



# INVESTING IN OUR MOST CRITICAL ASSET—THE AMERICAN WORKER

*By: Linda McMahon*

America requires a multifaceted talent development ecosystem that meets the needs of young adults entering the workforce for the first time, those poorly served by the education system, and mid-career adults in need of reskilling or retraining. Success in any of these endeavors requires close coordination and cooperation between program providers and employers. Moreover, it requires the availability of economic opportunity and a willingness of employers to hire. The Trump Administration sought to expand economic opportunity and pathways to family-sustaining jobs through a combination of economic growth, employer engagement, and the elimination of structural barriers. Thus far, the Biden Administration's strategy has focused on public spending that lacks a clear plan for helping Americans return to work and, in some cases, actively discourages it. To build a more prosperous and inclusive economic future, it is critical that all levels of government collaborate with job creators to improve how public resources are used to benefit American workers.

Increased access to Career and Technical Education (CTE) would provide more Americans opportunities to develop workplace-relevant skills before graduating high school. Students and job seekers of all ages need access to the full spectrum of policy-enabled, work-based learning opportunities, including simulated work environments, direct experience (subsidized if necessary), on-the-job training, and expanded apprenticeship opportunities. State governments should explore opportunities to better partner with employers to assist workers otherwise at risk of losing their jobs in reskilling to prevent job loss in the first place. Successful collaboration with employers is essential for effective layoff aversion efforts, as employers have a direct lens into identifying which jobs are at risk and what jobs are needed in the near term. American educators and education providers must recognize the value of formal and informal skill development and create a system that allows individuals to showcase what they can do regardless of where they learned how to do it. An effective workforce development initiative will require the continued commitment of the employer community to partner with program providers and, as with their participation in the Trump Administration's Pledge to America's Workers, to promote awareness of the employment and training opportunities available to students and job seekers.

The ultimate goal of a successful modern education and workforce development system is to support students and jobseekers in securing family-sustaining employment, and policymakers must be keenly aware of how state and federal policy affects the labor market.

This success will not be met with the Biden Administration and congressional Democrats implementing policies that discourage the return to work, such as a long extension of unemployment benefits in the [American Rescue Plan Act](#) (ARPA) that pay many people more to remain unemployed than to work ([Ganong, 2020](#)). The long-term negative effects of unemployment on workers and society are severe. Unemployment can negatively affect a worker's lifetime earnings, degrade their mental and physical health, and increase mortality. The adverse effects of joblessness are more severe for the long-term unemployed ([Cooper, 2013](#)) ([von Wachter, 2020](#)). For these reasons, the work disincentives in the ARPA and their possible link to the dramatic underperformance of the labor market over the past several months are particularly troubling.

The Biden Administration's proposed Build Back Better Agenda—centered on the American Jobs Plan and the American Families plan, with elements of both incorporated into Congress' bipartisan infrastructure framework and reconciliation package—will likely further impact worker prospects if passed into law. Although promoted by the administration as an infrastructure plan, only a small amount of the money goes to items traditionally thought of as infrastructure, such as roads and bridges, and the plan would also dramatically shift the landscape of work in the United States ([CRFB, 2021](#)) ([Penn Wharton, 2021](#)). Most notably, it would strengthen the hands of unions by overriding state right-to-work laws along with the will of voters who support such worker freedom protections ([Boehm, 2021](#)), with the likely practical effect being higher construction costs ([Burke & Tuerck, 2019](#)), and reduced economic growth ([Holmes, 1998](#)). To its credit, the American Jobs Plan recognizes the importance of apprenticeships and job training programs ([The White House, 2021](#)). Still, it takes a more regulatory-driven rather than industry-driven approach ([Howard, 2021](#)), putting greater power in the hands of bureaucrats instead of the private sector. Moreover, the disappointing job growth during the spring of 2021 threatens to undermine the potency of these efforts, as any apprenticeship or job training program is only effective if coupled with a labor market with robust job opportunities and a workforce qualified and incentivized to fill those opportunities. The Trump Administration proved an effective method to bring more workers off the sidelines and into the workforce—leveraging the private sector to own much of this investment as they know their needs and workforce best. The Tax Foundation found that under the Biden Administration's American Jobs Plan, U.S. gross domestic product (GDP) will decrease by 0.5 percent over time, leading to 101,000 fewer jobs in this country ([Durante et al., 2021](#)). Many elements of the American Jobs Plan are likely to be included in the bipartisan infrastructure framework and the reconciliation package. Workforce development initiatives cannot be divorced from economic policy; poor economic fundamentals and misguided labor policy create structural barriers to employment that increases in spending cannot solve.

## **PROGRESS MADE IN WORKFORCE DEVELOPMENT**

The term “demand-driven” has long been in vogue with both workforce development policy experts and practitioners. Unfortunately, job creation and program development

considerations are often divorced from policies designed to deliver economic growth. Investment in education and workforce development activities without economic expansion rearranges the economic deck chairs without substantively increasing economic opportunity. The Trump Administration adopted a deliberate strategy of prioritizing economic growth to increase labor market demand. Improved employment opportunities and increased wages followed economic expansion supported by tax reform and deregulation.

### ***Economic Growth***

Passed in November 2017, the [Tax Cuts and Jobs Act](#) (TCJA) undertook decades-overdue reforms of the U.S. tax system to promote and reduce barriers to economic growth. A cornerstone of TCJA was lowering the statutory federal corporate tax rate from 35 percent to 21 percent. Inclusive of state taxes, the U.S. rate fell from 38.92 percent—much higher than the pre-2017 Organisation for Economic Co-operation and Development (OECD) average of 24.38 percent—down to 25.77 percent ([OECD, n.d.](#)). The bonus depreciation provision in TCJA further encouraged domestic investment by allowing companies immediately to expense short-lived capital expenditures, thereby leveling the tax treatment of business expenses ([York & Muresianu, 2018](#)). Such encouragement of greater business investment from these substantive reforms also promoted more robust domestic job creation.

The Trump Administration paired comprehensive tax reform with regulatory reform, as laid out in [Executive Order 13771](#), Reducing Regulation and Controlling Regulatory Costs. This emphasis on regulatory reform recognized that poorly targeted and overly restrictive regulations have a substantial distortionary effect on the national economy that can rival or at times exceed that of wasteful spending; moreover, their economic effects and often regressive nature are overlooked by the general public ([Mulligan & Philipson, 2000](#)). The Mercatus Center has estimated that the growth in regulations between 1980 and 2012 reduced U.S. GDP growth by 0.8 percentage points annually, which means the economy would have been 25 percent larger in 2012 without this regulatory encroachment ([Coffey et al., 2016](#)). By contrast, in 2019, the Council of Economic Advisers projected that the Trump Administration's regulatory approach would increase U.S. GDP by 1.0-2.2 percent over a decade ([2019, p.2](#)).

Before the COVID-19 pandemic, this blend of policies designed to support economic growth succeeded in increasing labor market demand across all demographics with economic growth creating 5 million more jobs than had been predicted by the Congressional Budget Office in August 2016 ([The Council of Economic Advisers, b, p.14](#)). The prime-age Employment-to-Population Ratio (E-POP) improved to 80.5 percent in January 2020, a height briefly surpassed only at the peak of the late-1990s Dot Com bubble ([U.S. Bureau of Labor Statistics a](#)). The unemployment rate hit a low of 3.5 percent in February 2020—the lowest in half a century and accompanied by record lows for African Americans, Hispanic Americans, Asian Americans, Native Americans, individuals with disabilities, and Americans without a high school diploma ([The White House, 2021](#)). Finally, wage and income growth accelerated, with average hourly earnings increasing at an annualized nominal rate in excess

of 3.0 percent between July 2018 and December 2019 and median household income rising by \$4,400 in 2019 alone—the largest single-year jump on record ([The Council of Economic Advisers, 2021](#)). Moreover, lower-income earners experiencing faster wage growth than higher-income earners decreasing racial wage, income, and wealth inequality ([The Council of Economic Advisers, 2021](#)).

