



# The Rise of Women in the Creative Class

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**The Martin Prosperity Institute (MPI)** is the world's leading think-tank on the role of sub-national factors — location, place and city-regions — in global economic prosperity. It takes an integrated view of prosperity, looking beyond economic measures to include the importance of quality of place and the development of people's creative potential.

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# **The Rise of Women in the Creative Class**

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## EXECUTIVE SUMMARY

Women have become an increasingly important force in the U.S. labor market and especially in its knowledge based creative economy. Some argue that the economic crisis has tilted the playing field away from men, who have borne the brunt of blue collar job losses, and towards women, who are more concentrated in knowledge and service work. Using data from the American Community Survey (ACS) of the U.S. Census Bureau, this report provides a numbers-driven look at the status of women in today's job market, nationally and state-by-state (plus the District of Columbia). We develop a measure of the "location premium" states which provide for women overall and for women in the Creative Class. Utilizing several metrics we then develop a "Women's Earnings Index" which we use to rank the best states for women—in the labor market overall and for Creative Class jobs in particular.

Women are in a very different place today than they were in the 1950s. 47.4 percent of the overall workforce is female. Though women hold only 18.3 percent of blue collar jobs they comprise 62.6 percent of the workforce in the service field. Most of those jobs, unfortunately, are low skill and low pay. But 52.3 percent of Creative Class jobs are held by women as well—and women are a clear majority in four out of the nine occupational categories that comprise the Creative Class. Women hold three quarters of the jobs in healthcare, seven out of ten jobs in education, and more than half (54 percent) of the jobs in the legal profession. Only 40 percent of management jobs are filled by women, and just 30 percent of jobs involving computers and math. Women are most significantly under-represented in architecture and engineering, where men comprise 85 percent of the workforce.

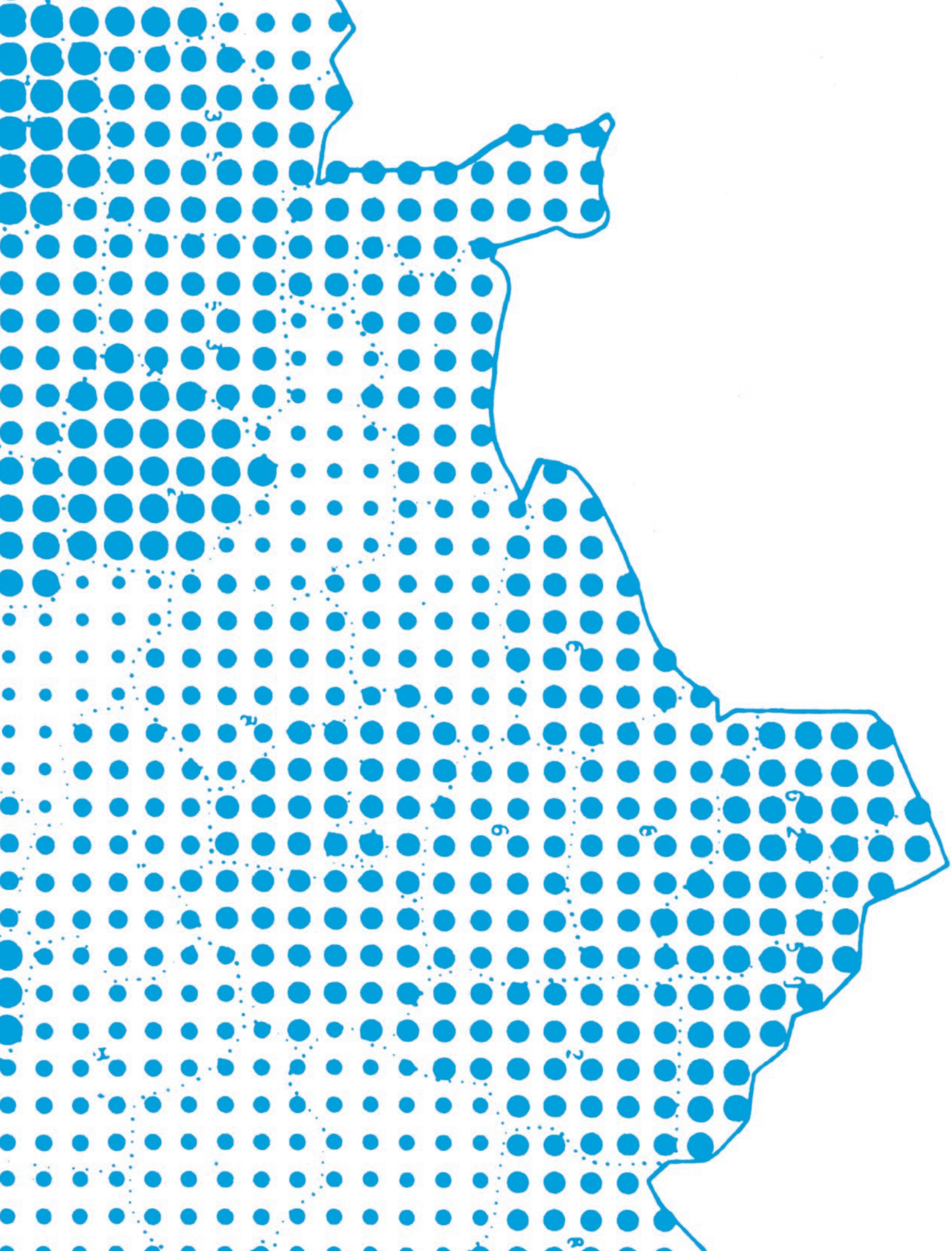
While women have increased their role in the overall economy and in the Creative Class in particular, there is a substantial gender gap in earnings. Overall, men are paid 50 percent more than women; Creative Class men earn a staggering 70 percent more than their female counterparts. The gap shrinks somewhat when we control for hours worked, education, and skills, but women still earn \$10,600 less than men overall and \$23,700 less than men in Creative Class jobs.

The pay gap is widest in occupations where women make up the largest share of the workforce, e.g. education, training, and libraries (where women outnumber men three to one but earn approximately 30 percent less), healthcare (where there are three times as many women as men but the pay difference is more than 50 percent—\$49,887 versus \$109,938), and law (where the average salary for women is \$65,886 versus \$137,680 for men), but there are substantial pay gaps in virtually every Creative Class field. Women in management, business, and finance occupations earn almost 40 percent less than their male colleagues. The gaps are smaller but still significant in architecture, engineering, and the sciences and smaller still in computer and mathematical occupations.

Our report also identifies some notable geographic trends. Women comprise more than half the total workforce in the District of Columbia and four states: Washington, Rhode Island, Massachusetts, and South Dakota. Women in the District of Columbia earn the most overall—\$53,450, \$10,000 more than the second ranked state. Women's earnings top \$40,000 in just three other states: Maryland (\$42,164), New Mexico (\$41,452) and Connecticut (\$40,716). Women earn less than \$25,000 per year in seven states: North Dakota, Montana, Idaho, South Dakota, Virginia, Utah, and Wyoming. Based on our Women's Earnings Index, the best states for women to work are the District of Columbia, Maryland, Nevada, Massachusetts, and Rhode Island. Wyoming, Idaho, Virginia, Utah, Montana, North Dakota, Kansas, and Oklahoma are the worst.

Women make up more than half of the Creative Class workforce in every state but Utah. With average earnings of \$70,395, Creative Class women do best in the District of Columbia. Creative Class women earn more than \$50,000 in ten states: New Mexico (\$59,476), Maryland (\$58,848), California (\$56,876), Connecticut (\$56,803), Nevada (\$54,630), Massachusetts (\$53,645), Vermont (\$52,757), Delaware (\$50,929), and New Hampshire (\$50,679). According to the Creative Class Women's Earnings Index, Alaska is also an excellent state for Creative Class women. Creative Class women earn less than \$36,000 in six states: Montana (\$34,169), North Dakota (\$34,448), South Dakota (\$35,018), Idaho (\$35,286), Utah (\$35,872), and Wyoming (\$35,874).

Our findings are decidedly mixed. Yes, women have been gaining ground—especially in professional, knowledge, and creative jobs, where they now make up the majority of the workforce. But substantial pay gaps remain, across all occupations and especially in higher skill Creative Class occupations. The gaps are widest in the fields where women hold the largest majorities of jobs—even when we control for education, skill and effort. Also, women's gains are not evenly distributed geographically—they do much better in some states than others. So while the economic playing field may be tilting toward women, it still has a long way to go before it is equal.





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## INTRODUCTION

“What if the modern, postindustrial economy is simply more congenial to women than to men?”<sup>1</sup> asks Hanna Rosin in her provocatively titled essay “The End of Men” in *The Atlantic*. “The attributes that are most valuable today — social intelligence, open communication, the ability to sit still and focus — are, at a minimum, not predominantly male.”

Rosin argues that the post-industrial playing field has tilted toward the attitudes and attributes associated with women—such as their superior social and communication skills—and away from physical skills long associated with male advantage in industrial and agricultural economies. All of this leads Rosin to ask, bluntly, “why wouldn’t you choose a girl?”

The current economic crisis has accelerated this shift. Catherine Rampell of the *New York Times* dubbed it the “mancession”. Men have suffered a full three-quarters of the total 8 million jobs lost during the current recession, and the crisis has hit hardest at men in blue-collar jobs.<sup>2</sup> In summer 2010, the unemployment rate for men was more than two percentage points higher than for women, 9.9 versus 7.8 percent.<sup>3</sup> The new jobs that are being created—in fields like education and healthcare—also appear to favor women, who dominate 13 out of 15 of the fastest-growing job categories.<sup>4</sup> Women have also seen their earnings rise relative to men’s over the past three decades or so.<sup>5</sup> While they have not closed the pay gap, it has been narrowing in many fields, particularly for younger women.<sup>6</sup>

The tilting playing field is evident in higher education as well, as women have caught up to

men in educational attainment, and are pulling ahead. Women earn approximately 60 percent of all bachelor’s and master’s degrees in the United States, up from 42 percent in 1970, and 57 percent of all bachelor’s degrees.<sup>7</sup>

This report provides a data-driven look at the status of women in today’s job market, focusing on the rise of women in higher-paying, more highly skilled Creative Class jobs. Using data from the American Community Survey (ACS) of the U.S. Census Bureau, it charts trends in women’s employment and wages for all jobs and for Creative Class jobs in particular. It tracks these trends nationally and across the 50 states and the District of Columbia. We develop a variety of statistics to shed light on women’s role in the creative economy, including measures of the location premium for women that some states afford. Using a “Women’s Earnings Index,” we generate a list of the best states for women in the labor market overall and for women in Creative Class jobs.

The first part of the report examines women’s role in the overall labor market. The second part turns to the rise of women in the Creative Class, looking at Creative Class jobs across the board and also at the fields that make up its major job categories—business and management; science and technology; arts, culture and entertainment; law; healthcare; and education. The third part examines state-by-state patterns in women’s employment overall. The fourth part tracks state-by-state patterns for women in Creative Class occupations. We conclude with a summary of our key findings and a discussion of their implications as we move forward beyond the crisis. The appendices provide a full accounting of our data, variables, and statistical methods.

## THE RISE OF WOMEN IN THE WORKFORCE

Here’s a thought experiment. Travel back in time to the 1950s and in your mind’s eye picture the gender division of labor. From Wall Street to Main Street, men occupied most of the good jobs. They were the accountants, professionals and blue-collar workers. Most women were housewives and stay-at-home moms; men were the providers and primary bread winners. Only about a third of the workforce were women and they were concentrated in lower-skill, traditionally female sectors of the labor market—think secretary, school-teacher or nurse. Now fast forward to today. Sure, some areas of work remain male bastions, but working women are now commonplace and fully half the labor force is made up of women. Women can be found in all types of work. **Exhibit 1** illustrates the converging pattern of men and women’s employment over the past half century.

The current economic crisis has accelerated this broad historical trend. For the first time in modern history, women make up a larger share of the total U.S. workforce<sup>8</sup> than men according to a new report from the Bureau Labor Statistics (BLS).<sup>9</sup> But participation is one thing, pay quite another. Although women have gained ground, a significant earnings gap remains, according to a detailed study by the Institute for Women’s Policy

Research.<sup>10</sup> But the most recent figures from the Bureau of Labor Statistics<sup>11</sup> suggest that the gap is narrowing, especially for younger women.

**Exhibit 2** brings this into focus. Women composed nearly half of the workforce (47 percent) as of 2006–2008, according data from the American Community Survey. But with average wages of \$48,742, men earned 50 percent more than women (\$31,608). Some of this is attributable to the fact that men work considerably more hours than women and have slightly more

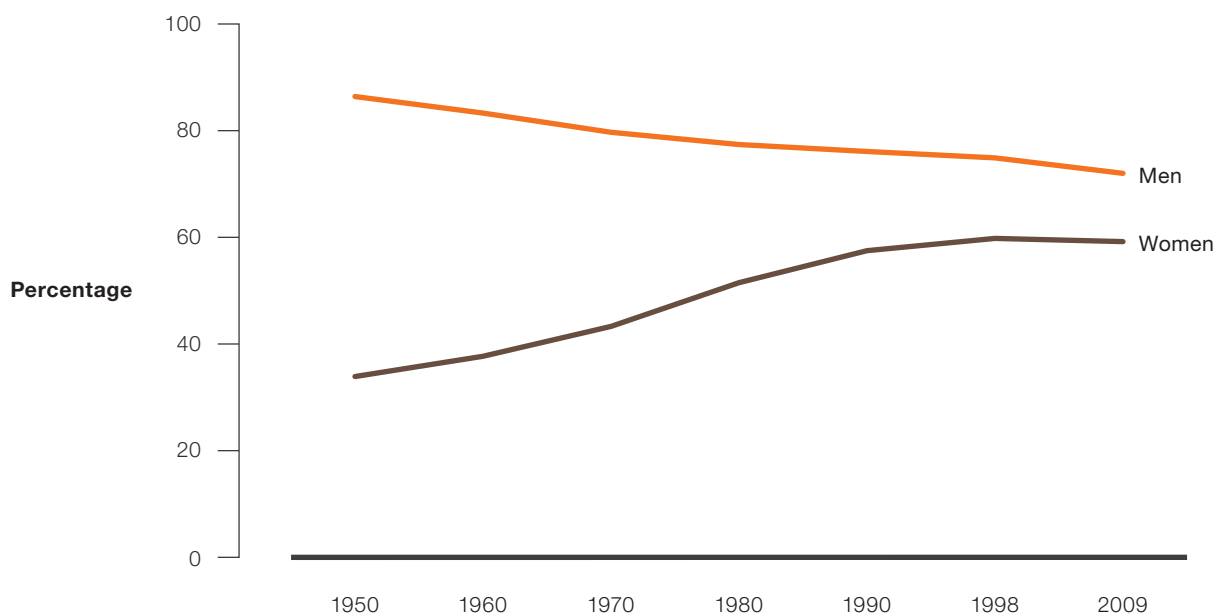
education. But even after we control for these factors, as well the number of years they've worked, in a regression analysis, a considerable gap of \$10,600 still remains.

Let's now look at how women fare across the three major occupational classifications of the economy—the blue-collar working class, the service class, and the Creative Class.

