



EVIDENCE REVIEW

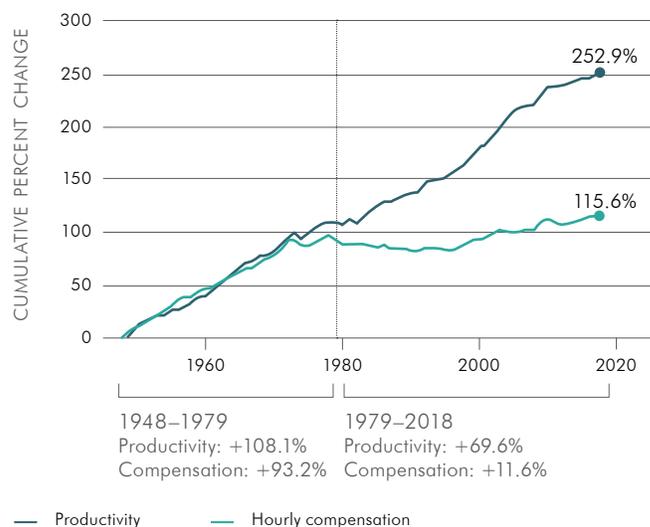
## SECTORAL EMPLOYMENT PROGRAMS AS A PATH TO QUALITY JOBS: LESSONS FROM RANDOMIZED EVALUATIONS

This publication summarizes an academic review paper on sectoral employment training programs, “Why Do Sectoral Employment Programs Work? Lessons from WorkAdvance,” by Lawrence F. Katz, Jonathan Roth, Richard Hendra, and Kelsey Schaberg, *Journal of Labor Economics*, forthcoming.

### OVERVIEW AND POLICY ISSUES

Wage inequality in the United States has skyrocketed in recent decades, with the highest earners increasingly pulling away from middle and low-wage workers. From 1979 to 2018, the top 0.1 percent has seen its earnings grow fifteen times faster than the bottom ninety percent, which has only seen consistent wage growth in ten of the past forty years.<sup>1</sup> It is increasingly difficult for non-college educated workers to gain employment in high-paying occupations with opportunities for career advancement, which has helped to drive the expansion in US educational wage differences and overall wage inequality (see figures 1 and 2) (Katz et al. forthcoming).

**FIGURE 1. PRODUCTIVITY GROWTH AND HOURLY COMPENSATION GROWTH, 1948–2018**

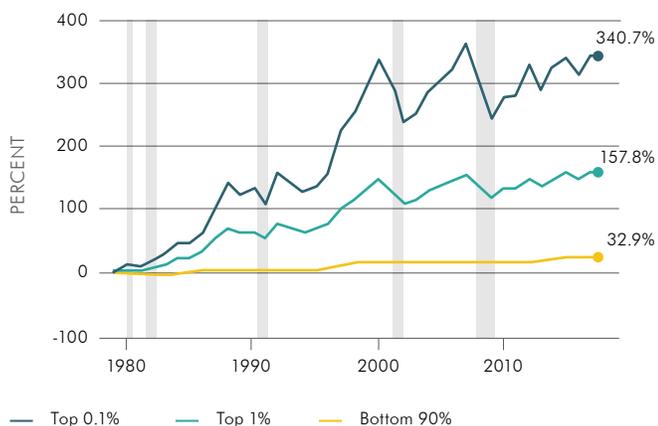


Notes: Data is for compensation (wages and benefits) of production/non supervisory workers in the private sector and for net productivity of the total economy. “Net productivity” is the growth of output of goods and services less depreciation per hour worked.

Sources: EPI analysis of unpublished Total Economy Productivity data from the Bureau of Labor Statistics (BLS) Labor Productivity and Costs program and EPI analysis of wage data from BLS Current Employment Statistics, BLS Employment Cost Trends, BLS consumer Price Index, and Bureau of Economic Analysis National Income and Product Accounts.

<sup>1</sup> Gould, Elise. “State of Working America Wages 2019.” Economic Policy Institute. February 20, 2020. <https://www.epi.org/publication/swa-wages-2019/>

**FIGURE 2. CUMULATIVE PERCENT CHANGE IN REAL ANNUAL EARNINGS, BY EARNINGS GROUP 1979–2018**



Note: Shaded areas denote recessions.

Source: EPI analysis of Kopczuk, Saez, and Song, *Earnings Inequality and Mobility in the United States from Social Security Data Since 1937* (2010). Table A3, and Social Security Administration wage statistics, as constructed by Mishel and Kassa; see “Top 1.0% of Earners See Wages Up 157.8% Since 1979” (December 2019).