### ***Private Sector Leadership and On-The-Job Learning***

Paired with efforts to improve the underlying economy, the Trump Administration's workforce development philosophy placed a significant emphasis on encouraging the private sector and on building partnerships between public and private actors. Recognizing the importance of non-federal actors in developing a healthy and robust workforce development ecosystem, the Trump Administration solicited input from a wide range of stakeholders beginning in 2017 with the formation of the Task Force on Apprenticeship Expansion and continuing with the subsequent formation in 2019 of the American Workforce Policy Advisory Board. Both included representatives from the employer community, organized labor, program providers, and elected state leaders. A persistent and reoccurring challenge in developing an effective talent development ecosystem is minimizing the divergence between education and training and the skills, knowledge, or competencies valued in the labor market. Employer-provided education and training eliminates any divergence, and effective employer-educator partnerships minimize disparities. Outside of a la carte training initiatives, the program design of third-party education or training providers must be regularly updated to reflect standards and practices in all industries and to align to future labor market demand signals.

This emphasis on employer-led education and training was a key component of both the Trump Administration's Pledge to America's Workers and the creation of the Industry Recognized Apprenticeship Program (IRAP). Encouraged by the Trump Administration, more than 460 companies and trade associations committed to providing employment, training, and upskilling opportunities to more than 16 million American students and workers ([The White House, 2021](#)). These public commitments provided an important labor market signal to job seekers and program providers. Although employers represent both producers and consumers of talent, employer capacity for providing education or training activities varies. Consequently, the Trump Administration supported workforce development and education opportunities to complement employers and fill in any necessary gaps.

The Registered Apprenticeship program, created in 1937, is the most formalized federal on-the-job training program. To be recognized by the Department of Labor (DOL), a program must satisfy 23 specific program requirements, including adherence to an approved curriculum ([U.S. Department of Labor, 2020](#)). It is crucial, however, to distinguish between apprenticeships as a pedagogical approach to on-the-job skill development involving the mastery of theory and practice and apprenticeships as a systemic approach to formalizing the division of labor. Akin to modern occupational licensing regimes, the apprenticeship system allowed some existing practitioners to discourage competition by limiting who could

practice a given occupation.<sup>1</sup> While advocates of a command and control economy equate apprenticeship with a formalized labor market relationship, research by Robert Lerman has found that less than 20 percent of Americans who report participating in an apprenticeship program are in a DOL-recognized Registered Apprenticeship program ([2014, p.17](#)). Based on Mr. Lerman’s assessment of the (admittedly limited) data, the extrapolation of the number of Americans self-reporting as participating in an apprenticeship program would represent 2.1 million apprentices ([Lerman, 2017](#)).

While policymakers should recognize that the Registered Apprenticeship program represents only a subset of on-the-job, earn-and-learn opportunities, Registered Apprenticeships are an essential component of America’s education and training ecosystem. The Registered Apprenticeship program has remained popular in the building trades due to the presence of organized labor and the distinct financial incentives that allow construction companies working on federally funded projects to pay Registered Apprentices “helper” wages less than the otherwise legally mandated “prevailing wage.” These occupations account for all 17 of the most represented occupational classifications in the program, comprising more than 66 percent of all Registered Apprentices in the states where DOL administers the Registered Apprenticeship program ([U.S. Department of Labor, 2020](#)). Throughout the Trump Administration, the number of Registered Apprentices increased by more than 25 percent, reflecting the Administration’s promotion of the workforce development approach and the health of the construction industry through liberalization of regulation and support for large projects like the Keystone XL pipeline ([U.S. Department of Labor, 2020](#)). Despite promotion across multiple presidential administrations, however, the program has failed to scale. The total number of Registered Apprentices may better reflect the health of the construction industry than the commitment of employers to support on-the-job training and the desire of Americans for such opportunities.

The Trump Administration supported the expansion of employer-led workforce development outside the Registered Apprenticeship program through the reauthorization of the [Perkins Career and Technical Education Act](#) (Perkins Act) and the creation of the IRAP program. Perkins is the main source of federal funding for CTE, providing funding for high schools, area technical schools, and community or technical colleges to support CTE at both the secondary and postsecondary levels. While the use of funds is flexible, states report on key performance indicators such as academic proficiency, employment outcomes, work-based learning, credential attainment, or dual enrollment credit earned. The Perkins Act had last been reauthorized in 2006, and efforts to modernize the legislation had stalled before the Trump Administration began pushing for Senate action. The Trump Administration championed the inclusion and state-level adoption of work-based learning performance metrics to ensure the quality of instruction and provide high school students exposure to

---

<sup>1</sup> In his autobiography, Benjamin Franklin describes having to relocate from Boston to Philadelphia to find work after being blacklisted by his master for leaving his service before completing the nine years of his legal indenture. However, according to Daniel Jacoby, apprenticeships evolved from a tool of labor control by employers into a system dominated by unions ([Jacoby](#)). Jack Barbash attributes union interest in apprenticeship to an effort to dictate wages through control over the labor supply, an effort to reduce any potential reduction in the price of labor due to training, and an interest in social policy ([Barbash](#)).

on-the-job and experiential learning opportunities related to their field of study. The provision of such learning opportunities requires school districts to develop and maintain working relationships with employers, which has the knock-on effect of increasing the likelihood CTE curricula and program design reflect professional, workplace-relevant standards and practices and in-demand skills. Moreover, the recent modernization increased the funding reserved for state-directed activities, of which 65 percent of states included a self-identified emphasis on equity in their program design, and 69 percent of states are using their state reserved leadership funding to reduce equity gaps ([ADVANCE CTE, 2020](#)).

The limited employer participation in the Registered Apprenticeship program indicates concerns with governance or structure that increased federal spending is unlikely to overcome. Not all employers, particularly small- and medium-sized employers, have the organizational capacity to develop comprehensive or customized employee education and training programs. Work-based learning and employer design of curricula was a vital component of the IRAP program developed over three years by the Trump Administration. The IRAP program encouraged and supported the development of sector-based apprenticeship standards while relying on third-party accreditation (known as Standards Recognition Entities or SREs) to ensure program quality and expand publicly available performance data, including previously unknown data on employment and earnings outcomes ([U.S. Department of Labor, 2020](#)). While programs must adhere to all state and federal labor laws, SREs must ensure participating employers adhere to enhanced equal employment opportunity standards and industry standards. Since the program's launch in September 2020, DOL has recognized 27 SREs, including industry groups, state offices of apprenticeship, workforce development boards, and community colleges. Ignoring the popularity of the delivery model and opportunities it has created, the Biden Administration has created regulatory uncertainty by publicly announcing the cessation of the program and ending the recognition of SREs ([The White House, 2021](#)), showing its preference for greater government regulation and older standardized apprenticeship models instead of a more innovative, market-driven approach that relies on industry expertise about appropriate training methods and skill progression. Despite the initial bold public announcement regarding termination, the fate of the program remains unclear given the ambiguous direction provided to DOL to "consider new rulemaking to reverse these programs ([Executive Order 14016](#))." This unnecessary increase in regulatory uncertainty is likely to inhibit the ability of DOL to effectively collaborate with employers in the promotion of on-the-job and work-based learning opportunities. With more jobs available than skilled workers to fulfill them, reversing IRAPS and ending SREs could be another contributing factor in discouraging American workers' ability to return to work and slow the country's economic recovery even more ([Business Wire, 2021](#)).

