

Creating New Pathways into Middle Class Jobs



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Many policy ideas on how to reduce income inequality and improve the upward mobility of low-income Americans are gaining popularity, on both sides of the political aisle. As usual, Republicans suggest that tax cuts heavily tilted towards the rich can address these problems, though many of their proposals would actually worsen inequality and mobility. Populist Democrats' proposals include minimum wage increases, gender pay equity and the like—which deserve support but would have very modest effects on overall inequality and mobility into the middle class. If we want to have large impacts on these problems, and create systemic rather than mostly symbolic effects, there is only one place to go: postsecondary education or other skills by low-income workers, and whether they get the kinds of jobs that reward these skills in the job market.

Most job training in the United States now occurs in community and for-profit colleges, as well as the lower-tier of four-year colleges. We send many young people to college, even among the disadvantaged, but completion rates are very low and earnings are uneven for graduates. The public colleges that the poor attend lack not only resources but also incentives to respond to the job market. Approaches like sectoral training and career pathways, which combine classroom and work experience, show promise but need to be scaled, while employers need greater incentives to create middle-paying jobs.

This report proposes a three-part strategy for equipping more Americans with new tools for economic mobility and success: 1) A "Race to the Top" program in higher education, where the federal government would help states provide more resources to their community (and perhaps four-year) colleges but also require them to provide incentives and accountability for the colleges based on their student completion rates and earnings of graduates; 2) Expanding high-quality career and technical education along with work-based learning models like apprenticeship; and, 3) Giving employers incentives to create more good jobs.

Other supportive policies, like minimum wage increases and provision of paid leave, should also be implemented. Together these proposals should help create a better set of education and job market choices for today's disadvantaged popula-

tions, with more gaining “middle-skill” jobs that will pay enough for them to enter the middle class.

How Policy Fails U.S. Workers

For decades, we have known that the U.S. labor market rewards higher education degrees very well. We also know that, for low-income youth and adults, the surest way to escape poverty and enter the middle class is to earn a college degree of some sort, whether it is a bachelor’s degree (BA) or an associate’s degree (AA). Indeed, workforce policy for the poor now consists primarily of handing out Pell grants to the poor and sending them to college, with little other support once they are there.

At the same time, our higher education outcomes have been disappointing in other respects. While college degree attainment has risen over time in the United States, so has the gap between the poor and non-poor in college attainment. Low-income students attend college in large numbers, though they are much more likely to attend community and for-profit colleges (as well as lower-tier four-year schools) than those from non-poor families. They are also much less likely to finish their degree programs, especially at the four-year schools. These gaps reflect a number of barriers and liabilities that limit success of poor students—including weaker academic (K-12) preparation, the mounting financial costs of better schools (and their own families’ lack of liquid resources), low information (especially among first-generation college-goers) and pressure to work to support families while being enrolled.¹

The weaker institutions that poor students attend also hurt their educational outcomes, both because of the limited resources of these institutions and their weak incentives to respond to labor market forces. The last factor, in particular, occurs because public institutions usually get the same subsidies from the states for student “seat time”—regardless of whether or not students complete their programs of study and regardless of what they study. The kinds of programs and credentials that the labor market rewards for AA or even certificate recipients—like health technology or other technicians, for example—are often costlier for the colleges to offer (due to expensive equipment or instructors). For that reason, higher education institutions fail to greatly expand teaching capacity in those areas, despite strong labor demand. Instead, too many students at these colleges enroll in and obtain generic AA degrees (in “liberal studies” or “general studies,” for example) with virtually no market value.²

Another reason that labor market rewards to postsecondary degrees have been so strong is because high school preparation for the job market is so weak. Indeed, the earnings of male high school graduates have dropped by roughly 20 percent since the early 1970s and those of females have been stagnant.³ Employers have little reason to believe that high school graduates bring any serious skills to the labor market that they should reward with higher pay (though they do not bring the huge stigma of being a high school dropout, at least among the native-born

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workers). This perception stands in contrast to those of many European employers—for example, those in Germany—who reward high school graduates more handsomely because they know these workers bring solid cognitive plus technical skills to their jobs.⁴

In Europe, career and technical education (CTE)—including apprenticeships—prepares high school graduates not going to college for well-paying jobs. In America, however, “vocational education” historically has been very weak. Starting in the 1960s, minority and low-income parents (as well as advocates) began complaining about “tracking” their students away from college and into very low-paying sectors of the economy.