This rising inequality comes alongside significant and persistent racial gaps in earnings between workers. From 2000 to 2019, the median wages of Black workers were 75.6 percent of white workers’ median wages. These disparities often stem from structural barriers to opportunities faced by people of color in the American job market.<sup>2</sup>

Sectoral employment programs—programs that train job seekers for high quality employment, or employment in specific industries considered to have strong labor demand and opportunities for career growth—offer a promising pathway to higher-wage jobs for workers who may face barriers to employment, typically those without college degrees.



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In this review, we summarize an academic paper that examines four randomized evaluations of nine sectoral employment programs and describes the mechanisms behind their success. The recently passed Infrastructure Investment and Jobs Act includes \$1 billion in occupational skills training grants.<sup>3</sup> There is the possibility of further investments in the United States’ workforce through a second infrastructure package, although the nature of these investments remains unclear.

This analysis finds that sectoral employment programs generate impressive positive impacts on worker employment and earnings, with the effects largely driven by workers gaining access to higher-wage and higher-quality jobs. The magnitude and consistency of the findings point to sectoral employment programs as a promising tool to advance worker prosperity. The following summary shares additional key findings and highlights areas for future inquiry.

<sup>2</sup> Gould, Elise. “State of Working America Wages 2019.” Economic Policy Institute. February 20, 2020. <https://www.epi.org/publication/swa-wages-2019/>.

<sup>3</sup> Spiker, Katie. “The Senate Passed an Infrastructure bill and took the first step towards economic recovery legislation – where do investments in inclusive skills training fit in?” National Skills Coalition. August 23, 2021. <https://nationalskillscoalition.org/blog/future-of-work/the-senate-passed-an-infrastructure-bill-and-took-the-first-step-towards-economic-recovery-legislation-where-do-investments-in-inclusive-skills-training-fit-in/>.

## KEY LESSONS

Sectoral employment programs **generate substantial earnings increases** in the year following training completion. These earnings persist in the evaluations with longer term follow-up evidence.

Sectoral employment programs **substantially increase training and career services received and educational credentials and certificates attained**, particularly those related to targeted sectors.

Earnings gains from high-performing sectoral employment programs are **among the largest found in evaluations of US training and employment services programs**.

Earnings gains from access to sectoral employment programs are driven by **increasing the share of participants working in higher-wage jobs** rather than increased employment rates or increased hours worked. This is likely from participants gaining employment in the targeted sectors.

The most effective sectoral employment training programs include a combination of:

- Upfront screening for applicants on basic skills and motivation
- Occupational skills training targeted to high-wage sectors and leading to an industry-recognized certificate
- Career readiness training (also sometimes referred to as soft skills)
- Wraparound support services for participants
- Strong connections to employers





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## WHY RANDOMIZED EVALUATION

Randomized evaluations, when properly implemented, are generally considered to be the strongest research design for quantitatively estimating the average effect of a program or policy. Randomly sorting a population into two groups—one that receives a program and one that does not—ensures that the groups are, on average, balanced at the beginning of the study. Therefore, any differences in outcomes between the two groups at the end of the study can be attributed to the program in question.

<sup>4</sup> A non-traditional worker is someone whose educational and/or training background is different from traditional educational expectations for their role; for example, someone who has not graduated from high school or college.

<sup>5</sup> David Autor, Anran Li, and Matthew Notowidigdo. “Preparing for the Work of the Future.” J-PAL. April 2019. <https://www.povertyactionlab.org/review-paper/preparing-work-future>

## DEFINING SECTORAL EMPLOYMENT

Sectoral employment programs train job seekers, typically low-income adults and those from non-traditional backgrounds<sup>4</sup> for high-quality employment in specific industries that are believed to have strong local labor demand and opportunities for longer-term career advancement. Targeted sectors have typically included health care, information technology (IT), and manufacturing. These programs work with local employers in the targeted sectors to identify in-demand occupations offering high starting wages and benefits, as well as career advancement opportunities. Programs then train participants in the necessary technical skills, as well as general life and career readiness capabilities to succeed in such jobs and attain the appropriate credentials and certifications to more broadly enhance their employment prospects. In contrast, traditional employment programs like public works initiatives focus on the direct creation of jobs and have mixed evidence on their efficacy.<sup>5</sup>

The core idea behind sectoral employment programs is that improvements in employment-related skills are strategically directed towards industries of strong and rising labor demand. Additionally, the programs focus on intermediaries like training and mentoring to break down barriers to employment for workers with non-traditional backgrounds for the targeted jobs. These two forces have led to durable gains in earnings and advancement in the labor market.



