Race/Ethnicity in the Wasatch Front Labor Force: an Equal Employment Opportunity Analysis

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Overview

Utah's racial and ethnic diversity continues to increase, along with the rest of the nation. Currently, 1 in 5 Utahns identify as racial minorities, increasing 3.5 percentage points from 2016. However, state level analysis can mask county and region-level variation. For example, in the Wasatch Front region, minority identification is closer to 1 in 4 at 23 percent, and Salt Lake County is 29 percent minority.

This information is useful, but how do these trends influence the region's labor force? Does the Wasatch Front labor force look the same as their total population? How are occupations distributed among different races and genders? This report helps answer these questions by identifying under and over representation in varying occupations by race/ethnicity and gender for the Wasatch Front region[1]. We apply the current racial/ethnic and gender makeup to different occupations to gain a better understanding of racial representation across different occupations in the Wasatch Front.

Since 2010, the labor force has gradually become less White and all minority groups but one (American Indian) are increasing as shares of the Wasatch Front labor force.

If we compare the total labor force racial composition to the racial composition within different occupations, we can see that:

- Racial minorities are most underrepresented in the Professionals category,
- Whites are most underrepresented in the Service and Maintenance category,
- Women are especially underrepresented in the Skilled Craft category, and
- Males are significantly underrepresented in the Paraprofessionals category.

These trends, while not surprising, are indicators of social and cultural expectations and outcomes. Each occupation type requires particular sets of skills, levels of education, and investments of monetary and social capital. This report identifies current employment trends that Wasatch Front cities, counties, and businesses can use to inform hiring and employment practices.

Race/Ethnicity Categories

This report and analysis uses the six race categories and one ethnicity used by the Census Bureau and defined by the Office of Management and Budget (OMB): White, Black or African American, American Indian or Alaska Native, Asian, Native Hawaiian or Pacific Islander, and Two or More Races. Any determination of race is through self-identification.

The term minority in this document refers to those who identified as Hispanic or any race category other than White. When discussing racial groups, this document is referring to people who identify as non-Hispanic, single-race (i.e. White, Asian, Native Hawaiian and Pacific Islander). A person who identifies with multiple race groups is included in the "Two or More" category.

How is Utah and the Wasatch Front Population Diversifying?
The State of Utah

Utah's total minority population grew by 3.7 percent from 2016 to 2017, while the White population only grew by 1.4 percent. Since 2010, Asians and Two or More Races were the fastest growing races, showing 38 percent and 37 percent growth respectively, while the White and American Indian racial groups showed the slowest growth at 9.4 percent and 8.7 percent (Table 1).[2] We anticipate these growth patterns to continue for a number of reasons, including current migration trends, differing fertility rates across race/ethnicity, changes in how individuals racially self-identify, and varying age structure differences between races. [3] [4] [5]
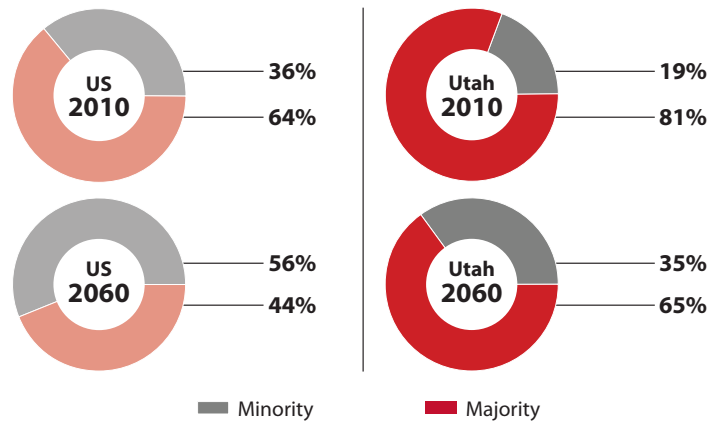
The Kem C. Gardner Policy Institute recently released state-level racial/ethnic projections by age and sex through 2065. The projections show that from 2010 through 2060, Utah will go from 1 in 5 Utahns identifying as racial minorities, to 1 in 3. Utah's 2060 racial majority and minority shares matches the United States' current minority/majority makeup, revealing an approximate 50 year or two generation lag in diversity behind the United States (see Figure 1).[6]

I N F O R M E D   D E C I S I O N S ™

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Table 1: Total Utah Population and Cumulative Change by Race/Ethnicity, 2010-2017*

