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Employment and training for mature adults: The current system and moving forward

Paul Osterman

osterman@mit.edu

NTU professor, MIT Sloan School of Management

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Introduction

Since the late years of the Eisenhower Administration, when alarms were first raised about the impact of what was then called cybernation there have been cycles of interest in the role of training policy for addressing perceived national challenges. During the War on Poverty, youth unemployment and juvenile delinquency motivated initiatives including summer youth jobs to the Job Corp and a great many others.¹ During the Clinton years concerns about lagging American competitiveness relative to Germany and Japan led to efforts to import elements of the German apprenticeship model as well as efforts to encourage firms to invest more in training their workforce.² More recently, trade shocks and disruption caused by robots and artificial intelligence have resulted in a renewed interest in public employment and training policy.

There has been a great deal of thought given on how to best prepare young people for work but it seems fair to say that less attention has been paid to adults. The case for thinking seriously about how to help adults cope with economic shocks is strong, both because of the economic implications for individuals and families and because of the risks to social stability if large numbers of people find themselves in economic distress.

This paper is about employment and training policy for adults and has two aims: first, to understand the nature of the problem and, secondly, to survey what we know and what we need to learn about effective job training that addresses these challenges. The American job training, (human capital development) system is complicated, hard to navigate, and under-funded. Yet at the same time it has significant strengths and many best practice and effective models.

It is important to understand that job training is only one leg of a policy stool. An effective response to the challenges facing many adults in today's job market requires more than improving human capital. Other supports, such as access to transportation and childcare, are often necessary to enable people to take advantage of opportunities to improve their skills. But training per se is important and the case is strong for thinking seriously about how to build upon today's programs.

This paper is organized in several sections that are intended to help us logically work through the issues. I begin with a discussion of the problem that employment and training is intended to address. I then discuss the nature of the labor market changes that need to be considered as we address the problem. The most important of these are demographic

developments and the evolving nature of skill demands. We then turn to a description of the American training system and its performance. The final section lays out options for moving forward.

The Problem

It may seem strange to claim that there are job market challenges in the context of an economic expansion. But there are constant reports of firms having difficulty filling their job vacancies. That said, there is a widespread perception that skill requirements are shifting and that people are facing more risk than in the past. As a general proposition the data are complex and the case is hard to make with clarity. Nonetheless is useful to distinguish groups who may be targets of policy.

First, an unacceptably large number of adults are working in jobs that pay less than a family sustaining wage. Table 1 shows the fraction of working adults, age 25-64 who earned low wages in 2018. It is apparent that far too many find themselves in this situation. Although in the current expansion there are many reports of firms such as Wal-Mart, the Gap, or Amazon raising their wages, if the experience of the expansion in the 1990s remains relevant—and there is no reason to think that it does not—very few of these workers will be able to permanently escape the low wage job market simply by dint of economic growth.³ Further evidence that the problem is structural is that the low wage incidence in 2000 was very similar to that of today.⁴ It is also worth noting that while, not surprisingly, there is a strong relationship between educational attainment and low wages. Nonetheless, 31.9 percent of those with some college and 14.7 percent of those with college earned \$15 an hour or less.

Table 1: Percent of Adults Age 25-64 Earning Low Wages, 2018

All workers:

At least \$10/hour	At least \$12/hour	At least \$15/hour
7.5%	15.2%	27.7%

Full-time workers only:

At least \$10/hour	At least \$12/hour	At least \$15/hour
5.8%	12.5%	24.7%

Source: 2018 ORG data. Sample is non self-employed civilians age 25-64.

When it comes to the bulk of the mature workforce, the data offers a conflicting picture of the degree of risk people face. On the more sanguine side, job tenure data are not consistent with the generalized sense of risk and turbulence that one might infer from popular accounts. Table 2 below displays tenure trends over a ten year period—a time frame which included a major recession. As is apparent, the patterns are fundamentally stable although for late middle aged men there does seem to be a slight decline in security.

Table 2: Job Tenure Over Time

Median Tenure, ages 45-54	January 2008	January 2018
Men	8.2 years	8.1 years
Women	7.0 years	7.1 years
Percent with ten or more years of tenure		
Men aged 45-49	43.5%	45.1%
Men aged 50-54	50.4%	48.7%
Women aged 45-49	36.7%	40.4%
Women aged 50-54	45.0%	45.5%

Source: BLS Economics News Release, Employee Tenure 2008-2018 <https://www.bls.gov/news.release/tenure.toc.htm>

Current labor market data tells a similar story. Table 3 shows the employment of so-called prime age men and women early in 2019. There is no age related decline in job holding for women, and only a modest decline in the oldest group for men. The employment reduction for the oldest group of men is due to higher rates of disability and retirement and not due to increased unemployment (although it is possible that for some people the retirement and disability categories mask difficulty in finding jobs).