### ***Structural Reform***

The third priority of the Trump Administration was the elimination of structural barriers to employment and economic opportunities. In conjunction with the American Workforce Policy Advisory Board, the Trump Administration championed regulatory reforms and changes in business practices to facilitate easier access to employment for students and job

seekers. A key component of this was the promotion of occupational licensing reform; this effort had bipartisan roots with the prior engagement on the issue by the Obama Administration's Council of Economic Advisers ([The White House, 2015](#)). The Trump Administration promoted occupational licensing reform principles designed to roll back and eliminate occupational licensing regulations that are more effective in protecting practitioners from competition than consumers from harm. As occupational licenses often limit economic and geographic mobility—with research attributing a 1.7 percent to 6.7 percent reduction in county-level mobility to the growth in state occupational licensing restrictions over the past 60 years ([Timmons et al., 2018](#))—the Trump Administration's Governor's Initiative of Regulatory Innovation promoted regulatory best practices similar to those used in the consideration of federal regulations, including state-level consideration of how occupational licensing regulations affect the general public, impose barriers to employment on returning citizens and military spouses, and limit geographic mobility. This initiative elevated state-level best practices, such as Arizona's review and elimination of unnecessary licensing requirements and extension of universal reciprocity for all retained licenses; the Trump Administration's leadership on the issue helped facilitate state-level licensing reform legislation passing in 19 states.

Since employee evaluation practices at work can impact workplace inclusivity, the Trump Administration collaborated with leading employers to champion human resource practices to increase opportunities for Americans whose skills or abilities had been overlooked. The use of artificial intelligence or software to screen applicants promises to promote a more meritorious hiring process; however, computers are only as clever or impartial as the humans who code them. If job postings and job requirements are not well aligned or biased, these practices may increase rather than reduce structural barriers to opportunity. This is particularly true for Americans with practical knowledge or skills acquired on the job or outside the classroom.

To address the challenge of skill verification, the Trump Administration convened leading employers to promote the acceleration and discussion of shared governance of digital Learning and Employments Records that allow students or workers to share digital “artifacts” representing skills, competencies, or credentials in a secure and verifiable format with prospective employers of their choice. Moreover, following the signing of Executive Order 13932, [Modernizing and Reforming the Assessment and Hiring of Federal Job Candidates](#), the Trump Administration eliminated the use of academic degrees as a hiring requirement for approximately 70 occupational classifications. This bold federal action ensures that the hiring and assessment of applicants for 70,000 civil service positions account for the skill, knowledge, and expertise required to fill the positions. In addition to expanding access to employment opportunities for Americans who learned their skills outside the classroom, the Trump Administration's action brought federal hiring practices in line with long-neglected civil service law. This action created a more meritorious and equitable civil service while modeling best practices for private sector employers. Finally, the Trump Administration worked closely with the Ad Council, labor organizations, and employers to promote public awareness of available employment opportunities and

pathways to these jobs through the “Find Something New” ad campaign. To date, the campaign’s website has had nearly 900,000 sessions initiated with high engagement on the website.<sup>2</sup> The campaign website is designed to match students and jobseekers with educational and employment opportunities while creating awareness of the value of industry-recognized credentials.

## **THE CHALLENGE OF COVID-19 AND ECONOMIC RECOVERY**

The economic effects of COVID-19 have created an unprecedented challenge to American workers and employers. The disruption to the economy cannot be overstated; following a series of lockdown orders designed to alleviate pressure on the health care system, unemployment peaked in April 2020 at 14.8 percent ([U.S. Bureau of Labor Statistics c](#)). The prime-age E-POP dropped to 69.6 percent; 5.2 percentage points below the lowest level reached in the aftermath of the Great Recession and the lowest societal level since the increase of women in the workforce ([U.S. Bureau of Labor Statistics a](#)). In response to the pandemic-induced economic crisis, the Trump Administration provided targeted economic relief paired with historic employment subsidies designed to mitigate the immediate economic dislocation of the pandemic and lay the groundwork for a historically fast recovery. This aid included an expansion of unemployment insurance, direct relief, and most importantly for small business survival and labor market recovery, the Paycheck Protection Program (PPP).

As a central pillar of the Coronavirus Aid, Relief, and Economic Security Act (CARES)—the largest piece of economic relief legislation in history ([The Council of Economic Advisers, 2021](#))—PPP represented a sweeping payroll subsidy program that supported 51 million jobs and was utilized by 80 percent of eligible small businesses ([Faulkender & Miran, 2021](#)). Small businesses received forgivable loans to assist with short-term expenses and encourage employee retention; initial program loan limits were tied directly to payroll expense, and borrowers were eligible for loan forgiveness up to the amount spent on covered expenses. Though not without its limitations, the program provided a critical safety net to the Nation’s small businesses and their employees. Critically, it recognized the irreplaceable role of small businesses in the labor market and that the shock to small businesses was unrelated to decisions they had made or pre-existing economic vulnerability. Nearly three-quarters of small businesses received PPP loans, and research indicates that the program may have directly saved 19 million jobs ([Treasury, p.2](#)).

Fortunately, small business activity is in the midst of a robust recovery. According to a late March 2021 Economic Innovation Group analysis of the Census’ experimental Small Business Pulse Survey (launched in April 2020 to record the effects of the pandemic on small businesses), the proportion of small businesses increasing hours and employees approached the percentage reducing hours and employee’s headcount for the first time since the

---

<sup>2</sup> The Ad Council puts together a monthly performance wrap-up for the Find Something New ad campaign. The latest data is included in this report.

pandemic began ([O'Dell, 2021](#)). Moreover, the small business formation has been strong; between March 2020 and May 2021, there have been 6,126,710 new businesses applying for the Internal Revenue Service (IRS) Employer Identification Numbers, including 2,114,814 applicants classified as having a high propensity for turning into businesses with payroll ([U.S. Census Bureau, 2021](#)). In addition, the economy has in just over a year recovered 70 percent of the net job losses during the pandemic—something that took nearly 3 years in the record slow Obama-Biden recovery following the 2007-09 financial crisis ([U.S. Bureau of Labor and Statistics, c](#)).

Simultaneous with high rates of business closures and creation, the pandemic accelerated a number of long-term trends in the labor market and the nature of work. E-commerce proliferated as consumers transitioned away from brick and mortar. With technological and demographic changes, the economic dislocations of the COVID-19 pandemic may accelerate previously projected changes to the national occupational mixture; moreover, if the increased prevalence of remote work persists, white-collar American workers may face increased global competition akin to the dislocations experienced by the manufacturing industry. Americans in the leisure and hospitality industry were the hardest hit with layoffs; more than 46 percent of Americans employed in the leisure and hospitality industries in March 2020 were laid off the following month, and as of March 2021, the industry employs 19 percent fewer people than in February 2020 ([U.S. Bureau of Labor Statistics, 2021](#)). The McKinsey Global Institute recently reduced its forecasted number of Americans working in the foodservice industry in 2030 by 4.3 million and projects that 28 percent of Americans may need to transition occupations ([Lund et al., 2021, p.14](#)).

Significant structural and programmatic changes are required to ensure Americans of all ages have access to the skills necessary to succeed in the modern economy. As noted earlier, the Trump Administration recognized the need even before COVID-19 expedited the shift towards remote work and greater use of technology, and potentially, automation. Going forward, the solutions to this skills crisis will require building upon the collaborative work between the previous administration and the private sector that included broader recognition of informal learning and skill developments, the elimination of artificial distinctions between education and training, and close collaboration with employers at every level of government.

By contrast, despite stated good intentions, the suite of Biden Administration policies enacted and proposed to date appear stuck in an outdated mindset of relying on traditional, government-driven training programs, greater regulation, and fiscal policies that discourage rather than promote work. Indeed, based on the ARPA, the Biden Administration appears to view the primary barrier to increased economic mobility and more effective talent development to be largely resource-based and best solved through additional state or federal spending. This approach fails to recognize the harmful effects of time spent out of the workforce for older workers, to respond to the increased number of young adults disconnected from education or work, nor advance systemic reforms to better position federally-funded programs to help students and job seekers.

