

Solutions for a Changing Economy

A Report from the
Aspen Institute Future of Work Initiative
National Advisory Council

October 2019



Contents

A Letter from the Chair of the National Advisory Council	3
National Advisory Council Members	4
Introduction	6
Policy Ideas	8
I. Independent Work	8
<i>Develop Portable Benefits Models</i>	
<i>Tax Simplification for Independent Workers</i>	
<i>Measuring the Independent Workforce</i>	
II. Automation, Artificial Intelligence, & Lifelong Learning	12
<i>Create Lifelong Learning and Training Accounts</i>	
<i>Create a Worker Training Tax Credit</i>	
<i>Increase Community College Investments</i>	
<i>Develop Better Data on Automation Trends</i>	
<i>Create and Expand Supports to Help Workers Recover from Displacements</i>	
III. Inclusive Capitalism & Human Capital	20
<i>Expand Human Capital Disclosure</i>	
<i>Equalize Accounting Treatment of Human and Physical Capital</i>	
Endnotes	23

Letter from the Chair of the National Advisory Council

The Aspen Institute Future of Work Initiative National Advisory Council formed in late 2017 to better understand the challenges and opportunities presented by the changing nature of the economy and the impact it has on work. Both the public and private sectors are wrestling with this current economic transformation. Recent developments—like the Business Roundtable’s announcement that the purpose of business is not only to benefit shareholders but to create value for all stakeholders, and the passage of a new law in California to clarify what it means to be an employee—show how leaders are changing practice and policies to respond to the nature of work today and prepare for work in the future.

While the conversation around the future of work has evolved, the fact that workers continue to face extraordinary uncertainty remains. Emerging technologies, the changing relationship between workers and employers, and pressure on businesses to focus on short-term results rather than long-term value creation have created new challenges. While our country must embrace technology and innovation to remain competitive and drive economic growth, we must also embrace new approaches that provide greater security and stability to workers hurt by disruption.

Solving these challenges requires leadership from across sectors and across parties. While members of the Advisory Council represent a variety of backgrounds and perspectives, the group shares an interest in testing new ideas and advancing solutions to support workers and innovation in a changing economy. The Advisory Council is encouraged by the activity taking place, especially by policymakers at the state level and by social entrepreneurs, to better understand and respond to the challenges we face, and shares the ideas in this report to continue to promote a sense of urgency and potential actions for policymakers to consider.



Jack Markell, Chair

Former Governor of Delaware

National Advisory Council

The Aspen Institute Future of Work Initiative National Advisory Council was formed with the belief that the changing economy and the impact it has on work requires new ideas and strategies to best help workers and businesses adjust and thrive. The Advisory Council puts forward the ideas and recommendations in this publication in the spirit of inviting more analysis and discussion around how best to respond to and prepare for the future of work. The ideas and recommendations are not meant to be comprehensive, as there are other ideas and proposals that individual Advisory Council members support and believe are necessary to address the challenges and opportunities presented by the changing economy. In addition, not all Advisory Council members necessarily agree with or endorse the specific recommendations made in this publication, and as each member participated in their individual capacities, the ideas put forward do not necessarily represent the views of the organizations they lead or represent.

Jack Markell, Chair

Former Governor of Delaware

Glenn Hubbard, Co-Chair

Dean Emeritus and Russell L. Carson Professor of Finance and Economics, Columbia Business School; former Chairman of the White House Council of Economic Advisers under President George W. Bush

Penny Pritzker, Co-Chair

Founder and Chairman of PSP Capital and Pritzker Realty Group; former Secretary of the U.S. Department of Commerce under President Barack Obama

Wally Adeyemo

President, Obama Foundation; former Deputy National Security Advisor for International Economics and Deputy Director of the White House National Economic Council under President Barack Obama

Maureen Conway

Vice President for Policy Programs, Aspen Institute; Executive Director, Aspen Institute Economic Opportunities Program

John Bailey

Visiting Fellow, American Enterprise Institute

Gary Edson

Principal, Civic Enterprises; former Deputy Director of the White House National Economic Council and National Security Council under President George W. Bush

Mayor Luke Bronin

Hartford, Connecticut

Ron Haskins

Senior Fellow, Economic Studies, and Co-Director, Center on Children and Families, Brookings Institution

Sylvia M. Burwell

President, American University; former Secretary of the U.S. Department of Health and Human Services

James Manyika

Chairman and Director, McKinsey Global Institute; Senior Partner, McKinsey & Company

Pablo Chavez

Vice President, Global Government Affairs and Public Policy, Google Cloud

Sheila Lirio Marcelo

Founder, Chairwoman, and CEO, Care.com

Mario Morino

Chairman, Morino Institute; Co-Founder and Director, Venture Philanthropy Partners

Nigel Morris

Co-Founder, Capital One; Co-Founder and Managing Partner, QED Investors

Scott Nathan

Senior Fellow, Center for American Progress; former Associate Director for General Government Programs at the Office of Management and Budget in the Obama Administration

Eduardo Padrón

President Emeritus, Miami Dade College

Ai-jen Poo

Executive Director, National Domestic Workers Alliance; Director, Caring Across Generations

Congresswoman Lisa Blunt Rochester

David Rolf

Founder and President Emeritus, SEIU 775; Chairman, Working Washington and Fair Work Center; Author, *The Fight for Fifteen* (The New Press, 2016), *A Roadmap to Rebuilding Worker Power* (The Century Foundation, 2018)

Kristen Silverberg

Executive Vice President, Policy, Business Roundtable; former U.S. Ambassador to the European Union and Assistant Secretary of State for International Organization Affairs under President George W. Bush

Marco Zappacosta

Co-Founder and CEO, Thumbtack, Inc.

Jeff Zients

CEO, The Cranemere Group; former Director of the White House National Economic Council under President Barack Obama

The Initiative would like to acknowledge the late Dr. Alan Krueger who served as a member of its National Advisory Council. Dr. Krueger was a distinguished academic and devoted public servant. He served most recently as a Professor of Political Economy at Princeton University and previously as chairman of the White House Council of Economic Advisers and as Assistant Secretary of the Treasury for Economic Policy. Dr. Krueger's work continues to have a significant impact on public policy and the field of economic research, and we remain grateful for his insights, participation, and friendship.

Introduction

Automation, artificial intelligence, shifting work arrangements, and shareholder pressure to focus on short-term profits over long-term value creation are challenging companies and workers in today's economy. Whether through national headlines or prominent reports, like the Council on Foreign Relations' 2018 report, *The Work Ahead: Machines, Skills, and U.S. Leadership in the Twenty-First Century*,¹ or the International Labour Organisation Global Commission on the Future of Work's 2019 report, *Work for a Brighter Future*,² the changing nature of work has drawn the attention of those working to build a more inclusive and competitive American economy. This requires policymakers and private sector leaders alike to develop a new social contract that responds to the challenges of the 21st century while rewarding work, creating opportunity, and reversing the concerning trend of increased economic insecurity.

We have seen transformational breakthroughs in technology's ability to perform functions that were once considered unique to humans. Varying estimates suggest the impact on employment could be dramatic, especially for workers who perform routine and predictable tasks. McKinsey Global Institute estimates that half of today's work activities have the potential to be automated with existing technologies,³ and a recent Brookings Institution report found that roughly 25 percent of jobs in the U.S. will face high exposure to automation in the coming decades.⁴

The experience of the manufacturing sector over the past forty years highlights the lost opportunity to develop comprehensive strategies to help workers displaced by the same forces shaping the economy today—technology, globalization, and outsourcing—and the fierce urgency of doing so now. Those who lost jobs often ended up either finding new jobs that paid less or not finding work at all. Yet the scope of the change that automation could bring in the years ahead holds the potential to impact workers across all industries. While various public and private sector approaches are underway to help more people from losing more ground, significant work remains to keep the workers and communities impacted from falling behind. And if done right, these new approaches will give more people an opportunity to earn a better future.

The reality is that the ways in which people work are evolving. Today, it is increasingly common for companies to hire independent contractors and temporary workers for short-term and project-based work instead of hiring full-time employees. According to a recent government survey, roughly one in ten workers participate in “alternative work arrangements”—independent contracting, on-call, temporary help agency, and subcontracted work—for their main job.⁵ Millions more engage in this type of work to supplement their income. Whether motivated by choice or necessity, people are piecing together work in order to make a living. This type of work can provide additional flexibility and earning opportunities, but also brings unique challenges and raises questions about access to secure and stable work, and the set of programs that has been established to provide a safety net to workers.

Many workers can no longer expect a career-long employer and instead they should expect to hold many different jobs that require different skills throughout their careers. Employers, education and training providers, and policymakers are creating new systems to help workers adapt to ever-changing requirements to enhance hard and soft skills. At the same time that businesses should be investing more in their workforce, they face shareholder pressure to produce short-term profits, even if that means they must forego investments that would create value in the long term.

To meet both the opportunities and challenges of an evolving 21st century economy, private and public sector leaders must develop new approaches. The Future of Work Initiative National Advisory Council was established in December 2017 to help understand the challenges, as well as the opportunities, presented by the changing nature of the economy and its impact on work. Over the course of 2018, the Advisory Council assessed how the economy is changing, and explored proposals designed to help respond to the challenges around the future of work. By sharing this set of ideas, the Advisory Council seeks to encourage continued dialogue and action on these issues, especially among policymakers, to support an economy that works better for all Americans.

This report provides specific policy recommendations in three key areas:

1. Independent Work;
2. Automation, Artificial Intelligence, & Lifelong Learning; and
3. Inclusive Capitalism & Human Capital.

The institutions of our modern economy are not keeping pace with the changes resulting from advances in technology and globalization. For all Americans to have an opportunity to succeed, new approaches are needed. The Aspen Institute Future of Work Advisory Council puts forth these proposals to contribute to and encourage progress towards responding to and preparing for the future of work.

I. Independent Work

Introduction

As we conclude the second decade of the 21st century, work for many is becoming more short-term and project-based. The 20th century model of spending most of one's career working full time for one employer is becoming less common. Whether motivated by choice or necessity, workers are piecing together jobs, simultaneously and over the course of their careers, in order to make a living. While non-traditional work—like independent contracting and temp work—can provide flexibility, additional income, and opportunities for entrepreneurship, it can also bring greater economic insecurity.

Although non-traditional work has proven difficult to measure, research shows that about 30 percent of U.S. workers are engaged in this form of work either as their primary job or for supplementary income.⁶ According to the Bureau of Labor Statistics (BLS), about one third of these—or one in ten American workers—rely on non-traditional work, including independent contracting, on-call, temporary help agency, and subcontracted work, for their primary job.⁷ Tax records and private surveys indicate that the number of people who work these sorts of jobs to earn supplemental income is growing rapidly.⁸

Whether held on a primary or supplemental basis, non-traditional jobs leave many workers without essential benefits and protections. In addition, many non-traditional workers face a complex and burdensome tax filing process. Policymakers have the opportunity and responsibility to update the 20th century social contract to help independent workers access key supports and achieve greater economic security.

