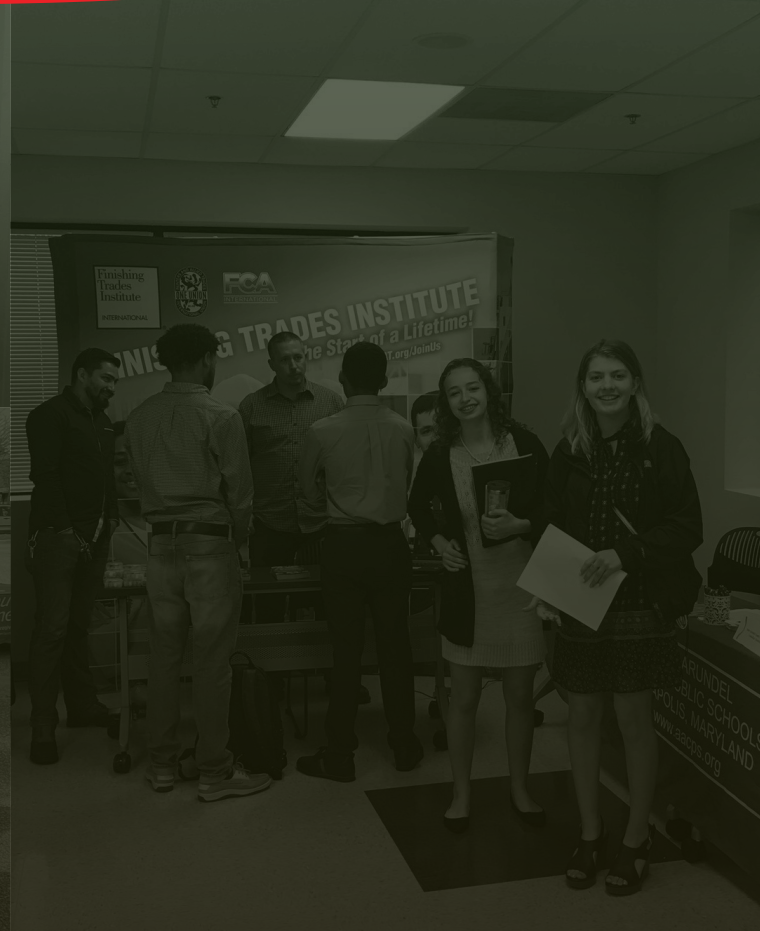




ANNE ARUNDEL
WORKFORCE DEVELOPMENT
CORPORATION



EXAMINING THE IMPACTS AND THE RETURN ON INVESTMENT OF AAWDC'S SERVICES AND INITIATIVES

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INTRODUCTION

This study was conducted by a team of BEACON researchers to examine the impacts and the return on investment (ROI) of the various programs and initiatives of the Anne Arundel Workforce Development Corporation (AAWDC) using an “Efficiency, Effectiveness, and Evidence Approach” originally developed by BEACON for use in program and project evaluation.

THE INITIAL SCOPE OF WORK FOR THE PROJECT WAS DEFINED AS FOLLOWS:

1. Estimating the overall ROI of AAWDC programs
2. Providing a “Peer Comparison” analysis
3. Analyzing the “Effectiveness” and “Efficiency” of AAWDC programs
4. Estimating the impact of AAWDC programs on targeted communities
5. Determining if the services provided by AAWDC lead to faster career progression
6. Determining if the services provided by AAWDC save partners money
7. Determining if the services provided by AAWDC reduce the need for public assistance
8. Estimating reduced UI payments related to AAWDC programs
9. Estimating increased employment related to AAWDC programs
10. Developing an “Evidence” dashboard to demonstrate AAWDC’s “Effectiveness” and “Efficiency”

A BRIEF NOTE ON THE STUDY PROCESS

The BEACON team collected and compiled a large amount of data and information from internal AAWDC sources as well as external sources including publicly available data sets and purchased proprietary data. The data sets were used in designing and running a scenario model to estimate the overall ROI and Impacts of AAWDC programs and initiatives. Some of the data and the information gathered was then used to examine some of the non-quantifiable impacts of these programs.

THE IMPACT MODEL

The AAWDC Impact Model developed by the BEACON team (see Figure 1 on the next page) is designed to simulate long-term impacts of the selected components of the AAWDC initiatives and services. These simulations are based on past operational and impact data as well as ranges of viable future outcomes as determined by a modified “Jury of Executive Opinion” process. A brief discussion of the methodology used for developing this model can be found in Appendix A of this document.

