

# Workforce Investment Act (WIA) Net Impact Estimates and Rates of Return

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# Purpose

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- Summarize and compare results from:
  - (1) Hollenbeck & Huang, *Net Impact and Benefit-Cost Estimates of the Workforce Development System in Washington State, 2003*
  - (2) Hollenbeck & Huang, *Net Impact and Benefit-Cost Estimates of the Workforce Development System in Washington State, 2006*
  - (3) Hollenbeck & Huang, *Workforce Program Performance Indicators for The Commonwealth of Virginia, 2008*
  - (4) Hollenbeck, *Return on Investment Analyses of a Selected Set of Workforce System Programs in Indiana, 2009*

# Background

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- All four studies are net impact evaluations
  - An individual encounters a workforce program and is offered services (*treatment*).
  - Outcomes ensue (we're mainly interested in *employment and earnings*)
  - Net impact is the difference between outcomes and what would have happened if the individual did not receive the treatment (*counterfactual*)
- Null hypothesis is that net impact is zero.
- The two Washington State studies and the Indiana study go beyond net impact and examine **rates of return**.

# Approach (Methodology)

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- Quasi-experimental
  - “Treatment group” from administrative data; “comparison group” from Employment Service data (usually)
  - “Treatment” in studies (1) to (4) defined as “encountered the workforce program,” i.e. in WIASRD for WIA clients
- Statistical matching used to construct comparison group
  - Matching variables – mainly pre-program labor force, and also demographics and education at program entry

# Approach

## (Data and time periods)

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- In Washington
  - Data are program administrative files (WIASRD and ES) linked to UI wage, UI benefit, and TANF/Food Stamps/Medicaid records. Exiters from programs in PY 1997 and 1999 (study 1) and PY 2001 and 2003 (study 2).
- In Virginia
  - Data are WIASRD and ES files linked to UI wage records (including WRIS). Exiters in PY 2005.
- In Indiana
  - Data are WIASRD and ES files linked to UI wage records and UI benefit data. Exiters in PY 2006.

# Results: Net impact comparisons (short-term)

## Short-Term Net Impact Estimates for WIA (or JTPA)

| Program                       | Study | Outcome         |                 |                        |                                 |
|-------------------------------|-------|-----------------|-----------------|------------------------|---------------------------------|
|                               |       | Employment Rate | Quarterly Hours | Wage Rate <sup>b</sup> | Quarterly Earnings <sup>b</sup> |
| Federal Job Training (Adults) |       |                 |                 |                        |                                 |
| JTPA II-A                     | 1     | 0.109***        | 23.0**          | \$0.77                 | \$349***                        |
| WIA I-B                       | 2     | 0.097***        | 52.2***         | \$1.49***              | \$711***                        |
| WIA I-B                       | 3     | 0.034***        | — <sup>a</sup>  | — <sup>a</sup>         | \$146***                        |
| WIA I-B                       | 4     | 0.148***        | — <sup>a</sup>  | — <sup>a</sup>         | \$549***                        |
| Federal Job Training (Youth)  |       |                 |                 |                        |                                 |
| JTPA II-C                     | 1     | 0.061***        | -15.3           | -\$0.47                | -\$175**                        |
| WIA I-B Youth                 | 2     | 0.042**         | 4.7             | \$0.20                 | \$ 66                           |
| WIA I-B Youth                 | 3     | -0.039**        | — <sup>a</sup>  | — <sup>a</sup>         | \$ 62                           |
| WIA I-B Youth                 | 4     | 0.034           | — <sup>a</sup>  | — <sup>a</sup>         | \$ 24                           |
| Dislocated Workers            |       |                 |                 |                        |                                 |
| JTPA III                      | 1     | 0.075***        | 19.6***         | -\$0.55                | \$278***                        |
| WIA I-B                       | 2     | 0.087***        | 58.4***         | \$1.04***              | \$784***                        |
| WIA I-B                       | 4     | 0.170***        | — <sup>a</sup>  | — <sup>a</sup>         | \$410***                        |

**Notes:** Study 1 is Hollenbeck and Huang 2003 (Washington State); Study 2 is Hollenbeck and Huang 2006 (Washington State); Study 3 is Hollenbeck and Huang 2008 (Virginia); Study 4 is Hollenbeck 2009 (Indiana). \*\*\* represents statistical significance at the 0.01 level; \*\* represents statistical significance at the 0.05 level; \* represents statistical significance at the 0.10 level.

