Creating 21st Century Jobs:
Increasing Employment and Wages for American Workers in a Changing World

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A paper jointly released by The Center for American Progress and The Hamilton Project

The Center for American Progress is a nonpartisan research and educational institute dedicated to promoting a strong, just and free America that ensures opportunity for all. We believe that Americans are bound together by a common commitment to these values and we aspire to ensure that our national policies reflect these values. We work to find progressive and pragmatic solutions to significant domestic and international problems and develop policy proposals that foster a government that is “of the people, by the people, and for the people.”

The Hamilton Project seeks to advance America’s promise of opportunity, prosperity, and growth. The Project offers a strategic vision and produces innovative policy proposals about how to create a growing economy that benefits more Americans. The Hamilton Project’s economic strategy reflects a judgment that long term prosperity is best achieved by fostering economic growth and broad participation in that growth, by enhancing individual economic security, and by embracing a role for effective government in making needed public investments.

The Hamilton Project is an economic policy initiative at The Brookings Institution.
Introduction

The U.S. labor market has not delivered for many Americans since the early 1970s. Over the whole period, the real wage of the median worker is largely unchanged, and the real earnings for non-college educated workers have declined. At the same time, the wages of the highly skilled have increased dramatically. Furthermore, in the last two decades, employment opportunities have become more polarized to disproportionately favor high and low skill sectors. The result of these changes is a sharp rise in income inequality that threatens the social fabric of the nation.

History suggests, however, that the pattern is not inexorable. These underlying trends were interrupted for a period in the 1990s. In this period, policy made a difference. It created the conditions in which robust job creation yielded a tight labor market. Policy also aided income growth at the bottom of the distribution by raising minimum wages and expanding the earned income tax credit. But by the official end of the Great Recession, many of these gains from that period were wiped out.

Today we confront record high levels of unemployment and these underlying trends toward income inequality. At the same time, the current fiscal situation poses significant risks to the future well-being of American workers for at least two reasons. First, the possibility of a fiscal crisis is real, and, if one emerges, it would create large job losses and likely be accompanied by sharp and indiscriminate changes in policy that worsen the structural problems in the labor market. Second, our nation’s high budget deficits constrain the government’s ability to make necessary public investments to increase living standards over the long run. Indeed, through previous research and events, both the Center for American Progress (CAP) and The Hamilton Project (THP) have highlighted numerous areas where new public investments and critical policy reforms would greatly strengthen America’s long-run competitiveness, including health care, education, infrastructure, and energy.

In April 2010, CAP and THP held the first in a two-part series of forums focusing on jobs and the American worker. The event featured discussion among experts and the release of a new paper by David Autor of the Massachusetts Institute of Technology that helped define the challenges facing the U.S. workforce. According to Autor, the sources of difficulties in the American labor market include changes in technology that reduced demand for certain U.S. jobs and skill sets, increasing competitive pressures from globalization, slow increases in the educational attainment of American workers, and changes in the minimum wage and unionization. Although many of these long-run trends were beyond the control of policymakers, it is now imperative that leaders at the federal and state levels take bold actions to better position American workers for success in a 21st century economy.

The second forum, in December 2010, continues the discussion by presenting policies that have the potential to help American workers address some of these longer-run challenges. In this paper, CAP and THP examine their causes and offer three discrete policy options that seek to promote the future competitiveness and prosperity of the U.S. labor force. The featured policies should be considered a starting point for thinking about additional policies that restore our economy as one that sustainably achieves broadly-shared economic growth. Although some good solutions to the structural labor market problems will require new resources, each of these three proposals is projected to be budget neutral or could even reduce the budget deficit.
The Great Recession and Beyond

For American workers, the Great Recession has been the most severe of any the United States has experienced in recent memory, and polling from the mid-term elections suggests that job creation remains a central economic issue for many Americans. While unemployment has reached the levels of the 1980–82 recessions, long-term and youth unemployment have reached their highest levels since the Great Depression.²

Although the Great Recession officially ended in June 2009, many Americans continue to suffer: unemployment has hit home for many, and nearly everyone knows a friend or family member out of work. The chart to the right presents a stark picture of our current employment situation.