The model combines the following quantitative as well as qualitative components:

- Public Assistance Reduction Outcomes of AAWDC Initiatives and Services
- AAWDC Impacts on Targeted Communities
- Peer Comparison
- Increased Employment Outcomes of AAWDC Initiatives and Services
- Unemployment Insurance Payment Reductions due to AAWDC Initiatives and Services
- AAWDC Partner Savings/Gains
- Career Progression Outcomes of AAWDC Initiatives and Services
- Overall Efficiency and Effectiveness Index Calculations for AAWDC
- Overall ROI of AAWDC Initiatives and Services

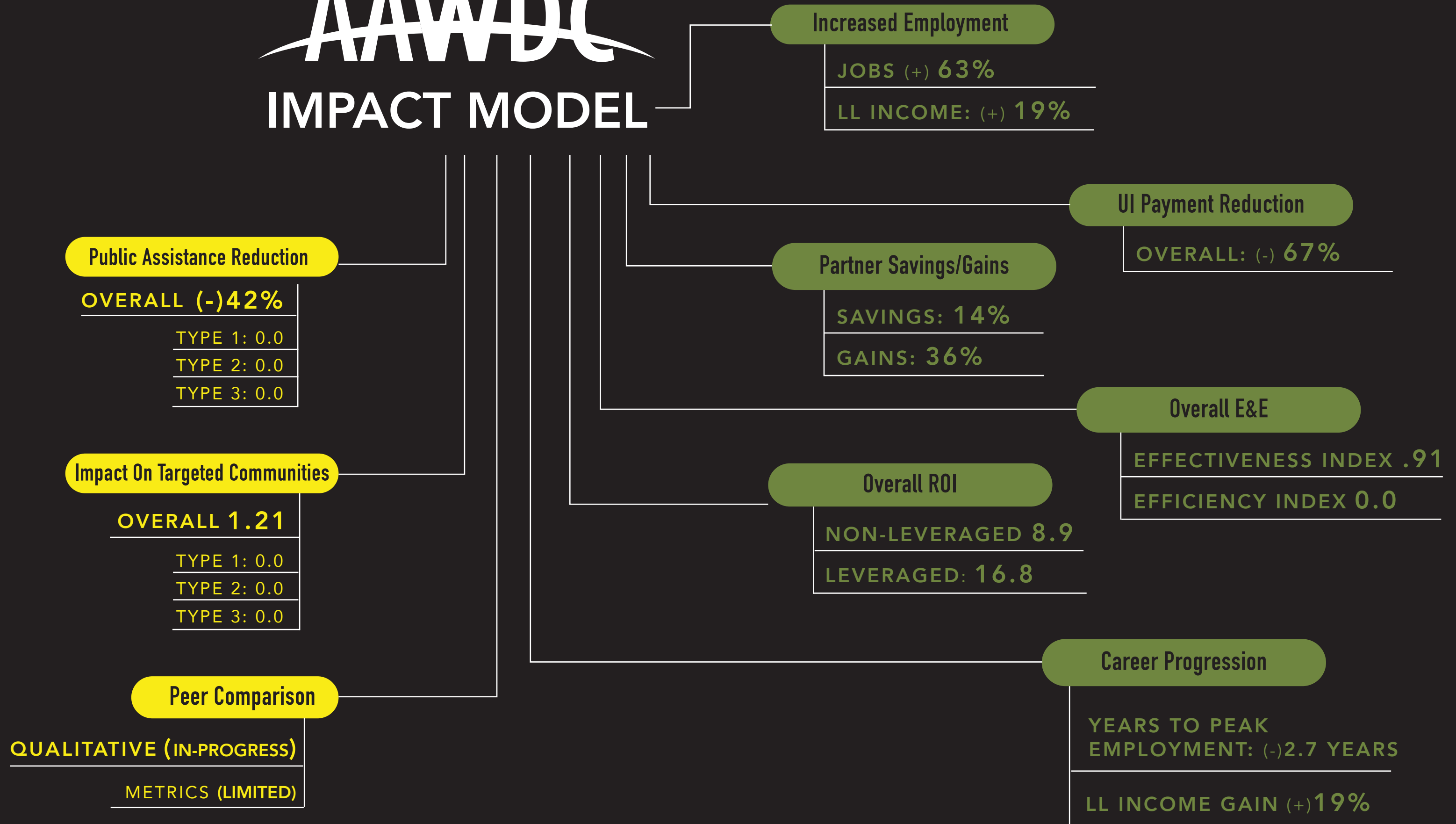
Detailed descriptions of each of these components can be found in the section titled **Model Components and Findings**. In addition to these descriptions, the findings for each component can also be found in this section. Finally, the discussion of each model component in this section will include (where appropriate) the data limitations encountered by the BEACON team. In some cases, this is due to lack of usable data, while in other cases, it is due to the format of the data not being appropriate for use in the model.

