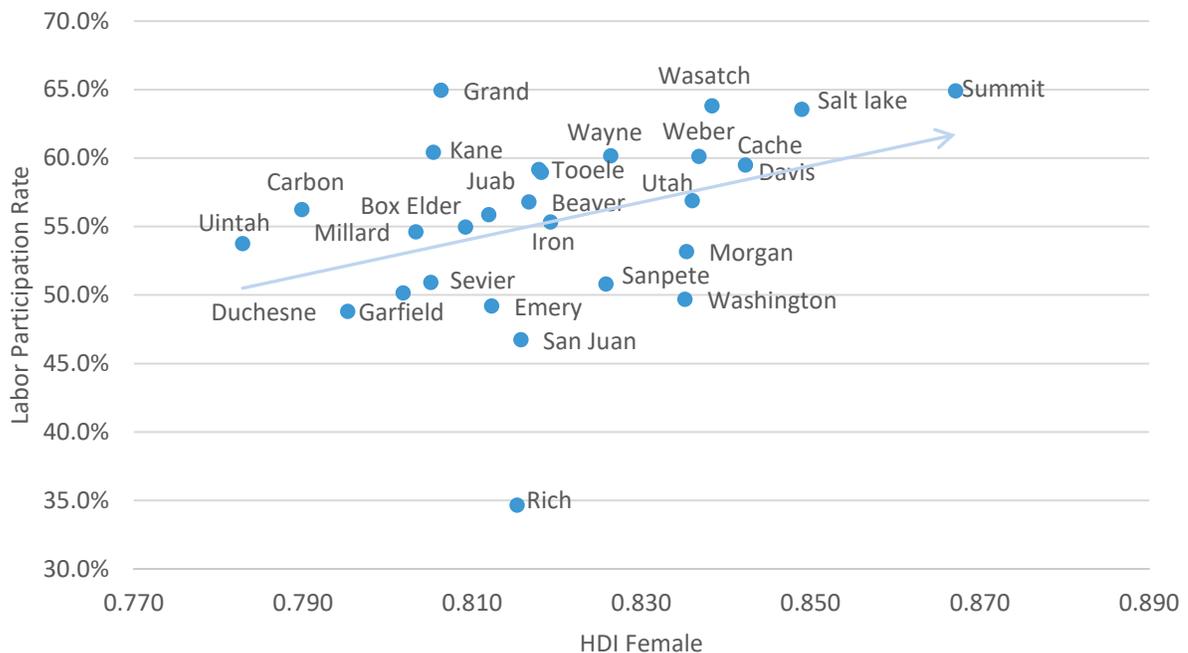
**Figure 9. 2020 Human Capital Values by County and Gender**



## 7. 2020 HDI and Labor Participation Rates

As mentioned above under point four, labor participation rates impact income and thus may positively affect the women’s HDI. To examine this relationship in the present data, female labor participation rates<sup>40</sup> were plotted against the HDI values for females. Figure 10 below shows evidence of a positive correlation. Higher labor participation rates were associated with higher HDI values. Some counties in the very high economic development quartile for women’s HDI showed high labor participation rates (e.g., Summit, Salt Lake, Davis, Wasatch); these counties appear above the trend line in the figure. Some counties in the low economic development quartile showed low participation rates (e.g., Duchesne, Sevier, Garfield); these counties appear below the trend line in the figure. Other counties in the low quartile category were above the trend line (e.g., Uintah, Carbon, Kane). This means that women’s HDI was low despite these counties having higher labor participation rates. These rural counties displayed more disparities for Utah women and warrant further analysis. One outlier also needs further exploration: Rich had the lowest female participation rate (35.0%); however, it belonged to the medium economic development quartile for women’s HDI.

**Figure 10. 2020 Female HDI by Female Labor Participation Rate and County**



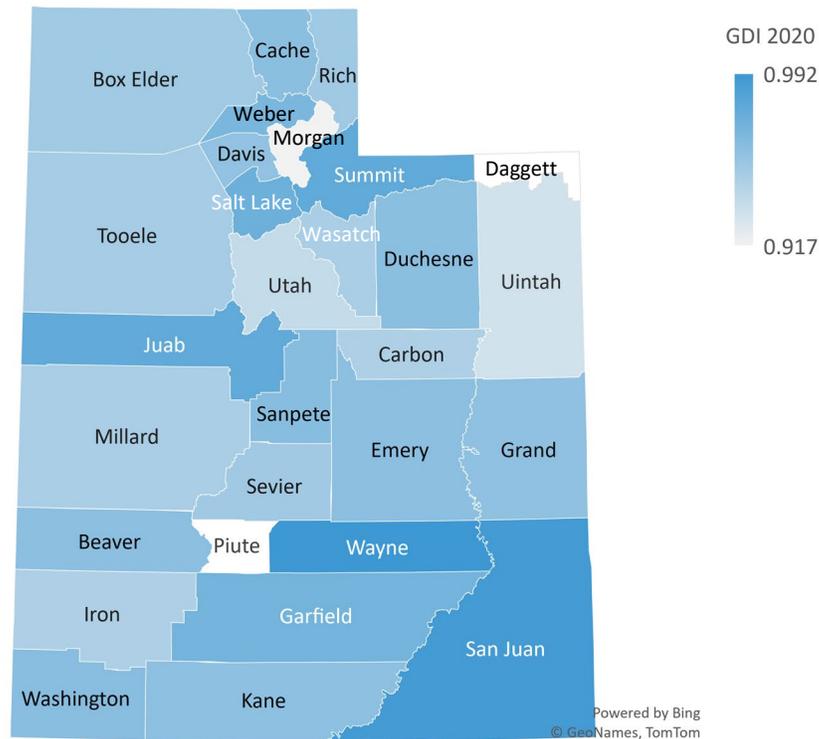
## 8. 2020 GDI by County

To close this section, we look at GDI, or the ratio between women’s and men’s HDI, by county. From the state analyses above, the 2020 GDI for Utah was the lowest compared to other states. Figure 11 below provides a visual heat map representation of the 2020 GDI data. All GDI values were below one, which indicated that women’s HDI was lower than men’s HDI. The pattern found with HDI and

<sup>40</sup> Labor participation rates were derived from Utah Department of Workforce Services, Women in the Workforce data dashboards: <https://jobs.utah.gov/wi/data/library/index.html>.

