

# Net Impact of Workforce Programs

Report to the Legislature

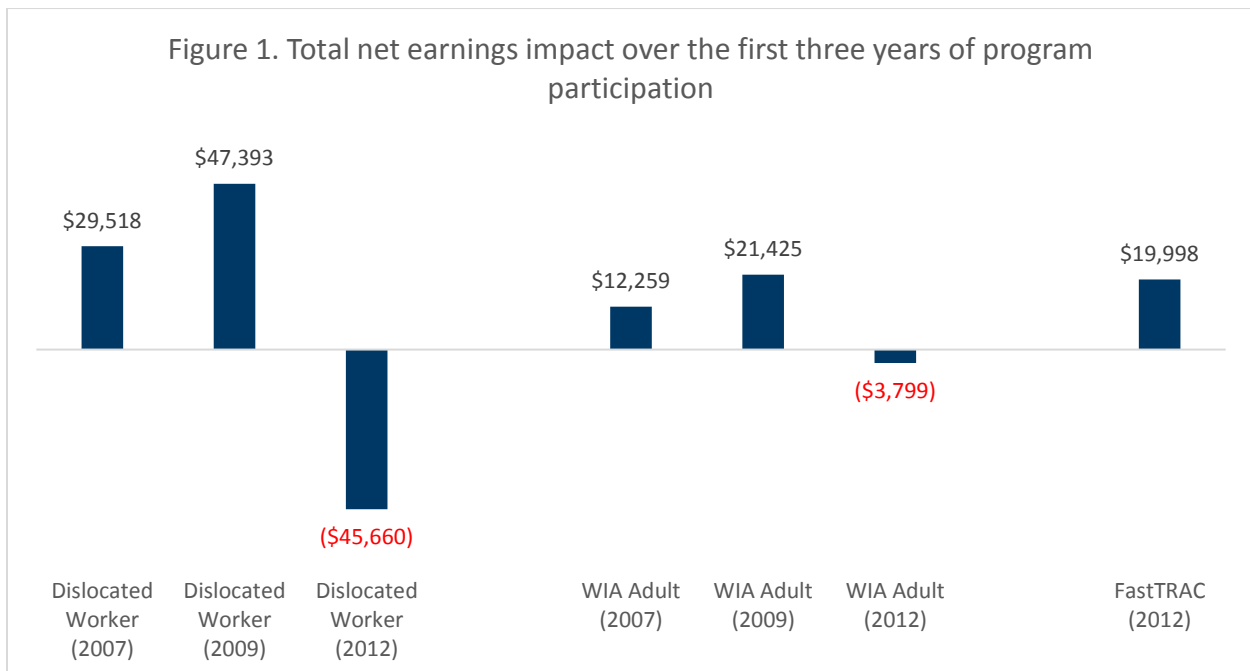
January 2017

Total cost of salaries, printing, and supplies in developing/preparing this report is \$54,487 (reported as required by MS. 3.197).

## Executive summary

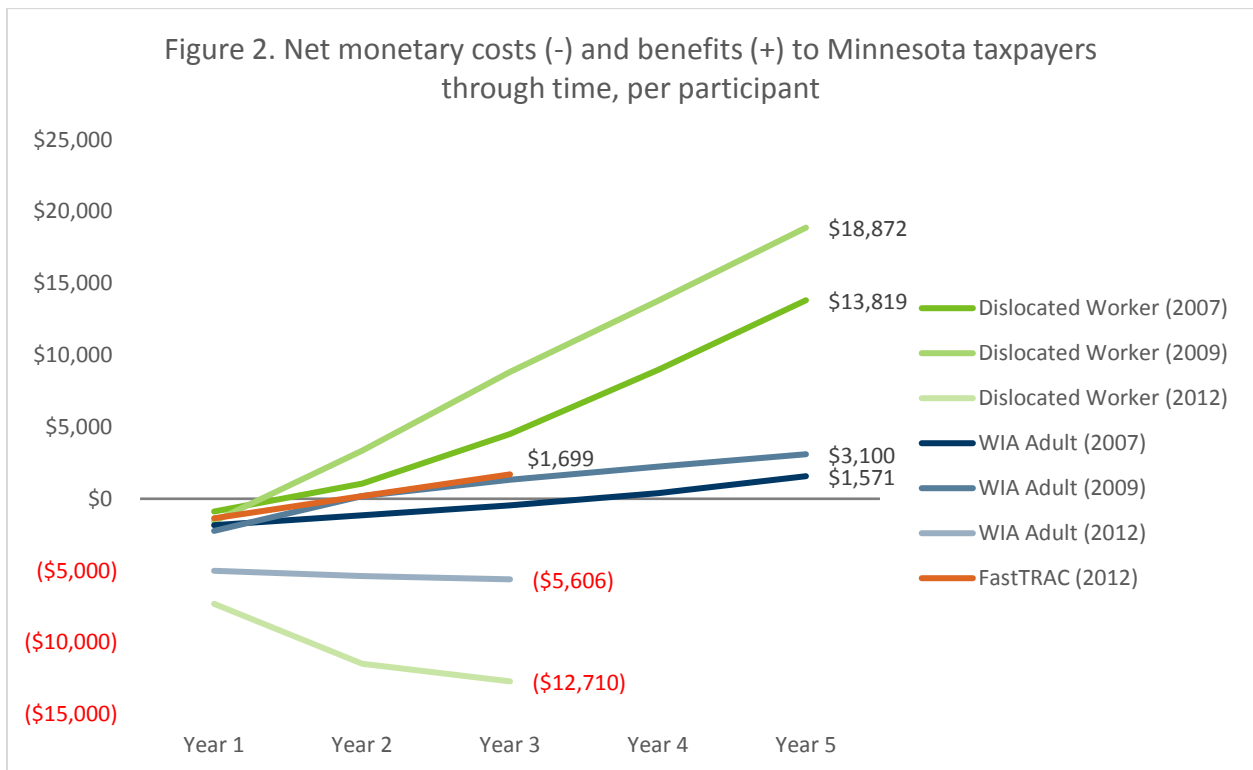
This report estimates the net impact on earnings from participation in a workforce program and derives cost/benefit estimates of those programs to taxpayers and society as a whole. It uses the methodology and cost framework developed through the consensus of experts in the field convened by the Governor’s Workforce Development Board’s Net Impact Advisory Group (active from 2009 to 2014).<sup>1</sup>

- Compared to observationally similar job seekers who were **not** engaged in any workforce program, **participants in the Dislocated Worker, WIA Adult (now WIOA Adult), and FastTRAC programs tend to see substantial earnings increases.**
  - This result is driven by **strong increases in employment** among participants, suggesting that program participation helps job seekers find work quicker than they otherwise would have.
  - Dislocated Worker participants not only get employed faster but, compared to similar job seekers who found employment quickly, earn more in the long term.
- **The Great Recession (December 2007 to June 2009) is likely a major force in the different impacts across cohorts in the Dislocated Worker and WIA Adult programs.** It appears that the external economic landscape has a significant role in shaping the extent to which these workforce programs impact participant outcomes.



<sup>1</sup> A complete history of this project can be found in the pilot report, available on DEED’s [Net Impact project page](#).

- Participants in each cohort across programs see a **small but significant increase in cash assistance and public healthcare coverage**, likely due to a combination of income loss and direct referrals from program counselors. This increase trends downward through the follow-up period, suggestive of more participants achieving self-sufficiency.
- **For most cohorts in all programs in this study, the monetary benefits outweigh the costs.** This is true when taking into account not just the cost of the programs themselves, but the cost of increased public benefit usage among participants and the benefit of increased tax revenue when participants see a higher income as a result of participation.
  - This result of benefits outweighing costs is driven by net increases in earnings, on average, among participants.
  - From the taxpayer perspective, the increase in the tax base due to these higher earnings more than pays for the cost of these programs. Where participants do not see higher earnings, the cost calculation will remain negative, as is true for the 2012 Dislocated Worker and WIA Adult cohorts.
  - **In general, where program benefits do outweigh the costs, they do so within two to three years.**



## History, scope, and methodology

Minnesota has been engaged in measuring the net impact of workforce development programs since 2009, with the passage of an updated performance measures statute. The Governor’s Workforce Development Council (now Governor’s Workforce Development Board) led a Return on Investment Initiative to establish an agreed-upon methodology, publishing the first results in the pilot report *Smart Investments, Real Results* in January 2015.

Since January 2015, this project has been institutionalized in the Office of Policy within the Department of Employment and Economic Development, which will publish ongoing updates every four years. The external evaluator, Professor Raymond Robertson of the Bush School of Government and Public Service at Texas A&M University, has remained engaged with the project through its move within the agency.

As that pilot report noted, the key questions answered by a net impact analysis are “what works?” and “who is impacted?”.

The results presented in that pilot report are both updated and extended in this report, which includes for the first time an analysis of the state’s career pathways program FastTRAC, an analysis of program effects specific to training engagement, and an analysis of program costs and benefits.

### Net impact methodology

A fundamental problem in answering the question “what works?” is we never see what would have happened to a participant if that individual instead chose **not** to engage in the program. The best we can do is compare participants (our treatment group) to otherwise similar individuals who are not participants (our comparison group); there are various methodologies which do this.

The methodology developed for this project is difference-in-differences (DinD) combined with propensity score matching (PSM). PSM matches individuals in our treatment group with individuals in a comparison group based on variables we can observe: their age, education level, gender, geography, race, veteran status, prior public assistance receipt, and prior employment. DinD goes a step further by comparing the two PSM-matched groups before and after program participation. This controls for factors we cannot observe, as long as those factors are constant across time, such as the strength of professional networks and motivation.

The treatment group includes any individual who:

- Exited the Workforce Investment Act (WIA) Adult Program between July 1, 2007 and June 30, 2008; between July 1, 2009 and June 30, 2010; or between July 1, 2012 and June 30, 2013;
- Exited the Workforce Investment Act (WIA) or Minnesota Dislocated Worker Program between July 1, 2007 and June 30, 2008; between July 1, 2009 and June 30, 2010; or between July 1, 2012 and June 30, 2013; or
- Exited the Minnesota FastTRAC program between July 1, 2012 and June 30, 2013.

The comparison group includes individuals who:

- Applied for Unemployment Insurance benefits during the time the treatment population enrolled in one of the above workforce programs or

- Registered an account to access basic on-line (www.MinnesotaWorks.net) and walk-in employment services via Minnesota’s WorkForce Centers during the time the treatment population enrolled in one of the above workforce programs.