At the end of this report, a number of conclusions and recommendations are presented. These conclusions offer a summary of the findings from the model, together with some observations from the members of the BEACON team. In addition, the data availability and format limitations mentioned above will form the basis of the recommendations to AAWDC for future analysis.

AAWDC

IMPACT MODEL

FIGURE 1: THE AAWDC IMPACT MODEL



MODEL COMPONENTS AND FINDINGS

The initiatives of AAWDC are designed to help put Anne Arundel County residents back to work. AAWDC does this by partnering with businesses to learn about their needs and training residents with the skills needed to fill positions in area businesses. As part of this mission, AAWDC provides services for various populations that have multiple barriers to employment to ensure that they can become productive members of the county’s workforce. The nine components of the scenario model developed by the BEACON team to examine these impacts are described and explored below.

1. PUBLIC ASSISTANCE REDUCTION OUTCOMES OF AAWDC INITIATIVES AND SERVICES

The various initiatives and services of the AAWDC result in many unemployed and underemployed Anne Arundel County residents to find gainful employment that reduces their reliance on public assistance programs. This component of the model (see Figure 2 below) is designed to estimate the overall reduction using currently available outcome data and viable estimates for future outcomes. The model also has sub-components that will enable AAWDC to determine these reductions in more detail (using three different types of public assistance reductions) in the future. This future analysis will require AAWDC to create a new and improved data collection/outcome tracking approach going forward.

As can be seen in Figure 2, AAWDC services reduce the Public Assistance reliance of participants by 42%.

OVERALL (-)42%

TYPE 1: 0.0
TYPE 2: 0.0
TYPE 3: 0.0

Public Assistance Reduction

FIGURE 2: PUBLIC ASSISTANCE REDUCTION OUTCOMES

2. IMPACT ON TARGETED COMMUNITIES

The various initiatives and services of AAWDC have a significant impact on the lives of unserved and underserved populations in Anne Arundel County. Using the currently available data and viable estimates for future outcomes, the model provides an impact estimate for these targeted communities in the aggregate (see Figure 3 below). However, the model is designed to help AAWDC decision makers to further break these impacts down to three specific targeted communities in the future:

- Chronically Unemployed Residents
- Underrepresented Demographics
- Veterans

This additional breakdown capability of the model will also require AAWDC to create a new and improved data collection/outcome tracking approach going forward.

As can be seen in Figure 3, the aggregate impact of AAWDC services on targeted communities is 1.21. This means that these services improve that quality of life for participants from these communities by 21% over the course of their working lives.

OVERALL 1.21

TYPE 1: 0.0
TYPE 2: 0.0
TYPE 3: 0.0

Impact On Targeted Communities

FIGURE 3: IMPACT ON TARGETED COMMUNITIES

3. PEER COMPARISON

A significant finding with regards to AAWDC outcomes as compared to regional and national peers will be discussed later in section 9 (Overall ROI of AAWDC Programs) in this document. A quick description of the model component with regard to peers is presented here:

This component of the model is currently not being used due to limited availability of comparable metrics. There is a qualitative review in progress. The preliminary findings from this review indicate that AAWDC services are generally innovative and demonstrably impactful in comparison to regional and national peers. Completion of this review, as well as the utilization of the quantitative analysis sub-component, requires a further study in which key decision makers from selected peers would be surveyed/interviewed to develop comparable metrics.

QUALITATIVE (IN-PROGRESS)

METRICS (LIMITED)

Peer Comparison

FIGURE 4: PEER COMPARISON

4. INCREASED EMPLOYMENT OUTCOMES OF AAWDC INITIATIVES AND SERVICES

The core mission of AAWDC is helping participants secure gainful employment through the organization’s various initiatives. This component of the model (see Figure 5 below) examines job placements and income improvements.

As can be seen in Figure 5, AAWDC services result in a 63% increase in job placements for the participants as well as a 19% boost in lifelong earnings.

Increased Employment

JOBS (+) 63%

LL INCOME: (+) 19%

FIGURE 5: INCREASED EMPLOYMENT

5. UNEMPLOYMENT INSURANCE PAYMENT REDUCTIONS DUE TO AAWDC INITIATIVES AND SERVICE

As discussed earlier, the core mission of AAWDC is helping participants secure gainful employment through the organization’s various initiatives. As participants are employed and/or become more employable, unemployment insurance claims are reduced. This component of the model (see Figure 6 below) examines these reductions.