With unified control of the Senate, House of Representatives, and the White House, the budget reconciliation process was used to pass ARPA along party lines. While the bill continued the PPP program, it reflected a lack of vision or creativity in assisting Americans in returning to work. For example, the bill included supplemental funding for unemployment benefits, but it failed to pair that with support for Reemployment Services and Eligibility Assessment Grants (RESEA), which is specifically designed to support the implementation of evidence-based reemployment activities for Americans most likely to have their Unemployment Insurance (UI) benefits expire—in practice, the Americans with the greatest need.

UI can provide important income support to Americans faced with job loss and is a critical piece of our social safety net. However, while the availability of such income assistance allows for increased selectivity in securing employment, the long-term effect of time out of the workforce can be severe. The long-term unemployed have more difficulty finding work, which leads to the atrophy of skills. The likelihood an individual who becomes unemployed finds full-time employment diminishes over time, and more than half will no longer be in the labor force if unemployed for 15 months or longer ([Krueger et al., 2016](#)). The negative effects of unemployment are not confined to economic prospects; unemployed workers exhibit degradation in their mental and physical health, an increase in chronic disease, and elevated all-cause mortality ([Paul & Moset, 2006](#)) ([Pharr et al., 2011](#)) ([Herbig et al., 2013](#)) ([Roelfs et al., 2011](#)). Unfortunately, these effects are more pronounced in the long-term unemployed ([Herbig et al., 2013](#)) ([Garcy & Vågerö, 2012](#)), and there is considerable evidence that the serial extensions of unemployment insurance following the Great Recession contributed to the slow recovery ([Mitman & Rabinovich, 2020](#)) ([Hagedorn et al., 2016](#)).

The negative economic consequences faced by workers who lose their job and spend significant time out of the workforce extend to those receiving retraining assistance and wrap-around supports. Evidence from the Trade Adjustment Assistance (TAA) program, designed to provide extensive training and wrap-around services for workers who have lost their employment due to the effects of trade and import competition, found that despite these extensive supports, workers participating in the program and availing themselves to education and training services had lower earnings than unemployment insurance claimants without access to directly subsidized education and training services ([Schochet et al., 2011, p. 1-12](#)). The evaluation of the TAA program largely attributed this phenomenon to the proclivity of workers receiving unemployment benefits to return to work faster than those availing themselves of TAA training activities.

The decision of the Biden Administration and congressional Democrats to focus spending exclusively on extending increased unemployment insurance while neglecting RESEA is baffling. Unlike with TAA, the RESEA program has been found to increase the future earnings of program participants, reduce the likelihood a participant would exhaust their benefits,

and reduce public expenditure through reductions in UI benefits.<sup>3</sup> Moreover, the ARPA represented a missed opportunity to refocus the program on the truly needy and hard to serve by eliminating a provision slipped into prior spending bills that dilute the program’s focus on Americans most likely to face difficulty returning to work.

Policies that prioritize programs over people were reflected in the ARPA’s approach to providing overly generous assistance to government entities and publicly funded and financed institutions. State revenue data for 2020 remains incomplete; however, analysis by the Tax Foundation estimated that contrary to early dire predictions, state revenue only dropped by \$1.7 billion—or approximately 0.02 percent—and that municipal revenue grew ([Walczak, 2021](#)). Variations in state-level revenue largely reflect state-level preferences in fiscal policy. However, the ARPA provided more than \$325 billion for state and local government regardless of on-the-ground revenue considerations or local fiscal capacity.<sup>4</sup> The Biden Administration has yet to issue guidance regarding the allowed use of funds; however, the broad language of the ARPA implies this may be used as a direct or indirect subsidy for postsecondary education.<sup>5</sup> This funding is duplicative of the \$164.6 billion provided specifically for K12 and postsecondary education, constituting the largest and third-largest state-level expenditures ([Stauffer et al., 2019, p. 2](#)).<sup>6</sup> Although the current administration has adopted the position that the only constraint on the secondary training system is a resource constraint, state and local leaders have the opportunity to advance ambitious reforms better to serve students and job seekers.

## A VISION FOR THE FUTURE

In building a more equitable and market-driven workforce development system, policymakers must take into consideration how best to serve both young adults entering the workforce and mid-career adults desiring to enhance their economic opportunities or confronted by an imposed career change. A key aspect of better preparing young adults for the workforce is broadening access to career-relevant work-based learning opportunities. Moreover, based on changing demographics, it is critically important that all students, particularly at-risk and vulnerable students, have access to these opportunities. The same principle, connectivity to the workforce, is relevant for mid-career adults and opportunity youth, who are young people between the ages of 16 to 24 years old that are disconnected from school and work. Where possible, retraining or upskilling should occur on the job, and time out of the workforce should be minimized. This will improve program completion and minimize nonvalue added expenses and negative impacts to workers. Youth employment has been in sharp decline since 2000; labor force participation for 16 to 19 year-olds dropped

---

<sup>3</sup> The RESEA program is modeled on the Nevada Reemployment Services Program found to have a direct causal effect on earnings, employment, and the receipt of public benefits. ([Manoli et al., 2016, p. 13-17](#))

<sup>4</sup> The American Rescue Plan provided \$350 billion in funding for local governments; however, this included \$24.5 billion for tribal and territorial governments.

<sup>5</sup> The ARP allowed uses of funds include “responding to the negative economic impacts, including assistance to households, small business, and nonprofits.”

<sup>6</sup> ARP provided \$125 billion for elementary and postsecondary education and \$39.6 billion for postsecondary education.

more than 38 percent between January 2000 and February 2020 ([U.S. Bureau of Labor and Statistics, d](#)). While some of this decline can be attributed to increased school attendance, a significant percentage of this population is classified as “not in education employment or training” ([Cannon et al., 2015](#)). This trend holds true for summer jobs as well, with pre-pandemic summer employment for secondary students registering at 24.1 percent for 16- and 17-year olds and 46.2 percent for 18- and 19-year olds compared to a combined peak of 58 percent in 1978 ([Desilver, 2019](#)). This long-term trend has consequences for labor force preparation, with young adults failing to learn the foundational skills necessary to succeed on the job before high school graduation. Summer jobs afford students the opportunity to learn how to interact in a more professional setting, work collaboratively, respond to professional criticism and adhere to workplace expectations; delaying these lessons increases the personal cost of any lesson learned through failure on the job. Expanded access to quality work-based learning experiences for young adults has the potential to address these challenges.

Work-based learning can include both on-the-job, employer-provided instruction, and simulated work environments. At the postsecondary level, such an approach has been found to increase learner confidence, encourage reflection and curiosity, improve persistence, graduation, and employment. At the same time, all students benefit; students from underserved racial, ethnic, and socioeconomic backgrounds have notable gains ([Rodriguez et al., 2016, p. 4](#)) ([Lester & Costley, 2010, p. 567-568](#)). These benefits are more consistent than those of summer jobs programs which may have mixed evidence of promoting lasting academic achievement but have failed consistently to generate evidence of positive future effects on employment.<sup>7</sup> There is compelling evidence in support of work-based learning for character development (or social and emotional learning) and academic performance prior to consideration of the technical skill development and career exploration it can provide. Fortunately, at the state level, 26 states<sup>8</sup> have committed to providing high school CTE students the opportunity to participate in work-based learning opportunities. New Hampshire is at the forefront nationwide in fostering private sector leadership and collaboration with an integrated work-based learning program encompassing both secondary and postsecondary education, offering students a range of options with significant employment involvement in sector partnerships across five industry groups: construction and infrastructure, healthcare, hospitality, advanced manufacturing, and information technology.