In December 2007 at the start of the recession, the U.S. economy had 138 million (non-farm) jobs; by October 2010, the job total stood at 130.5 million, approximately 7.5 million below the peak before the recession. At the same time, the labor force has grown by roughly 4.4 million. The result of these trends is a “job gap” of 11.8 million.³ Among the unemployed, 41.8 percent have been looking for work for longer than six months, and there are nearly five job seekers for every job opening.⁴

**FIGURE 1**

**Historical employment-to-population ratio**

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It is no wonder that policymakers have been preoccupied with finding ways to create new jobs in the short run, to alleviate the job gap that continues to impact the lives of countless American families.

While these near-term goals are critically important, it is vital that experts, advocates, and policymakers also focus on the long-term structural challenges facing American workers and develop a wider inventory of relevant policy that would mitigate and even reverse some of these disturbing trends. Thus, the aim of the December conference is to look beyond the immediate problems of the Great Recession and identify policies that will help to secure the competitiveness and prosperity of American workers in the global economy.

Addressing these longer-run trends will require solutions to their underlying causes. For this reason, we examine the following forces shaping the U.S. labor market over the last thirty years: changes in the skill sets demanded of U.S. workers as a result of technological advancement and economic globalization; lagging rates of improvement in educational and skills attainment of U.S. workers, particularly male workers; and changes in labor market institutions affecting wage setting, including unionization rates and minimum wage laws.

These forces demand a broad array of policy responses that improve worker skills and facilitate increased educational attainment, encourage labor force participation for those traditionally excluded from employment opportunities, and improve the productivity of and demand for U.S. workers through increases in capital investment in the United States.

In that context, the three proposals introduced in this paper could each have an important impact on the American labor market. It is our hope that they could be part of a broader set of solutions for dealing with our nation’s long-term structural challenges.
Long-Run Changes Affecting the U.S. Worker

Although the financial crisis and recession triggered a high rate of unemployment, its persistence reflects labor market trends that existed long before 2007. Indeed, David Autor’s paper released during the April conference indicates that the Great Recession has reinforced prevailing labor market trends that were underway long before the recession began.\(^5\)

These trends are perhaps best quantified by the earnings ratio of college graduates relative to high school graduates, which is now at a historic high. For example, in 1963 the hourly wage of the typical college graduate was approximately 1.4 times the hourly wage of the typical high school graduate; by 2009, the college premium was nearly double. This gap would be considerably larger if calculations included the value of such job benefits as health insurance and pension plans, which are far more common among high-skilled jobs.\(^6\)

**FIGURE 2**
College degree vs. high school diploma, weekly wage ratio, 1963-2009

In the presence of these changes in the labor market, recent U.S. policy has failed to adequately adapt. This policy failure has contributed to the decline in broad-based growth that is at the core of the American Dream. Here, we outline some of the causes of the long-run changes in the U.S. labor market, which help frame the policies presented at the conference.

**Technological Change**

Extraordinary innovations in information and communications technology over the last few decades have altered labor markets around the world. Autor argues that this technological change has contributed to a polarization of job opportunities, with job growth occurring in those sectors that demand low or unskilled labor and in those that demand higher skills. The explanation for this polarization is that the two kinds of jobs that rapid technological change cannot make redundant are manual jobs and abstract analysis jobs. Manual jobs, such as janitors and construction laborers, are typically at the lower end of the skill distribution. Yet, because they require in-person interaction, flexibility in different situations, and responses to cues that computers cannot detect, new technologies cannot replace these jobs. Abstract analysis occupations, such as engineers and lawyers, demand sophisticated and creative skill sets that computers also cannot replace.

Between these two levels of occupation lie what Autor describes as “middle-skilled clerical, administrative, production, and operative occupations.” Due to the nature of middle-skill work, developments in information and computer technologies can dramatically reduce the number of people needed to perform these jobs.

As is frequently the case with academic theories, not all economists agree with this assessment. However, there is common agreement that, in an era of increasing technological innovation, the skill sets the American middle class currently possesses make them much less competitive on the job market than they once were.

