

THE FUTURE OF WORK: IMPLICATIONS FOR COLORADO WOMEN

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In the Bell Policy Center's [Guide to Economic Mobility in Colorado](#), we examine four forces impacting economic mobility in Colorado: changing demographics, increasing income inequality, declining public investment, and technology's effect on how we work and learn.

In this brief, we apply a gender lens to aspects of this research. We explore technology's influence on the changing nature of work, highlight how women are uniquely affected, and raise up policy levers that can position women for economic success.

Modern labor realities perpetuate inequity in women's economic mobility. As Colorado prepares its workforce to adapt for and thrive in tomorrow's economy, we have an opportunity. Policymakers should consider how factors shaping the future of work will impact women workers in a distinct way. These factors include automation, "non-traditional" work arrangements, such as freelance or on-demand jobs, the proliferation of low-wage work, and expectations around caregiving. Through the policy and program changes recommended in this brief, we can design a system that addresses these factors and keeps women's strengths and needs front and center.

Women are a crucial piece of Colorado's workforce, and their economic potential has yet to be fully tapped. Consider:

- Nearly 63 percent of Colorado women are in the workforce, according to the [Economic Status of Women in Colorado](#).
- Over two-thirds of [young children in Colorado](#) live in households where all adults are in the workforce.
- [New research](#) from the Bell finds Colorado middle class families are far more likely to live a middle class lifestyle if two parents work and hold professional or managerial positions.
- Five percent of Colorado working women overall and 20 percent of families headed by working single mothers [live in poverty](#).
- If Colorado increased women's workforce participation to equal men's, enabled more women to move from part- to full-time work, rebalanced unpaid work between genders, and changed the mix of sectors in which women work, we could add [\\$40 billion](#) to our state's economy by 2025.

Colorado's economy and families depend on working women. The workplace of the future will depend on them, too, yet women cannot always depend on our current workplace policies, regulations, politics, and societal norms. Our current system, created in the 1930s when men dominated the workforce, hasn't evolved, and the U.S. has yet to implement a strong approach that meets the needs and demands of today's workers. Because of this, and because of the speed and scale at which other parts of our economy will change, policymakers need to prepare for the future now.



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The Status Quo for Colorado Working Women

The future of work will impact women differently than men because current workplaces offer different gender-based realities. American men are more likely to work than American women, but far more women work today than in decades past. In 1962, only about [one-third](#) of U.S. women were working or searching for jobs. By 2000, 61 percent of women were in the workforce. Men's workforce rates have been slowly declining for decades, but women's participation rates were climbing to compensate.

Then, around the turn of the 21st century, something shifted. As [explained](#) by researchers with the Hamilton Project, women's workforce participation in the U.S. began to slow and reverse after 2000. Workforce rates for both genders have since been declining in concert with each other. Today, about [57 percent](#) of all U.S. women participate in the workforce. Importantly, other industrialized nations like Canada, Great Britain and Japan are not experiencing a similar decline; rather, the number of working women in those countries continues to grow.

Research from the Hamilton Project continues by pointing out the US labor market, while flexible according to the OECD, is "also among the least supportive in terms of generosity of unemployment benefits and active labor-market policies, including job search assistance and training. Strengthening and expanding the unemployment insurance system and providing worker training, as well as public jobs programs, might help both women and men stay more attached to the labor market while they are in their prime working years. These policies, in addition to implementing paid family leave and expanded access to child care, would likely increase the labor force participation rate of prime-age women."

In Colorado, we have the 11th highest female labor force participation rate in the country, though women are still less likely to work than men. The number of Colorado women working or looking for work has [declined slightly](#) since the 1990s, according to longitudinal information from the Women's Foundation of Colorado (WFCO) and the Institute for Women's Policy Research (IWPR). This decline is projected to [slowly continue](#) into 2025. In Colorado, about 31 percent of women [work part time](#), and women are twice as likely to do so than men.

Women are also more likely to work in low-wage jobs. A 2013 Colorado Fiscal Institute [report](#) revealed more than one-quarter of all Colorado jobs are low-wage jobs

(those paying less than \$12 per hour), and more than half of them employ women. More recent research by the National Women's Law Center (NWLC) finds more than 63 percent of Colorado jobs paying less than \$11.50 per hour are [held by female workers](#). That means nearly two-thirds of working women [aren't earning enough](#) for a family of four to live above the federal poverty level (FPL), which is about \$25,100 a year.

Workplace discrimination, which can include disparities in pay, is more widespread for women. [NWLC analysis](#) points out while the vast majority of those who face sexual discrimination at work never lodge a legal complaint, over 80 percent of sexual harassment charges filed at the federal level in 2017 were filed by women.

Forty percent of women report gender discrimination at work, nearly twice the rate of incidence reported by men, per a Pew Research Center [survey](#).

Discrimination can also be linked to workers' gender identity and sexual orientation. The Center for American Progress (CAP) reports up to 30 percent of LGBT workers say they lost promotions, were fired, weren't hired, or had to alter their resumes because of their sexual orientation or gender identity. Research by [One Colorado](#) finds 2 out of 5 LGBT Coloradans face homophobia, transphobia, and/or harassment at work, and a similar number experience employment discrimination.

Women of color face different labor and economic realities than other workers. Data from [WFCO's Economic Status of Women](#) in Colorado shows female workforce participation rates differ according to race and ethnicity, with black female workers having the highest workforce participation rates. Irrespective of gender, racial and ethnic minorities are more likely to be employed in low-wage jobs than other demographic groups; [CFI's research](#) shows over half of Colorado workers who are black or Latinx are employed in low-wage work.

Overall, Colorado women of color are more likely to have lower incomes than white women, despite having similar or higher workforce participation rates. Women of color are also more likely to face disparities in educational attainment, unemployment, poverty, financial assets, homeownership, and health. Colorado LGBT workers of color are also more likely to encounter frequent (at least once a day) [harassment and discrimination](#) than white workers.