	Total Population		Change from Census 2010 to 2017	
	Census 2010	July 1, 2017	Absolute	Percent
Total Population	**2,763,885**	**3,101,833**	**337,948**	**12.2%**
White	2,226,363	2,434,785	208,422	9.4%
Minority	537,522	667,048	129,526	24.1%
Hispanic	358,340	434,288	75,948	21.2%
Black or African American	26,328	34,090	7,762	29.5%
American Indian or Alaska Native	27,228	29,608	2,380	8.7%
Asian	54,794	75,471	20,677	37.7%
Native Hawaiian or Pacific Islander	24,183	29,885	5,702	23.6%
Two or More Races	46,649	63,706	17,057	36.6%

Source: Kem C. Gardner Policy Institute analysis of Census Bureau 2017 Vintage Estimates

Figure 1. Share of Minority Population for Utah and the U.S, 2010 and 2060

US 2010: 36% / 64%
Utah 2010: 19% / 81%
US 2060: 56% / 44%
Utah 2060: 35% / 65%

Minority ■ Majority

Note: Majority includes those identifying as non-Hispanic White Alone, and Minority all others.
Sources: U.S. Census Bureau; Kem C. Gardner Policy Institute Race/Ethnicity Projections

State patterns are important for understanding the parameters that regions and counties operate within, but it is also important to recognize the variation within Utah. Utah's urban areas tend to be more diverse than the rural counties, with the exception of counties containing tribal areas such as San Juan County. The remainder of this report will focus on the Wasatch Front region.

The Wasatch Front

The Wasatch Front region (for the purpose of this analysis includes Davis, Salt Lake, Summit, Tooele, Utah, and Weber counties) is slightly more diverse than the state, with 23 percent identifying as minorities. However, there is much variation within the region.

Salt Lake is the most diverse county in the Wasatch Front, with 29 percent of the population identifying as a minority, while Weber County follows closely at approximately 24 percent minority. Utah, Davis, Summit, and Tooele all hover around 18 to 16 percent minorities, which is lower than the average state share. See Table 2 for the racial shares of each county in the

Wasatch Front region, the region as a whole, and the state.

Salt Lake County's diverse economy and job opportunities, public transportation, and nationally recognized public university contribute to its diversity. Utah County is much less diverse despite having their own nationally recognized university (Brigham Young University) and rapidly growing employment around the silicon slopes tech corridor. The projected growth in Utah County over the next 50 years has the potential to add not only more people, but also more diversity to the area. Weber County has similar, yet smaller in scale, employment opportunities, public infrastructure, and Weber State University that promotes and supports diverse communities. Davis, Summit, and Tooele counties, while providing local employment, are commuter counties with strong employment ties to Salt Lake, Utah, and Weber counties. Salt Lake has a high concentration of Asians, 4 percent of the county population, compared to other Wasatch Front counties (and 63% of the state's Asian population)[7] Salt Lake and Weber counties tie for the highest proportion of Hispanics in

Table 2: Share of 2017 Total Population by Race/Ethnicity, Wasatch Front Counties, Region Total, and State*

	White	Black or African American	American Indian or Alaska Native	Asian	Native Hawaiian or Other Pacific Islander	Two or More Races	Hispanic	Minority
Davis	83.9%	1.2%	0.4%	1.9%	0.8%	2.2%	9.7%	16.1%
Salt Lake	71.4%	1.6%	0.7%	4.2%	1.6%	2.2%	18.3%	28.6%
Summit	84.8%	0.8%	0.3%	1.6%	0.1%	1.3%	11.2%	15.2%
Tooele	83.2%	0.7%	0.8%	0.7%	0.6%	1.7%	12.3%	16.8%
Utah	82.4%	0.6%	0.5%	1.7%	0.8%	2.3%	11.8%	17.6%
Weber	76.1%	1.3%	0.5%	1.4%	0.3%	2.0%	18.3%	23.9%
Region Total	**76.9%**	**1.2%**	**0.6%**	**2.8%**	**1.1%**	**2.2%**	**15.2%**	**23.1%**
State Total	**78.5%**	**1.1%**	**1.0%**	**2.4%**	**1.0%**	**2.1%**	**14.0%**	**21.5%**

Source: Kem C. Gardner Policy Institute analysis of Census Bureau 2017 Vintage Estimates

* Individuals claiming Hispanic, Latino, or Spanish origin are categorized as Hispanic and can be of any race. Non-Hispanic persons can be classified as a single race alone—White, Black or African American, American Indian or Alaska Native, Asian, Native Hawaiian or Pacific Islander—or as two or more races.

the Wasatch Front region (18 percent). Salt Lake also has the highest concentration of Native Hawaiian/Pacific Islanders in the state (61% of all Pacific Islanders/Native Hawaiians live in Salt Lake County).