Table 3: Labor Market Status by Age, January 2019

MEN	Age 25-35	Age 36-45	Age 46-55
Employed	84.0%	85.5%	81.7%
WOMEN			
Employed	70.2%	71.4%	71.3%

Source: 2019 CPS files

Set against these mostly stable patterns (albeit with a hint of difficulty for the oldest men) are dislocated worker surveys which suggest that large numbers of people are indeed at risk. Between January 2015 and December 2017 three million people with three or more years of tenure lost their jobs because of a plant closing, insufficient work, or a position or shift was abolished. If the three year tenure restriction is lifted then the figure was 6.8 million people.⁵ There is

considerable evidence that these groups face significant earnings loss if they are even able to obtain new employment.⁶ In his analysis of the dislocated worker data, Farber reports that job loss rates are—not surprisingly—higher for less educated workers and that while younger workers have higher job loss rates than older workers the rates are converging with older workers risk increasing in relative terms.⁷

Other data also paint a troubling picture. In their analysis of the Michigan Health and Retirement Survey (a nationally representative dataset that covers the period 1992-2016), Urban Institute researchers tracked the employment history of people age 51 and older who were full-time full year workers with at least five years of job tenure. Over the period, 28 percent of this group lost their job due to a layoff or job closing, 13 percent quit their job because they found conditions unsatisfactory, and 13 percent retired unexpectedly.⁸ The time period and sample limitation mean that these patterns are not comparable to Census employment data but they do suggest a considerable degree of labor market turbulence among older well-established employees.

Experienced, and older, workers face additional challenges. On average they have less education than do younger employees with 29.6 percent of people 55 and older having no education beyond high school, compared to 22.6 percent of 25-34 year olds. The rate of attaining a four year college degree or more is 30.4 percent and 39 percent respectively.⁹ Additionally they believe that they face age discrimination¹⁰ and academic research based on audit studies support this perception.¹¹ And, although the data are shaky, what evidence we do have suggests that employers are reluctant to invest in training older employees.¹²

The Demand Side

Before turning to the American skill training system, it is important to understand the contours of labor market demand. Where will the jobs be going forward and what are the skills that will be required to obtain decent work? These questions are at the center of an enormous body of both academic and popular discussion and research, and it is not possible to do full justice to the complexities of the discussion. However, it useful to summarize several central issues.

The first point is that most researchers and sophisticated observers have moved beyond the apocalyptic “end of work, robots and AI will destroy most jobs” tone of much of the initial discourse. It is true that most Americans—72 percent—are worried about a future where robots and computers can do most jobs¹³ but the facts and theory do not suggest that extreme worries are justified. The same survey that showed widespread worry reported that only two percent of respondents reported losing their job due to automation and only five percent reported that automation led to a wage or

hours cut. The experience of the past few years in which a broad range of firms have complained of labor shortages is also telling. Of course automation will cost some jobs but it will also create new ones.¹⁴ The real concern regards changing skill demands and adjustment mechanisms for those whose work is impacted.

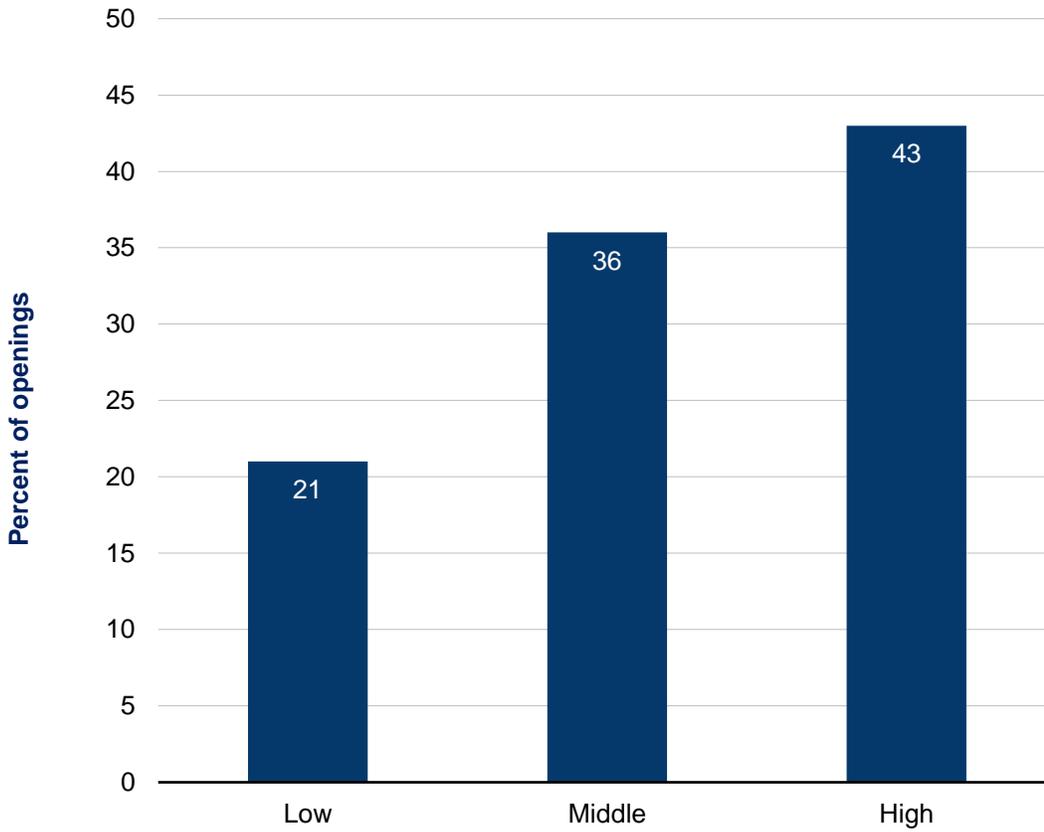
A second common perception that needs qualification is that the future job distribution will be polarized, with the weight of the distribution falling at the two ends of low skilled work that requires little education and training and high skilled jobs that require a four year college degree or more. The underlying rationale of this polarization prediction is that technological change will eliminate the middle level jobs which are typically characterized by tasks that can be done by computers, robots, and other technologies.¹⁵ If this is indeed the case it represents a discouraging pattern given that only well under half of 25-34 year olds have at least a four year college degree.