The intersectionality of being a woman and a person of color compounds workforce challenges. Policymakers must pay attention to this dynamic, particularly because people of color, regardless of gender, are [projected](#) to comprise most of the growth in our working-age population through 2050. While data are limited on work-related challenges for LGBT workers, available information suggests policymakers should consider how to best support them in the workplace as well. Policies that foster equity in our economy will be especially impactful for the workforce of tomorrow.

Technology & Automation

To understand how women in Colorado will be affected by changes in the way we work and learn, we first must understand how these challenges affect Colorado workers in general. Automation, artificial intelligence (AI), and robotics have the potential to shift Colorado’s economy in positive ways. Over the long term, these technological advances can improve worker productivity and performance, generate more jobs, lower consumer prices, and stimulate economic growth.

The Bell’s [Guide](#) points to specific ways our state may benefit in the future, especially in high-technology industries like aerospace, electronics, bioscience, as well as advanced manufacturing companies. Automation will likely have broad positive outcomes on small and large business practices, organization, competition, and related customer experience.

On the other hand, technology and automation disruption has led to job loss in the past. Experts [predict](#) similar outcomes in the future, which will threaten job and income security for some workers. The World Economic Forum (WEF) released a report based on data from the U.S. Bureau of Labor Statistics (BLS) projecting in the next eight years, job disruption from technology and the sharing economy will lead to dramatic change in production, consumption, and employment in our country. [WEF’s report](#) notes “1.4 million jobs are slated to be disrupted, and 57 percent are held by women.”

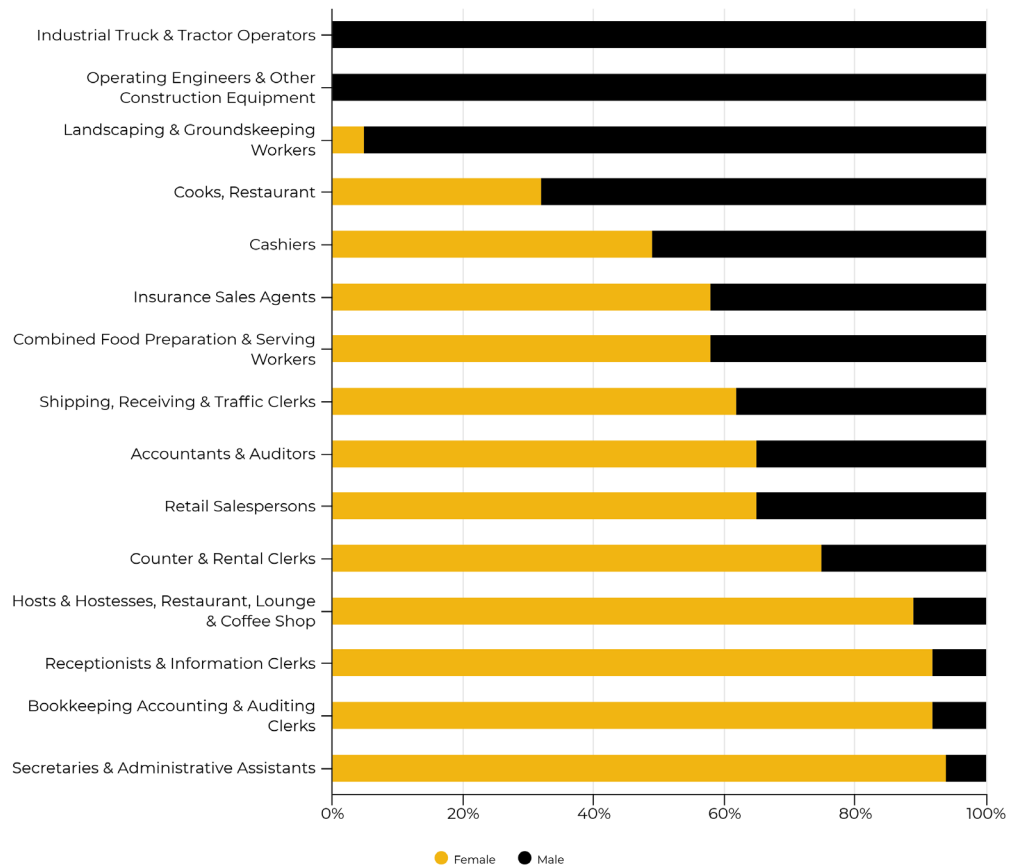
[International analysts](#) point out men and women in the workforce will both be impacted, but on different time horizons. Jobs held by women are more at risk in the short term, while jobs dominated by men will be impacted in the long term. This is largely due to the current gender composition of jobs at risk for automation.

Using prior [national research](#) as a guide, the Bell identifies 307 occupations in Colorado that could have all or part of their functions automated. Of these, 15 have a 90 percent or higher probability of being automated over the next 10 years to 20 years. There are currently 477,000 Colorado workers in these positions, and they are more likely to earn lower incomes and have less education.

All but four of these jobs likely to be automated have a woman-dominated workforce.

They include jobs like accountants, administrative assistants, bookkeeping clerks, cashiers, retail clerks, and restaurant servers and hostesses.

GENDER COMPOSITION OF JOBS MOST LIKELY TO BE AUTOMATED



Source: Frey and Osborne, Bell Policy Center calculations based on CPS data 2015, 2016, 2017, IPUMS

The state must address the disruption and effects of automation, all of which will have varying local [consequences](#) as well. Many Colorado metro areas with high population density have the largest number of workers at risk of job loss — Denver, Arapahoe, El Paso, Jefferson, and Adams counties comprise the top five.