### Upfront Screening

Sectoral employment programs generally undertake some upfront screening for the motivations and basic skills (math and literacy) possessed by potential participants to focus program resources on candidates deemed most likely to benefit by program operators.



### Technical skills training

Sectoral employment programs provide training in technical skills geared towards a specific sector, such as health care or IT. This often includes training to receive certain certifications and credentials that are widely recognized in the sector and may be necessary to enter a field like nursing or computer repair.



### Career readiness training and mentoring

Sectoral employment programs also include training in non-technical skills in the area of career readiness. These include instruction and training in abilities like time management, study skills, critical thinking, and conflict resolution. Such training can be expanded to include real world job experiences like internships, where both technical and non-technical skills can be put into practice.



### Comprehensive Support Systems

Beyond training, these programs also provide their trainees with comprehensive support systems, ranging from job placement and retention services to counseling and teams of social workers. In Project QUEST, for example, job placement assistance came in the form of resume help, interview preparation, and referrals to employers that were hiring. Generally, programs build relationships with employers in the targeted industries, often securing spots for program participants or helping them get employed through the referral process. The programs then stay in contact with participants and employers after the program has ended to assist with employment retention. Some programs like YearUp and Project QUEST expand this support to include social workers and counselors to support participants through personal and academic issues.



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### Target industries with higher paying jobs and opportunities for advancement

Since one of the main goals of sectoral employment programs is placing participants in higher paying and more secure employment, targeting the industries that fit that goal is an important component. These industries typically include health care, manufacturing, IT, and financial services, as jobs in these fields have high starting wages and opportunities for advancement. A key component of this is the programs' efforts to build relationships with employers in the targeted industries.



### Financial support

Programs may provide participants with financial support to make participation in these programs viable. This can take the form of weekly cash stipends or support in paying for necessities such as books, transportation, childcare, and food.

## EVALUATIONS INCLUDED AND THEIR RESULTS

This review summarizes the findings from four randomized evaluations of nine different sectoral employment programs or providers. Detailed explanations of each of the nine programs can be found in Appendix A. Across studies, workers who participated in sectoral employment programs saw consistent gains in their total earnings over time. Participants were also more likely to be employed in targeted sectors with higher-wage and higher-quality jobs.

### Sectoral Employment Impact Study

Maguire et al. (2010) evaluated the impacts of three mature sectoral employment programs: Per Scholas, Jewish Vocational Service - Boston, Massachusetts (JVS-Boston), and the Wisconsin Regional Training Partnership (WRTP). The programs offered training and provided industry-recognized certifications to successful participants, although they varied in location, sector-focus, and length. Per Scholas was based in the Bronx, New York, and focused on the IT sector, JVS-Boston concentrated on the health care sector, and the WRTP was based in Milwaukee and targeted the construction, manufacturing, and health care sectors.

All of the programs evaluated saw higher overall earnings among participants. They also found that participants were more likely to be employed, work more consistently, work in jobs with higher wages, and earn benefits.

Participants across all three programs earned a significant amount—\$4,500 (an 18 percent increase)—more than those in the control group over the two year study period. Most of these gains were seen in the second year, as participants spent much of the first year in training. Over the second year alone, participants saw earnings that were \$4,000 higher (a 29 percent increase) than those who did not participate.

Trainees were also more likely to be employed in general and in higher paying jobs. The employment rate among participants in the second year, who had a rate of 70 percent, was 10 percentage points higher than that of those in the control group, who had a rate of 60 percent (a 16.67 percent increase). Those who received the training were 14 percentage points more likely to have worked in a job that paid at least \$11 an hour, with 59 percent of trainees having worked such jobs versus only 45 percent of those in the control group (a 31 percent increase). Trainees were more likely to work consistently, with participants working an average of 1.3 months (a 9.6 percent increase) more than those in the control group. Participants also worked in jobs with benefits at a higher rate than those in the control group did. At the two year mark, participants (at a rate of roughly 57 percent) were about 10 percentage points more likely to work in a job that offered benefits than those in the control group, who had a rate of around 47 percent (approximately a 21 percent increase). These results indicate that the program helped participants not only increase their earnings, but also find steadier and better quality employment in varying programs and locations across the United States.

### WorkAdvance

Hendra et al. (2016) studied the implementation of WorkAdvance, a standardized sectoral employment model that was applied across four separate providers: Towards Employment, Madison Strategies, St. Nick's Alliance, and a more recent version of Per Scholas. The WorkAdvance program included training that offered industry-recognized certifications and it required providers to take into account the needs of employers. Although the providers all implemented WorkAdvance, there were significant variations in operator maturity and sector-focus. Towards Employment operated in northeast Ohio and focused on health care and manufacturing, Madison Strategies operated in Tulsa, Oklahoma and targeted manufacturing and transportation, St. Nick's Alliance operated in Brooklyn, New York, and prioritized the environmental remediation sector, and Per Scholas operated in the Bronx, New York, and concentrated on the IT sector.