Proposal: Develop Portable Benefits Models

During the 20th century, many workers spent their career with one employer, and relied on that relationship to provide a steady and dependable income and a range of benefits and protections. This “social contract” included workers’ compensation, health care, retirement, disability insurance, Unemployment Insurance, and training opportunities, among other benefits and protections, and was supported by government subsidies and mandates. This 20th century social contract played an important role in providing financial stability for many families and communities across the country. However, as the economy has changed, the social contract between employers and workers has weakened. Many workers today lack access to the benefits that used to be provided by full-time work, leaving them economically vulnerable, and unsure as to how long their jobs will last.⁹ The percentage of workers, whether in traditional or non-traditional arrangements, receiving health care or retirement benefits from their employer has decreased since the early 1990s.¹⁰ In addition, non-traditional workers are significantly less likely than traditional workers to access health insurance, retirement plans, or other benefits.¹¹

Developing portable benefits systems can help fill coverage gaps and provide greater economic security to workers. In addition, these programs can promote entrepreneurship and mobility, since with them, workers would not have to risk losing benefits should they open a business or pursue a new opportunity. Ideally, these programs will allow workers to take benefits with them from job to job (portable), will allow for contributions by multiple parties that are provided in proportion to work performed (prorated), and will be accessible regardless of work arrangement (universal).

In recent years, policymakers, worker advocacy organizations, and employers have engaged in experimentation with portable benefits, aided by new technologies that can facilitate tracking and administration of these programs. Given the promise of innovation to create effective and scalable models, both the public sector—especially states—and the private sector should further develop portable benefits programs; evaluations of these models can be used to inform a national approach. The examples below illustrate how progress is being made across sectors.

State-level policies on portable benefits:

- **Portable benefits can be created at the state level.** In Washington State, portable benefits legislation has been introduced in the past three sessions.¹² The Washington bill requires businesses that facilitate the hiring of independent contractors to contribute a percentage on top of contractors' earnings to a "qualified benefits provider." Providers must be a 501(c)(3) non-profit, act in the interests of beneficiaries, and have at least half of its governing board comprised of worker representatives. Businesses must contribute 15 percent of earnings to the provider, in addition to the cost of providing workers' compensation. In New Jersey, State Senator Troy Singleton has introduced similar legislation during the past two sessions, and Georgia State Senator Elena Parent introduced a similar bill in 2018.¹³ Massachusetts State Senator Eric Lesser introduced a bill in February 2019 to create an innovation fund to experiment with different portable benefits models.¹⁴ State-level policies hold the potential to be both innovative and scalable, improving security for millions of workers while taking into account the political and economic context of each state.

In addition to creating new programs, states can expand existing programs to be more portable and cover more types of workers. Several new and long-standing social insurance programs, including Unemployment Insurance, disability insurance, and paid leave, have been designed primarily for traditional, permanent, full-time employees, often leaving independent and non-traditional workers without needed supports. To address this shortcoming, several states have considered how to make their paid family and medical leave programs apply across different types of work arrangements. These programs, which have been introduced in seven states and the District of Columbia, guarantee automatic partial wage replacement for nearly all private sector employees, including temp agency and subcontracted workers. Although no implemented program requires self-employed workers to buy coverage, most programs allow self-employed workers to opt-in.¹⁵ Furthermore, Massachusetts' program automatically covers self-employed workers who work for businesses that rely heavily on independent contractors. In addition, most state programs include some level of portability, with varying restrictions, so that earned benefits can be taken from one job to the next without a lapse in coverage.¹⁶ These examples demonstrate how social insurance programs can be expanded to serve a broader base of workers.

- **Encourage the creation of state-level portable benefits for specific populations and industries.** For example, New York's Black Car Fund provides workers' compensation insurance for approximately 300 car-for-hire companies, with over 130,000 affiliated drivers across the state. Created by statute in 1999, it is funded by a 2.5 percent surcharge paid by consumers. Last year, the Independent Drivers Guild, a Machinists Union affiliate that organizes and supports app-based drivers, successfully expanded the benefits available to include a vision plan and telemedicine access.¹⁷

Federal policy can also support innovation at the state and local level. Bipartisan legislation has been introduced this Congress that would require the Department of Labor to award grants on a competitive basis to states, local governments, or nonprofit organizations to support innovation and experimentation with respect to portable benefits models.¹⁸ Whether at the federal, state, or local level, programs that are universally available and do not require individual action or opt-in are most likely to reach the greatest number of in-need workers.

While policymakers are best equipped to create scalable, accessible portable benefits models, non-governmental groups can also help address the challenges faced by workers by developing creative solutions from which policymakers can learn and incorporating their best practices into legislatively-created programs.

Highlighting innovative benefit models:

- **Alia:** In December 2018, NDWA Labs—the innovation arm of the non-profit National Domestic Workers Alliance—launched Alia, a tech-driven tool that facilitates benefits for home cleaners through voluntary customer contributions.¹⁹ Once a home cleaner is a member of Alia and has clients paying into the program, workers can access paid time off, as well as accident insurance, life insurance, and disability insurance. Alia is dependent on the voluntary participation of both customers and cleaners.
- **Care.com Benefits:** Care.com—an online destination for finding and managing family care—has facilitated client contributions to workers' benefits through Care.com Benefits.²⁰ With the Care.com Benefits program, a percentage of the platform's transaction fee converts to Care Benefit Bucks, which caregivers can use to pay for health insurance, doctor visits, prescriptions, transportation expenses, education, and other needs, up to \$500 total per year. Through the platform, workers can receive contributions from multiple families, and these pooled funds are portable, remaining with workers as they move from one job to the next.
- **Catch:** Catch is a new platform offering access to health plans, retirement accounts, tax and paid leave savings accounts, and other benefits.²¹ The platform provides customized benefit options to users, and can connect to their bank accounts to automatically set aside contributions out of paychecks.

Proposal: Tax Simplification for Independent Workers

Other challenges independent workers face include unpredictable incomes and difficulty covering unexpected expenses.²² They also must navigate a complex and burdensome tax filing process. Traditional employers withhold income and payroll taxes for their employees each pay period and share that information with the government. By contrast, independent contractors are required to perform tax-related functions like withholding and reporting themselves. Many independent contractors do not receive documentation of their earnings, and those with more than nominal tax liability are expected to predict their annual income and make estimated tax payments four times per year, facing irregular and often substantial tax bills. These workers also must track and document expenses to deduct them from their gross pay in order to avoid paying taxes on their business expenses. Some may also overpay their taxes by failing to claim deductions and credits. These complexities contribute to high costs for both workers and government, and increased economic insecurity for workers.

Several policy changes could simplify the tax filing process for independent workers, thereby improving their financial security. First, policymakers at the federal level should expand income reporting by lowering and standardizing the reporting threshold for businesses hiring independent contractors. Specifically, workers should receive documentation of any earnings above \$600, regardless of whether they are paid directly, or indirectly through a platform or app like Uber or PayPal. This type of change has been instituted in Massachusetts and Vermont.²³ Outside those states, right now, those paid through a platform generally receive documentation only if they earn above \$20,000, even though they are responsible for taxes on earnings below that threshold. Second, federal policymakers should introduce voluntary withholding for independent contractors working for large companies, reducing unexpected tax bills. Given the variability across types of independent work, this proposal should include options for workers to select alternative withholding rates to best match their situation.²⁴ In addition to expanding reporting and withholding, policymakers should increase funding for the Internal Revenue Service to provide grants for Volunteer Income Tax Assistance (VITA) sites to provide further tax preparation assistance.

In the private sector, innovative financial management tools have the potential to ease the tax filing process for this population. Financial tools can help facilitate the tax payment process for independent contractors by automatically saving estimated tax amounts in a separate account for individuals. Additionally, partnerships and nonprofit efforts have also provided key financial resources for non-traditional workers. For example, the Freelancers Union recently partnered with the City of New York to open the Freelancers Hub, a communal workspace where freelance workers can access tax and financial advice, among other services, at no cost.²⁵

Proposal: Measuring the Independent Workforce

As the economy and hiring practices have evolved, the collection of economic data has not kept pace. Accurate data on today's workforce is needed to identify the challenges faced by workers and to help policymakers evaluate the best ideas to address those challenges. The range of ways in which people work today are not well captured by conventional survey questions. For example, people's responses to survey questions about independent work often do not match their tax filings.²⁶ Additionally, people often do not think of informal, occasional, or supplemental work as a "job," a word commonly used to measure work activities. These issues mean that current measures likely undercount supplemental or side jobs, and we have little knowledge about the impact of this type of work on people's incomes and on the economy, and how participation varies across demographic factors and between industries. Addressing these challenges and improving data collection in both the private and public sectors will allow policymakers to develop responsive and informed policy reforms that are inclusive of workers across different work arrangements.

At the federal level, we can strengthen our knowledge of work arrangements by requiring interagency cooperation in the collection and compilation of data. To better understand the nature of work arranged through platforms, the Department of Commerce should request that companies provide administrative data on their workforce, such as how many workers they hire, how many hours they work, or how much they are paid. Furthermore, additional funding for the Contingent Worker Supplement—collected by the Bureau of Labor Statistics (BLS)—should be used to provide a more consistent measure of workers who rely on contingent and alternative work arrangements for their primary job. In addition, further funding could be used to include a reliable measure of supplemental work, to provide data representative at the state and local level, or to better understand segmentation (such as industry participation) within the independent workforce.

In addition to gaining a better understanding of the workforce, it is important to maintain a comprehensive federal database of employer-provided benefits. These benefits include, but are not limited to, employer-provided health insurance, disability insurance, retirement plans, and paid leave. This effort could build on the Employee Benefits Survey, part of BLS' National Compensation Survey.

While public agencies like BLS have a strong reputation for rigor and can build on existing infrastructure to gather new data, privately held data sources, like data held by companies about their workers, can also be applied to questions about work arrangements and the challenges faced by workers. Public-private data partnerships, such as grants to facilitate private companies providing data on workers to academic researchers to answer specific questions, can help to increase knowledge in this area.

Given the potential for local lawmakers to develop innovative policies, the lack of geographically specific data is particularly noteworthy. In addition, particular types of workers, such as domestic workers, are more likely to be left out of general surveys. Quantitative and qualitative studies aimed at specific populations can further improve understanding of the independent workforce.

II. Automation, Artificial Intelligence, & Lifelong Learning

Introduction

What do emerging technologies—like artificial intelligence, machine learning, and advanced robotics—and their ability to automate work mean for American workers?²⁷

As it has in the past, technological innovation and automation have the potential to create new jobs, increase economic growth, and improve living standards for American families. For these reasons, innovation must continue to be at the core of our nation's economic strategy.

At the same time, automation has resulted in job loss and economic hardship for individuals and communities.²⁸ As we experience the next wave of automation, some workers will see their jobs disappear or change significantly, potentially increasing income inequality, and further exacerbating the economic, political, geographic, and social divides that exist today. As a rule, our country has not effectively helped workers displaced by disruption of jobs resulting from automation or trade.

We must get better at addressing job displacements, the resulting uncertainties faced by families, and the necessity to help workers gain the skills they need to respond to these economic changes.

The proposals that follow are designed to help prepare our economy and workforce for the challenges and opportunities of automation. They include: encouraging lifelong learning and employer-provided training so that workers can keep pace with evolving skill needs and earn higher wages; increasing the supply of quality training through investments in community colleges; strengthening the support system for displaced workers and helping them transition to new jobs and occupations that provide economic dignity; and improving our understanding of how automation is impacting specific occupations, industries, and regions.

Proposal: Create Worker-Owned Lifelong Learning and Training Accounts to Support Ongoing Skill Development

The United States must move toward a system of lifelong learning. Twelve years of childhood education is no longer sufficient to prepare for the continuously shifting demands of the labor market. Access to effective and affordable skills training throughout a career is necessary to provide an opportunity to learn, adapt, advance, and succeed no matter what jobs and skills become more or less in demand as the economy evolves. This approach will not only help reduce job disruption, but also can help our workforce take advantage of the opportunities that technology will create.

