Workforce development as an antipoverty strategy: What do we know? What should we do?

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The paradox of workforce development for the poor

Over the past few decades, the gap in earnings between moreand less-educated American workers rose.¹ The number of adult workers in low-wage jobs also rose—partly because of the growing supply of these workers, associated with welfare reform and immigration (among other forces), and partly because of growing demand for workers in low-paying jobs.² And, at least among less-educated and minority men, the number with criminal records and other characteristics that make them hard to employ grew dramatically as well.

A consensus has developed among economists and policy analysts on the increased importance that workforce skills play in explaining the labor market problems of the disadvantaged. The lack of skills and educational credentials among disadvantaged racial and ethnic minorities and the poor contributes to their low employment and earnings and inhibits their ability to advance in the labor market. As a result, many policymakers and researchers have suggested increased public investments in improving early education opportunities, reforming school practices in the K-12 years, and improving access to higher education.

In contrast, less support has emerged for the argument that "workforce development" (or employment and training) programs raise employment and earnings for disadvantaged youth and adults. Employment and training programs can be defined as any kind of education or work experience that directly prepares workers for specific occupations or jobs, and potentially includes many types of activities that can occur in the classroom or on the job, both formally and informally, for workers either currently employed or not employed.³ The broader concept of workforce development might also include a range of employment services, including pre-employment assessments and job placement assistance as well as post-employment supports, such as assistance with child care or transportation.

Federal funding of these efforts has fallen over time in real terms and especially relative to the size of the economy, even though the economic rewards to skills have grown. Why has support for workforce development policies fallen as an antipoverty strategy? What are the most recent developments in the field, and what is the state of knowledge about their success? Is a resurgence of interest in workforce development for the poor merited? And, for low-wage workers for whom workforce development is unlikely to be a successful option, what other policies might work?

Trends in federal funding

Figure 1 shows overall federal funding levels for employment and training programs at the Department of Labor (DOL). The figure plots annual expenditures on employment and job training from the Manpower Development Training Act (MDTA) in 1963 through WIA in 2003 in constant dollars. After peaking in real terms in 1979 at about \$17 billion, funding declined until 1985, and has either remained flat or declined more since then. By 2003, inflation-adjusted funding had fallen by about 65 percent from its 1979 peak; by 2008, by nearly 70 percent. Moreover, because the real economy has more than doubled in size since 1979, this funding has fallen by about 87 percent in relative terms-from roughly 0.30 percent to 0.04 percent of Gross Domestic Product (GDP). Because WIA now funds a broader range of services for a broader set of participants than DOL employment and training programs did 30 years ago, the decline in spending on the disadvantaged, especially for direct employment or training, has been even greater. Outside the Department of Labor, employment and training expenditures have increased in some cases (e.g., for Pell grants) and decreased in others, but have not fully offset the dramatic declines in DOL funding, especially relative to the growing needs of the low-income population.

Perceptions of ineffectiveness: The evaluation literature

A major reason for the decline in public spending on, and interest in, workforce development is a widespread percep-



tion that the programs are not cost-effective at raising future earnings of participants. The generally large private and social returns to education and training in our economy are not in doubt. Why might publicly funded training for disadvantaged adults or youth be less effective?

One reason may be that the basic cognitive skills of disadvantaged adults are too weak for limited occupational training to effectively raise. Another might be that the motivation of disadvantaged adults to participate in training is low, especially if the programs are time-consuming. This might be particularly true for working (especially single) parents who are already pressed for time, or for young adults who are not yet ready to "settle down." Or perhaps prospective employers are not impressed by any government-sponsored training, if the other educational and work experiences of trainees are weak.

Is the general perception of program ineffectiveness warranted by the evidence? The estimated impacts of training programs for disadvantaged workers on their later earnings in this literature vary considerably by demographic group, with more positive impacts generally observed for adult women than men and for adults and in-school youth than for out-of-school youth. The estimated impacts also vary by the following: (1) Whether program participation has been voluntary or mandatory; (2) whether participants are "hard to employ," with more severe disabilities or barriers to work (such as criminal records, substance abuse, or very poor skills); (3) the duration or intensity of the treatment; 4) the nature and content of the treatment-i.e., whether it focused primarily on classroom training, on-the-job training, work experience; (5) the scale of the program considered, and whether or not it is a replication effort; and (6) whether the evaluation uses survey or administrative data.