We begin with the blue-collar sector, which

Gender composition of the workforce 1950–2009

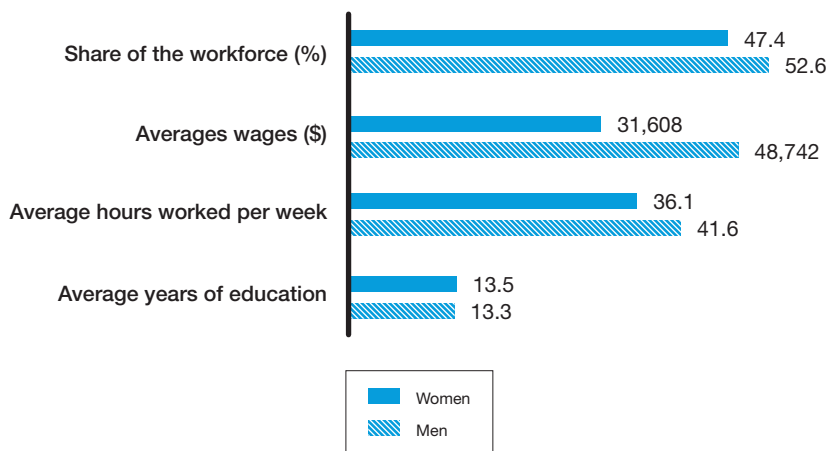
Exhibit 1



Source: Institute for Women's Policy Research, "The Gender Wage Gap: 2009", 2009, retrieved from <http://www.iwpr.org/pdf/C350.pdf>

The gender division of the workforce

Exhibit 2



Source: American Community Survey 2006–2008

include jobs in construction and extraction; installation, maintenance, and repair; production; transportation and material moving. Blue-collar occupations, which make up 26 million jobs or 23 percent of the workforce, have been particularly vulnerable to the economic crisis. Women hold just 18.2 percent of these jobs and are out-earned by men by \$13,852 or 64 percent (see **Exhibit 3**). There is a slight education gap in favor of men, and men also work more hours. When we control for these factors in a regression analysis, the pay gap is reduced to \$12,200, which is still a significant sum.

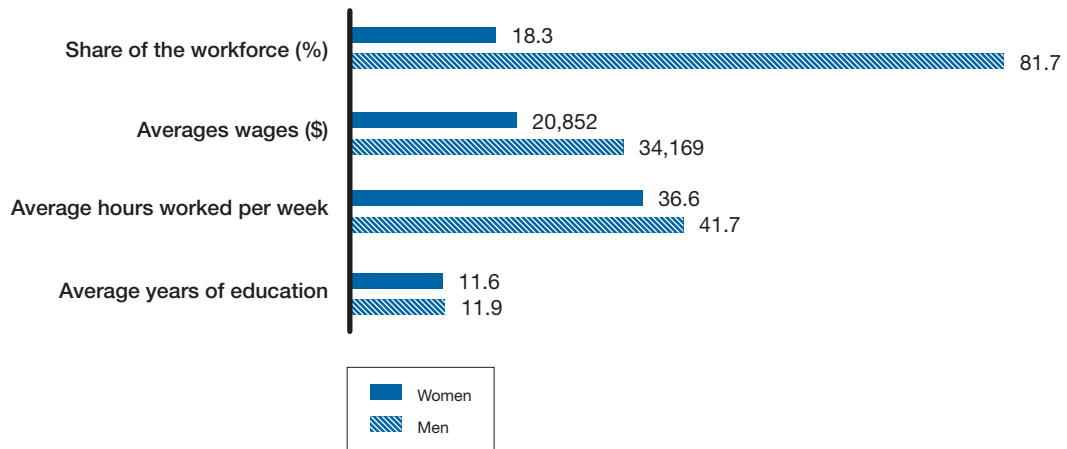
Next we turn to service class jobs in fields like food preparation and food-service-related

occupations, building and grounds cleaning and maintenance, personal care and service, low-end sales, office and administrative support, community and social services, and protective services. These occupations comprise 52 million jobs or 46 percent of the workforce. Though the majority of service class workers (62.6 percent) are women, here again men out earn women with \$38,188 versus \$23,406—a gap of \$14,782 dollars or 63 percent (see **Exhibit 4**). An earnings gap of \$7,500 remains when we control for education and hours.

**This brings us to the high-paid, high-skilled Creative Class jobs.**

Gender and the working class occupations

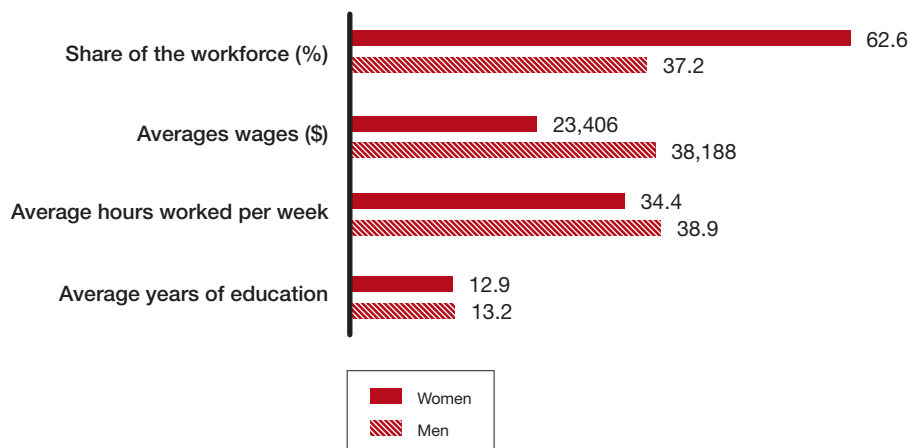
Exhibit 3



Source: American Community Survey 2006–2008

Gender and the service class occupations

Exhibit 4



Source: American Community Survey 2006–2008

## THE RISE OF WOMEN IN THE CREATIVE CLASS

Approximately 36 million Americans, or about one third of the workforce, hold Creative Class jobs. These jobs pay 60 percent more than the average and have been far less vulnerable to unemployment, averaging just half the level of the overall unemployment rate. Creative Class cities and regions have also enjoyed greater incomes and greater economic stability over the course of the past few decades. So how have women in the Creative Class fared? **Exhibit 5** provides a baseline.

Women hold more than half (52.3 percent) of Creative Class jobs. Their average level of education is almost the same as for men. But Creative Class men out-earn Creative Class women by a considerable margin. Creative Class men average \$82,009 versus \$48,077 for Creative Class women. This is a gap of \$33,932, where men out-earn women by a staggering 70 percent. Even when we control for hours worked and education in a regression analysis, Creative Class men continue to out-earn Creative Class women by a sizeable \$23,700 or 49.2 percent.

Now let's take a closer look at the occupations that make up the Creative Class. **Exhibit 6** breaks down the gender composition of the major job categories that make up the Creative Class—computer and math; architecture and engineering; life, physical, and social sciences; arts, design, media, entertainment, and sports; management; law; finance; business; management; education; and healthcare occupations.

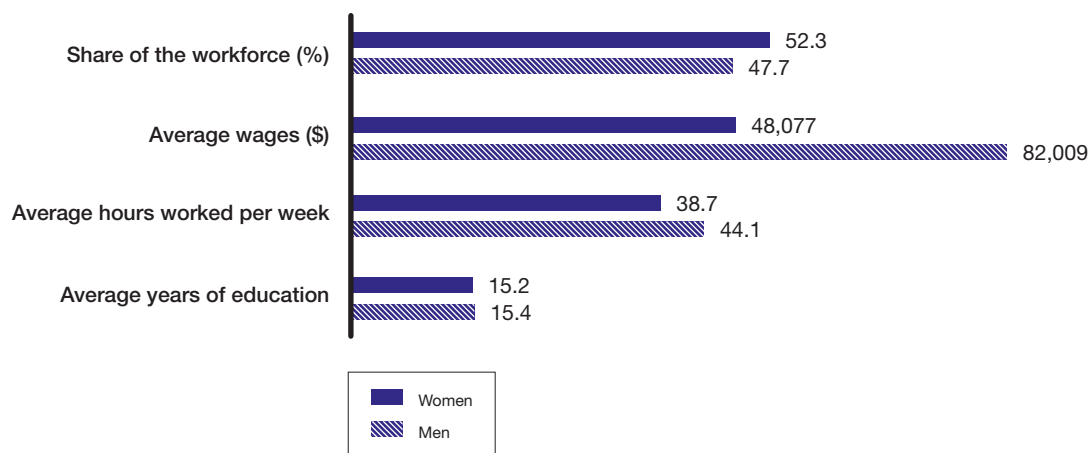
The gender divisions within the Creative Class are easily discerned. Men dominate several job categories: architecture and engineering (where they make up 85.4 percent of the labor force); computer science and math (where their share is 72.3 percent); management (60.7 percent); and the sciences (55.5 percent). Women comprise larger shares of healthcare (75.5 percent); education (73.6 percent); and legal occupations (54.0 percent).

Which brings us to wages. Women earn lower wages across the board, with the biggest disparities in the fields where they make up the largest share of the workforce. Take healthcare for example: there are three times as many women as men in the workforce, but they earn on average half as much (\$49,877 versus \$109,938). Or law, where women make up 54 percent of the workforce, but also earn half as much as men (\$65,886 versus \$137,680). In management, business, and finance occupations women earn almost 40 percent less than men. Women earn approximately 30 percent less than men in education, training, and library occupations, where they make up 73.6 percent of the workforce. Women earn 25 percent less than men in architecture and engineering and the sciences. The smallest gap is in computer and mathematical occupations, where men on average earn approximately 20 percent more than women.

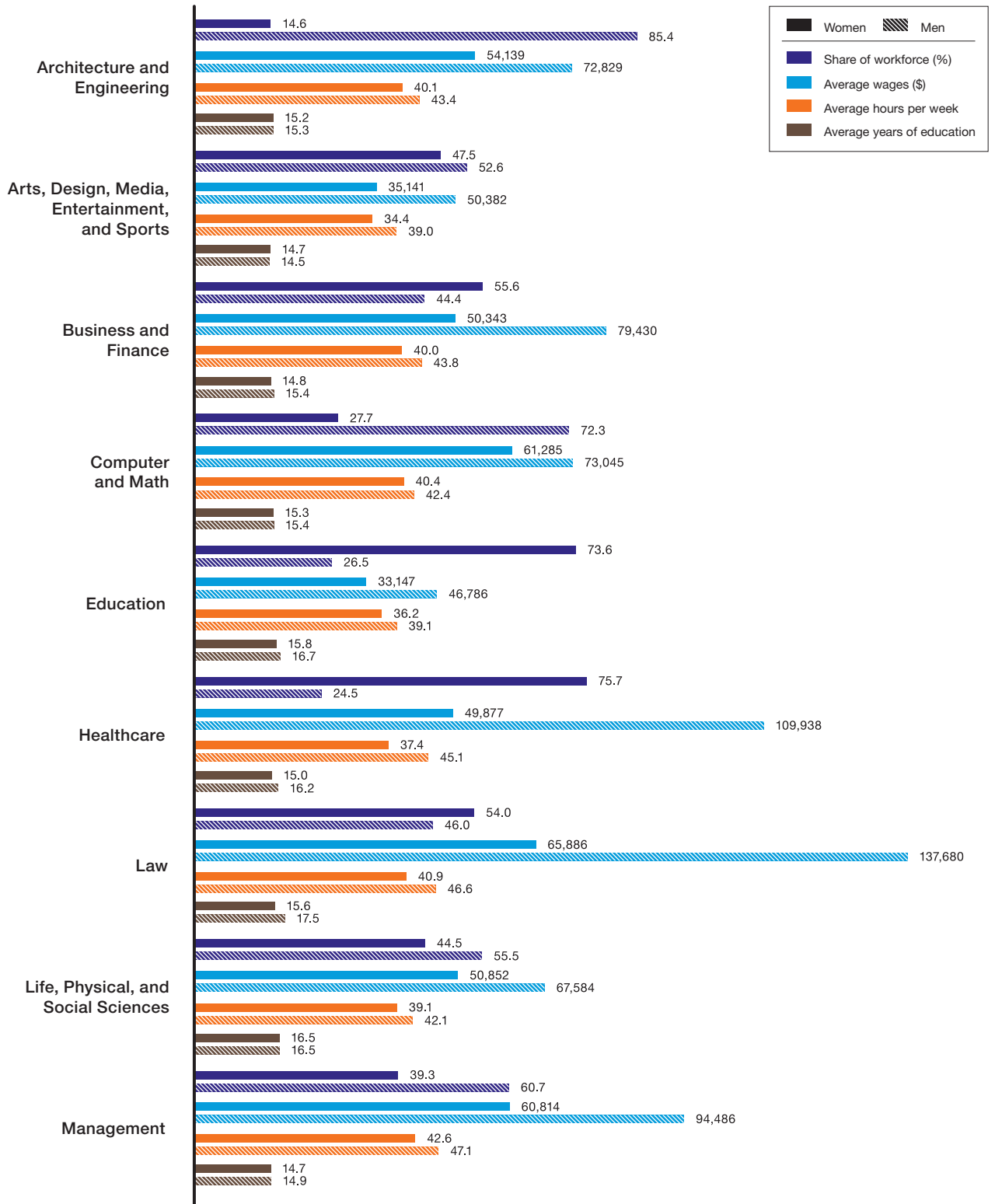
It is important to recognize that wages reflect more than gender; they are a function of skill and effort as well. Still, it is clear that the level of education is fairly similar for men and women across these Creative Class occupational categories. Generally speaking, skill differences show up between job categories, but much less so within them. The largest gender differences for education are in the legal occupations, with a difference of almost two years, and healthcare, where the difference is 1.2 years. The education level is about par for computer and math and science occupations.

Gender and the Creative Class

Exhibit 5



Source: American Community Survey 2006–2008



Source: American Community Survey 2006–2008

The only occupational categories where women have more years of education than men are arts, design, entertainment, sports, and media (0.2 years).

But pay is a function of effort as well as skill. Men consistently work more hours than women. Consider healthcare for example, where women work 17 percent less hours than men, or 37.4 versus 45.1 hours per week. The smallest difference in hours worked is in the computer and math occupations, where men work just five percent more per week than women. It is interesting to note that wages are also most equal within this occupational group. The gender difference in hours worked is also relatively small in architecture and engineering (8.3 percent); the sciences (7.8 percent); and education (8 percent).

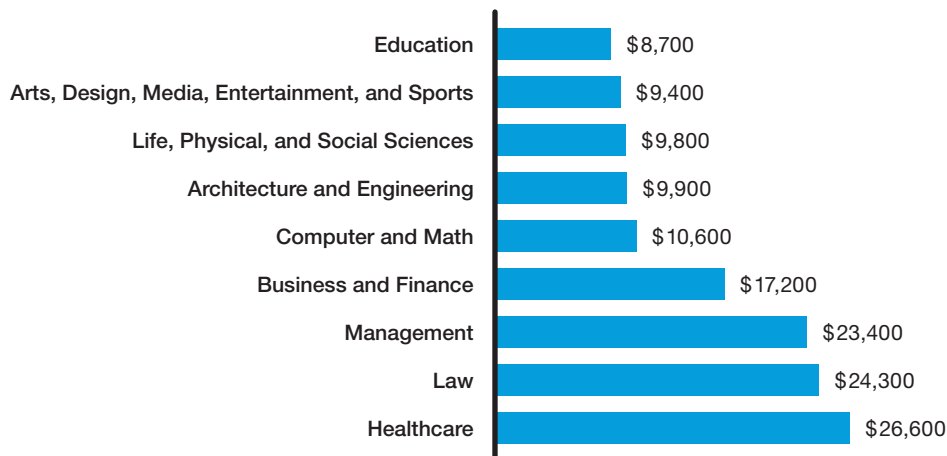
However, even when we control for hours worked, years of education, and skills, a relatively large earnings gap between men and women persists. **Exhibit 7** illustrates this gender gap

across the major Creative Class occupations, ranging from \$20,000—plus on the high end (\$23,400 for management, \$24,300 for law, and \$26,600 for healthcare occupations), to around \$8,000–\$10,000 on the low end (\$8,700 for education, \$9,400 for arts, design, media, entertainment, and sports, \$9,800 for life, physical, and social sciences, and \$9,900 for architecture and engineering).