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The WorkAdvance model saw positive impacts on earnings as well as employment in the targeted sectors across providers. However, there was significant variation at the site level as each operator implemented the program differently.

The pooled results across the four providers show that as a whole, WorkAdvance increased earnings among participants by approximately \$1,945 (about a 14 percent increase) in the second year studied and \$2,716 (about an 11 percent increase) in the fifth year studied (Hendra et al. 2016; Schaberg and Greenberg 2020).

There was considerable variation on the individual site level, for example:

- Per Scholas trainees were 6 percentage points more likely to earn \$30,000 a year or more in the sixth year studied (at a level of 57 percent) than those who did not receive training of which 51 percent earned this amount (an increase of 12 percent).
- St. Nick's Alliance participants were 9.3 percentage points more likely to be earning \$30,000 a year or more (at a level of 41 percent) than those in the control group, of which 32 percent earned this amount (an increase of 29 percent).
- Madison Strategies Group trainees were 6 percentage points more likely to earn \$30,000 a year or more (at a level of 34 percent) than those who did not receive training, of which 28 percent earned this amount (an increase of 21 percent).
- Towards Employment did not find statistically significant results on earnings.

None of the WorkAdvance sites increased overall employment by a statistically significant amount above the control groups in either 2017 or 2018. However, earlier analysis showed that employment levels across the sites increased employment in the targeted sector, although there was substantial variation on the site level. In the second year studied, Per Scholas participants were 41 percentage points more likely to be employed in the IT sector, at a rate of 61 percent, versus 20 percent of the control group (an increase of 200 percent). Meanwhile, participants in St. Nick's Alliance were 12 percentage points more likely to be employed in the targeted sector, at a rate of 32 percent, versus 20 percent of the control group (an increase of 60 percent). When employment results were statistically significant, Per Scholas' impact on employment rates was far greater than that of any of the other providers.



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There was sizeable variation in the impacts of programs in areas such as employment and earnings across all of the providers, with Per Scholas consistently yielding the highest impacts. The providers who implemented WorkAdvance had varying levels of experience in the field and relationships with employers, and Per Scholas was one of the most established programs studied. Madison Strategies Group and Towards Employment were new to their location and sector, respectively, leading to less experience in the sector-specific training and a need to build new relationships with employers from scratch, which could have resulted in their lower impacts. However, Per Scholas was a mature program that had been in operation for many years with strong experience in training and strong relationships with employers, which could be why it saw the largest improvements. Even with this variation, in short-term follow-ups WorkAdvance yielded significant gains in earnings and employment across the providers.

### YearUp

Fein et al. (2018) evaluated YearUp, a national sectoral employment program targeted towards urban youth aged 18–24. The program provided six months of full-time occupational skills training in the IT and financial services sectors, followed by six month internships. YearUp provided extensive support (like weekly stipends and mentoring), and focused heavily on the development of both professional and technical skills. The program led to consistently large and positive effects on earnings, employment rates in the targeted industries, total hours worked, and wages.

By the third year in the study period, YearUp participants saw their earnings increase by \$7,011 (a 40 percent increase) overall. Those in YearUp were also more likely to be working in the targeted sectors:

- Participants were 33 percentage points more likely to work in the IT sector (at a level of 37 percent) than those in the control group, of which 4 percent were employed in the sector (an increase of 825 percent).
- Trainees were also 9 percentage points more likely to work in the financial services industry (at a level of 23 percent) than those who did not receive training, of which 14 percent were employed in the sector (an increase of 64.3 percent).

This employment was steadier and better paid, with participants working an average of 3.4 more hours per week (an increase of 13.9 percent) and earning nearly \$4 per hour more than the control group (an increase of 31.7 percent). Employers' perceptions of YearUp interns were also highly favorable, leading some employers to revamp their hiring processes to better open doors to less traditional applicants (Fein and Hamadyk 2018).

By the fifth year studied, the impacts of YearUp remained large, positive, and significant, amounting to a \$1,857 (38 percent) increase in quarterly earnings over the control group. Results in this long-term follow-up also found that the program's benefits to society surpassed its costs. The net gain was \$15,349 per participant when comparing a net benefit of \$38,484 to a net cost of \$23,135 (a benefit of 66 percent), implying that the public received \$1.66 for every \$1 spent on the program (Fein, Dastrup, and Burnett 2021).

