



# A Vibrant and Inclusive Industrial Sector

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## *Key Points*

- Once the centerpiece of the postwar American economy, the industrial sector suffered decades of decline, and manufacturing in particular became exclusionary and discriminatory for workers of color.
- The passage of the CHIPS and Science Act, the Infrastructure Investment and Jobs Act (IIJA), and the Inflation Reduction Act, which pair industrial policy with community development, will lead to the creation of millions of well-paying industrial jobs, but these jobs will not be filled without decisive steps to build—and adequately reward—a workforce that mirrors the country’s racial demographics.
- Moving forward, efforts must be made to provide employers and communities the technical assistance needed so that reinvestment in America’s industrial sector benefits everyone.

President Biden’s signing remarks of the CHIPS and Science Act, the Infrastructure Investment and Jobs Act (IIJA), and the Inflation Reduction Act, firmly stated his administration’s bold commitment to job creation for all Americans, with sustainable wages and a stewardship of community development. And indeed, these three acts provide a historic investment in industrial policy and job creation for workers of diverse educational and demographic backgrounds. But for Americans who can only secure jobs that result in stagnant wages, occupational segregation, and employment bias, this historic commitment will not prevail

without taking an equity-centered approach. While these issues disproportionately impact women, disabled people, and immigrants, among others, the below section will focus on issues specific to race.

It is anticipated that the three acts will create millions of industrial jobs in the manufacturing and the trades, in environmental cleanup, and in science and technology. In order to ensure that all Americans can benefit from this investment, implementation must include active and sustainable steps to dismantle racism as well as all forms of prejudice in hiring and in the workplace—and in fact these equity considerations were explicitly included in the CHIPS and Science Act. To eliminate these barriers for hiring and retaining workers, there must be an acknowledgment of the legacy and ongoing racism that attributes to the underrepresentation of communities of color in manufacturing and the trades as well as community-level efforts to recruit and train workers.

The projected job creation from recent legislation will make a transformative impact on the economic outcomes of prospective workers and the regions where they live. But revitalizing the industrial sector on this scale will need a workforce that mirrors the country’s racial demographics, which will require rebuilding trust, inclusive talent acquisition, and community partnerships.

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This report can be found online at: <https://tcf.org/content/report/a-2023-plan-for-economic-equity-and-progress/>

## Addressing Current Racial Inequities in Manufacturing and Trade Jobs

Although manufacturing is the second-highest paying industry in the United States, the sector has a ways to go in closing racial pay gaps, which can only be done through targeted recruitment, mitigating bias, and equal pay, with paths to career mobility. Addressing the racial inequities in this sector also requires examining the root causes beginning in K–12 education, such as the underrepresentation of students of color in career and technical programs, a promising training pipeline for students pursuing trades careers. Recently, school districts have restored vocational programs, but students of color are less likely to choose STEM-related training programs. The Hechinger Report has highlighted the enrollment racial disparities across the country. They found for example that in South Carolina, although Black and Latino students comprised 43 percent of the overall student body, they made up only 25 percent of students in STEM-related courses. Meanwhile, Black and Brown students in the state comprised 60 percent of enrollees in hospitality and human services, industries that pay significantly lower than manufacturing and the trades. These racial disparities in enrollment were attributed to students of color choosing sectors based on familiarity and people in the industry who looked like them, thereby perceiving a higher likelihood of being employed.

Racial inequities exist within the manufacturing sector itself, as well. A TCF report highlighted the occupational segregation by race in manufacturing. Black and Brown workers make up more than half of production jobs, the lowest paying positions, and 25 percent of Black workers in manufacturing make less than \$30,000 a year, compared to only 15 percent of white workers who make less than \$30,000 a year. While Black workers tend to occupy jobs in the bottom of the manufacturing pay scale, white workers are nearly three times as likely to be in management.

The problems of the manufacturing sector being exclusionary and discriminatory for workers of color puts the country's most marginalized communities at an economic

disadvantage and leaves millions of jobs unfilled, which holds back the nation's supply chains, production, and innovation. For example, MIT's study "The Lost Einsteins" reiterates that American innovation can quadruple if women, people of color, and economically disadvantaged communities can innovate at the rate of Americans from high-income households.