<sup>a</sup> Virginia and Indiana wage record data do not include hours so no results for quarterly hours or wage rate.

<sup>b</sup> In \$2005/2006.

# Results: Net impact comparisons (long-term)

## Long-Term Net Impact Estimates of WIA (or JTPA)

| Program                       | Study | Outcome         |                 |                        |                                 |
|-------------------------------|-------|-----------------|-----------------|------------------------|---------------------------------|
|                               |       | Employment Rate | Quarterly Hours | Wage Rate <sup>a</sup> | Quarterly Earnings <sup>a</sup> |
| Federal Job Training (Adults) |       |                 |                 |                        |                                 |
| JTPA II-A                     | 1     | 0.074***        | 23.9***         | \$0.68**               | \$ 658***                       |
| WIA I-B                       | 2     | 0.066***        | 35.7***         | \$0.67**               | \$ 455***                       |
| WIA I-B                       | 4     | 0.137***        | — <sup>b</sup>  | — <sup>b</sup>         | \$ 463***                       |
| Federal Job Training (Youth)  |       |                 |                 |                        |                                 |
| JTPA II-C                     | 1     | 0.053**         | 2.3             | -\$0.71                | \$ 117                          |
| WIA I-B Youth                 | 2     | 0.103***        | 31.1***         | \$0.77***              | \$ 325***                       |
| WIA I-B Youth                 | 4     | 0.023           | — <sup>b</sup>  | — <sup>b</sup>         | \$ 47                           |
| Dislocated Workers            |       |                 |                 |                        |                                 |
| JTPA III                      | 1     | 0.073***        | 26.6***         | -\$0.10                | \$1,009***                      |
| WIA I-B                       | 2     | 0.064***        | 48.8***         | \$0.97***              | \$ 771***                       |
| WIA I-B                       | 4     | 0.165***        | — <sup>b</sup>  | — <sup>b</sup>         | \$ 310***                       |

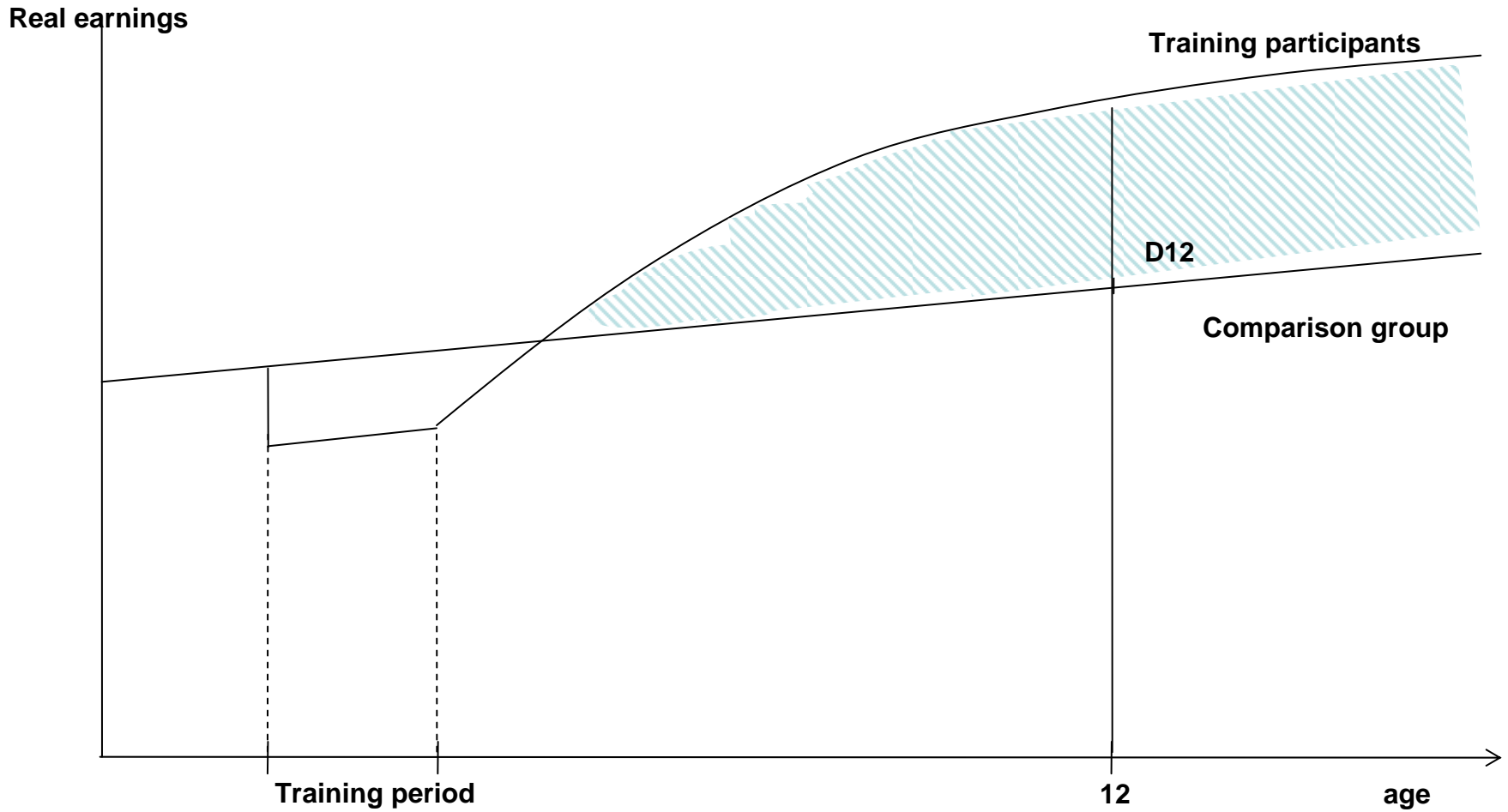
**Notes:** Study 1 is Hollenbeck and Huang 2003 (Washington State); Study 2 is Hollenbeck and Huang 2006 (Washington State); Study 4 is Hollenbeck (2009).