What Do These Trends Mean for the Wasatch Front Labor Force and Occupations?

An increasingly diverse population means an increasingly diverse workforce. However, the different age structures, particularly younger racial and ethnic minorities and older white populations, can translate into a slightly less diverse workforce compared to the total population until the younger minority population ages and is eligible to join the labor force.

Utilizing current Census Bureau age, sex, and race/ethnicity population estimates and the American Community Survey 2006-2010 Equal Employment Opportunity Tabulation occupational data, we produced updated and current racial/ethnic and gendered distributions across different occupation types.

The Study Area

We consider the entire Wasatch Front region an employment source for Salt Lake County due to the intense commuting patterns between the counties. The Salt Lake City workforce is composed of 70 percent Salt Lake County residents, and 30 percent from outside the county, including the following five surrounding counties: Davis, Summit, Tooele, Utah, and Weber.[8] This aggregation of geographies makes this analysis useful for any employer within the Wasatch Front, not just Salt Lake City.

Occupational Classifications

We utilized the occupational classifications found in the EEO-4 Survey job classification list, which are used at the state and local government level.[9]

1. Officials and Administrators
2. Professionals
3. Technicians
4. Protective Services
5. Paraprofessionals
6. Administrative Support
7. Skilled Craft
8. Service Maintenance

See the Methodology section at the end of the report for more details about the data and methods.

Current Patterns

Figure 2 displays the current racial and ethnic proportions of the combined counties' labor force. The Wasatch Front labor force is slightly less diverse then the total population, with 79% identifying as White compared to 76% of the total Wasatch Front population. This makes demographic sense because most minority populations are younger than their white counterparts.

Table 3 shows the current occupational supply distributions for the combined Wasatch Front region counties by race,

Figure 2: Total Civilian Labor Force by Race and Ethnicity (2017)* Davis, Salt Lake, Summit, Tooele, Utah, and Weber Counties
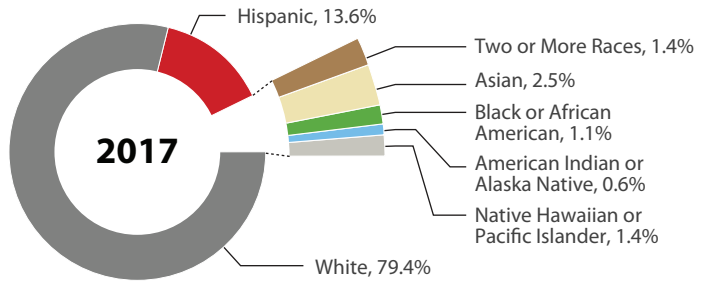
Source: Kem C. Gardner Policy Institute analysis of Census Bureau 2017 Vintage Estimates and ACS EEO Tabulation (2006-2010)

Figure 3: Racial Representation Across Occupations (2017)* Davis, Salt Lake, Summit, Tooele, Utah, and Weber Counties
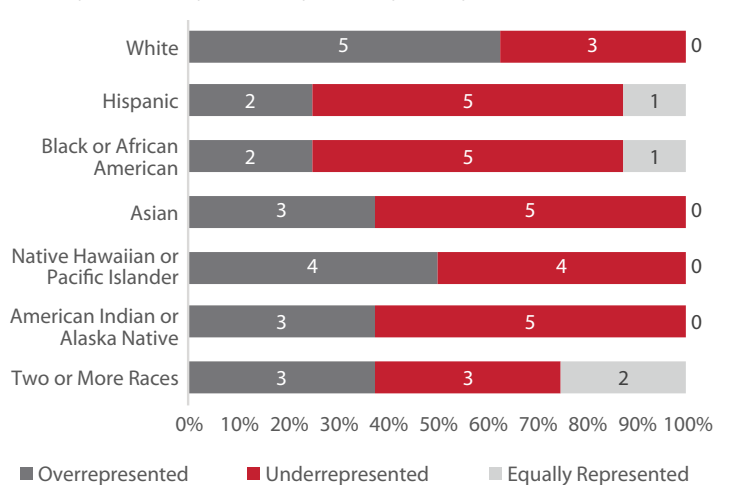
Source: Kem C. Gardner Policy Institute analysis of Census Bureau 2017 Vintage Estimates and ACS EEO Tabulation (2006-2010)

ethnicity, and sex. The red and grey highlights indicate whether each race or gender is underrepresented or overrepresented in each occupation compared to the overall labor force make-up. For example, Whites are over-represented in the Officials and Administrators occupation (86.8 percent) compared to the Total Civilian Labor Force (79.1 percent), so the White category is highlighted grey, while the other races in the same row are highlighted red.