There is, however, another way to think about the trajectory of jobs and this is to focus on the distribution of openings rather than at endpoints. The starting point of this discussion is to focus on demographic trends. The fraction of the workforce that is age 55 and older has grown dramatically will continue to do so. The BLS reports that this age group accounted for 11.9 percent of the workforce in 1996, 16.8 percent in 2006, 22.4 in 2016 and will account for 24.8 percent in 2026.¹⁶ This trend sets the stage for a massive wave of retirements which will put considerable pressure on employers. The point is that due to retirements the number and distribution of job openings may paint a more optimistic picture than the net endpoint distribution of jobs. Importantly, it is openings that are the appropriate targets of individuals and of public policy.

A dramatic illustrative example is production workers, an occupation under considerable pressure both because of technology and trade. The Bureau of Labor Statistics projects that the net number of production workers will decline by 429,500 between 2018 and 2028. This would certainly seem to be an occupation with little future. Yet in the same period, due to retirements, there will be 1.6 million openings if all 65 year olds production workers leave the workforce and a bit over 600,000 openings if productions workers continue until 70 and then leave the workforce. The charts below generalize this point to a (admittedly somewhat arbitrary) set of middle skill occupations and it is apparent that from the perspective of openings the future of work is more hopeful than the polarization perspective might suggest.

Figure 1

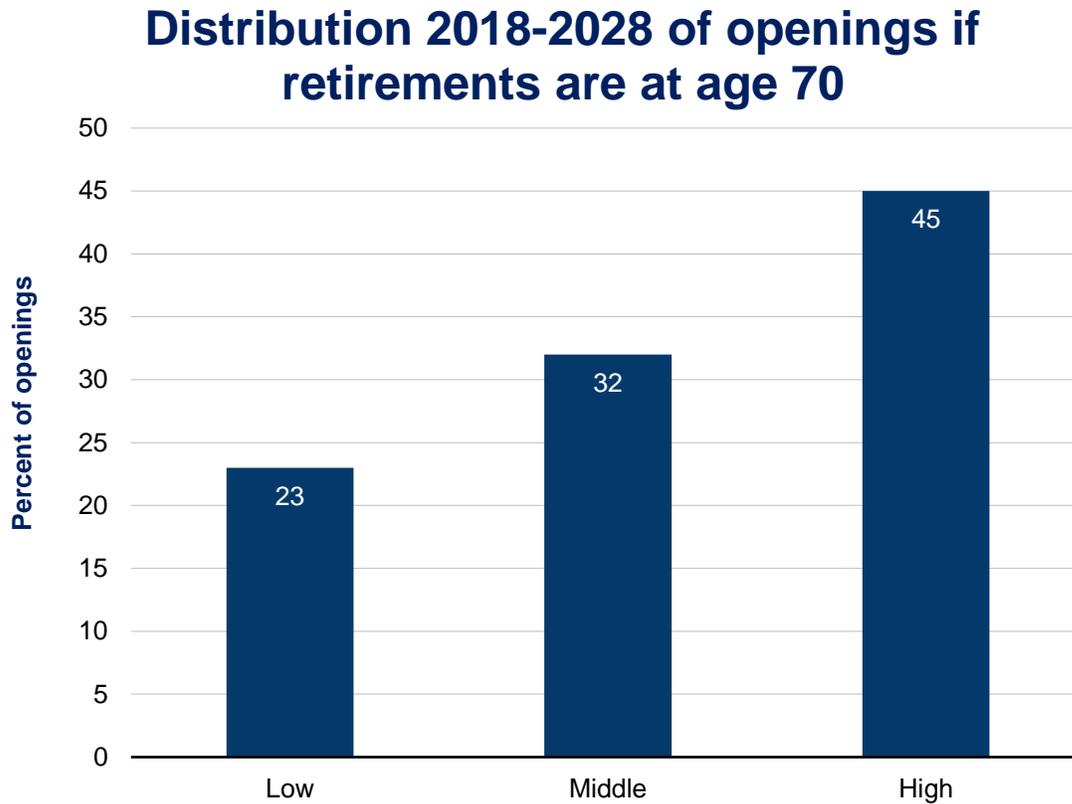
Distribution 2018-2028 of openings if retirements are at age 65