Other counties have a high percentage of jobs that are at risk of automation, which means their local economies are more likely to see dramatic workforce changes and challenges. Small counties and mountain and resort areas fall into this category. This means Colorado communities will need to adjust to the future of work in different ways. Some may want to diversify the mix of prevalent industries and jobs.

Other areas of the state will need to bolster local options for formal child and older adult care, as those supports are currently lacking and many workers, especially women, can't work without them. For example, 30 percent of Coloradans live in a [child care desert](#), meaning there aren't enough (or any) licensed child care slots for the number of children who need them. The Center for American Progress correlates child care deserts with

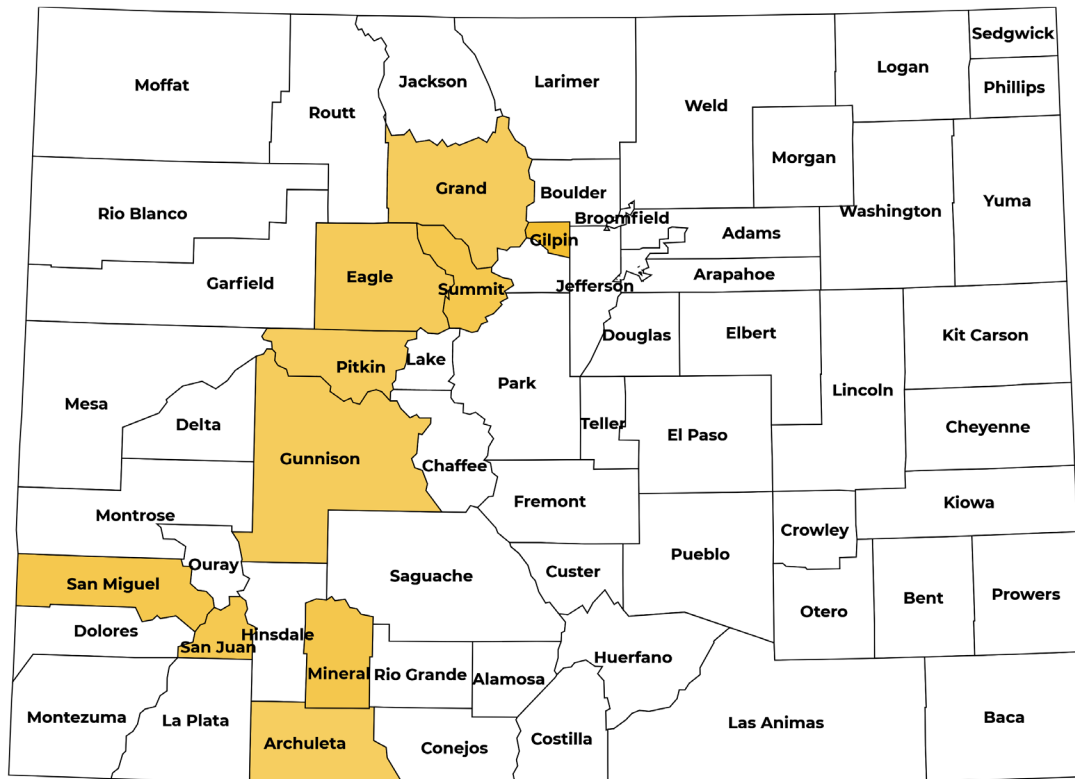
lower maternal workforce participation rates. In Colorado, Latinx workers and those living in urban areas are more likely to lack access than others. Local economies that depend on these workers must find ways to improve child care access and affordability to stimulate growth.

Technology & Nature of Work

A full-time, 9-5 job with a single employer has been the commonly held perception of work in America for over half a century, yet it has failed to capture the experience of many working women.

As times change, millions are working in ways that don't neatly fit into a standard framework, and technology and automation are contributing to a new workforce reality. [Analysts](#) with McKinsey Global Institute (MGI) are exploring how digital technology is transforming work. They find automation could grow the number of people doing project-based work and lead to businesses employing fewer people, opting instead to contracting for and outsourcing certain services. Given these dynamics, many are attempting to measure our workforce change by tracking the non-traditional workforce.

2017 COLORADO COUNTIES WITH GREATEST CONCENTRATION OF JOBS WITH MORE THAN 90% RISK OF AUTOMATION



Source: National Association of Counties - The Future of Work: The Rise of the Gig Economy

The term “non-traditional” can encompass many different types of jobs. Due to varying research methods, data sets, and definitions it is difficult to definitively parse out who is working alternative or non-traditional work arrangements, including by gender. Key studies are outlined on the next page to paint an overall picture of this workforce and offer suggestions on how its women workers can thrive in tomorrow’s economy.

Gig/Freelance Work

Technological advances have grown the [gig economy](#). This work is characterized by time-limited, on-demand jobs that are often accessed online using app-based platforms like Uber, Etsy, and TaskRabbit. According to estimates from the study [Freelancing in America](#), the U.S. has nearly 57.3 million freelance workers, a number that is steadily rising. The same study predicts by 2027, freelancers will comprise most of our workforce.

The National Association of Counties (NACo) [details](#) the extent of the freelance economy at the local level by making inferences using BLS data. The country’s western region, including Colorado, has an estimated 21 percent