IHDI—where higher development was concentrated in more urban regions—was not as evident with the GDI. For instance, Utah and Morgan were ranked in the bottom three counties for the GDI despite being in the highest quartile for the HDI and the IHDI. In contrast, Wayne was in the highest quartile for the GDI but in the medium and low quartiles for the HDI and the IHDI, respectively. Not all counties followed this pattern; counties such as Wasatch, Summit, and Salt Lake had a GDI consistent with their HDI and IHDI values. Another group of counties in the medium quartile for their HDI or IHDI values stayed in the medium quartile for the GDI or moved to the high quartile. One possible interpretation is that the wellbeing conditions in rural counties were already low and that differences between genders were not substantial. See Appendix I for the GDI rank and values for each county.

**Figure 11. Heat Map of 2020 GDI by County**



## Section Summary

Even though Utah ranks high in the HDI and IHDI, in state comparisons, disparities between genders are still evident. A closer look at the three dimensions that make up the indexes revealed some explanation of the disparities. We found significant income gaps to be the primary source of the disparities, considering the different levels of economic development between counties. Even when examining human capital (as a combination of the health and education indexes), gender gaps persisted, particularly in the low economic development areas in which women seem to face disparities in income conditions but also in health and education conditions. Because HDI is becoming more relevant as an alternative indicator for the GDP per capita, we explored the association between women’s labor participation rate and women’s HDI. We found a positive trend—as women’s labor participation increased, women’s HDI tended to increase as well. Finally, the GDI showed variability in the ratio between women’s and men’s HDI across regions of the state, and, unfortunately, the GDI did not change much in the last five years. This finding supports previous evidence showing the need to improve the status of Utah women.

## Summary & Recommendations

This white paper provides evidence of gender disparities in Utah counties using alternative indicators to the GDP. While the GDP is a useful output measurement, it does not account for population wellbeing. Human development indexes capture the degree to which people can live long healthy lives, access education, and enjoy a decent standard of living. Thus, to better analyze gender disparities, it is important to go beyond the GDP for a more expansive outlook of women's conditions. This report offers quantitative evidence using the HDI, IHDI, GDI, and GII to examine how Utah compared to other US states. Additionally, the HDI, IHDI, and GDI were used to bring attention to the gender disparities in Utah at the county level. In summary, here are some of the key findings of this report:

- In 2015 and 2020, the state of Utah ranked in the high economic development category for HDI, even after the adjustment for inequality in the three dimensions. The loss due to inequality was 15.4% in 2020, which was among the highest of all states. The main variable to explain the loss was in the health index, with a loss of 22.3% in life expectancy. It is worth noting that most states faced significant losses in life expectancy because of COVID-19.
- Utah counties in the highest ranking of HDI and IHDI belong to the Great Salt Lake economic region and comprise most urban areas (86.5% of the total population).<sup>41</sup> In comparison, low HDI and IHDI were more present in rural areas. A disaggregated analysis of each dimension by county provided a similar picture. The estimated loss due to inequality was also higher for rural areas, and even though rural areas house 13.5% of the population,<sup>42</sup> these areas may require more policy attention.
- The calculation of the GDI at the national level places Utah at the bottom for 2015 and 2020. The GDI is the ratio of the differentiated HDI by gender. Therefore, regarding capabilities (i.e., health, education, income), men fare better than women. However, when the GII is measured, Utah ranks 24th among the 50 states. This favorable result could not be verified more granularly because several of the measured variables were unavailable at the county level.
- The GDI calculated at the county level exposed significant gender disparities even in urban areas. For example, even though Utah county had high HDI and IHDI values, and it belongs to the Great Salt Lake economic region, GDI disparities indicate that women and men do not have equal opportunities to achieve better wellbeing conditions. In contrast, some rural areas, such as San Juan, have increased in GDI ranking between 2015 and 2020.
- Income was the central dimension in which women faced major challenges in pursuing better wellbeing conditions. The income index differentiated by gender was lower for women in all economic development quartiles. This means that regardless of a county's overall economic development, women had a lower value in the income dimension than men did. Even after adjusting for unequal distributions in the dimensions (i.e., by computing the IHDI), women's values in the income dimension were still lower than they were for men. However, the gap tended to be smaller for counties in the very high economic development category.
- The significance of income for women's wellbeing was compared with the labor participation rate. A positive correlation between labor participation rate and HDI for women was found for 2020, which suggests that as labor participation increases, women's overall human development will improve. However, there is a need for more quantitative econometric work to establish causation between the two variables. We cannot conclude that better outcomes in income will solve all the disparities because there was evidence of inequalities in education and health as well.

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<sup>41</sup> U.S. Census Bureau. (2022).

<sup>42</sup> U.S. Census Bureau. (2022).

Still, policymakers aiming to improve women's wellbeing conditions would do well to start by examining how to reduce the income gap.

Some recommendations from this work are the following:

- These initial findings provide a valuable starting point for analyzing human development in Utah. However, to gain a more complete understanding of the issues, there is a need for more granular data at the county level that supplements and confirms these findings. To address the issue of gender gaps in particular, it is essential to use indexes that consider other measures, such as women's empowerment, and to gather more quantitative evidence to pinpoint areas where specific policies can help reduce these gaps. For instance, programs and initiatives that support women in entering or re-entering the labor force can be instrumental in improving overall human development. This can include policies that provide access to affordable childcare, support for women-owned businesses, and programs that help women acquire new skills or education. By gathering more quantitative evidence and using a more nuanced approach to analyzing human development, we can identify specific policy interventions that can help address the challenges faced by different groups in Utah. This will enable us to make more informed decisions and develop more effective policies that promote sustainable and equitable human development across the state.
- Despite Utah's solid economic growth, there is a lack of consistent transformation of that growth into better social wellbeing conditions for its population. While economic growth is important, it is not the only factor contributing to overall wellbeing. To address this issue, it is important for the state to measure progress using indexes beyond GDP regularly. These indexes can provide a more comprehensive view of the state's progress in areas such as health, education, and social welfare. By measuring progress in these areas, the state can better understand the impact of policies and initiatives on the wellbeing of its population, and pinpoint areas where more resources or attention are needed. Measuring progress with indexes beyond GDP can also help to promote more equitable and sustainable economic growth. Economic growth alone does not guarantee that everyone benefits equally or that the growth is sustainable in the long term. By considering a wider range of factors in measuring progress, the state can promote a more equitable and sustainable future for its residents.
- The United Nations' 17 Sustainable Development Goals include a specific goal (Goal 5) that focuses on achieving gender equality and empowering women and girls. By supporting this goal, the state has a unique opportunity to engage in collaborative projects with researchers and government officials from other states and nations who share the same vision of achieving gender equality. Through joint efforts, we can work towards creating a more equitable and just society.
- We not only need to reduce gender disparities but also disparities between rural and urban areas. In terms of human development, doing so requires providing equal opportunities for individuals in both rural and urban areas to access better health and education, and to acquire a decent standard of living. This can be achieved through policies and initiatives that target the unique challenges faced by individuals living in rural areas, such as limited access to healthcare facilities and educational resources, as well as lower job opportunities and wages. By reducing the disparities between rural and urban areas, we can ensure that everyone, regardless of their location, has the same chances to reach their full potential and contribute to the development of their communities and society. Doing so will lead to a more equitable and sustainable future for everyone.