Source: Authors' calculation from BLS net openings projections and the ACS age distributions by occupation

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Figure 2



Source: Authors' calculation from BLS net openings projections and the ACS age distributions by occupation

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The foregoing is strongly suggestive that the trajectory of demand will be that many good jobs will be within the reach of most people. But the limitation is that the analysis focuses on occupational labels without asking what are the actual skill demands within the occupations. It is possible in principle that there will be many middle skill openings if we focus on occupational labels but that middle skill job titles will require new and considerably higher level skills.

There is a general consensus both among researchers and among people more generally that skill requirements of jobs are increasing and that obtaining so called “21st Century Skills” is increasingly important. For example in a recent survey 54 percent of the working population saw continuous training as essential and another 33% say is important for career success.¹⁷ This said, it is useful to make several distinctions. One set of questions concerns the content of skills, i.e. what topics should be taught. The second concerns the level of skills and whether skill demands are accelerating in ways that put good jobs out of the reach of people whose education falls short of four year college degrees.

Several Conclusions on Research and Skills

Skill has multiple dimensions: Experts agree that there are multiple dimensions to skill. For example a recent National Research Council review of workplace skill requirements distinguished between the cognitive domain (critical thinking and reasoning), the interpersonal domain (teamwork and leadership), and the intrapersonal domain (flexibility and initiative) each of which was found to be related (in with varying degrees of strength and confidence) to labor market success.¹⁸

What is new are demands for computer, problem solving, and teamwork skills: Surveys of employer requirements show a continued demand for the three R's and these are often overlooked in the focus on what is new. This said, it is true that new skill requirements are emerging. Work—both blue collar and white collar—is increasingly organized around teams and in many settings interaction with customers is also important. These trends put a growing emphasis on so-called soft skills and surveys of firms as well as research which tracks the economic rate of return to skill show that these skills are both demanded and rewarded.¹⁹ In addition, to no one's surprise, computer skills also increasingly demanded. The popular impression that digital skills are now required by many, if not most, good jobs is supported by studies of the content of job postings. For example, according to Burning Glass 82 percent of middle skill opening require digital skills.²⁰

Skill demands are attainable. With respect to the second question, whether the level of these skills is beyond the reach of most people the answer appears to be no. Surveys that directly ask employers what skills they are seeking report strong demand for what might be termed community college level skills. For example, a survey of manufacturing firms regarding their skill demands for their core production workers found a broad demand for basic skills but when it came to extended technical skills demand for at least one level of extended hard skills was more limited and ranged from 23% for writing, 38% math, to 42% computer, and 53% reading.²¹

Skill demands are adjustable. Skill requirements are not fixed and given unalterably by the technology. Firms have discretion both in how they organize the tasks that add up to a job and also in their investments in training people to do the work. This discretion implies that job requirements are not fixed. Good evidence on this point comes from research that examines how hiring requirements vary over the business cycle. Modestino and her colleagues, using job postings from Burning Glass Technologies, show that when labor markets are loose and available employees are plentiful, firms ratchet up their hiring requirements and that as the labor market tightens firms' requirements move in the reverse direction. They also show that this reversal is most pronounced in middle skill and low skill jobs.²² These findings are also supported by a casual reading of the business press which reports that firms, facing an unusually tight and competitive

labor market, have been willing to hire people whom they shunned in the past and are seemingly able to redesign jobs to accommodate the capabilities of these new hires.²³ The ability of firms to be flexible about their skill demands is important both for understanding the nature of skill and, more practically, for job training programs that seek to work with firms in opening access to left out groups and in building internal career ladders.

It is useful programmatically to classify skills into several buckets. A central programmatic and policy question is who should teach what skills. Economists conventionally think of this via the distinction between general skills (which are widely used) and specific skills (relevant to a given employer) with the assumption that schools are responsible for general skills and employers for specific ones. This prescription often fails in practice given that many training programs, both in schools and in other institutions, prepare people for specific occupations and, in fact, are often targeted at particular employers. Perhaps, a more useful way to think about this question is to distinguish between basic skills (the three R's, digital skills, and soft skills), occupational family skills (e.g. what all manufacturing workers or health care technicians should know), and job specific skills (how to do a particular more narrowly defined job). These distinctions seem helpful in thinking about the venue for training and the allocation of costs.

The U.S. Training System

The United States does not have a training system for adults if what is meant by the term “system” is a well-articulated set of programs or opportunities that fit together in a logical stepwise way and which are readily accessible to all those who are interested or need assistance. What the United States does have is a diverse set of opportunities, some large and some small, and for some of these we know what is best practice and for some we are in the dark about effectiveness. In this section we review each of these components.²⁴ Before getting into the details it is worth emphasizing several important conclusions that will emerge.