After a review of past evaluation results, detailed in the full version of this article, I conclude that many modest programs for disadvantaged adults in the past have worked reasonably well, as have a few intensive efforts for the harder to employ. Similarly, while much remains unknown about exactly what approaches are most successful for disadvantaged (especially out-of-school) youth, the successes detailed in my article challenge the notion that nothing works for these youth.

Other approaches, other problems, and a changing labor market

The conclusion that job training programs for poor adults and youth are not cost-effective, while not very accurate, has been reinforced by several widely held perceptions, including:

- Other approaches for improving the earnings of the disadvantaged are more cost-effective than training, and therefore are more worthy of scarce public dollars;
- Problems of the disadvantaged other than their lack of occupational skills and work experience are more serious; and
- A changing labor market is rendering job training less relevant than it might have been in previous generations.

I review each of these arguments below.

Are other approaches more cost-effective?

For adults, the apparent success of welfare reform in raising employment and earnings among single mothers has been accompanied by a sense that "work first" approaches are more cost-effective than education and training. But wages for former welfare recipients remain quite low, with little evidence of rapid labor market advancement. If wage growth is hard to achieve, then critics of education and training argue for raising employment levels in low-wage jobs through low-cost approaches such as job search assistance, and then publicly supplementing low earnings through extensions of the Earned Income Tax Credit (EITC) and expanded child care subsidies and other work supports.

But is it clear that these other efforts dominate job training in cost-effectiveness? My own calculations suggest that moderately effective training for adults and youth might be at least as socially efficient as the EITC. For instance, my estimates suggest that every \$1 of expenditure on the EITC raises the earnings of single mothers by about \$0.25, and therefore raises their incomes by \$1.25 (without accounting for any welfare cost of taxation).⁴ This compares with the near doubling of earnings generated per net dollar spent on the Job Training Partnership Act (JTPA) over a 5-year period.⁵ Of course, most training programs are not necessarily this successful, and training and the EITC are not mutually exclusive. However, given the high annual costs of the EITC relative to the very small sums now spent on training disadvantaged adults, increased federal spending on WIA and/or Pell grants (in addition to some possible extensions of the EITC) is clearly warranted.6

Are other problems more serious?

Recent efforts to improve skills and long-term earnings potential among the disadvantaged have focused not on adults and youth, but on young children. Many high school reform efforts also focus primarily on cognitive skills and academic achievement and are designed to promote greater college attendance and completion, rather than training and work experience for high school students.

The current emphasis on younger children and academic skills reflect a growing awareness of:

- The large achievement gap between racial and income groups that develops very early in the lives of children;⁷
- The ability of the achievement gap to account for large portions of differences in college attendance and completion and in earnings differences;⁸ and
- Evidence that the relative and real wages of high school graduates stagnated while the college/high school earnings gap widened dramatically since the 1970s.⁹

Although the evidence on these three points is very solid, they do not necessarily imply an exclusive focus on early childhood preparation, test scores, and college outcomes. A strong proponent of primarily investing in early childhood

education (perhaps at the expense of later efforts) is Nobel laureate James Heckman.¹⁰ He documents that cognitive skill formation occurs most easily at very early ages, and that these early skills lead to further cognitive skills over time. He also documents that noncognitive skills can be influenced at early (as well as somewhat later) ages, and these also affect labor market outcomes of high school graduates. The importance of early cognitive skill-building leads Heckman to conclude that the social returns to human capital enhancement decrease strongly with age, and that training programs beyond a certain age are not cost-effective. As a result, he advocates a major reorientation of resources away from training of youth and adults towards early childhood programs (along with some additional expenditures later in childhood, as these are viewed as complements to successful early childhood investment).