Figure 3 summarizes the number and percentage of over, under, and equal representation of each race across the 8 different occupation types. Whites are over-represented in all occupations except for: Paraprofessionals, Skilled Craft, and Service Maintenance. Two or more races has the least amount of underrepresentation across occupations and the highest amount of equal representation, while Hispanic, Blacks, Asians, and American Indians all tie for the most underrepresented (across five different occupations).

* Individuals claiming Hispanic, Latino, or Spanish origin are categorized as Hispanic and can be of any race. Non-Hispanic persons can be classified as a single race alone—White, Black or African American, American Indian or Alaska Native, Asian, Native Hawaiian or Pacific Islander—or as two or more races.

Table 3: Occupational Distributions - By Sex, Race, and Ethnicity

Place of Residence Analysis, Davis, Salt Lake, Summit, Tooele, Utah, and Weber Counties

ACS 2006-2010 EEO Data – Benchmarked to Census Vintage 2017

Sex	Total	White	Hispanic	Black	Asian	NHPI	AIAN	Two or More Races
Total Civilian Labor Force								
Total	100.0%	79.1%	13.6%	1.1%	2.5%	1.4%	0.6%	1.4%
Male	55.4%	43.6%	7.9%	0.7%	1.2%	0.7%	0.3%	0.7%
Female	43.9%	34.9%	5.6%	0.4%	1.3%	0.7%	0.3%	0.7%
Officials and Administrators								
Total	100.0%	86.8%	7.0%	0.9%	2.1%	0.5%	0.2%	1.2%
Male	65.0%	56.8%	4.4%	0.6%	1.2%	0.3%	0.1%	0.7%
Female	35.0%	30.0%	2.6%	0.3%	0.9%	0.2%	0.1%	0.5%
Professional								
Total	100.0%	87.7%	4.4%	0.9%	1.1%	2.7%	0.5%	1.4%
Male	51.6%	45.7%	1.9%	0.6%	0.5%	1.4%	0.2%	0.7%
Female	48.3%	42.0%	2.5%	0.4%	0.6%	1.3%	0.3%	0.7%
Technicians								
Total	100.0%	83.3%	8.2%	0.8%	4.4%	0.4%	0.5%	1.8%
Male	57.3%	48.7%	4.2%	0.3%	2.3%	0.3%	0.3%	0.8%
Female	42.7%	34.6%	4.0%	0.5%	2.2%	0.1%	0.2%	1.1%
Protective Services								
Total	100.0%	85.2%	6.1%	1.3%	2.1%	2.0%	0.6%	1.6%
Male	75.0%	63.6%	4.8%	1.3%	1.5%	1.8%	0.4%	0.9%
Female	24.9%	21.6%	1.4%	0.0%	0.6%	0.2%	0.1%	0.7%
Paraprofessionals								
Total	100.0%	78.6%	13.6%	1.1%	3.8%	1.9%	0.7%	0.0%
Male	36.1%	28.4%	4.3%	0.2%	1.2%	1.0%	0.7%	0.0%
Female	64.0%	50.2%	9.2%	0.9%	2.6%	0.9%	0.0%	0.0%
Administrative Support								
Total	100.0%	82.4%	10.4%	1.0%	2.3%	1.1%	0.5%	1.6%
Male	39.3%	32.6%	4.0%	0.5%	0.9%	0.3%	0.1%	0.6%
Female	60.7%	49.8%	6.4%	0.6%	1.4%	0.8%	0.3%	1.0%
Skilled Craft								
Total	100.0%	75.1%	19.9%	0.6%	1.5%	1.0%	0.8%	1.0%
Male	94.8%	71.0%	19.2%	0.6%	1.2%	0.9%	0.8%	1.0%
Female	5.3%	4.1%	0.7%	0.0%	0.3%	0.1%	0.0%	0.0%
Service Maintenance								
Total	100.0%	66.1%	25.7%	1.6%	4.0%	1.5%	1.0%	1.4%
Male	57.7%	38.1%	15.0%	1.1%	1.9%	0.9%	0.5%	0.8%
Female	42.3%	28.0%	10.7%	0.5%	2.1%	0.6%	0.4%	0.6%

Source: Kem C. Gardner Policy Institute Analysis of U.S. Census Bureau Data (ACS 2006-2010 EEO Tabulation and 2017 Vintage Population Estimates)

▨ Denotes under-reprentation compared to Total Civilian Labor Force distribution

▨ Denotes over-reprentation compared to Total Civilian Labor Force distribution

Table 4: Occupational Distributions - By Sex, Race, and Ethnicity

Place of Residence Analysis, Davis, Salt Lake, Summit, Tooele, Utah, and Weber Counties