---

<sup>7</sup> Recent assessments of youth summer employment programs in Boston or New York have found a positive correlation between program participation and academic persistence ([Leos-Urbel, 2014](#); [Modestino and Paulsen, 2019](#)). However, a recent experiment in Chicago found that a positive correlation between a reduction in violent crime, there was no academic effect; the Chicago study, in evaluating population subgroups, for potential positive employment effects for participants that were younger, more female, more Hispanic, and from a geographic location with less unemployment ([Davis and Heller, 2020](#)).

<sup>8</sup> The following 26 states have created policies for work-based learning through industry partnerships: Colorado, Florida, Georgia, Hawaii, Indiana, Iowa, Kentucky, Maryland, Massachusetts, Michigan, Missouri, Nevada, New Jersey, New York, North Carolina, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Dakota, Tennessee, Utah, Vermont, Virginia, Washington, and Wisconsin.

The increase in policymaker interest in CTE had raised concerns regarding equity. Concerns about the disproportionate tracking (the division of students into differentiated academic programs) of low-income and minority students into academically sub-par vocational education programs encouraged the emphasis on academic assessments contained in the 2001 [No Child Left Behind Act](#), an increase in academic rigor, and a rebranding of vocational education as CTE ([Ainsworth & Roscigno, 2004](#)) ([Arum & Yossi, 1995](#)) ([Oakes, 1983](#)). Fortunately, the academic quality of these programs has improved. According to an analysis by ADVANCE CTE, the organization representing state CTE directors, the national graduation rate for CTE concentrators is approximately 95 percent and roughly 10 percent higher than the national average ([2020](#)). While this is positive for students with the opportunity to participate in CTE programs, new research raises questions regarding which students have access to CTE courses at the secondary level. According to research by the American Enterprise Institute, the academic improvement of CTE program participants may be a result of compositional changes to the students served; CTE programs may now be comprised of increasingly academically inclined college-bound students ([Malkus, 2019, p. 26-27](#)). Moreover, while there is no longer evidence of tracking students into CTE, there is evidence of tracking within CTE ([Giani, 2019, 14-20](#)) ([Butrymowicz et al., 2020](#)). This is not a uniquely American challenge. While many proponents of apprenticeships and career education champion the German vocational education and training system (VET), the increased academization of the VET system (with the increased interest in general education gymnasiums and high performing students participating in both traditional apprenticeship and degree-granting programs) has crowded out less academically successful young people including migrants and refugees ([Haasler, 2020](#)). With the popularity and effectiveness of CTE, state and federal leaders should ensure that every student, particularly low-income and historically disadvantaged students, has access to a high-quality CTE program, a proposal first put forward in the Trump Administration's 2021 Budget Request. Policymakers and the business community should also consider ways to continue to elevate technical trade jobs as avenues for rewarding, no-debt, family-sustaining careers. For decades, a college education bias developed in our Nation and has ultimately served neither the American worker nor employer well.

While work-based learning is critical to ensuring young adults entering the workforce have the necessary foundational skills, the failure of older TAA program participants to out-earn contemporaries who lose their job despite the provision of retraining assistance, counseling, and wrap-around support services provides evidence of the crucial importance of maintaining older worker connectivity to the workforce. With the nature and technological requirements of work changing, Americans will need to reskill throughout their careers, and policymakers and, most importantly, employers should align programming and training with a focus on life-long learning. As a country, the U.S. subsidizes education and training for college-bound students and provide social safety net programs to aid those who have lost their job, but—and despite this being allowed use of funds local and Rapid Response funds in the [Workforce Innovation and Opportunity Act](#) (WIOA)—there has not been a similar

commitment to layoff aversion.<sup>9</sup> This represents a potential market failure warranting public and private investment to support the retraining and cross-training of workers who would otherwise be laid off. This is particularly true of older workers who might otherwise be incentivized to seek disability or retire prematurely. While there is insufficient evidence of effective practices to warrant a federal program, state and local governments may consider experimentation with public-private partnerships to assist employers in repurposing, retraining, and reassigning workers who would otherwise be laid off. DOL and private sector organizations and associations should provide data and research on the evidence of such practices to states that have or intended to adopt such efforts. As many states have bifurcated their career and technical education or workforce development efforts from their enforcement agency, a better understanding of dedicated state, local, and private sector resources would be a useful national endeavor.

Recognizing layoffs are unavoidable, the talent development ecosystem must provide job seekers needing to reskill fast and affordable on-ramps back to employment. While the WIOA system can provide job seekers with valuable labor market information and career counseling, it is poorly structured to fund or support large-scale retraining efforts; the program's three major funding streams (adult employment and training activities, youth activities, and dislocated worker employment and training activities) received \$2.845 billion total in FY21 and, based on historical precedent, approximately 22 percent, or \$63 million will be spent on training activities.<sup>10</sup> Rather than lamenting the lack of WIOA funding spent on training or believing the problem to be insufficient resources, policymakers should recognize that community or technical colleges are the primary publicly-funded providers of short-term training (whether for credit or not) and amend the Higher Education Act to better support short-term programs, especially public-private partnerships with robust industry participation. By facilitating a faster return to work, such programs would help alleviate financial pressure on working families, and their accelerated nature increases the likelihood of successful completion. Moreover, if federal student aid prioritized low-income students and the institutions that serve them, it would increase educational and job opportunities for underserved students.

The convoluted nature of student aid furthers confusion among policymakers and students; the Federal Work-Study program is a subsidized employment program masquerading as a student aid program, and reorienting this program to prioritize increasing the likelihood of

---

<sup>9</sup> Layoff aversion is codified in regulation to mean the strategies and activities to prevent or minimize the duration of unemployment resulting from layoffs. The economic incentive to invest in reskilling or retraining takes into consideration future economic returns; consequently, for older workers, there is a diminished time horizon to recoup personal or organizational investment.

In Fiscal Year 2020, excluding loan aid or grants to service members, the federal government provided \$29.6 billion in financial aid through the Pell Grant program and approximately \$2 billion in financial aid through campus-based programs. Before the pandemic, Congress provided states \$2.4 billion for the administration of their Unemployment Insurance programs, and employers were able to claim approximately \$1.3 billion in Work Opportunity Tax Credits. In comparison, WIOA Adult and Dislocated worker funding totaled \$2.2 billion.

<sup>10</sup> The 2015 WIA Adult and Dislocated Worker Programs Gold Standard Evaluation examined local expenditures during program years 2011 and 2012 ([McCutcheon and Mastri 2015](#)).

employment after graduation is consistent with the evidence that the majority of Americans pursue postsecondary education for purposes of improving their employment prospects ([Strada Education Network & Gallup, 2018, p. 2](#)). By reallocating resources from institutions serving more affluent students and reducing the overly generous subsidies provided for on-campus and nonprofit employment, more students would be provided the opportunity to pair their academic course work with paid on-the-job learning. The program allows federal funding to account for up to 90 percent of a student's wages; this high subsidy rate reduces the number of opportunities available to students and reduces the quality of the learning opportunity. By minimizing the skin in the game for participating employers, there is less incentive to ensure the student employment opportunity is aligned with productive organizational activity, reducing the student learning experience quality.

Finally, states should reform their postsecondary education systems to more easily facilitate the transfer of credit and recognition of prior learning. While academic institutions have a financial incentive to force learners to complete coursework to demonstrate the mastery of theory and practice which they already possess, such practices make it more difficult for transfer students, frequently adult learners, or students who stopped out at a prior institution to complete their program of study.<sup>11</sup> Quite simply, requiring students to duplicate coursework represents a particularly egregious form of rent-seeking and should not be financed by taxpayers at any level of government. While the institutions that comprise the Consortium for the Assessment of College Equivalence represent institutional leaders in recognizing college-equivalent learning obtained outside a postsecondary institution, several states have moved forward with more comprehensive systemic reforms.<sup>12</sup> For example, Ohio has adopted a system-wide articulation and transfer policy, including recognizing prior learning assessments that encompass technical training, apprenticeship programs, professional training, and certificate programs.