*Authors:* Dr. Maritza Sotomayor has been an Associate Professor of Finance in Economics at the Woodbury School of Business, Utah Valley University since 2009. She holds a PhD in Applied Economics, and her research focuses on international economics, including Global Value Chains, Latin American economics, and alternative indicators of GDP. Dr. Sotomayor is currently a visiting professor at the Universidad Nacional de Moreno in Buenos Aires, Argentina. Dr. Emily Swensen Darowski is the Associate Director for the Utah Women & Leadership Project. Her role involves research team management, building partnerships and collaborations, developing resources and special initiatives, and fundraising. Emily holds a doctorate in cognitive psychology from Michigan State University. Her research has focused on the relationship between working memory and higher order cognitive processes (e.g., reading), the impact of aging and memory, improving undergraduate writing, and gender equity. For questions and information: [uwlp@usu.edu](mailto:uwlp@usu.edu) or [www.utwomen.org](http://www.utwomen.org).

*Acknowledgements:* Special thanks Parker Howell for his research assistance. Thanks to Dr. Susan R. Madsen for her guidance, coaching, and editing, and to Kylie Downs for her assistance with formatting.

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**Appendix A**  
**HDI and HDI Measures by State: 2020 Compared to 2015**

State	HDI Rank		HDI		LE		EYS		AYS		PI	
	'20	'15	'20	'15	'20	'15	'20	'15	'20	'15	'20	'15
<b>Very High Human Development</b>												
Massachusetts	1	1	0.878	0.870	78.7	80.3	18.0	18.1	14.1	13.9	\$40,161	\$29,577
Connecticut	2	2	0.874	0.868	78.6	80.3	17.9	17.9	13.9	13.7	\$39,350	\$30,790
New Hampshire	3	6	0.871	0.859	79.3	79.5	17.3	17.5	14.0	13.8	\$37,487	\$29,213
Minnesota	4	7	0.868	0.857	79.1	79.8	17.2	17.3	13.9	13.7	\$37,786	\$28,740
New Jersey	5	3	0.868	0.868	77.4	80.6	17.8	17.9	13.8	13.6	\$40,311	\$30,750
Maryland	6	4	0.865	0.864	77.3	79.5	17.3	17.3	14.0	13.8	\$42,034	\$33,204
Colorado	7	8	0.865	0.857	78.7	79.8	16.9	17.1	14.0	13.9	\$37,395	\$28,498
Washington	8	12	0.864	0.852	79.6	80.2	16.5	16.6	13.8	13.6	\$38,126	\$28,271
Vermont	9	10	0.864	0.853	78.8	79.6	17.4	17.6	14.1	13.8	\$33,370	\$25,356
Virginia	10	9	0.861	0.855	78.0	79.4	17.1	17.2	13.9	13.7	\$37,356	\$28,960
Rhode Island	11	13	0.861	0.851	78.4	79.5	17.7	17.7	13.6	13.3	\$34,221	\$26,246
New York	12	5	0.860	0.861	77.9	81.0	17.7	17.7	13.5	13.4	\$35,821	\$27,478
<b>High Human Development</b>												
California	13	11	0.860	0.852	79.4	81.4	17.4	17.5	13.2	13.0	\$34,140	\$25,053
Hawaii	14	21	0.858	0.844	79.4	78.8	16.2	16.5	13.7	13.5	\$37,276	\$28,775
Utah	15	20	0.857	0.844	78.9	79.7	16.9	16.9	13.9	13.7	\$32,253	\$24,137
Wisconsin	16	17	0.854	0.848	78.1	79.6	17.0	17.3	13.6	13.4	\$33,743	\$25,630
Oregon	17	24	0.853	0.840	78.9	79.5	16.7	16.8	13.7	13.5	\$32,471	\$23,582
Illinois	18	14	0.853	0.850	77.0	79.3	17.3	17.5	13.6	13.4	\$34,920	\$26,751
Nebraska	19	19	0.853	0.846	77.9	79.2	17.1	17.3	13.6	13.4	\$33,541	\$25,460
Delaware	20	18	0.851	0.847	77.0	78.6	17.1	17.2	13.6	13.4	\$34,944	\$28,106
Maine	21	29	0.849	0.836	78.0	78.5	16.9	17.0	13.7	13.5	\$31,235	\$23,431
Iowa	22	15	0.849	0.849	77.5	79.6	17.1	17.5	13.5	13.4	\$33,101	\$25,815
North Dakota	23	16	0.849	0.849	77.1	79.6	16.5	16.8	13.7	13.5	\$36,769	\$28,192
Florida	24	31	0.848	0.834	78.5	78.6	17.2	17.3	13.4	13.2	\$29,523	\$22,847
<b>Medium Human Development</b>												
Wyoming	25	22	0.846	0.842	77.3	78.5	16.6	16.7	13.7	13.5	\$33,443	\$27,562
Pennsylvania	26	26	0.845	0.839	76.8	78.4	17.0	17.2	13.6	13.3	\$32,557	\$24,968
Alaska	27	28	0.844	0.837	78.6	78.5	15.4	15.8	13.6	13.5	\$35,316	\$29,149
Kansas	28	23	0.843	0.842	76.6	78.4	16.9	17.2	13.7	13.5	\$32,328	\$25,313
Michigan	29	30	0.842	0.836	76.5	78.1	17.1	17.4	13.6	13.4	\$31,107	\$23,453
Arizona	30	27	0.841	0.838	77.7	80.0	16.4	16.6	13.4	13.2	\$31,775	\$24,239
Idaho	31	35	0.841	0.830	78.5	79.4	16.3	16.4	13.5	13.3	\$29,116	\$21,831
South Dakota	32	25	0.840	0.839	76.7	79.1	16.6	16.8	13.6	13.4	\$32,352	\$24,856
Montana	33	36	0.839	0.829	77.0	78.2	16.3	16.4	13.8	13.6	\$30,189	\$22,697