Today, there are much higher-quality examples of career and technical education in the United States—like Career Academies, apprenticeships, Linked Learning or High Schools That Work—which equip high school graduates for both college and the job market. Indeed, these schools often offer students “contextualized” or applied learning, which might be more successful for those whom the traditional classroom model does not serve well. But the CTE schooling models have not been expanded as much as they could in the United States, with our current near-exclusive focus on academic achievement and higher education.⁵

While these issues limit the *supply* of workers with middle-class skills, are employers creating enough jobs requiring these skills on the *demand* side of the labor market? As Diana Carew of the Progressive Policy Institute has shown, the average earnings of young full-time workers with just a BA have fallen 12 percent over the last decade, and have continued to decline during the recovery.⁶ Perhaps this reflects a rising supply of young BAs in the labor market, especially at a time when overall labor market demand is weak. But the returns to a BA, on average, are still very strong relative to having only high school or AA degrees.⁷

Moreover, many economists have noted growing “polarization”—or a shrinking of the middle of the labor market—with jobs growing more rapidly at the lower and higher ends in recent years.⁸ This shrinking in the middle is most notable when we measure jobs by average wages earned (as opposed to those requiring some postsecondary education or training below the level of a BA). But the employment trends in middle-wage jobs are not all the same. The traditional middle-wage jobs in the labor market—mostly for clerical, production, and construction workers—often went to those with high school diplomas only (or even high school drop-outs). These jobs have been disappearing since the 1980s, and just since the Great Recession began their share of jobs in the U.S. labor market has fallen by about 10 percent.⁹

A newer set of middle-wage jobs is taking their place—in health care, technical jobs, and the high end of the service and retail sectors. These jobs generally do not require BA degrees, though they often require some type of postsecondary education or training and credentialing (in the form of an AA degree or a certificate).¹⁰

This “newer middle” of the labor market has grown by over five percent since 2000.¹¹ Also, many jobs that traditionally required few skills now require more. For example, truck drivers must now be able to track packages through computerized systems, and precision welders must operate numerically-controlled equipment, and even auto mechanics must be able to use computerized diagnostic tools. This newer middle of the job market is growing, but perhaps not as rapidly as the older one is shrinking. Hence, the middle of the market overall seems to be declining quite consistently.

It also appears that employers are building fewer internal labor markets than in earlier years, and perhaps investing less than before in worker training—despite the growing importance of skilled workers in the economy. They are clearly more likely than before to outsource human resource functions to other firms, and to engage in other cost-minimizing (rather than productivity-maximizing) behaviors—in other words, to take the “low road” in human resource practices to profits rather than the “high road.”¹²

Perhaps there are “market failures” driving these decisions—such as imperfect information among employers on the productivity benefits of training, or rigid wages that keep them from sharing the costs of general training with workers, or “coordination failures” across smaller firms in the same industries that keep them from sharing the startup costs of training. Or perhaps employers are right that the best way of maximizing profits is simply to minimize labor costs—a set of decisions that reward shareholders but at the expense of the working public, which could enjoy higher earnings while being very productive under “high road” management practices.

Either way, there are potential public policy responses in our public systems of education—both secondary and postsecondary—and in dealing with employers, that can potentially more middle-class jobs and middle-level skills among workers to fill them.

Education and Workforce Policy: Some New Directions and Developments

How has the policy environment in the United States responded to these changing labor market and education developments?

Since the 1960s, the federal government has used job training (or “workforce development”) programs funded by the Department of Labor to try to generate moderately skilled workers, especially among those who are disadvantaged or have been displaced from good-paying jobs by economic forces. The first such effort, the Manpower Development and Training Act (MDTA) of the early 1960s, was then replaced by the much larger and better-funded Comprehensive Employment and Training Act (CETA) of the 1970s, the Job Training Partnership Act (JTPA) of the 1980s and 1990s, and the Workforce Investment Act (WIA) of the

late 2000s, which was reauthorized as the Workforce Innovation and Opportunity Act (WIOA) last year. Many evaluations show that the impacts of these programs on worker earnings have been mixed, and modest at best.¹³

But, since 1980, the federal resources invested in these programs have shrunked dramatically (though the workforce services provided in Job Centers are still useful to workers while state and local workforce boards still partner with local colleges and help allocate WIOA funds).¹⁴ Because the labor market rewards college credentials much more generously than in the past, federal efforts have shifted to the realm of higher education, and funding through Pell grants has risen. Accordingly, most “job training” for the disadvantaged now takes place at community colleges and for-profit schools, in AA or certificate programs (where the latter usually take one year or less and are sometimes for academic credit, and sometimes not).