### Project QUEST

Roder and Elliott (2018; 2021) evaluated Project QUEST, a health care-focused sectoral employment program based in San Antonio, Texas. Rather than delivering its technical skills training in-house as the other programs did, Project QUEST instead provided a wide range of supports and resources geared towards helping individuals complete occupational training programs at local community colleges and professional training institutes. The program consistently demonstrated positive impacts on participants' earnings, as well as increases in employment in higher quality jobs. Its impacts on earnings in the eleven year study period were the longest-sustained increases ever found in a rigorous evaluation of a United States workforce development program.

Roder and Elliott's medium-term evaluation (2018) looked at program outcomes up to year six. By year six, program participants had average annual earnings that were \$5,080 (22 percent) higher than those in the control group. Individuals in the Project QUEST group were 15 percentage points more likely to be employed in steady jobs (at a level of 72 percent) than those in the control group, of which 57 percent were employed at that level (an increase of 26 percent). Moreover, workers who participated in the program were 11 percentage points more likely to earn \$15 an hour or more (at a level of 46 percent) than those who did not, of which 35 percent earned that amount (a 31 percent increase).

Project QUEST participants were 12 percentage points more likely to be working in any health care occupation, at a rate of 43 percent, than the control group, of which 31 percent were employed in the industry (a 39 percent increase). For health care positions that required more technical knowledge like nurses and technicians, participants were 8 percentage points more likely to be employed in these positions, at a rate of 29.4 percent, versus those in the control group, who were employed at a rate of 21.5 percent (a 37 percent increase). These results may have been due to the program's close relationship with the health care sector in San Antonio, as well as the program's good reputation among local employers.

Roder and Elliott's long-term evaluation (2021) analyzed program impacts up to year eleven. The positive impacts on earnings were both large and sustained, and remained consistent over the eleven year evaluation period. While the average annual earnings of participants were \$5,754 (26 percent) larger than the control group's earnings in year six, by year eleven they were \$4,616 (15 percent) larger than the control group, demonstrating persistent positive impacts on earnings among participants. Throughout the eleven year evaluation period, impacts on employment also remained positive. In the last year studied, participants were 10.1 percentage points more likely to be employed (at a level of 83.8 percent) than those in the control group, who were employed at a level of 73.7 percent (a 13.7 percent increase). Overall, Project QUEST saw consistently large and positive impacts on multiple measures among participants throughout the evaluation period.

## TARGETING MULTIPLE BARRIERS TO EMPLOYMENT

Sectoral employment programs offer comprehensive services and supports to participants. Many workers face multiple barriers to employment, such as a lack of formal education, industry certifications, or career readiness skills. Programs included in this review addressed these barriers through multiple mechanisms.



### Bolster human capital

Many of the workers who enrolled in sectoral employment programs are at a disadvantage due to their lack of educational credentials and/or experience in high-wage sectors. Sectoral employment programs work to bolster participants' human capital through occupational skills, and career readiness training, leaving participants more equipped to successfully enter the workforce.

Additionally, the transferable nature of the skills attained as well as the official certifications earned through the occupational skills training provided by sectoral employment programs may be a key element of the long-term earnings gains demonstrated by these programs. The flexibility of these credentials expands access to opportunities in higher-wage sectors for non-traditional workers and workers of color who may otherwise face barriers to entry.



### Overcome social barriers to employment

Sectoral employment participants may also face social barriers to employment, including employer discrimination or limited professional networks. Sectoral employment programs address this through pre- and post-employment services and by vouching for workers qualifications and job readiness with employers as they work with them to identify needed skills, develop positions, and place participants in jobs.

Through retention services that occur after the program has been completed, program staff continue to communicate and connect with previous participants. This outreach may better allow participants to overcome problems of supervisor implicit bias and discrimination against minority and non-traditional employees in the workplace. Staff can also advise and assist participants in resolving any workplace problems that may arise and any life shocks that otherwise would have derailed their progress in the labor market.



### Insight into the labor market

Sectoral employment programs also seek to overcome information barriers that may exist, as workers may not be aware of which sectors have strong labor demand and present opportunities for advancement. The focus on sectors with current and expected strong labor demand and close staff involvement with employers minimizes the risk of misalignment with the labor market that is thought to be an issue with some publicly funded training programs. These characteristics improve the likelihood of successful job placement for sectoral employment program participants.

### WHY ARE SECTORAL EMPLOYMENT PROGRAMS SO EFFECTIVE? NOT JUST A JOB BUT THE RIGHT TYPE OF JOB.

Multiple evaluations of sectoral employment programs have demonstrated substantial, positive results for participants, with earnings gains among the largest found in any evaluation of a US training and employment services program. What is the primary driver of these impressive results?