However, the empirical evidence on returns to education and training does not always fit the predicted declining pattern over the life cycle.¹¹ In particular, evidence of very strong returns on pre-K is limited to a few small and intensive programs that have never been replicated or scaled up, while rigorous evaluation evidence of positive impacts from efforts that have gone to scale (like Head Start) is more limited and often reflects the state of the program as it was in the 1960s or 1970s rather than today. Also, some newly popular statewide universal pre-K programs show highly varied short-term impacts on achievement and quick fade-out of cognitive impacts.¹² And the strong returns per dollar spent in the estimated impacts of programs like the Career Academies for high school students, the National Supported Work demonstration, and JTPA for adults, suggest that some training programs for youth and adults are quite effective.¹³ Once again, I view the earlier investments in children and the later ones in youth and adults as complements, not substitutes, and support some expansion of both.

Similarly, I reject the notion that only test scores and cognitive achievement and ultimately college attendance merit public attention. Universal college attendance seems unachievable in the short term—especially when roughly a quarter of our youth are not finishing high school on time.¹⁴ The more modest goal of "some postsecondary for all" seems appropriate. The returns to a year or more of community college and to various kinds of career and technical education in secondary school are strong enough to justify some continued investment in these efforts.¹⁵

A changing labor market

Two economic developments that have negatively affected the employment and earnings of the disadvantaged have contributed to the declining interest in training programs. First, some analysts expect that continuing globalization, with greater offshoring of service activities and more immigration, might enable employers to meet their future labor needs more easily with foreign (or foreign-born) labor than by training native-born, less-educated workers.¹⁶ Second, some authors have documented growth in both high-skill and low-skill jobs relative to those in the middle.¹⁷ These developments imply that there may be little reason to train less-educated workers for relatively unavailable middle-level jobs.

I caution against overstating these trends. Immigrants are heavily concentrated at the bottom and top of the skills distribution; they may be least effective in filling demand for middle-skill jobs.¹⁸ Also, many economic sectors that use middle-skill labor—such as health care, construction, retail trade and the like—exhibit a strong "home bias," in which the work will remain in the U.S. where customers are located. As for the need of employers for middle-skill labor, a recent study concludes that, while mildly shrinking, the middle of the labor market will continue to generate strong demands for hiring over the next decade and beyond.¹⁹ This is especially true for gross hiring, including replacement demand for retirees, as opposed to net employment shifts across skill-level categories. Thus, I still see a continuing need to train less-educated workers for jobs near the middle of the skill spectrum.

Summary

On close examination, the arguments that investments in workforce development for the poor should diminish because other approaches are more cost-effective, other problems are more serious, and the labor market is changing are, like the arguments of weak cost-effectiveness, not fully convincing. Perhaps the real reasons for why employment and training programs have diminished so dramatically are political, rather than substantive. In a world of scarce fiscal resources, advocates for the poor concentrate their limited political capital on direct cash or near-cash assistance, like welfare or child care, rather than on the more indirect and longer-term benefits that accrue from job training. And, as resources for workforce development programs diminished over time, the interest in fighting for them diminished as well.²⁰

Recent labor market developments and training approaches

In recent years, newer approaches to workforce development, which might be more effective for the poor than those reviewed above, have developed, generating more enthusiasm among state and local policymakers. These approaches tend to emphasize the importance of linking education and training more closely to jobs—especially for sectors and employers where well-paying jobs are still readily available for less-educated workers, and where these jobs will not be easily filled by employers on their own. Targeting training for the disadvantaged to these sectors and jobs might thus serve a dual purpose of supporting economic development while also helping the poor, and thus improving labor market efficiency as well as equity.²¹

New approaches for disadvantaged adults

The box on page 66 lists some promising new approaches for meeting employer demands by training disadvantaged adult workers, and some prominent programs around the country that apply these approaches, albeit at relatively small scales. These approaches generally involve some combination of the following: (1) Education and training (sometimes but not always at community colleges) that give workers a postsecondary credential; (2) direct ties to employers or industries that provide well-paying jobs in key sectors; and (3) a range of additional supports and services to help workers deal with problems that arise (such as child care and transportation), either during the training period or beyond.