To ensure that the programs offered by higher education fit the needs of the labor market, and especially employers, newer models of collaboration between colleges and industry are being developed and widely implemented. In one approach, called “sectoral” training, a workforce intermediary brings together training providers (usually community colleges) and employers in an industry with lots of employment growth and good-paying jobs (below the BA level) so that the training is well-targeted to the needs of employers in that industry; this model has been used most frequently in health care, advanced manufacturing, IT, and some service fields. Rigorous evaluation efforts show that these programs can have quite large impacts on the earnings of the working poor.¹⁵

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In another approach, “career pathways” are developed in which workers combine classroom training and work experience through a sequence of jobs, within or across firms in an industry, and a sequence of credentials that signal their growing skill levels. For instance, unskilled nursing aides can first get CNA certificates, and ultimately go on to get certificates or AAs that enable them to become licensed practical nurse (LPN).

Much activity at the state and regional level is now occurring to develop and implement these models, a process encouraged by WIOA and their local and state workforce boards. The Obama Administration has also encouraged them (referring to the sectoral approach as “job-driven” training) through a series of competitive grant programs, like the Trade Adjustment Assistance Community College and Career Training (TAACCCT) and Workforce Innovation grants administered by the US Departments of Education and Labor.¹⁶ More such programs have been proposed in the President’s FY2016 budget.

Despite all this activity, major questions remain about the success of these efforts. The federal grant programs are many in number, but they are small and fragmented, and the agencies implementing them remain quite “siloeed” from one another. While partnerships in key industries are proliferating at the state and re-

gional level, we have no data on their scale, much less their quality. Low-income students or workers may lack the basic academic skills to be trained in the technical work often needed, especially in the well-compensated STEM fields; and remediation efforts at community colleges for students with weak academic preparation very frequently fail, leading to high dropout rates.

Consistent with these observations, many employers complain about their inability to fill “middle-skill” jobs, even after wages in them have risen substantially, and worry especially about what will happen after their Baby Boomer employees retire from them.¹⁷ On the other hand, small- and medium-sized employers in many industries do not participate in sectoral or career pathway efforts - perhaps because they are not familiar with them, or they do not want to invest their limited time and resources in such efforts (if they feel the workers will still be poorly skilled or have high turnover), or they feel that their needs can be met elsewhere (by outsourcing or offshoring work in such jobs, and organizing their workplaces in ways that eliminate them). Perhaps because of these alternatives, wages have not been rising, even in high-demand jobs or sectors, and on-the-job training overall has not yet rebounded.

Based on the discussion above, what is needed are effective proposals to *help or incentivize employers to create more middle-wage jobs* and to create viable pathways for workers to obtain the *skills needed to fill them*, especially at the sub-BA level and with employer involvement. Indeed, having a wider and more visible set of sub-BA pathways into middle-wage jobs might reduce the numbers of academically under-prepared students who pursue generic AA or especially BA degrees at high public cost and high failure rates (due to dropping out of college). Furthermore, it should be a *clearly stated policy goal to generate both middle-paying jobs and worker skills*—to address the growing reality that skills/credentials alone won’t help anyone if employers aren’t willing to create middle-skill jobs that require them and pay middle-level wages to workers that have them.

Three Ways to Create Middle-Class Skills and Jobs

1. Create A “Race to the Top” in Higher Education

As noted above, community (and lower-tier public four-year) colleges need more resources targeted at services and supports for disadvantaged students, as well as stronger incentives to expand capacity in high-demand fields. Both can be accomplished through a new version of “Race to the Top” (or RttT), which strongly rewarded states for undertaking K-12 reforms in the past decade. Such a proposal would entail a one-time cost of several billion dollars to the federal government—as did the original RttT program - but would generate improved higher education outcomes and reduced expenditures over time on programs for the poor (more of whom would enjoy earnings above the poverty level).¹⁸

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States that create more accountability for their colleges—by partially tying their subsidies for colleges to student outcomes in the classroom and job market—would receive new federal funding. Within federal guidelines, the states would choose which measures to reward and how to do so. But additional federal funding would only go to schools that serve many disadvantaged students, and only for expanding teaching capacity in high-demand fields (like health care or other technician work) or providing better services to these students, such as academic “coaching” and career-counseling as well as more effective “developmental” or remediation services.¹⁹