2017 Rebenched minus 2016 Rebenched

Sex	Total	White	Hispanic	Black	Asian	NHPI	AIAN	Two or More Races
Total Civilian Labor Force								
Total	0.0%	-0.4%	0.2%	0.0%	0.0%	0.0%	-0.0%	0.0%
Male	0.0%	-0.2%	0.1%	0.0%	0.0%	0.0%	-0.0%	0.0%
Female	0.0%	-0.2%	0.1%	0.0%	0.0%	0.0%	-0.0%	0.0%
Officials and Administrators								
Total	0.0%	-0.4%	0.1%	0.0%	0.0%	0.0%	-0.0%	0.0%
Male	0.0%	-0.3%	0.1%	0.0%	0.0%	0.0%	-0.0%	0.0%
Female	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	-0.0%	0.0%
Professional								
Total	0.0%	-0.4%	0.1%	0.0%	0.0%	0.0%	-0.0%	0.0%
Male	0.0%	-0.2%	0.0%	0.0%	0.0%	0.0%	-0.0%	0.0%
Female	0.0%	-0.2%	0.0%	0.0%	0.0%	0.0%	-0.0%	0.0%
Technicians								
Total	0.0%	-0.4%	0.1%	0.0%	0.1%	0.0%	-0.0%	0.0%
Male	0.0%	-0.2%	0.1%	0.0%	0.0%	0.0%	-0.0%	0.0%
Female	0.0%	-0.2%	0.1%	0.0%	0.0%	0.0%	-0.0%	0.0%
Protective Services								
Total	0.0%	-0.4%	0.0%	0.0%	0.0%	0.0%	-0.0%	0.0%
Male	0.0%	-0.3%	0.0%	0.0%	0.0%	0.0%	-0.0%	0.0%
Female	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%	-0.0%	0.0%
Paraprofessionals								
Total	0.0%	-0.4%	0.2%	0.0%	0.1%	0.0%	-0.0%	0.0%
Male	0.0%	-0.1%	0.1%	0.0%	0.0%	0.0%	-0.0%	0.0%
Female	0.0%	-0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Administrative Support								
Total	0.0%	-0.4%	0.1%	0.0%	0.0%	0.0%	-0.0%	0.0%
Male	0.0%	-0.2%	0.1%	0.0%	0.0%	0.0%	-0.0%	0.0%
Female	0.0%	-0.2%	0.1%	0.0%	0.0%	0.0%	-0.0%	0.0%
Skilled Craft								
Total	0.0%	-0.4%	0.3%	0.0%	0.0%	0.0%	-0.0%	0.0%
Male	0.0%	-0.3%	0.3%	0.0%	0.0%	0.0%	-0.0%	0.0%
Female	0.0%	-0.0%	0.0%	0.0%	0.0%	0.0%	-0.0%	0.0%
Service Maintenance								
Total	0.0%	-0.3%	0.4%	0.0%	0.1%	0.0%	-0.0%	0.0%
Male	0.0%	-0.2%	0.2%	0.0%	0.0%	0.0%	-0.0%	0.0%
Female	0.0%	-0.1%	0.2%	0.0%	0.0%	0.0%	-0.0%	0.0%

Source: Kem C. Gardner Policy Institute Analysis of U.S. Census Bureau Data (ACS 2006-2010 EEO Tabulation and 2017 Vintage Population Estimates)

    Denotes under-reprentation compared to Total Civilian Labor Force distribution

    Denotes over-reprentation compared to Total Civilian Labor Force distribution

Table 5: Occupational Distributions - By Sex, Race, and Ethnicity

Place of Residence Analysis, Davis, Salt Lake, Summit, Tooele, Utah, and Weber Counties