The wage gains experienced by sectoral employment program participants cannot be explained simply by increased employment rates or an increase in the number of hours worked. Rather, evidence shows that **sectoral employment programs operate in large part by getting participants into higher-wage jobs in higher-earning industries.**

This is a valuable insight, as it highlights the importance of incorporating labor trends and targeted relationships with sector-specific employers in effective workforce development programming. Programs that focus on employment without the added focus on a specific high-wage sector will likely not have the same transformative impacts.



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## POLICY IMPLICATIONS AND OPEN QUESTIONS

Sectoral employment programs represent a promising pathway for non-traditional and low-income workers to access quality, well-paying jobs with opportunities for advancement. However, there remain opportunities for further exploration.

### Expand eligibility to a broader population of workers

Sectoral employment programs have proven successful in improving the earnings outcomes for low-wage workers without college degrees but with sufficient motivation and basic skills to gain program entry. This includes testing at a 6th to 10th grade level, or having a high school degree or GED.

Moving forward, researchers and policymakers should seek to understand the extent to which sectoral employment programs can be effective if expanded to cover a broader population of workers by weakening the upfront screening criteria. Such an effort may provide a pathway for more workers, such as individuals who did not complete high school and would be unable to pass the current pre-enrollment screens, to access quality jobs.

### Implementing high quality programs at a lower cost

Another open question facing the scalability of sectoral employment programs is the issue of cost. Researchers and policymakers should continue to study the extent to which earnings gains for participants outweigh the costs associated with the programs. Current evidence on sectoral employment cost effectiveness is promising but varied.

Program implementers, researchers, and policymakers alike must continue to innovate to operate these programs in ways that are both effective and affordable. Future evaluations of sectoral employment programs may explore the impact of online certification programs or income-sharing funding models.

## ABOUT J-PAL NORTH AMERICA

J-PAL North America is a regional office of the Abdul Latif Jameel Poverty Action Lab (J-PAL), a global network of researchers who use randomized evaluations to answer critical policy questions in the fight against poverty. Our mission is to reduce poverty by ensuring that policy is informed by scientific evidence.

## CONCLUSIONS

Sectoral employment programs are capable of generating substantial education, training, employment, and earnings gains for participants. Further, these programs provide low-income and non-traditional workers with access to higher-wage jobs in better paying sectors with opportunities for advancement. As income inequality continues to rise, expanded access to quality jobs is vital and must be prioritized.

The most effective sectoral employment training programs include a combination of:

- Upfront screening for applicants on basic skills and motivation
- Occupational skills training targeted to high-wage sectors and leading to an industry-recognized certificate
- Career readiness training (also sometimes referred to as soft skills)
- Wraparound support services for participants
- Strong connections to employers

Successful implementation of a program with the above traits often correlates with program maturity, as the ability to implement a model with fidelity and strong employer relationships often comes with time.

Overall, sectoral employment programs produce positive impacts for workers across a range of outcomes.

- Sectoral employment programs **generate substantial earnings increases** in the year following training completion that persist in the evaluations with longer term follow-up evidence.
- Sectoral employment programs **substantially increase training and career services received and lead to increased attainment of educational credentials and certificates**, particularly those related to targeted sectors.
- Earnings gains from high-performing sectoral employment programs are **among the largest found in evaluations of US training and employment services programs**.
- Earnings gains from access to sectoral employment programs are driven by **increasing the share of participants working in higher-wage jobs** rather than increased employment rates or increased hours worked. This is likely from participants gaining employment in the targeted sectors.

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APPENDIX A

SUMMARY OF PROGRAMS

	Technical Skills Training	Career readiness training/ mentoring	Comprehensive support systems (e.g., job placement services, employment retention services)	Target industries with higher paying jobs and opportunities for advancement	Financial support	Social workers/ counseling offered to help with emotional/ academic concerns
SEIS: JVS (Boston, MA)	✓	✓	✓	✓	—	—
SEIS: Per Scholas (New York, NY)	✓	✓	✓	✓	—	✓
SEIS: Wisconsin Regional Training Partnership (Wisconsin)	✓	✓	✓	✓	—	—
WorkAdvance: Per Scholas (Bronx, NY)	✓	✓	✓	✓	—	—
WorkAdvance: St. Nick's Alliance (Brooklyn, NY)	✓	✓	✓	✓	—	—
WorkAdvance: Madison Strategies (Tulsa, OK)	✓	✓	✓	✓	—	—
WorkAdvance: Towards Employment (Ohio)	✓	✓	✓	✓	—	—
YearUp (National)	✓	✓	✓	✓	✓	✓
Project QUEST (San Antonio, TX)	✓	✓	✓	✓	✓	✓