First, the historical division of labor between firms and public training organizations that has underwritten the U.S. system appears to be in doubt. Although the data are weak there is at least reason to believe that firms are expecting public training institutions to play a greater role than they have in the past in providing specific vocational training. Whether this is a good thing or not is an open question.

Second, the view, often expressed by skeptics²⁵ that training programs are ineffective is wrong. For intermediaries (a job training model) and community colleges there is strong reliable evidence that best practice programs pay off

substantially for people who participate. The correct policy question is not whether anything works but rather how to diffuse best practice at scale.

Third, recent years have witnessed a proliferation of new models such as boot-camps, on-line options, and other institutions that deliver certification and training. We have very little information on the scope of these and which models if any are effective.

Community Colleges

Community Colleges, of which there are nearly 1,200, are America's premier training institution. They enroll about six million students in credit courses of whom 40 percent are over age 24 and the strong majority of these older students are in vocational programs.²⁶ In addition another six million people take non-credit courses and although these are poorly tracked it is reasonable to think that most are vocational and mostly populated by adults. Community college students in credit courses are disproportionately minority, first generation college and lower income. Among full time students 62% work as do 72% of part time students.²⁷ Finally, in addition to traditional courses many community colleges offer customized training programs for firms aimed at either assisting them with their hiring needs or upgrading incumbent workers.

The scale of community colleges and the extensive vocational components make community colleges central to any training initiatives. In some sense the scale also implies that they add up to a "system" but in reality governance is highly decentralized not simply in the sense that States have far more control than the Federal government but also because in many States each community college has its own governing board and in some cases its own tax base.

The good news about community colleges is that when students complete a degree or certificate the rate of return is good. While RCTs are not available for standard programs sophisticated fixed effect modeling, sometimes using survey data and sometimes using administrative data, support this conclusion. For example an assessment using administrative data from six states found that completing an AA degree improved earnings by between \$4,640–\$7,160 compared to entering the college and not obtaining the credential. Smaller but positive results were also reported for completion of a certificate.²⁸ Other studies reach similar conclusions.²⁹

All this said, there are important concerns regarding community colleges the most central of which is retention and graduation. Reported rates are weak—nationally 39.2 percent of community college full or part-time students who enrolled in 2012 earned a credential from either a two or four year school within six years of initial enrollment³⁰—but these need to be taken with a grain of salt in part because they fail to take into account the inherent part-time nature of

many students and in part they fail to accurately track transfers. This said, no one doubts that retention is a serious challenge and the explanations range from the fact that community colleges are underfunded relative to non-research four year schools, that community colleges are open enrollment and many students arrive unprepared for college level work, and community colleges often are confusing and lack clear pathways for students.

Intermediaries

Since the War on Poverty public policy has supported a web of job training programs, often income targeted and aimed at people in labor market difficulty.³¹ Too often these programs were short term, connected neither to employers nor to labor market demand, and of highly variable quality. All of this was reflected in the discouraging evaluation literature. The good news is that in the past decade or so a new model, often termed intermediaries or sectoral programs, has emerged and been shown via RCTs to be substantially more successful in connecting people to good jobs and raising earnings.

The core best practice components of intermediaries are close relationships with employers (the so-called dual customer model), support services and counseling for clients, and substantial investments in training. Depending on the specific program the actual training is either done by the intermediary itself or by a community college. If the training is the responsibility of the community college the intermediary works closely with that institution around issues of scheduling and support. In order to achieve the close relationship with employers intermediary staff become knowledgeable about the nature of the industry and the needs of employers. Intermediaries which adhere to this broad model may be sponsored by community groups, business associations, or unions. There are several national support organizations for intermediaries including the Aspen Institute Economic Opportunities Program, The National Fund For Workforce Solutions.

High quality evaluations show a substantial payoff to this model. A strong example is Project QUEST in San Antonio which was subject to an RCT with a nine year follow up.³² QUEST exemplifies the best practice elements described above. From year three to year nine participants earned significantly more than the control group and by year nine the gap was over \$5,000 per year in annual earnings. These impacts are not unique to QUEST and other rigorous evaluations of best practice intermediaries also find positive results.³³

Employer Training

Firms have long been at the center of the American system of job training and the classic model has been that schools provide general skills training while the skills for specific jobs are provided by employers. A problematic aspect of this

arrangement is the longstanding observation, supported by data, that the distribution of firm based training is tilted towards those at the higher end of the educational distribution. But this important qualification aside, from the overall perspective of the U.S. human capital system the division of labor between firms and schools has seemed workable and effective.

It is difficult to assess the extent to which this arrangement continues because reliable data on the firm based training are simply not available with the last national survey a decade old. Table 4 below shows what we know from national surveys and the conclusion is discouraging.