The timeframe for the analysis includes a **baseline period** (for each individual in the study, the 8<sup>th</sup> through 5<sup>th</sup> quarters prior to program participation) and as many as five **follow up periods** (each year beginning with the quarter after program enrollment). This means we start measuring outcomes as soon as the participant enrolls, rather than when they ‘exit’ the program (i.e. no longer receive services). We do this because the length of time spent in the program can vary widely, from a couple months to a couple years, and participants generally exit when they find a job. Because of timing, the 2012 cohorts have just three years of follow up available for this analysis.<sup>2</sup>

---

<sup>2</sup> Read more about this methodology, including a full literature review, in the pilot report, available on DEED’s [Net Impact project page](#).

## Programs studied

The three programs in this analysis represent very different service models and target populations. This section describes each program.

### Dislocated Worker

The Dislocated Worker Program is available to any person who lost their job through no fault of their own **and** is unlikely to be able to find work in that same industry or occupation due to declining employment opportunities. The program is designed to help participants transfer their skills to a new industry or occupation and get back to work quickly. A federal program, the Dislocated Worker Program is supplemented with significant state dollars in Minnesota, roughly doubling the number of participants served.

To be eligible, an individual typically must qualify for Unemployment Insurance (although the program does not serve temporary or seasonal workers, who make up a large portion of Unemployment Insurance recipients). In addition to these individuals, the following groups are eligible for Dislocated Worker services in Minnesota:

- Self-employed individuals who lose their jobs due to economic conditions;
- Veterans leaving active duty with the armed forces; and
- Certain individuals leaving active duty of the National Guard or armed forces reserves.

Recruitment for the program occurs through the state's 48 WorkForce Centers and nine independent service providers. For mass layoffs affecting 50 or more workers, recruitment often occurs directly on the worksite with the employer's cooperation. The Dislocated Worker Program operates seamlessly with another federal program, Trade Adjustment Assistance, which provides extra funding for workers laid off due to negative trade impacts.

Dislocated Worker and WIA Adult (below) provide the same set of program services:

1. Career Planning and Counseling: Professionally trained and experienced counselors help customers assess skills, develop career paths, and set job goals.
2. Job Search and Placement Services: Counselor and program staff provide job search tools, networking clubs, and workshops on everything from resume building to interview skills.
3. Job Training: Counselors and program staff help customers use funding proactively to develop occupational skills training, on-the-job training, entrepreneurial support, adult basic education, and other types of training.
4. Financial Support Services: The program has the ability to support its customers through tough financial times by assisting with transportation costs, family care costs, health care costs, or other emergency aid workers may need to reach their employment goals.

### WIA Adult

The WIA Title IB Adult program<sup>3</sup> provides the program services listed above to adults who face significant barriers to employment. While eligibility is broad, priority of service is given to those

---

<sup>3</sup> In 2014, the Workforce Investment Act (WIA) was replaced by new legislation, the Workforce Innovation and Opportunity Act (WIOA). Both the Title IB Adult and Dislocated Worker programs survive largely unchanged under WIOA.

receiving public assistance, low-income individuals, and veterans. Recruitment for the program occurs through the state's 48 WorkForce Centers.

## FastTRAC

FastTRAC Adult Career Pathways is a state initiative that partnered the Department of Employment and Economic Development (DEED), Adult Basic Education, Minnesota State Colleges and Universities (MnSCU), local employers, and community-based organizations. FastTRAC was first developed as a career pathways system between 2008 and 2011 and has been refined over the years.<sup>4</sup> The State currently funds career pathways through the Pathways to Prosperity program.<sup>5</sup> The target population of this program is adults with low educational attainment, and the program aims to place them in well-paying careers with the potential for upward mobility.

FastTRAC participants in this analysis received three key components:

- Contextualized instruction, meaning participants receive career-specific training as well as the adult basic education they need to succeed in those courses.
- Career development, including career assessment and job placement.
- Support services and navigation, meaning participants can get help in both tangible and non-tangible ways as they re-enter the education system, such as with transportation vouchers or building self-esteem.

Recruitment into FastTRAC occurred from multiple different channels, including students already enrolled in community college, participants of other workforce development programs (including WIA Adult, Minnesota Family Investment Program (MFIP), and Vocational Rehabilitation), and general outreach to the local community.

Unlike Dislocated Worker and WIA Adult, FastTRAC's program model involves all participants engaging in training, generally with both college coursework and ABE instruction.

## Common aspects

Despite their differences, the three programs in this analysis do share some key commonalities with implications for this analysis.

Within each program, participation is a two-way selection process. That is, participants have to want to engage in the program, and program staff have to approve the activities of participants. This is important because of what economists term "selection bias", which can lead to misleading results if the participants studied are not representative of all participants.

This is especially true for program participants engaging in training: training activities are subject to approval based on funding availability, labor market justification, and fit with the participant's skills and abilities. Ultimately, participants who engage in training may not be representative of all program participants if they have more motivation, ability, or other traits valued in the workplace than

---

<sup>4</sup> More information on the history and implementation of FastTRAC is available in the [FastTRAC Implementation Study](#) and the [Shifting Gears Evaluation Report](#).

<sup>5</sup> More information on Pathways to Prosperity is available [on DEED's website](#).

participants who do not engage in training. Without controlling for selection bias, we could wrongly attribute to training the positive labor market outcomes associated with motivation.

Our methodology controls for selection bias both by matching participants to observationally similar non-participants, based on race, gender, educational attainment, etc., and by tracking individuals through time. Tracking individuals through time effectively controls for traits we cannot observe (such as motivation and ability) as long as those traits are constant through time.

## Descriptive Statistics

Descriptive statistics for each cohort in this study are available in Appendix Tables A1 to A3. Basic demographics across cohorts *within programs* are fairly consistent.

- Dislocated Worker participants tend to come from middle-income, full-time employment (\$38,000 to \$46,000 annual income, averaging 32 to 34 hours per week) and are between 82 and 87 percent White. Small percentages received any public assistance benefits prior to enrollment. Most (62 to 70 percent) live in the Minneapolis-St Paul metro area. The program tends to have about equal numbers of men and women enrolled, or slightly more men (44 to 50 percent women). The average age is 45 to 47 years old.
- WIA Adult participants come from lower income, part-time employment (\$11,000 to \$13,000 annual income averaging 15 to 18 hours per week). Between 58 and 67 percent of participants are White, and 23 to 24 percent are Black or African American. Substantial portions received either public healthcare coverage (40 to 50 percent) or cash assistance (30 to 40 percent). Less than half (42 to 45 percent) live in the Minneapolis-St Paul metro area. The program tends to have about equal numbers of men and women enrolled, or slightly more women (55 to 61 percent women). The average age is 36 years old.
- FastTRAC participants earned on average about \$9,000 in annual income in the baseline period, averaging 14 hours per week. Just 55 percent are White, and 28 percent are Black or African American. Over half (51 percent) received public healthcare coverage, and nearly half (45 percent) received cash assistance. Only 37 percent live in the Minneapolis-St Paul metro, and the vast majority are women (78 percent). The average age is 32 years old.

This information is used to match participants with appropriate comparisons among non-participants. Through the matching process, non-participants mirror participants along all of these statistics. Results of the statistical tests confirming a well-matched comparison group for each treatment cohort are available in Appendix Tables A4 to A6.

Ideally, there would be no significant differences in these results; this is especially important in our variable of interest, 'Average (logged) earnings'. In practice, we do have a minimal number of significant results and one instance of significance in 'Average (logged) earnings' (among the 2009 Dislocated Worker cohort). If results differed substantially for this cohort, we would view those results with suspicion.

Given these sporadic significant differences, our methodology goes one step further than this propensity score matching to a difference-in-differences analysis. In effect, a difference-in-differences analysis controls for these differences as long as they are constant through time.



For example, Table A4 shows that the 2009 Dislocated Worker cohort earns less than the corresponding comparison group, and that this difference is significant. The difference-in-differences analysis will assume this earnings differential is constant across time and will only pick up increases or decreases from there.

## Net Impact Results

This section provides descriptive statistics on the treatment and comparison groups and presents net impact results for each cohort.

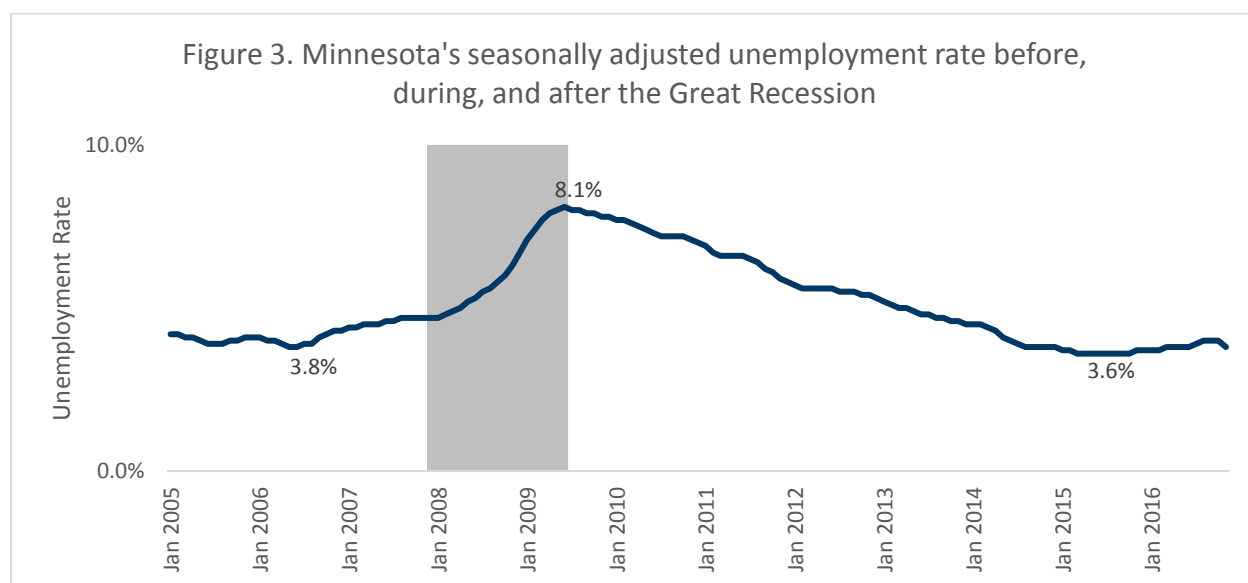
### Net impact on earnings

This section contains the main results of this analysis: the net impact on participant earnings. This is expressed both as a percentage change relative to the baseline year (Table 1) and in corresponding dollar amounts specific to those cohorts' baseline earnings (Table 2).

For example, participants in the 2007 Dislocated Worker cohort are estimated to have earned 19 percent more in the first year after enrollment *than if they had not participated*.

