

Estimating Worklife Return on Investment of Transitional Youth with Significant Disabilities

RETURN ON INVESTMENT FOR PUBLIC VOCATIONAL REHABILITATION PROGRAMS

Dr. Thomas K. Bias
School of Public Health
West Virginia University

Pisnu Bua-Iam
WV Division of Rehabilitation Services
Department of Education and the Arts



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West Virginia Division of Rehabilitation Services
Acting Director Donna Ashworth
Joseph "Zeke" Hampton
Susan Newhouse
Todd Sink
Douglas Snuffer
Basil White Jr.

BACKGROUND – ROI IN REHABILITATION SERVICES

Usefulness and Alternative Models Rehabilitation Return on Investment

Uses for Return on Investment

- ROI is a prominent factor in national level discussions about public vocational rehabilitation services
 - Impact on society
 - Funding decisions
 - Accessibility issues
 - Impact on the employment of individuals with significant disabilities

Previous ROI Models

- Previous research has yielded a variety of useful ROI approaches that vary in:
 - Types of measurements
 - Sample selection
 - Data sources
 - Defining costs and benefits
 - Length of time after case closure
 - Use of a control group

Previous ROI Models (continued)

- ▶ Several ways of calculating benefits have been utilized:
 - Wages (Cimera, 2009; Dean, 1991; Dean, Ashley, Schmidt, & Rowe, 2006; Dean & Rowe, 2010)
 - Wages with Social Security savings (Greenblum, 1975)
 - Wages, Social Security savings, and tax revenues (Hemenway & Rohani, 1999; Rogers, Sciarappa, Macdonald-Wildon, & Danley, 1995; Uvin, Karaaslani, & White, 2004)
- ▶ In addition, the sources of each one of these benefits vary from study to study

Use of Control Groups in Previous Work

- Control Group Selection
 - Collect information pre- and post-services from consumers through self-reporting (Rogers et al., 1995)
 - Compare accepted applicants who received services with those who did not (Dean, 1991; Hemenway & Rohani, 1999; Uvin et al., 2004; Wilhelm & Robinson, 2010)
 - Gibbs (1991) noted that pre-program information is inadequate by itself because of the nature of the VR system
 - Consumers often have rapid decline in wages or the ability to work because of significant disabilities, so it may be difficult or impossible to see these changes looking at pre-program data

Multiple and Unsuccessful Closures

- Multiple Closures
 - An estimated 33% of consumers have two or more cases (Dean & Rowe, 2010)
 - It is important to include all consumers who received services, regardless of rehabilitation status
 - Dean and Rowe (2010) found 30 to 40% consumers who were closed “unsuccessfully” were actually working after they received rehabilitation services

ASSUMPTIONS OF THIS ROI TECHNIQUE

Introduction

- Public Vocational Rehabilitation (VR) programs are charged with the provision of services to persons with disabilities, with an emphasis on serving persons with significant and most significant disabilities, to help them achieve competitive employment outcomes and greater independence.

Eligibility for VR Services

- The federal regulations pertaining to public VR programs require VR agencies to serve only those individuals who are qualified for VR services.
- To become a VR customer, an individual must meet the eligibility criteria for a public VR program:

Eligibility Requirements (34 CFR § 361.42)

The designated State unit's determination of an applicant's eligibility for vocational rehabilitation services must be based only on the following requirements:

- (i) A determination by qualified personnel that the applicant has a physical or mental impairment.
- (ii) A determination by qualified personnel that the applicant's physical or mental impairment constitutes or results in a substantial impediment to employment for the applicant.
- (iii) A determination by a qualified vocational rehabilitation counselor employed by the designated State unit that the applicant requires vocational rehabilitation services to prepare for, secure, retain, or regain employment consistent with the applicant's unique strengths, resources, priorities, concerns, abilities, capabilities, interests, and informed choice.
- (iv) A presumption, in accordance with paragraph (a)(2) of this section, that the applicant can benefit in terms of an employment outcome from the provision of vocational rehabilitation services.

VR Services

- Once an individual becomes a customer, a public VR agency is required to provide VR and related services as stated in the individualized plan for employment (IPE).
- The services identified in the IPE are agreed to by the customer and the VR counselor.
- The identified VR and related services are based on the results of a comprehensive evaluative and assessment process of the customer that recognizes the customer's skills, abilities, preferences, and individual choices.

VR Services

- The necessary steps for a VR customer to achieve competitive employment involve multiple arrays of successes including a success in physical and/or mental rehabilitation, education and/or skills training, job search, and the work setting.
- For a public VR agency, costs of the services are not the driving factors in identifying and selecting the required services to move customers through various VR stages and ultimately to a competitive outcome in an integrated setting.

CRITICAL ISSUES IN THE DISCUSSION OF RETURN ON INVESTMENT (ROI) FOR PUBLIC VR PROGRAMS

Critical Issue #1

- Are public VR programs and their consumers the same as service providers (and consumers) at the Workforce One-Stop Center?
 - If the answer is "yes," then the same type of ROI methodology used for Workforce programs must be used for generating ROI for public VR programs.
 - If the answer is "no," then a different ROI methodology for VR may be more appropriate, realistic, and practical.