North Carolina	34	37	0.837	0.829	76.6	78.0	16.7	16.9	13.5	13.2	\$30,482	\$23,186
Georgia	35	34	0.837	0.830	76.0	77.6	17.0	17.1	13.4	13.2	\$31,302	\$23,712
Ohio	36	33	0.837	0.830	76.1	77.3	16.8	17.1	13.5	13.3	\$31,466	\$24,051
Texas	37	32	0.837	0.832	76.9	78.9	16.7	16.8	13.1	12.8	\$31,855	\$24,442
South Carolina	38	42	0.835	0.821	77.0	76.9	16.6	16.9	13.4	13.1	\$28,926	\$22,136
<b>Low Human Development</b>												
Missouri	39	38	0.834	0.829	75.8	77.4	16.7	16.9	13.5	13.3	\$31,045	\$23,534
Mississippi	40	46	0.834	0.811	78.1	76.2	17.0	17.1	13.1	12.8	\$25,576	\$19,866
Indiana	41	39	0.833	0.827	75.9	77.2	16.7	16.9	13.3	13.1	\$31,288	\$23,940
Oklahoma	42	43	0.832	0.815	76.7	75.8	16.6	16.7	13.2	13.1	\$29,305	\$23,059
Alabama	43	47	0.832	0.809	77.1	75.4	16.8	16.8	13.2	13.0	\$27,367	\$21,212
Tennessee	44	44	0.831	0.814	76.7	76.2	16.4	16.6	13.3	13.0	\$29,357	\$22,038
New Mexico	45	41	0.830	0.825	77.5	78.4	16.3	16.7	13.3	13.1	\$26,931	\$21,711
Nevada	46	40	0.830	0.826	76.8	78.5	15.8	16.1	13.1	12.9	\$32,340	\$25,230
Louisiana	47	45	0.829	0.814	76.6	76.1	16.8	16.9	13.1	12.8	\$27,478	\$22,254
Kentucky	48	48	0.827	0.808	76.6	75.5	16.4	16.7	13.1	12.9	\$27,846	\$21,268
Arkansas	49	50	0.824	0.807	76.3	75.8	16.5	16.7	13.1	12.8	\$26,857	\$20,577
West Virginia	50	49	0.822	0.808	76.7	76.2	16.2	16.6	13.0	12.8	\$26,514	\$20,662

*Note.* HDI = Human Development Index. AYS = Average Years of Schooling; EYS = Expected Years of Schooling; LE = Life Expectancy (years); PI = Personal Income in 2019 Dollars.

**Appendix B**  
**IHDI & IHDI Dimensions by State: 2020**

State	IHDI Rank	Diff. with HDI Rank	IHDI: O	Loss: O	IHDI: H	Loss: H	IHDI: E	Loss: E	IHDI: I	Loss: I
<b>Very High Human Development</b>										
Florida	1	23	0.739	12.8%	0.725	19.4%	0.722	12.3%	0.773	6.2%
Vermont	2	7	0.739	14.5%	0.712	21.2%	0.736	13.4%	0.771	8.4%
California	3	10	0.738	14.1%	0.728	20.3%	0.736	10.6%	0.750	11.1%
Wisconsin	4	12	0.738	13.6%	0.704	21.2%	0.743	10.0%	0.768	8.9%
New Hampshire	5	-2	0.734	15.6%	0.714	21.7%	0.747	11.5%	0.743	13.4%
Colorado	6	1	0.734	15.2%	0.709	21.5%	0.732	12.4%	0.761	11.2%
Maine	7	14	0.733	13.7%	0.702	21.4%	0.729	11.6%	0.770	7.5%
Connecticut	8	-6	0.731	16.3%	0.704	21.8%	0.752	12.2%	0.738	14.6%
Massachusetts	9	-8	0.731	16.8%	0.703	22.1%	0.764	11.5%	0.726	16.4%
Rhode Island	10	1	0.729	15.3%	0.707	21.2%	0.733	12.8%	0.748	11.5%
Hawaii	11	3	0.729	15.1%	0.719	21.4%	0.706	12.6%	0.764	10.9%
Virginia	12	-2	0.728	15.4%	0.701	21.4%	0.734	12.2%	0.751	12.4%
<b>High Human Development</b>										
Oregon	13	4	0.726	14.9%	0.713	21.2%	0.698	14.9%	0.770	8.0%
New York	14	-2	0.726	15.6%	0.700	21.4%	0.731	12.9%	0.749	12.1%
Minnesota	15	-11	0.725	16.5%	0.712	21.8%	0.705	15.8%	0.759	11.6%
Utah	16	-1	0.725	15.4%	0.704	22.3%	0.718	13.6%	0.754	9.8%
Michigan	17	12	0.725	13.9%	0.684	21.3%	0.724	12.4%	0.768	7.5%
North Carolina	18	16	0.724	13.6%	0.685	21.4%	0.718	11.9%	0.771	6.8%
Wyoming	19	6	0.723	14.5%	0.694	21.2%	0.717	12.2%	0.76	9.6%
Arizona	20	10	0.722	14.1%	0.708	20.2%	0.687	14.6%	0.775	7.1%
Maryland	21	-15	0.722	16.5%	0.695	21.1%	0.744	11.6%	0.729	16.6%
Texas	22	15	0.722	13.8%	0.685	21.7%	0.715	10.9%	0.767	8.1%
Idaho	23	8	0.721	14.2%	0.699	22.3%	0.704	12.4%	0.763	7.1%
Washington	24	-16	0.721	16.6%	0.725	20.9%	0.698	14.8%	0.742	13.8%
<b>Medium Human Development</b>										
Nebraska	25	-6	0.721	15.4%	0.693	22.1%	0.702	15.0%	0.770	8.5%
Georgia	26	9	0.721	13.9%	0.674	21.8%	0.725	11.5%	0.767	7.8%
South Dakota	27	5	0.721	14.2%	0.678	22.3%	0.721	11.3%	0.767	8.4%
Kansas	28	0	0.720	14.6%	0.677	22.2%	0.718	12.8%	0.769	8.1%
Ohio	29	7	0.720	14.0%	0.678	21.4%	0.714	12.4%	0.770	7.5%
Montana	30	3	0.719	14.3%	0.687	21.7%	0.697	14.4%	0.777	6.0%
Illinois	31	-13	0.719	15.7%	0.686	21.8%	0.716	14.1%	0.757	10.7%
Delaware	32	-12	0.719	15.5%	0.687	21.7%	0.710	14.1%	0.761	10.2%