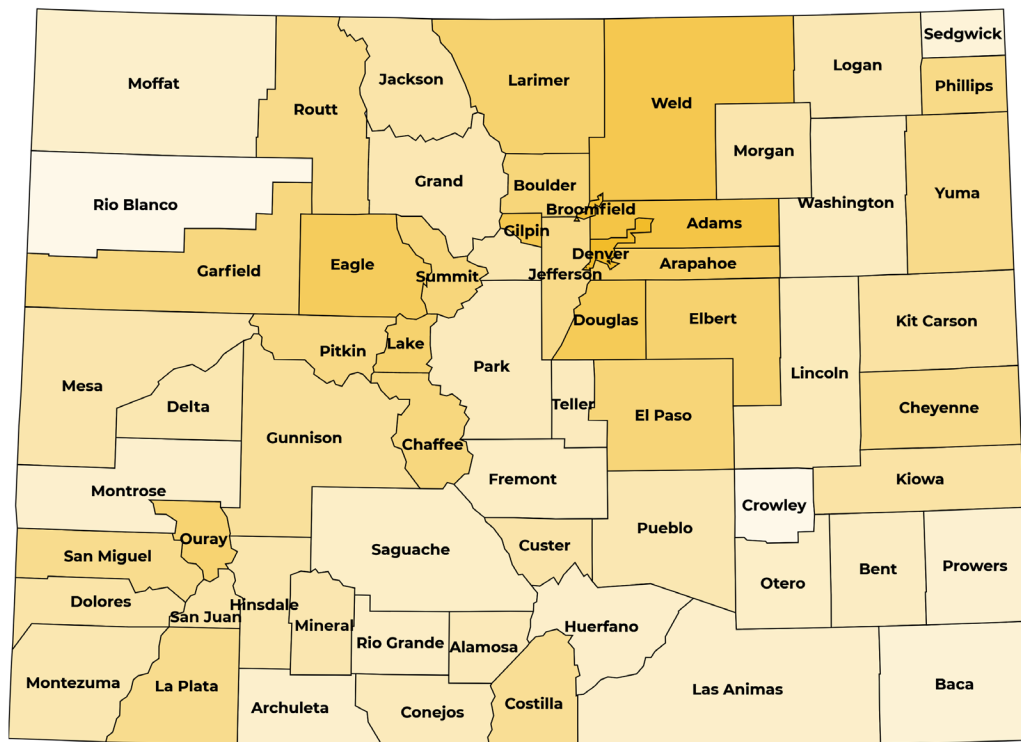
of workers categorized as self-employed, many of whom work as freelancers. The map below shows which Colorado counties are likely experiencing growth in freelance workforce. This again points to the need for broad policy change paired with a locally focused approach.

Contingent Work

The [contingent workforce](#) refers to people working in temporary jobs that aren’t expected to last and aren’t tied to an employer. Contingent workers can include temporary workers, on-call workers, contract workers, and independent contractors. These workers comprise anywhere from 5 percent to 30 percent of the workforce, depending on the definitions and data used.

The [U.S. Government Accountability Office](#) (GAO) recently researched the makeup of contingent work. The number of Americans in these work arrangements grew after the 2008 recession, with GAO estimating approximately 8 percent of U.S. workers make up the “core” of the contingent workforce. Compared to standard full-time workers, core contingent workers appeared to be younger, Latinx, and less educated.

THE RISE OF THE GIG ECONOMY WORKFORCE IN COLORADO



Source: National Association of Counties, The Gig Economy Workforce, 2005-2015 Non-Employer Establishments Growth Rate by Percent

-25 0 25 50

Alternative Work Arrangements

Katz and Krueger* capture trends in both freelance and contingent work in their [study](#) of alternative workers. Between 2010 and 2015, nearly all net new jobs were created in alternative work. By 2015, almost 16 percent of U.S. workers fell into this camp and 0.5 percent of all workers were gig workers. Katz and Krueger show alternative workers are more likely to work part-time, work fewer hours, and have lower weekly earnings than those in traditional employment situations. Their research also demonstrates alternative workers can be found in all kinds of jobs and industries, but the distribution has changed over time. Construction work and the professional and business services industries were most likely to have an alternative workforce 20 years ago, but today more than 1 in 5 alternative workers have jobs in health or education services. One in 10 alternative workers have sales jobs, the job category with the largest alternative workforce.

BLS [quantified](#) contingent, alternative, and gig work in a survey released in 2018. Their results estimate up to 5.9 million people, or 3.8 percent of the workforce, are in contingent arrangements and over 15.5 million, or 10.1 percent of the workforce, are in alternative work. These numbers are lower than most other projections and decreased from the last time the BLS conducted a similar survey. Experts [speculate](#) this is because BLS asked only about a worker's main job, not secondary employment.

BLS also released its [first-ever look](#) at "electronically mediated employment" in 2018, aimed at further defining the gig workforce. The results show 1.6 million people in this category, which tended to be slightly more likely to be male than female, accounting for 1 percent of total employment. However, BLS notes the data has limitations, as survey questions were [misunderstood](#) by some respondents.

Benefits and Drawbacks

Flexibility and freedom are often touted as benefits of freelance, contingent, or alternative work. Another benefit is these types of jobs offer a chance to earn supplemental wages. The [JP Morgan Chase Institute](#) finds people who experience the highest fluctuations in income — which include the young, the poor, and people in the West — are more likely to use online platforms to find work. Because these platforms help people find jobs quickly and easily, they can help workers handle a sudden drop in income and are a better option than taking on debt or not paying bills.

Unfortunately, non-traditional work can come with a price: instability, a lack of predictability, and sporadic income. Often people perform this work, particularly contingent work, because they cannot find traditional jobs that offer the full-time hours and salaries they desire. GAO reports contingent workers are at a disadvantage compared to other non-traditional workers on a variety of measures, including income and schedule predictability. Additionally, they have less job stability and satisfaction, are unlikely to have workplace benefits, and are more likely to receive public assistance.

MGI's survey finds those who actively choose independent work are more satisfied than those who do the work out of necessity. Both groups are less satisfied with their income level and income security than traditional workers. Information from the [Brookings Institution](#) shows the data bears this out: "Amongst full-time workers, the median usual weekly earnings of those who are independent contractors are just 4 percent less than workers with traditional arrangements. In contrast, earnings are 10 percent less for on-call workers and 41 percent less for temporary help workers."