Now that we have looked at women in the overall labor force and within the Creative Class, we turn our attention to state-level patterns.

Gender wage gap with a control for hours worked, education, and skills

Exhibit 7



Source: American Community Survey 2006–2008

## BEST STATES FOR WOMEN

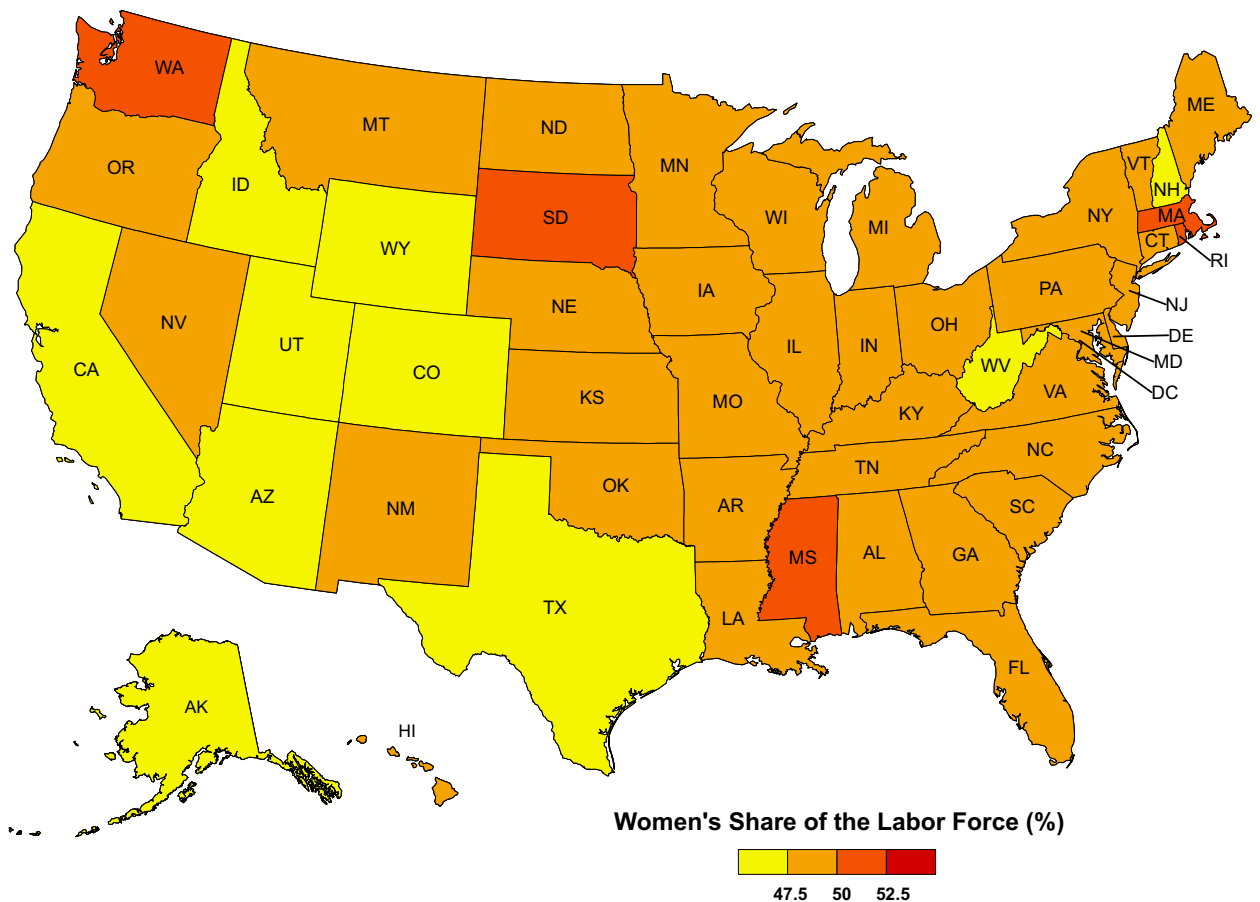
Americans are being increasingly codified, not only by culture and attitudes, political parties, and favored candidates, but also by human capital levels, technological literacy, skill level, type of work and income, housing values, and even by measures of subjective well-being (or happiness).<sup>12</sup> An underlying geography of work, money, and class has also become apparent in the distribution of the 3 Ts of economic development (Technology, Talent and Tolerance, all of them key factors in economic growth and innovation).<sup>13</sup> A growing body of research has also shown the importance of diversity to economic growth.<sup>14</sup> Overall, we should expect states that are more open and tolerant, and where talent and technology are more concentrated, to be better places for women to succeed economically.

Let's get started by looking at women's share of the labor force across the fifty states and the District of Columbia (see **Exhibit 8**). Women make up a majority of the labor force in six states: the District of Columbia (52.6 percent), Washington (50.2 percent), Rhode Island (50.2 percent), Mississippi (50.2 percent), Massachusetts (50.1 percent), and South Dakota (50.1 percent). At the bottom of the list is Utah, where women make up 45 percent of the labor force. Alaska and New Hampshire also have relatively low shares of women in the labor force (45.9 and 46.2 percent respectively) (see **Appendix A**).

Now let's look at wages (see **Exhibit 9**). The District of Columbia, is the clear winner here, with average women's wages of \$53,450, more than \$10,000 more than its closest neighbor Maryland (\$42,164). Average women's income topped \$40,000 in just two other states: New Mexico (\$41,452) and Connecticut (\$40,716). The lowest-ranked state is North Dakota, where women earn \$23,349—less than half of what they earn in the highest paying states. Women also earn less than \$25,000 per year in Montana (\$23,669), Idaho (\$23,955), South Dakota (\$23,961), Virginia (\$24,489), Utah (\$24,830), and Wyoming

Women's share of labor force by state

Exhibit 8



(\$24,911) (see **Appendix B**). There are many possible explanations for this gap, including differences in occupational structures, in which more women are employed in low wage jobs or a lower share of women work full time.

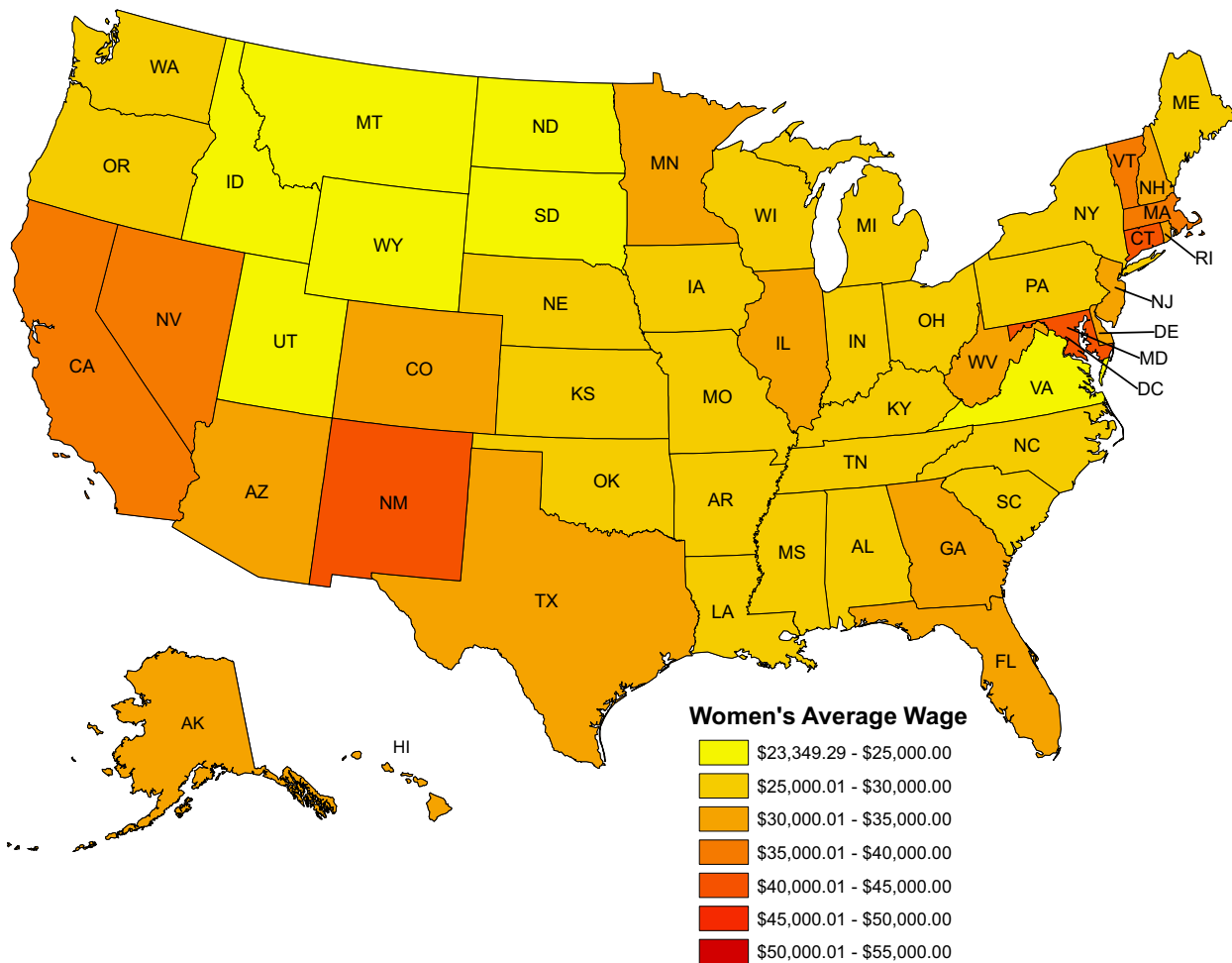
**Exhibit 10** shows the percent of total wages earned by women state-by-state. Once more, the District of Columbia, tops the list, where women generate 45.3 percent of total wages. Next in line are Washington (41.3 percent), South Dakota (40.3 percent), and Maryland (40.0 percent). Utah again takes last place, where

women account for less than 30 percent of total earnings. Women make up less than 35 percent of total earnings in Wyoming (32.0 percent) and Idaho (34.0 percent) (see **Appendix C**).

We now introduce a new measure into our analysis, which we call “the location premium”, to get at how much women benefit from being located in a certain state. The location premium is the amount of earnings

Average wages for women by state

Exhibit 9



Source: American Community Survey 2006–2008



that can be attributed to working in a specific state after controlling for the three factors of education, hours worked, and skill (see the methodology appendix for details on how this is calculated). **Exhibit 11** shows this location premium across the United States.

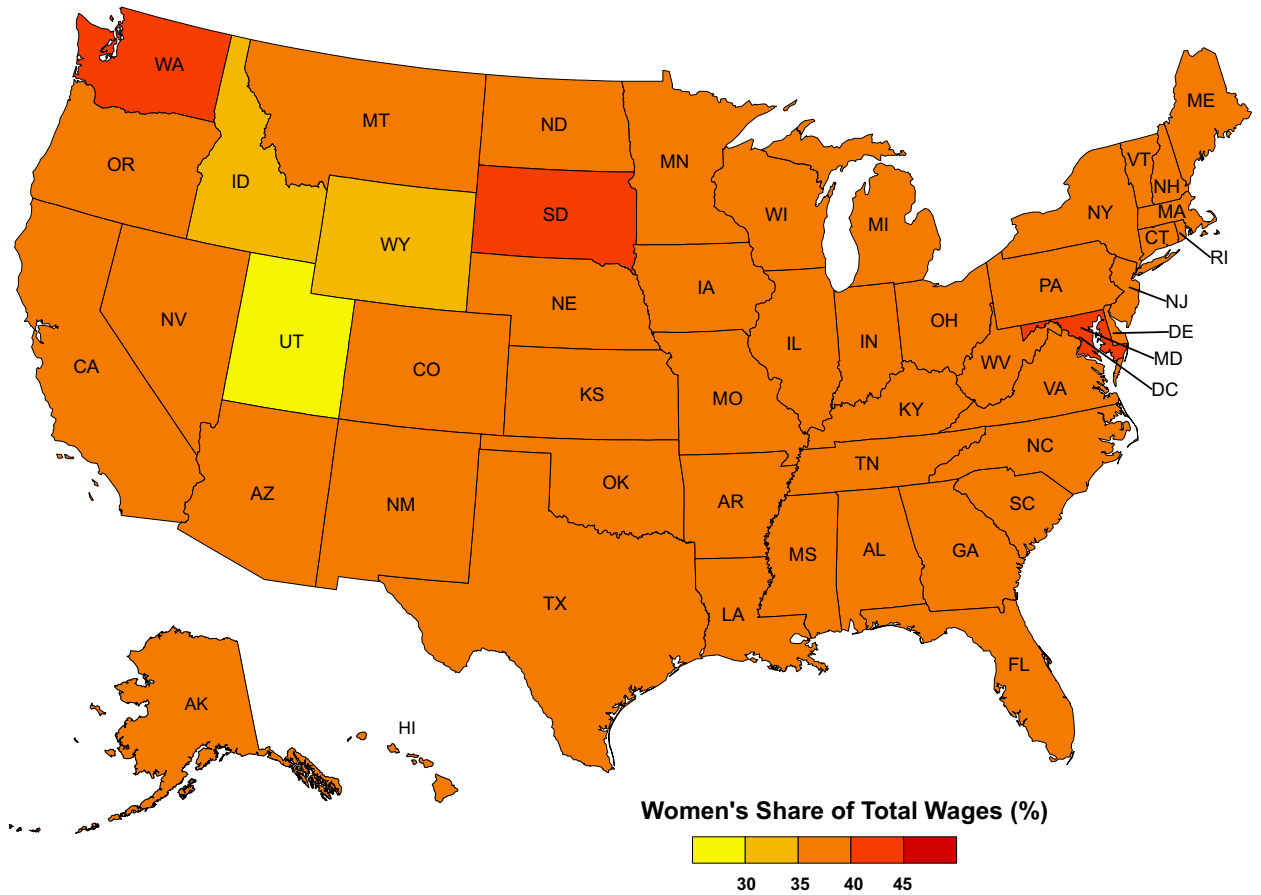
The location premium in the District of Columbia, is \$13,465, by far the highest. A dozen states also have positive location

premiums, but it only tops \$5,000 in four of them: New Mexico (\$7,913), Connecticut (\$7,121), Maryland (\$6,728), and California (\$6,119). The other states with positive location premiums are Massachusetts (\$4,522), Nevada (\$4,121), Vermont (\$2,149), New Hampshire (\$1,998), Delaware (\$1,834), Rhode Island (\$1,710), West Virginia (\$656), and Illinois (\$543).