In addition, labor market intermediaries often bring together the workers, employers, training providers, and sources of supports needed to make this process work. The intermediaries might help overcome employer resistance to hiring workers (perhaps owing partly to discrimination) by providing more information on positive worker skills and attributes, and by carefully screening the applicants whom they refer to these employers. If the basic skills of the workers are not sufficient for their participation in the needed occupational training, the potential workers take remedial "bridge programs" at the community colleges. Intermediaries provide not only job placements with employers in well-paying jobs, but also in some cases a range of post-employment services to deal with problems that frequently arise in new working contexts. The direct involvement of employers and the availability of jobs at the end of training help improve the match between the skills being acquired and the demand side of the labor market; in some cases, employers are even encouraged to change job structures and promotion ladders, so that more "good jobs" are created to match the new skills of workers. The direct ties to available jobs at wages above their current levels of earnings should motivate the disadvantaged to undertake the training. Workers also often receive a certification that indicates attainment of general and specific occupational skills, thereby providing opportunities for mobility across employers and occupations in the future.

The best-known approaches that combine some or all of these elements include sectoral training, incumbent-worker training, and the building of career ladders or career pathways. Sectoral training targets specific economic sectors at the local level where labor demand is strong and well-paying jobs are available for those without four-year college degrees. Incumbent worker training programs sometimes use state funds to subsidize employer-sponsored training and upward mobility for entry-level workers in the firms that currently employ them. Efforts to build career ladders into low-skill jobs, like nursing aide positions, might enable low-wage workers to progress either with their current employers or with other firms in the same industry. Finally, several states have developed career pathway programs that reach into the high schools and community colleges and generate clear progressions to skilled jobs in particular industries through packages of education, training, and work experience.²²

Because these are small scale programs that have not been rigorously evaluated, we do not know the extent to which they can be successfully scaled up, and whether or not they are cost-effective. But some sectoral programs—like the Extended Care Career Ladder Initiative in Massachusetts or the Wisconsin Regional Training Partnership—have already achieved impressive scale. The Career Pathways and Ready to Work programs in Kentucky and Arkansas are statewide efforts to link community colleges to the working poor and to higher-wage jobs and employers in those states. The evaluation evidence is so far limited to descriptive outcomes for small programs, although some important evaluations are in progress and the results are pending.²³

All of these new approaches to employment and training for poor adults require careful attention to natural tensions that can arise between "economic development" and "antipoverty" efforts. Employers are often reluctant to participate in antipoverty programs, which can tend to stigmatize the workers they are designed to help. The employers might well prefer to use public funding for others whom they might have hired and trained anyway. Targeting program resources on disadvantaged workers is needed to ensure that scarce public funds do not provide windfalls to such employers. At the same time, to maintain both employer interest and broader political support, some flexibility might be needed to provide funding to less-educated workers who are not necessarily poor.

New programs for ex-offenders and at-risk youth

Among newer approaches to improve employment options for the hard to employ, transitional jobs have recently gained some popularity. Much like Supported Work, transitional jobs generally provide adults who have little formal work history roughly 6-12 months of paid experience, either in a nonprofit or for-profit setting. This is particularly important for the ex-offender population, which has grown enormously in recent years and faces significant barriers to employment.24 Thus, the Center for Employment Opportunity (CEO) in New York provides every ex-offender leaving Rikers Island Prison the opportunity for transitional jobs. CEO has been evaluated with a random assignment design, and preliminary results suggest a sizable drop in recidivism for those entering transitional jobs soon after release.²⁵ Other programs for ex-offenders (like the Safer Foundation in Chicago) provide training and job placement services without the guarantee of a transitional job; these programs are considerably less expensive, though we do not know how cost-effective their services are.²⁶ But whether any of these actually improve employment outcomes over the longer-term for ex-offenders and the hard to employ more generally remains uncertain.