America has long been missing out on the opportunity to tap the full potential of its workforce. Thankfully, the three acts will help change that—most notably through the support of registered apprenticeships and requirements for prevailing wages.

### *Registered Apprenticeships*

Registered apprenticeships embrace an "earn while you learn" paradigm, meaning that prospective workers can participate in an industry-driven and high-quality career model while receiving classroom instruction, a mentor, and on-the-job training. Apprenticeships broaden the recruitment pool by providing employers with a diverse pool of graduates who are entering the workforce with an industry certification, sectoral skills, and the knowledge of workplace safety and culture. Registered apprenticeships are proven to promote workforce diversity when programs are required to serve and recruit from the community in which the employer operates. This is significant because youth and young adults often remain under/unemployed because they are unaware of the opportunities manufacturing and trade apprenticeships present, with starting wages of nearly \$20 an hour, and annual average starting salary of nearly \$77,000, nearly double the compensation in the retail and hospitality industries. Apprenticeships have a 93 percent placement rate, which means most apprentices move on to full employment. For many workers, whether they're a single mom of color, or someone reentering society from incarceration, such as manufacturing advocate Andrew Crowe, apprenticeships and the trades can be life-changing.

### *Prevailing Wages*

All three acts also require participating employers to

pay prevailing wages, defined under the Davis Bacon Act as combined basic hourly wages based on specific classification of workers, consistent with the local labor market, particularly on federally funded and construction projects. This ensures that construction workers are not paid lower wages than the average wages of local workers. Registered apprentices also receive prevailing wages and this creates equitable job creation through mitigating the racial pay parities in the trades sector.

The CHIPS and Science Act, Inflation Reduction Act, and IIJA support registered apprenticeship programs with extensive investments and requirements. For example, in the Inflation Reduction Act, employers must comply with prevailing wages and registered apprenticeship requirements, meaning that a construction employer is mandated to set a certain minimum of hours to be performed by a registered apprentice. These requirements also ensure an apprentice is paired with a mentor or journeyworker to increase retention in the sector. Similarly, the CHIPS and Science Act expands and funds apprenticeship training in the microelectronics and semiconductor workforce, industries underrepresented of workers of color. Initiatives from these acts have already been implemented, such as commitments from the North American Building Trades Union to train 250,000 new apprentices across the country, including a nonprofit organization, TradesFuture, that will offer wraparound services and construction training for people of color. (Provisions in the CHIPS and Science Act also allocate \$200 million for the RECOMPETE pilot program for job creations in economically distressed communities through a home-grown approach.)

The three acts present a window of opportunity for prospective workers so that they no longer have to work jobs that have no upward path for career mobility and wages. Apprenticeships are the best starting point for ensuring diverse workers enter the workforce with competitive skills on an equal footing. The racial demographics of apprenticeship programs show the need for change, with white apprentices comprising nearly 76 percent of participants, compared to 17 percent of Black in 2020. Although this is an increase from 13 percent Black in 2020, more awareness of apprenticeships

among communities of color can ensure the implementation of these three acts are not only worker centered, but equity centered, as intended.

## Climate Jobs and Environmental Justice

From a higher likelihood of being exposed to and dying from air pollutants to lower reinvestments after natural disasters, research has well documented that communities of color suffer the brunt of environmental injustice, or what activists call environmental racism. Unfortunately, across the country, disaster risk and disaster recovery both are racially inequitable. For example, studies conducted by Rice University and University of Pittsburgh found that in communities that suffered \$10 billion in disaster damage, recovery efforts led to a wealth increase of nearly \$126,000 for white families, while Black families saw a wealth decrease of only \$27,000.

Thankfully, these three acts will address some of these historic funding inequities through initiatives such as the \$60 billion invested in environmental justice in the Inflation Reduction Act as well as a historic \$16 billion in the IIJA dedicated to orphan oil and gas wellsite plugging and reclaiming abandoned wells, particularly on Tribal lands.