**Globalization**

Interconnected with the effects of information and communications technology are the economic effects of globalization. New technologies have greatly influenced the ability to communicate at low cost with possible providers and customers around the world; negotiate terms, place orders, track production and deliveries; and make payments. Indeed, much of the growing global trade in service industries—from preparing taxes to examining medical records to writing software and much more—is economically viable because the product can be shipped to any location or provided over the Internet. As a result, globalization has transformed the world economy. China, India, Brazil, Russia, and other countries that seemed only loosely connected to the global economy several decades ago now play a prominent role in global trade in manufactured goods, services, and raw materials.

Currently, 80 percent of the U.S. workforce is in services industries, up from 65 percent in 1960. With the expansion of broadband availability, many service jobs can be performed from distant regions, often at a reduced cost. The continued prosperity of Americans, therefore, depends on our ability to remain competitive as a nation.

This is not to suggest that globalization necessarily has an adverse impact on job growth in the U.S. economy. The flip side is that globalization offers larger markets for the products produced in the United States and allows U.S. consumers less expensive products. Indeed, globalization has been proceeding for decades now, and before the Great Recession, U.S. unemployment had stayed below 6.3 percent since April 1994—and was below 5 percent in 2006 and 2007.

The expansion of the global economy has increased the prosperity and productivity of the United States and also has helped alleviate poverty in developing nations around the world. The threat of globalization is not that emerging economies will take U.S. jobs, but that our policies at home are not well-suited to secure the long-term competitiveness of the American worker. Policies to improve the skills of American workers and enhance the productivity of American businesses will help America and its workers compete successfully in the global marketplace. These policies are necessary if the United States hopes to remain an attractive environment for capital investment.
Slowing Increases in Educational Attainment

As technology has advanced, employers’ demand for skilled workers has increased steadily since early in the 20th century. Until relatively recently, the number of people attaining a certain education and skill level roughly matched employers’ demand for that skill. High school graduation rates rose along with rates of college attendance. However, in the last few decades, the increase in the number of higher skilled workers has slowed at the very same time that the rewards to staying in school longer have increased.9

Studies indicate that high school graduation rates “peaked at around 80 percent in the late 1960s and then declined by 4–5 percentage points.”10 Meanwhile, at the post-secondary level, the share of Americans with a college degree has continued to rise but at a decreasing rate.11 This slowdown is particularly striking for men. For example, in 1940, 8 percent of white males ages 25–34 had a four-year bachelor’s degree. This increased to 20 percent by 1970, but rose to just 26 percent by 2008. Similarly, college completion rates for black males rose from 6 percent to 16 percent between 1970 and 2008. Remarkably, the college completion rate for white females increased from 12 to 34 percent in the same period.

Back in the 1970s and 1980s, the United States had a large lead over other countries in the share of the population that completed a college degree. But by the early 21st century, that lead had essentially vanished. College graduation rates in 2008 were essentially the same for the United States, Australia, France, the United Kingdom, Spain, and Sweden. Norway, Japan, and Korea lagged well behind U.S. college graduation rates in 1978 but now clearly exceed the U.S. level. Canada, which had a similar level of educational achievement as the United States in 1978, has also seen large gains. The declining number of well-prepared high school graduates helps explain the United States’ difficulty expanding its share of college graduates.

FIGURE 3
Changes in college completion over time across countries

Percentage of 25-34 year olds having some type of college degree

<table>
<thead>
<tr>
<th>Country</th>
<th>1978</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>40%</td>
<td>50%</td>
</tr>
<tr>
<td>Canada</td>
<td>30%</td>
<td>50%</td>
</tr>
<tr>
<td>Australia</td>
<td>20%</td>
<td>30%</td>
</tr>
<tr>
<td>Norway</td>
<td>10%</td>
<td>20%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>10%</td>
<td>20%</td>
</tr>
<tr>
<td>Sweden</td>
<td>8%</td>
<td>10%</td>
</tr>
<tr>
<td>Japan</td>
<td>6%</td>
<td>8%</td>
</tr>
<tr>
<td>Germany</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>France</td>
<td>4%</td>
<td>6%</td>
</tr>
<tr>
<td>Spain</td>
<td>3%</td>
<td>5%</td>
</tr>
<tr>
<td>Korea</td>
<td>2%</td>
<td>4%</td>
</tr>
</tbody>
</table>

These trends are especially disturbing in light of the increasing benefits to college graduation in the United States shown in Figure 2. Furthermore, recent research by The Georgetown University Center on Education and the Workforce shows that nine out of ten workers with a high school education or less are limited to three occupational clusters that either pay low wages or are in decline. The implication of the study is clear: many people who do not complete postsecondary education face the risk of falling out of the middle class.