South Carolina	33	5	0.719	14.0%	0.684	22.1%	0.705	12.9%	0.770	6.2%
Iowa	34	-12	0.718	15.4%	0.685	22.5%	0.706	14.4%	0.767	8.7%
Indiana	35	6	0.718	13.8%	0.675	21.5%	0.719	11.1%	0.763	8.2%
Alaska	36	-9	0.718	14.9%	0.724	19.7%	0.684	13.0%	0.749	11.9%
Kentucky	37	11	0.718	13.2%	0.674	22.7%	0.717	10.1%	0.766	6.0%
<b>Low Human Development</b>										
North Dakota	38	-15	0.717	15.5%	0.685	22.1%	0.705	13.4%	0.764	10.6%
New Mexico	39	6	0.717	13.7%	0.699	21.0%	0.682	14.6%	0.773	4.5%
New Jersey	40	-35	0.716	17.4%	0.687	22.2%	0.735	13.7%	0.728	16.2%
Arkansas	41	8	0.715	13.2%	0.673	22.2%	0.712	10.6%	0.762	5.8%
Tennessee	42	2	0.714	14.1%	0.674	22.7%	0.704	12.1%	0.767	6.7%
Pennsylvania	43	-17	0.714	15.5%	0.68	22.3%	0.706	14.3%	0.757	9.6%
Alabama	44	-1	0.712	14.4%	0.678	22.8%	0.703	13.0%	0.758	6.6%
Missouri	45	-6	0.712	14.7%	0.669	22.0%	0.700	14.1%	0.771	7.2%
Mississippi	46	-6	0.711	14.7%	0.703	21.3%	0.675	16.5%	0.759	5.5%
Louisiana	47	0	0.710	14.3%	0.673	22.7%	0.704	12.4%	0.755	7.1%
Nevada	48	-2	0.709	14.5%	0.689	21.2%	0.672	13.9%	0.770	8.0%
Oklahoma	49	-7	0.705	15.3%	0.678	22.4%	0.674	16.2%	0.766	6.8%
West Virginia	50	0	0.704	14.3%	0.677	22.5%	0.680	13.7%	0.758	6.1%

*Note.* HDI = Human Development Index; IHDI = Inequality-adjusted Human Development Index. E = Education Dimension; H = Health Dimension; I = Income Dimension; O = Overall. Loss = Percentage loss between HDI and IHDI.

**Appendix C**  
**HDI, IHDI, & Loss Due to Inequality by Gender and State: 2020**

State	Female			Male		
	HDI	IHDI	Loss	HDI	IHDI	Loss
Alabama	0.817	0.714	12.6%	0.838	0.708	15.5%
Alaska	0.842	0.736	12.6%	0.853	0.710	16.8%
Arizona	0.844	0.738	12.6%	0.851	0.717	15.7%
Arkansas	0.819	0.721	12.0%	0.825	0.712	13.7%
California	0.857	0.753	12.1%	0.871	0.732	16.0%
Colorado	0.861	0.752	12.7%	0.876	0.725	17.2%
Connecticut	0.875	0.754	13.8%	0.889	0.728	18.1%
Delaware	0.854	0.735	13.9%	0.858	0.717	16.4%
Florida	0.846	0.745	11.9%	0.851	0.728	14.5%
Georgia	0.839	0.738	12.0%	0.849	0.718	15.4%
Hawaii	0.854	0.740	13.3%	0.863	0.717	16.9%
Idaho	0.830	0.721	13.1%	0.856	0.729	14.8%
Illinois	0.853	0.739	13.4%	0.868	0.717	17.4%
Indiana	0.829	0.726	12.4%	0.845	0.713	15.6%
Iowa	0.849	0.735	13.4%	0.864	0.720	16.7%
Kansas	0.842	0.735	12.7%	0.859	0.724	15.7%
Kentucky	0.822	0.724	11.9%	0.827	0.711	14.0%
Louisiana	0.822	0.720	12.4%	0.832	0.706	15.1%
Maine	0.848	0.740	12.7%	0.855	0.728	14.9%
Maryland	0.869	0.746	14.2%	0.876	0.715	18.4%
Massachusetts	0.876	0.753	14.0%	0.890	0.722	18.9%
Michigan	0.839	0.732	12.8%	0.856	0.724	15.4%
Minnesota	0.867	0.745	14.1%	0.880	0.719	18.3%
Mississippi	0.821	0.698	15.0%	0.836	0.706	15.6%
Missouri	0.835	0.727	12.9%	0.844	0.711	15.8%
Montana	0.838	0.728	13.1%	0.854	0.725	15.1%
Nebraska	0.851	0.734	13.7%	0.867	0.724	16.5%
Nevada	0.832	0.722	13.2%	0.841	0.712	15.3%
New Hampshire	0.864	0.752	13.0%	0.877	0.720	17.9%
New Jersey	0.870	0.745	14.4%	0.887	0.714	19.5%
New Mexico	0.829	0.724	12.7%	0.839	0.723	13.8%
New York	0.867	0.752	13.3%	0.878	0.729	17.0%
North Carolina	0.838	0.734	12.4%	0.846	0.722	14.7%
North Dakota	0.852	0.739	13.3%	0.866	0.722	16.6%
Ohio	0.832	0.728	12.5%	0.846	0.714	15.6%
Oklahoma	0.825	0.710	13.9%	0.834	0.700	16.1%

Oregon	0.849	0.739	13.0%	0.865	0.720	16.8%
Pennsylvania	0.844	0.729	13.6%	0.858	0.714	16.8%
Rhode Island	0.859	0.743	13.5%	0.871	0.721	17.2%
South Carolina	0.829	0.722	12.9%	0.837	0.716	14.5%
South Dakota	0.843	0.738	12.5%	0.855	0.727	15.0%
Tennessee	0.821	0.718	12.5%	0.830	0.706	14.9%
Texas	0.837	0.738	11.8%	0.852	0.724	15.0%
Utah	0.841	0.729	13.3%	0.878	0.732	16.6%
Vermont	0.863	0.744	13.8%	0.874	0.739	15.4%
Virginia	0.859	0.747	13.0%	0.874	0.722	17.4%
Washington	0.857	0.740	13.7%	0.877	0.707	19.4%
West Virginia	0.817	0.710	13.1%	0.832	0.706	15.1%
Wisconsin	0.850	0.750	11.8%	0.866	0.730	15.7%
Wyoming	0.844	0.741	12.2%	0.862	0.724	16.0%

*Note.* HDI = Human Development Index; IHDI = Inequality-adjusted Human Development Index. Loss = Percentage loss between HDI and IHDI.