The job creation anticipated from these initiatives is historic, with placements in communities most impacted by air quality, gas emissions, and natural disasters. Recently, the Biden administration released the availability of \$100 million in environmental justice grants through the Inflation Reduction Act, the largest amount of environmental justice grant funding by the Environmental Protection Agency (EPA). This coincides with President Biden's Justice40 Initiative goal of ensuring that 40 percent of directed funds be dedicated to communities that face the most pronounced adverse health and environmental disparities. The Bluegreen Alliance foresees nearly 30,000 jobs from grants and community-centered projects and more than 5,000 jobs to reduce air pollution in schools. Similarly, implementation of the IIJA includes \$1.5 billion over five years for new workers to help clean contaminated and dangerous brownfield

properties, areas where researchers found that 55 percent of surrounding residents are communities of color. A community and bottom-up approach is a proven strategy for restoring trust, and ensuring that minoritized Americans have a stake in their local revitalizations.

## Universal Broadband and Inclusive Innovation

The COVID-19 pandemic, particularly the accessibility of telehealth, underscored that universal broadband should no longer be framed as a luxury, but as a civil right. Yet, 42 million Americans still do not have access to broadband Internet. Rural communities, low-wage workers, and people of color are the most disconnected from broadband—and they are also the most likely to be shut out from jobs in the high-paying information technology sector. This is an educational and economic tragedy for these communities, as technology professionals have an average salary of around \$100,000. Closer attention must be paid to who is shut out from research, technology, and innovation related jobs—partly due to the lack of broadband infrastructure—as wealthier and more privileged communities continue to thrive.

The three acts all have components that will work in tandem to ensure that more communities live in a high-tech America. For example, the IIJA is delivering \$65 billion in deploying universal broadband, with a focus on affordable Internet services in underserved communities, such as rural and Tribal land. Universal broadband is the first step, and with its deployment, economic development and jobs will come through a worker-centered implementation. The CHIPS and Science Act complements this through the regional technology hubs and provisions for inclusive innovation. Appropriated at \$500 million for planning grants, regional technology hubs seek to spur place-based job creation and economic development through forming ecosystems. This includes a public-private consortium of community-based organizations, industries, and higher education institutions (including minority serving) to focus on job creation and expanding the regional diversity of innovation. One third of the hubs must advance small and rural communities. The

CHIPS and Science Act will also create more research jobs by requiring the National Science Foundation to engage more with Historically Black Colleges and all minority serving institutions, and requiring the Government Accountability Office (GAO) to publish a report on the participation, outreach, and competitiveness of these institutions for federal research funding compared to tier-one (R1) research universities.

## Looking Ahead

The reasons why community-based organizations in Black and Brown communities feel disempowered to apply for federal opportunities that can create job opportunities include the absence of grant officers, the lack of administrative capacity, and/or the lack of technical assistance in these communities. The initiatives funded through these three acts will go a long way to address these problems so that the massive investment the nation is making in industrial policy and job creation is achieved more equitably.

In partnership with Manufacturing Renaissance, TCF has been working to lend technical assistance through regular public webinars for community-based organizations to learn coaching and empowerment on securing federal employment. Recently, for example, TCF presented on the Department of Labor's Building Pathways to Infrastructure Jobs Grant Program, as a result of the IIJA.

The CHIPS and Science Act has a required report on the level of participation of communities of color, particularly HBCUs, in securing federal funding. The Inflation Reduction Act and IIJA should also require similar studies and fund the provision of real-time technical assistance to organizations and higher education institutions primarily serving communities of color. Researchers at the Center for American Progress have also highlighted that the Inflation Reduction Act does not include workforce development funding or incentives for a diverse workforce.

The good news is that community-embedded workforce programs are unique and thriving. Recently, Secretary of the Treasury Janet Yellen visited TCF's Industry and Inclusion

## A 2023 Plan for Economic Equity and Progress

Cohort Member, MAGNET, on the opening of their new facility in Cleveland, Ohio. Transformed from a former elementary school and directly adjacent to a public housing community, the new center has 3-D printers, advanced technologies, and ultimately, job training for the next generation of workers in the K-12 educational system. During her visit, Secretary Yellen touted all three acts for spurring manufacturing investments in Ohio, such as bringing jobs through industries such as Intel. The new MAGNET facility is projected to bring 30,000 jobs by 2032, and grow the local economy by \$40 billion.

Through these three acts, MAGNET and the greater Cleveland area does not have to be the only region in reversing industrial decline and creating jobs. Every community has an opportunity, but that starts with a holistic implementation of ensuring communities of every size and demographic are fully equipped to positively transform the economic trajectories of their residents through federal dollars and America's promises.