Critical Issue #1, cont'd.

- The Department of Labor (DOL) specifically acknowledges that “the populations served in the Department’s programs vary considerably” (Government Accountability Office [GAO], 2012, p.84) and that not all of the Department’s programs were intended specifically for people with disabilities.

Critical Issue #1, cont'd.

- There is no disagreement with the requirement that a “comparison group” is needed when conducting an ROI for the regular job training program where an average customer can find employment with or without receiving services from a Workforce program.
- This same line of reasoning may not be true for an average VR customer who is, generally, with significant or most significant disabilities and has functional limitations and employment barriers that require VR services to alleviate or circumvent.

Critical Issue #1, cont'd.

- The Workforce Investment Act (1998) has set rules for conducting economic impact studies, including requiring a comparison group. However, in practice, GAO has acknowledged the difficulties of producing a comparison group for public VR programs:
 - We were not able to compare the earnings of beneficiaries who completed VR with a control group that had not completed VR because we could not identify a group that was sufficiently similar to those who completed VR to feel confident that any differences in outcomes that we found would be attributable to the VR program and not to the differences in individual characteristics. (GAO, 2007, p. 43)

Facts for Consideration

- A) Despite the fact that the Rehabilitation Act is the Title IV of the Workforce Investment Act, the funding stream for public VR programs is still separate from other federal job training programs.
- B) A job-training-integration bill that is sitting in the House today (H.Rep. No. 112-4297, 2012) proposed an integration of all training programs except two, with one of them being the public VR programs.

Facts for Consideration

- C) The latest GAO (2012) study on federal programs serving persons with disabilities presents statistics on numbers of persons with disabilities served by various federal programs and it clearly recognizes public VR programs as primary service providers for this population, making VR a truly unique program with a specialized service population.
 - The Department of Education's response to the GAO report (2012, p. 83) states, "Taken together, the capacity of the Department's VR program to provide and coordinate a wide range of individualized services to achieve an employment outcome for individuals with disabilities, particularly significant disabilities, is not duplicated by any other program."

Critical Issue #1, cont'd.

- In general, public VR programs under the Department of Education serve people with significant or most significant disabilities with functional limitations and barriers to employment. Workforce Development programs under the DOL serve all individuals, including persons with disabilities.
- The DOL states, in their response to the GAO's latest report:
 - In the report, the GAO notes that over the years many programs have been created to address issues related to the employment of people with disabilities. However, several of the Department's programs included in the study were not created solely for this purpose, but rather to provide services to all job seekers – the majority of whom are not individuals with disabilities. (GAO, 2012, p. 84)

Critical Issue #2

- Is it realistic to assume that persons with significant and most significant disabilities can achieve employment outcomes without receiving VR and related services?

Critical Issue #3

- Why do you need a "comparison group" when conducting an ROI for VR?
- Individuals with a Status 30 closure are likely to receive services elsewhere in order to be able to gain or maintain employment.
- Also, these individuals represent such a small number in the overall VR picture.

Critical Issue #4

- Is it possible to construct or develop a realistic “comparison group” of VR customers?

Critical Issue #5

- If public VR programs are designed to serve customers with disabilities from all types of disabilities, then do we need to consider the specific ROI for each disability type?
- Is it the agency’s responsibility to produce that type of ROI?
- From the management perspective, VR agencies already have the cost data for services provision for various disability groups and agencies know which groups cost more and why.

SHORT-TERM ROI FOR TRANSITIONAL YOUTH*

An Introduction to the WVDRS Model

*We used the RSA definition of “transitional youth” as being 24 years or younger at date of application.

WVDRS ROI Models

- Resting on the assumptions presented above, the WVDRS ROI models bring together the key elements of many prior ROI studies, and advocate a new strategy for estimating Social Security savings and state and federal tax revenues
 - Short-term (3-year) Streamlined Model
 - Short-term Inclusive Model
 - Work-life Estimate Model
- These models can be presented in terms of transitional youth, older consumers, or all consumers.

Why a new model?

- Using a combination of existing techniques and new strategies to estimate benefits, WV DRS models:
 - Utilize efficient and accessible information
 - Reduce reliance on estimates for short term
 - Broad scope of economic impact
 - KEY POINT: Replicable methodology for other state-federal VR programs

Step-by-Step WVDRS ROI Methodology

- Step 1: Sampling Methodology
- Step 2: Measures and Data Sources
- Step 3: Data Collection
- Step 4: Modeling Return on Investment
- Step 5: Results

Please note: The following discussion presents the streamlined short-term ROI model for transitional youth. For further information about the inclusive model or models for older consumers, please contact the authors.

Step 1 - Sampling Methodology

- Using all cases in a given fiscal year that are closed after services, create a statistically robust random sample – this is necessary because of work involved in later steps
 - For example, in 2007, 2,521 cases were closed after services in the WV system. We chose 370 cases for our short-term ROI study (This included youth and adults) for a margin of error of +/- 4.71% at a 95% confidence interval.
 - This includes all status 26 (rehabilitated) and 28 (closed after services without employment) cases
 - Comparing this sample to the population as a whole on demographic variables shows little change.