The new accountability measures would be based on academic success (measured by credits or diplomas earned or successful transfers to other schools) and also on the subsequent earnings of their students. Data systems are now available for the states to measure both (see the Workforce Data Quality Campaign and state efforts to build Statewide Longitudinal Data Systems with federal support). Many states have begun to experiment with such accountability, though most efforts to date are based only on academic rather than employment outcomes. And incentives must be structured to avoid “creaming” by the colleges, who might simply raise their admission requirements and avoid at-risk students to make their outcome numbers look better. This problem can be addressed either by having at least some of the accountability measures defined separately for minorities or disadvantaged students, or by using “value-added” measures of academic success that reward schools not for outcome levels but for improvements among students who might start with a low base level of academic outcomes.²⁰

There are other ways to provide new resources plus incentives for the public colleges. For example, Congress could use the reauthorization of the Higher Education Act to strengthen academic requirements in the Pell grant program while also requiring more services for poor students.²¹ Any of these approaches will likely generate political and legal pushback from the higher education community, both public and private, who might prefer the status quo to a new system based on accountability, though the additional resources provided to them could help limit their opposition.

Similar approaches could also be used to reward public colleges that limit tuition growth rates, or that provide more affordable ways of paying for college to lower- and middle-income students—such as replacing tuition increases with long-term loans and repayment based on future income.

All of these ideas differ substantially from the Obama Administration’s recent proposal for free community college. Though well-intentioned, that proposal would likely take us in the wrong direction by encouraging more students to enroll in two-year rather than four-year colleges or in other pathways to labor market success. Such students would likely see their degree attainment rates fall, and they would displace poorer students from the better programs that are already capacity-strained.²²

2. Expand High-Quality Technical and Work-Based Learning

The logic of technical and work-based learning is to create high-quality pathways into the labor market for young people—especially for those not ready to go straight into higher education—through which they could gain valuable education credentials as well as strong early work experience. Many young people, especially the disadvantaged, now have trouble gaining both.

The contextualized and applied learning in these programs can be more effective for some students who did not do well in traditional classroom settings. Low-income and young people especially value work-based learning because they are paid while learning—in fact, this can be especially important for young parents who must continue supporting their families while in school. Workers can gain the kinds of AAs or certificates with high labor market value while apprenticing, giving them both specific skills relevant to a given employer or occupation as well as more general ones that are portable across firms and industries. And employers also like the apprenticeships, which provide them with workers appropriately skilled and experienced for the work they need (though they might not provide enough of them on their own due to a lack of information about them, or other market failures described above).

The Obama Administration has spawned a number of grants programs to encourage high-quality career and technical education, starting at high schools but perhaps continuing into community colleges, as well as apprenticeships and other models of work-based learning. These include the small Youth Career Connect and American Apprenticeship Grants programs that are already in place, plus a proposed new Technical Training Fund for community colleges. Tax credits for employers who create apprenticeships, such as one South Carolina provides, should be considered as well, at a cost of roughly \$1,000 per new apprentice.²³ Such an initiative might cost as much as \$1 billion (assuming a goal of one million new apprenticeships), though this could be offset by savings on the smaller programs mentioned above.

Technical assistance and other efforts to promote high-quality technical education and apprenticeships could also be incorporated into a new and expanded version of the Carl Perkins Act, which currently provides about \$1 billion in funding for secondary and postsecondary career education. Past efforts to reform the Perkins Act (by the Obama and Bush 43 administrations) by using more of these funds for competitive grants have always met political opposition from the career education community. To be successful, new efforts might need to fund grants in addition to current funding, rather than in place of it. And a broader and more comprehensive approach within one program is preferable to a series of small and fragmented programs. In addition, efforts to expand the higher education part of technical and work-based learning (and also pathways into higher education that begin in secondary school) could also be included in the Higher Education Act as well as the new “Race to the Top” program described above.

However, it is also important to remember that, in a dynamic labor market such as the one we now have (and likely to grow only more so), workers trained for specific occupations and sectors might find their skills become obsolete, as the high-demand fields today are no longer high-demand in the future. This will require sector-based and career education approaches to provide students with strong general skills, which can be portable across firms and sectors. And it will be important to make retraining more available to those workers whose previous occupational training might now become obsolete.