In line with similar studies, the net impact methodology removes from the analysis those participants who had no earnings in the baseline period. This ensures that we are removing any participant from the sample who may have no earnings in the follow up periods because of an erroneous linkage between participant data and employment data. For each cohort, the same set of participants are compared before and after program participation, including those who are unemployed after participation.

In general, these programs have large and lasting positive effects on earnings. The exceptions to this are the most recent, post-recession cohorts of WIA Adult and Dislocated Worker, suggesting that these programs may be especially effective during periods of economic downturn, or that they increase participants' resiliency through recessions. See [What could explain the business cycle effects in these results?](#) for a fuller discussion.



The 2007 cohorts enrolled between 2006 and 2007, just before the recession. Our five-year follow-up period follows these individuals through the worst of the labor market downturn. The 2009 cohorts enrolled between 2008 and 2009, during the worst of the labor market downturn, and again our five-year follow-up period follows these individuals through the worst of the recession's impact on the labor market. During both of these follow-up periods, jobs were scarce.

In contrast, the 2012 cohorts enrolled between 2010 and 2012, after the recession had technically ended but during a period marked by higher-than-normal but steadily declining unemployment rates.

Also of note is the positive impact of FastTRAC, even during the time period in which trends in WIA Adult and Dislocated Worker turn insignificant or negative. The magnitude of the FastTRAC effect is similar to the effects of WIA Adult and Dislocated Worker on earlier cohorts of participants engaged in classroom training (as all FastTRAC participants are).

**These programs tend to have large and lasting positive effects on earnings. The exceptions to this suggest that their effects may be especially pronounced during periods of economic downturn.**

**Table 1. Net impact: percent change in yearly earnings among all participants**

|                                 | Year 1 |    | Year 2 |    | Year 3 |    | Year 4 |    | Year 5 |    |
|---------------------------------|--------|----|--------|----|--------|----|--------|----|--------|----|
| <b>Dislocated Worker (2007)</b> | 19%    | ** | 25%    | ** | 48%    | ** | 67%    | ** | 81%    | ** |
| <b>Dislocated Worker (2009)</b> | 4%     |    | 54%    | ** | 67%    | ** | 66%    | ** | 73%    | ** |
| <b>Dislocated Worker (2012)</b> | -59%   | ** | -50%   | ** | -16%   | ** |        |    |        |    |
| <b>WIA Adult (2007)</b>         | 63%    | ** | 35%    |    | 36%    |    | 48%    |    | 69%    | *  |
| <b>WIA Adult (2009)</b>         | 62%    | ** | 120%   | ** | 65%    | ** | 55%    | *  | 56%    | *  |
| <b>WIA Adult (2012)</b>         | -22%   |    | -14%   |    | -8%    |    |        |    |        |    |
| <b>FastTRAC (2012)</b>          | 57%    |    | 90%    | *  | 100%   | *  |        |    |        |    |

Significance levels: \*\* = 1%; \* = 5%

**Table 2. Net impact: change in yearly earnings, in dollars among all participants**

|                                 | Year 1    |    | Year 2    |    | Year 3   |    | Year 4   |    | Year 5   |    |
|---------------------------------|-----------|----|-----------|----|----------|----|----------|----|----------|----|
| <b>Dislocated Worker (2007)</b> | \$6,157   | ** | \$8,053   | ** | \$15,308 | ** | \$21,236 | ** | \$25,751 | ** |
| <b>Dislocated Worker (2009)</b> | \$1,435   |    | \$20,508  | ** | \$25,450 | ** | \$24,944 | ** | \$27,712 | ** |
| <b>Dislocated Worker (2012)</b> | -\$21,428 | ** | -\$18,409 | ** | -\$5,823 | ** |          |    |          |    |
| <b>WIA Adult (2007)</b>         | \$5,769   | ** | \$3,221   |    | \$3,270  |    | \$4,327  |    | \$6,314  | *  |
| <b>WIA Adult (2009)</b>         | \$5,400   | ** | \$10,399  | ** | \$5,627  | ** | \$4,753  | *  | \$4,834  | *  |
| <b>WIA Adult (2012)</b>         | -\$1,912  |    | -\$1,213  |    | -\$673   |    |          |    |          |    |
| <b>FastTRAC (2012)</b>          | \$4,634   |    | \$7,296   | *  | \$8,068  | *  |          |    |          |    |

Significance levels: \*\* = 1%; \* = 5%

## Net impact on employment

The results presented above could be consistent with one of two stories: participants are employed at about the same rate as comparison individuals but in higher-paying jobs, or participants are employed at a higher rate than comparison individuals. The evidence suggests the latter.

Table 3 presents net impact results on employment, defined as earning any income in the relevant year (by design, both the treatment and comparison groups have employment rates of 100 percent).

Program participation has a nearly universal positive and significant net impact on employment rates, although again the most recent cohorts of Dislocated Worker and WIA Adult are the exception. In general, the trend is positive, even where Year 1 results are negative.

## Program participation has a nearly universal positive and significant net impact on employment rates.

**Table 3. Net impact: percent change in employment among all participants**

|                                 | Year 1 |    | Year 2 |    | Year 3 |    | Year 4 |    | Year 5 |    |
|---------------------------------|--------|----|--------|----|--------|----|--------|----|--------|----|
| <b>Dislocated Worker (2007)</b> | 3%     | ** | 3%     | ** | 4%     | ** | 5%     | ** | 6%     | ** |
| <b>Dislocated Worker (2009)</b> | 2%     | ** | 4%     | ** | 5%     | ** | 5%     | ** | 5%     | ** |
| <b>Dislocated Worker (2012)</b> | -6%    | ** | -5%    | ** | 0%     |    |        |    |        |    |
| <b>WIA Adult (2007)</b>         | 4%     | ** | 3%     |    | 3%     |    | 3%     |    | 5%     | *  |
| <b>WIA Adult (2009)</b>         | 5%     | ** | 7%     | ** | 4%     | *  | 5%     | *  | 4%     | *  |
| <b>WIA Adult (2012)</b>         | -2%    |    | -1%    |    | 0%     |    |        |    |        |    |
| <b>FastTRAC (2012)</b>          | 5%     |    | 8%     | ** | 7%     | *  |        |    |        |    |

*Significance levels: \*\* = 1%; \* = 5%*

Tables 4 and 5 present earnings results for a subset of participants included in Tables 1 and 2: those employed both in the baseline period and in each respective follow-up period. These results remove the negative earnings impact of unemployment, and hone in on the wages earned by those who are employed.

**For earlier Dislocated Worker cohorts, results suggest the program’s effect went beyond moving participants into *any* job to moving participants into a *higher-income* job than they otherwise would have had.**

**Table 4. Net impact: percent change in yearly earnings among participants employed at baseline and follow up**

|                                 | Year 1  | Year 2  | Year 3  | Year 4 | Year 5 |
|---------------------------------|---------|---------|---------|--------|--------|
| <b>Dislocated Worker (2007)</b> | -8% **  | -5% *   | 1%      | 8% **  | 7% **  |
| <b>Dislocated Worker (2009)</b> | -20% ** | 3%      | 4% *    | 5% **  | 7% **  |
| <b>Dislocated Worker (2012)</b> | -31% ** | -25% ** | -19% ** |        |        |
| <b>WIA Adult (2007)</b>         | 11%     | 2%      | -4%     | 10%    | 8%     |
| <b>WIA Adult (2009)</b>         | 8%      | 7%      | 7%      | -8%    | -2%    |
| <b>WIA Adult (2012)</b>         | -15%    | -12%    | -9%     |        |        |
| <b>FastTRAC (2012)</b>          | 1%      | -14%    | -9%     |        |        |

Significance levels: \*\* = 1%; \* = 5%

**Table 5. Net impact: change in yearly earnings, in dollars among participants employed at baseline and follow up**

|                                 | Year 1       | Year 2      | Year 3      | Year 4     | Year 5     |
|---------------------------------|--------------|-------------|-------------|------------|------------|
| <b>Dislocated Worker (2007)</b> | -\$2,476 **  | -\$1,703 *  | \$224       | \$2,513 ** | \$2,103 ** |
| <b>Dislocated Worker (2009)</b> | -\$7,614 **  | \$1,184     | \$1,546 *   | \$2,116 ** | \$2,860 ** |
| <b>Dislocated Worker (2012)</b> | -\$11,862 ** | -\$9,599 ** | -\$7,260 ** |            |            |
| <b>WIA Adult (2007)</b>         | \$1,041      | \$148       | -\$403      | \$934      | \$753      |
| <b>WIA Adult (2009)</b>         | \$765        | \$644       | \$623       | -\$734     | -\$150     |
| <b>WIA Adult (2012)</b>         | -\$1,266     | -\$1,066    | -\$729      |            |            |
| <b>FastTRAC (2012)</b>          | \$75         | -\$1,206    | -\$772      |            |            |

Significance levels: \*\* = 1%; \* = 5%

Results among WIA Adult and FastTRAC are not significant, and results for the most recent Dislocated Worker cohort are negative (although trending positive).

For earlier Dislocated Worker cohorts, results turn positive and significant in the 3<sup>rd</sup> or 4<sup>th</sup> year after enrollment, suggesting the program’s effect went beyond moving participants into any job to moving participants into a higher-income job than they otherwise would have had.

What could explain the business cycle effects in these results?

Enrollment patterns in Trade Adjustment Assistance (TAA) may have at least a small impact on Dislocated Worker effects. The share of Dislocated Worker participants co-enrolled in TAA increased across cohorts: from 6-7 percent in the 2007 and 2009 cohorts to 10 percent in the 2012 cohort.

**Importantly, TAA has more generous benefits than Dislocated Worker which may delay job-seeking, including extended unemployment insurance payments for participants engaged in training.** Further study is needed to determine how this increase in TAA enrollment impacts overall results, but this could help explain the negative employment results in the first two years of the 2012 cohort.

Additionally, **our methodology does not include the prior industry of employment.** If participants and comparison individuals differ by their industry of employment, and if that difference changes over the business cycle and impacts employment outcomes, this could help explain our differing results through the Great Recession and its aftermath. Data on industry is currently available, so further research with this methodology will include industry of prior employment to explore this possibility.

**Economic theory suggests that employer perceptions of workforce participants may change throughout the business cycle, favoring participants during downturns and avoiding participants during tighter labor markets.**

Finally, **new economic theory suggests, with budding empirical evidence, that employer perceptions of workforce participants may change throughout the business cycle.**<sup>6</sup> Our methodology controls for observable and unobservable characteristics about participants but not employer perceptions or the “signal” that participation in a workforce program provides. It is plausible that, during business cycle downturns when labor is plentiful, employers perceive workforce participants to be **more motivated** than the average job seeker: motivated enough to enroll in a career-oriented program to make some time investments in their future. During business cycle booms, when labor is scarce, employers may perceive workforce participants to be **less desirable** than the average job seeker: these are now participants that must require extra assistance to find employment in a tight labor market. **This theory is supported by anecdotal evidence that the programs serve harder to serve populations during business cycle booms, suggesting that employer perceptions, if they do exist along these lines, may be accurate.** Although this theory can be partly tested with available data, further research may need to include interviews with employers to determine how perceptions may change over time.