As for at-risk out-of-school youth, a number of model programs are being investigated in a variety of settings. Several dropout prevention programs for youth in high school, both during and after school hours, are being developed; some of these are programs within existing high schools, and others involve broader efforts.²⁷ In addition, new "dropout recovery" models in alternative/charter schools now combine high school completion with the beginning of postsecondary education.²⁸ Recent evaluation evidence shows strong short-term impacts of the National Guard's Challenge Program on the attainment of GEDs or high school diplomas among young people who had dropped out. The Job Corps shows fairly strong early impacts on earnings that fade somewhat with time, though the program still appears cost-effective for those aged 20 and

New Training Approaches: Promising State and Local Programs

Sectoral Training Programs

- Cooperative Home Care Associates (CHCA)—Developed by the Paraprofessional Health Care Institute in the Bronx, CHCA is a worker-owned home health care cooperative that trains and employs home health care aides. Founded on the belief that higher quality jobs will lead to higher quality care, CHCA aims to restructure the long-term care industry by serving as a model employer that offers higher wages and benefits, supportive services, full-time work, opportunities for career growth, and reduced turnover. The program provides classroom training, on-the-job training, and peer mentorship. As employees of CHCA, program participants are guaranteed a paid wage for a minimum of 30 hours per week, receive free health insurance, and earn dividends. Internal career ladders offer employees the opportunity to move into higher-paying administrative positions. Over 900 workers are members of the cooperative, and over 200 per year join annually and receive training.
- AFSCME 1199c Training and Upgrading Fund—Funded through the provision of 1.5 percent of gross payroll by participating hospitals, nursing homes and other providers in Philadelphia, this program provides training and career ladders for certified nursing assistants (CNAs) and licensed practical nurses (LPNs). Each student is placed with a case manager to provide ongoing career and personal counseling. In 2005, the program provided training to over 4,000 individuals.
- Wisconsin Regional Training Partnership (WRTP)—WRTP is a nonprofit association of businesses and unions that has served employers, employees, job seekers, and unions in the Milwaukee area since 1996. WRTP works in several industries including manufacturing, health care, construction, and hospitality. Firms that join WRTP agree to develop education and training programs on-site or at community colleges and provide a payroll contribution. In return, they receive technical assistance to strengthen technology and workplace practices, improve the skills of incumbent workers, and recruit and train new workers. Nearly 100 employers with about 60,000 workers participate.

Career Ladder Programs

- Kentucky Career Pathways—Operating at all 16 community and technical colleges in the state, this initiative generates partnerships with businesses and has developed "pathways" in health care, manufacturing, construction, and transportation. It mostly targets incumbent workers for training and upgrading in their companies. Participating institutions are encouraged to offer curricula in modularized formats, at alternative times (such as evening and weekends), and at alternative sites, such as at the workplace. Colleges are also encouraged to integrate intensive student support systems including improved advising, mentoring, and career counseling strategies. Currently over 1,100 workers participate.
- Arkansas Career Pathways—Instituted at 11 community colleges (out of 22) around the state, the program has created career pathways in a variety of sectors and has served about 2,000 workers in a short time period. The program features training programs that are clearly and closely linked to real local job opportunities upon graduation; "bridge" classes providing basic skills and workplace competencies that bring students to skill levels required for college entry; "fast track" two-semester developmental education programs that provide contextualized instruction to reach skill level required for advanced college courses; and intensive support services offered by a case manager that provide academic advising and access to other supports, including child care and transportation.
- Massachusetts Extended Care Career Ladder Initiative (ECCLI)—ECCLI aims to improve the quality of nursing home care through instituting career ladders and promoting skill development and other supportive practices among nursing home staff. The program provides grants to nursing homes and home health agencies who may partner with other long-term care facilities, community colleges, WIBs, and others to create new career ladders for direct care staff and to address staff training, work environment, and quality of care issues. Partnerships involve 15 community colleges around the state and over 150 nursing homes (about 20 percent of the total). Over 7,500 workers have participated to date. Most are CNAs seeking to upgrade skills and perhaps become LPNs.