**Appendix D**  
**Utah & Median**

**HDI, HDI by Dimension, IHDI, & Loss Due to Inequality: 2020**

	<b>HDI: H</b>	<b>HDI: E</b>	<b>HDI: I</b>	<b>HDI: O</b>	<b>IHDI: O</b>	<b>Loss: O</b>
<b>Female</b>						
Utah	0.909	0.830	0.789	0.841	0.729	13.3%
Median	0.904	0.830	0.806	0.844	0.737	13.0%
<b>Male</b>						
Utah	0.929	0.831	0.878	0.878	0.732	16.6%
Median	0.900	0.809	0.866	0.857	0.720	15.8%

*Note.* HDI = Human Development Index; IHDI = Inequality-adjusted Human Development Index; E = Education Dimension; H = Health Dimension; I = Income Dimension; O = Overall. Loss = Percentage loss between HDI and IHDI.

**Appendix E**  
**GDI & GII by State: 2020**

<b>State</b>	<b>GDI Rank</b>	<b>GDI 2020</b>	<b>Female HDI</b>	<b>Male HDI</b>	<b>GI Rank</b>	<b>GI 2019</b>
Florida	1	0.995	0.846	0.851	18	0.152
Maine	2	0.994	0.848	0.855	6	0.112
North Carolina	3	0.994	0.838	0.846	20	0.155
Alaska	4	0.993	0.842	0.853	30	0.181
New York	5	0.993	0.867	0.878	11	0.131
Nevada	6	0.992	0.832	0.841	22	0.168
Maryland	7	0.992	0.869	0.876	10	0.124
Mississippi	8	0.991	0.821	0.836	48	0.282
Delaware	9	0.991	0.854	0.858	32	0.184
Vermont	10	0.991	0.863	0.874	3	0.092
Oklahoma	11	0.991	0.825	0.834	44	0.271
Georgia	12	0.990	0.839	0.849	40	0.232
Hawaii	13	0.990	0.854	0.863	26	0.175
Arkansas	14	0.989	0.819	0.825	49	0.300
California	15	0.989	0.857	0.871	4	0.098
Arizona	16	0.989	0.844	0.851	29	0.180
New Mexico	17	0.989	0.829	0.839	35	0.207
North Dakota	18	0.988	0.852	0.866	33	0.201
Connecticut	19	0.987	0.875	0.889	5	0.104
Illinois	20	0.987	0.853	0.868	7	0.118
Wisconsin	21	0.986	0.850	0.866	21	0.159
Ohio	22	0.986	0.832	0.846	28	0.179
Montana	23	0.986	0.838	0.854	31	0.181
Tennessee	24	0.986	0.821	0.830	43	0.268
Texas	25	0.986	0.837	0.852	36	0.208
New Jersey	26	0.986	0.870	0.887	17	0.147
Louisiana	27	0.986	0.822	0.832	46	0.279
Kentucky	28	0.985	0.822	0.827	47	0.279
Missouri	29	0.985	0.835	0.844	38	0.210
New Hampshire	30	0.985	0.864	0.877	2	0.090
South Dakota	31	0.985	0.843	0.855	37	0.209
Colorado	32	0.985	0.861	0.876	15	0.143
Rhode Island	33	0.985	0.859	0.871	9	0.123
Massachusetts	34	0.985	0.876	0.890	1	0.088
Virginia	35	0.984	0.859	0.874	19	0.154

Indiana	36	0.984	0.829	0.845	39	0.226
Pennsylvania	37	0.984	0.844	0.858	14	0.143
Kansas	38	0.984	0.842	0.859	34	0.201
Nebraska	39	0.984	0.851	0.867	27	0.178
West Virginia	40	0.983	0.817	0.832	45	0.272
Iowa	41	0.983	0.849	0.864	23	0.168
Oregon	42	0.983	0.849	0.865	13	0.135
Minnesota	43	0.983	0.867	0.880	12	0.131
Michigan	44	0.982	0.839	0.856	16	0.147
South Carolina	45	0.978	0.829	0.837	42	0.255
Washington	46	0.978	0.857	0.877	8	0.123
Wyoming	47	0.977	0.844	0.862	41	0.240
Alabama	48	0.975	0.817	0.838	50	0.307
Idaho	49	0.971	0.830	0.856	25	0.173
Utah	50	0.961	0.841	0.878	24	0.170

*Note.* GDI = Gender Development Index; GII = Gender Inequality Index; HDI = Human Development Index.

**Appendix F**  
**HDI & HDI Measures by Utah Counties: 2020 Compared to 2015**

State and County	HDI Rank		HDI		LE		EYS		AYS		PI	
	'20	'15	'20	'15	'20	'15	'20	'15	'20	'15	'20	'15
Utah	15	20	0.857	0.844	78.9	79.7	16.9	16.9	13.9	13.7	\$32,253	\$24,137
<b>East Central</b>												
Carbon	27	26	0.807	0.802	74.9	75.0	15.6	16.5	13.3	13.1	\$25,081	\$19,799
Emery	17	27	0.827	0.795	75.8	77.0	16.3	14.3	13.3	12.9	\$29,411	\$21,642
<b>Greater Salt Lake</b>												
Box Elder	14	11	0.836	0.826	78.3	78.9	15.5	15.7	13.4	13.3	\$31,482	\$24,120
Cache	5	5	0.862	0.844	80.5	79.9	17.9	17.9	14.1	13.9	\$25,127	\$19,476
Davis	3	1	0.867	0.855	80.3	80.7	16.3	16.4	14.1	14.0	\$36,580	\$27,763
Juab	23	20	0.818	0.812	77.5	78.3	15.0	15.8	13.2	13.0	\$26,897	\$19,803
Morgan	1	2	0.880	0.855	79.1	78.1	18.3	17.3	14.3	14.0	\$36,625	\$30,355
Rich	16	13	0.834	0.822	80.2	80.9	15.1	15.6	13.5	13.4	\$27,354	\$18,475
Salt Lake	6	6	0.862	0.844	79.4	79.5	16.7	16.7	13.8	13.6	\$35,519	\$25,969
Summit	2	3	0.876	0.854	78.0	77.6	17.1	16.0	14.7	14.4	\$42,789	\$35,886
Tooele	10	9	0.842	0.831	78.6	78.0	15.2	15.7	13.5	13.3	\$36,379	\$28,984
Utah County	4	4	0.866	0.849	80.3	80.6	17.6	17.6	14.3	14.1	\$27,464	\$20,240
Wasatch	7	7	0.860	0.839	77.8	79.0	16.7	15.7	14.3	13.8	\$36,172	\$27,870
Weber	11	10	0.841	0.827	78.0	78.4	16.0	16.1	13.4	13.2	\$33,464	\$24,514
<b>Southeast</b>												
Grand	19	19	0.824	0.814	79.3	78.3	13.7	15.1	13.8	13.4	\$28,651	\$21,431
San Juan	24	25	0.816	0.805	76.9	79.4	16.2	15.9	12.7	12.5	\$24,932	\$17,502
<b>Southwest</b>												
Beaver	13	14	0.839	0.821	78.1	78.0	15.7	16.1	13.4	13.2	\$33,269	\$22,825
Garfield	25	23	0.816	0.806	77.7	79.3	15.4	15.2	13.6	13.2	\$21,806	\$17,654
Iron	9	12	0.847	0.823	78.9	78.2	17.5	17.1	13.7	13.7	\$24,857	\$17,742
Kane	21	18	0.820	0.815	78.5	77.7	14.1	15.2	13.6	13.6	\$28,003	\$22,040
Washington	8	8	0.849	0.835	79.2	79.1	16.7	17.1	13.8	13.6	\$28,182	\$21,072
<b>Uintah Basin</b>												
Duchesne	22	22	0.818	0.808	76.9	76.8	14.9	14.8	12.9	12.9	\$31,439	\$26,471
Uintah	26	21	0.809	0.811	76.3	77.5	15.6	15.1	12.9	12.9	\$24,325	\$25,144
<b>West Central</b>												
Millard	15	16	0.835	0.820	80.0	80.3	15.5	15.5	13.1	13.0	\$28,104	\$20,732
Sanpete	11	15	0.841	0.820	79.9	79.3	17.6	17.5	13.3	13.2	\$21,557	\$15,949
Sevier	18	24	0.827	0.805	76.9	77.8	16.2	15.6	13.3	13.1	\$26,895	\$18,682
Wayne	20	17	0.821	0.816	77.5	77.2	15.6	16.7	13.6	13.8	\$23,761	\$17,816