---


<sup>6</sup> Morgan, John and Felix Vardy. 2009. “Diversity in the Workplace,” American Economic Review.

Ewans, Michael et al. 2014. “Statistical Discrimination or Prejudice? A Large Sample Field Experiment,” Review of Economics and Statistics.

## Net impact on earnings among participants engaged in classroom training

Although it is valuable to know how much a program impacts all participants overall, it can also be helpful to know what particular strategies have the greatest impact. This is especially true in a program context with a wide range of possible services.

Some participants in Dislocated Worker and WIA Adult receive just job counseling and job search services, while others receive a more intensive set of services: formal training and even a credential in marketable skills. The level of services any given participant receives is based primarily on what they and their job counselor decide is their best route to a good job.



### **Trends across the 2007 and 2009 cohorts in both programs suggest that the returns to training may be depressed in a weak labor market.**

As a way of investigating the effect of this more intensive set of services, we ran the same analysis including in the treatment group just those participants who engaged in formal classroom training intended to result in a credential. Because participants engaged in more intensive services are not necessarily representative of all participants, the comparison group for each cohort was redrawn based on their observed characteristics.

Compared to the main results presented in Tables 1 and 2, Tables 6 and 7 show much more negative results in Year 1, when most participants engaged in training are likely unemployed while taking classes at least part of the year. Economists term these forgone earnings the “opportunity cost” of attending school and take them into account when calculating returns to education.

Longer term trends differ between the 2007 and 2009 cohorts: by Year 5, participants in the earlier cohort who engage in credentialed training do not fare better than their treatment peers who did not, but participants in the 2009 cohort who engage in credentialed training do. Because this trend exists in both programs, this could suggest another Great Recession-driven result: that the returns to training are depressed in a weak labor market.

**Table 6. Net impact: percent change in yearly earnings among participants engaged in classroom training**

|                                 | Year 1 |    | Year 2 |    | Year 3 |    | Year 4 |    | Year 5 |    |
|---------------------------------|--------|----|--------|----|--------|----|--------|----|--------|----|
| <b>Dislocated Worker (2007)</b> | -57%   | ** | -30%   | ** | 24%    |    | 47%    | ** | 51%    | ** |
| <b>Dislocated Worker (2009)</b> | -38%   | ** | 21%    | *  | 65%    | ** | 84%    | ** | 99%    | ** |
| <b>Dislocated Worker (2012)</b> | -86%   | ** | -80%   | ** | -29%   | ** |        |    |        |    |
| <b>WIA Adult (2007)</b>         | -33%   |    | 96%    |    | 78%    |    | 44%    |    | 27%    |    |
| <b>WIA Adult (2009)</b>         | 46%    |    | 81%    | *  | 75%    |    | 116%   | *  | 70%    |    |
| <b>WIA Adult (2012)</b>         | -41%   | *  | -11%   |    | 39%    |    |        |    |        |    |

*FastTRAC not included because all participants engage in classroom training.*

*Significance levels: \*\* = 1%; \* = 5%*

**Table 7. Net impact: change in yearly earnings, in dollars among participants engaged in classroom training**

|                                 | Year 1    |    | Year 2    |    | Year 3   |    | Year 4   |    | Year 5   |    |
|---------------------------------|-----------|----|-----------|----|----------|----|----------|----|----------|----|
| <b>Dislocated Worker (2007)</b> | -\$17,839 | ** | -\$9,347  | ** | \$7,390  |    | \$14,483 | ** | \$16,014 | ** |
| <b>Dislocated Worker (2009)</b> | -\$14,870 | ** | \$8,168   | *  | \$25,535 | ** | \$33,141 | ** | \$38,858 | ** |
| <b>Dislocated Worker (2012)</b> | -\$29,179 | ** | -\$27,235 | ** | -\$9,828 | ** |          |    |          |    |
| <b>WIA Adult (2007)</b>         | -\$2,358  |    | \$6,824   |    | \$5,533  |    | \$3,154  |    | \$1,900  |    |
| <b>WIA Adult (2009)</b>         | \$3,793   |    | \$6,735   | *  | \$6,175  |    | \$9,571  | *  | \$5,804  |    |
| <b>WIA Adult (2012)</b>         | -\$3,586  | *  | -\$991    |    | \$3,404  |    |          |    |          |    |

*FastTRAC not included because all participants engage in classroom training.*

*Significance levels: \*\* = 1%; \* = 5%*

### Net impact on earnings: by gender, race, region, and educational attainment

Another important question is whether the program is particularly effective with certain demographics. Tables 14, 15, and 16 provide net impact results for each cohort by gender, race (White or Black/ African American), region (Minneapolis – St Paul metro area or greater Minnesota), and education level (high school degree or at least some college). In all breakdowns but race, all participants are represented in one category or the other: additional racial groups other than White and Black or African American are too small to show reliable results. In this analysis, the comparison group is limited to the same demographic group as participants; for instance, male participants are matched only with male comparison individuals.

#### Dislocated Worker

- Three trends appear consistent across Dislocated Worker cohorts: female participants see a more positive net impact than male participants; Minneapolis – St Paul metro residents see a more positive net impact than their Greater Minnesota counterparts; and participants who had attained some college or a degree by the time they enrolled see a more positive net impact than those who never attended college.

In the earlier cohorts, positive net impacts among Black or African American participants appear early before fading away; net impacts among White participants trend uniformly upward (even for the 2012



cohort). At its height, however, the net impact among Black or African American participants can exceed that among White participants.

#### WIA Adult


- The only consistent trend among WIA Adult participants is that those with some college or more see a higher net impact than those who have never attended college. Other trends are more variable.

Female WIA Adult participants in the 2007 and 2012 cohorts see a higher net impact than male participants, but male participants see a higher earnings impact in the 2009 cohort.

**The only positive and significant result from the 2012 cohort is among Black or African American participants in Year 1.** Similar to the Dislocated Worker trends by race, net impacts among Black or African American participants are highest in the first year, fading away thereafter.

White participants tend to see an increasing net impact in the 2007 and 2012 cohorts, while the impact peaks in Years 2 and 3 in the 2009 cohort.

In the earliest cohort, participants in Greater Minnesota are uniformly higher than those among participants in the Minneapolis – St Paul metro area, although later trends are less clear.



**Across most cohorts, the positive net impacts among Black or African American participants are high initially but fade out over time. White participants see an opposite trend.**

#### FastTRAC

- Male FastTRAC participants see a higher net impact than female, although the trend for both groups is positive through the follow up period.
- Similar to trends in Dislocated Worker and WIA Adult, the positive net impacts among Black or African American participants are high initially, fading out over time. However, these impacts are higher than for White participants.
- Participants from the Minneapolis – St Paul metro area see higher net impacts than those from Greater Minnesota, including the highest net impact result in percentage terms that we see across all of the programs.
- Counter to trends in Dislocated Worker and WIA Adult, those who have never attended college see higher impacts than those who have.

**Table 8a. Dislocated Worker (2007) net impact: percent change in yearly earnings, by demographics**

|                                    | Year 1 |    | Year 2 |    | Year 3 |    | Year 4 |    | Year 5 |    |
|------------------------------------|--------|----|--------|----|--------|----|--------|----|--------|----|
| <b>Male</b>                        | 5%     |    | 4%     |    | 30%    | ** | 53%    | ** | 55%    | ** |
| <b>Female</b>                      | 58%    | ** | 60%    | ** | 81%    | ** | 87%    | ** | 92%    | ** |
| <b>White</b>                       | 9%     |    | 10%    |    | 42%    | ** | 61%    | ** | 75%    | ** |
| <b>Black or African American</b>   | 104%   | ** | 27%    |    | 6%     |    | 1%     |    | -9%    |    |
| <b>Minneapolis - St Paul Metro</b> | 47%    | ** | 50%    | ** | 69%    | ** | 77%    | ** | 79%    | ** |
| <b>Greater MN</b>                  | -16%   | *  | -14%   |    | 12%    |    | 36%    | ** | 54%    | ** |
| <b>HS equivalent or less</b>       | 51%    | ** | 40%    | ** | 52%    | ** | 62%    | ** | 67%    | ** |
| <b>Some college or more</b>        | 20%    | ** | 24%    | ** | 51%    | ** | 81%    | ** | 87%    | ** |

Significance levels: \*\* = 1%; \* = 5%

**Table 8b. Dislocated Worker (2009) net impact: percent change in yearly earnings, by demographics**

|                                    | Year 1 |    | Year 2 |    | Year 3 |    | Year 4 |    | Year 5 |    |
|------------------------------------|--------|----|--------|----|--------|----|--------|----|--------|----|
| <b>Male</b>                        | -22%   | ** | 40%    | ** | 51%    | ** | 60%    | ** | 71%    | ** |
| <b>Female</b>                      | 37%    | ** | 91%    | ** | 120%   | ** | 111%   | ** | 130%   | ** |
| <b>White</b>                       | -6%    |    | 56%    | ** | 75%    | ** | 81%    | ** | 96%    | ** |
| <b>Black or African American</b>   | 49%    |    | 95%    | ** | 106%   | ** | 80%    | *  | 46%    |    |
| <b>Minneapolis - St Paul Metro</b> | 29%    | ** | 98%    | ** | 98%    | ** | 101%   | ** | 105%   | ** |
| <b>Greater MN</b>                  | -34%   | ** | 4%     |    | 32%    | ** | 47%    | ** | 65%    | ** |
| <b>HS equivalent or less</b>       | -23%   | ** | 23%    | *  | 42%    | ** | 43%    | ** | 54%    | ** |
| <b>Some college or more</b>        | 26%    | ** | 89%    | ** | 102%   | ** | 107%   | ** | 115%   | ** |

Significance levels: \*\* = 1%; \* = 5%

**Table 8c. Dislocated Worker (2012) net impact: percent change in yearly earnings, by demographics**

|                                    | Year 1 |    | Year 2 |    | Year 3 |    |
|------------------------------------|--------|----|--------|----|--------|----|
| <b>Male</b>                        | -63%   | ** | -60%   | ** | -36%   | ** |
| <b>Female</b>                      | -48%   | ** | -40%   | ** | 3%     |    |
| <b>White</b>                       | -59%   | ** | -50%   | ** | -17%   | ** |
| <b>Black or African American</b>   | -33%   |    | -49%   | ** | -20%   |    |
| <b>Minneapolis - St Paul Metro</b> | -42%   | ** | -33%   | ** | 1%     |    |
| <b>Greater MN</b>                  | -79%   | ** | -77%   | ** | -45%   | ** |
| <b>HS equivalent or less</b>       | -54%   | ** | -56%   | ** | -16%   |    |
| <b>Some college or more</b>        | -55%   | ** | -43%   | ** | -9%    |    |