Another drawback: Changing work arrangements have blurred the line between who is or isn't an employee. Being classified as an employee guarantees a baseline of worker protections and benefits, whereas those classified as independent contractors don't have the same. As alternative work arrangements proliferate, more workers fall into the latter category.

The very existence of different definitions creates an incentive for employers to classify more workers as non-employees, effectively allowing them to avoid offering protections and benefits (think unemployment insurance, workers' compensation, anti-discrimination policies, and health insurance) that traditional employees have. Policy actions should combat this trend to ensure workers receive a meaningful share of the economic growth they help create and benefit from an effective social safety net.

Implications for Women

The percentage of women working in non-traditional work hovers between 39 percent to 47 percent of the total non-traditional workforce. Not all studies of the non-traditional workforce reveal meaningful gender-based differences, but Katz and Krueger's analysis is noteworthy. According to the researchers, "the percentage of women employed in alternative work almost doubled to 17 percent between 2005 and 2015."

** Shortly after this brief's publication, Katz and Krueger revised their 2015 estimates to between 11.7 percent and 12.7 percent. This reflects a 1 percent to 2 percent point increase in alternative work arrangements between 2005 and 2015, down from a 5.8 percentage point increase. Issues with the sample surveyed and the effects of the economic cycle caused Katz and Krueger to overestimate the percentage of workers in alternative work arrangements. The authors made no changes in their estimates for the percentage of workers in alternative arrangements who are women, however. The revised estimates are reflected in the table on page 6.*

ESTIMATES OF TOTAL & WOMEN WORKERS IN NON-TRADITIONAL WORK ARRANGEMENTS

Source	Percent of Total Workers	Percent of Women Workers
GAO, 2015	7.9%	44.5%
Katz & Krueger, 2016 & 2019	15.8%, 11.7% to 12.7%	53%
Upwork, 2017	36%	41%
BLS, 2018	3.8% contingent, 10.1% alternative	46.5% contingent, 41% alternative
Marketplace-Edison, 2018	21%	39%

The analysis continues, “Because the percentage for men increased by a more modest amount, women are now more likely than men to be employed in an alternative work arrangement.” There are also more alternative workers (of any gender) who have college degrees, multiple jobs, and identify as Latinx.

Women are more likely than men to juggle multiple demands on their time, so non-traditional work may be more appealing for them. Unfortunately, women also are already more likely to earn less, lack access to benefits like paid time off and health insurance, and have less wealth and savings overall. Perhaps unsurprisingly, [Marketplace-Edison’s poll](#) finds female gig workers are more anxious than men about the economy and work. Interviews with these workers reveal specific sources of stress include navigating and accessing benefits like health care and retirement and negotiating for rights as freelancers.

Fortunately, there is no shortage of ideas to help us create an economic future that works for women. Many of them are systemic reforms that should have been made long ago. Conversations about the future of work give us the opportunity to finally act on long-needed improvements that, importantly, will help more than just women. Policies that help women succeed in tomorrow’s workforce also help our overall economy. Businesses, working men, and families, especially children, who will be the workforce of the future, all benefit.

What We Can Do

If automation and the changing nature of work will disrupt jobs, a logical next step is to disrupt our system of workplace benefits. Our existing structure for worker benefits and protections was crafted long ago. It was based on the workplace and workforce of the 1930s, one that was overwhelmingly dominated by men.

As explained by [researchers](#) at the Aspen Institute, this structure resulted in a social contract in which employers provided decent, stable income, benefits, and the potential for career advancement, in return for workers’ loyalty and productivity. It insured workers against income losses from life events such as old age and retirement, work-related accidents, illnesses, and unemployment. Outside of benefits provided by employers, the U.S. hasn’t developed a robust social safety net.

This is a problem. If your house had an electrical or plumbing system from the 1930s, you would modernize it. Incredibly, we have yet to overhaul our country’s social insurance system. What we’re left with today is an antiquated approach containing inequities that can hurt a woman’s family and livelihood just as a fire or flood would. Many workers today need a system that is universal, portable, and flexible.

One way to do this is to decouple workplace benefits and protections from employment altogether. Experts from the Roosevelt Institute and the National Employment Law Project (NELP) [propose](#) ways to update work benefits and ensure more workers get access to the protections they deserve. These changes would crack down on the business practice of worker misclassification and extend workplace benefits and protections to certain independent contractors.

Another idea is to use a part of the federal tax code, called Voluntary Employee Benefits Associations (VEBA), as a vehicle to allow independent contractors to negotiate portable benefits with employers who would help fund their costs. [Researchers with the Hamilton Project](#) suggest a new work category: “independent workers.” Their proposal would allow independent workers, including those who work through an online intermediary, to qualify for some of the same benefits and protections employees receive.

Independent workers would be free to organize and collectively bargain, receive protection from workplace discrimination, and have taxes withheld, while employers contribute to payroll taxes. The intermediaries they work with would be allowed to pool independent workers for purchasing and providing health insurance and other benefits, without those intermediaries being considered employers. Independent workers would not be eligible for benefits such as minimum wage, overtime, or unemployment, however.

Forward-thinking lawmakers are contemplating how to make these ideas a reality at the state level. For example, Washington legislators considered [House Bill 2812](#) in 2018, which would've required businesses to contribute to new "benefit providers" for the purposes of providing certain benefits to independent contractors, ensured access to other worker protections like a minimum wage and unemployment insurance, and prohibited employee misclassification. New Jersey lawmakers are considering a similar measure.

Making Work Pay

Policy approaches for tomorrow's economy must recognize the lines between our work and family life are increasingly blurred. This is especially true for women, who shoulder most of a family's caregiving needs.

Without major shifts in policies, culture, and our collective mindset, women will continue to be disproportionately impacted by the lack of guaranteed benefits. The Brookings Institution [notes](#) the absence of paid leave and universal child care are likely behind the recent slight decline of women in the U.S. workforce, a trend unique to our country.