There are 38 states with negative location premiums. The worst of the lot are Montana (-\$7,871), North Dakota (-\$7,334), and South Dakota (-\$7,248). Nine more states have negative

Women's share of total wages by state

Exhibit 10



Source: American Community Survey 2006–2008

location premiums of \$5,000 or more: Virginia (−\$6,948), Mississippi (−\$6,473), Wyoming (−\$6,213), Nebraska (−\$5,901), Arkansas (−\$5,855), Oklahoma (−\$5,644), Maine (−\$5,405), Louisiana (−\$5,259), and Idaho (−\$5,234) (see **Appendix D**).

This brings us to the obvious question: Given our data, which are the best states for working women overall? To get at this, we developed a Women’s Earnings Index based on four key variables: women’s share of the labor force; average wage levels for women; women’s share of total state wages; and the loca-

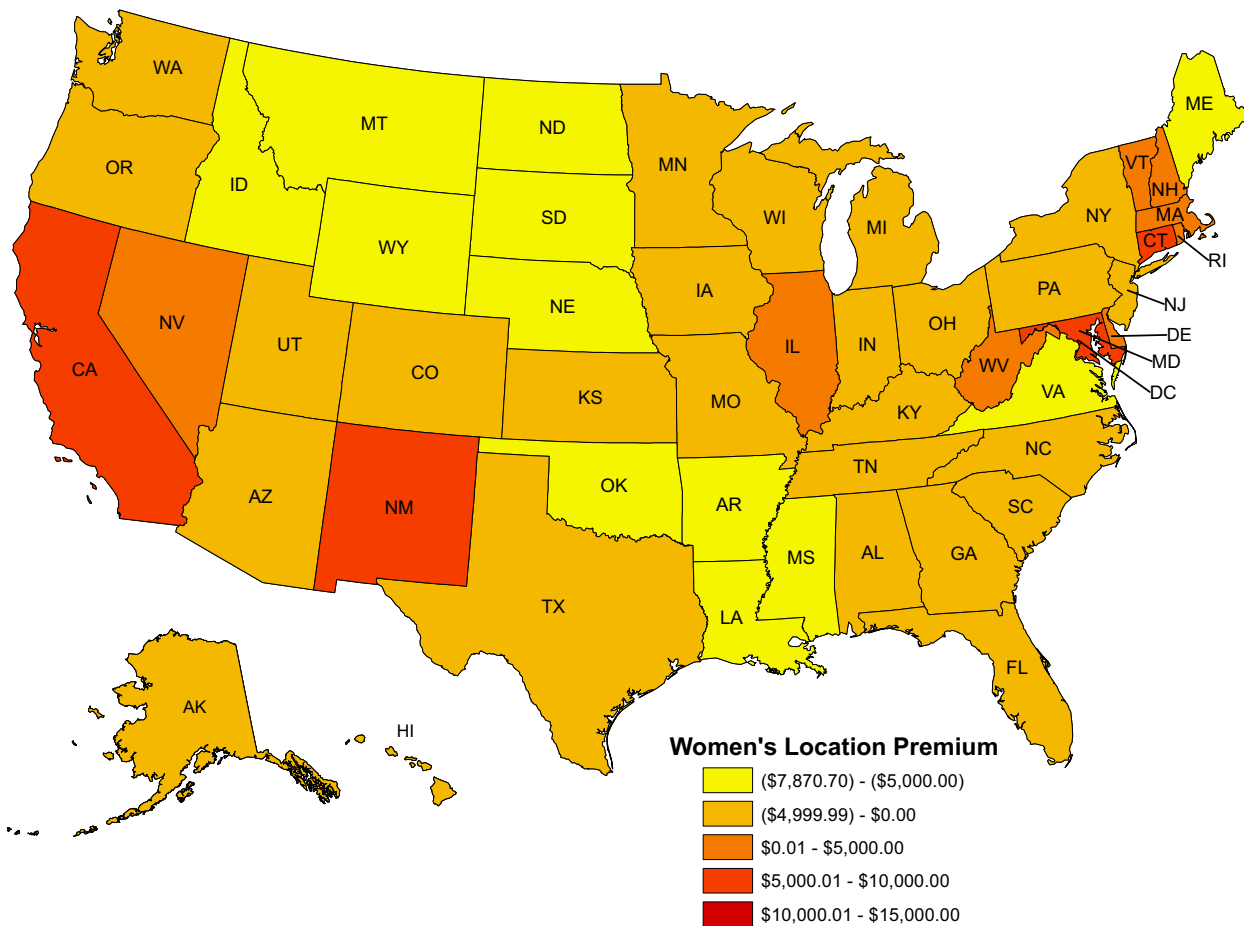
tion premium. **Exhibit 12** charts the Women’s Earnings Index scores across the 50 states and the District of Columbia.

Once again, the clear winner is the District of Columbia. It is followed by Maryland (with an index score of 0.931), Nevada (0.873), Massachusetts (0.863), Rhode Island (0.843), and Delaware (0.838).

In the bottom position we find Wyoming

Women’s location premium

Exhibit 11



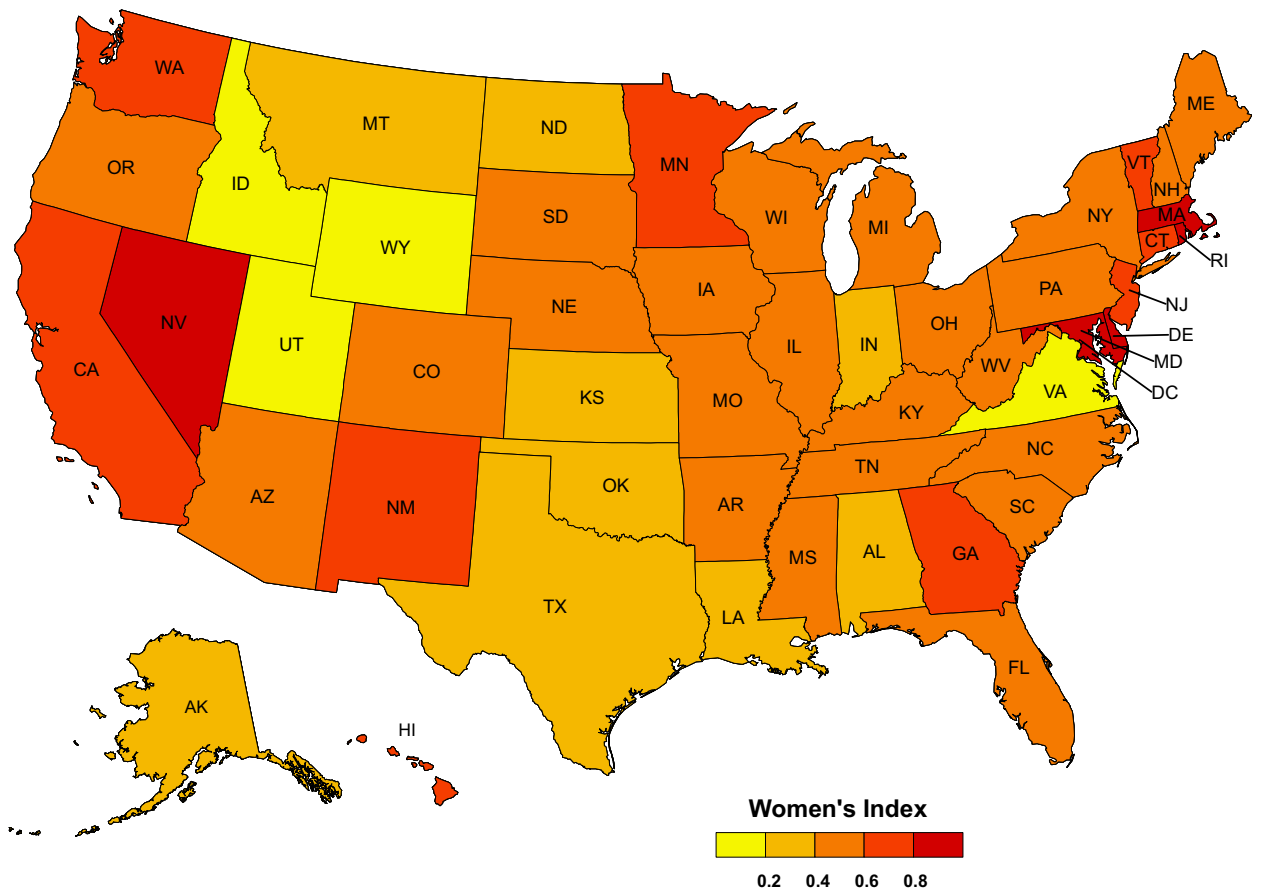
Source: American Community Survey 2006–2008

(which scores 0.103 on the Women's Earnings Index). Seven additional states have index scores below 0.300: Idaho (0.123), Virginia (0.142), Utah (0.157), Montana (0.240), North Dakota (0.270), Kansas (0.275), and Oklahoma (0.279) (see **Appendix E**).

So far, we have examined the economic situation for all working women. In the next section, we focus specifically on Creative Class women—the women with the knowledge jobs that tend to drive the contemporary creative economy.

Women's earning index

Exhibit 12



Source: American Community Survey 2006–2008

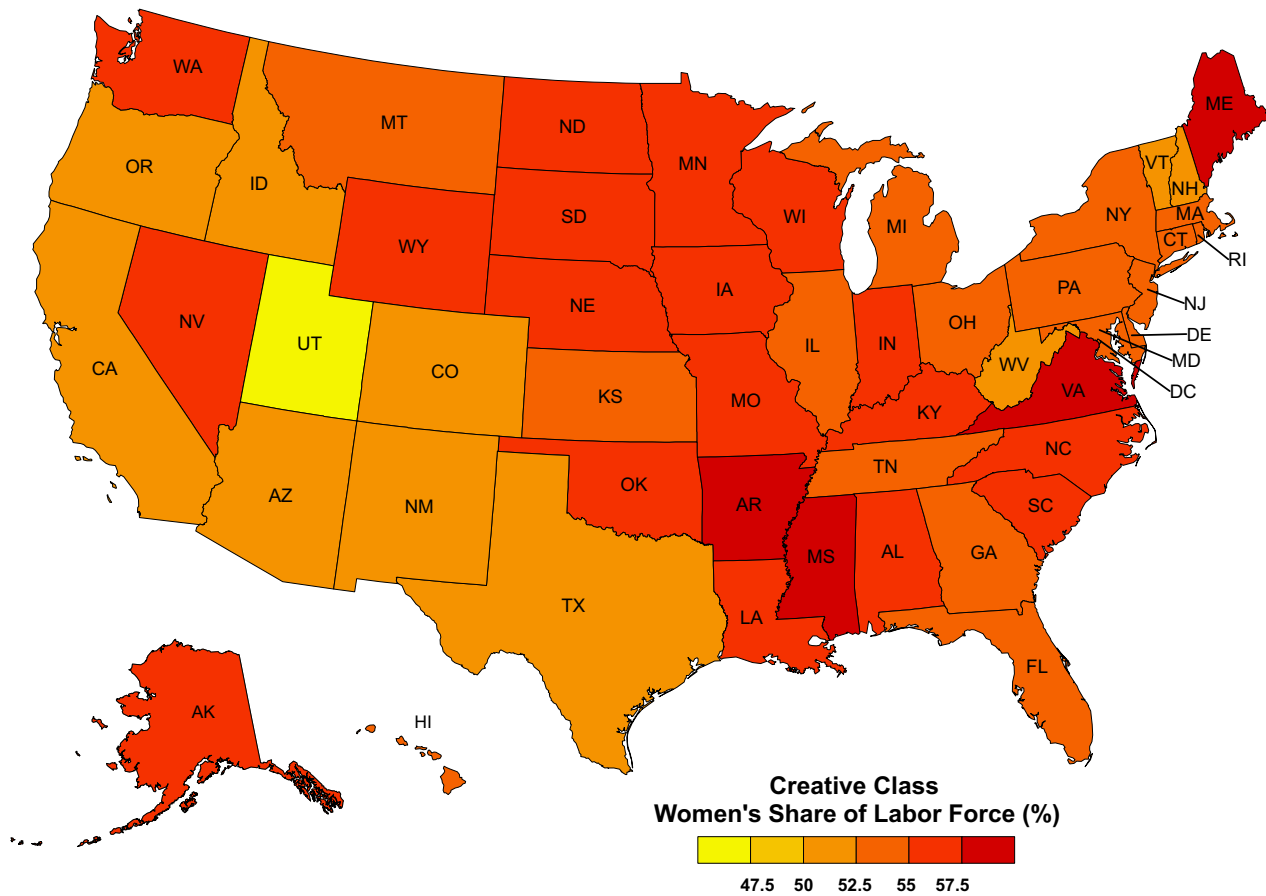
## BEST STATES FOR CREATIVE CLASS WOMEN

As we have seen, women tend to be better-represented in the Creative Class labor market than in the labor market in general. But how does this vary from state-to-state?

To start, we look at women's share of the Creative Class across the 50 states and the District of Columbia (see **Exhibit 13**).

Women's share of the Creative Class by state

Exhibit 13



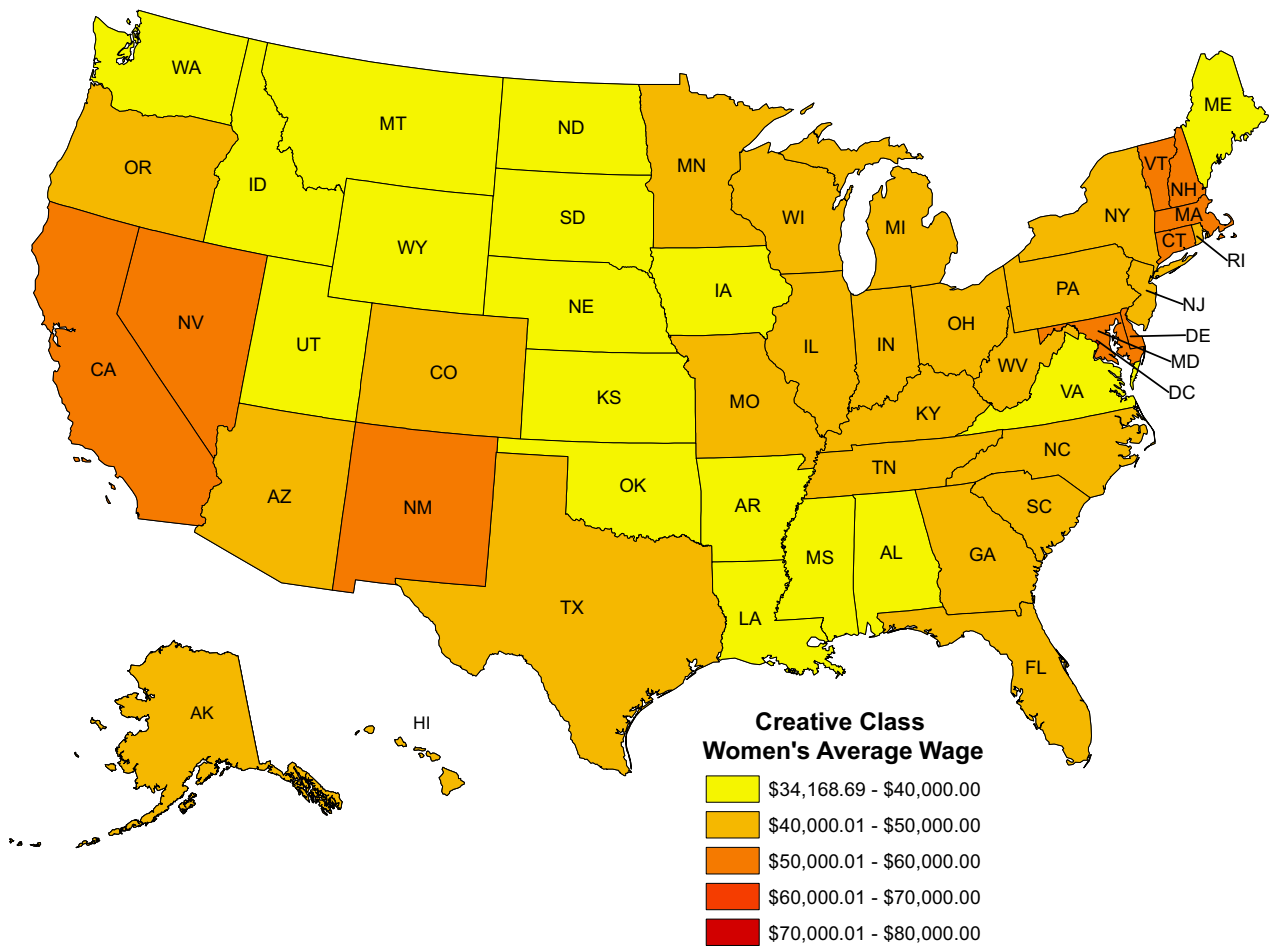
Source: American Community Survey 2006–2008

The top of the list may seem surprising. The state of Mississippi takes first place, where women comprise 58.9 percent of the Creative

Class. It is followed by Maine (58.7 percent), Arkansas (58.2 percent), Virginia (57.7 percent), and Louisiana (57.4 percent). At the bottom of the list are Utah (45.7 percent), Colorado (50.3

Average wages for Creative Class women by state

Exhibit 14



Source: American Community Survey 2006-2008

percent), West Virginia (50.5 percent), California (50.7 percent), and Vermont (51.4 percent) (see **Appendix F**). This is clearly a very different result than for overall women’s labor force participation (see **Exhibit 8**), and it is likely due to the different occupational structures of these states.