3. Encourage Employers to Create More “Good Jobs”

Merely participating in a sectoral partnership or a career pathway network should help employers create more good jobs, by making it easier to fill them with highly-skilled workers. But policymakers should take additional steps to directly encourage employers to create more middle-wage jobs, and to participate in efforts to generate the needed skilled workers.

Unfortunately, we have less experience with or evidence on what might work in this area. Still, here are some approaches worth trying:

- Tax credits for incumbent worker training (or apprenticeships) that generate higher compensation for less-educated workers;
- Grant programs for firms (either individual or part of an industry network) that choose from a wider range of compensation and training policies to achieve this goal;
- Technical assistance to firms attempting to change their human resource policies in this direction;
- Preference for such firms in government contract procurement and/or requirements on those receiving federal funds (especially Medicare and Medicaid) to create better-paying jobs and career pathways; and
- Moral suasion that provides good publicity and reputations to employers who make such changes.

Policymakers should take additional steps to directly encourage employers to create more middle-wage jobs, and to participate in efforts to generate the needed skilled workers.

While the benefits of any one such policy might be modest, doing all of them together should help create synergies between them, as the effects of a comprehensive and clearly articulated strategy are likely greater than the sum of its individual parts.

Many states offer tax credits for incumbent worker training, though these sometimes decline during recessions. The costs can be contained by limiting the tax credits only to front-line employees without BAs.²⁴ The tax credits for apprenticeships described above would be fairly similar. Grants could also be provided to firms or industries that propose to upgrade workers through a wider range of approaches—including career pathways, profit-sharing, job redesign, and even more stable hours of work for its employees. For example, the state of Michigan ran a successful grants program for training for small- and medium-sized manufactur-

ers in the late 1980s, which generated positive impacts on productivity for participating firms.²⁵ Technical assistance for firms trying to restructure and create better-paying jobs and training can be provided through a program modeled after the Manufacturing Extension Partnership (MEP), which helps manufacturers (often small- and medium-sized ones) make organizational changes to improve their output and productivity.

The federal government should announce its intention to reward firms that adopt such high-road practices with more federal contracts—assuming they meet other criteria for demonstrating their qualifications for such work. It could also require that hospitals and nursing homes receiving federal Medicare or Medicaid funds raise wages and create career pathways for its lowest-paid nursing assistants. And moral suasion can be valuable too. The Obama Administration is attempting to use its Upskill America campaign to highlight the practices of firms engaging in positive human resource practices, though the entire effort could also be given a higher profile that would make more use of the “bully pulpit.”

Other Supportive Policies and Practices

Marketable skills are the best source of security for working Americans who are struggling to adapt to a technology-intensive, globalized economy. The three-part strategy proposed here would dramatically widen pathways into the middle class and help to reverse the erosion of middle-income jobs. Still, there are additional steps federal and state lawmakers can take to reinforce this new strategy. They include:

- Minimum wage increases and stronger enforcement of wage and hour provisions;
- “Paid leave” for all workers (financed at the state level with federal assistance);
- Labor law reform, including provisions allowing “work councils” at nonunion firms to give workers more of a voice in management decisions.

Minimum wage increases at the federal or state levels should be large enough to meaningfully raise earnings for less-skilled adult and youth workers, while not substantially generating employment losses for these groups. The Congressional Budget Office (CBO) suggests that a federal minimum wage of \$10.10 an hour meets these conditions.²⁶

While the Family and Medical Leave Act of 1993 (FMLA) requires employers with 50 or more workers to provide leaves of absence to employees, these leaves are *unpaid*—and too many low- or moderate-income simply cannot afford to take these leaves. Paid leave—which would help working mothers to remain attached to the labor market and to their better-paying jobs—remains one of the most important employee benefits that many workers do not have. While a few localities (e.g., San Francisco and New York) have mandated that employers provide a small number of such days each year, the publicly-financed provision of such benefits (which are now available in California, Hawaii, New Jersey, New York,

and Rhode Island) will be more generous without raising labor costs, and thus unemployment.

In addition, progressives should favor reform of the National Labor Relations Act—which now governs certification elections for unions—to allow *work councils*, through which employees could have more voice in management decisions, and make the preferences of workers better known.