Step 2 – Measures and Data Sources COSTS

Data	Measurement	Source
Administrative Costs	\$ per Quarter client was served at WVDRS. Value for each client was found by taking the average cost for all clients served in a given year and summing them for each year client was in the WVDRS electronic case management system (iECM). This included all preceding and subsequent cases the client had on record.	RSA-2 iECM at WVDRS
Cost of Services	\$ for total services in each case (including preceding and subsequent) the client had with WVDRS. The actual amount for each individual client was reported.	RSA-9u

- Due to data constraints, a small number of cases had administrative costs prior to 2001 and had to be conservatively estimated at 2001 values

Step 2 – Measures and Data Sources BENEFITS

Data	Measurement	Source
Wages	Gross wages in \$ per quarter for 3 years (12 quarters) including the quarter in which the case was closed. When U/I data were unavailable, this was supplemented by reported wages at closure data to determine the wages received in the closure quarter (but not in any subsequent quarters).	Unemployment Insurance (U/I) Data RSA-911

Derived from Unemployment Insurance (U/I) data

The most promising method of matching consumers to post VR wages

- Ability to track wages over time
- Data are typically available for 5 years prior to when it is accessed
- Includes quarterly wages for each individual

When U/I data were unavailable, RSA wage data at closure were used (only for the closure quarter)

Step 3 – Data Collection

- Using the most accessible and available information (from the data sources above):
 - Find the cost for going through rehabilitation services for each closure in FY 2007 (IECM + Administrative Costs)
 - Determine quarterly wages generated for three years after closure (U/I Data, RSA-911 when necessary)
- TIP: Don't forget that the sample costs and benefits must be extrapolated back to the Entire Population

Step 4 – Model Short-Term Streamlined ROI

- Defined as a ratio of costs to benefits where:
 - **Costs**= Administrative costs + costs of services
 - **Benefits**= Gross wages for 12 quarters*

*includes the quarter in which the case was closed

Step 5: Results

Short Term 3-year Return on Investment – Youth by Closure Type in Random Sample

Closure Status	n	Costs	Cumulative Wages	ROI
Rehabilitated	148	\$1,084,206	\$5,932,637	\$1.00:\$5.47
Closed Without Employment	87	\$275,902	\$991,435	\$1.00:\$3.59
All Youth	235	\$1,360,108	\$6,924,072	\$1.00:\$5.09

This sample ROI can be extrapolated to the entire population.

WORKLIFE ROI FOR TRANSITIONAL YOUTH

WVDRS Model

Estimation

- Using the streamlined model as a springboard, we attempted to make a conservative and realistic estimate of ROI for youth consumers over their worklife.
- This approach could not rely
- The first question came as to how to estimate worklife of consumers with significant disabilities.

Gamboa-Gibson Tables

- These present a method of estimating the expected number of years that an individual with a disability will be able to continue working.
 - Uses American Community Survey data, break down by various demographic and disability related characteristics
 - Including education, disability type, severity of disability, and gender
- These tables have been used in legal and court cases.
- They have been scrutinized in the past (Corcione 1995; Ireland 2009; Skoog & Toppino 1999; Walker, Clevenger, & Baker 2004)
 - Most of these limitations have indicated that the tables actually underestimate lifetime earnings, making them a conservative approach.

Methodology

1. Using the results of the streamlined model and the Gamboa-Gibson tables, calculate for each consumer the number of worklife years remaining (after the third year).
2. For each consumer, Cumulative Worklife Wages = (Worklife years X Wages for third year after closure) + 3-year wages

Results

Worklife Return on Investment – Youth by Closure Type in Random Sample

Closure Status	n	Costs	Cumulative Wages	ROI
Rehabilitated	148	\$1,084,206	\$22,847,293	\$1.00:\$21.07
Closed Without Employment	87	\$275,902	\$3,565,772	\$1.00:\$12.92
All Youth	235	\$1,360,108	\$26,413,066	\$1.00:\$19.42

Youth Vs. Older Consumers

- Short Term
 - Youth \$1:\$5.09
 - Older consumers \$1:\$6.48
- Worklife Estimates:
 - Youth \$1:\$19.42
 - Older consumers \$1:\$13.39

We found that older consumers were a better short-term investment, but the opposite when thinking about long-term worklife estimates.

Limitations

- Gamboa-Gibson Worklife Tables not a perfect measure
- State differences make generalizations hard
 - Different ratio of youth to older consumers
 - Costs of services
 - Administrative costs
 - Average wages
- Costs to businesses for accommodations
- Model does not incorporate social benefits
- Cannot accurately estimate the future costs of clients if they return to the system.

Limitations Cont... (Inflation)

- Very difficult to include taxes, social security savings, and fringe benefits and costs in a long-term model
- Hard to incorporate increasing salaries as youth age (Wage increase rate)
- Did not include discounting rate
 - What would an appropriate rate be?
- Note: We had few cases with expected worklife more than 10 years in our sample, limiting potential upward bias of the ROI.

For More Information

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