Significance levels: \*\* = 1%; \* = 5%

**Table 9a. WIA Adult (2007) net impact: percent change in yearly earnings, by demographics**

|                                    | Year 1 |    | Year 2 |  | Year 3 |   | Year 4 |    | Year 5 |
|------------------------------------|--------|----|--------|--|--------|---|--------|----|--------|
| <b>Male</b>                        | 72%    | *  | -22%   |  | 7%     |   | 12%    |    | 21%    |
| <b>Female</b>                      | 59%    | *  | 56%    |  | 65%    |   | 85%    | *  | 94%    |
| <b>White</b>                       | 42%    | *  | 29%    |  | 56%    | * | 91%    | ** | 89%    |
| <b>Black or African American</b>   | 13%    |    | -54%   |  | -49%   |   | -56%   |    | -18%   |
| <b>Minneapolis - St Paul Metro</b> | 30%    |    | -2%    |  | -6%    |   | -20%   |    | 29%    |
| <b>Greater MN</b>                  | 48%    | *  | 31%    |  | 48%    |   | 71%    | *  | 114%   |
| <b>HS equivalent or less</b>       | 72%    | ** | -2%    |  | -24%   |   | -16%   |    | -5%    |
| <b>Some college or more</b>        | 74%    | *  | 58%    |  | 62%    |   | 110%   | *  | 100%   |

Significance levels: \*\* = 1%; \* = 5%

**Table 9b. WIA Adult (2009) net impact: percent change in yearly earnings, by demographics**

|                                    | Year 1 |    | Year 2 |    | Year 3 |    | Year 4 |    | Year 5 |
|------------------------------------|--------|----|--------|----|--------|----|--------|----|--------|
| <b>Male</b>                        | 94%    | ** | 139%   | ** | 125%   | ** | 71%    | *  | 65%    |
| <b>Female</b>                      | 75%    | ** | 83%    | ** | 78%    | *  | 55%    |    | 36%    |
| <b>White</b>                       | 30%    |    | 70%    | *  | 69%    | *  | 50%    |    | 17%    |
| <b>Black or African American</b>   | 251%   | ** | 152%   | *  | 8%     |    | -13%   |    | -16%   |
| <b>Minneapolis - St Paul Metro</b> | 158%   | ** | 71%    |    | 52%    |    | -6%    |    | -6%    |
| <b>Greater MN</b>                  | 33%    |    | 90%    | *  | 56%    |    | 51%    |    | 43%    |
| <b>HS equivalent or less</b>       | 78%    | ** | 49%    | *  | 36%    |    | 37%    |    | 30%    |
| <b>Some college or more</b>        | 144%   | ** | 156%   | ** | 145%   | ** | 98%    | ** | 63%    |

Significance levels: \*\* = 1%; \* = 5%

**Table 9c. WIA Adult (2012) net impact: percent change in yearly earnings, by demographics**

|                                    | Year 1 |   | Year 2 |  | Year 3 |
|------------------------------------|--------|---|--------|--|--------|
| <b>Male</b>                        | -29%   |   | 6%     |  | 0%     |
| <b>Female</b>                      | 8%     |   | 43%    |  | 41%    |
| <b>White</b>                       | -17%   |   | 0%     |  | 22%    |
| <b>Black or African American</b>   | 150%   | * | 64%    |  | 33%    |
| <b>Minneapolis - St Paul Metro</b> | 11%    |   | 43%    |  | 25%    |
| <b>Greater MN</b>                  | -31%   |   | -5%    |  | 23%    |
| <b>HS equivalent or less</b>       | -19%   |   | 32%    |  | 24%    |
| <b>Some college or more</b>        | 6%     |   | 1%     |  | 40%    |

Significance levels: \*\* = 1%; \* = 5%

**Table 10. FastTRAC (2012) net impact: percent change in yearly earnings, by demographics**

|                                    | Year 1 | Year 2 | Year 3 |     |
|------------------------------------|--------|--------|--------|-----|
| <b>Male</b>                        | 83%    | 98%    | 174%   | *   |
| <b>Female</b>                      | 30%    | 37%    | 57%    |     |
| <b>White</b>                       | 11%    | 53%    | 46%    |     |
| <b>Black or African American</b>   | 102%   | 78%    | 35%    |     |
| <b>Minneapolis - St Paul Metro</b> | 142%   | 186%   | 354%   | *   |
| <b>Greater MN</b>                  | 72%    | 104%   | 202%   | *   |
| <b>HS equivalent or less</b>       | 48%    | 154%   | 199%   | * * |
| <b>Some college or more</b>        | 81%    | 74%    | 149%   |     |

Significance levels: \*\* = 1%; \* = 5%

### Net impact on public assistance programs

Tables 11, 12, and 13 show the net impact on public assistance receipt, whether cash assistance or public healthcare coverage through MinnesotaCare or Medical Assistance. Although we would hope participants achieve self-sufficiency through employment gained by program services, we also know that a steep decline in income precipitates enrollment in each of these workforce programs. We also know job counselors provide direct referrals to any public benefits their clients may be eligible for. Therefore, perhaps the best case scenario in these results would be an initial increase in benefits but a decline over time as participants work toward self-sufficiency; this is indeed what we see.

Because the data linking process for this analysis does not include employment data sources, no restriction is made on prior employment: this analysis includes all participants.

**All cohorts see statistically significant net increases in cash benefits after enrolling in a workforce program; these increases are small in dollar value and tend to diminish over time.**

Table 11 shows statistically significant net increases in cash benefits awarded to participants after enrolling in a workforce program; these increases tend to diminish over time. Table 12 shows the net impact in dollar terms, showing in fact very small dollar amounts.

**Table 11. Net impact: percent change in yearly MFIP and SNAP benefits among all participants**

|                                 | Year 1 |    | Year 2 |    | Year 3 |    | Year 4 |    | Year 5 |    |
|---------------------------------|--------|----|--------|----|--------|----|--------|----|--------|----|
| <b>Dislocated Worker (2007)</b> | 23%    | ** | 17%    | ** | 17%    | ** | 16%    | ** | 10%    | ** |
| <b>Dislocated Worker (2009)</b> | 19%    | ** | 18%    | ** | 14%    | ** | 9%     | ** | 7%     | ** |
| <b>Dislocated Worker (2012)</b> | 25%    | ** | 34%    | ** | 34%    | ** |        |    |        |    |
| <b>WIA Adult (2007)</b>         | 312%   | ** | 200%   | ** | 160%   | ** | 80%    | ** | 48%    | *  |
| <b>WIA Adult (2009)</b>         | 463%   | ** | 226%   | ** | 165%   | ** | 34%    |    | 28%    |    |
| <b>WIA Adult (2012)</b>         | 334%   | ** | 178%   | ** | 155%   | ** |        |    |        |    |
| <b>FastTRAC (2012)</b>          | 172%   | *  | 112%   |    | 245%   | ** |        |    |        |    |

Significance levels: \*\* = 1%; \* = 5%

**Table 12. Net impact: change in yearly MFIP and SNAP benefits, in dollars among all participants**

|                                 | Year 1  |    | Year 2  |    | Year 3  |    | Year 4 |    | Year 5 |    |
|---------------------------------|---------|----|---------|----|---------|----|--------|----|--------|----|
| <b>Dislocated Worker (2007)</b> | \$0.31  | ** | \$0.22  | ** | \$0.23  | ** | \$0.22 | ** | \$0.13 | ** |
| <b>Dislocated Worker (2009)</b> | \$0.24  | ** | \$0.23  | ** | \$0.18  | ** | \$0.11 | ** | \$0.09 | ** |
| <b>Dislocated Worker (2012)</b> | \$0.37  | ** | \$0.49  | ** | \$0.50  | ** |        |    |        |    |
| <b>WIA Adult (2007)</b>         | \$26.49 | ** | \$17.01 | ** | \$13.59 | ** | \$6.82 | ** | \$4.09 | *  |
| <b>WIA Adult (2009)</b>         | \$43.10 | ** | \$21.05 | ** | \$15.40 | ** | \$3.18 |    | \$2.57 |    |
| <b>WIA Adult (2012)</b>         | \$58.51 | ** | \$31.15 | ** | \$27.19 | ** |        |    |        |    |
| <b>FastTRAC (2012)</b>          | \$59.44 | *  | \$38.72 |    | \$84.69 | ** |        |    |        |    |

Significance levels: \*\* = 1%; \* = 5%

Across all programs and cohorts, Table 13 shows statistically significant net increases in the amount of time with public healthcare coverage. For example, participants in the 2007-08 Dislocated Worker cohort have one tenth more quarters (about 11 days) of public healthcare coverage than they otherwise would have if they had not participated in the program. Like the results for cash assistance, these results are statistically significant but in practice very small.

**Table 13. Net impact: change in public healthcare benefits, in calendar quarters of coverage among all participants**

|                                 | Year 1 |    | Year 2 |    | Year 3 |    | Year 4 |    | Year 5 |    |
|---------------------------------|--------|----|--------|----|--------|----|--------|----|--------|----|
| <b>Dislocated Worker (2007)</b> | 0.1    | ** | 0.1    | ** | 0.1    | ** | 0.1    | ** | 0.1    | ** |
| <b>Dislocated Worker (2009)</b> | 0.1    | ** | 0.1    | ** | 0.1    | ** | 0.0    | ** | 0.1    | ** |
| <b>Dislocated Worker (2012)</b> | 0.2    | ** | 0.3    | ** | 0.3    | ** |        |    |        |    |
| <b>WIA Adult (2007)</b>         | 0.8    | ** | 0.6    | ** | 0.5    | ** | 0.4    | ** | 0.2    |    |
| <b>WIA Adult (2009)</b>         | 0.9    | ** | 0.6    | ** | 0.5    | ** | 0.4    | ** | 0.3    | ** |
| <b>WIA Adult (2012)</b>         | 0.7    | ** | 0.6    | ** | 0.7    | ** |        |    |        |    |
| <b>FastTRAC (2012)</b>          | 0.6    | ** | 0.7    | ** | 0.8    | ** |        |    |        |    |

Significance levels: \*\* = 1%; \* = 5%

## Costs and benefits

This section applies the cost framework developed by the Net Impact Advisory Group and published in the pilot Net Impact report.

- The accounting of costs and benefits in this section includes **direct program costs, earnings increases (or decreases)** and the associated **tax revenue increases (or decreases)**, and **increases in public benefit usage**.