Note. HDI = Human Development index. AYS = Average Years of Schooling; EYS = Expected Years of Schooling; LE = Life Expectancy (years); PI = Personal Income in 2019 Dollars.

**Appendix G**  
**IHDI & IHDI Dimensions by Utah Counties: 2020**

Region	State and County	IHDI Rank	Diff. with HDI Rank	IHDI: O	Loss: O	IHDI: H	Loss: H	IHDI: E	Loss: E	IHDI: I	Loss: I
State	Utah	16	-1	0.725	15.4%	0.704	22.3%	0.718	13.6%	0.754	9.9%
Very High Development											
GSL	Summit	1	1	0.735	16.1%	0.717	19.6%	0.781	9.1%	0.708	19.3%
GSL	Cache	2	3	0.734	14.8%	0.730	21.5%	0.748	13.0%	0.724	9.6%
GSL	Utah County	3	1	0.732	15.4%	0.722	22.2%	0.759	11.7%	0.717	11.9%
GSL	Salt Lake	4	2	0.731	15.2%	0.717	21.5%	0.721	12.5%	0.756	11.1%
SW	Washington	5	3	0.728	14.2%	0.729	19.9%	0.711	13.5%	0.745	8.7%
GSL	Davis	6	-3	0.724	16.5%	0.721	22.3%	0.717	12.9%	0.735	14.0%
High Development											
GSL	Weber	7	4	0.716	14.9%	0.694	22.2%	0.704	11.2%	0.751	10.8%
GSL	Wasatch	8	-1	0.710	17.4%	0.685	22.9%	0.743	11.3%	0.703	17.6%
GSL	Morgan	9	-8	0.708	19.6%	0.716	21.2%	0.786	10.6%	0.630	26.3%
WC	Sanpete	10	2	0.706	16.0%	0.727	21.0%	0.725	12.6%	0.668	14.1%
SW	Iron	11	-2	0.704	16.9%	0.705	22.2%	0.728	13.4%	0.681	14.8%
WC	Millard	12	3	0.699	16.3%	0.742	19.6%	0.685	11.3%	0.671	17.8%
GSL	Box Elder	13	1	0.696	16.8%	0.693	22.7%	0.677	13.5%	0.717	13.9%
Medium Development											
GSL	Tooele	14	-4	0.694	17.6%	0.704	21.9%	0.669	13.9%	0.709	17.0%
WC	Sevier	15	3	0.692	16.2%	0.679	22.4%	0.695	12.8%	0.704	13.1%
SE	San Juan	16	8	0.691	15.3%	0.710	18.9%	0.679	12.7%	0.685	14.3%
GSL	Juab	17	6	0.674	17.5%	0.681	23.1%	0.669	12.3%	0.673	16.9%
UB	Duchesne	18	4	0.674	17.6%	0.695	20.6%	0.656	12.6%	0.671	19.4%
EC	Carbon	19	8	0.673	16.7%	0.654	22.5%	0.695	10.8%	0.670	16.3%
UB	Uintah	20	6	0.666	17.7%	0.678	21.8%	0.668	13.1%	0.652	18.0%
Low Development											
EC	Emery	21	-4	0.666	19.5%	0.667	22.4%	0.706	11.8%	0.627	23.8%
SW	Garfield	22	3	0.664	18.6%	0.700	21.1%	0.677	13.8%	0.617	20.9%
SE	Grand	23	-4	0.664	19.5%	0.736	19.4%	0.652	12.9%	0.609	25.6%
SW	Kane	24	-3	0.653	20.4%	0.704	21.8%	0.655	12.8%	0.604	26.0%
GSL	Rich	25	-9	0.641	23.2%	0.725	21.6%	0.676	12.4%	0.537	33.9%
WC	Wayne	26	-6	0.632	23.0%	0.680	23.1%	0.700	11.3%	0.530	33.1%
SW	Beaver	27	-14	0.623	25.8%	0.701	21.6%	0.685	13.0%	0.503	40.1%

*Note.* EC = East Central; GSL = Great Salt Lake; SE = Southeast; SW = Southwest; UB = Uintah Basin; WC = West Central. E = Education Dimension; H = Health Dimension; I = Income Dimension; O = Overall. Loss = Percentage loss between HDI and IHDI.