The federal government has been excruciatingly slow to act, so states are stepping in to fill the leadership vacuum. Options to provide paid family and medical leave, paid sick time, and retirement security are highlighted below, but child and older adult care, flexible and predictable scheduling, and health care are equally important and are further explored in other research by the Bell.

Retirement Ready

In Colorado, nearly half of private sector workers don't have access to a workplace retirement savings plan. Another 8 percent have a plan at work but don't participate, some because they aren't eligible.

The Bell [finds](#) less than half of all women who are private sector workers in Colorado participate in a retirement savings plan at work.

While this is roughly the same amount as men who participate, research shows men are slightly more likely to enroll in workplace plans if they're offered. Some of this may be attributed to women's lower earnings overall, according to the [Employee Benefits Research Institute](#). Additionally, the combination of women's tendency to take time off work, their longer lifespans, and the gender pay gap (discussed further below) means women have less to save yet need more resources in retirement. It's no surprise women feel [less confident](#) and more stressed than men about retirement.

Colorado could increase women's ability to save with a [public-private solution](#). The state should operate a retirement savings plan for private sector workers who lack access to one through work, similar to those in six other states. A portable plan with automatic enrollment and low fees will address some of the barriers women face when saving for the future, helping ensure their years of work are rewarded with a safe and secure retirement.

Paid Family & Medical Leave

An embarrassment at best and an economic albatross at worst, the U.S. is the only industrialized country with no guaranteed paid family leave benefits. The status quo approach — hoping employers will offer it — has yielded a predictable result: Only 14 percent of workers have access to a paid family and medical leave benefit, a number that's barely budged over time.

Nationally, 37 percent of workers in the finance and insurance industry — the majority of whom are women — have the best shot at a paid leave policy. However, in other industries where women dominate or comprise about half of the workforce (leisure and hospitality, real estate, education and health), access to paid leave is low. While study after study shows paid leave helps everyone — [men](#), children, older adults, and employers — women see unique benefits.

A recent [study](#) commissioned by the National Partnership for Women and Families says women who take paid leave after childbirth report “stronger labor force attachment and positive changes in wages in the year following a child’s birth, when compared to those who do not take any leave.” [Further research](#) shows these women are also 40 percent less likely to receive food stamps.

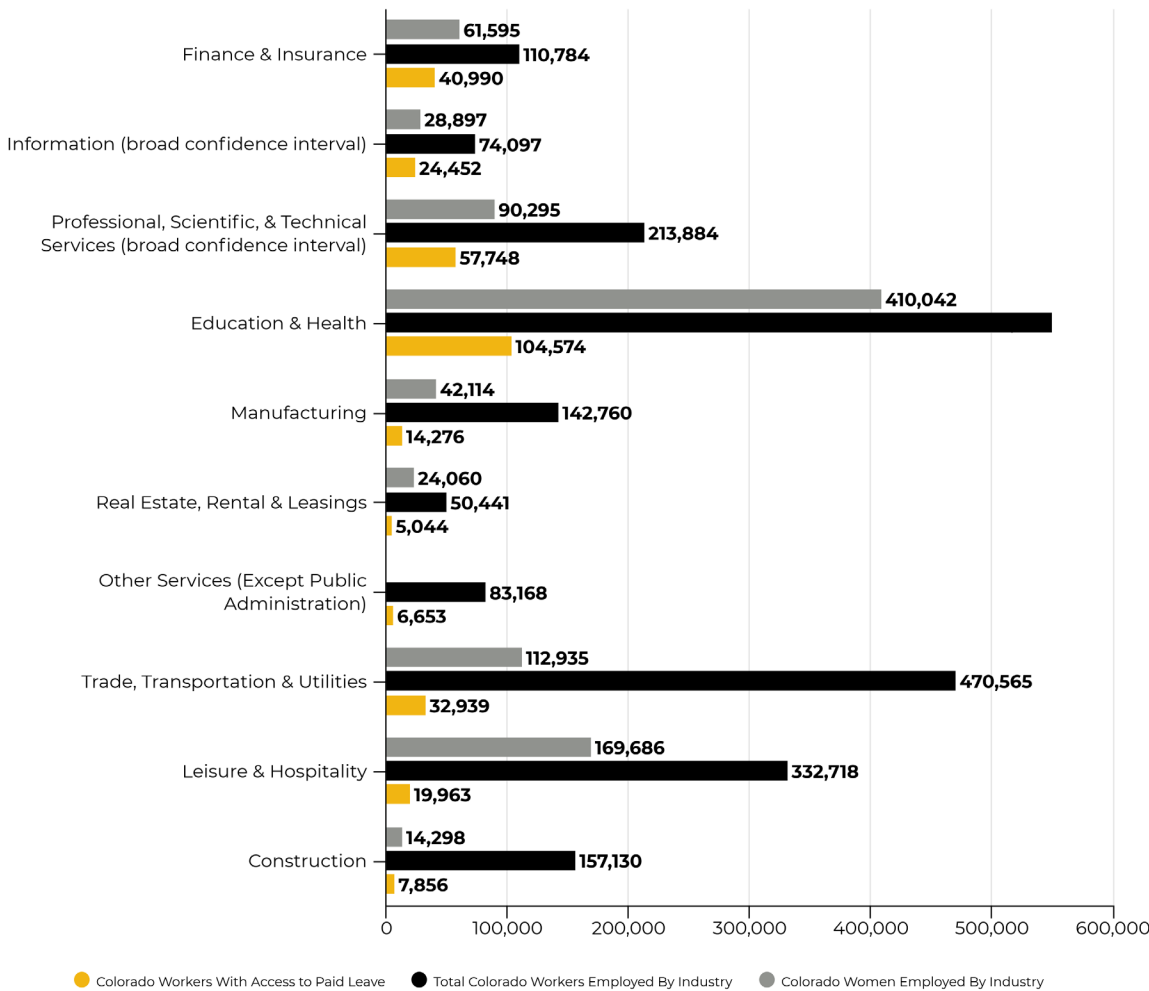
Colorado-specific [research](#) suggests paid leave could help those caring for older adults (60 percent of whom are women and 60 percent of whom are employed) by helping offset health costs and improving their productivity at work. Seven states have pioneered their own approach to paid leave insurance. Colorado legislators have tried to do the same with the [Family and Medical Leave Insurance Act](#), which would pool employee funds, allowing all workers to take up to 12 paid weeks off to care for a loved one or themselves. The state Senate has blocked the effort, but momentum is building for its passage.