\*\*\* represents statistical significance at the 0.01 level; \*\* represents statistical significance at the 0.05 level; \* represents statistical significance at the 0.10 level.

<sup>a</sup> In \$2005/2006.

<sup>b</sup> Data not available.

# Typical Earnings Profiles of a Training Participant and Comparison Group Member





## Discounted Benefits and Costs and Rates of Return for Washington's Education and Training System over Working Lifetime, by Program (r.o.i. are quarterly interest rates)

| Program   | Study | Private  |        |         | Public   |         |         | Social   |         |         |
|---|-------|----------|--------|---------|----------|---------|---------|----------|---------|---------|
|   |       | Benefits | Costs  | r.o.i.  | Benefits | Costs   | r.o.i.  | Benefits | Costs   | r.o.i.  |
| <b>PANEL A: Over first 2.5 years after Exit</b> |       |          |        |         |          |         |         |          |         |         |
| Federal Job Training (Adults)                   |       |          |        |         |          |         |         |          |         |         |
| JTPA II-A                                       | 1     | \$1,106  | \$ 403 | 8.24%   | \$3,989  | \$3,791 | 1.36%   | \$5,095  | \$4,194 | 3.07%   |
| WIA I-B   | 2     | 4,173    | -1,111 | —       | 3,113    | 5,744   | -15.36% | 7,286    | 4,633   | 9.94%   |
| WIA I-B   | 4     | 2,804    | 1,350  | 10.54%  | 2,916    | 4,132   | -10.29% | 5,720    | 5,482   | 0.85%   |
| Federal Job Training (Youth)                    |       |          |        |         |          |         |         |          |         |         |
| JTPA II-C                                       | 1     | -3,646   | 384    | —       | 1,864    | 2,605   | -4.69%  | -1,782   | 2,989   | —       |
| WIA I-B Youth                                   | 2     | 3,313    | 0      | —       | -1,151   | 6,617   | —       | 2,163    | 6,617   | -15.96% |
| WIA I-B Youth                                   | 4     | 671      | 495    | 6.03%   | 113      | 6,550   | —       | 784      | 7,045   | -27.96% |
| Dislocated Workers                              |       |          |        |         |          |         |         |          |         |         |
| JTPA III  | 1     | 4,944    | 13,640 | -12.49% | 882      | 2,885   | -12.29% | 5,826    | 16,525  | -12.45% |
| WIA I-B   | 2     | 4,258    | 10,746 | -10.72% | 5,770    | 7,081   | -5.59%  | 10,028   | 17,827  | -9.38%  |
| WIA I-B   | 4     | 1,993    | 6,440  | -15.76% | 2,376    | 6,426   | -21.31% | 4,369    | 12,866  | -17.83% |
| <b>PANEL B: Over working lifetime</b>           |       |          |        |         |          |         |         |          |         |         |
| Federal Job Training (Adults)                   |       |          |        |         |          |         |         |          |         |         |
| JTPA II-A                                       | 1     | \$62,744 | \$ 403 | 20.52%  | \$25,092 | \$3,791 | 9.26%   | \$87,836 | \$4,194 | 13.23%  |
| WIA I-B   | 2     | 38,928   | -1,111 | —       | 6,241    | 5,744   | 0.21%   | 45,170   | 4,633   | 15.14%  |
| WIA I-B   | 4     | 15,825   | 1,350  | 16.32%  | 4,084    | 4,132   | -0.04%  | 19,909   | 5,482   | 7.60%   |
| Federal Job Training (Youth)                    |       |          |        |         |          |         |         |          |         |         |