Moving toward a lifelong learning system will not be easy—workers face many barriers to retraining or upskilling, especially if they are already in a full-time job.²⁹ Education and training programs must also be designed with the flexibility to meet the needs of a variety of workers.³⁰ One key barrier is financial: education and training programs can be expensive, and despite many programs to help students save and pay for college, relatively few exist that help those who are working save and pay for short-term training.

As a first step toward better financing a system designed around the concept of lifelong learning, the Future of Work Initiative has proposed the creation of worker-owned, tax-advantaged Lifelong Learning and Training Accounts

(LLTAs)—funded by workers, employers, and government—to help pay for education and training opportunities over the course of a career.³¹ Beginning at age 18, workers could contribute up to \$2,000 per year into their LLTA on a pre-tax basis, which would be matched by government contributions at a rate based on the worker’s income—up to 50 percent for lower-income workers. Employers would also be eligible to contribute up to \$2,000 annually to these accounts. Contributions would not be permitted once the account balance reaches \$10,000—enough to pay for tuition and fees for most two-year community college programs.³² This limit is intended to encourage regular usage throughout their careers, rather than treating the account as a long-term savings vehicle. Eligible expenses for LLTA funds would be limited to education and training programs that result in an industry-recognized post-secondary credential.

In 2018, Senators Mark Warner and Chris Coons proposed the Lifelong Learning and Training Account Act, which shares many of the design specifications of the proposal described above.³³ Senators Amy Klobuchar and Ben Sasse and Representatives Derek Kilmer and Glenn Thompson have also proposed lifelong learning account legislation.³⁴ At the state level, Massachusetts State Senator Eric Lesser proposed legislation in 2019 to establish a Lifelong Learning and Training Account program.³⁵ Over the years, lifelong learning account demonstration programs have been implemented in a handful of states and cities, including Maine, Washington State, Chicago, and New York City.³⁶ Separately, some companies in the private sector offer annual training accounts, tuition reimbursement, or both to their employees, though policies like LLTAs would ensure that more workers have access to support for training.

Other countries are adopting policies that provide lifelong learning and training opportunities to their workers. Singapore recently established “individual learning accounts” for each citizen over the age of 25 to spend on education and training programs from a list of 500 approved providers.³⁷ The government seeds these accounts with a direct subsidy to individuals of \$500SGD, called the SkillsFuture Credit, and even higher subsidies for mid-career professionals. In 2018, over 400,000 Singaporeans benefited from the credit.³⁸ Canada has adopted a similar proposal, which will start in 2020.³⁹ Both programs are designed to be universally available to reach the greatest number of workers. In 2015, France established individual training accounts that workers can use to pay for 24 hours of training per year over eight years in a wide variety of programs.⁴⁰ In France, businesses fund this benefit with a one-percent tax on payrolls.

To help workers choose effective education and training programs, policymakers should complement LLTAs with better data and analysis of labor market trends; better and more accessible analysis of education and training program effectiveness; and expanded career counseling services.

Proposal: Create a Worker Training Tax Credit to Encourage Increased Business Investment in Non-Highly Compensated Employees

Employers are uniquely positioned to play an important role in helping prepare their workforce for the changes that new technologies will have on work: they often have scale, resources, and real-time insights into changing skill needs. In response to today’s historically tight labor market, there are examples of large employers that are increasing their investment in training their workforce. But the available data suggest that there has been a downward trend in business training investments. From 1996 to 2008, the percentage of workers receiving employer-sponsored or on-the-job training fell 42 percent and 36 percent, respectively.⁴¹ This decline was widespread across industries, occupations, and demographic groups.⁴²

Moreover, many low- and middle-wage workers do not benefit from existing training investments because businesses disproportionately direct training expenditures to the highest-paid and highest-educated workers.⁴³ A report from

the Hitachi Foundation explains that training investments are often managed as worker benefits, which are also skewed towards higher-paid workers.⁴⁴ This skewed distribution suggests that any policy solution to the training disinvestment problem should target low- and middle-wage workers.

Without intervention, business investment in workers may continue to decline. In a recent Accenture survey of 1,200 CEOs and other top executives, 74 percent said that they plan to use artificial intelligence to automate tasks in their workplace over the next three years. Yet only three percent reported planning to significantly increase investments in training over the same time period.⁴⁵

In part, the decline in employer-provided training can be explained by changes in the employer-employee relationship over the past 40 years. If employees are expected to stay with a company for decades, the company knows it will accrue the benefits of that investment. But as relationships between workers and businesses become less stable, businesses may fear workers receiving training and then taking their new skills to other employers.⁴⁶ The result is less investment in training, even as the workforce requires more. This underinvestment justifies public policies to make workforce investments less costly and more attractive to employers.

Federal and state policymakers should encourage employers to make greater investments in worker training through the creation of a Worker Training Tax Credit. The credit would be available for new training activities for non-highly compensated workers. The Worker Training Tax Credit could mirror the policy design of the successful R&D Tax Credit,⁴⁷ which establishes a base expenditure level for qualified expenses, and then applies a 20 percent credit to any increase above this level. The credit would only cover training for non-highly compensated workers (less than \$120,000 per year), the standard currently used in the Internal Revenue Code.⁴⁸ Funding for this tax credit should be balanced with a commensurate increase in corporate revenues.

Under the proposal, eligible training activities include employer-provided training that leads to an industry-recognized credential, or training programs authorized under the Workforce Innovation and Opportunity Act.⁴⁹ Businesses could enroll workers in existing training programs, create their own training programs, or work with other businesses and local educational institutions to create a sectoral training program. For example, in 2010 a Toyota plant near Lexington, KY partnered with the Bluegrass Community & Technical College to create the Kentucky Federation for Advanced Manufacturing Education (KY FAME), a work-based learning program to provide a pipeline of manufacturing technicians—the program has since expanded across the state.⁵⁰ Examples of other successful sectoral training programs include Jewish Vocational Service–Boston (JVS–Boston), Per Scholas, Wisconsin Regional Training Partnership (WRTP), and Capital IDEA.⁵¹

On the federal level, two bills have been introduced in the U.S. Congress that use this model. Senator Mark Warner, along with Senators Bob Casey and Debbie Stabenow, first introduced the *Investing in American Workers Act* in October 2017 and reintroduced the bill in February 2019, and Representative Raja Krishnamoorthi introduced a companion bill in the House in April 2018.⁵²

In addition, several states already provide businesses with tax incentives for training investments, including Connecticut, Georgia, Kentucky, Mississippi, Rhode Island, and Virginia. These incentives range between 5 percent and 50 percent of training expenses.⁵³ Virginia modified its existing training tax credit in 2019 by increasing the generosity of the credit and targeting it to training that provides recognized post-secondary credentials.⁵⁴ A version of a worker training tax credit was also introduced in New Jersey in 2019.⁵⁵

Proposal: Increase the Supply of Quality Training Through Community College Investments

Providing workers with more access to skills training is important, but steps must also be taken to ensure that there is a sufficient supply of good quality training available. Workers must choose from a variety of training options offered by a range of institutions. Community colleges are currently the largest provider of training in the country, and can serve as an accessible and affordable option for workers to pursue additional training or a new certificate or degree.⁵⁶

There are 876 community colleges across the country, and the education and training they provide is often high quality, making them well positioned to provide effective training programs.⁵⁷ Research has found that completing a training certificate at a public institution raises annual earnings by roughly 30 percent.⁵⁸ Similarly, an analysis of California community college programs found that their career and technical programs raised earnings by 14 percent for certificates of less than 18 units, and 45 percent for associate degrees.⁵⁹ Despite this evidence, community college funding has been sharply cut over the past two decades. Since 2001, state and local funding per full-time equivalent student has declined by 30 percent (after adjusting for inflation).⁶⁰ Federal funding to community colleges has risen over this time period, but not enough to fill the funding gap.

To increase the supply of high-quality training options, policymakers should provide additional funding for community colleges. The Aspen Economic Strategy Group has proposed increasing federal funding for community colleges to boost educational attainment, expand opportunities for mid-career skills development, and provide better career pathways for workers without four-year college degrees. Additional funding should be allocated based on characteristics of the student body (with greater funding allocated to schools with greater shares of students from disadvantaged backgrounds); the labor market conditions in the local community, such as the local employment rate; and demonstrated improvements in student retention and completion.⁶¹

In addition, policymakers should ensure that workers and students have access to standardized and verifiable information about the training outcomes of individual programs. As of 2018, 25 states had adopted outcomes-based funding for their public higher education institutions, including seven that include post-graduation outcomes such as job placement rates.⁶² Similarly, under Virginia's New Economy Workforce Credential Grant (NEWCG), a student pays one-third of the cost and the state will pick up the remaining two-thirds (up to \$3,000) if the student completes the program and receives the credential in an in-demand field.⁶³

Proposal: Develop Better Data on Automation Trends at Both the National and Local Levels

The degree to which automation is changing jobs and skills today and into the future is not well understood. To help employers, workers, and government adjust to a changing economy, we need better data. For example, if a person drives for a living, how quickly is self-driving technology progressing, and how long can one expect their occupation to remain stable? This type of information could help workers understand the risks of automation. At the same time, information on new jobs that are being created would better highlight the opportunities of automation. This type of data could also benefit education and training providers who, in collaboration with employers, need to understand how skill needs are changing to better design training programs. And finally, government and community leaders would benefit from an improved understanding of how automation and other technologies are changing the economy and what populations and communities are at greatest risk of disruption.

Federal and state agencies—in particular, the Departments of Labor and Commerce—track and project economic and labor market trends, including economic growth, unemployment rates, and labor force participation statistics. But as a recent GAO report found, more work needs to be done to understand how advanced technologies are changing employment.⁶⁴ Presently, the Bureau of Labor Statistics' (BLS) biennial Occupational Outlook Handbook—the premier government resource to help stakeholders understand and plan for current and emerging employment trends—does not fully incorporate the impact of automation into its projections of expected job growth and decline across occupations, for three reasons. First, the BLS methodology incorporates forward-looking projections of technological change, but it is largely based on historical occupational trends. Second, these projections only estimate the quantity of jobs within specific occupations over the next ten years but provide little information on how the composition of tasks and skill needs within those occupations may change.⁶⁵ And third, projecting automation's impact on the labor market is highly sensitive to the assumed rate of technological adoption, so a single estimate of job quantity fails to convey what can be a wide range of potential outcomes.

Recent reports by researchers at the McKinsey Global Institute,⁶⁶ Brookings Institution,⁶⁷ Organisation for Economic Co-operation and Development (OECD),⁶⁸ Oxford,⁶⁹ and others have attempted to address this challenge by focusing on tasks as the unit of analysis rather than on jobs or occupations. Using data from O*NET and other sources, these researchers break down existing jobs into discrete tasks, compare these tasks with the capabilities of current and emerging technologies, and project the task makeup and skill needs of future jobs. This task-based approach may provide more accurate projections of how automation will impact occupations and change the requisite tasks and skills that these jobs will require.

Federal agencies, working with leading experts, should develop new metrics to track the ways in which technology is impacting work—potentially by incorporating a task analysis methodology and producing alternative scenarios based on different rates of adoption of new technologies—while making recommendations on how to better incorporate these trends into existing data offerings. These new metrics should be accompanied by user-friendly online tools to ensure that workers, education providers, businesses, and government can best take advantage of the available information.