Table 4: Percentage of Workers Receiving Employer Financed Training During the Year

	2001	2004	2009
All workers	20.6%	16.1%	14.9%
High school only	14.3%	9.3%	9.0%
College degree only	31.3%	23.1%	21.7%

Source: Waddoups 2016³⁴

Suggestive as these data are it is important to note that they are old and more recent anecdotal evidence points in conflicting directions. On the one hand well publicized announcements by firms such as Amazon as well as broad interest in apprenticeship programs suggest a renewed commitment to training. On the other hand conversations with community colleges and intermediaries suggest that even in today’s tight job market getting the attention of employers, much less obtaining their cooperation, is very hard. In a review of the literature on employer involvement with public training programs Barnow and Spaulding also expresses concerns about its uneven and generally ineffective character.³⁵ Other indicators also point down: in 2018 51 percent of firms surveyed by the Society For Human Resource Management (SHRM) provided undergraduate tuition assistance benefits and 49 percent graduate assistance and both these rates are down from 66 percent and 61 percent respectively in 2008.³⁶

The rhetoric of the employer community regarding the importance of public training systems, especially community colleges, suggests a possible effort to shift training costs to the public sector. A benign explanation would be shorter job tenures which make recouping of training costs more difficult or, alternatively, that skills are becoming more general, perhaps due to the increased importance of computer skills. A less benign explanation is simply cost shifting. Until we have better data we will not have an answer about trends or explanations.

Emerging Models

The fourth leg of the U.S. skill development system is a potpourri of non-traditional models, some of which have long existed and some are new. Examples are certificate programs such as those provided for Oracle and Microsoft, boot-

camps, and on-line courses. What distinguishes these initiatives is that they offer non-degree credentials, that is credentials that attest to skill attainment but which are not the traditional markers provided by accredited degree granting educational institutions (it is important to note here that some educational institutions, notably community colleges, also offer non-degree credentials such as certificates). We do not have a full accounting of the number and scope of these new models although efforts, such as Credentials Engine, are underway that aim to classify and track them. According to the Adult Training and Education Survey 8 percent of adults holds a post-secondary certificate but this figure represents a subset of the potential types of innovations.³⁷ It also appears to be the case that people with post-secondary degrees are more likely to obtain these types of credentials than do people with less education.

Some of these innovations, such as on-line courses, hold considerable potential promise both with respect to pedagogy and reach (although may be worrisome regarding ability to reach underserved populations) but it is far too early to reach any conclusions about whether this promise is real or can be attained. Others, such as boot camps or IT certificate programs, may also be promising laboratories for pedagogical innovation but seem unlikely to have a substantial impact at scale. For now it seems best to think of this group taken as whole as experiments from which we can learn rather than as sturdy components of a national system.

Apprenticeships

One better grounded and researched non-degree model that has received considerable interest in recent years is apprenticeship programs.³⁸ At their simplest the apprenticeship model is based upon a combination of classroom training and employer or union based on the job training, both components of which are structured around a well-defined curriculum and learning objectives. The attraction of the model is that it is tightly bound to the actual requirements of jobs and, given the employer or union involvement, there is more likely to be job at the end of the program. The classic examples of apprenticeship are in the skilled construction trades. The Federal government, and some states, register apprenticeships and in 2016 there were over 500,000 registered apprenticeships.³⁹ However, new funding sources—Federal, state, and foundation—do not always require formal registration. Whereas in general Federal job training funding has been in decline (see below) support for apprenticeship programs has increased and foundations are also in the game. The rates of return to apprenticeships are high but are also somewhat misleading because the data are dominated by the construction trades and it not clear that it appropriate to generalize from those programs to other settings. The extent to which the model can be diffused more broadly and what will be the payoffs if and when this happens remain open questions.

Training For Dislocated Workers

Mature adults who lose their jobs are a distinctive group, representing a challenging population, for obvious reasons: on average lower levels of education and embedded personal and family commitments that often limit options. In addition the stigma of job loss is an additional burden given that potential employers may fear that it is a negative signal.

There are very few credible assessments of training interventions for this group. The raw data from the Trade Adjustment Assistance Program (which only captures a subset of the dislocated worker population) are not encouraging: in 2017 72.5 percent of program participants entered employment post program participation and of these the earnings replacement ratio for 40-49 year olds was 83.9 percent and for 50-59 year olds 75.3 percent (the earnings replacement ratios were much better for young people).⁴⁰ A Mathematica evaluation of TAA using the experience of the early 2000's found between a zero and a negative impact on earnings although, again, younger participants did better. A study that identified impact via random assignment to easy or tough examiners, did find a substantial earnings gain from program participation over a ten year follow-up period although by the end of that period the relative gains dissipated.⁴¹ Finally, an assessment of dislocated workers training in Washington State Community Colleges did find positive impacts that varied in expected directions with the length of the training investment.⁴²

Moving Forward

Critics of the American system of skill provision often point to the much more orderly systems of Germany and Switzerland with their well-developed apprenticeship programs and national credentials that lead into employment. All observers are impressed with the high quality of these systems and there is also a more subtle strength that sometimes goes unnoticed: the commitment of the social partners—firms, unions, and the government—to cooperate in delivering skill. Both of these points are offer useful lessons with perhaps the broad national consensus being the most important because it underwrites the long term viability and scope of the system. To date no comparable social contract exists in the United States.