2017 Rebenched minus 2010 Rebenched

Sex	Total	White	Hispanic	Black	Asian	NHPI	AIAN	Two or More Races
Total Civilian Labor Force								
Total	0.0%	-2.2%	0.9%	0.1%	0.5%	0.1%	0.0%	0.2%
Male	0.0%	-1.2%	0.5%	0.1%	0.2%	0.1%	0.0%	0.1%
Female	0.0%	-1.0%	0.4%	0.0%	0.2%	0.1%	0.0%	0.1%
Officials and Administrators								
Total	0.0%	-2.5%	0.5%	0.1%	0.4%	0.0%	0.0%	0.2%
Male	0.0%	-1.6%	0.3%	0.1%	0.2%	0.0%	0.0%	0.1%
Female	0.0%	-0.9%	0.2%	0.0%	0.2%	0.0%	0.0%	0.1%
Professional								
Total	0.0%	-2.5%	0.3%	0.1%	0.2%	0.2%	0.0%	0.2%
Male	0.0%	-1.3%	0.1%	0.1%	0.1%	0.1%	0.0%	0.1%
Female	0.0%	-1.2%	0.2%	0.0%	0.1%	0.1%	0.0%	0.1%
Technicians								
Total	0.0%	-2.4%	0.6%	0.1%	0.8%	0.0%	0.0%	0.3%
Male	0.0%	-1.4%	0.3%	0.0%	0.4%	0.0%	0.0%	0.1%
Female	0.0%	-1.0%	0.3%	0.1%	0.4%	0.0%	0.0%	0.2%
Protective Services								
Total	0.0%	-2.4%	0.3%	0.1%	0.4%	0.2%	0.0%	0.3%
Male	0.0%	-1.8%	0.2%	0.1%	0.3%	0.2%	0.0%	0.2%
Female	0.0%	-0.6%	0.1%	0.0%	0.1%	0.0%	0.0%	0.1%
Paraprofessionals								
Total	0.0%	-2.2%	0.9%	0.1%	0.7%	0.2%	0.0%	0.0%
Male	0.0%	-0.8%	0.3%	0.0%	0.2%	0.1%	0.0%	0.0%
Female	0.0%	-1.4%	0.6%	0.1%	0.5%	0.1%	0.0%	0.0%
Administrative Support								
Total	0.0%	-2.3%	0.7%	0.1%	0.4%	0.1%	0.0%	0.3%
Male	0.0%	-0.9%	0.3%	0.1%	0.2%	0.0%	0.0%	0.1%
Female	0.0%	-1.4%	0.4%	0.1%	0.3%	0.1%	0.0%	0.2%
Skilled Craft								
Total	0.0%	-2.1%	1.4%	0.1%	0.3%	0.1%	0.0%	0.2%
Male	0.0%	-2.0%	1.3%	0.1%	0.2%	0.1%	0.0%	0.2%
Female	0.0%	-0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Service Maintenance								
Total	0.0%	-1.9%	1.8%	0.2%	0.7%	0.1%	0.0%	0.2%
Male	0.0%	-1.1%	1.0%	0.1%	0.4%	0.1%	0.0%	0.1%
Female	0.0%	-0.8%	0.7%	0.1%	0.4%	0.1%	0.0%	0.1%

Source: Kem C. Gardner Policy Institute Analysis of U.S. Census Bureau Data (ACS 2006-2010 EEO Tabulation and 2017 Vintage Population Estimates)

▮ Denotes under-reprentation compared to Total Civilian Labor Force distribution

▮ Denotes over-reprentation compared to Total Civilian Labor Force distribution

Figure 4: Percentage Change in Racial/Ethnic Workforce Composition, 2010-2017* Davis, Salt Lake, Summit, Tooele, Utah, and Weber Counties
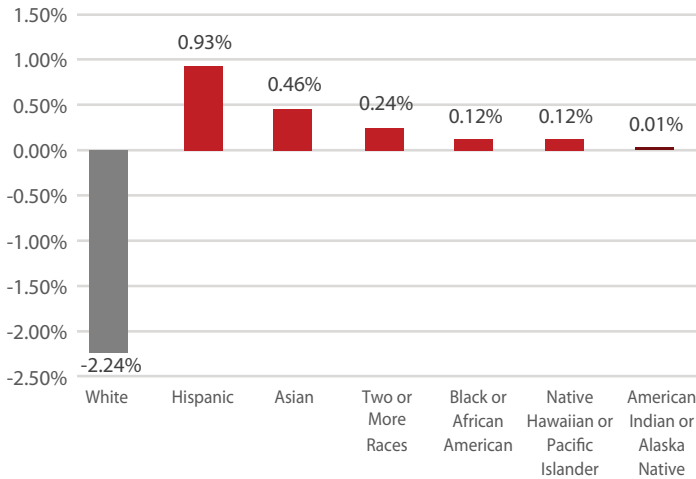
Source: Kem C. Gardner Policy Institute analysis of Census Bureau 2017 Vintage Estimates and ACS EEO Tabulation (2006-2010)

How does 2017 compare to 2016?

Table 4 shows a comparison of the analysis of the 2016 data (not updated with the 2017 vintage) and this year's analysis with the benchmarked 2017 data. The red and green highlights indicate whether each race and sex increased or decreased its share of that occupation since 2016.