✓ Program component included      — Program component not included

APPENDIX A, CONTINUED

PROGRAM DETAILS

	Technical Skills Training
SEIS: JVS (Boston, MA)	20 to 22 weeks of training, with a certificate of completion at the end.
SEIS: Per Scholas (New York, NY)	15 weeks of technical skills training.
SEIS: Wisconsin Regional Training Partnership (Wisconsin)	Develops 2 to 8 week training programs in response to specific labor market and employers' needs.
WorkAdvance: Per Scholas (Bronx, NY)	15 weeks of technical skills training in A Plus and Network Plus courses were provided on-site.
WorkAdvance: St. Nick's Alliance (Brooklyn, NY)	5 to 12 weeks of technical skills training was provided in a mix of on and off-site sessions. Courses included Environmental Remediation Training, Commercial Driver's License B with hazmat endorsement, and Pest Control Technician.
WorkAdvance: Madison Strategies (Tulsa, OK)	4 to 32 weeks of technical skills training was provided off-site at private/technical schools/community colleges. Courses included Aviation Manufacturing, Commercial Driver's License A and B, Computerized Numerical Control Machining, Diesel Mechanic, Welding, and Supervisory Leadership.
WorkAdvance: Towards Employment (Ohio)	2 to 17 weeks of technical skills training was provided off-site at private/technical schools/community colleges. Courses included Computerized Numerical Control Machining, Welding, Phlebotomy, Certified Health Care Access Associate, Patient Care Assistant, State Tested Nurse Assistant, and Medical Billing and Coding.
YearUp (National)	Students attend classes full time. Technical training was tailored to the individual offices and targeted sectors.
Project QUEST (San Antonio, TX)	Students attend classes full time. Technical training was tailored to the individual offices and targeted sectors.

APPENDIX A, CONTINUED

	Career readiness training/mentoring
SEIS: JVS (Boston, MA)	4 to 6 week internship, with job readiness training including job interviewing and writing resumes/cover letters.
SEIS: Per Scholas (New York, NY)	Internship, employability workshops, and “life skills” training that included goal setting, communication, time management, and job interviewing.
SEIS: Wisconsin Regional Training Partnership (Wisconsin)	“Essential skills” training in timeliness, attendance, strategies for dealing with childcare/workplace issues, and operating within the industry culture.
WorkAdvance: Per Scholas (Bronx, NY)	12 sessions at 7 hours each that occurred concurrently with occupational skills training. There were one-on-one pre-employment coaching sessions during technical training and coaches followed up via email or in person during the job search.
WorkAdvance: St. Nick’s Alliance (Brooklyn, NY)	9 sessions at 4 hours each that occurred concurrently with occupational skills training. One-on-one coaching sessions were provided, and coaches were expected to follow up 2 to 3 times per week during the job search.
WorkAdvance: Madison Strategies (Tulsa, OK)	5 sessions at 6 hours each were typically provided for 1 week immediately following enrollment and before the start of occupational skills training. One-on-one coaching sessions occurred during career readiness training. Coaches visited weekly with participants as a group during technical skills training, and one-on-one sessions were provided as needed.
WorkAdvance: Towards Employment (Ohio)	10 sessions at 6 hours each. Coaches introduced a career plan during career readiness training. They met with participants in groups and one-on-one up to 3 times per week during the job search.
YearUp (National)	Students learned professional communication skills, critical thinking, writing, and giving presentations. 6 month full-time internships in entry level positions, with reflection sessions that involved workshops and post-program career planning occurring once a week.
Project QUEST (San Antonio, TX)	Weekly meetings focusing on life skills like time management, study skills, critical thinking, and conflict resolution.

APPENDIX A, CONTINUED

	Comprehensive Support Systems (e.g., job placement services, employment retention services)
SEIS: JVS (Boston, MA)	Case management, childcare and transportation assistance, job placement, post employment retention services, English as a Second Language (ESL) and basic skills tutoring as needed, and tax preparation assistance.
SEIS: Per Scholas (New York, NY)	Career mentoring, job placement, post employment retention services, and assistance with work attire.
SEIS: Wisconsin Regional Training Partnership (Wisconsin)	Case management, job placement, post employment retention services, remedial education as needed, assistance getting a driver’s license, and childcare and transportation for those receiving Temporary Assistance for Needy Families (TANF).
WorkAdvance: Per Scholas (Bronx, NY)	Need-based transportation assistance.
WorkAdvance: St. Nick’s Alliance (Brooklyn, NY)	Need-based transportation assistance.
WorkAdvance: Madison Strategies (Tulsa, OK)	Bus passes or gas cards were provided to all training participants, and additional need-based transportation assistance was provided as needed.
WorkAdvance: Towards Employment (Ohio)	Need-based transportation assistance.
YearUp (National)	Each student is paired with a staff advisor and an outside mentor. They receive supports for career planning and post-program job placement.
Project QUEST (San Antonio, TX)	Job placement services such as assistance with resume writing and interviewing, as well as referrals to employers who are hiring.