Finally, workers whose skills will remain too low to participate in any such approaches would benefit from the minimum wage and paid leave policies above and also:

- Expanding the Earned Income Tax Credit (EITC), especially for childless adults;
- More support for child care for low-income working parents; and
- A subsidized job creation program in the private and public sectors, along the lines of the Emergency TANF program that quickly created 250,000 jobs for very unskilled workers.²⁷

Together, these policies would generate more middle-class jobs for U.S. workers, along with the skills workers now need to fill them. They would lead to higher earnings for millions of working families, and better productivity in our workplaces. And they would reduce inequality the right way—by enabling more Americans to climb the economic ladder of success.

Endnotes

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- ¹ Harry Holzer, “Improving Economic Opportunity Through Better Human Capital Investments for the Labor Market,” Princeton NJ: Educational Testing Service, 2015. David Deming, Claudia Goldin and Lawrence Katz, “For-Profit Colleges,” *The Future of Children*, Vol. 23, No. 1, 2013. See for comparisons of student outcomes at public and for-profit colleges.
 - ² Ben Backes, Harry Holzer and Erin Dunlop Velez, “Is It Worth It? Postsecondary Education and Earnings of Disadvantaged Students,” CALDER Working Paper, 2014. See for evidence on job market returns to certificates, AAs and BAs in different fields of study. John Bound, Michael Lovenheim and Sarah Turner, “Why Have College Completion Rates Declined?,” *American Economic Journal: Applied Economics*, Vol. 2, No. 3, 2010. See for evidence that institutional quality and resources affect college student completion rates.
 - ³ David Autor, “Skills, Education, and the Rise of Earnings Inequality among the “other 99 percent,”” *Science*, Vol. 244, Issue 6186, 23 May, 2014.
 - ⁴ Nancy Hoffman, *Schooling in the Workplace*, Cambridge: Harvard Education Press, 2011. William Symonds, Robert Schwartz and Ronald Ferguson, *Pathways to Prosperity*, Graduate School of Education, Harvard University, 2011.
 - ⁵ Harry Holzer, Dann Linn and Wanda Monthey, *The Promise of High-Quality Career and Technical Education in the US*, The College Board, Washington DC, 2013. See for a summary of different CTE models and what we know about their effectiveness. The Career Academies have been evaluated rigorously using randomized controlled trials (RCT), while apprenticeship has been evaluated using somewhat less rigorous propensity score matching. The other models should be viewed as “promising” rather than rigorously “proven.”