Some policymakers have already taken steps in this direction. Senators Gary Peters and Todd Young introduced the *Workforce Data for Analyzing and Tracking Automation Act* in June 2019 to authorize the BLS, in consultation with the National Academies of Sciences, Engineering, and Medicine, to record the effect of automation on the labor market and measure trends, such as the number of jobs created, job displacement, and changes to workforce skills in demand as a result of automation.⁷⁰ Representative Bill Foster has proposed that the BLS develop plans to reform their occupational projections and publish multiple scenarios in consultation with industries that are driving rapid technological change and those affected.⁷¹ Similarly, the *AI Jobs Act of 2018*—sponsored by Representative Darren Soto and co-sponsored by a bipartisan group of legislators—would authorize the Department of Labor to analyze the future growth of artificial intelligence and its impact on the American workforce.⁷²

Additionally, detailed workforce data on local and regional economies is necessary to create policy solutions that are responsive to specific conditions across states and communities. Better data would benefit local, state, and national stakeholders as it would improve understanding of how economic forces like automation are affecting local and regional economies, to best target policymaking, service offerings, and delivery. The Workforce Information Advisory Council (WIAC), which advises the U.S. Secretary of Labor on how to improve national and state workforce information systems, published a report in 2018 recommending specific actions to help all stakeholders better prepare for a changing economy.⁷³ These include expanding state Unemployment Insurance wage records to include new data elements, such as occupational title, hours worked, credential completion, and work site. A 2014 BLS survey found that states that collected enhanced wage records “reported that the data were extremely helpful in estimating hourly earnings, understanding career progression from occupation to occupation, assessing

the effectiveness of workforce training, and making occupational projections.”⁷⁴ WIAC also recommended higher investments in state labor market data systems.

Many private sector entities have proprietary datasets that could help provide a clearer picture of labor market needs and emerging trends. Companies such as LinkedIn, Burning Glass Technologies, Indeed, Monster, Emsi, and others track companies and their job openings, workers and their skills, schools and their programming, wage rates, and more. And though these data may be narrower in scope than public administrative data, they do offer the possibility of answering timely labor market questions that public data currently cannot. For instance, LinkedIn’s Economic Graph tracks city-level skills shortages and surpluses by measuring the skills that appear in job postings on their site, the share of LinkedIn members in that city who have that skill listed in their profile, and comparing the hiring rates of workers with and without that skill.⁷⁵ These private sector efforts present an important opportunity for public-private partnership. Policymakers and private companies should continue to explore and establish partnerships to develop state-level analyses and projections, and share knowledge and expertise to inform development and use of new public data efforts.

Proposal: Create and Expand Supports to Help Workers Recover from Displacements

While automation will change job tasks, there will be workers that are displaced as their job or occupation becomes obsolete. The McKinsey Global Institute estimates that up to one-third of workers may need to transition to entirely different occupations by 2030 due to the impact that automation could have on work.⁷⁶

Job loss is one of the most difficult challenges American families contend with—causing serious financial, emotional, and physical stress. But displaced workers—defined as those who lost or left jobs because their plant or company closed or moved, there was insufficient work for them to do, or their position or shift was abolished—face even greater challenges than those workers who lose their job due to ordinary business conditions.⁷⁷

Displaced workers tend to be unemployed longer before finding new jobs, and when they do find new employment, it is often for less pay.⁷⁸ On average, displaced workers who lose full-time jobs experience a 35 percent loss of earnings, largely due to unemployment or working fewer hours. Moreover, the longer they held their prior job, the greater the fall in earnings: on average, displaced workers with over 20 years of tenure experience 10 percent greater earnings loss than workers with one to three years of tenure.⁷⁹ And these reduced wages persist: one study found that workers who were tenured at least three years before becoming displaced had average annual earnings losses of 30 percent compared to those who were not displaced, and earnings remained 15 to 20 percent lower 20 years later.⁸⁰ These challenges are especially pronounced for older displaced workers, many of whom may end up dropping out of the labor force entirely. There is also evidence that the earnings losses of displaced workers have been increasing since the mid-1990s.⁸¹

Displacements also contribute to significant non-monetary challenges for impacted workers. Research suggests that displaced workers face higher mortality rates and reduced life expectancy. Parental job loss and displacement have been linked to reduced educational achievement and cognitive development of children. And layoffs have been linked with lower rates of home ownership, increased incidence of divorce, and higher rates of entering disability insurance programs.⁸²

Moreover, failing to help workers adjust and find reemployment will lead them to rely more heavily on other safety net programs, such as Medicaid, Temporary Assistance for Needy Families, and the Supplemental Nutrition Assistance Program. This could put added strain on already-strained state budgets, and expand the structural federal budget deficit, which is already at historic highs.⁸³

A recent OECD report finds that through a combination of income support, reemployment services, and other policies, many other developed countries have been able to help displaced workers adjust and find reemployment more effectively than the U.S.⁸⁴ The report partly attributes this discrepancy to a lack of funding: the U.S. invests far less in its labor market adjustment programs than many other developed countries, spending just 0.11 percent of GDP, less than half the share it spent in 1985. In contrast, Canada spends 0.24 percent of GDP on adjustment programs, Germany spends 0.63 percent, and France spends 1.01 percent.⁸⁵

Four core supports in particular—training, income and wraparound supports, wage insurance, and career counseling—should be created or expanded to help displaced workers weather unemployment and transition back to employment.⁸⁶

- **Make training programs tuition-free for displaced workers:** Displaced workers may need and want to retrain for new jobs, but the financial stress of displacement makes paying for high-quality training—which can cost as much as \$10,000—prohibitively expensive. Policymakers should ensure displaced workers have access to tuition-free retraining options—such as through training vouchers, last-mile funding (such as Tennessee Promise⁸⁷ or Indiana’s Workforce Ready Grant⁸⁸), or expanding access to innovative financing options such as income-share agreements.
- **Design training programs to provide wrap-around services to maximize success:** Tuition and fees are just one set of financial barriers making it difficult for displaced workers to enter and complete training programs. Not only do workers enrolled in training still need to pay the bills and put food on the table, there are other potential costs associated with enrolling in a training program, such as transportation and childcare costs, that can derail many participants from successfully completing a program.⁸⁹ Examples of training programs that are designed to address these types of impediments include Project Quest in San Antonio and Capital IDEA in Central Texas.⁹⁰ Federal and state policymakers should explore designing training programs that provide displaced workers with the supports necessary to maximize success.
- **Provide older displaced workers with wage insurance to counteract reduced reemployment wages:** Traditionally, workers’ wages increase in a job over time due to the accumulation of job-specific knowledge that makes them more valuable to their employer than less-tenured workers. When a displaced worker has to change occupations, the loss of this job-specific knowledge can lead to a large reduction in wages, particularly for older, longer-tenured workers. Retraining for new fields can help bridge some of the skill and knowledge gap so that displaced workers can recoup some lost wages, but will likely not make up the full gap. To counteract reduced reemployment wages, policymakers should consider creating a wage insurance program for older displaced workers—whereby a portion of the worker’s reduced wages are offset by an income support benefit. This could reduce the economic challenge of having to take a lower paying job, help displaced workers return to work more quickly, and smooth the transition.
- **Offer career counseling to help displaced workers find a new job:** Training alone is not enough to help displaced workers transition and find new jobs. Not every displaced worker necessarily needs retraining, and even those who do pursue it may still find it difficult to find a job. Career counseling and other reemployment services, such as individual coaching and job search assistance, can help workers transition back to work. A study commissioned by the U.S. Department of Labor found that reemployment services represent a fast and cost-effective approach to helping workers find work, and result in savings to the Unemployment Insurance program that exceed the cost of the services.⁹¹ The 2016 Gold Standard Program Evaluation of the federal workforce development program found that workers who used staff-supported services, which includes career counseling, experienced 17 percent higher earnings compared to workers who only accessed self-service resources.⁹² Policymakers should expand these types of

supports to help displaced workers find new jobs—whether by restoring funding for state grants under WIOA to support state workforce programs, or through increased Reemployment Services and Eligibility Assessments (RESEA) funding to help states expand UI-related reemployment services.⁹³ Moreover, states should provide training to counselors to better use technology—such as SkillsEngine, mySkills, myFuture, edX, LinkedIn, and CSMLearn—and labor market data to improve their ability to guide workers through career transitions.

It is also important for policymakers to recognize that these supports are not exhaustive. Displaced workers face far greater barriers to reemployment than simply changing skill needs—and more must be done to ensure that opportunity is more equitably shared across groups and communities. For example, workers, especially displaced workers, need the flexibility to move between jobs, companies, occupations, and industries, and to become entrepreneurs by starting their own businesses. But in recent decades, legal restrictions that limit whom workers can work for and what kind of work they can engage in have proliferated. These include non-compete clauses, no-poach agreements, and occupational licenses. Policymakers should prohibit non-compete clauses for low-income workers and ban no-poach agreements, including those between separate franchises with a single chain. Similarly, state and local policymakers should review their licensure requirements to ensure that they are not unnecessarily burdensome. In addition, displaced workers who want to move to high-growth regions with available jobs face barriers related to the cost of housing and transportation. Policymakers should develop proposals to encourage more affordable housing construction and expand public transportation to facilitate greater mobility.

Furthermore, displacements do not just impact individuals and families. Regions whose industries experience disruptions as a result of automation can face serious economic and social challenges. Employment, wages, and even home values can become significantly depressed, and social problems such as poverty, crime, mortality, and drug addiction can rise as an entire region struggles to adjust.⁹⁴ This is typified by the kind of rapid decline seen in the manufacturing, steel, and coal industries in the late 20th and early 21st century, and the persistent struggles of the communities that relied on them. Place-based and sector-based policies, if designed well, can effectively support transition and economic development in those areas where significant automation disruption occurs.⁹⁵ For example, infrastructure investments like rural broadband and universal high-speed wireless connectivity can improve the competitiveness of local economies and businesses, support entrepreneurship and workforce participation, and improve access to skills training. To spur more broad-based job growth, MIT economists Jon Gruber and Simon Johnson have proposed a substantial increase in federal R&D investment to create new research and technology hubs across the country.⁹⁶

III. Inclusive Capitalism & Human Capital

Introduction

Capitalism is built on the promise that competitive markets will lead to economic growth and opportunity. Under the proper conditions, businesses will compete and invest to benefit their employees and their companies over the long term.⁹⁷ However, the benefits of economic growth over the past forty years have not been broad-based as we have seen increased income and wealth inequality. Since 1980, the real wages of U.S. workers have held steady⁹⁸ as the income of top earners has skyrocketed.⁹⁹ Across industries, a smaller number of firms have increased their market share, limiting competition.¹⁰⁰ Today, capitalism is working for too few people. To renew the promise of capitalism, policymakers need to reform our current system so that the benefits of economic growth are more broadly shared and contribute to a growing middle class.

A renewed capitalism that creates shared prosperity and competitive markets is an ambitious challenge, but a necessary one. It will require changes not only in policy, but also in the practices and principles that shape our economic system. Notably, the Business Roundtable, which is comprised of chief executive officers of leading U.S. companies, released a statement in August to acknowledge that the purpose of the corporation is to create value for all stakeholders, including workers and communities, rather than shareholders alone.¹⁰¹ The statement represents a significant shift from the idea of shareholder primacy and builds on efforts by business leaders, including Blackrock CEO Larry Fink, who used his annual letter to shareholders to call on CEO's to invest more in their workers and communities.¹⁰² In addition, a number of private and non-profit efforts, like JUST Capital and Focusing Capital on the Long Term, have focused on changing business behavior through new tools and approaches.¹⁰³ Policymakers have also begun to produce a range of ideas to address wage stagnation and widening inequality, including through tax, spending, and corporate governance proposals.