In building stackable programs, the emphasis, naturally, is frequently on the originating institution to secure recognition by subsequent institutions. These institutions, however, have limited incentives to do so. The straightforward solution would be to prohibit the use of Federal Student Aid to finance substantially similar coursework completed in good standing; the use of the existing higher education accreditation system could be applied for purposes of enforcing such a requirement. State-level governance forms represent an alternative approach to accomplishing such a policy change. Institutional leadership, however, is required to support the broader adoption of prior learning assessments to determine whether potential or current students have sufficient mastery of theory and practice to be awarded college credit.

---

<sup>11</sup> Students who fail to complete their program of study but intend to return are considered to have “stopped out.” This represents a significant subset of the 36 million students with some postsecondary education or training who failed to complete their program ([National Student Clearinghouse Research Center, 2019](#)).

<sup>12</sup> The Consortium for the Assessment of College Equivalence consists of the Community College of Vermont, Charter Oak State College, Thomas Edison State University, SUNY Empire College, and Granite State College.

## CONCLUSION

Policymakers at both the state and federal level have the dual responsibility of helping American workers dislocated by the pandemic return to work and building the workforce development infrastructure, in close coordination with job creators that will support the talent development necessary for the 21st-century economy. Due to changing employer needs and variance in the labor market, American workers will need to learn throughout their careers. For Americans who do not learn these skills in conjunction with their employment, we need an education and training system that facilitates that skill development in a manner that helps displaced workers return to economic prosperity as fast as possible. Close collaboration between program providers and employers ensures learners and jobseekers acquire in-demand skills and facilitates a faster, more seamless entry into the workforce. Moreover, these initiatives and efforts do not exist in a vacuum; strong economic fundamentals increase labor market demand and incentivize employers to engage closely with education and training providers and adopt human resources policies that benefit workers.

Creating a holistic and responsive talent development ecosystem requires considering how we prepare Americans for the workforce and facilitate lifelong learning. Based on the research above, state and federal leaders could confidently consider policies which:

1. Ensure that all students have access to high-quality CTE, including work-based learning opportunities.
2. Dedicate ARP funding to experiment with layoff aversion strategies, including subsidized employment and on-the-job training.
3. Expand federal subsidies for postsecondary education that includes short-term training.
4. Encourage the Federal Work-Study program to require all participating employers, including schools and other nonprofits, to match the federal investment to provide more Pell Grant recipients a high-quality on-the-job learning opportunity.
5. Improve the effectiveness of subsidized colleges and universities by expanding their recognition of prior learning for academic credit through state government; the federal government has an opportunity to avoid subsidizing duplicative learning “necessitated” to overly restrictive transfer policies.

Such actions will establish a more effective framework for assisting Americans in developing the skills necessary to succeed in the modern economy. While such systemic reforms will take time to implement, state and local leaders, and private sector partners, should prioritize efforts to restore the connection between vulnerable populations and the labor force—particularly high school dropouts and the long-term unemployed. All public interventions should rely on quantitative measures of employment and earnings outcomes while avoiding the inclination toward mission creep or creaming that has undercut the effectiveness of RESEA, WIOA at-risk youth, and Pell Grant programs.

## **AUTHOR BIOGRAPHY**

**Linda McMahon** serves as Chair of the Board for the America First Policy Institute (AFPI) and Chairman for AFPI's Center for the American Worker. McMahon served in President Donald J. Trump's Cabinet as the Administrator of the Small Business Administration.

## WORKS CITED

- ADVANCE CTE. *CTE and Student Achievement*. (2020). Retrieved April 1, 2021, from [https://cte.careertech.org/sites/default/files/documents/factsheets/CTE\\_and\\_Student\\_Achievement\\_2020\\_0.pdf](https://cte.careertech.org/sites/default/files/documents/factsheets/CTE_and_Student_Achievement_2020_0.pdf)
- Ainsworth, J. & Roscigno, V. (2005). *Stratification, School-Work Linkages and Vocational Education*. *Social Forces*, 84(1), 257-284. Retrieved April 1, 2021, from <https://doi.org/10.1353/sof.2005.0087>
- Arum, R. & Shavit, Y. (1995). *Secondary Vocational-Education and the Transition From School to Work*. *Sociology of Education*, 68(3), 187-204. Retrieved April 1, 2021, from <http://hdl.handle.net/1814/16905>
- Boehm, E. (2021, April 1). *Biden's Infrastructure Plan Would Overturn 'Right-To-Work' Laws in 27 States*. Reason. Retrieved April 10, 2021, from <https://reason.com/2021/04/01/bidens-infrastructure-plan-would-overturn-right-to-work-laws-in-27-states/>
- Burke, W. F. & Tuerck, D. G., PhD. (2019, August). *The Effects of Project Labor Agreements on Public School Construction in New Jersey*. The Beacon Hill Institute. Retrieved April 1, 2021, from [https://www.heartland.org/\\_template-assets/documents/publications/BHI-PLA-NJ-Report-20190826FINAL.pdf](https://www.heartland.org/_template-assets/documents/publications/BHI-PLA-NJ-Report-20190826FINAL.pdf)
- Business Wire. (2021, March 18). *U.S. Skilled Trades Labor Shortage Heightens as In-Demand Jobs Remain Unfilled the Longest*. A Berkshire Hathaway Company. Retrieved April 1, 2021, from <https://www.businesswire.com/news/home/20210318005265/en/U.S.-Skilled-Trades-Labor-Shortage-Heightens-as-In-Demand-Jobs-Remain-Unfilled-the-Longest#:~:text=U.S.-,Skilled%20Trades%20Labor%20Shortage%20Heightens%20as%20In,Jobs%20Remain%20Unfilled%20the%20Longest&text=A%20new%20analysis%20by%20the,the%20shortage%20of%20qualified%20workers>
- Butrymowicz, S., Amy, J. & Fenn, L. (2020, October 22). *How career and technical education shuts out Black and Latino students from high-paying professions*. Hechinger Report/Associated Press. Retrieved April 1, 2021, from <https://hechingerreport.org/how-career-and-technical-education-shuts-out-black-and-latino-students-from-high-paying-professions/>
- Cannon, M., Kudlyak, M. & Liu, Y. (2015, January 26). *Youth Labor Force Participation Continues To Fall, but It Might Be for a Good Reason*. The Federal Reserve Bank of St. Louis. Retrieved April 1, 2021, from <https://www.stlouisfed.org/publications/regional-economist/january-2015/youth-labor-force>
- Careertech.org. (2020). *The State of Career and Technical Education: An Analysis of States' Perkins V Priorities*. Retrieved April 1, 2021, from [https://cte.careertech.org/sites/default/files/files/resources/State\\_CTE\\_PerkinsV\\_2020.pdf](https://cte.careertech.org/sites/default/files/files/resources/State_CTE_PerkinsV_2020.pdf)