Incumbent Worker Programs

- New Jersey Workforce Development Program—Operated by the New Jersey Department of Labor and all 19 community colleges in the state, the program funds incumbent worker training through grants to employers. It also includes the Supplemental Workforce Fund for Basic Skills, to finance basic education related to work. In Fiscal Year 2006 the supplemental program alone funded over 14,000 individuals. The program pays for the cost of the training, and employers pay workers wages while they attend classes (usually at the worksite). The programs are financed by Unemployment Insurance (UI) taxes on both employers and workers.
- Pennsylvania Incumbent Worker Training Fund—This is a large-scale statewide initiative to enhance the skills and earnings of incumbent workers in key targeted industries. The program provides grants to regional partnerships among employers, workforce development systems, and educational institutions and has trained over 4,000 individuals. Begun in 2005, the program is complemented by the Workforce and Economic Development Network of Pennsylvania, which provides grants to 28 community colleges to deliver basic skills to workers at their employer.

Source: H. Holzer and K. Martinson, "Helping Poor Working Parents Get Ahead: Federal Funds for New State Strategies and Systems." Washington DC: The Urban Institute (2008).

above (but not for teens). And programs like YouthBuild and the Youth Service and Conservation Corps need more evaluation evidence before we can gauge their impacts.

Conclusions

In a labor market that places a greater premium on skill development than ever before, we now spend dramatically fewer resources on the training of disadvantaged workers than we did in the 1970s. In general, the evidence for adults indicates that modest training and work experience programs can generate modest impacts that are cost-effective even though they do not dramatically improve the lives of the poor. Some programs for youth who are still in school, like Career Academies, appear to be cost-effective. Those for out-of-school youth have not been as successful, though we are starting to see more positive evidence emerge on newer efforts (like the National Guard Challenge program). For exoffenders, some preliminary evidence on "transitional jobs" for ex-offenders suggests a reduction in recidivism, though less impact on subsequent earnings.

Overall, the conventional wisdom that "nothing works" in the training of disadvantaged youth and adults, or that investments in other kinds of education (like early childhood programs) or in work supports (like the EITC) are more costeffective than workforce development, is not clearly supported by the evidence. I thus reject the view that the dramatic declines in federal investments in workforce development for the poor can be justified by a lack of cost-effectiveness or by other labor market developments.

On the other hand, I am skeptical that workforce development will ever be sufficient on its own to dramatically improve the life chances of disadvantaged adults and out-ofschool youth. Many among the current stock of poor workers will likely never have access to additional training and might not benefit from it if they did. Perhaps workforce development is best seen as an important component of a broader strategy that also includes stronger income supplementation for the poor (like extensions of the EITC to childless adults and noncustodial fathers who do not now qualify for much); additional work supports (like child care and transportation) and benefits (like health insurance and parental leave); as well as a range of educational approaches that begin (but do not end) with high-quality early childhood and pre-K programs. And, since so much remains unknown about exactly what is cost-effective in workforce development efforts for youth and adults, we need to generate a great deal more knowledge to guide policymakers in their choices.

Thus, I argue for the following workforce development policy priorities:

1. *Greater funding should be available for Pell grants*, since they now finance much of the community college training at the core of our workforce development system, and since funding has not kept up with growing needs. Indeed, the recent funding increases that were part of the American Recovery and Reinvestment Act for the next two years should be maintained over time. These should be supplemented by additional reforms to make Pell grants more effective and more accessible to low-income adults and youth.²⁹

- 2. Funding for the federal workforce system for adults should be expanded as well, to restore at least some of what has been cut so dramatically in recent years. WIA now pays for a range of employment services and training not funded by Pell grants and an array of other workforce development programs: core and intensive services; funding of training for displaced workers; adult basic education (especially English instruction for immigrants); and administration of One-Stop offices. These are worth preserving and expanding. However, the reauthorization (or replacement) of WIA in 2009 or beyond should also incorporate a greater emphasis on building state-level workforce development systems that target good jobs in growing sectors for the disadvantaged, with the kinds of demand-oriented training programs plus support services described above. Additional funding for programs that reduce recidivism among ex-offenders, and for other hard-to-employ workers, is warranted as well.
- 3. *Funding for effective programs for at-risk youth*—such as high-quality career and technical education, efforts to expand their access to higher education, and various categories of youth development and mentoring—should also be increased. States should receive greater federal support as they experiment with new dropout prevention and recovery efforts and develop youth systems at the local level.
- 4. In all of the above categories, *an aggressive program of rigorous evaluation* should accompany all expansions of funding. The areas most in need of demonstration projects are where our knowledge remains most limited—such as what works to improve earnings for out-of-school youth and ex-offenders.