Due to data limitations, we are not able to estimate the change in unemployment insurance payments or incarceration costs, although those are included in the group’s theoretical framework. **Under this framework, benefits accrue to (or costs are born by) either participants or taxpayers; the total social benefit (or cost) is the sum of these two parts.** Costs and benefits are presented as estimated averages per participant served. All dollar figures are presented in constant 2016 dollar terms and, following federal practice, reflect a discount rate of seven percent.<sup>7</sup>

The pilot report contains a full discussion of the caveats to this approach, of which a few should be summarized here.

- We **do not have access to individual-level cost data**, so all cost estimates are derived from averages.
- Some potential program effects are hard to quantify and **not included** in this cost framework, including economic multipliers, changes in mental and physical health, and changes in worker productivity.
- Other potential program effects could be monetized but **could not be estimated due to data restrictions**, including changes in subsidized housing benefits, child support payments, or childcare assistance benefits.
- This cost framework does not account for **employer costs and benefits**, largely because we lack information on changes in worker productivity.

**In general, these programs’ monetary benefits outweigh their costs.**

**Taxpayers see a strong return on investment due to increased tax revenues collected from participants.**

Table 14 presents the headline cost and benefit results for these cohorts, breaking out the total social costs and benefits into its component parts: participant and taxpayer costs and benefits. In general, these programs’ monetary benefits outweigh their costs.

---

<sup>7</sup> “Guidelines and Discount Rates For Benefit-Cost Analysis of Federal Programs,” OMB Circular A-94, [available online](#), accessed 10 Jan 2017.

**Table 14. Average net benefits accruing to participants, to taxpayers, and to society**

|                                 | Average benefit accruing to participants over <u>three</u> years | Average benefit accruing to participants over <u>five</u> years | Average benefit accruing to taxpayers, per participant, over <u>three</u> years | Average benefit accruing to taxpayers, per participant, over <u>five</u> years | Average social benefit per participant over <u>three</u> years | Average social benefit per participant over <u>five</u> years |
|---------------------------------|--|---|---|--|--|---|
| <b>Dislocated Worker (2007)</b> | \$34,078   | \$79,924  | \$4,276   | \$15,138   | \$38,354   | \$95,062  |
| <b>Dislocated Worker (2009)</b> | \$52,318   | \$101,935   | \$9,011   | \$21,190   | \$61,329   | \$123,125   |
| <b>Dislocated Worker (2012)</b> | (\$50,910)   |   | (\$12,732)  |  | (\$63,643)   |   |
| <b>WIA Adult (2007)</b>         | \$14,969   | \$25,378  | (\$674)   | \$1,716  | \$14,295   | \$27,094  |
| <b>WIA Adult (2009)</b>         | \$24,921   | \$34,041  | \$1,196   | \$3,342  | \$26,117   | \$37,383  |
| <b>WIA Adult (2012)</b>         | (\$3,903)  |   | (\$5,615)   |  | (\$9,518)  |   |
| <b>FastTRAC (2012)</b>          | \$21,913   |   | \$1,883   |  | \$23,796   |   |

Tables 15A through 15H break out the composite benefits and costs aggregated in Table 14.

Table 15A provides the average cost per participant relevant to each cohort. Individual-level costs are unavailable. Therefore, we use an average cost per participant. Because average costs can vary across time, we use an average from the relevant time period for each cohort. This methodology is consistent with other published analyses of workforce development costs and benefits.<sup>8</sup>

Available accounts of the cost of the program in a given year are either allocated or spent. Programs spend less than the amount they are allocated, so using the total amount spent rather than allocated can provide a more accurate and a lower cost per participant. Total amount spent is not available for FastTRAC in 2012 and Dislocated Worker in 2007, so those cohorts have higher apparent costs.

Participants in our cohorts were enrolled for as little as a month to as long as two or more years. On average, participants tended to be enrolled between nine months and a year, so we use the average cost per participant for a single year to represent the direct program cost.

<sup>8</sup> See Barnow, Burt S. and Jeffrey Smith. 2015. "Employment and Training Programs", NBER Working Paper 21659. Available online at [the NBER website](#).

- Table 15A presents the average program costs per participant relevant for each cohort. This represents the most direct cost to taxpayers of these programs.

**Table 15A. Estimate of direct program costs: a taxpayer cost**

|                          | Average program cost per participant |
|--------------------------|--------------------------------------|
| Dislocated Worker (2007) | \$2,524 <sup>9</sup>                 |
| Dislocated Worker (2009) | \$1,925 <sup>10</sup>                |
| Dislocated Worker (2012) | \$2,081 <sup>11</sup>                |
| WIA Adult (2007)         | \$3,257 <sup>12</sup>                |
| WIA Adult (2009)         | \$3,475 <sup>13</sup>                |
| WIA Adult (2012)         | \$4,402 <sup>14</sup>                |
| FastTRAC (2012)          | \$2,349 <sup>15</sup>                |

Table 15B presents a sum of the results presented in Table 1 over three years and, where available, over five years.

- In this cost framework, this earnings increase (or decrease) represents the main benefit (or cost) that participants derive from these workforce programs.

**Table 15B. Change in earnings: a participant benefit (or cost)**

|                          | Total over three years | Total over five years |
|--------------------------|------------------------|-----------------------|
| Dislocated Worker (2007) | \$30,547               | \$70,809              |
| Dislocated Worker (2009) | \$46,667               | \$90,034              |
| Dislocated Worker (2012) | (\$45,580)             |                       |
| WIA Adult (2007)         | \$13,262               | \$22,336              |
| WIA Adult (2009)         | \$22,094               | \$30,004              |
| WIA Adult (2012)         | (\$3,787)              |                       |
| FastTRAC (2012)          | \$19,145               |                       |

Many jobs have benefits beyond wages—benefits like paid vacation, retirement, or health insurance. (All jobs have Social Security and Medicare benefits, unemployment insurance benefits, and workers’ compensation benefits; because these are legally required, this cost framework does not include them.)

- The Bureau of Labor Statistics has found that wages cost employers on average \$23.42, while non-legally-required fringe benefits cost employers \$8.17, or 35 percent of the wage amount.<sup>16</sup>

**Table 15C shows the earnings amounts of Table 21B multiplied by 35 percent.** In this cost

<sup>9</sup> See the [State Dislocated Worker Annual Report from State Fiscal Year 2008](#)

<sup>10</sup> See the [State Dislocated Worker Annual Report from State Fiscal Year 2010](#)

<sup>11</sup> See the [State Dislocated Worker Annual Report from State Fiscal Year 2013](#)

<sup>12</sup> See Table P of the [WIA Annual Report from Program Year 2007](#)

<sup>13</sup> See Tables M and N of the [WIA Annual Report from Program Year 2009](#)

<sup>14</sup> See Tables M and N of the [WIA Annual Report from Program Year 2012](#)

<sup>15</sup> This calculation comes from internal grant tracking not otherwise published publicly, covering the grants awarded in 2012.

<sup>16</sup> [Employer Costs for Employee Compensation – September 2016](#), News Release, Bureau of Labor Statistics, accessed 23 Dec 2016.



framework, this increase (or decrease) in fringe benefits represents another significant benefit (or cost) accruing to participants.

**Table 15C. Change in fringe benefits: a participant benefit (or cost)**

|                          | Total over three years | Total over five years |
|--------------------------|------------------------|-----------------------|
| Dislocated Worker (2007) | \$10,691               | \$24,783              |
| Dislocated Worker (2009) | \$16,333               | \$31,512              |
| Dislocated Worker (2012) | (\$15,953)             |                       |
| WIA Adult (2007)         | \$4,642                | \$7,818               |
| WIA Adult (2009)         | \$7,733                | \$10,501              |
| WIA Adult (2012)         | (\$1,325)              |                       |
| FastTRAC (2012)          | \$6,701                |                       |

Participants' increased earnings is an increase in the tax base. The Tax Policy Center estimates that the average effective federal individual income tax rate is 9.9 percent.<sup>17</sup> The Minnesota Department of Revenue's 2015 Tax Incidence Study estimates the corresponding effective state income tax rate at 4.1 percent.<sup>18</sup> **Combined, we estimate that participants are paying 15 percent of their earnings in income taxes.** Table 15D shows the earnings amounts of Table 15B multiplied by 15 percent.

- This represents a transfer of income from participants to taxpayers and as such does not have an effect on the total, social benefit (or cost) of these programs. However, income transfers between groups is important public policy information, and therefore we tally benefits (and costs) to participants and taxpayers separately.

**Table 15D. Change in state and federal income taxes: a transfer from participants to taxpayers**

|                          | Total over three years | Total over five years |
|--------------------------|------------------------|-----------------------|
| Dislocated Worker (2007) | \$4,277                | \$9,913               |
| Dislocated Worker (2009) | \$6,533                | \$12,605              |
| Dislocated Worker (2012) | (\$6,381)              |                       |
| WIA Adult (2007)         | \$1,857                | \$3,127               |
| WIA Adult (2009)         | \$3,093                | \$4,201               |
| WIA Adult (2012)         | (\$530)                |                       |
| FastTRAC (2012)          | \$2,680                |                       |

**The worker's share of the payroll tax is set in statute at 7.65 percent** (employers also pay 7.65 percent, but our cost framework is not able to account for employer costs and benefits). Table 15E shows the earnings amounts of Table 15B multiplied by 7.65 percent. As with the income tax, the payroll tax is a transfer from participants to taxpayers.

<sup>17</sup> See the Tax Policy Center's [Model Estimates: T16-0092 – Average Effective Federal Tax Rates – All Tax Units By Expanded Cash Income Percentile](#), 2016.

<sup>18</sup> See the [2015 Minnesota Tax Incidence Study](#)

**Table 15E. Change in payroll taxes: a transfer from participants to taxpayers**

|                          | Total over three years | Total over five years |
|--------------------------|------------------------|-----------------------|
| Dislocated Worker (2007) | \$2,337                | \$5,417               |
| Dislocated Worker (2009) | \$3,570                | \$6,888               |
| Dislocated Worker (2012) | (\$3,487)              |                       |
| WIA Adult (2007)         | \$1,015                | \$1,709               |
| WIA Adult (2009)         | \$1,690                | \$2,295               |
| WIA Adult (2012)         | (\$290)                |                       |
| FastTRAC (2012)          | \$1,465                |                       |

As participants earn more, they also likely buy more items subject to a state or local sales tax.

- The 2015 Minnesota Tax Incidence Study estimates the average effective sales tax rate for individuals is 1.5 percent of their total income. Note that this is lower than statutory sales tax rates, which vary widely by municipality and type of good consumed, because not all goods are subject to a sales tax and not all income is spent.