While there are a wide range of potential policy interventions to renew the promise of capitalism by making it work for more people, promoting human capital investment, which directly benefits both companies and workers, was an area of particular focus for the Future of Work Initiative National Advisory Council. Both workers and capital investment are central to driving our economy forward; focusing on human capital investment brings these two essential components together. As a starting point, greater transparency and improved measurement around how companies are investing in human capital can shape the practices of companies. Two specific interventions—issuing human capital disclosure guidelines and aligning the accounting treatment of human and physical capital investment—promise to better incentivize long-term-oriented behavior by companies and move us toward more broad-based growth.

Proposal: Expand Human Capital Disclosure

Businesses rely on investors, and investors rely on information from businesses in order to make informed decisions about where to invest. To ensure investors are adequately informed, the U.S. Securities and Exchange Commission (SEC) requires disclosure of business and financial data on a regular basis by public companies, reported to the SEC and directly to shareholders.

The information that companies must disclose covers a range of information, including property ownership, stock prices, subsidiaries, risk factors, and legal proceedings—information that may foreshadow future profits or losses. Although required disclosures have historically consisted of financial data and tangible asset ownership, more

consideration is being given to the ways in which human capital investment can enhance corporate performance, and the ways in which companies can document that investment to the SEC and others.¹⁰⁴

Several actors, including the SEC, have expressed growing recognition of the relevance of human capital metrics to investment decisions. In July 2018, Senator Mark Warner asked the SEC to consider expanding the Regulation S-K reporting requirement to include qualitative and quantitative human capital disclosures. A 2018 report by Andy Green and Andrew Schwartz of the Center for American Progress highlighted mandatory disclosure of a range of ESG factors—including human capital investment—as a way of enabling market forces to promote long-term strategy and sustainable corporate behavior.¹⁰⁵ Some institutional investor groups, including Principles for Responsible Investment and the Human Capital Management Coalition, have successfully pressured some companies to disclose human capital metrics to investors. In August 2019, the SEC proposed rule amendments that would include human capital resources in recommended disclosures under Regulation S-K and is currently accepting public comment.¹⁰⁶ Together, these issuances of support for human capital disclosure signal growing momentum for the idea.

By expanding disclosure guidelines to include human capital metrics, the SEC can give investors and the public a better sense of how companies value and invest in their workers. These metrics could include employee pay and benefits, employee turnover rates, training investments, work arrangements and contract workers hired, and employee engagement scores. This data could help investors understand how workforce investments may impact long-term performance.

There is recent precedent for these types of disclosures. The 2010 Dodd-Frank reforms, enacted in the wake of the 2008 financial crisis, included a pay disclosure requirement, the ratio of the annual pay of the CEO to the median employee compensation.¹⁰⁷ However, the specifics of this rule, which took effect for the first time in 2018, allow companies to select the precise methodology used in calculating these figures, meaning that direct comparisons between companies are difficult.¹⁰⁸

There are several key questions and considerations when proposing expanded disclosure. Perhaps most significantly, disclosure guidelines can be either optional or mandatory for companies. In order to maximize the value of disclosure to investors and the impact on investment decisions, mandatory disclosure should be pursued. By requiring disclosures, investors are guaranteed comparable data across companies, equipping them to make sound decisions based on available information. Voluntary disclosure guidelines risk ineffectiveness and are likely to result in many companies forgoing disclosure, prohibiting comparisons by investors. In addition, they may result in companies disclosing information that appears most beneficial to them, while withholding information that may be damaging in the eyes of investors or the public. While voluntary guidelines would represent an incremental step toward more comprehensive disclosure, mandatory disclosure would represent a more substantial shift, and has the potential to have a larger impact on corporate behavior. Mandating disclosures is not without risk, though. Because additional disclosures represent a reporting burden for companies, requiring additional disclosures may have an impact on the decision that companies make to become and remain a public company.¹⁰⁹ In considering what information companies must disclose, the SEC should strive to balance material information for investors with minimized burden for companies.

Disclosure guidelines should provide standardized metrics, since many measures of human capital investment can be presented in a range of ways. When reporting compensation information, for example, companies need to select which employees to include, whether to count benefits along with wages, and whether to report on a per worker or aggregate basis. Standardizing these allows for meaningful comparisons. To further improve comparability, human capital disclosure guidelines can include sector-level frames of reference for investors. A sector-level approach, as advocated by the Sustainability Accounting Standards Board (SASB), takes into account differences between industries; the labor needs of retail, for example, differ from those of biotechnology.

Proposal: Equalize Accounting Treatment of Human and Physical Capital

Addressing the accounting treatment of human capital would better reflect the value of that investment. Studies have shown that training investments can produce positive returns for businesses as well as for workers.¹¹⁰ In addition, a 2017 OECD report on the future of work and skills noted that as the demand for skills changes, skill mismatches and shortages have an economic cost for businesses. Skill mismatches can “reduce[s] productivity and increases on-the-job search and turnover, while shortages increase the cost of hiring and hinder the adoption of new technologies.”¹¹¹ Human capital management is a key component of the long-term strategy of a business.

Accounting standards should reflect the return of human capital investment in today’s ever-changing labor market. Accounting conventions and standards—how companies measure and communicate financial information—reflect the underlying economic transactions, but also can have a significant impact on business decisions, including corporate investments.¹¹² Yet some have argued that financial statements do not adequately capture drivers of value in today’s economy, such as intangible assets.¹¹³

An independent organization, the Financial Accounting Standards Board (FASB), establishes financial accounting and reporting standards for public and private companies and non-profit organizations in the United States. The SEC recognizes FASB as the designated accounting standard setter for public companies.¹¹⁴ FASB defines assets as “probable future economic benefits obtained or controlled by a particular entity as a result of past transactions or events.”¹¹⁵ Investments in physical capital, such as new equipment or a new factory, are considered assets and the value of the asset is typically depreciated over time. By contrast, an investment in human capital, like the training of an employee, is considered an expense which represents an outflow of assets and is reflected as a cost in the year that it is incurred. However, expensing the full cost of training in the year it occurs does not account for the benefit of training that would accrue over time.¹¹⁶ This creates a disparity between how investments in human capital and physical capital are viewed by business leaders and by investors, and a disincentive for investments in training. A 1993 paper in the *Stanford Law and Policy Review* describes the issue as follows: “On the most fundamental level, financial accounting standards treat equipment and other tangible goods as assets, while viewing all expenditures associated with people as “expenses.” Therefore, we should not be surprised to find a consistent pattern of managers optimizing the former and minimizing the latter.”¹¹⁷ Further, the SEC’s Investor Advisory Committee recently concluded that “current accounting standards on their own may obscure workforce investment by reflecting it only as an expense not distinguished from other inputs.”¹¹⁸

An argument that has been made against treating employee training as an intangible asset is that rather than serving as an asset owned by the firm, training represents an asset for the individual employee, which the firm does not control.¹¹⁹ In addition, internally generated intangible assets are typically not reflected in a firm’s financial statements, in part because they would be challenging to value. There has been interest in exploring the issue of human capital and intangible assets further. For example, the International Labour Organization’s (ILO)’s Global Commission on the Future of Work 2019 report called for exploring “viable options to incentivize businesses to increase their investment in training, including looking at how accounting standards treat training costs.”¹²⁰ Though this issue has been raised for consideration, FASB voted to remove a research project on accounting for intangible assets from its research agenda in 2017.¹²¹

Public and private sector leaders should call on FASB to evaluate revising financial accounting standards to recognize investments in human capital as assets. Alternatively, policymakers could call on the SEC to request that FASB provide guidance on this issue given that the SEC has the authority to enforce accounting standards. While any changes to accounting standards would involve a multi-year process, the opportunity to engage stakeholders on this issue would also allow for an important and overdue discussion of how firms value human capital.

Endnotes

- 1 Alden, Edward, and Laura Taylor-Kale. 2018. "The Work Ahead: Machines, Skills, and U.S. Leadership in the Twenty-First Century." Independent Task Force Report No. 76. Council on Foreign Relations. April. www.cfr.org/report/the-work-ahead/report.
- 2 International Labour Organization. 2019. "Work for a brighter future – Global Commission on the Future of Work." www.ilo.org/global/topics/future-of-work/brighter-future/lang--en/index.htm.
- 3 Manyika, James, Susan Lund, Michael Chui, Jacques Bughin, Jonathan Woetzel, Parul Batra, Ryan Ko, and Saurabh Sanghvi. 2017. "Jobs Lost, Jobs Gained." McKinsey Global Institute. www.mckinsey.com/global-themes/future-of-organizations-and-work/what-the-future-of-work-will-mean-for-jobs-skills-and-wages.
- 4 Muro, Mark, Robert Maxim, and Jacob Whiton. 2019. "Automation and Artificial Intelligence: How machines are affecting people and places." Brookings Institution. January. www.brookings.edu/research/automation-and-artificial-intelligence-how-machines-affect-people-and-places.
- 5 Bureau of Labor Statistics. 2018. "Contingent and Alternative Employment Arrangements – May 2017." U.S. Department of Labor. June. www.bls.gov/news.release/pdf/conemp.pdf.
- 6 For additional background on estimates of independent work, see the Gig Economy Data Hub: www.gigeconomydata.org.
- 7 Bureau of Labor Statistics. 2018. "Contingent and Alternative Employment Arrangements – May 2017." U.S. Department of Labor. June. www.bls.gov/news.release/pdf/conemp.pdf.
- 8 Farrell, Diana, Fiona Greig, and Amar Hamoudi. 2018. "The Online Platform Economy in 2018: Drivers, Workers, Sellers, and Lessors." JPMorgan Chase Institute. www.jpmorganchase.com/corporate/institute/document/institute-ope-2018.pdf.
Jackson, Emilie, Adam Looney, and Shanthi Ramnath. 2017. "The Rise of Alternative Work Arrangements: Evidence and Implications for Tax Filing and Benefit Coverage." Office of Tax Analysis, U.S. Department of the Treasury. January. www.treasury.gov/resource-center/tax-policy/tax-analysis/Documents/WP-114.pdf.
- 9 Hyman, Louis. 2018. *Temp: How American Work, American Business, and the American Dream Became Temporary*. Viking.
- 10 Bureau of Labor Statistics. "National Compensation Survey." U.S. Department of Labor. www.bls.gov/ncs.
- 11 Bureau of Labor Statistics. 2018. "Contingent and Alternative Employment Arrangements – May 2017." U.S. Department of Labor. June. www.bls.gov/news.release/pdf/conemp.pdf.
Board of Governors of the Federal Reserve System. 2018. "Report on the Economic Well-Being of U.S. Households in 2017." May. www.federalreserve.gov/publications/files/2017-report-economic-well-being-us-households-201805.pdf.
- 12 State of Washington. "HB 1601 - Creating the universal worker protections act." 66th Legislature. Introduced January 25, 2019. app.leg.wa.gov/bills/summary?BillNumber=1601&Year=2019.
- 13 State of New Jersey. "S67 - Establishes system for portable benefits for workers who provide services to consumers through contracting agents." 218th Legislature. Introduced January 9, 2018. www.njleg.state.nj.us/2018/Bills/S0500/67_11.HTM.
State of Georgia. "SB 475 - Independent Contractors; certain employment benefits; funding; administration; and eligibility; provide." 2017-2018 Regular Session. Introduced February 21, 2018. www.legis.ga.gov/Legislation/en-US/display/20172018/SB/475.
- 14 Commonwealth of Massachusetts. "SD 1100 - An Act establishing a portable benefits for independent workers innovation fund." 119th General Court. Introduced January 17, 2019. malegislature.gov/Bills/191/SD1100.
- 15 States that have passed paid family and medical leave programs at the time of publication are California, New Jersey, Washington, New York, Rhode Island, Massachusetts, Connecticut and Oregon, in addition to the District of Columbia. States with programs that allow self-employed workers to opt-in are California, Connecticut, Massachusetts, New York, and Washington, as well as the District of Columbia.
- 16 Williamson, Molly Weston, Sherry Leiwant, and Julie Kashen. 2018. "Paid Family and Medical Leave & Nonstandard Employees." In *Constructing 21st Century Rights for a Changing Workforce: A Policy Brief Series*. A Better Balance. www.abetterbalance.org/resources/report-constructing-21st-century-rights-for-a-changing-workforce-a-policy-brief-series-brief-2.
- 17 Matthews, Karen. 2018. "NYC drivers for Uber, other apps to get vision care coverage." *Associated Press*. June 29. www.apnews.com/39270aa6dabf484688d179c894ccad77.
- 18 U.S. Senate. "S.541 - Portable Benefits for Independent Workers Pilot Program Act." 116th Congress. Introduced February 25, 2019. www.congress.gov/bill/116th-congress/senate-bill/541.
- 19 For additional information on Alia, visit www.myalia.org.