Now we consider wages: Where do Creative Class women earn the most? **Exhibit 14** shows the average Creative Class wage level for women in the 50 states and the District of Columbia.

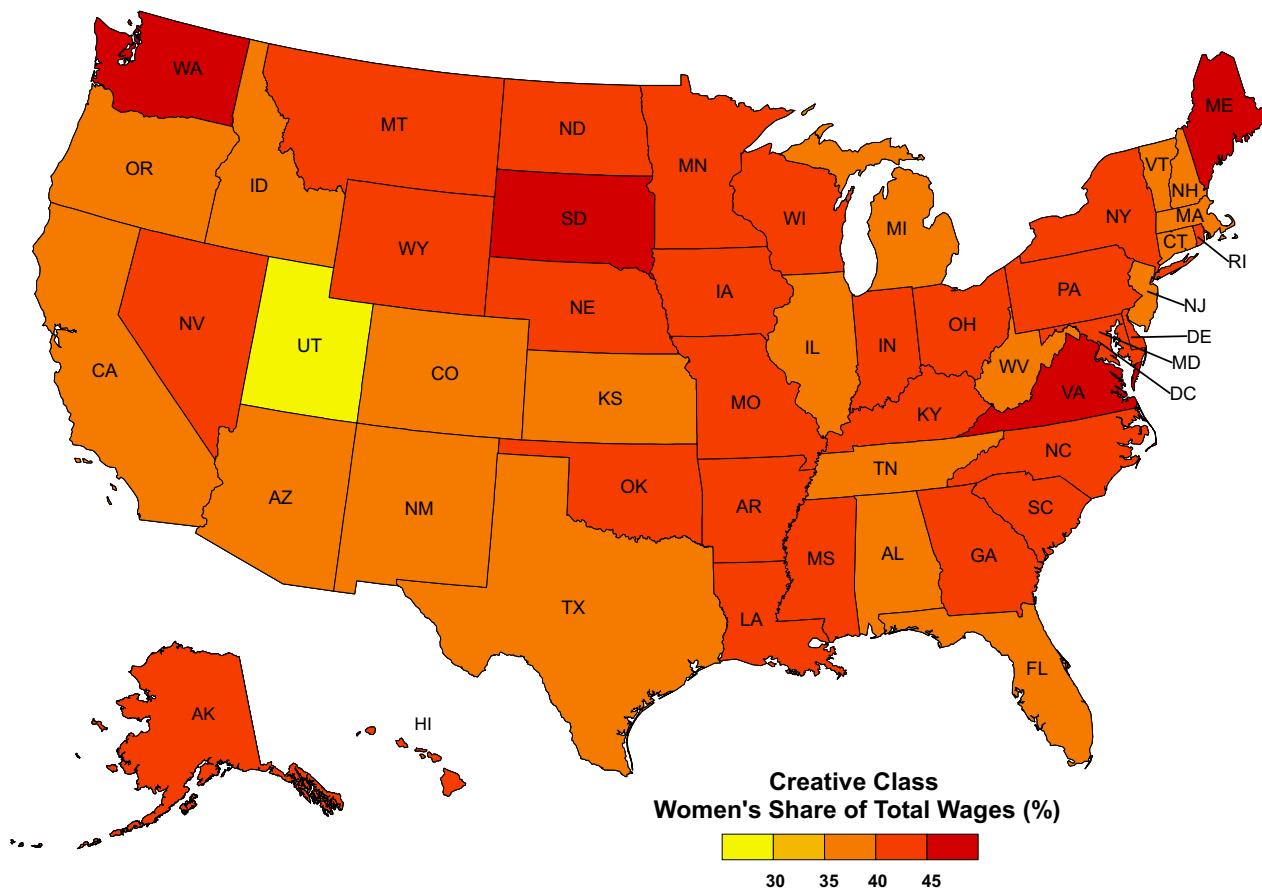
The pattern here is more recognizable. The District of Columbia, again tops the list for wages of Creative Class women (\$70,395), followed by New Mexico (\$59,476), Maryland (\$58,848), California (\$56,871), and Connecticut (\$56,803). In total, ten states have average annual wages for Creative Class women above \$50,000, including Nevada (\$54,630), Massachusetts (\$53,645), Vermont (\$52,757), Delaware

(\$50,929), and New Hampshire (\$50,679). At the bottom of the list are Montana (\$34,169) and North Dakota (\$34,448). South Dakota (\$35,018), Idaho (\$35,286), Utah (\$35,872), and Wyoming (\$35,874) are also states where Creative Class women earn roughly half of what they do in the District of Columbia (see **Appendix G**). The ratio between the bottom and top performer is approximately the same for all women and for Creative Class women, with states at the top earning approximately twice as much as states at the bottom.

We now turn to women’s share of total Creative Class wages (see **Exhibit 15**). The list here is similar to the earlier ranking for

Creative Class women’s share of total Creative Class wages by state

Exhibit 15



Source: American Community Survey 2006–2008

all women's share of total wages (see **Exhibit 10**). South Dakota tops the list, where women's wages comprise 46.6 percent of total wages, followed by Maine (46.3 percent). Washington and Virginia both have shares above 45 percent, followed by the District of Columbia (44.7 percent) and North Dakota (44.1 percent). At the bottom of the list is Utah, the only state where women receive less than 30 percent of total wages. Connecticut is next with 36.3 percent, followed by Idaho (36.7 percent), Colorado (37.3 percent), and Texas (37.7 percent) (see **Appendix H**).

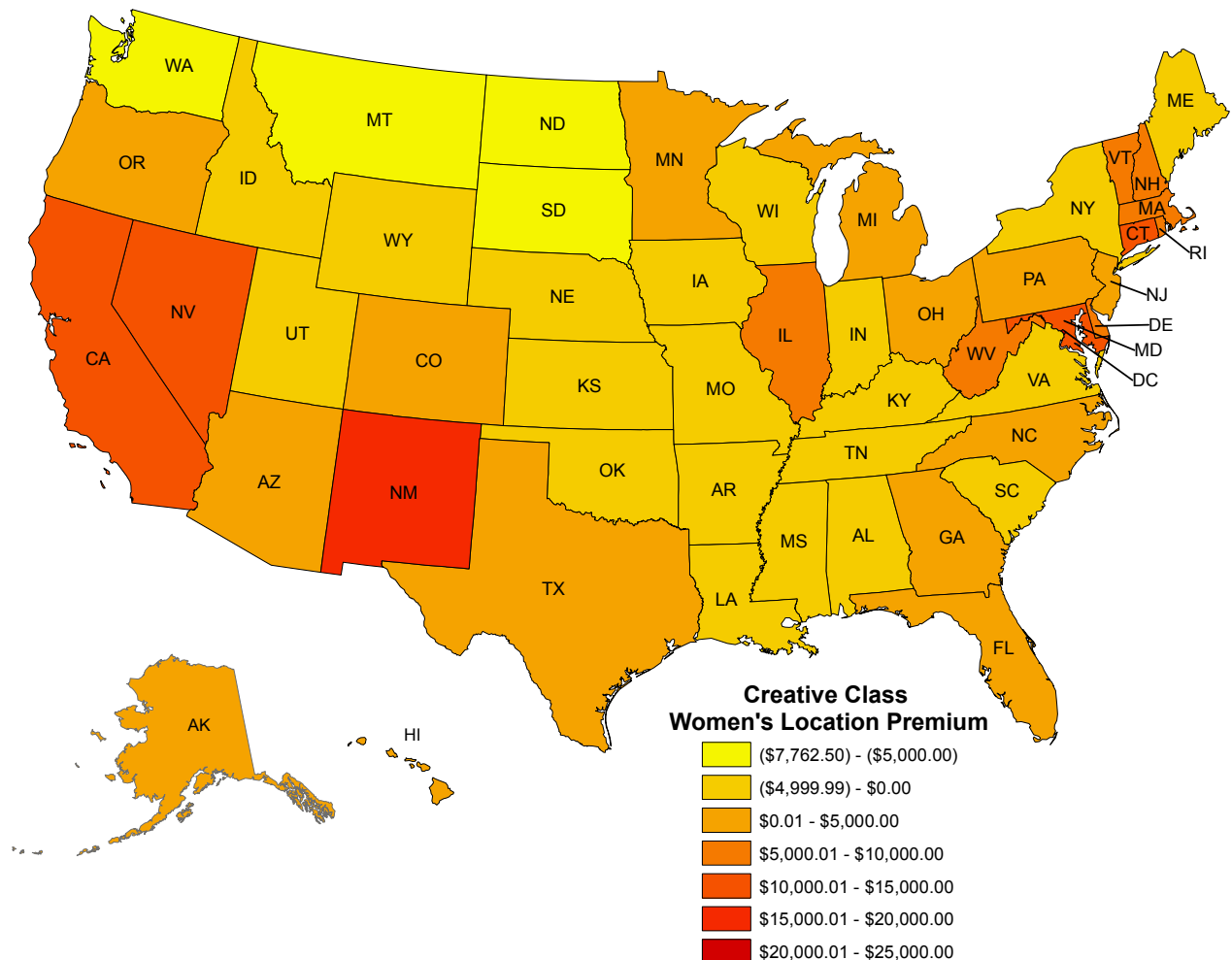
Women in creative occupations earn a larger share of the total state Creative Class

wages than women overall. The women's share of total Creative Class wages exceeds 40 percent in 31 of the 50 states plus the District of Columbia. Compare this to just four states where the women's share of total wages in all occupational groups exceed 40 percent.

So where do Creative Class women have the highest location premium (see **Exhibit 16**)? Here again, the District of Columbia tops the list with a Creative Class location premium of more than \$20,000 per year. It is followed by New Mexico (\$16,115), California (\$13,910), Maryland (\$13,845), and Connecticut (\$13,400) (see **Appendix I**). Overall, 27 of the 50 states including the District of Columbia have positive Creative Class location premiums. This is about double the level we found for the overall labor market, where just 13 states had positive location premiums (see **Exhibit 11**). The state with the worst location

Creative Class women's location premium by state

Exhibit 16



Source: American Community Survey 2006-2008

premium is Montana (-\$7,762), followed by North and South Dakota (-\$6,993 and -\$6,759 respectively), and Washington (-\$5,035).

What are the best states for Creative Class women in general? To get at this, we calculate an overall index for Creative Class women based on four factors:

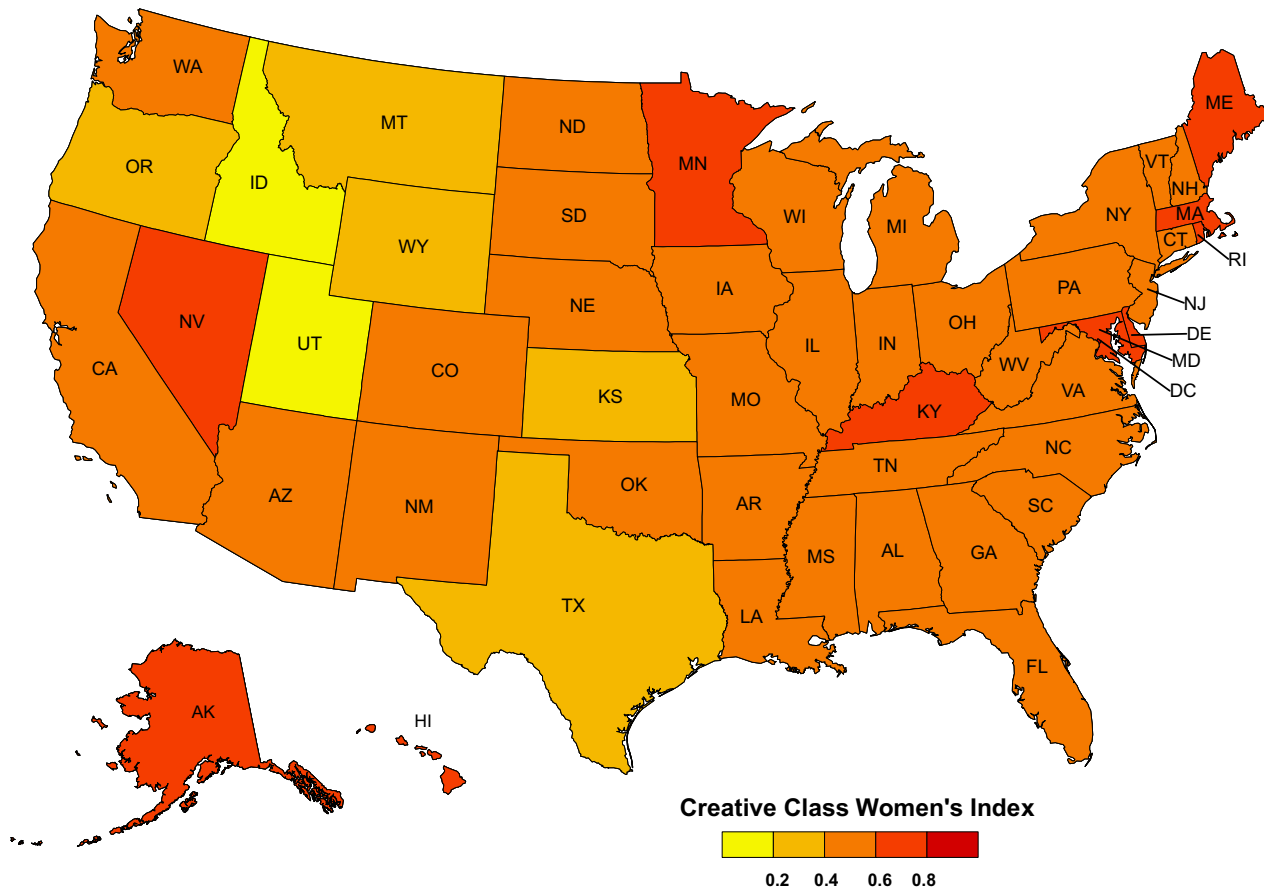
1. women as a share of the Creative Class workforce;
2. the average wage level for women;
3. women's share of total wages; and
4. the location premium for women.