Table 15F shows the earnings amounts of Table 15B multiplied by 1.5 percent. As with the income and payroll taxes, the sales tax is treated as a transfer from participants to taxpayers.

**Table 15F. Change in sales taxes: a transfer from participants to taxpayers**

|                          | Total over three years | Total over five years |
|--------------------------|------------------------|-----------------------|
| Dislocated Worker (2007) | \$458                  | \$1,062               |
| Dislocated Worker (2009) | \$700                  | \$1,351               |
| Dislocated Worker (2012) | (\$684)                |                       |
| WIA Adult (2007)         | \$199                  | \$335                 |
| WIA Adult (2009)         | \$331                  | \$450                 |
| WIA Adult (2012)         | (\$57)                 |                       |
| FastTRAC (2012)          | \$287                  |                       |

We have seen that participants see a small but significant increase in cash assistance; Table 15F sums the results presented in Table 11 across three and five years. Because cash assistance is publicly funded, this represents a transfer from taxpayers to participants.

**Table 15F. Increase in MFIP and SNAP benefits: a transfer from taxpayers to participants**

|                          | Total over three years | Total over five years |
|--------------------------|------------------------|-----------------------|
| Dislocated Worker (2007) | \$1                    | \$1                   |
| Dislocated Worker (2009) | \$1                    | \$1                   |
| Dislocated Worker (2012) | \$1                    |                       |
| WIA Adult (2007)         | \$67                   | \$76                  |
| WIA Adult (2009)         | \$90                   | \$95                  |
| WIA Adult (2012)         | \$119                  |                       |
| FastTRAC (2012)          | \$179                  |                       |

We have also seen that participants see an increase in time spent on public healthcare programs, including MinnesotaCare and Medical Assistance.

- While we do not observe the actual medical payments associated with our participants' coverage, we do know that on average the cost per enrollee per calendar quarter is \$105.<sup>19</sup>

Table 15G presents the results from Table 13 summed across three and five years, multiplied by \$105.

**Table 15G. Increase in public health coverage benefits: a transfer from taxpayers to participants**

|                                 | Total over three years | Total over five years |
|---------------------------------|------------------------|-----------------------|
| <b>Dislocated Worker (2007)</b> | \$34.79                | \$48.47               |
| <b>Dislocated Worker (2009)</b> | \$36.43                | \$45.08               |
| <b>Dislocated Worker (2012)</b> | \$75.64                |                       |
| <b>WIA Adult (2007)</b>         | \$212.59               | \$266.74              |
| <b>WIA Adult (2009)</b>         | \$218.60               | \$275.13              |
| <b>WIA Adult (2012)</b>         | \$209.28               |                       |
| <b>FastTRAC (2012)</b>          | \$205.76               |                       |

In summary, most cohorts in all programs see an average net benefit per participant. This result depends largely on the estimated earnings changes: where participants see higher earnings due to the program, longer-term benefits are likely to outweigh the initial costs. This holds true from both the participant and the taxpayer perspective.

For future estimates, we will explore using more granular tax estimates than the overall average. These program participants tend to be on the lower end of the income scale, so using effective tax rates for earners in the lower income deciles is likely to be more accurate.

<sup>19</sup> See total [calendar year 2015 payments](#) compared to [calendar year 2015 eligible individuals](#).

## Appendix

**Table A1. Dislocated Worker descriptive statistics, by cohort**

|  | <b>2007 Cohort</b>     | <b>2009 Cohort</b>     | <b>2012 Cohort</b>     |
|--|------------------------|------------------------|------------------------|
| <b>Number of participants</b>  | 8,491                  | 11,625                 | 8,563                  |
| <b>80 percent enrolled between these dates</b>                                   | Mar 2006 –<br>Nov 2008 | Dec 2007 –<br>Nov 2009 | Jul 2009 –<br>Dec 2012 |
| <b>Percent employed in baseline year</b>   | 96%                    | 97%                    | 96%                    |
| <b>Average earnings in baseline year</b>   | \$38,254.76            | \$46,560.21            | \$45,635.39            |
| <b>Average hours worked in baseline year</b>                                     | 1720                   | 1764                   | 1674                   |
| <b>Percent received unemployment insurance in baseline year</b>                  | not available          | not available          | 19%                    |
| <b>Average amount of unemployment insurance received in baseline year</b>        | not available          | not available          | \$1,349.09             |
| <b>Percent received public healthcare coverage in baseline year</b>              | 8%                     | 6%                     | 7%                     |
| <b>Average number of quarters of public healthcare coverage in baseline year</b> | 0.2                    | 0.2                    | 0.2                    |
| <b>Percent received cash assistance in baseline year</b>                         | 4%                     | 4%                     | 6%                     |
| <b>Average amount of cash assistance received in baseline year</b>               | \$119.00               | \$78.61                | \$141.07               |
| <b>Average age at enrollment, in years</b>                                       | 45                     | 45                     | 47                     |
| <b>Percent women</b>   | 47%                    | 44%                    | 50%                    |
| <b>Percent live in Twin Cities metro area</b>                                    | 64%                    | 62%                    | 70%                    |
| <b>Percent veteran</b>   | 8%                     | 7%                     | 8%                     |
| <b>Percent with less than HS diploma</b>   | 5%                     | 4%                     | 3%                     |
| <b>Percent with HS diploma or GED</b>  | 33%                    | 28%                    | 28%                    |
| <b>Percent with some college but no degree</b>                                   | 38%                    | 36%                    | 32%                    |
| <b>Percent with a college certificate</b>  | 1%                     | 1%                     | 2%                     |
| <b>Percent with associate degree</b>   | 0%                     | 0%                     | 3%                     |
| <b>Percent with bachelor's degree</b>  | 17%                    | 21%                    | 22%                    |
| <b>Percent with master's or doctoral degree</b>                                  | 6%                     | 9%                     | 10%                    |
| <b>Percent American Indian</b>   | 1%                     | 1%                     | 1%                     |
| <b>Percent Asian or Pacific Islander</b>   | 5%                     | 4%                     | 4%                     |
| <b>Percent Black or African American</b>   | 7%                     | 6%                     | 10%                    |
| <b>Percent Hispanic or Latino</b>  | 2%                     | 2%                     | 3%                     |
| <b>Percent White</b>   | 84%                    | 87%                    | 82%                    |
| <b>Percent multiracial</b>   | 1%                     | 0%                     | 1%                     |
| <b>Percent receiving support services</b>  | 29%                    | 28%                    | 33%                    |
| <b>Average amount of support services received</b>                               | \$307.93               | \$321.19               | \$404.05               |
| <b>Percent engaged in classroom training</b>                                     | 19%                    | 27%                    | 32%                    |
| <b>Percent engaged in on-the-job training</b>                                    | 3%                     | 3%                     | 2%                     |
| <b>Percent engaged in basic skills training</b>                                  | 41%                    | 34%                    | 34%                    |

**Table A2. WIA Adult descriptive statistics, by cohort**

|  | <b>2007 Cohort</b>     | <b>2009 Cohort</b>     | <b>2012 Cohort</b>     |
|--|------------------------|------------------------|------------------------|
| <b>Number of participants</b>  | 1,309                  | 1,923                  | 1,231                  |
| <b>80 percent enrolled between these dates</b>                                   | Oct 2005 –<br>Jan 2008 | Feb 2008 –<br>Jan 2010 | Dec 2009 –<br>Jan 2013 |
| <b>Percent employed in baseline year</b>   | 73%                    | 73%                    | 72%                    |
| <b>Average earnings in baseline year</b>   | \$12,500.11            | \$11,888.25            | \$11,572.35            |
| <b>Average hours worked in baseline year</b>                                     | 938                    | 814                    | 803                    |
| <b>Percent received unemployment insurance in baseline year</b>                  | not available          | not available          | 18%                    |
| <b>Average amount of unemployment insurance received in baseline year</b>        | not available          | not available          | \$1,183.88             |
| <b>Percent received public healthcare coverage in baseline year</b>              | 40%                    | 41%                    | 48%                    |
| <b>Average number of quarters of public healthcare coverage in baseline year</b> | 1.3                    | 1.3                    | 1.6                    |
| <b>Percent received cash assistance in baseline year</b>                         | 29%                    | 31%                    | 38%                    |
| <b>Average amount of cash assistance received in baseline year</b>               | \$784.12               | \$967.22               | \$1,360.77             |
| <b>Average age at enrollment, in years</b>                                       | 36                     | 36                     | 36                     |
| <b>Percent women</b>   | 56%                    | 55%                    | 61%                    |
| <b>Percent live in Twin Cities metro area</b>                                    | 42%                    | 44%                    | 44%                    |
| <b>Percent veteran</b>   | 3%                     | 3%                     | 4%                     |
| <b>Percent with less than HS diploma</b>   | 15%                    | 13%                    | 8%                     |
| <b>Percent with HS diploma or GED</b>  | 44%                    | 45%                    | 42%                    |
| <b>Percent with some college but no degree</b>                                   | 33%                    | 32%                    | 36%                    |
| <b>Percent with a college certificate</b>  | 0%                     | 1%                     | 2%                     |
| <b>Percent with associate degree</b>   | 0%                     | 0%                     | 2%                     |
| <b>Percent with bachelor's degree</b>  | 6%                     | 8%                     | 8%                     |
| <b>Percent with master's or doctoral degree</b>                                  | 2%                     | 1%                     | 2%                     |
| <b>Percent American Indian</b>   | 2%                     | 2%                     | 1%                     |
| <b>Percent Asian or Pacific Islander</b>   | 5%                     | 5%                     | 2%                     |
| <b>Percent Black or African American</b>   | 23%                    | 24%                    | 23%                    |
| <b>Percent Hispanic or Latino</b>  | 11%                    | 6%                     | 6%                     |
| <b>Percent White</b>   | 58%                    | 62%                    | 67%                    |
| <b>Percent multiracial</b>   | 1%                     | 1%                     | 1%                     |
| <b>Percent receiving support services</b>  | 25%                    | 33%                    | 39%                    |
| <b>Average amount of support services received</b>                               | \$162.12               | \$269.33               | \$403.62               |
| <b>Percent engaged in classroom training</b>                                     | 24%                    | 35%                    | 49%                    |
| <b>Percent engaged in on-the-job training</b>                                    | 19%                    | 7%                     | 6%                     |
| <b>Percent engaged in basic skills training</b>                                  | 16%                    | 27%                    | 18%                    |