-
-
- 20 For additional information on Care.com Benefits, visit www.care.com/benefits.
 - 21 For more information on Catch, visit catch.co.
 - 22 Freelancers Union and Upwork. 2017. "Freelancing in America: 2017." www.upwork.com/i/freelancing-in-america/2017.
MBO Partners. 2018. "The State of Independence in America." www.mbopartners.com/state-of-independence.
Prudential. 2017. "Gig Workers in America – Profiles, Mindsets, and Financial Wellness." www.prudential.com/media/managed/documents/rp/Gig_Economy_Whitepaper.pdf.
 - 23 Commonwealth of Massachusetts. 2017. TIR 17-11: New Massachusetts Reporting Requirements for Third Party Settlement Organizations. November 29. www.mass.gov/technical-information-release/tir-17-11-new-massachusetts-reporting-requirements-for-third-party.
State of Vermont. 2017. "New Law Lowers Reporting Threshold for 1099-K Information Reporting." December 19. tax.vermont.gov/news/1099-k-information-reporting.
 - 24 Fitzpayne, Alastair, Shelly Steward, and Ethan Pollack. 2018. "Tax Simplification for Independent Workers." Aspen Institute Future of Work Initiative. September. www.aspeninstitute.org/publications/tax-simplification-for-independent-workers-september-2018.
 - 25 New York City Mayor's Office of Media and Entertainment. 2018. "De Blasio Administration Announces New First of its Kind 'Freelancers Hub.'" August 22. www1.nyc.gov/site/mome/news/08222018-freelancers-hub.page.
 - 26 Abraham, Katharine, John Haltiwanger, Kristin Sandusky, and James Spletzer. 2017. "Measuring the Gig Economy: Current Knowledge and Open Issues." U.S. Census Bureau. March. aysps.gsu.edu/files/2016/09/Measuring-the-Gig-Economy-Current-Knowledge-and-Open-Issues.pdf.
 - 27 The Aspen Institute Future of Work Initiative's report *Automation and A Changing Economy* (2019) defines automation as follows: "Automation generally refers to the use of technology to reduce the level of human activity needed to complete a particular task by replacing or augmenting labor. Key to this concept is that the task itself is still being performed, but with less human labor required as an input. Because automation occurs at the task level, it often changes jobs partially rather than eliminates them, though in limited cases, technology can automate an entire job."
McKay, Conor, Ethan Pollack, and Alastair Fitzpayne. 2019. "Automation and a Changing Economy: The Case for Action." Aspen Institute Future of Work Initiative. April. www.aspeninstitute.org/publications/automation-and-a-changing-economy-the-case-for-action.
 - 28 Autor, David, and Anna Salomons. 2018. "Is automation labor-displacing?" Brookings Papers on Economic Activity. www.brookings.edu/bpea-articles/is-automation-labor-displacing-productivity-growth-employment-and-the-labor-share.
 - 29 Conway, Maureen. 2018. "Do job training programs work? Wrong question." *Fast Company*. July 19. www.fastcompany.com/90204625/do-job-training-programs-work-wrong-question.
 - 30 For example, Project Quest in San Antonio, Texas will support additional costs that participants have while engaged in training, such as rent, utilities and childcare, and provides weekly coaching sessions for program participants. A recent nine-year trial study of Project Quest participants found that graduates earn on average \$5,000 more annually compared with peers who did not complete the program. See Schwartz, Nelson. 2019. "Job Training Can Change Lives. See How San Antonio Does It." *New York Times*. August 19. www.nytimes.com/2019/08/19/business/economy/worker-training-project.html.
 - 31 Fitzpayne, Alastair, and Ethan Pollack. 2018. "Lifelong Learning and Training Accounts: Helping Workers Adapt and Succeed in a Changing Economy." Aspen Institute Future of Work Initiative. May. www.aspeninstitute.org/publications/lifelong-learning-and-training-accounts-2018.
 - 32 The College Board. 2018. "Trends in College Pricing 2018." research.collegeboard.org/pdf/trends-college-pricing-2018-full-report.pdf.
 - 33 Office of U.S. Senator Mark R. Warner. 2018. "Warner & Coons to Introduce Bill to Promote Lifelong Learning & Worker Training." November 16. www.warner.senate.gov/public/index.cfm/2018/11/warner-coons-to-introduce-bill-to-promote-lifelong-learning-worker-training.
 - 34 U.S. Senate. "S.275 - Skills Investment Act of 2019." 116th Congress. Introduced January 30, 2019. www.congress.gov/bill/116th-congress/senate-bill/275.
U.S. House of Representatives. "H.R.898 - Skills Investment Act of 2019." 116th Congress. Introduced January 30, 2019. www.congress.gov/bill/116th-congress/house-bill/898.
Other account-based approaches have been used at the federal level in the past, including Personal Reemployment Accounts and Individual Development Accounts.
 - 35 Commonwealth of Massachusetts. "SD.1155 - An Act to establish a Lifelong Learning and Training Account Program." 191st General Court. malegislature.gov/Bills/191/SD1155.

-
-
- 36 The Council for Adult and Experiential Learning. 2011. "Lifelong Learning Accounts: Helping to Build a More Competitive Workforce." cdn2.hubspot.net/hubfs/617695/2011_LiLA%20Policy_Overview.pdf.
- 37 *The Economist*. 2017. "Equipping People to Stay Ahead of Technological Change." January 14. www.economist.com/leaders/2017/01/14/equipping-people-to-stay-ahead-of-technological-change.
- 38 SkillsFuture Singapore. 2019. "SkillsFuture: 2018 Year in Review." February. www.myskillsfuture.sg/content/portal/en/about/about-myskillsfuture/2019-press-releases/-11-2-2019--skillsfuture-2018-year-in-review.html.
- 39 Robson, Jennifer. 2019. "Canada's new training credit comes with caveats." *Policy Options*. March 21. policyoptions.irpp.org/magazines/march-2019/canadas-new-training-credit-comes-caveats.
- 40 Eurofound. 2017. "France: Employers Obligation to Provide Skill Development Plans or Training." Last modified October 27, 2017. www.eurofound.europa.eu/observatories/emcc/erm/legislation/france-employers-obligation-to-provide-skill-development-plans-or-training.
- 41 Council of Economic Advisors. 2015. "Economic Report of the President." obamawhitehouse.archives.gov/sites/default/files/docs/cea_2015_erp_complete.pdf.
- More recent data on employer-provided training has been mixed. Data from the Society for Human Resource Management suggests that employer-provided tuition assistance has been falling in recent years, from 66 percent of surveyed businesses offering tuition assistance benefits in 2008 down to 53 percent in 2017. Meanwhile, data from the Association for Training & Development suggests that employer training investments have been roughly flat over the last decade.
- Society for Human Resource Management. 2017. "2017 Employee Benefits: Remaining Competitive in a Challenging Talent Marketplace." www.shrm.org/hr-today/trends-and-forecasting/research-and-surveys/Documents/2017%20Employee%20Benefits%20Report.pdf.
- Association for Talent Development. 2017. "2017 State of the Industry." December. www.td.org/research-reports/2017-state-of-the-industry.
- 42 Waddoups, C. Jeffrey. 2016. "Did Employers in the United States Back Away from Skills Training during the Early 2000s?" *ILR Review* 69, no. 2 (March): 405-434. ilr.sagepub.com/content/69/2/405.
- 43 Ibid.
- 44 Levine, Jonathan, Mark Popovich, and Tom Strong. 2013. "Doing Well and Doing Good: Pioneer Employers Discover Profits and Deliver Opportunity for Frontline Workers. The Hitachi Foundation. September. www.issuelab.org/resources/15753/15753.pdf.
- 45 Shook, Ellyn, and Mark Knickrehm. 2018. "Reworking the Revolution." Accenture. January. www.accenture.com/us-en/company-reworking-the-revolution-future-workforce.
- 46 Lynch, Lisa M. 2004. "Development Intermediaries and the Training of Low-Wage Workers." In *Emerging Labor Market Institutions for the Twenty-First Century*, edited by Richard B. Freeman, Joni Hersch, and Lawrence Mishel. University of Chicago Press. December. www.nber.org/chapters/c9959.pdf.
- 47 Fitzpayne, Alastair, and Ethan Pollack. 2018. "Worker Training Tax Credit: Promoting Employer Investments in the Workforce." Aspen Institute Future of Work Initiative. August. www.aspeninstitute.org/publications/worker-training-tax-credit-update-august-2018.
- 48 This concept is found in Section 414(q) of the federal tax code. It was set at \$120,000 in total compensation in 2018. www.irs.gov/retirement-plans/plan-participant-employee/definitions.
- 49 Section 3(52) of the Workforce Innovation and Opportunity Act defines an industry-recognized credential as consisting of "an industry-recognized certificate or certification, a certificate of completion of an apprenticeship, a license recognized by the State involved or Federal Government, or an associate or baccalaureate degree." Section 122(a)(2) of the Workforce Innovation and Opportunity Act defines an eligible training provider as (A) an institution of higher education that provides a program that leads to a recognized postsecondary credential; (B) an entity that carries out apprenticeship programs; or (C) another public or private provider of a program of training services, which may include joint labor-management organizations, and eligible providers of adult education and literacy activities if such activities are provided in combination with occupational skills training.
- 50 National Network of Business and Industry Associations. "KY FAME: Building Kentucky's 21st Century Skilled Manufacturing Workforce Through a Unique Employer-Educator Partnership." nationalnetwork.org/guidebook/ky-fame.
- 51 Maguire, Sheila, Joshua Freely, Carol Clymer, Maureen Conway, and Deena Schwartz. 2010. "Tuning In to Local Labor Markets." Public/Private Ventures. ppv.issuelab.org/resources/5101/5101.pdf.
- Conway, Maureen. 2011. "The Price of Persistence: How Nonprofit - Community College Partnerships Manage And Blend Diverse Funding Streams." Aspen Institute Economic Opportunities Program. February. www.aspeninstitute.org/publications/price-persistence-nonprofit-community-college-partnerships-manage-blend-diverse-funding-streams.