Earned Paid Sick Days

Colorado-specific analysis done for the Bell by the Institute for Women’s Policy Research (IWPR) shows over one-third of Colorado working women cannot take even one paid sick day. Much of this has to do with the nature of jobs — part time, low paying, and less likely to offer paid sick days — with predominately women workers.

Many of these jobs provide direct services, where paid sick days are scarcer than in executive or administrative work. For example, IWPR’s research finds two job categories with the lowest access are food preparation and serving (76 percent lack access) and personal care and service (70 percent lack access). These categories include workers many of us depend on and with whom we have frequent contact, like child care providers, personal care aides, and restaurant workers. Additionally, almost half of health care support workers who provide crucial medical, dental, and wellness care, lack access to paid sick days.

COMPARISON OF WOMEN IN INDUSTRY TO ALL WORKERS WITH ACCESS TO PAID LEAVE



Source: Bell Policy Center calculations based on CDLE, BLS, and Pew data

An earned paid sick leave policy would give Colorado women job and income protection when they need to recuperate from an illness or care for a sick family member. Other states, and some localities, have mandated earned paid sick days for workers.

Unfortunately, a recent legislative effort to allow workers to earn at least 40 hours of paid sick leave per year also died in Colorado’s Senate.

Making Pay Work

As previous research by the Bell has shown, there are many ways our state can do more to raise wages for Colorado workers. Many of these would be especially impactful for women.

Improving Gender Pay Inequity

Today, Colorado women only earn 84 cents for every dollar a white man earns, and women of color fare worse. Latinx women, for example, earn just over half of what a white man earns.

Evidence suggests Colorado women would gain \$14.5 billion each year if the pay gap didn't exist.

That's money that could go toward strengthening families and bolstering our economy, but without steps to eradicate it, our state's gender pay gap is [predicted](#) to persist until 2057.

There are many promising solutions to mitigate some of the [known conditions](#) causing the pay gap. However, an unexplained pay gap — anywhere from [5 percent](#) to [41 percent](#), depending on the research — still exists even when controlling for variables like [parenthood](#), work experience, educational attainment, and negotiating techniques.

The Bell supports some of the most well-researched reforms to eliminate workplace bias and discrimination affecting the gap. These include strategies like requiring increased pay transparency, prohibiting employers from asking about prior salaries, ensuring the state model best practices, and empowering workers with information that would help them pursue complaints around gender- and identity-based pay inequities.

Address Challenges of Low-Wage Work

In Colorado, as in many states, women are twice as likely to work in low-wage jobs, even though they comprise less than half the overall workforce. In particular, black women are overrepresented in low-wage, high-growth jobs nationally.

[NWLC's research](#) finds 3 out of the 5 jobs projected to grow the most nationally over the next decade are low-wage, woman-dominated occupations. These positions include personal care aides, home health aides, and combined food prep and serving workers (including fast food). One in 6 women working in these occupations had incomes below the poverty line.

These jobs will grow in Colorado as well, likely comprising 15 percent of the total growth in new jobs in the next decade. In addition, industry-specific data shows through 2026, over 75 percent of new jobs will be created in the health care and social assistance, accommodation and food services, educational services, and retail trade industries. On average, these industries currently pay median wages just at or below 200 percent federal poverty level (FPL) for a family of four — barely enough for a family to make ends meet. NWLC's concludes that without policy interventions the "future of work for women threatens to be increasingly characterized by precarious jobs with poverty-level wages."

[Prior analysis](#) by the Bell quantifies this problem for health and personal care workers specifically, 88 percent of whom are women. Five years ago, nearly 60 percent of these workers earned an income of \$21,000 or less.

More recent [data](#) analyzed by the Paraprofessional Health Institute (PHI) shows median hourly wages in Colorado for personal care aides have only grown by 6 percent between 2006 and 2016 and declined by 5 percent for home health aides during the same time period. PHI also finds over one-third of home care and nursing home staff in Colorado receive some form of public assistance, such as Medicaid or food stamps.

Compensation for early childhood workers is similarly low. In 2016, the mean salary for preschool teachers was \$30,177 — only 57 percent of the mean salary for all Colorado occupations. Other [research](#) by the Working Poor Families Project shows nationally, early childhood workers are paid only slightly more than dishwashers and cashiers, and only slightly less than coat and locker room attendants. Despite working full time and year round, early childhood workers also earn less than half the amount kindergarten teachers do.

Colorado policymakers should adhere to the calls to improve and cultivate the paid caregiver workforce from bipartisan statewide groups like the [Strategic Action Plan on Aging](#) (SAPGA), the [Colorado Commission on Aging](#), the [Community Living Advisory Group](#), and public and private sector experts involved in crafting [Colorado's Early Childhood Workforce 2020 plan](#). Recommendations from these groups find both the private and public sector can pay a role in improving wages and other job conditions for paid caregivers.

Work-Based Learning/Training & Retraining/Reskilling

The Medicaid program, run with state and federal money, is the biggest payor of home- and community-based care, and Colorado's Child Care Assistance Program (CCCAP), funded with a mix of federal, state, and local funds, is the largest source of public child care funding. Adequate reimbursement rates for these programs and requirements dictating rate increases be passed on to workers can spur needed workforce investment.