**Table A3. FastTRAC descriptive statistics**

|  | <b>2012 Cohort</b>  |
|--|---------------------|
| <b>Number of participants</b>  | 585                 |
| <b>80 percent enrolled between these dates</b>                                   | Oct 2011 – Dec 2012 |
| <b>Percent employed in baseline year</b>   | 68%                 |
| <b>Average earnings in baseline year</b>   | \$9,217.56          |
| <b>Average hours worked in baseline year</b>                                     | 732                 |
| <b>Percent received unemployment insurance in baseline year</b>                  | 10%                 |
| <b>Average amount of unemployment insurance received in baseline year</b>        | \$570.33            |
| <b>Percent received public healthcare coverage in baseline year</b>              | 51%                 |
| <b>Average number of quarters of public healthcare coverage in baseline year</b> | 1.7                 |
| <b>Percent received cash assistance in baseline year</b>                         | 45%                 |
| <b>Average amount of cash assistance received in baseline year</b>               | \$2,067.21          |
| <b>Average age at enrollment, in years</b>                                       | 32                  |
| <b>Percent women</b>   | 78%                 |
| <b>Percent live in Twin Cities metro area</b>                                    | 37%                 |
| <b>Percent veteran</b>   | 1%                  |
| <b>Percent with less than HS diploma</b>   | 14%                 |
| <b>Percent with HS diploma or GED</b>  | 58%                 |
| <b>Percent with some college but no degree</b>                                   | 20%                 |
| <b>Percent with a college certificate</b>  | 3%                  |
| <b>Percent with associate degree</b>   | 1%                  |
| <b>Percent with bachelor's degree</b>  | 4%                  |
| <b>Percent with master's or doctoral degree</b>                                  | 1%                  |
| <b>Percent American Indian</b>   | 3%                  |
| <b>Percent Asian or Pacific Islander</b>   | 3%                  |
| <b>Percent Black or African American</b>   | 28%                 |
| <b>Percent Hispanic or Latino</b>  | 9%                  |
| <b>Percent White</b>   | 55%                 |
| <b>Percent multiracial</b>   | 2%                  |
| <b>Percent receiving support services</b>  | 11%                 |
| <b>Average amount of support services received</b>                               | \$45.02             |
| <b>Percent engaged in classroom training</b>                                     | 57%                 |
| <b>Percent engaged in on-the-job training</b>                                    | 3%                  |
| <b>Percent engaged in basic skills training</b>                                  | 49%                 |

**Table A4. Dislocated Worker control group match diagnostics, by cohort**

| Weighted Variables                                       | Dislocated Worker (2007) |         | Dislocated Worker (2009) |         | Dislocated Worker (2012) |         |
|--|--------------------------|---------|--------------------------|---------|--------------------------|---------|
|  | Difference               | P value | Difference               | P value | Difference               | P value |
| Average (logged) earnings                                | 0.01                     | 0.19    | -0.04                    | 0.00 ** | -0.01                    | 0.28    |
| Average hours worked                                     | 12.72                    | 0.09    | -4.29                    | 0.54    | -15.00                   | 0.08    |
| Average amount of unemployment insurance received        | NA                       | NA      | NA                       | NA      | 56.99                    | 0.16    |
| Average number of quarters of public healthcare coverage | 0.00                     | 0.93    | 0.01                     | 0.28    | 0.02                     | 0.07    |
| Average amount of cash assistance received               | 11.66                    | 0.17    | 10.48                    | 0.13    | -5.96                    | 0.55    |
| Average age, in years                                    | 0.10                     | 0.45    | 0.08                     | 0.48    | 0.09                     | 0.49    |
| Percent with less than HS diploma                        | 0.00                     | 0.43    | 0.00                     | 0.11    | 0.00                     | 0.46    |
| Percent with HS diploma or GED                           | 0.00                     | 0.77    | 0.00                     | 0.63    | -0.01                    | 0.20    |
| Percent with some college but no degree                  | 0.01                     | 0.17    | 0.00                     | 1.00    | 0.00                     | 0.52    |
| Percent with a college certificate                       | 0.00                     | 0.48    | 0.00                     | 0.60    | 0.00                     | 0.01 ** |
| Percent with associate degree                            | NA                       | NA      | 0.00                     | 0.72    | 0.00                     | 0.45    |
| Percent with bachelor's degree                           | -0.01                    | 0.05    | -0.01                    | 0.12    | -0.01                    | 0.32    |
| Percent with master's or doctoral degree                 | 0.00                     | 0.73    | 0.01                     | 0.06    | 0.00                     | 0.27    |
| Percent women  | 0.00                     | 0.48    | 0.00                     | 0.42    | -0.01                    | 0.42    |
| Percent live in Twin Cities metro area                   | 0.01                     | 0.27    | 0.01                     | 0.35    | 0.01                     | 0.11    |
| Percent American Indian                                  | 0.00                     | 0.73    | 0.00                     | 0.93    | 0.00                     | 0.87    |
| Percent Asian or Pacific Islander                        | 0.00                     | 0.25    | 0.00                     | 0.83    | 0.00                     | 0.68    |
| Percent Black or African American                        | 0.00                     | 0.55    | 0.00                     | 0.25    | 0.00                     | 0.85    |
| Percent Hispanic or Latino                               | 0.00                     | 0.19    | 0.00                     | 0.86    | 0.00                     | 0.90    |
| Percent White  | 0.00                     | 0.52    | 0.00                     | 0.37    | 0.00                     | 0.96    |
| Percent multiracial                                      | 0.00                     | 0.34    | 0.00                     | 0.78    | 0.00                     | 0.98    |
| Percent veteran  | 0.00                     | 0.30    | 0.00                     | 0.60    | 0.00                     | 0.23    |

Significance levels: \*\* = 1%; \* = 5%

**Table A5. WIA Adult control group match diagnostics, by cohort**

| Weighted Variable(s)                                     | WIA Adult (2007) |         | WIA Adult (2009) |         | WIA Adult (2012) |         |
|--|------------------|---------|------------------|---------|------------------|---------|
|  | Difference       | P value | Difference       | P value | Difference       | P value |
| Average (logged) earnings                                | -0.09            | 0.07    | -0.03            | 0.45    | 0.01             | 0.84    |
| Average hours worked                                     | 31.62            | 0.30    | 34.34            | 0.13    | 28.16            | 0.30    |
| Average amount of unemployment insurance received        | NA               | NA      | NA               | NA      | 111.75           | 0.32    |
| Average number of quarters of public healthcare coverage | -0.07            | 0.35    | -0.04            | 0.43    | -0.02            | 0.75    |
| Average amount of cash assistance received               | 78.17            | 0.30    | 93.58            | 0.09    | -144.08          | 0.14    |
| Average age, in years                                    | -0.03            | 0.95    | -0.10            | 0.80    | 0.80             | 0.07    |
| Percent with less than HS diploma                        | 0.01             | 0.73    | 0.01             | 0.17    | 0.01             | 0.34    |
| Percent with HS diploma or GED                           | 0.01             | 0.58    | -0.01            | 0.32    | -0.03            | 0.12    |
| Percent with some college but no degree                  | -0.01            | 0.49    | 0.00             | 0.91    | 0.01             | 0.49    |
| Percent with a college certificate                       | 0.00             | 0.51    | 0.00             | 0.97    | 0.01             | 0.05 *  |
| Percent with associate degree                            | NA               | NA      | 0.00             | 0.95    | 0.00             | 0.93    |
| Percent with bachelor's degree                           | 0.00             | 0.86    | 0.00             | 0.67    | 0.00             | 0.69    |
| Percent with master's or doctoral degree                 | 0.00             | 0.97    | 0.00             | 0.77    | 0.00             | 0.78    |
| Percent women  | 0.01             | 0.66    | 0.04             | 0.01 ** | 0.03             | 0.12    |
| Percent live in Twin Cities metro area                   | 0.00             | 0.97    | -0.01            | 0.33    | -0.01            | 0.45    |
| Percent American Indian                                  | -0.01            | 0.12    | 0.00             | 0.98    | 0.00             | 0.49    |
| Percent Asian or Pacific Islander                        | 0.00             | 0.80    | 0.00             | 0.80    | -0.02            | 0.00 ** |
| Percent Black or African American                        | 0.00             | 0.96    | -0.03            | 0.01 *  | -0.01            | 0.49    |
| Percent Hispanic or Latino                               | -0.01            | 0.65    | 0.00             | 0.68    | -0.01            | 0.27    |
| Percent White  | 0.02             | 0.40    | 0.03             | 0.03 *  | 0.03             | 0.03 *  |
| Percent multiracial                                      | 0.00             | 0.68    | 0.00             | 0.74    | 0.00             | 0.54    |
| Percent veteran  | 0.00             | 0.70    | 0.00             | 0.79    | 0.00             | 0.78    |

Significance levels: \*\* = 1%; \* = 5%



**Table A6. FastTRAC control group match diagnostics**

| <b>Weighted Variable(s)</b>                                     | <b>FastTRAC (2012)</b> |                |
|---|------------------------|----------------|
|   | <b>Difference</b>      | <b>P value</b> |
| <b>Average (logged) earnings</b>                                | -0.03                  | 0.66           |
| <b>Average hours worked</b>                                     | 6.67                   | 0.87           |
| <b>Average amount of unemployment insurance received</b>        | -70.73                 | 0.60           |
| <b>Average number of quarters of public healthcare coverage</b> | 0.00                   | 0.99           |
| <b>Average amount of cash assistance received</b>               | 185.88                 | 0.21           |
| <b>Average age, in years</b>                                    | 0.61                   | 0.36           |
| <b>Percent with less than HS diploma</b>                        | 0.00                   | 0.98           |
| <b>Percent with HS diploma or GED</b>                           | 0.06                   | 0.04 *         |
| <b>Percent with some college but no degree</b>                  | 0.00                   | 0.89           |
| <b>Percent with a college certificate</b>                       | -0.04                  | 0.00 **        |
| <b>Percent with associate degree</b>                            | 0.00                   | 0.62           |
| <b>Percent with bachelor's degree</b>                           | -0.01                  | 0.38           |
| <b>Percent with master's or doctoral degree</b>                 | 0.00                   | 0.66           |
| <b>Percent women</b>  | -0.01                  | 0.70           |
| <b>Percent live in Twin Cities metro area</b>                   | 0.02                   | 0.41           |
| <b>Percent American Indian</b>                                  | -0.02                  | 0.12           |
| <b>Percent Asian or Pacific Islander</b>                        | 0.01                   | 0.15           |
| <b>Percent Black or African American</b>                        | 0.00                   | 0.87           |
| <b>Percent Hispanic or Latino</b>                               | 0.03                   | 0.10           |
| <b>Percent White</b>  | -0.03                  | 0.32           |
| <b>Percent multiracial</b>                                      | 0.00                   | 0.57           |
| <b>Percent veteran</b>  | 0.00                   | 0.97           |

*Significance levels: \*\* = 1%; \* = 5%*