As can be seen in Figure 6, AAWDC services result in a 67% reduction in unemployment claims attributable to participants.

UI Payment Reduction

OVERALL: (-) 67%

FIGURE 6: UNEMPLOYMENT INSURANCE PAYMENT REDUCTIONS

6. AAWDC PARTNER SAVINGS/GAINS

In pursuing its core mission, AAWDC partners with many private, public, and nonprofit sector organizations such as educational institutions, social, human, and healthcare service organizations, etc. Research shows that as the employment and/or employability of individuals improves, the various burdens on the aforementioned partners is reduced and various benefits are increased. This component of the model (see Figure 7 below) quantifies these savings/gains.

As can be seen in Figure 7, AAWDC services result in a 14% increase in savings and a 36% increase in gains for the organization’s partners attributable to participants.

Partner Savings/Gains

SAVINGS: 14%

GAINS: 36%

FIGURE 7: AAWDC PARTNER SAVINGS/GAINS

7. CAREER PROGRESSION OUTCOMES OF AAWDC INITIATIVES AND SERVICES

In addition to improving immediate employment outcomes and the lifelong earnings of the participants, AAWDC’s initiatives result in significant positive outcomes related to career progression. This component of the model (see Figure 8 below) examines the reduction in the number of years of the participants’ achievement of “Peak Employment” and their lifelong income gains.

As can be seen in Figure 8, AAWDC services result in a 2.7-year reduction in the time participants need to reach “Peak Employment”, while improving their lifelong income potentials by 19%.



FIGURE 8: CAREER PROGRESSION OUTCOMES

8.OVERALL EFFICIENCY AND EFFECTIVENESS INDEX CALCULATIONS FOR AAWDC

It is imperative for all organizations to engage in practices that improve the effectiveness of what they do as well as the efficiency of how they do what they do. This component of the model (see Figure 9 below) is designed to calculate an “Effectiveness Index” as well as an “Efficiency Index” for the organization. Due to lack of available resource allocation benchmarks, the “Efficiency Index” for AAWDC cannot be calculated at this time. Using this sub-component of the model in the future will require the development of such benchmarks by AAWDC.

As can be seen in Figure 9, AAWDC’s Initiatives have an outstanding “Effectiveness Index” of .91, which means they are within 9% of achieving perfect effectiveness.



FIGURE 9: OVERALL EFFICIENCY AND EFFECTIVENESS INDEX CALCULATIONS

9.OVERALL ROI OF AAWDC INITIATIVES AND SERVICES

This is the most important component of the model. The BEACON team, based on seven years of experience measuring ROI from over 100 workforce development programs throughout the State of Maryland, has examined the aggregate AAWDC ROI (see Figure 10 below). The non-leveraged ROI refers to the ROI of AAWDC initiatives in isolation. The Leveraged ROI adds the impacts (as they relate to AAWDC participants) of AAWDC partners that support AAWDC initiatives.

As can be seen in Figure 10, AAWDC’s initiatives have an outstanding non-leveraged overall ROI of \$8.9 for each \$1 invested over the work life of participants. The overall ROI becomes even more impressive (\$16.8 for each \$1 invested) when the impacts (as they relate to AAWDC participants) of AAWDC partners are added.



FIGURE 10: OVERALL ROI OF AAWDC PROGRAMS AND INITIATIVES

CONCLUSIONS AND RECOMMENDATIONS

Based on the findings from the impact model described above, and the observations of the BEACON team throughout the study, it is clear that the various AAWDC initiatives and services are highly effective. The overall impacts of the organization’s activities can be summarized as follows:

- 1. AAWDC services reduce the Public Assistance reliance of participants by 42%. This outcome is about 75% better than the national average.
- 2. The aggregate impact of AAWDC services on targeted communities is 1.21. This means that these services improve the quality of life for participants from these communities by 21% over the course of their working lives. This outcome is about 20% better than the national average.
- 3. AAWDC services result in a 63% increase in job placements for participants as well as a 19% boost in lifelong earnings. The increase in job placements is about 30% higher than the national average. The boost in lifelong earnings is slightly (2%) higher than national outcomes.
- 4. AAWDC services result in a 67% reduction in unemployment claims attributable to participants. This outcome is over 40% higher than the comparable national average.
- 5. AAWDC services result in a 14% increase in savings for the organization’s partners attributable to participants. This outcome is similar to comparable national outcomes.