This list of priorities suggests that program expansion and rigorous evaluation should proceed simultaneously, and in ways that allow evaluation to continuously inform program expansion over time. At least some of the funding increases should be implemented by competitive rather than formula grants to states or cities, and renewal of these grants should be conditional on strong observed performance and use of proven programs. Elsewhere I have outlined how the federal government could fund competitive grants for states to develop innovative programs.³⁰ The federal government would provide states with substantial oversight and technical assistance, and would also provide bonuses for performance.³¹ Rigorous evaluation would be required, and renewal of grants to states in subsequent years would be conditional on the incorporation of lessons learned through evaluation. Such a system could be designed as a complement to the current WIA system, or as a major part of a new reform effort.

Whatever path is taken, we need to expand funding for a range of workforce development efforts for disadvantaged

youth and adults. At the same time, some consolidation of the dozens of programs in the federal budget that now fund employment and training, and some reforms aimed at improving system performance, is also warranted.■

²D. Autor, L. Katz, and M. Kearney, "The Polarization of the U.S. Labor Market." National Bureau of Economic Research (NBER) Working Paper, 2006.

³See C. O'Leary, R. Straits, and S. Wandner, "U.S. Job Training: Types, Participants, and History," in *Job Training Policy in the United States*, eds. C. O'Leary et al. (Kalamazoo MI: W.E. Upjohn Institute for Employment Research, 2004) for a listing that includes remedial training in the classroom (including both basic academic and "soft skills," such as language and communication); "customized" training for particular employers and sectors; and "postemployment training" in classrooms or directly on the job. Work experience programs that try to generate basic job-readiness for the "hard to employ" can also fit into this definition.

⁴Details of these calculations are available from the author.

⁵H. Bloom, L. Orr, S. Bell, G. Cave, F. Doolittle, W. Lin, and J. Bos, "The Benefits and Costs of JTPA Title II-A Programs," *Journal of Human Resources*, 32, No. 3 (1997): 549–576.

⁶Elsewhere I have argued for extending the EITC to childless adults, especially adult men who are noncustodial parents of children and who pay child support. See A. Carasson, H. Holzer, E. Mag, and E. Steuerle, *The Next Age for Social Policy: Encouraging Work and Family Formation among Low*-*Income Men* Washington, DC: The Urban Institute, 2008.

⁷R. G. Fryer and S. D. Levitt, "Understanding the Black-White Test Score Gap in the First Two Years of School," *Review of Economics and Statistics* 86, No. 2 (2004): 447–464.

⁸W. Johnson, and D. Neal, "Basic Skills and the Black-White Earnings Gap," in *The Black-White Test Score Gap*, eds. C. Jencks and M. Phillips (Washington DC: The Brookings Institution, 1998).

⁹R. Blank, S. Danziger, and R. Schoeni, *Working and Poor* (NY: Russell Sage Foundation, 2007).

¹⁰For example, J. Heckman, "Schools, Skills, and Synapses," NBER Working Paper, 2008.

¹¹L. Karoly, "Caring for our Children and Youth: An Analysis of Alternative Investment Strategies," Los Angeles CA: The Rand Corporation (2003). Karoly's findings were at least partly based on strong estimated impacts of the Job Corps and Quantum Opportunities, which faded out or failed to be fully replicated in subsequent evaluations. Her summary still includes many interventions for youth and adults that appear fairly cost-effective.