**Decreasing rates of unionization and a low minimum wage**

Although it is well-known that the influence of labor unions has declined in recent decades, the actual numbers are eye-opening. In 1970, 28 percent of U.S. nonagricultural workers belonged to a union. In 2009, just 12.3 percent of workers were members of unions. Indeed, in 2009 the number of government-employed unionized workers for the first time outstripped the number of private-sector unionized workers.

The influence of the minimum wage has declined as well. Over recent decades, despite occasional increases in the value of the minimum wage, the minimum wage has failed to keep up with inflation. For example, when adjusted for inflation, the 1968 minimum wage of $1.60 per hour was worth nearly 36 percent more than the 2009 minimum wage in actual buying power.

Both unionization and the minimum wage have a greater influence for those in the lower-middle and bottom of the wage distribution because union contracts tend to provide job stability for older workers and raise wages for workers with lower skills relative to those with higher skill levels. Recent data indicates that between 2004 and 2007, unionized workers’ wages were on average 11.3 percent higher—or $2.26 more per hour in 2008 dollars—than the wages of non-union workers with similar characteristics. Though not necessarily causally related, the decline in the real minimum wage over time closely tracks the rise in income inequality.

As unionization rates and the real minimum wage have declined, workers at the lower-middle and bottom of the wage distribution are finding themselves more vulnerable to many of the other trends already discussed here. While the precise role of each force will be debated for decades to come, it is clear that together they have undermined and even reversed the advancement of living standards for many American workers.
Three Proposals to Improve U.S. Workers’ Wages and Employment Opportunities

The dramatic transformation of the American labor market over the past thirty years requires a retooling of American economic policy. Many of our policies are designed for a 20th century economy rather than a 21st century economy. Any policy change that has a chance of improving long-run and broad-based prosperity must confront at least one of the causes outlined in the previous section. Yet it will take a suite of policies to respond to the current-day challenges facing American workers.

The proposals we present as part of such a package are by no means an exhaustive list of policy options. Rather, they each address a discrete reform that could help reverse one of the outcomes described above. Each proposal focuses on a broad area where reform is needed: improving information for college applicants to facilitate the acquisition of the skills necessary to compete in the global economy; finding ways for disability insurance to support the disabled and encourage work so that more Americans can participate in the labor market; and reforming the corporate income tax so that our country remains a haven for innovation, entrepreneurial activity, and new business investment. The breadth of these topics underscores that the future prosperity of the United States and all its workers depends on our ability to remain economically competitive as a nation – a challenge that requires new thinking and new solutions.

Grading Higher Education: Giving Consumers The Information They Need

The lesson behind several of the major labor market trends is that we need to improve the opportunities for more students to achieve post-secondary degrees. The U.S. education system is underperforming and needs the attention of policymakers across all levels of education.

In “Grading Higher Education: Giving Consumers The Information They Need,” Bridget Terry Long of Harvard University proposes that the federal government become a clearinghouse for information about institutions of higher education, including information about admissions, faculty, class size, costs, and, most importantly, economic and other outcomes that students of each institution experience after leaving school.

By providing easy access to this information, Long’s proposed clearinghouse would better equip students to choose the right school for their particular interests and circumstances. It also would enable students to better understand their choices and the rewards of enrolling in specific programs, providing a useful nudge to encourage more students to attend college.