- Coffey, B, McLaughlin, P, & Peretto, P. (2016, April 26). *The Cumulative Cost of Regulations* [Working Papers]. The Mercatus Institute. Retrieved April 1, 2021, from <https://www.mercatus.org/publications/regulation/cumulative-cost-regulations>
- Committee for a Responsible Federal Budget. (2021, April 2). *What's in President Biden's American Jobs Plan?* Retrieved April 10, 2021, from <https://www.crfb.org/blogs/whats-president-bidens-american-jobs-plan>
- Cooper, D.H. (2013). *The Effect of Unemployment Duration on Future Earnings and Other Outcomes*. [Working Paper No. 13-8]. Retrieved April 10, 2021, from <https://www.bostonfed.org/publications/research-department-working-paper/2013/the-effect-of-unemployment-duration-on-future-earnings-and-other-outcomes.aspx>
- Cox, J. (2021, May 7). *April's expected hiring boom goes bust as nonfarm payroll gain falls well short of estimates*. CNBC. Retrieved May 8, 2021, from <https://www.cnbc.com/2021/05/07/jobs-report-april-2021.html>
- Cox, J. (2021, June 4). *Job creation accelerated in May but is still below lofty expectations*. CNBC. Retrieved June 5, 2021, from <https://www.cnbc.com/2021/06/04/jobs-report-may-2021.html>
- Desilver, D. (2019, June 27). *In the U.S., Teen Summer Jobs Aren't What They Used to Be*. The Pew Charitable Trust. Retrieved April 1, 2021, from <https://www.pewresearch.org/fact-tank/2019/06/27/teen-summer-jobs-in-us/>
- Durante, A., Kallen, C. Li, H. & McBride, W. (2021, June 4). *Details and Analysis of President Biden's American Jobs Plan*. The Tax Foundation. Retrieved June 7, 2021, from <https://taxfoundation.org/american-jobs-plan/>
- Executive Order 14016. (2021, February 17). *Revocation of Executive Order 13801*. Retrieved April 1, 2021, from <https://www.federalregister.gov/documents/2021/02/23/2021-03874/revocation-of-executive-order-13801>
- Faulkender, M.W., Jackman, R. & Miran, S. (2020, December 17). *The Job Preservation Effects of Paycheck Protection Program Loans*. Retrieved April 1, 2021, from <https://ssrn.com/abstract=3767509>
- Garcy, A. M., & Vågerö, D. (2012). The length of unemployment predicts mortality, differently in men and women, and by cause of death: A six year mortality follow-up of the Swedish 1992-1996 recession. *Social Science and Medicine*, 74(12), 1911–1920. Retrieved April 1, 2021, from <https://doi.org/10.1016/j.socscimed.2012.01.034>
- Giani, M. (2019, March 26). *Who is the modern CTE student? A descriptive portrait of career and technical education students in Texas*. [Report] American Enterprise Institute. Retrieved April 1, 2021, from <https://www.aei.org/research-products/report/who-is-the-modern-cte-student-a-descriptive-portrait-of-career-and-technical-education-students-in-texas/>

- Ganong, P., Noel, P. & Vavra, J. (2020, September 30). *US unemployment insurance replacement rates during the pandemic*. *Journal of Public Economics*, 191(104273). Retrieved April 10, 2021, from <https://doi.org/10.1016/j.jpubeco.2020.104273>
- Haasler, S. (2020, February 12). *The German System of Vocational Education and Training: Challenges of Gender, Academization, and the Integration of Low -Achieving Youth*. *Transfer: European Review of Labour and Research*, 26(1), 57-71. Retrieved April 1, 2021, from <https://doi.org/10.1177/1024258919898115>
- Herbig, B., Dragano, N. & Angerer, P. (2013, June 10). *Health in the Long-Term Unemployed*. *Deutsches Arzteblatt International*, 110(23-24), 413-419. Retrieved April 1, 2021, from <https://dx.doi.org/10.3238%2Farztebl.2013.0413>
- Holmes, T. J. (1998). *The Effect of State Policies on the Location of Manufacturing: Evidence from State Borders*. University of Minnesota and Federal Reserve Bank of Minneapolis. Retrieved April 1, 2021, from <https://www.jstor.org/stable/10.1086/250026?seq=1>
- Howard, E. (2021, March 4). *Biden Freezes Trump Administration Apprenticeship Program*. *Employment Law Handbook*. Retrieved April 1, 2021, from <https://www.employmentlawhandbook.com/uncategorized/biden-freezes-trump-administration-apprenticeship-program/>
- Kruger, A. Cramer, J. & Cho, D. (2014). *Are the Long-Term Unemployed on the Margins of the Labor Market?* *Brookings Papers on Economic Activity*. Retrieved April 1, 2021, from [https://www.brookings.edu/wp-content/uploads/2016/07/2014a\\_Krueger.pdf](https://www.brookings.edu/wp-content/uploads/2016/07/2014a_Krueger.pdf)
- Lerman, R. (2017). *Are Employers Providing Enough Training? Theory, Evidence and Policy Implications*. Prepared for the National Academy of Sciences Symposium on the Supply Chain for Middle-Skill Jobs: Education, Training, and Certification Pathways. Retrieved April 1, 2021, from [https://sites.nationalacademies.org/cs/groups/pgasite/documents/webpage/pga\\_168146.pdf](https://sites.nationalacademies.org/cs/groups/pgasite/documents/webpage/pga_168146.pdf)
- Lester, S. & Costley, C. (2010, August). *Work-Based Learning at Higher Education Level: Value, Practice, and Critique*. *Studies in Higher Education* 35(5), 561-575. Retrieved April 1, 2021, from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.1056.494&rep=rep1&type=pdf>
- Lund, S., Madgavkar, A., Manyika, J., Smit, S., Ellingrud, K., Meaney, M. & Robinson, O. (2021, February 18). *The Future of Work After COVID-19*. The McKinsey Global Institute. Retrieved April 1, 2021, from <https://www.mckinsey.com/featured-insights/future-of-work/the-future-of-work-after-covid-19>
- Malkus, N. (2019, May 1). *The Evolution of Career and Technical Education: 1982–2013*. [Report]. The American Enterprise Institute. Retrieved April 1, 2021, from <https://www.aei.org/wp-content/uploads/2019/04/The-Evolution-of-Career-and-Technical-Education.pdf?x91208>

- Mulligan, C. & Philipson, T. (2000, May). *Merit Motives and Government Intervention: Public Finance in Reverse*. [Working Paper 7698] National Bureau of Economic Research. Retrieved April 23, 2021, from [https://www.nber.org/system/files/working\\_papers/w7698/w7698.pdf](https://www.nber.org/system/files/working_papers/w7698/w7698.pdf).
- Oakes, J. (1983, May) *Limiting Opportunity: Student Race and Curricular Differences in Secondary Vocational Education*. 1983. *American Journal of Education*, 91(3), 328-355. Retrieved April 1, 2021, from <https://www.jstor.org/stable/1085026>
- O'Dell, K. (2021, March 26). *Taking the Pulse of America's Small Business Sector: March 26*. The Economic Innovation Group. Retrieved April 1, 2021, from <https://eig.org/news/taking-the-pulse-of-americas-small-business-sector-march-26th>
- OECD. (n.d.). *Table II.1. Statutory Corporate Income Tax Rate*. Retrieved April 1, 2021, from [https://stats.oecd.org/Index.aspx?DataSetCode=TABLE\\_II1](https://stats.oecd.org/Index.aspx?DataSetCode=TABLE_II1)
- Paul, K.I. & Moser, K. (2006). *Incongruence as an Explanation for the Negative Mental Health Effects of Unemployment: Meta-Analytic Evidence*. *Journal of Occupational and Organizational Psychology*, 79, 595-621. Retrieved April 1, 2021, from <https://bpspsychub.onlinelibrary.wiley.com/doi/abs/10.1348/096317905X70823>
- Penn Wharton. (2021, April 7). *President Biden's \$2.7 Trillion American Jobs Plan: Budgetary and Macroeconomic Effects*. University of Pennsylvania. Retrieved April 10, 2021, from [https://static1.squarespace.com/static/55693d60e4b06d83cf793431/t/606dd4abf6d59e5cb9b8ed01/1617810603717/President+Biden%E2%80%99s+%242.7+Trillion+America+n+Jobs+Plan\\_Budgetary+and+Macroeconomic+Effects.pdf](https://static1.squarespace.com/static/55693d60e4b06d83cf793431/t/606dd4abf6d59e5cb9b8ed01/1617810603717/President+Biden%E2%80%99s+%242.7+Trillion+America+n+Jobs+Plan_Budgetary+and+Macroeconomic+Effects.pdf)
- Pharr, J., Moonie, S. & Bungum, T. (2012). *The Impact of Unemployment on Mental and Physical Health, Access to Health Care and Health Risk Behaviors*. ISRN Public Health, 2012, 1-7. Retrieved April 1, 2021, from [https://digitalscholarship.unlv.edu/cgi/viewcontent.cgi?article=1082&context=community\\_health\\_sciences\\_fac\\_articles](https://digitalscholarship.unlv.edu/cgi/viewcontent.cgi?article=1082&context=community_health_sciences_fac_articles)
- Rodriguez, J., Fox, H. & McCambly, H. (2016, October). *Work-Based Learning as a Pathway to Postsecondary and Career Success*. Insights on Equity and Outcomes, Issue 18. Illinois Office of Community College Research and Leadership. Retrieved April 1, 2021, from <https://occr.illinois.edu/docs/librariesProvider4/ptr/wbl-brief.pdf>
- Roelfs, D. J., Shor, E., Davidson, K. W., & Schwartz, J. E. (2011). Losing life and livelihood: A systematic review and meta-analysis of unemployment and all-cause mortality. *Social Science and Medicine*, 72(6), 840–854. <https://doi.org/10.1016/j.socscimed.2011.01.005>
- Schochet, P., D'Amico, R., Berk, J., Dolfin, S. & Wozny, N. (2012, August). *Estimated Impacts for Participants in the Trade Adjustment Assistance (TAA) Program Under the 2002 Amendments*. Social Policy Research Associates & Mathematica. Retrieved April 1, 2021, from [https://wdr.doleta.gov/research/FullText\\_Documents/ETAOP\\_2013\\_10\\_Participant\\_Impact\\_Report.pdf](https://wdr.doleta.gov/research/FullText_Documents/ETAOP_2013_10_Participant_Impact_Report.pdf)