This said the American system has an important advantage over alternatives. Our system is more flexible and open. It is possible at almost any point in life to enter into training, change fields, and learn new skills. This flexibility is underwritten by the fact that occupations in the United States have multiple entry points and the training system reflects this. The seeming disorganization of the U.S. system is, from another perspective, a strength and it is a strength that even now with our inadequate investment many people utilize. Any effort to introduce more systematic rigidities seem likely to fail and to fail for good reason.

It is also the case, as we have just seen, that we understand best practice for important components of the American system and the complaint that nothing works is simply wrong. What then is the problem? As noted above, a clear lacuna is that while we understand best practice in general it is less clear how best to retrain mature workers who lose their jobs. A broader more general concern is the need to diffuse best practice at scale and make the system more broadly accessible.

One important task is organizational: working with institutions to address the weakness or challenges that many face in achieving best practice. A second challenge is to expand the reach of the system so that it is more accessible to a wider population. This challenge involves resources and, inevitably, politics.

With respect to intermediaries scale is an obvious concern. There are many job training programs in the United States but the vast majority are small and, due in part to the restrictions inherent in Federal funding streams, most are unable to replicate the range of services and practices that characterize high performing models. There is also a question about whether local authorities, through whom funding often flows, are willing to make hard allocational decisions regarding effective and ineffective programs. With respect to the nature of funding streams the inherent tensions involve providing flexibility while at the same time insuring that those most in need receive services and that quality standards are maintained. And, of course it is naïve to ignore the “simple” question of adequate levels of funding.

Community colleges are at scale but face several challenges, the first of which is that they are underfunded. Per pupil operating expenditures is less than half that of four year bachelor’s (not masters and not research) private colleges⁴³ and state higher education funding streams have yet to attain levels in 2008 prior to the Great Recession.⁴⁴ Another way of seeing this is to note that the U.S. Department of Education estimates that in 2016-2017 the instructional costs per full-time equivalent student in public 2-year institutions were about \$6,900 compared to \$12,700 in public four year schools.⁴⁵ The consequences are both higher tuition levels, which challenge access, as well as inadequate support systems which have significant implications for retention and completion.

Beyond resources the challenge in improving community colleges is organizational. Community colleges have multiple missions (terminal degrees, transfer function, certificates, non-credit programs, customized programs for employers) and what it takes to achieve success at each of these differs in important respect from the others. In addition it is hard for community colleges to respond nimbly to changing job market demands given fixed investments and faculty politics.

Community college leaders will point out that reported completion rates are unfair in that some students leave early because they find good jobs and other students do eventually complete or transfer to four year schools yet fall outside the time range of the data. Nonetheless dropout rates are simply too high. Current thinking about how to address this focuses on integrating developmental education into the regular mainstream curriculum (so that students do not get lost in the developmental education loop) and simplifying curricular choices so that clear pathways are apparent and well understood. The “guided pathways” model was developed and elaborated at Columbia University’s Teachers College and research is hopeful.⁴⁶ In this context it is worth noting that an RCT of a City University of New York community college innovation, the Accelerated Study In Associates Program (ASAP) showed positive results in improving completion but that this, by now well known, study is quite particular in that the program requires full-time attendance whereas 64 percent of all public community college students enroll part-time (and even full time students hold jobs at a very high rate) and the incidence of part-time attendance is even higher among the public community college students who are age 25 and older.⁴⁷ That said, the components of the ASAP program—guided pathways and significant investment in support services—seem likely to be important elements of any community college reform effort.

Beyond fixing and diffusing the central training institutions there are several system wide reforms that have currency in policy discussions. One important idea is the construction of a national set of recognized skill based credentials that are, to use terms in wide use, portable, uniform, transparent, and stackable. The idea finds its inspiration in the German system and was first attempted by the Clinton era National Skills Standards Board. The rationale is that standardization of credentials will enable people to be more mobile across employers, and even geographies, while at the same time providing reassurance to employers about what they get when they hire someone. Widespread adoption would in some sense create a national skill training system albeit without any particular institutional innovations beyond adoption of a standard curriculum structure across training organizations. In recent years considerable work has been devoted to the development of standards in manufacturing as well as in the retail industry.

While attractive in the abstract important questions remain about this idea. The skills standards effort failed during the Clinton years and many of the underlying issues remain. The deepest problem is that employers do not seem to pay attention except in tightly defined circumstances (e.g. some IT certifications). A 2018 survey by NIST National Manufacturing Extension Partnership, utilizing an on-line survey of the MEP national network as well as focus groups, concluded that credentials are “not routinely required or used” by firms, that firms do not know what credentials are available, that firms are unaware of any value added from credentials, and that firms report that they would want to train new employees regardless of what credentials they hold. These results are consistent with a nationally representative survey conducted in 2012 and 2013 that found that only 7.4% of manufacturing firms responded affirmatively to the

question “Do you use any formal industry skill credentials system, such as those provided by industry associations or national testing services, for hiring core employees?.”⁴⁸ Employers simply do not seem to find the credentials useful or necessary. At the deepest level this reluctance is inherent on the open flexible nature of the American labor market that was noted above. More concretely, employers prefer to adjust their hiring criteria as well as adjust internal investment in training based on the state of labor market demand and other factors. Whether continued advocacy around standards will move the needle is an open question and it is too soon to reach a positive or negative answer.