## Appendix H

### HDI, IHDI, & Loss Due to Inequality by Gender and County: 2020

State and Counties	Female						Male					
	HDI	IHDI	Loss: O	Loss: H	Loss: E	Loss: I	HDI	IHDI	Loss: O	Loss: H	Loss: E:	Loss: I
Utah	0.841	0.729	13.3%	21.4%	13.7%	4.0%	0.878	0.732	16.6%	21.9%	13.5%	14.0%
East Central												
Carbon	0.790	0.654	17.3%	22.4%	10.9%	18.0%	0.835	0.700	16.2%	23.4%	10.7%	14.0%
Emery	0.812	0.666	18.0%	21.8%	12.1%	20.0%	0.847	0.668	21.2%	23.7%	12.1%	27.0%
Greater Salt Lake												
Box Elder	0.809	0.682	15.7%	22.9%	13.6%	10.0%	0.851	0.703	17.4%	22.4%	13.5%	16.0%
Cache	0.837	0.703	16.0%	21.5%	13.6%	13.0%	0.872	0.751	13.9%	22.6%	12.6%	6.0%
Davis	0.842	0.727	13.7%	22.3%	13.2%	5.0%	0.880	0.714	18.9%	22.1%	12.6%	22.0%
Juab	0.812	0.677	16.7%	20.8%	12.7%	16.0%	0.831	0.687	17.4%	23.0%	11.9%	17.0%
Morgan	0.835	0.713	14.6%	21.1%	11.8%	11.0%	0.911	0.687	24.6%	22.7%	10.4%	38.0%
Rich	0.815	0.640	21.5%	21.2%	13.4%	29.0%	0.857	0.645	24.8%	22.3%	11.5%	38.0%
Salt Lake	0.849	0.739	12.9%	21.2%	12.4%	4.0%	0.873	0.722	17.3%	22.0%	12.9%	17.0%
Summit	0.867	0.729	13.4%	18.7%	9.9%	9.0%	0.887	0.732	16.7%	20.9%	8.8%	28.0%
Tooele	0.818	0.758	12.6%	21.4%	14.1%	8.0%	0.862	0.713	19.6%	22.5%	13.8%	25.0%
Utah	0.836	0.643	17.8%	22.0%	13.0%	10.0%	0.893	0.694	17.5%	22.6%	11.2%	13.0%
Wasatch	0.838	0.710	15.1%	21.0%	12.4%	7.0%	0.885	0.753	15.7%	23.1%	10.7%	26.0%
Weber	0.826	0.651	20.5%	22.1%	13.0%	6.0%	0.855	0.622	24.6%	22.6%	10.4%	15.0%
Southeast												
Grand	0.806	0.641	20.5%	18.7%	13.2%	29.0%	0.842	0.685	18.6%	20.5%	12.8%	22.0%
San Juan	0.816	0.689	15.6%	18.2%	13.0%	16.0%	0.825	0.699	15.3%	20.5%	12.5%	13.0%
Southwest												
Beaver	0.817	0.594	27.3%	21.2%	13.5%	44.0%	0.851	0.639	25.0%	24.4%	12.7%	36.0%
Garfield	0.802	0.661	17.6%	20.8%	14.1%	18.0%	0.827	0.664	19.7%	21.5%	13.9%	23.0%
Iron	0.819	0.666	18.7%	22.3%	14.1%	20.0%	0.867	0.738	14.8%	22.0%	12.8%	9.0%
Kane	0.805	0.656	18.6%	20.9%	13.6%	21.0%	0.840	0.653	22.3%	23.1%	12.0%	31.0%
Washington	0.835	0.723	13.8%	19.8%	13.3%	6.0%	0.869	0.708	20.1%	20.0%	14.1%	11.0%
Uintah Basin												
Duchesne	0.795	0.665	16.4%	19.9%	13.2%	16.0%	0.829	0.679	18.0%	21.6%	12.0%	20.0%
Uintah	0.783	0.699	14.6%	21.9%	13.8%	18.0%	0.841	0.686	20.4%	21.8%	13.0%	17.0%
West Central												
Millard	0.803	0.664	17.4%	20.2%	10.7%	21.0%	0.848	0.713	15.9%	21.7%	12.5%	13.0%
Sanpete	0.826	0.679	17.8%	20.9%	13.2%	19.0%	0.859	0.739	14.0%	21.3%	12.1%	8.0%
Sevier	0.805	0.674	16.2%	22.4%	13.3%	13.0%	0.847	0.714	15.7%	22.7%	12.3%	12.0%
Wayne	0.818	0.724	13.3%	20.9%	11.6%	28.1%	0.825	0.738	15.1%	23.2%	11.2%	37.3%

Note. HDI = Human Development Index; IHDI = Inequality-adjusted Human Development Index. Loss = Percentage loss between HDI and IHDI.

## Appendix I

### GDI by County: 2020

Economic Region	State and County	2020 GDI	2020 GDI Rank	2020 Female HDI	2020 Male HDI	2015 to 2020 Change
State	Utah	50	0.961	0.841	0.878	0.01
Very High Development						
West Central	Wayne	1	0.992	0.818	0.825	-0.01
Southeast	San Juan	2	0.989	0.816	0.825	0.03
Greater Salt Lake	Summit	3	0.977	0.867	0.887	0.02
Greater Salt Lake	Juab	4	0.977	0.812	0.831	0.04
Greater Salt Lake	Salt Lake	5	0.972	0.849	0.873	0.01
Southwest	Garfield	6	0.969	0.802	0.827	-0.01
High Development						
Greater Salt Lake	Weber	7	0.966	0.826	0.855	0.00
West Central	Sanpete	8	0.961	0.826	0.859	0.01
Southwest	Washington	9	0.961	0.835	0.869	0.01
Uintah Basin	Duchesne	10	0.960	0.795	0.829	0.01
Greater Salt Lake	Cache	11	0.960	0.837	0.872	0.01
Southwest	Beaver	12	0.959	0.817	0.851	0.00
East Central	Emery	13	0.959	0.812	0.847	0.02
Medium Development						
Southwest	Kane	14	0.959	0.805	0.840	-0.03
Southeast	Grand	15	0.958	0.806	0.842	-0.01
Greater Salt Lake	Davis	16	0.957	0.842	0.880	0.01
Greater Salt Lake	Rich	17	0.951	0.815	0.857	0.03
West Central	Sevier	18	0.951	0.805	0.847	0.02
Greater Salt Lake	Box Elder	19	0.951	0.809	0.851	0.01
Greater Salt Lake	Tooele	20	0.948	0.818	0.862	-0.02
Low Development						
West Central	Millard	21	0.947	0.803	0.848	-0.02
Greater Salt Lake	Wasatch	22	0.947	0.838	0.885	-0.01
East Central	Carbon	23	0.945	0.790	0.835	0.00
Southwest	Iron	24	0.945	0.819	0.867	-0.01
Greater Salt Lake	Utah	25	0.936	0.836	0.893	0.01
Uintah Basin	Uintah	26	0.931	0.783	0.841	-0.01
Greater Salt Lake	Morgan	27	0.917	0.835	0.911	-0.01

*Note.* GDI = Gender Development Index; HDI = Human Development Index. In the last column, red means the 2020 GDI decreased compared to 2015, yellow means it did not change, and green means it increased.