- 6. AAWDC services result in a 36% increase in gains for the organization’s partners attributable to participants. This outcome is similar to comparable national outcomes.
- 7. AAWDC services result in a 2.7-year reduction in the time participants need to reach “Peak Employment”. We do not have comparable national data for this outcome. Based on the components of AAWDC’s initiatives and the outcomes for those components, we believe this outcome is likely comparable or slightly higher than national averages.
- 8. AAWDC’s initiatives have an outstanding “Effectiveness Index” of .91, which means they are within 9% of achieving perfect effectiveness. Most comparable workforce development programs have Effectiveness Index numbers below .80.
- 9. AAWDC services have an outstanding non-leveraged overall ROI of \$8.9 for each \$1 invested over the work life of participants. The overall ROI becomes even more impressive (\$16.8 for each \$1 invested) when the impacts (as they relate to AAWDC participants) of AAWDC partners are added. National ROI numbers range between \$4 and \$8 per \$1 invested (depending on the industry sector and program category).

NOTE: The comparable national outcomes presented above are derived from seven years of EARN-Maryland program evaluations done by BEACON for the Maryland Department of Labor.

While these are indeed impressive outcomes, there are a number of data collection and data formatting improvements that can be made by AAWDC that would enable the organization to better evaluate its outcomes in the future. As discussed in the previous section of this report, this is especially the case for assessing different types of public assistance reductions; examining the organization’s impact on specific targeted communities; making qualitative and metrics based quantitative peer comparisons, and determining the organization’s overall efficiency.

APPENDIX A: METHODOLOGY USED FOR DEVELOPING THE AAWDC IMPACT MODEL

The AAWDC Impact Model is a Scenario Analysis Model that uses Monte Carlo simulations. Scenario analysis is the process of estimating the expected value of a set of variables after a given period of time, assuming specific changes in the values of the variables or key factors. Scenario analysis is commonly used to estimate positive or negative changes to the target variables in response to various intervening actions or processes. Based on mathematical and statistical principles, scenario analysis provides a process to estimate shifts in the value of these target variables based on the occurrence of different situations—referred to as scenarios—following the principles of "what if" analysis, or Sensitivity Analysis. Sensitivity Analysis is simply how different values of an independent variable affect a dependent variable under specific conditions.

In the AAWDC Impact Model, the Sensitivity Analysis is used to determine the likely positive impacts of AAWDC initiatives on the various work and career outcomes of the participants. The model contains viable value ranges for each of the target variables. The model then randomly assigns a value to each variable from within these viable ranges. This is repeated for 250,000 iterations of the simulation. These simulations are based on past operational and impact data as well as ranges of viable future outcomes as determined by a modified “Jury of Executive Opinion” process.

The AAWDC Impact Model combines the following quantitative as well as qualitative components:

- Public Assistance Reduction Outcomes of AAWDCS Initiatives and Services
- AAWDC Impacts on Targeted Communities
- Peer Comparison
- Increased Employment Outcomes of AAWDC Initiatives and Services
- Unemployment Insurance Payment Reductions due to AAWDC Initiatives and Services
- AAWDC Partner Savings/Gains
- Career Progression Outcomes of AAWDC Initiatives and Services
- Overall Efficiency and Effectiveness Index Calculations for AAWDC
- Overall ROI of AAWDC Initiatives and Services

Once the 250,000 iterations are completed, the top and bottom 25% of the results are discarded as being statistically improbable outcomes. The mean value of the remaining results is then reported as the likely future outcome for each variable.

The biggest advantage of scenario analysis is that it acts as an in-depth examination of all possible outcomes. Because of this, it allows decision makers to understand the potential impact of specific variables.

On the negative side, possible incorrect assumptions can lead to models that are way off the mark. Scenario analysis is also susceptible to the biases of the user and tends to be heavily dependent on historical data.

ABOUT BEACON

The Business Economic and Community Outreach Network (BEACON) of the Franklin P. Perdue School of Business at Salisbury University, offers applied business & economic research and targeted outreach programs to a variety of organizations.

BEACON has a dual mission of:

1. Providing private, public, and nonprofit sector decision makers with the business & economic development data, information, and know-how they need;
2. Providing our students with a wide variety of experiential learning opportunities.



AAWDC'S MISSION

AAWDC is a nonprofit organization that enhances the economic vitality of Anne Arundel County by developing and implementing workforce solutions. We build and maintain a pipeline of skilled talent to meet the demand of businesses and prepare residents with the in-demand skills that lead to family-sustaining employment.



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AAWDC's Career Development Services are funded in part by federal funds. Please visit www.aawdc.org/fundingsource for the current program year funding levels.

AAWDC is an equal opportunity employer/program. Auxiliary aids and services are available upon request to individuals with disabilities, call the Career Center or Maryland Relay 711, 72 hours in advance or email CareerCenter@aawdc.org to request reasonable accommodations. Translation Services are available upon request.