APPENDIX A, CONTINUED

Target industries with higher paying jobs and opportunities for advancement	
SEIS: JVS (Boston, MA)	Targeted clerical and medical office jobs.
SEIS: Per Scholas (New York, NY)	Targeted the IT sector.
SEIS: Wisconsin Regional Training Partnership (Wisconsin)	Targeted manufacturing, construction, and health care.
WorkAdvance: Per Scholas (Bronx, NY)	Targeted the IT sector.
WorkAdvance: St. Nick's Alliance (Brooklyn, NY)	Targeted environmental remediation and related occupations.
WorkAdvance: Madison Strategies (Tulsa, OK)	Targeted transportation and manufacturing.
WorkAdvance: Towards Employment (Ohio)	Targeted health care and manufacturing.
YearUp (National)	Targeted the IT and financial service sectors, with strong relationships with local employers (often major corporations).
Project QUEST (San Antonio, TX)	Targeted the health care sector, building relationships with employers to understand their needs and working with local colleges to develop programs that meet those needs.

Financial support	
YearUp (National)	YearUp came at no cost to students and included weekly stipends, as well as help applying for student financial aid.
Project QUEST (San Antonio, TX)	Financial assistance to cover tuition and fees for classes, books, transportation, uniforms, licensing exams, and tutoring were provided. This also included referrals to outside agencies for assistance with utility bills, childcare, food, and other services along with direct financial assistance on an as-needed basis.

Social workers/counseling offered to help with emotional/academic concerns	
SEIS: Per Scholas (New York, NY)	Counseling provided.
YearUp (National)	Each local office maintained a team of social workers who provided services and referrals to help students address varied life challenges.
Project QUEST (San Antonio, TX)	Counseling to address personal and academic concerns and provide motivation and emotional support.

APPENDIX B

	Site	Primary skill requirements	Sectors targeted	Year 2 effect on earnings	Long-term effect on earnings	Timeframe for long-term effects
WorkAdvance	All Sites	Varied by site (see below)	Varied by site (see below)	14.1% ***	11.5% ***	Year 6
	Per Scholas	Test at 10th grade level + HS/GED	IT	25.9% ***	19.6% ***	Year 6
	Towards Employment	Test at 6th–10th grade level (depending on track) + Background check/ Drug screen	Health care, manufacturing	14.0% *	7.7%	Year 6
	Madison Strategies	Test at 8th grade level + Behavioral assessment + Mechanical aptitude and manual dexterity exams + Driver’s license	Transportation, manufacturing	12.4% *	3.8%	Year 6
	St. Nick’s Alliance	Test at 9th grade level + Driver’s license + Drug screen	Environmental remediation	1.3%	12.3%	Year 6
Sectoral Employment Impact Study: Maguire et al. (2010)	All Sites			29.4% ***		
	Wisconsin Regional Training Partnership	Test at 6th–10th grade level (depending on track) + Driver’s license + Drug screen	Manufacturing, construction, and health care	27.4% ***		
	Jewish Vocational Service - Boston	Test at 6th–8th grade level (depending on track) + HS/GED	Clerical and medical office occupations	35.0% ***		
	Per Scholas	Test at 10th grade level + HS/GED	IT	31.8% ***		
Project QUEST: Roder and Elliott (2021)	Project QUEST	HS degree + 20 years of career ahead of them	Health care	-17.7% **	14.9% *	Year 11
YearUp: Fein et al. (2021)	YearUp	Learning assessment + Drug screen/background check	IT and financial services	37.7% ***	33.5% ***	Year 5

\* p < 0.1; \*\* p<.05; \*\*\* p<.01

These are indicators of different levels of statistical significance. If there is no \* next to a reported result, this means the impact was not statistically significant.

Source: Table 1. Katz et al. “Why do Sectoral Employment Programs Work? Lessons From WorkAdvance.” Journal of Labor Economics, forthcoming. [https://scholar.harvard.edu/files/lkatz/files/krhs\\_sectoral\\_jole\\_final.pdf](https://scholar.harvard.edu/files/lkatz/files/krhs_sectoral_jole_final.pdf)

## APPENDIX C

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