-
-
- 52 U.S. Senate. "S.2048 - Investing in American Workers Act." 115th Congress. Introduced October 31, 2017. www.congress.gov/bill/115th-congress/senate-bill/2048.
- U.S. Senate. "S.538 - Investing in American Workers Act." 116th Congress. Introduced February 25, 2019. www.congress.gov/bill/116th-congress/senate-bill/538.
- U.S. House of Representatives. "H.R.5516 - Investing in American Workers Act." 115th Congress. Introduced April 13, 2018. www.congress.gov/bill/115th-congress/house-bill/5516.
- 53 Connecticut: Credit of 5% of all expenses incurred for the enhancement of human capital.
- Georgia: Tax credit of 50% of a company's direct training expenses, with up to \$500 credit per full-time employee, per training program. Maximum annual credit per employee of \$1,250.
- Kentucky: Tax credit of up to 50% of eligible training.
- Mississippi: Tax credit of 50% of costs for training an employee, not to exceed \$2,500 per employee per year.
- Rhode Island: Tax credit of 50% of training expenses for all employees, capped at \$5,000 per employee.
- Virginia: Tax credit of 30% of training costs (if through community college) or \$200 annually (if through private schooling) for employers who participate in worker retraining efforts.
- 54 Commonwealth of Virginia. "HB 2539 Worker retraining tax credit; sunset date, worker training investment tax credit." 2019 Session. Passed March 5, 2019. lis.virginia.gov/cgi-bin/legp604.exe?191+sum+HB2539.
- 55 State of New Jersey. "Senate No. 3337." 218th Legislature. Introduced January 17, 2019. www.njleg.state.nj.us/2018/Bills/S3500/3337_11.HTM.
- 56 MIT Task Force on the Work of the Future. 2019. "The Work of the Future: Shaping Technology and Institutions." August. workofthefuture.mit.edu/sites/default/files/2019-09/WorkoftheFuture_Report_Shaping_Technology_and_Institutions.pdf.
- 57 National Center for Education Statistics. 2018. "Degree-granting postsecondary institutions, by control and classification of institution and state or jurisdiction: 2017-18." U.S. Department of Education. nces.ed.gov/programs/digest/d18/tables/dt18_317.20.asp.
- Davidson, Brittney, Tess Henthorne, Josh Wyner, and Linda Perlstein. 2019. "Aligning Talent and Opportunity: An Employer Guide to Effective Community College Partnership." Aspen Institute College Excellence Program. October. highered.aspeninstitute.org/wp-content/uploads/2019/09/The-Employer-Guide_20190926_Final-for-Approval.pdf.
- 58 Stevens analysis of Cellini and Turner (2018).
- Stevens, Ann Huff. 2019. "What Works in Career and Technical Education (CTE)? A Review of Evidence and Suggested Policy Directions." Aspen Institute Economic Strategy Group. February. www.aspeninstitute.org/longform/expanding-economic-opportunity-for-more-americans.
- Cellini, Stephanie Riegg, and Nicholas Turner. 2018. "Gainfully Employed? Assessing the Employment and Earnings of For-Profit College Students Using Administrative Data." *The Journal of Human Resources*. jhr.uwpress.org/content/early/2018/01/25/jhr.54.2.1016.8302R1.abstract.
- 59 Stevens, Ann Huff, Michal Kurlaender, and Michel Grosz. 2015. "Career Technical Education and Labor Market Outcomes." National Bureau of Economic Research. www.nber.org/papers/w21137.pdf.
- 60 Aspen Institute Economic Strategy Group. 2019. "Expanding Economic Opportunity for More Americans." www.aspeninstitute.org/longform/expanding-economic-opportunity-for-more-americans.
- 61 This was originally proposed by the Aspen Economic Strategy Group in a recent report.
- Aspen Institute Economic Strategy Group. 2019. "Expanding Economic Opportunity for More Americans." www.aspeninstitute.org/longform/expanding-economic-opportunity-for-more-americans.
- 62 Kvaal, James, and John Bridgeland. 2018. "Moneyball for Higher Education." Results for America. February. results4america.org/tools/moneyball-for-higher-education-how-states-can-use-data-and-evidence-to-improve-student-outcomes.
- 63 State Council of Higher Education for Virginia. "New Economy Workforce Credential Grant." www.schev.edu/index/institutional/grants/workforce-credential-grant.
- 64 U.S. Government Accountability Office. 2019. "Better Data Needed to Assess and Plan for Effects of Advanced Technologies on Jobs." March. www.gao.gov/assets/700/697365.pdf.
- 65 For example, medical assistants are projected to be one of the fastest growing occupations over the next 10 years and workers can use the BLS Occupational Outlook Handbook to learn about the skills and training needed today to become a medical assistant. But the skills needed in 10 years could look very different from those needed today; for instance, recent research from the Brookings Institution's Metropolitan Policy Program found that medical assistants had one of the largest increases in its share of digital skills among 545 occupations from 2002 to 2016 (a digital score of 63.7, up from 35.1).

-
- Bureau of Labor Statistics. "How to Become a Medical Assistant." Occupational Outlook Handbook. U.S. Department of Labor. Last modified April 12, 2019. www.bls.gov/ooh/healthcare/medical-assistants.htm#tab-4.
- Muro, Mark, Sifan Liu, Jacob Whiton, and Siddharth Kulkarni. 2017. "Digitalization and the American workforce." Brookings Institution. November. www.brookings.edu/research/digitalization-and-the-american-workforce.
- 66 Manyika, James, Susan Lund, Michael Chui, Jacques Bughin, Jonathan Woetzel, Parul Batra, Ryan Ko, and Saurabh Sanghvi. 2017. "Jobs Lost, Jobs Gained." McKinsey Global Institute. www.mckinsey.com/global-themes/future-of-organizations-and-work/what-the-future-of-work-will-mean-for-jobs-skills-and-wages.
- 67 Muro, Mark, Robert Maxim, and Jacob Whiton. 2019. "Automation and Artificial Intelligence: How machines are affecting people and places." Brookings Institution. January. www.brookings.edu/research/automation-and-artificial-intelligence-how-machines-affect-people-and-places.
- 68 Nedelkoska, Ljubica, and Glenda Quintini. 2018. "Automation, skills use and training." OECD Social, Employment and Migration Working Papers. March. www.oecd-ilibrary.org/employment/automation-skills-use-and-training_2e2f4eea-en.
- 69 Frey, Carl Benedikt, and Michael Osborne. 2013. "The Future of Employment: How Susceptible Are Jobs to Computerisation?" University of Oxford. September. www.oxfordmartin.ox.ac.uk/downloads/academic/The_Future_of_Employment.pdf.
- 70 Office of U.S. Senator Gary Peters. 2019. "Peters, Young Introduce Bipartisan Legislation to Measure Impact of Automation on Workers and Inform Workforce Development Strategies." June 6. www.peters.senate.gov/newsroom/press-releases/peters-young-introduce-bipartisan-legislation-to-measure-impact-of-automation-on-workers-and-inform-workforce-development-strategies.
- 71 Amendment No. 139. U.S. House of Representatives. "H.Amdt.401 to H.R.3354." 115th Congress. Offered September 12, 2017. www.congress.gov/amendment/115th-congress/house-amendment/401.
- Amendment No. 22. U.S. House of Representatives. "H.Amdt.288 to H.R. 2470." 116th Congress. Offered June 12, 2019. www.congress.gov/amendment/116th-congress/house-amendment/288.
- 72 Office of U.S. Congressman Darren Soto. 2018. "Rep. Soto Introduces Bipartisan 'AI Jobs Act of 2018.'" January 19. soto.house.gov/media/press-releases/rep-soto-introduces-bipartisan-ai-jobs-act-2018.
- 73 Workforce Information Advisory Council. 2018. "Recommendations to Improve the Nation's Workforce and Labor Market Information System." Submitted to Secretary Acosta, U.S. Department of Labor. January. www.doleta.gov/wioa/wiac/docs/Second_Draft_of_the_WIAC_Final_Report.pdf.
- 74 Administrative Wage Record Enhancement Study Group. 2014. "Enhancing Unemployment Insurance Wage Records: Potential Benefits, Barriers, and Opportunities." Prepared for the Workforce Information Council, U.S. Department of Labor. September. www.bls.gov/advisory/bloc/enhancing-unemployment-insurance-wage-records_fy.pdf.
- 75 For more information on the LinkedIn's Economic Graph, visit economicgraph.linkedin.com.
- 76 Manyika, James, Susan Lund, Michael Chui, Jacques Bughin, Jonathan Woetzel, Parul Batra, Ryan Ko, and Saurabh Sanghvi. 2017. "Jobs Lost, Jobs Gained." McKinsey Global Institute. www.mckinsey.com/global-themes/future-of-organizations-and-work/what-the-future-of-work-will-mean-for-jobs-skills-and-wages.
- 77 Bureau of Labor Statistics. 2018. "Worker Displacement: 2015-17." U.S. Department of Labor. August. www.bls.gov/news.release/disp.nr0.htm.
- 78 Jacobson, Louis, Robert LaLonde, and Daniel Sullivan. 2011. "Policies to Reduce High-Tenured Displaced Workers' Earnings Losses Through Retraining." The Hamilton Project, Brookings Institution. www.hamiltonproject.org/papers/policies_to_reduce_high-tenured_displaced_workers_earnings_losses_thro.
- Lachowska, Marta, Alexandre Mas, and Stephen Woodbury. 2018. "Sources of Displaced Workers' Long-Term Earnings Losses." Working Paper 24217, National Bureau of Economic Research. January. www.nber.org/papers/w24217.
- 79 Farber, Henry. 2017. "Employment, Hours, and Earnings Consequences of Job Loss: US Evidence from the Displaced Workers Survey." *Journal of Labor Economics* 35, no. S1 (July): S235-S272. www.journals.uchicago.edu/doi/10.1086/692353.
- 80 Von Wachter, Till, Jae Song, and Joyce Manchester. 2011. "Long-Term Earnings Losses due to Mass Layoffs During the 1982 Recession: An Analysis Using U.S. Administrative Data from 1974 to 2004." Columbia University.
- 81 Farber, Henry. 2010. "Job Loss and the Decline in Job Security in the United States." In *Labor in the New Economy*, edited by Katharine G. Abraham, James R. Spletzer, and Michael Harper, 223-262. University of Chicago Press. www.nber.org/chapters/c10822.pdf.
- 82 Davis, Steven, and Till von Wachter. 2011. "Recessions and the Costs of Job Loss." Brookings Papers on Economic Activity. Fall. www.brookings.edu/bpea-articles/recessions-and-the-costs-of-job-loss.