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- ⁶ Diana Carew, “Surprising New Data on Young College Graduates,” Progressive Policy Institute, Washington D.C., 2014.
 - ⁷ David Autor, “Skills, Education, and the Rise of Earnings Inequality among the “other 99 percent,”” *Science*, Vol. 244, Issue 6186, 23 May, 2014.
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 - ⁸ David Autor, “The Polarization of Job Market Opportunities in the US Labor Market: Implications for Employment and Earnings,” 2010.
 - ⁹ Harry Holzer, *Job Market Polarization and US Worker Skills: A Tale of Two Middles*, Economic Studies, Brookings Institution, Washington D.C., 2015. This shows that the share of clerical, construction and production jobs in the labor market has fallen from 23.5 to 21 percent between 2007 and 2013.
 - ¹⁰ Ben Backes, Harry Holzer and Erin Dunlop Velez, “Is It Worth It? Postsecondary Education and Earnings of Disadvantaged Students,” CALDER Working Paper, 2014. See for evidence on the strong rewards to certificate and AA programs in technical fields.
 - ¹¹ Harry Holzer, *Job Market Polarization and US Worker Skills: A Tale of Two Middles*, *Economic Studies*, Brookings Institution, Washington D.C., 2015. This shows that middle-wage jobs outside of clerical, construction and production jobs grew from 14.8 to 15.2 percent of the labor market in 2000-07 and to 15.6 percent in 2013.
 - ¹² Eileen Appelbaum, Annette Bernhardt and Richard Murnane, *Low-Wage America*, New York: Russell Sage Foundation, 2003.
Peter Cappelli, “Skill Gaps, Skill Shortages, and Skill Mismatches: Evidence for the US,” NBER Working Paper, 2014.
David Weil, *The Fissured Workplace*, Cambridge, Mass.: Harvard Educational Press, 2014.
 - ¹³ Harry Holzer, “Workforce Development,” in M. Bailey and S. Danziger eds. “The Legacy of the War on Poverty,” New York: Russell Sage Foundation, 2013. Generally, rigorous evaluations show positive impacts for disadvantaged adults, especially women, but few positive impacts for displaced workers or youth. WIOA today funds only short-term training through modest vouchers called Individual Training Accounts (ITAs) that cannot possibly have large earnings impacts.
 - ¹⁴ Workers receive “core” and “intensive” services, which include job search assistance or information as well as labor market counseling and testing respectively, at over 3,000 Job Centers (formerly known as One-Stop offices) around the US.
 - ¹⁵ Sheila Maguire et al, *Tuning Into Local Labor Markets*, Philadelphia: PPV, 2010.
 - ¹⁶ The Administration funded \$2B worth of TAACCCT grants over four funding cycles in 2010-13, while Workforce Innovation grants were funded out of WIA budgets. Both provided funding to community colleges or to regional and state partnerships between employers and training providers to provide training for high-demand jobs. Similar approaches have been used to fund apprenticeships and training for the long-term unemployed in the past few years. Most recently, the Tech Hire initiative has created partnerships involving 300 employers in 21 regions around the country to train more workers for jobs in the STEM (or Science, Technology, Engineering, and Math) fields.
 - ¹⁷ Manufacturing Institute, *Boiling Point? The Skills Gap in US Manufacturing*, Washington DC, 2011. See as an example.
 - ¹⁸ The K-12 version of RttT cost the federal government over \$4B during the years it was implemented (roughly 2010-12). Incentives to the states must be large enough, relative to their current levels of spending on higher education, to make it worth their while to engage in the required reforms.
 - ¹⁹ Harry Holzer, “Improving Employment Outcomes for Disadvantaged Students,” in M. Kearney and B. Harris eds, *Policies to Address Poverty in America*, The Hamilton Project, Brookings Institution, Washington DC, 2014. See for a broader discussion of how to implement accountability in higher-education funding.
 - ²⁰ National Conference of State Legislatures, “Performance-Based Funding for Higher Education,” January 2015. See for an up-to-date listing on the higher education accountability measures that states are beginning to implement.

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²¹The College Board, *Rethinking Pell Grants*, Washington D.C., 2013.

²²Center for American Progress, *Report of the Commission on Inclusive Prosperity*, Washington D.C., 2015. See for a discussion on the value of replacing tuition costs with loans using income-based repayment.

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²³Robert Lerman, “Expanding Apprenticeship Opportunities in the United States,” in M. Kearney and B. Harris eds, *Policies to Address Poverty in America*, The Hamilton Project, Brookings Institution, Washington D.C., 2014.

²⁴Kevin Hollenbeck, “Is There a Role for Public Support of Incumbent Worker On-the-Job Training?,” Working Paper, W.E. Upjohn Institute for Employment Research, Kalamazoo MI, 2008. At least before the Great Recession, states spend something below \$1B to fund these programs, at about \$1,000 per participating worker.

²⁵Harry Holzer, Richard Block, Marcus Cheatham, and Jack Knott, “Are Training Subsidies for Firms Effective? The Michigan Experience,” *Industrial and Labor Relations Review*, Vol. 46, No. 4, 1993.

²⁶Congressional Budget Office, *The Effects of a Minimum Wage Increase on Employment and Family Income*, Washington D.C.: USGPO, 2014.

²⁷Anne Roder and Mark Elliott, *Stimulating Opportunity: An Evaluation of ARRA-Funded Subsidized Employment Programs*, New York: Economic Mobility Corporation, 2012. See for some limited evidence on the effectiveness of the TANF emergency program in net new job creation and some post-program impacts on employment outcomes for disadvantaged workers.
MDRC, *Paycheck Plus: Making Work Pay for Low-Income Single Adults*, New York, 2014. See also for description of a pilot program in New York City, called Paycheck Plus, to make childless adults eligible for EITC payments.

About the Author

Harry J. Holzer is a professor of public policy at the McCourt School of Public Policy, Georgetown University and a visiting fellow in Economic Studies at Brookings. He is also an Institute Fellow at the American Institutes for Research and a former Chief Economist at the U.S. Department of Labor. He received his AB (1978) and Ph.D. (1983) from Harvard University in 1983. His work focuses on the labor market for less-educated and lower-wage workers, and on policies to improve their outcomes. He has written or edited 11 books and over 50 articles in peer-reviewed journals, and has testified before congressional committees and other federal agencies on many occasions.

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