Finally, it could revolutionize the market for higher education by motivating schools to improve the quality of coursework, graduation rates, and other key outcomes that ultimately determine their students’ subsequent standard of living.
Supporting Work: A Proposal for Modernizing the U.S. Disability Insurance System

A disability insurance program is a central feature of the social safety net and a key to creating a fair society: those who find themselves disabled should not be left economically destitute as a result. However, in today’s economy, disability is not the all-or-nothing outcome implicit in the Social Security Disability Insurance program, in which a person either is not disabled and can work full time or is disabled and cannot work at all. Indeed, by failing to support employment and economic self-sufficiency of workers with disabilities, the SSDI program has contributed to a decline in employment and a rise in SSDI enrollment among Americans with disabilities.

In “Supporting Work: A Proposal for Modernizing the U.S. Disability Insurance System,” David Autor and his colleague Mark Duggan of the University of Maryland suggest restructuring the current disability insurance program in a way that upholds its important function of offering protection for workers with disabilities but that also supports those workers who are able and willing to keep working.

The proposal aims to provide early support for individuals with work-limiting disabilities by building on an existing private-sector institution, the private disability insurance (PDI) system. The proposal would extend private sector PDI coverage to the entire workforce in much the same way that Unemployment Insurance and Workers Compensation benefits are universally provided to workers. Such coverage would provide expert vocational assistance, cost-effective workplace accommodations, and partial income replacement to workers with work-limiting disabilities. These benefits would come into force within 90 days of the onset of the disability, when the prospects for successful intervention are highest. Because firms will purchase PDI policies in the private marketplace, they will face appropriate incentives to minimize avoidable movements of employees onto the SSDI system, and to cost-effectively accommodate those who become disabled, as required under the Americans with Disabilities Act.

By adding a “front end” to the U.S. disability insurance system that assists individuals with disabilities to remain employed, this plan would improve the economic security and well-being of individuals with disabilities, as well as their families, employers, and society at large. It would slow the growth of the SSDI program by reversing the needless decline in the employment rates of work-capable adults, thereby improving the long-term solvency of the Social Security system. Keeping more Americans attached to the workforce enhances productivity, increases incomes, reduces reliance on government programs, and ensures that workers with disabilities participate fully in all aspects of American life. Ultimately, it would increase the available pool of workers to include many highly-skilled Americans.

A Modern Corporate Tax

The U.S. corporate tax system introduced more than 100 years ago has not kept pace with changes to the economy. The increasing international mobility of capital and companies has greatly changed the business environment, creating global competition among countries for business investment, and resulting in declining corporate tax rates abroad. Given that the United States has a relatively high corporate tax rate, some suggest that the United States must join this “race to the bottom” by reducing rates and further eroding tax revenue to keep business activity and jobs in the United States. In addition, the recent economic crisis heightened concerns that the corporate tax contributes to economic instability by encouraging excessive corporate borrowing.

In “A Modern Corporate Tax,” Alan J. Auerbach of the University of California, Berkeley argues that reform is needed to address these concerns and ensure that the corporate tax is a viable, progressive revenue source that encourages economic growth and promotes economic stability. His paper proposes a two-step reform to the U.S. corporate tax system that would enhance incentives for equity-financed investments by U.S. businesses and eliminate existing incentives to shift profits abroad.

First, Auerbach would replace the current system of depreciation allowances with an immediate deduction for all investments. This reform would increase firms’ incentives to invest while simplifying the tax system by removing the need for depreciation schedules or inventory accounting. Extending a similar change to the treatment of borrowing would eliminate its current tax incentive.
Second, the plan would replace the current approach to taxing foreign-source income with a system that ignores all transactions except those occurring exclusively in the United States. This step would reduce incentives for U.S.-based firms to shift profits abroad while also promoting international competitiveness by allowing U.S. companies to compete abroad on an equal footing with companies from other countries.

Auerbach’s Modern Corporate Tax would be a simpler approach to taxing corporate income that would raise the same amount of revenue as the current corporate tax and maintain its progressive structure while encouraging investment in the United States, eliminating incentives to borrow funds, and addressing concerns about multinational businesses.

Indeed, this plan could deliver a host of other economic advantages to U.S. businesses and American workers by promoting domestic corporate activity. Estimates of similar proposals suggest these changes could increase national income by as much as 5 percent over the long run, offering substantial impetus to long-run job creation and wage growth.
Conclusion

Even when the unemployment rate gradually declines from its elevated level, the U.S. labor market and the American worker will continue to face long-run challenges. These challenges reflect the fact that the world economy has changed, and America has not fully risen to the challenge of responding to those changes.