- Strada Education Network & Gallup. (2018, June). *Why Higher Ed? Top Reasons U.S. Consumers Choose Their Educational Pathway*. Retrieved April 1, 2021, from <https://go.stradaeducation.org/why-higher-ed>
- Stauffer, A., Oliff, P., Foard, C., Thiess, R., Reese, M., Samms, B., Bryant, M., Pontari, L., Spence, E. & Einsiedler, J. (2019, October). *Two Decades of Change in Federal and State Higher Education Funding: Recent trends across levels of government*. [Chartbook]. Pew Charitable Trust. Retrieved April 1, 2021, from [https://www.pewtrusts.org/-/media/assets/2019/10/fedstatefundinghigheredu\\_chartbook\\_v1.pdf](https://www.pewtrusts.org/-/media/assets/2019/10/fedstatefundinghigheredu_chartbook_v1.pdf)
- The Council of Economic Advisers. (2021, January). *Economic Report of the President*. Retrieved April 1, 2021, from <https://www.govinfo.gov/content/pkg/ERP-2021/pdf/ERP-2021.pdf>
- The Council of Economic Advisers. (2019, June). *The Economic Effects of Federal Deregulation Interim Report*. Retrieved April 1, 2021, from <https://www.banking.senate.gov/imo/media/doc/The-Economic-Effects-of-Federal-Deregulation-Interim-Report.pdf>
- The White House. (2015, June). *Occupational Licensing: A Framework for Policymakers*. The Council of Economic Advisers, U.S. Department of the Treasury Office of Economic Policy, and U.S. Department of Labor. Retrieved April 1, 2021, from [https://obamawhitehouse.archives.gov/sites/default/files/docs/licensing\\_report\\_final\\_nonembargo.pdf](https://obamawhitehouse.archives.gov/sites/default/files/docs/licensing_report_final_nonembargo.pdf)
- The White House. (2021, January). *The Trump Administration Statements and Releases*. Retrieved April 23, 2021, from <https://trumpwhitehouse.archives.gov/trump-administration-accomplishments/>
- The White House. (2021, February 17). *Fact Sheet: Biden Administration to Take Steps to Bolster Registered Apprenticeships*. [Press Release]. Retrieved April 1, 2021, from <https://www.whitehouse.gov/briefing-room/statements-releases/2021/02/17/fact-sheet-biden-administration-to-take-steps-to-bolster-registered-apprenticeships/>
- The White House. (2021, March 31). *FACT SHEET: The American Jobs Plan*. [Press Release]. Retrieved April 1, 2021, from <https://www.whitehouse.gov/briefing-room/statements-releases/2021/03/31/fact-sheet-the-american-jobs-plan/>
- U.S. Bureau of Labor Statistics. (2021). *All Employees, Total Nonfarm (Payems)*. Federal Reserve Bank of St. Louis. Retrieved June 1, 2021, from <https://fred.stlouisfed.org/series/PAYEMS>
- U.S. Bureau of Labor Statistics. (2021). *Labor Force Participation Rate – 16-19 yrs*. Federal Reserve Bank of St. Louis. Retrieved June 1, 2021, from <https://fred.stlouisfed.org/series/LNS11300012>
- U.S. Bureau of Labor Statistics. (2021). *Average Hourly Earnings of All Employees, Total Private* [CES0500000003]. Federal Reserve Bank of St. Louis. Retrieved April 1, 2021, from <https://fred.stlouisfed.org/graph/?g=1Jf5>

- U.S. Bureau of Labor Statistics. (2021). *Employment-Population Ratio - 25-54 Yrs.* [LNS12300060]. Federal Reserve Bank of St. Louis. Retrieved April 1, 2021, from <https://fred.stlouisfed.org/series/LNS12300060>
- U.S. Bureau of Labor and Statistics. (2021). *Employment, Hours, and Earnings from the Current Employment Statistics survey (National)* [CES2000000001]. Retrieved April 1, 2021, from [https://data.bls.gov/timeseries/CES2000000001?amp%253bdata\\_tool=XGtable&output\\_view=data&include\\_graphs=true](https://data.bls.gov/timeseries/CES2000000001?amp%253bdata_tool=XGtable&output_view=data&include_graphs=true)
- U.S. Census Bureau. (2021, June 10). *Business Formation Statistics: Time Series/Trend Charts*. Retrieved April 1, 2021, from [https://www.census.gov/econ/currentdata/dbsearch?program=BFS&startYear=2020&endYear=2021&categories=TOTAL&dataType=BA\\_HBA&geoLevel=US&adjusted=1&notAdjusted=1&submit=GET+DATA&releaseScheduleId=](https://www.census.gov/econ/currentdata/dbsearch?program=BFS&startYear=2020&endYear=2021&categories=TOTAL&dataType=BA_HBA&geoLevel=US&adjusted=1&notAdjusted=1&submit=GET+DATA&releaseScheduleId=)
- U.S. Department of Labor. Apprenticeship Programs, Labor Standards for Registration, Amendment of Regulation. Fed. Reg. 14294-14392 (2020, March 11) revising 29 CFR Part 29
- U.S. Department of Labor. (2020). *Registered Apprenticeship National Results Fiscal Year 2019 10/01/2018 to 9/30/2019*. Employment and Training Administration. Retrieved April 1, 2021, from <https://www.dol.gov/agencies/eta/apprenticeship/about/statistics>
- von Wachter, T. (2020). *The Persistent Effects of Initial Labor Market Conditions for Young Adults and Their Sources*. Journal of Economic Perspectives, 34(4), 168–194. Retrieved April 10, 2021, from <https://pubs.aeaweb.org/doi/pdfplus/10.1257/jep.34.4.168>
- Walczak, Jared. (2021, March 3). *State Aid in American Rescue Plan Act Is 116 Times States' Revenue Losses*. The Tax Foundation. Retrieved April 1, 2021, from <https://taxfoundation.org/state-and-local-aid-american-rescue-plan/>
- York, S. & Muresianu A. (2018, September 28). *The TCJA's Expensing Provision Alleviates the Tax Code's Bias Against Certain Investments*. The Tax Foundation. Retrieved April 1, 2021, from <https://taxfoundation.org/tcja-expensing-provision-benefits/>