One year is not typically a long enough time to see significant changes in the makeup of the workforce; however, we do see that Hispanics slowly increased their share of the total workforce by 0.2 percent, while the White population decreased their share of the workforce by about 0.4 percent since last year (see Table 2). Hispanics' largest increases were in the Service Maintenance, Paraprofessional, and Skilled Craft occupational categories. Asians did not increase their share of the total workforce, but they did increase their share in certain professions. Their increases were in the Technicians, Paraprofessionals, and Service Maintenance occupational categories, a continuation of last year's patterns.

Blacks, Native Hawaiian and other Pacific Islanders, American Indians, and Two or more races did not change their share of the workforce since last year. Percentages tell a story of both increases and decreases for different racial/ethnic categories as a share of the labor force; however, the Wasatch Front and surrounding counties' labor force is growing in total and across all racial and ethnic categories.

How does 2017 compare to 2010?

If we look at the racial changes in the composition of the workforce since 2010, we see changes in all racial and ethnic categories, except for American Indians which is virtually unchanged (see Table 5). Asians have the second most growth in labor force share, with 0.5 percentage point growth in the labor force since 2010, and growth in all occupational categories ranging from the highest value of 0.8 percentage point in Technicians and Service Maintenance, and the lowest value of 0.2 percentage point in the Professional occupational category.

Blacks see a 0.1 percentage point increase in their share of the workforce and in each occupation (except Service Maintenance with 0.2 percentage point), which indicates no change since last year. Native Hawaiian and Pacific Islanders experienced the same growth as Blacks, particularly concentrated in the Professional, Protective Services, and Paraprofessional occupational categories. Two or more races shows slightly more growth with a 0.2 percentage point and 0.3 percentage point increase in all occupations except for the Paraprofessional category which shows no growth. American Indians and Alaska Natives has not experienced change in its share of occupations since 2010.

Conclusion

This analysis reveals that the Hispanic and Asian labor force is continuing to grow rapidly as it increases its share annually. There is also slight growth in the Native Hawaiian or Pacific Islander population and the Two or More Races categories that, while growing much slower, are becoming a larger share of the the Wasatch Front labor force and labor market area.

Utah's increasing diversity, and more specifically the Wasatch Front region, translates to an increasingly diverse labor force. Regional employers benefit by understanding these changing demographics, and developing practices that support and provide opportunities for the changing local population.

* Individuals claiming Hispanic, Latino, or Spanish origin are categorized as Hispanic and can be of any race. Non-Hispanic persons can be classified as a single race alone—White, Black or African American, American Indian or Alaska Native, Asian, Native Hawaiian or Pacific Islander—or as two or more races.

Methodology

Study Area

This study focuses on the civilian workforce that work in Salt Lake City. The Salt Lake City civilian workforce is composed of 70 percent Salt Lake County residents, and 30 percent from outside the county, including the following five surrounding counties: Davis, Summit, Tooele, Utah, and Weber.[10]

Race and Ethnicity Grouping

In this study, we estimate the labor force for males, females, and total population for the following mutually exclusive and exhaustive racial and ethnic groups defined in the Census 2010 categories:[11]

1. White (alone, not Hispanic)
2. Hispanic or Latino
3. Black or African American (alone, not Hispanic)
4. Asian (alone, not Hispanic)
5. Native Hawaiian or Other Pacific Islander (alone, not Hispanic)
6. American Indian or Alaska Native (alone, not Hispanic)
7. Two or More Races (not Hispanic)

Occupational Classification

The occupational classifications are found in the EEO-4 Survey job classification list, and are typically used at the state and local government level.[12]

1. Officials and Administrators
2. Professionals
3. Technicians
4. Protective Services
5. Paraprofessionals
6. Administrative Support
7. Skilled Craft
8. Service Maintenance

All but one of the EEO-4 job classifications are available in the published tabulations of the data. Paraprofessionals are not tabulated and this creates some ambiguity about how to measure this job category.

The EEO-4 Form 164, used as a submission guide for state and local governments, provides descriptions and examples of each occupational classification.[13] Using the Paraprofessionals descriptions and examples, we searched the ACS 2006-2010 EEO Tabulation for all job category examples under Paraprofessionals and used the occupational categories available. The following occupations are included in the measurement of Paraprofessional (some occupations do not exist in every county):

o Miscellaneous life, physical, and social science technicians, including social science research assistants 1965 (SOC 19-40YY)
o Social and human service assistants 2017 (SOC 21-1093)

o Personal care aides 4610 (SOC 39-9021)
o Personal care and service workers, all other 4650 (SOC 39-9099)
o Library assistants, clerical 5320 (SOC 43-4121)
o Ambulance drivers and attendants, except emergency medical technicians 9110 (SOC 53-3011)

Procedure

Data

This updated Availability Analysis utilizes two main data sources: the ACS EEO Tabulation (2006-2010) and the U.S. Census Bureau Vintage Estimates (2017).