The Hamilton Project and the Center for American Progress believe that policy can foster economic growth and broad participation in that growth. Our own history of reversing course for a period in the 90s is evidence. What is more, the three policies outlined here have the potential to help advance these crucial goals, while also improving our nation’s long-run fiscal situation that by itself is a threat to our well-being.

The real test, however, is whether policymakers and the public recognize the deeper challenge and will respond to it with a healthy debate on an array of bold policy actions. The country faces a choice of watching deep-seeded forces march inexorably forward, bringing growing inequality and diminished opportunities for too many American workers or undertaking smart, market-oriented strategies that will lift everyone up.
Endnotes


2  The Labor Department started tracking the statistics in 1948.


5  Autor, p. 4.

6  Autor, p. 5.

7  Compares the ratio of weekly wages for full-time, full-year (40+ weeks) earners with four years of college education to those with a high school diploma only, for white males ages 30–50. Following Autor, earnings below $67 per week in 1982 dollars ($149 in 2009 dollars, adjusted using CPI) are dropped (see Autor, Figure 10).


11  Statistics in this paragraph are drawn from Census Data 1940–2000 and U.S. Census American Community Survey 2008. A bachelor’s degree is considered the completion of four or more years of college in the data from 1940 to 1980. From 1990 onward, the statistics refer to the completion of a bachelor’s degree or five or more years of college.


Creating 21st Century Jobs:
Increasing Employment and Wages for American Workers in a Changing World

In an April 2010 forum, The Center for American Progress (CAP) and The Hamilton Project (THP) examined the long-term structural changes underway in the global economy and the effect that these changes have had on the U.S. labor force. New policies are needed to ensure that American workers have the skills to effectively compete in the 21st century and that America remains a haven for investment and jobs.

Building on the April forum and on previous work, CAP and THP offer three proposals to help address the long-run imperative of creating jobs and improving wages in the United States. These proposals, which span the policy spectrum, include ideas for making higher education accessible to more Americans; enabling as many individuals as possible to participate in the labor force; and improving business incentives to invest in the United States—each of which is critical to ensuring American economic competitiveness in the coming decades. Recognizing the constraints posed by the current fiscal situation, these policies have the added advantage of being deficit-neutral and, possibly, deficit-reducing. They include:

• “Grading Higher Education: Giving Consumers the Information They Need” by Bridget Terry Long, Professor of Education and Economics at the Harvard Graduate School of Education. In this proposal, Long argues that the federal government should become a clearinghouse for useful information about institutions of higher learning. Centralizing and facilitating access to data on admissions, faculty, class size, costs, and economic and professional prospects for graduates would serve three useful purposes. First, it would help students make better college decisions. Second, it would encourage more students to attend college by giving them a better sense of their choices. Finally, it would motivate colleges to improve the quality of education they offer, which in turn would improve students’ career prospects.

• “Supporting Work: A Proposal for Modernizing the U.S. Disability Insurance System” by David H. Autor, Professor of Economics at the Massachusetts Institute of Technology, and Mark Duggan, Professor of Economics at the University of Maryland. In this proposal, Autor and Duggan recommend fundamentally restructuring the nation’s public disability insurance program so that it protects disabled workers, but also enables their participation in the workforce. The reforms that the authors propose are based on the recognition that disability and employment are not mutually exclusive states, and many disabled workers can remain in the labor market if provided adequate support.

• “A Modern Corporate Tax” by Alan J. Auerbach, Robert D. Burch Professor of Economics at the University of California, Berkeley. In this proposal, Auerbach argues that the U.S. corporate tax code, which was designed a century ago, needs to be updated to meet the demands of an increasingly globalized world economy. He introduces an alternative, more progressive way of taxing corporate income that would raise the same quantity of revenue as the current corporate tax while encouraging investment in the United States and eliminating incentives to borrow funds.

There is no panacea for ensuring American competitiveness and prosperity in the 21st century; however, much can still be done to boost American workers’ prospects. These proposals offer discrete policy options for increasing employment and wages for American workers in today’s changing world.