**Exhibit 17** shows the index across the 50 states and the District of Columbia. Once again, the District of Columbia, tops the list with an index score of 0.819. It is both the best place for women in general and for Creative Class women specifically.

Nevada comes in second with an index score of 0.775—close to its third place finish on the overall index. Maryland is third (0.686), Rhode Island fourth (0.672), and Alaska suddenly leaps to fifth place (0.657). Interestingly four states which scored highly on the overall Women's Earning Index—Massachusetts, New Mexico, Washington, and Connecticut—dropped significantly on the Creative Class Women's Earning Index. Utah comes up last for Creative Class women (with an index score of 0.123), followed by Idaho (0.147), Montana (0.270) and Kansas (0.319) (see **Appendix J**).

Creative Class women's earning index by state

Exhibit 17



Source: American Community Survey 2006–2008



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## CONCLUSION

This study poses a simple, straightforward question: Is the playing field of today's knowledge-driven, creative economy tilting toward women? To determine this, we conducted an empirical examination of women's wages and working hours overall, for the Creative Class versus other main classes of employment, and for specific Creative Class occupations. We did this for the country as a whole, and for the fifty states and District of Columbia.

Our findings suggest that the answers are mixed. Women certainly play a larger role in the labor force today than they did in the 1950s. This is true of jobs overall and of Creative Class jobs in particular, where women make up more than half of the total workforce. Indeed, women make up the majority of the workforce in six out of the nine major occupational categories that comprise the Creative Class. Women make up the majority of workers in legal jobs as well as those in business and finance occupations, and hold three out of four jobs in healthcare and education. Creative Class women earn higher wages and are better educated in comparison to women in other less skilled occupations. They also work more hours and are catching up to men in terms of the share of total wages they command.

But a substantial gender gap in earnings remains. Women make 50 percent less than men overall, and Creative Class women earn a staggering 70 percent less than their male counterparts. When we control for hours worked, education and skills the gap becomes somewhat narrower but women still make \$10,600 less than men overall and \$23,700 less than men in Creative Class jobs. Ironically, the pay gap is widest in occupations where women make up the largest share of the workforce (e.g. education, training, and library or healthcare practitioner and technical jobs), and substantial pay gaps remain across virtually every Creative Class field.

These are the broad national patterns, but our research has also identified considerable variation at the state level. Women comprise

more than the half the total workforce in the District of Columbia and four states—Washington, Rhode Island, Massachusetts, and South Dakota. In terms of earnings, the District of Columbia is the best place for women. The best states for women are Maryland, New Mexico and Connecticut. The District of Columbia, New Mexico, Connecticut, Maryland and California offer the highest location premiums for women—in excess of \$6,000. Topping the list of the best places for women in the workforce based upon our Women's Earnings Index are the District of Columbia, Maryland, Nevada, Massachusetts, and Rhode Island.

So where are the best places for Creative Class women? Women make up more than half of the Creative Class workforce in every state but one, Utah. The highest levels of pay and the highest location premiums for Creative Class women are found in the District of Columbia, New Mexico, Maryland, California, and Connecticut. In the District of Columbia, the premium is more than \$20,000 and it averages more than \$13,000 in the top states. At the opposite end of the spectrum women sacrifice more than \$5,000 in Montana, North Dakota, South Dakota and Washington. The location premium is also low in Virginia, Wyoming, Nebraska, Mississippi, and Oklahoma. Based on our Creative Class Women's Earnings Index, the best places for Creative Class women are the District of Columbia, Nevada, Maryland, Rhode Island, and Alaska.

So what does it all mean? For Creative Class women and for women in the workforce overall, the implications are mixed. Women have become a significant force in the U.S. economy, making up 47 percent of the overall workforce. While men continue to dominate blue collar work and women hold a majority of jobs in the service class, women have become a powerful force in the Creative Class. Women hold just over half of all Creative Class jobs and comprise more than half of the Creative Class workforce in every state but one. But even when we control for education, skills, and hours worked, men out-earn women by \$10,600 overall and by \$23,700 in Creative Class jobs.

So to bring us back to the key question: Is the knowledge economy tilting the playing field toward women? Our answer is a strongly qualified *yes*. Yes, in that women make up a large and growing share of Creative Class jobs. Yes, in that women are concentrated in occupations like education and healthcare, which are less exposed to adverse economic cycles. And yes, when you consider that women make up the majority of students enrolled in undergraduate, graduate, and professional degree programs.

But alongside these positive trends, we are forcibly struck with the significant earnings gaps that remain across the board. Men earn significantly more than women no matter how you slice it—across the economy as a whole, by major class, or by specific Creative Class occupation. And these earnings gaps remain even when we control for education, skill, and effort. While the economic playing field may be tilting toward women, it has a long way to go before we can call it equal.

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## METHODOLOGY APPENDIX

### VARIABLES, DATA, AND METHODS USED IN THIS STUDY

This study is based on data from the American Community Survey (ACS).<sup>15</sup> The ACS is an annual survey conducted by the U.S. Census Bureau to collect economic, social, demographic, and housing information. The data covers the years 2006–2008, which provides a bigger sample than data from a single year. The ACS survey provides detailed data on specific occupations or jobs, wages, and skill levels based on education, overall and for the fifty states and the District of Columbia.

We examine women’s role in the labor force overall and within the Creative Class. The Creative Class makes up roughly a third of the U.S. workforce and includes: workers in computers and math; architecture and engineering; life, physical, and social sciences; education, training, and library; arts, design, media, entertainment, and sports; management; legal; finance and business; and health care practitioner and technical occupations.

We examine wages, working hours, and education or skill level for women in the overall labor force and in the Creative Class specifically. We use the following variables in our analysis:

**Women’s Share of the Labor Force:**

This is the percentage of women as a share of the overall labor force.

**Education/Skill:**

Our skill variable is based on years of education. It is derived from the ACS variable “SCHL” (education attainment), which is then converted to years of education.

**Wages:**

Our wages measure reflects wages or salary income for the past 12 months. It is derived from the ACS variables “WAGP” as adjusted by the ACS to reflect inflation-adjusted 2008 dollars.

**Hours Worked:**

This variable measures hours worked per week in the past twelve months. It is extracted from the ACS variable “WKHP”.

**Location Premium:**

We calculate the Location Premium as the average saved residual ( $\epsilon$ ) for each state from the regression based on the model:

$$\log Earnings = \alpha + \beta_1 SchoolYears + \beta_2 Experience + \beta_3 Experience^2 + \beta_4 Hours/Week + \epsilon$$

which is a traditional Mincer (1974)<sup>1</sup> wage regression.

**Women’s Earning Index:**

The Women’s Earning Index is constructed with four variables:

1. women’s share of the labor force;
2. average wage level for women;
3. women’s share of total wages; and
4. the location premium for women.

**Creative Class Women’s Earning Index:**

This index is also composed of four variables:

1. Creative Class women’s share of the Creative Class labor force;
2. average wage level for Creative Class women;
3. Creative Class women’s share of total Creative Class wages; and
4. the location premium for Creative Class women.

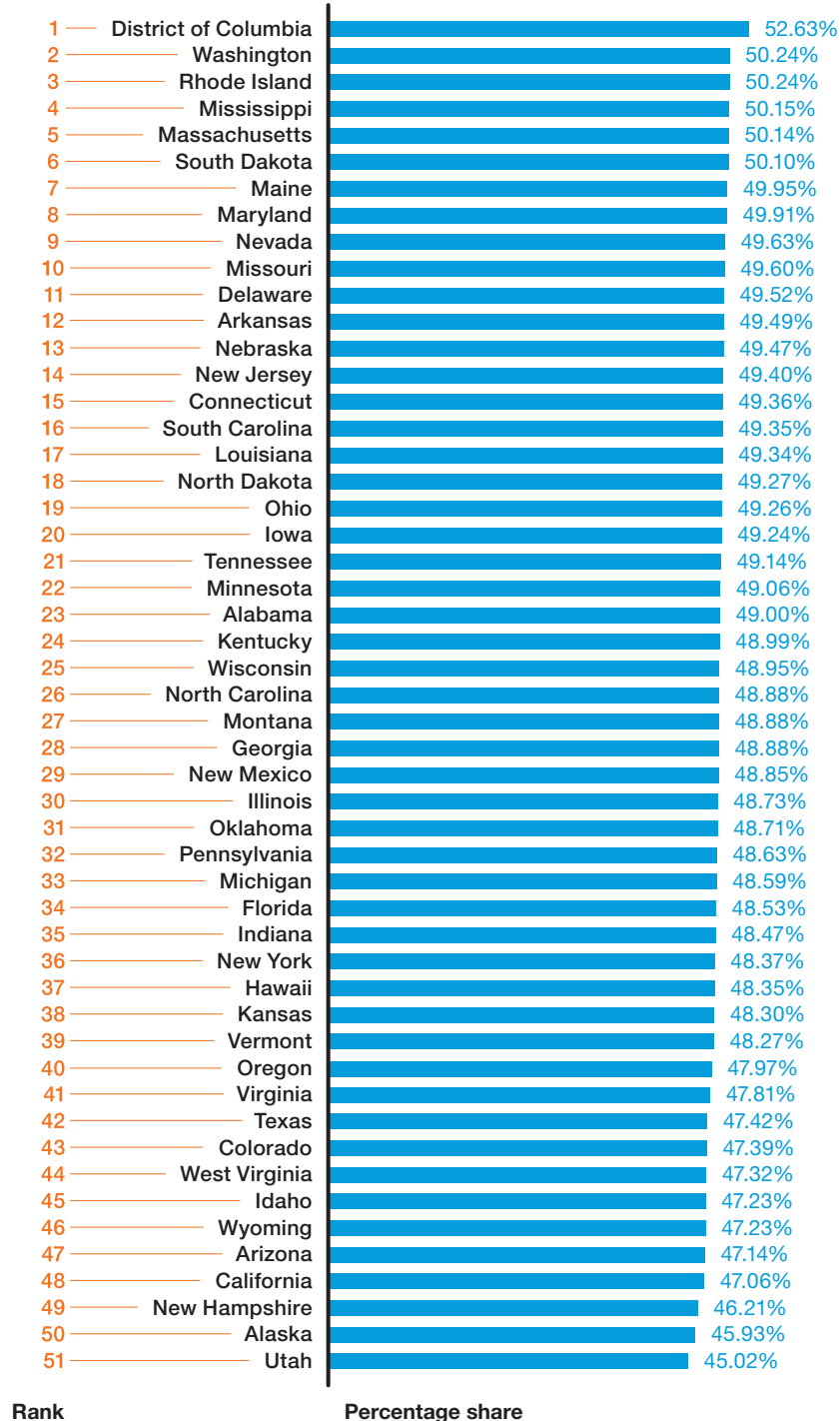
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<sup>1</sup> Jacob Mincer, *Schooling, Experience, and Earnings* (Columbia University Press, 1974).