ACS EEO Tabulation (2006-2010)

The American Community Survey (2006-2010) is based on a sample interviewed from January 1, 2006 through December 31, 2010.[14] The ACS is a national sample of roughly 15 million housing units over a period of five years (producing an estimate that describes a 5 year- time period). It replaced the 2000 Census long-form data which sampled roughly 1-in-6 housing units and was interpreted as a point estimate. Due to the target sampling rate of Utah (2.79 percent), all estimates provided by the ACS include a margin of error and confidence interval that should be considered when interpreting these data. However, the ACS is the only provider of EEO tabulations and thus is used in the analysis. We did not include confidence intervals in this report.

The "2006-2010 State and Local Government Job Groups by Sex, and Race/Ethnicity for Residence Geography, Total Population" provided the occupational distributions by sex and race/ethnicity for each job classification except for Paraprofessionals. In order to obtain the specific occupations within the Paraprofessionals category, we used the "Detailed Census Occupation" data which allows one to search by occupation. A limitation of this dataset is that some counties have such a low number of employees in specific occupations, that these are combined into "County-sets" that result in meaningful estimates. Tooele and Summit Counties fall into this category. Tooele County is included in the Juab-Sanpete-Tooele county-set (sum of 144 paraprofessionals), and Summit is included in the Morgan-Summit-Wasatch county-set (sum of 79 paraprofessionals).

U.S. Census Bureau Vintage Estimates (2017)

The postcensal estimates produced by the Census Bureau are annual estimates of populations at the national, state, and county levels for each year following the decennial enumeration. Each year, the Census Bureau releases a new vintage which produces updated estimates from July 1, 2010 to the current year. This means the 2017 vintage contains slightly revised estimates for July 1, 2010 through July 1, 2017 and a new estimate for July 1, 2017. In order to find the appropriate county-level population totals and racial/ethnic make-up, the July 1, 2010 estimates from the 2017 vintage were applied

to the ACS EEO occupational distributions to determine the sex, race, and ethnicity of the 2010 labor force eligibles (non-institutionalized, civilian population 16 years and older) and also the labor force participation rates.[15] The July 1, 2017 estimates from the 2017 vintage were then used to benchmark the 2010 estimates to the current racial and ethnic makeup of the occupational distributions. The 2017 analysis holds the 2006-2010 ACS EEO Tabulation occupational distribution by sex constant within any race or ethnic group.[16]

Basic Algorithm

The 2010 occupational supply distributions for the study area by sex, race, and ethnicity are based on the following equations:

$$\frac{Labor\ Force_{r,e}}{Labor\ Force\ Eligibles_{r,e}} = Labor\ Force\ Participation\ Rate_{r,e}$$

$$\frac{Occupations_{s,r,e}}{Labor\ Force_{s,r,e}} = Occupational\ Participation\ Rate_{s,r,e}$$

In these equations, *s* is sex, *r* is race, and *e* is ethnicity. Only the civilian (non-military) labor force is considered. All of the underlying distributions necessary for these computations are available in the Census 2010 and ACS 2006-2010 EEO tabulation data.

Updated EEO Procedure

The July 1, 2017 Census Bureau vintage population estimates for the aggregated study area were used to benchmark the 2010 Occupational Supply Distributions. Updated racial and ethnic counts by county and labor force eligibles were multiplied and then additionally multiplied by the 2010 labor force participation rate (derived from the EEO tabulation) to supply an updated 2017 labor force count. Next, the 2017 labor force by race and ethnicity was multiplied by the 2010 occupational participation rate to give a benchmarked 2017 occupational supply distribution for the aggregated study area. The equations are below to illustrate the steps:

Step 1:

$$\left(2017\ Total\ Population\ Share_{r,e} \times Labor\ Force\ Eligibles_{r,e} \right) \times 2010\ Labor\ Force\ Participation\ Rate_{r,e} = 2017\ Labor\ Force_{r,e}$$

Step 2:

$$2017\ Labor\ Force_{r,e} \times 2010\ Occupational\ Participation\ Rate_{s,r,e} = 2010\ Occupations_{s,r,e}$$

Endnotes

1. This research incorporates the changing demographics of the Salt Lake City labor market to update the Availability Analysis used by the Salt Lake City government. We provide updated occupational distributions by race, ethnicity, and gender to facilitate Equal Employment Opportunity (EEO) practices in accordance with public law.

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