Workers could gain from enhanced training opportunities in the way of higher wages and expanded benefits. It could reduce the need for direct care workers to rely on Medicaid for their health coverage, [saving the state money](#). This type of investment yields other returns, as providing women with ample, quality paid caregiving options allows them to work, further bolstering our economy.

Modernizing Pay Laws

Colorado voters increased the state minimum wage to reach \$12 by 2020 and adjusts it for inflation in the future. Fifty-five percent of Colorado's women workers benefit from this increase, and 30 percent of all workers who benefit have children.

However, it makes sense to continue to increase the minimum wage locally, as many Colorado communities experience costs of living expenses outpacing household incomes. Unfortunately, state law prohibits local governments from setting a higher standard. Removing this restriction would allow local policymakers and voters to reflect the needs of their communities and workers in low-wage jobs, many of whom are women.

[Modernizing overtime rules](#), specifically updating and raising the salary threshold that automatically qualifies salaried workers for time and a half, would benefit 327,000 Coloradans, especially women, black, and Latinx workers. For example, women comprise 41.2 percent of the applicable Colorado workforce, but make up 47 percent of the workers who would benefit from this modernization.

Automation and technology will lead to workplace changes — some jobs will no longer exist and tasks within many jobs will change. We need a nimble and equitable system to give workers job-based training and life-long learning opportunities. The WEF [suggests](#) 95 percent of workers most immediately at risk due to automation, regardless of gender, could find higher earning jobs with reskilling or retraining. Reskilling substantially multiplies a woman's options for new work, increasing her opportunities fourfold. It could also "close persistent wage gaps."

Good paying jobs, particularly [middle-skill jobs](#) (such as those found in information technology, transportation, advanced manufacturing, construction, and some health service jobs) present the most opportunity for on-the-job training and experience. They require at least a postsecondary certification, but less than a bachelor's degree, and moderate to substantial training on the job, including apprenticeships. They also tend to be male-dominated. Men have more opportunities to receive extensive training and introduction to new skills through pipeline programs, apprenticeships, and similar programs.

In fact, women make up less than 1 out of 10 apprentices in the U.S. [Recent research](#) by Young Invincibles confirms women make up only 6 percent of registered apprentices in Colorado.

COLORADO APPRENTICES BY GENDER, 2018



Source: Young Invincibles Achieving Gender Equity in Colorado Apprenticeships, October 2018

Men find most apprenticeships in construction, the fastest growing industry in Colorado between 2011 and 2016. Furthermore, there are far fewer women in 3 out of the 4 industry sectors — construction, utilities, and manufacturing — with the largest amount of registered apprenticeships.

Colorado can learn from national efforts offering solutions to barriers women face. IWPR's [Job Training Success Project](#) is designed to help women overcome common obstacles to attending and finishing training programs, such as providing access to child care services, transportation, access to public benefits, and housing assistance. The U.S. Department of Labor [finds](#) programs implemented through the Workforce Investment and Opportunity Act (WIOA) have a positive effect on the wages of women who participate in the programs.

[The Aspen Institute](#) shows approaches encouraging long-term, on-the-job training with mentors, and a promise of increased wages based off the additional training and experience are effective. Trainees, particularly people of color, reported positive experience with hands-on training with mentors. Programs in Wisconsin and Maine that used school-to-career systems with active mentors saw improved outcomes in graduation rates, work placement, and postsecondary education/training enrollment.

In California, the [Women In Non Traditional Employment Roles \(WINTER\) program](#) places women in middle-skill construction and engineering jobs with industry-recognized certifications and trainings to help them earn the same wages as men in those positions. Some WINTER participants report having increased access to jobs that they are traditionally shut out of. Others say the program helped establish relationships with unions, which guarantee workplace rights and job opportunities.

Colorado is also designing programs with women's needs in mind. [Skillful](#) is an innovative multi-sector approach aimed at addressing some of the changing needs for workforce skills training. Skillful offers resources and trainings for job seekers, directs employers to them, and offers tools for coaches and educators. The [Colorado STEM Roadmap](#) seeks to bring [more women workers](#) into science, technology, engineering and manufacturing (STEM) jobs.

The Colorado Coalition for the Homeless (CCH) spearheads a [job-training program](#) for low-income women who want a career in information technology. Graduates can expect starting salaries between \$30,000 and \$45,000, annual raises, and opportunities for career advancement.

Lastly, Colorado's [2017 Talent Pipeline Report](#), which seeks to prepare Colorado for a changing workforce, argues employers should embrace [two-generation approaches](#) to training. Two-generation strategies spur change by intentionally serving children and adults simultaneously, putting the entire family on secure financial footing. According to the Talent Pipeline Report, two-generation approaches lead to greater female workforce participation, "untapping talent and connecting people to careers that lead them to the middle class."

The CCH program nods to two-generation strategies by offering child care as a supportive service to trainees. Another promising effort is the [Supporting Working Families Initiative \(SWFI\)](#), which pairs child care providers with community college students in Denver and Aurora who are developing skills for in-demand jobs. SWFI prepares students with the training needed to be successful in tomorrow's workforce while recognizing their families' needs are of equal importance.

Conclusion

At a minimum, Colorado policymakers should formally and comprehensively plan for the future of work as other states, such as [New Jersey](#), are doing. As recommended in our Guide, state leaders "should convene representatives from labor, the technology industry, other businesses, academia, and state and local governments and task them with assessing the impact of automation. This group should also develop recommendations for balancing automation's effects on economic growth with those of affected workers."

This brief should be used as a tool to further spark action on this planning. It also underscores an important aspect that must be included in our preparations — we must apply a gender lens to the effort. Colorado should use the forces of technology and automation as a driver to positively shape the workforce of the future, so it works for women.