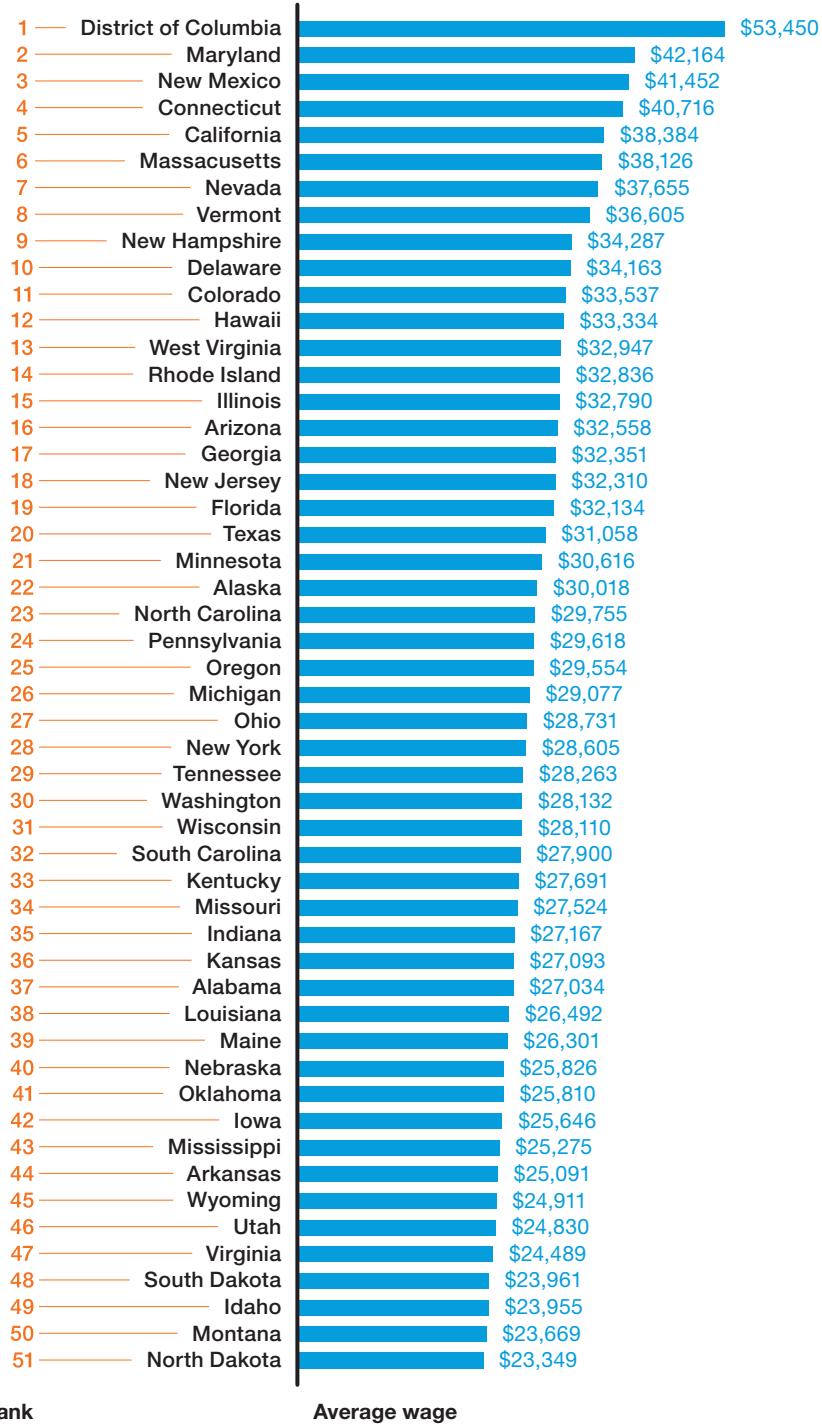
## DATA APPENDICES

Women's share of the workforce by state

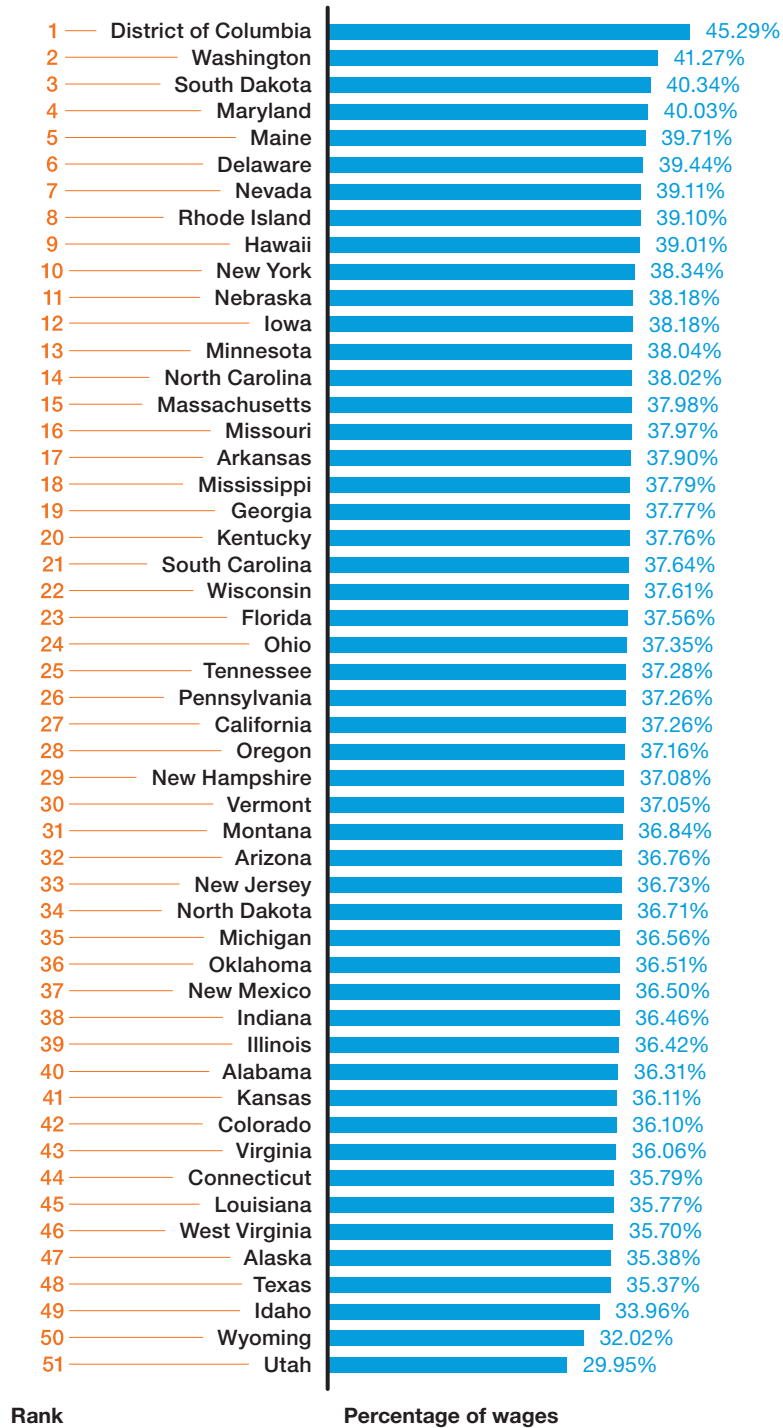
Appendix A



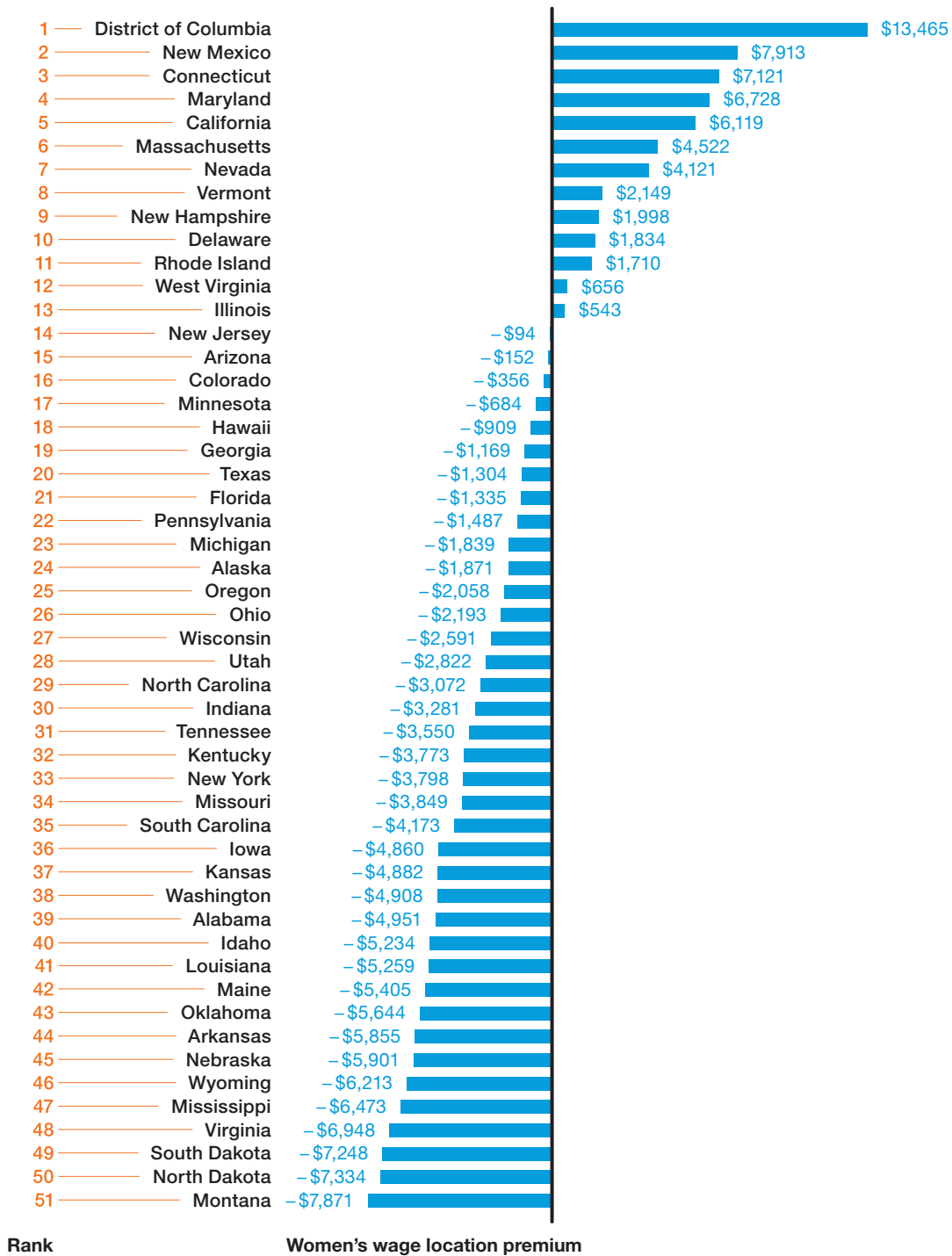
Source: American Community Survey 2006–2008



Source: American Community Survey 2006–2008

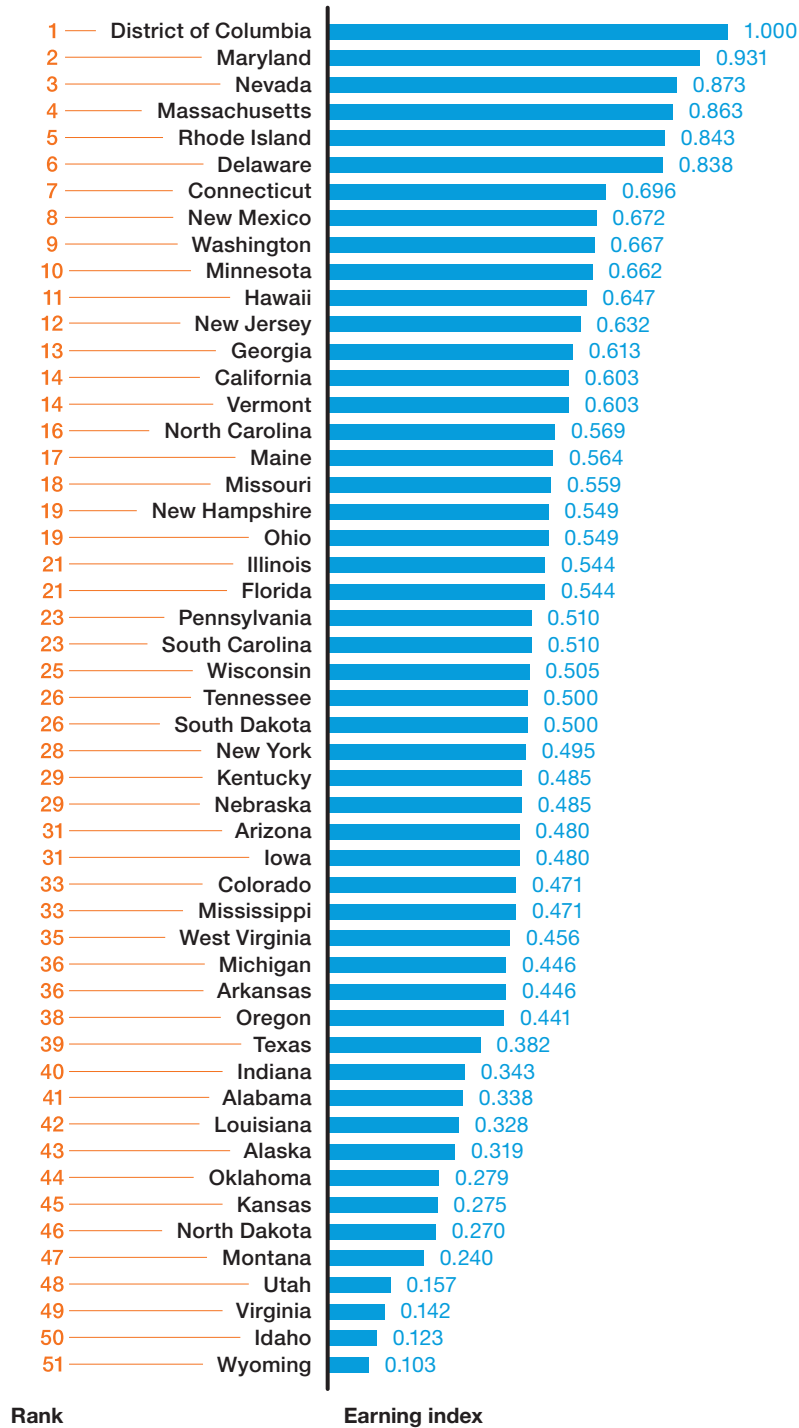


Source: American Community Survey 2006–2008



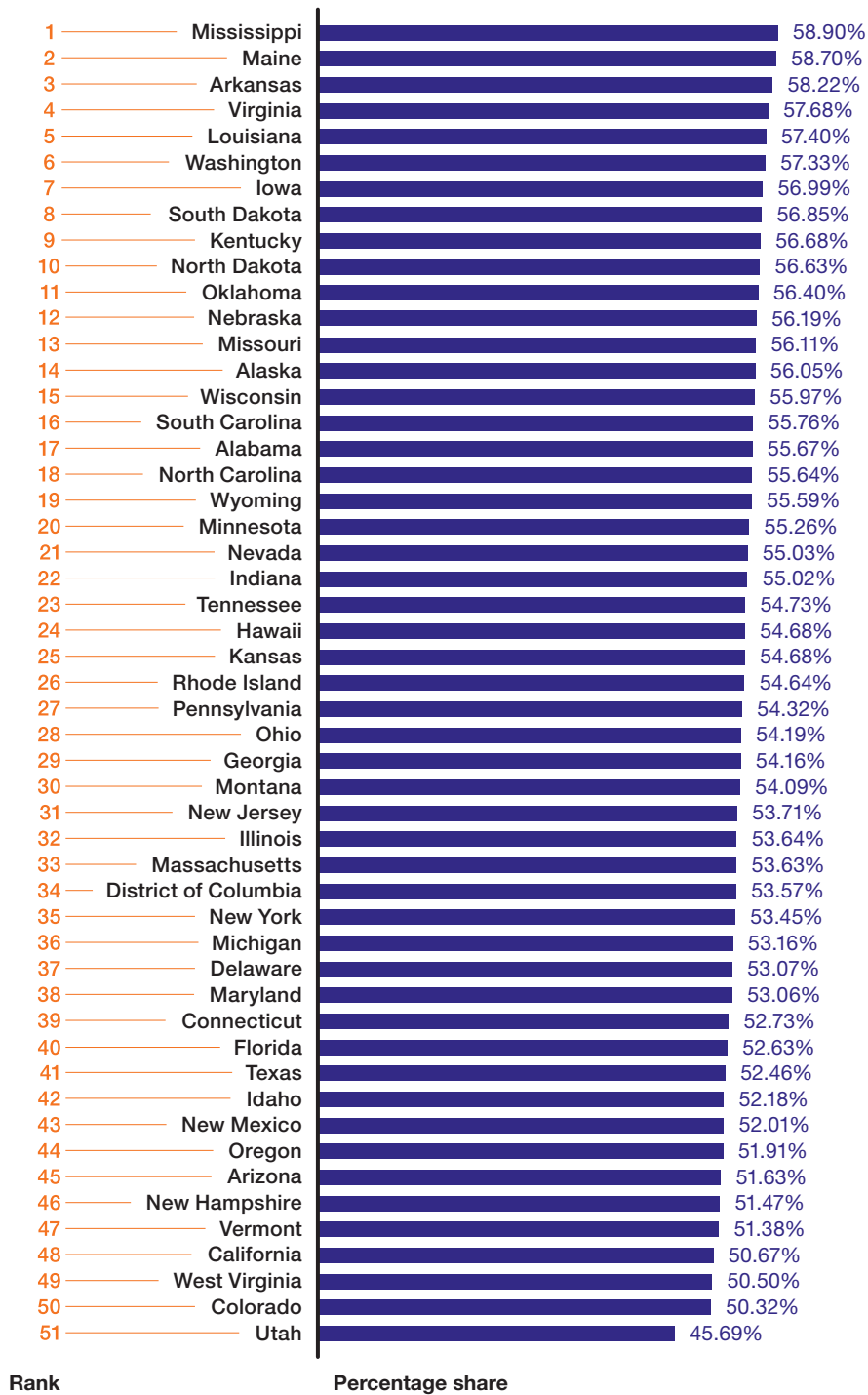
Source: American Community Survey 2006–2008

Note: This figure is based on residual analysis which identified how much more or less women earn in a state on average relative to all other states, controlling for education, skill, and hours work.