¹²For achievement impacts see: V. Wong, T. Cook, S. Barnett and K. Jung, "An Effectiveness-Based Evaluation of Five State Pre-Kindergarten Programs," *Journal of Policy Analysis and Management*, 27, No. 1 (2008): 122–154. For cognitive impacts, see: C. J. Hill, "The Longer-Term Effects of a Universal Pre-Kindergarten Program," working paper, Georgetown University, 2007.

¹³Heckman himself notes the quite positive impacts of JTPA, at least under some assumptions, and of the National Supported Work demonstration for disadvantaged adult women in J. Heckman, R. Lalonde and J. Smith, "The Economics and Econometrics of Active Labor Market Programs," in *Handbook of Labor Economics, Vol. 3A*, eds. O. Ashenfelter and D. Card (Amsterdam: North Holland, 1999). In keeping with his view that positive noncognitive impacts on adolescents and teens are achievable, he praises youth development and mentoring programs for in-school youth in some of his writings as well. ¹⁴J. Heckman, and P. LaFontaine, "The American High School Graduation Rate: Trends and Levels," unpublished manuscript, University of Chicago, 2007.

¹⁵R. Lerman, "Career-Focused Education and Training for Youth," in *Reshaping the American Workforce in a Changing Economy* eds. H. Holzer and D. Nightingale (Washington, DC: Urban Institute Press, 2007).

¹⁶Freeman, R., "Is a Great Labor Shortage Coming? Replacement Demand in a Global Economy," in *Reshaping the American Workforce*.

¹⁷D. Autor, L. Katz, and M. Kearney, "The Polarization of the U.S. Labor Market."

¹⁸"Middle-skill" jobs might be defined as those requiring something more than a high school diploma, in terms of education or training or work experience, but less than a bachelor's degree. See G. Borjas, "Immigration Policy and Human Capital," in *Reshaping the American Workforce* for detail on the skills distribution.

¹⁹H. J. Holzer and R. Lerman, "America's Forgotten Middle-Skill Jobs: Education and Training Requirements for the Next Decade and Beyond," Washington, DC: The Workforce Alliance, 2007.

²⁰Indeed, the willingness of big-city mayors to fight for employment and training funds has dropped considerably since the late 1970s, when CETA expenditures on public service jobs and other kinds of training were so much more substantial.

²¹Andersson et al. stress the importance of improving the access of the poor to well-paying jobs in high-wage firms and sectors to improve their advancement prospects in the labor market; F. Andersson, H. J. Holzer, and J. Lane, *Moving Up or Moving On: Who Advances in the Low-Wage Labor Market?* (New York: Russell Sage Foundation, 2005).

²²D. Jenkins, "Career Pathways: Aligning Public Resources to Support Individual and Regional Economic Advancement in the Knowledge Economy," New York: Workforce Strategies Center, 2006.

²³M. Conway, L. Dworak-Munoz, and A. Blair, "Sectoral Workforce Development: Research Review and Future Directions," Washington, DC: Workforce Strategies Institute, The Aspen Institute, 2004.

²⁴J. Travis, *But They All Come Back: Facing the Challenge of Prisoner Reentry*, Washington DC: The Urban Institute, 2005.

²⁵D. Bloom, C. Redcross, J. Zweig, and G. Azurdia, "Transitional Jobs for Ex-Prisoners." New York: MDRC, 2007.

²⁶These programs tend to focus on the labor market, but provide little treatment for substance abuse or mental health issues (like Post Traumatic Stress Disorder), and therefore are already targeted towards the relatively more job-ready portion of the offender population.

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³⁰H. J. Holzer, "Better Workers for Better Jobs: Improving Worker Advancement in the Low-Wage Labor Market," Washington DC: The Brookings Institution, The Hamilton Project, 2007.

³¹Since performance measures for program participants can be manipulated through who is allowed to enter or exit the program, these should be supplemented or even replaced by state-wide measures where improvement is expected in employment outcomes. This would also encourage states to build greater scale into their efforts.

¹This article draws upon "Workforce Development as an Antipoverty Strategy: What Do We Know? What Should We Do?" in *Changing Poverty, Changing Policies*, eds. M. Cancian and S. Danziger (New York: Russell Sage Foundation, 2009).