| JTPA II-C                                       | 1     | 30,235   | 384    | 3.08%   | 6,770    | 2,605   | 6.08%   | 37,005   | 2,989   | 3.61%   |
| WIA I-B Youth                                   | 2     | 29,002   | 0      | —       | 8,282    | 6,617   | 0.07%   | 37,284   | 6,617   | 4.55%   |
| WIA I-B Youth                                   | 4     | 7,055    | 495    | 13.27%  | 1,184    | 6,550   | -1.73%  | 8,239    | 7,045   | 0.22%   |
| Dislocated Workers                              |       |          |        |         |          |         |         |          |         |         |
| JTPA III  | 1     | 81,327   | 13,640 | 5.19%   | 25,719   | 2,885   | 6.81%   | 107,046  | 16,525  | 5.53%   |
| WIA I-B   | 2     | 49,201   | 10,746 | 5.00%   | 18,440   | 7,081   | 5.15%   | 67,641   | 17,827  | 5.04%   |
| WIA I-B   | 4     | 15,398   | 5,440  | 2.64%   | 10,310   | 6,426   | 1.50%   | 25,708   | 12,866  | 2.13%   |

**Notes:** Study 1 is Hollenbeck and Huang 2003 (Washington State); Study 2 is Hollenbeck and Huang 2006 (Washington State); Study 4 is Hollenbeck 2009 (Indiana). Table entries are for average participant. Benefits include earnings, fringe benefits, and income-related transfers payments. Costs include tuition and fees (if any), foregone earnings, and public program costs per participant. \$ figures are in real \$2005/2006. – means that r.o.i. could not be calculated because of 0 or negative benefits or costs.

# Comparisons to National JTPA Study (NJS)

- Net Impacts of JTPA II-A

NJS (U.S. GAO study using wage record data; inflated to \$2005/2006))

| Year after assignment | Males             |                    | Females           |                    |
|-----------------------|-------------------|--------------------|-------------------|--------------------|
|                       | Annual employment | Quarterly earnings | Annual employment | Quarterly earnings |
| +2                    | 0.6               | 200*               | 2.6*              | 270*               |
| +3                    | 2.4               | 206*               | 3.1*              | 210*               |
| +4                    | 3.7*              | 196                | 2.0               | 196*               |
| +5                    | 1.2               | 110                | 1.3               | 137                |

\*Significant at 0.05 level.

## Washington State JTPA II-A (from above)

Quarters after exit  
8-11

Employment  
7.4\*\*\*

Earnings  
645\*\*\*

- Benefit-Cost of JTPA II-A

|          |                              |            |                   |
|----------|------------------------------|------------|-------------------|
| NJS      | 30 months after registration | Social b-c | 1.50 (Abt report) |
| WA state | 30 months after exit         | Social b-c | 1.21              |

# Policy Implications

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- Can use administrative data to estimate net impacts of education and training programs
- Decomposing earnings impacts into employment, hours, and wage rates adds insight
- Public and society reap substantial returns on training programs, although the payoffs take more than 10 quarters to achieve
- The rate of return analysis shows that dislocated workers, in particular, have substantial investment costs, so that policy makers may wish to consider stronger support mechanisms for them

Comments or questions are welcome.

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