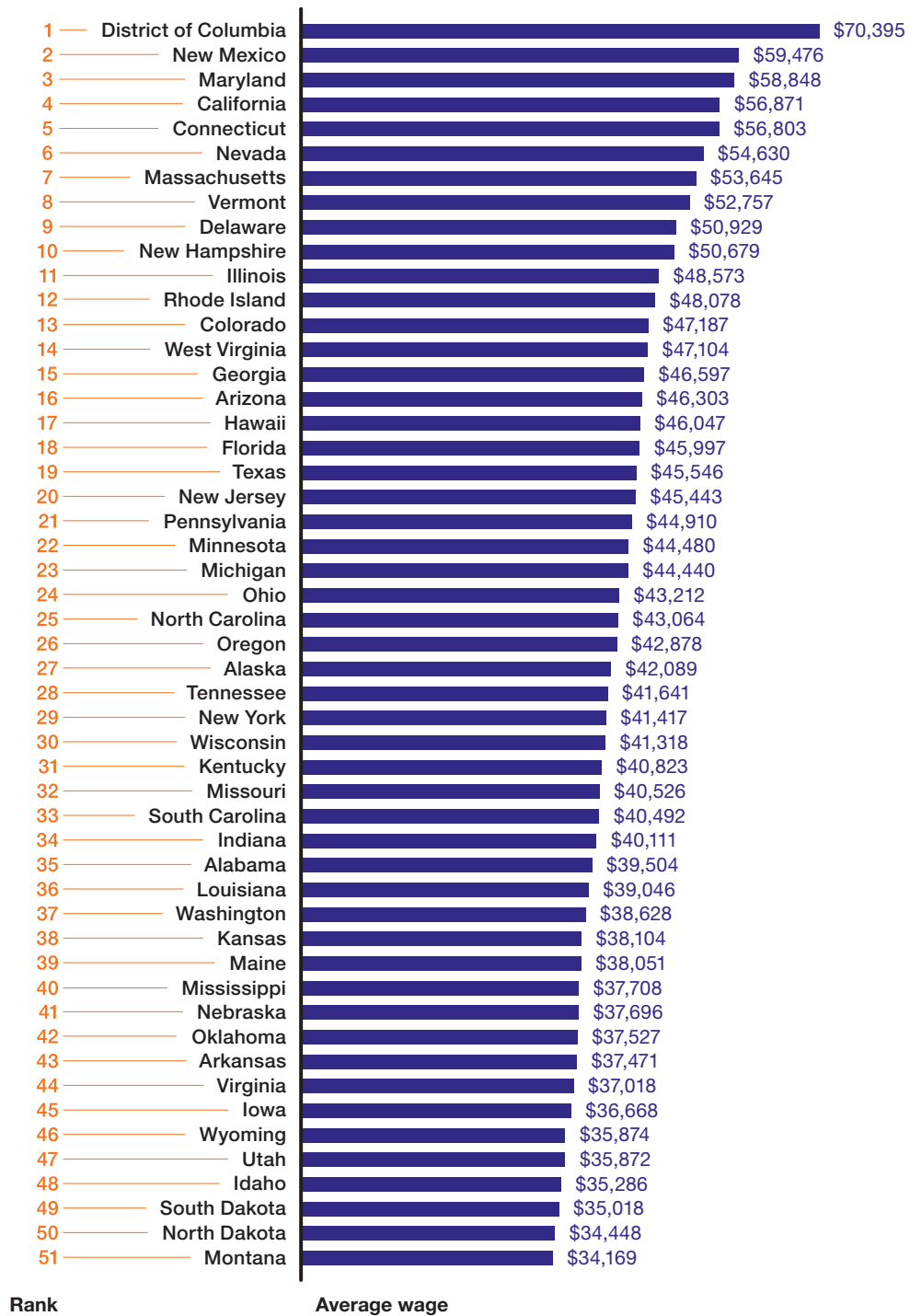
Source: American Community Survey 2006–2008

Note: This index is based on four equally weighted variables: women's share of total employment; average wage levels for women; women's share of state wages; and the location premium for women, that is how much extra or less women earn on average per year, by being in this specific state after we control for education, skill, and hours worked.

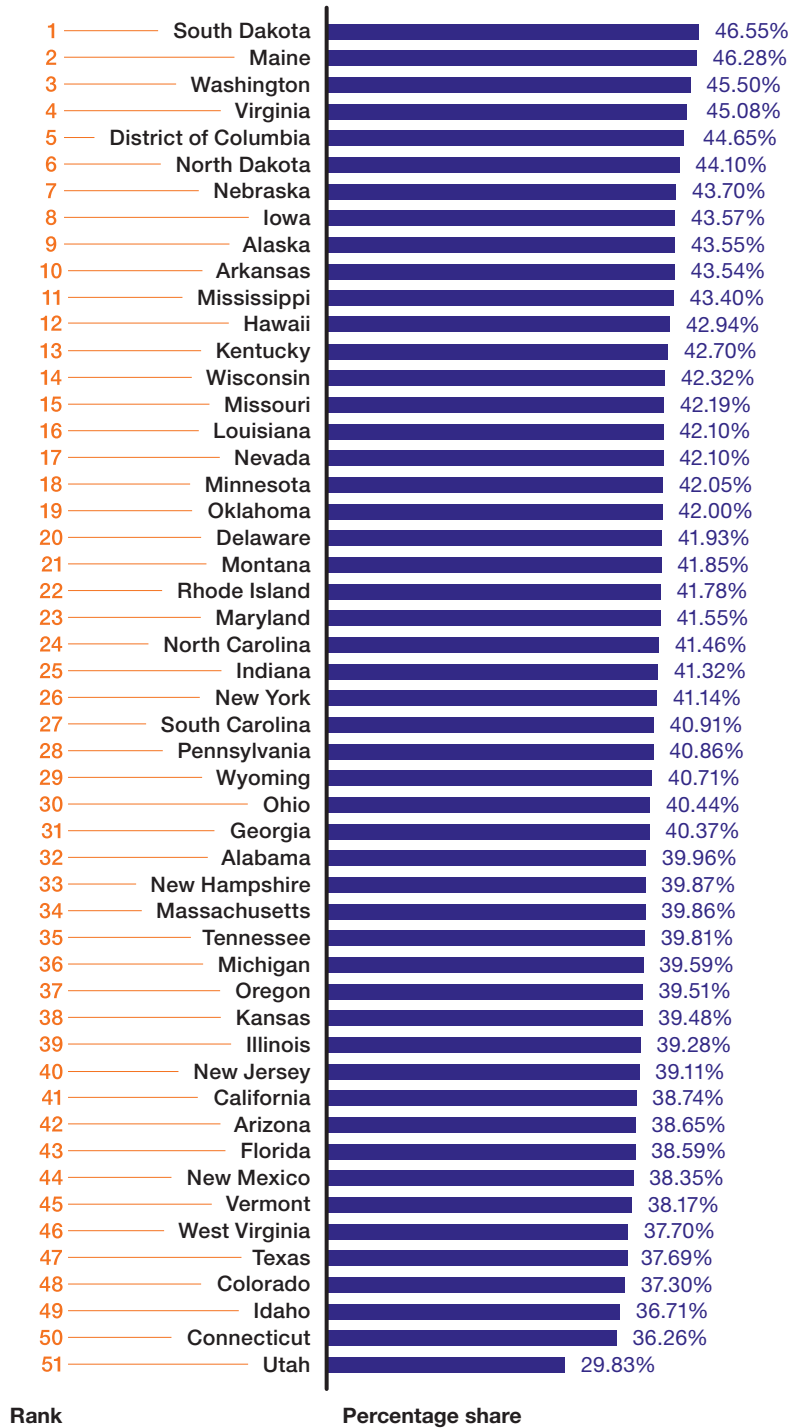


Source: American Community Survey 2006–2008

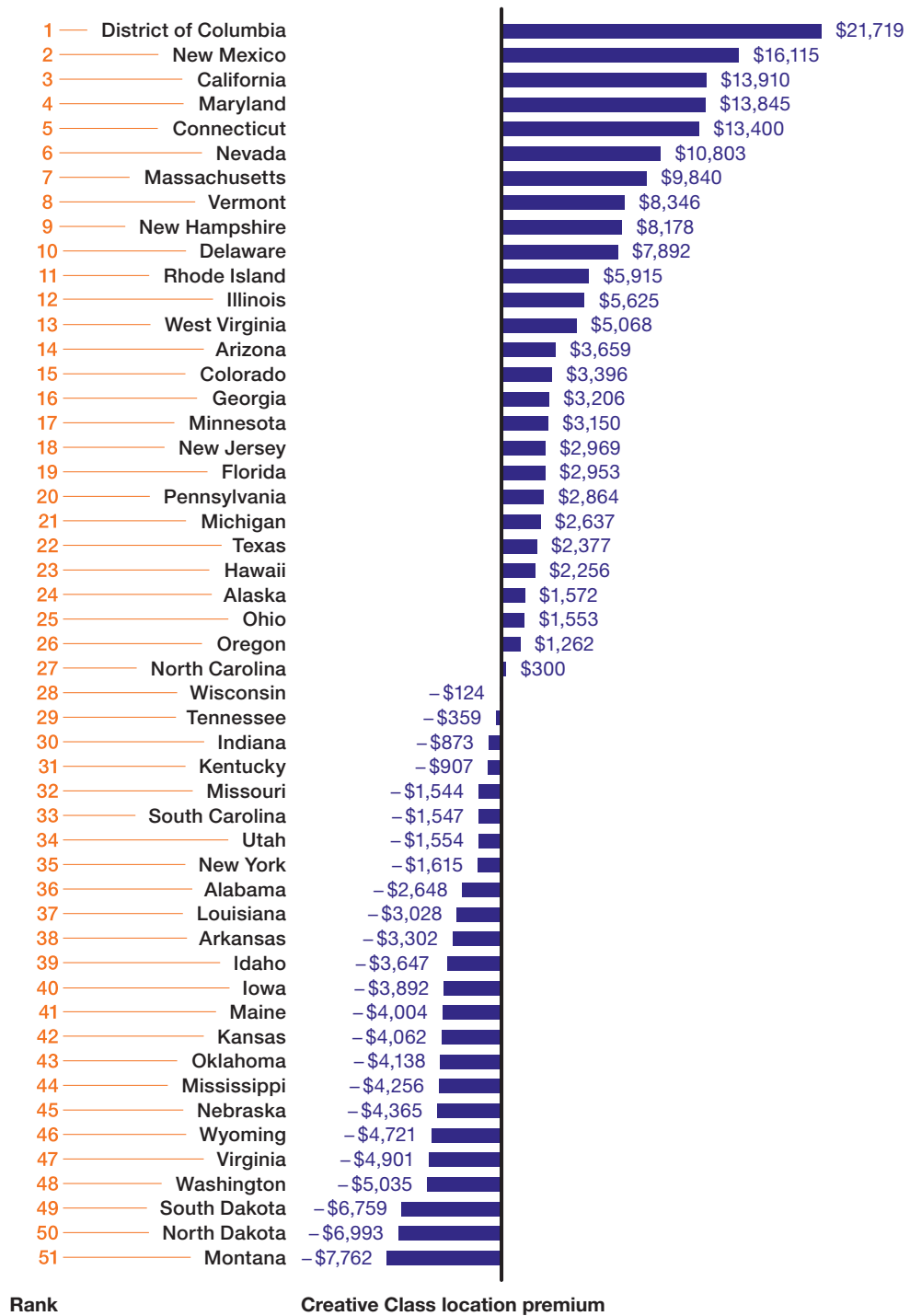




Source: American Community Survey 2006–2008

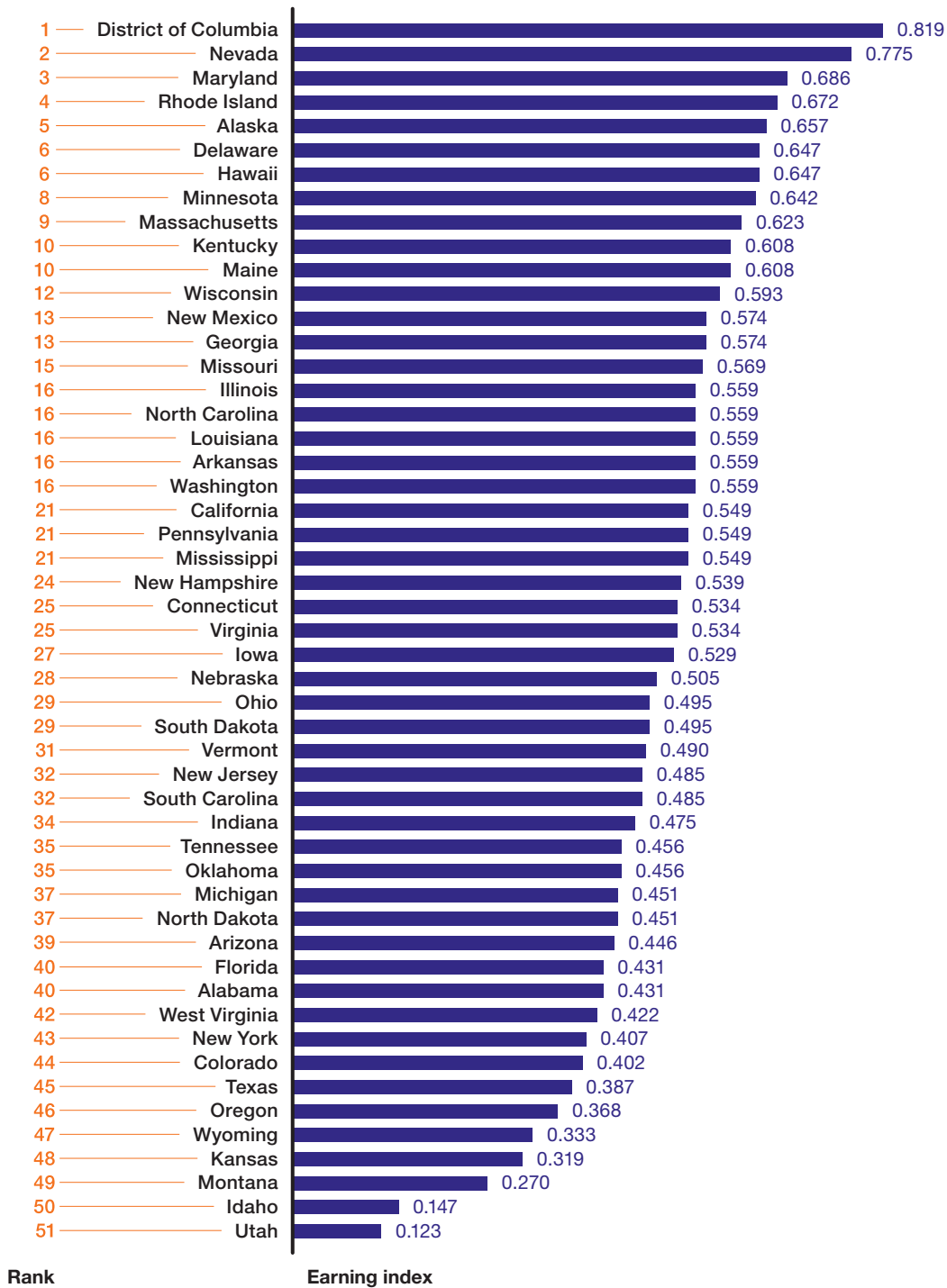


Source: American Community Survey 2006–2008



Source: American Community Survey 2006–2008

Note: This figure is based on residual analysis which identified how much more or less women in Creative Class jobs earn in a state on average relative to all other states, controlling for education, skill, and hours worked.



Source: American Community Survey 2006–2008

Note: This index is based on four equally weighted variables: women's share of Creative Class employment; average wage levels for Creative Class women; women's share of Creative Class wages; and the location premium residual for Creative Class women, that is how much extra or less Creative Class women earn on average per year, by being in this specific state after we control for education, skill, and hours worked.

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## ACKNOWLEDGMENTS

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