-
-
- 83 Committee for a Responsible Federal Budget. 2018. "The Deficit Has Never Been This High When the Economy Was This Strong." December 13. www.crfb.org/blogs/deficit-has-never-been-high-when-economy-was-strong.
- 84 OECD. 2016. "Back to Work: United States: Improving the Re-employment Prospects of Displaced Workers." OECD Publishing. December. www.oecd-ilibrary.org/employment/back-to-work-united-states_9789264266513-en.
- 85 OECD. "Active Labour Market Policies: Connecting People with Jobs." www.oecd.org/employment/activation.htm.
- 86 While these supports will require funding, they may end up creating net savings in the long run by reducing dependency on public assistance programs and boosting tax revenues. For example, the evidence is so strong that reemployment services produce savings that by law, funding for these services does not count against the federal Budget Control Act discretionary caps at the federal level.
- Senate Committee on the Budget. 2018. "Cap Adjustments: How the Government Raises Its Spending Limit." 115th Congress. July. www.budget.senate.gov/download/budget-bulletin_-cap-adjustments-how-the-government-raises-spending-limits.
- 87 For information on Tennessee Promise, visit www.tn.gov/tnpromise.html.
- 88 For information on Indiana's Workforce Ready Grant, visit www.in.gov/che/4773.htm.
- 89 Conway, Maureen. 2011. "The Price of Persistence." Aspen Institute Economic Opportunities Program. February. www.aspeninstitute.org/publications/price-persistence-nonprofit-community-college-partnerships-manage-blend-diverse-funding-streams.
- 90 Orrell, Brent, and Caleb Seibert. 2019. "In Austin, a Public/Private Partnership for Workforce Success." American Enterprise Institute. August. www.aei.org/publication/in-austin-a-public-private-partnership-for-workforce-success.
- 91 Michaelides, Marios, Eileen Poe-Yamagata, Jacob Benus, and Dharmendra Tirumalasetti. 2012. "Impact of the Reemployment and Eligibility Assessment (REA) Initiative in Nevada." January. wdr.doleta.gov/research/FullText_Documents/ETAOP_2012_08_REA_Nevada_Follow_up_Report.pdf.
- 92 McConnell, Sheena, Kenneth Fortson, Dana Rotz, Peter Schochet, Paul Burkander, Linda Rosenberg, Annalisa Matri, and Ronald D'Amico. 2016. "Providing Public Workforce Services to Job Seekers: 15-Month Impact Findings on the WIA Adult and Dislocated Worker Programs." Mathematica Policy Research. May. www.mathematica-mpr.com/our-publications-and-findings/publications/providing-public-workforce-services-to-job-seekers-15-month-impact-findings-on-the-wia-adult.
- 93 Because spending on reemployment services produces savings, it does not count against the Budget Control Act discretionary caps.
- Senate Committee on the Budget. 2018. "Cap Adjustments: How the Government Raises Its Spending Limit." 115th Congress. July. www.budget.senate.gov/download/budget-bulletin_-cap-adjustments-how-the-government-raises-spending-limits.
- 94 Davis, Steven, and Till von Wachter. 2011. "Recessions and the Costs of Job Loss." Brookings Papers on Economic Activity. Fall. www.brookings.edu/bpea-articles/recessions-and-the-costs-of-job-loss.
- 95 The Hamilton Project. 2018. "Place-Based Policies for Shared Economic Growth." Edited by Jay Shambaugh and Ryan Nunn. Brookings Institution. September. www.hamiltonproject.org/papers/place_based_policies_for_shared_economic_growth.
- Groschen et al (2018) reviews the existing literature and concludes that "some types of well-designed policies can be effective, while other policies do not appear to be. Policies that subsidize businesses based solely on their location are hard to defend based on the research record. Place-based policies used in a more discretionary fashion seem to work better, perhaps because policymakers can target subsidies where they will do the most good and also hold recipients accountable. And place-based policies that generate public goods such as infrastructure and knowledge appear beneficial, perhaps because these goods are underprovided by the private sector."
- Groschen, Erica, Susan Helper, John Paul MacDuffie, and Charles Carson. 2018. "Preparing U.S. Workers and Employers for an Autonomous Vehicle Future." Securing America's Future Energy (SAFE). June. avworkforce.secureenergy.org/wp-content/uploads/2018/06/Groschen-et-al-Report-June-2018-1.pdf.
- 96 MIT Sloan School of Management. 2019. "Jump-Starting America: New book by MIT's Jonathan Gruber and Simon Johnson argues that public investment in science is key to revving up the U.S. growth engine." April 9. mitsloan.mit.edu/press/jump-starting-america-new-book-mits-jonathan-gruber-and-simon-johnson-argues-public-investment-science-key-to-revving-u-s-growth-engine.
- 97 While short-termism is often cited as a challenge faced by public companies today, some have noted insufficient evidence for this trend over the long term. See Steven Kaplan's 2017 paper, "Are U.S. Companies Too Short-Term Oriented? Some Thoughts" for additional context.
- Kaplan, Steven. 2017. "Are U.S. Companies Too Short-Term Oriented? Some Thoughts." May. ssrn.com/abstract=2972117.
- 98 DeSilver, Drew. 2018. "For most U.S. workers, real wages have barely budged in decades." Pew Research Center. August 7. www.pewresearch.org/fact-tank/2018/08/07/for-most-us-workers-real-wages-have-barely-budged-for-decades.
- 99 Saez, Emmanuel, and Thomas Piketty. 2003 "Income Inequality in the United States, 1913-1998." *Quarterly Journal of Economics* 118(1), 1-39. Updated October 2019.

-
-
- 100 Shambaugh, Jay, Ryan Nunn, Audrey Breitwieser, and Patrick Liu. 2018. "The State of Competition and Dynamism: Facts about Concentration, Start-Ups, and Related Policies." The Hamilton Project. www.brookings.edu/wp-content/uploads/2018/06/ES_THP_20180611_CompetitionFacts_20180611.pdf.
- 101 Business Roundtable. 2019. "Statement on the Purpose of a Corporation." August 19. opportunity.businessroundtable.org/wp-content/uploads/2019/09/BRT-Statement-on-the-Purpose-of-a-Corporation-with-Signatures-1.pdf.
- 102 Fink, Larry. 2019. "Larry Fink's 2018 Letter to CEOs: Purpose & Profit." www.blackrock.com/corporate/investor-relations/larry-fink-ceo-letter.
- 103 JUST Capital and Focusing Capital on the Long Term are both non-profit organizations formed by business leaders in 2013 aimed at encouraging companies to act responsibly and with a long-term stakeholder-oriented mindset. JUST Capital creates and publicizes a ranking of companies, and FCLT provides companies with information and strategies to improve their commitment to long-term practices.
- 104 Bernstein, Aaron, and Larry Beeferman. 2015. "The Materiality of Human Capital to Corporate Financial Performance." The Investor Responsibility Research Center Institute and the Labor and Worklife Program of Harvard University. lwp.law.harvard.edu/files/lwp/files/final_human_capital_materiality_april_23_2015.pdf.
- 105 Green, Andy, and Andrew Schwartz. 2018. "Corporate Long-Termism, Transparency, and the Public Interest." Center for American Progress. www.americanprogress.org/issues/economy/reports/2018/10/02/458891/corporate-long-termism-transparency-public-interest.
- 106 U.S. Securities and Exchange Commission. 2019. "SEC Proposes to Modernize Disclosures of Business, Legal Proceedings, and Risk Factors Under Regulation S-K." August 8. www.sec.gov/news/press-release/2019-148.
- 107 U.S. Securities and Exchange Commission. 2015. "SEC Adopts Rule for Pay Ratio Disclosure." www.sec.gov/news/pressrelease/2015-160.html.
- 108 U.S. Securities and Exchange Commission. 2017. "Division of Corporation Finance on Calculation of Pay Ratio Disclosure." www.sec.gov/corpfin/announcement/guidance-calculation-pay-ratio-disclosure.
- 109 The number of publicly listed companies has fallen precipitously over the past 20 years; there are only half as many public companies today as there were in 1997. It is estimated that less than one percent of all firms are now publicly listed. Though there are several explanations for this trend—most notably increasing concentration of firms and broader availability of private capital—disclosure requirements are potentially a contributing factor.
- Mauboussin, Michael, Dan Callahan, and Darius Majd. 2017. "The Incredible Shrinking Universe of Stocks: The Causes and Consequences of Fewer US Equities." Credit Suisse Global Financial Strategies. www.cmgwealth.com/wp-content/uploads/2017/03/document_1072753661.pdf.
- 110 Bernstein, Aaron, and Larry Beeferman. 2015. "The Materiality of Human Capital to Corporate Financial Performance." The Investor Responsibility Research Center Institute and the Labor and Worklife Program of Harvard University. lwp.law.harvard.edu/files/lwp/files/final_human_capital_materiality_april_23_2015.pdf.
- Lumina Foundation. 2016 "Talent Investments Pay Off White Paper: Cigna Realizes Return on Investment from Tuition Benefits." www.luminafoundation.org/files/resources/talent-investments-pay-off-cigna-full.pdf.
- 111 OECD. 2017. "Future of Work and Skills." February. www.oecd.org/els/emp/wcms_556984.pdf.
- 112 Shroff, Nemit. 2017. "Corporate Investment and Changes in GAAP." *Review of Accounting Studies*, Vol. 22, No. 1. March. ssrn.com/abstract=1977532.
- 113 Upton, Wayne. 2001. "Special Report: Business and Financial Reporting, Challenges for the New Economy." Financial Accounting Standards Board. www.fasb.org/sr_new_economy.pdf.
- 114 Financial Accounting Standards Board. 2019 "About the FASB." Accessed May 23, 2019. www.fasb.org/facts/index.shtml.
- 115 Financial Accounting Standards Board. 2008. "Statement of Financial Accounting Concepts No. 6: Elements of Financial Statements." www.fasb.org/jsp/FASB/Document_C/DocumentPage?cid=1218220132831&acceptedDisclaimer=true.
- 116 Lerman, Robert. 2015. "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. June. sites.nationalacademies.org/cs/groups/pgasite/documents/webpage/pga_168146.pdf.
- 117 Coff, Russell, and Eric G. Flamholtz. 1993. "Corporate Investment in Human Capital: How Financial Accounting Standards Undermine Public Policy." *Stanford Law and Policy Review*. Fall.

-
-
- 118 U.S. Securities and Exchange Commission. 2019. "Recommendation of the Investor Advisory Committee. Human Capital Management Disclosure." March 28. www.sec.gov/spotlight/investor-advisory-committee-2012/human-capital-disclosure-recommendation.pdf.
 - 119 Hasken, Jonathan, and Stian Westlake. 2018. *Capitalism Without Capital: The Rise of the Intangible Economy*. Princeton University Press.
 - 120 International Labour Organization. 2019. "Work for a brighter future – Global Commission on the Future of Work." www.ilo.org/global/topics/future-of-work/brighter-future/lang--en/index.htm.
 - 121 Financial Accounting Standards Board News Release. 2017. "FASB Makes Decision on Agenda Invitation to Comment." September 20. www.fasb.org/cs/ContentServer?c=FASBContent_C&cid=1176169346081&d=&pagename=FASB%2FFASBContent_C%2FNewsPage.

The Aspen Institute Future of Work Initiative is a nonpartisan effort to identify concrete ways to address the challenges American workers and businesses face due to the changing nature of work in the 21st century. Established in 2015, the Initiative is driven by the leadership of Honorary Co-Chairs Senator Mark R. Warner and Purdue University President and former Governor of Indiana Mitch Daniels, and Co-Chairs John Bridgeland and Bruce Reed. Executive Director Alastair Fitzpayne leads an Aspen Institute staff, based in Washington, DC.

Copyright © 2019 by the Aspen Institute. All Rights Reserved.