Related to the idea of uniform industry credentials are efforts to better diffuse labor market information regarding trends in occupational openings, compensation and other features of jobs, as well as the payoff to different credentials and the track record of different training providers. One example is the Markle Foundation “Skillful” initiative.⁴⁹ The argument is that greater transparency will lead to better decision making by all parties. It is important to understand that information per se does not improve the reach or quality of the training system nor does it improve access. Furthermore the impact of data on the quality of the system requires a faith in the ability of markets to weed out weak players based on information about their deficiencies. The capacity of predatory for-profit schools to survive and even thrive in the face of sustained critiques and investigations casts doubt on this assumption. All this said, while information alone does not create a system better information would certainly be useful and it is hard to argue against improved transparency.

Improving labor market information is a strategy that fits comfortably with the idea of improving access to training via some form of Individual Training Account or Life Long Learning Account. There are a number of proposals along these lines and the central ideas are tax advantaged individual contributions and a government match.⁵⁰ Some versions are income dependent (with the government contribution declining with income) while others are more universal. All bow in the direction of performance standards for training providers although the effectiveness of such standards is, based on history, is questionable. A Mathematica evaluation of a less ambitious version of ITAs under WIA suggests that there are benefits to providing counseling to people prior to their spending the ITA.⁵¹ A review of the evidence by Barnow suggests caution about the effectiveness of vouchers but also emphasizes success depends upon the quality of counseling and assessment.⁵² Much as is true about the transparency movement what seems to be missing in the current discussion of training accounts is how to assure that the capacity is in place to provide quality training at scale. This returns us to the earlier discussion of how to improve the scale and performance of labor market intermediaries and community colleges. Absent high performing providers that are accessible the training accounts are likely to lead to considerable waste and disappointment.

Finally, it may seem either obvious or tired to point to the underfunding of the U.S. system but this is a challenge that cannot be ignored. As documented above community colleges are seriously underfunded. In addition, WIA/WIOA Federal funding fell from \$4.62 billion in FY2001 to \$2.79 billion in FY2018 and Perkins Career and Technical Education support and Adult Basic Education support also experienced substantial funding declines over the same period.⁵³ The United States also suffers in comparison with other countries. According to the OECD in 2016 Germany spent six times more than the U.S. relative to GNP on public training programs and France spent ten times more.⁵⁴

Open Questions And Conclusion

It we step back from the discussion of specific programs and delivery institutions and ask what all successful interventions have in common then several core elements emerge. Good programs make substantial investments in their students or trainees, they provide support services, they have strong connections with employers, the curriculum or training program is tightly structured so that students and trainees do not get lost, and if students or trainees need remediation it is delivered in an accelerated way and integrated with the actual training. The question then is how to diffuse all of this at scale. This said, while we do know more than we perhaps think we do, several important open questions remain.

One open question is understanding what is happening with employer investments in skill. As noted above, what data we have as well as some anecdotal evidence point towards declining investment yet other anecdotal evidence points in the opposite direction. We need not only to understand what is happening in general but also obtain a more textured understanding of what are the characteristics of firms that are investing in their employees, what are the characteristics of firms that are either disinvesting or seeking to shift training costs to the public sector, and how to work effectively with firms to build skill levels and enable their workforce to navigate a turbulent job market.

Second, as noted, while we do have a good understanding of what constitutes best practice for job training programs and community colleges in general we lack a firm grasp of how best to retrain older dislocated workers. There is much less evidence and experience with this group that can point us towards what an effective system at scale would look like. It is certainly possible that training in isolation is not a good answer for this population but it is too soon to reach that conclusion.

Third, also as noted above, we have little understanding regarding the scope and performance of new training models—boot camps, on-line programs, and certificate programs offered by non-traditional institutions. It is clear that

this is a heterogenous collection and it seems likely there is diversity in performance and in what lessons can be learned about delivering skill.

As noted in the introduction to this paper, there have been several distinct periods in which a combination of worries about the labor market and political will led to important initiatives to improve our skill provision system. Anxiety around the future of work, even in the midst of a strong job market, may be setting the stage for a new epoch of innovation. Added impetus is policy creativity around all of these issues. In states such as South Carolina, Colorado and Michigan there are serious efforts to build apprenticeship programs at scale, the Pathways To Prosperity Project works with a number of states to open credential opportunities for labor market entrants, the business community seems energized around skill shortages, The Aspen Institute and the National Fund for Workforce Solutions supports a wide range of intermediaries, a number of foundations are supporting wide-ranging efforts to improve community college performance, and the foregoing is only a partial list of efforts that are underway. We may be entering a fertile and constructive period in which it is possible to build pathways for a more inclusive and secure job market.

Endnotes

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