

# Alabama Office of Apprenticeship

## Online Tool Calculator Overview

*July 28, 2023*

### WELCOME TO THE APPRENTICESHIP ROI CALCULATOR

The Alabama Office of Apprenticeship developed a web-based apprenticeship return on investment (ROI) Calculator. This document provides users with this tool information and resources to understand each page of the calculator and the calculations completed on each page.

Users start on the Welcome to the Apprenticeship ROI Calculator. The Quick Start section contains three options:

- **ROI Calculation** will take the user to subsequent pages in the ROI calculator.
- **Start New ROI** will clear any current ROI calculation and start a new calculation.
- **Getting Started** directs users to the **Resources** page which contains brief information on the required fields in the calculator and potential types of costs and offsets to include within an ROI calculation.

When a user selects either **ROI Calculation** or **Start New ROI**, they will be directed to the following pages.

- **Employer ROI Setup:** Summarizes the fields, required and optional, on the first page of the calculator.
- **Period Setup:** Describes the second page of the calculator, including the number of work hours per period.
- **Cost Setup:** Provides an overview of the third page of the calculator, to set up the types of costs to be included in the calculator.
- **Cost Worksheet:** Summarizes how to input cost data into the fourth page of the calculator.
- **Cost Summary:** Describes the summary calculations created by the calculator based on data inputted on pages two through four of the calculator.
- **Offset Setup:** Describes the types of offsets that can be included in the calculator.
- **Offset Worksheet:** Summarizes how to input offset data into the seventh page of the calculator.
- **Offset Summary:** Provides information on the summary calculations completed by the calculator based on data inputted on pages six and seven of the calculator.

- **ROI Calculations:** Discusses the final calculations in the tool and output results.

## EMPLOYER ROI SETUP

The first page of the Alabama Apprenticeship ROI Calculator is the setup page, which establishes the basic characteristics of the apprenticeship to be modeled, hereafter referred to as the scenario. Fields with an asterisk (\*) are required to be able to save progress or move to the next page of the calculator. The fields that appear on this page are as follows, including reference to an example calculation for an apprentice program for which data was gathered in this study (**Exhibit 1**).

- **ROI Name** and **ROI Description** provide descriptive information about the scenario or apprentice the user is modeling and help to document the scenario for users that wish to save or print the calculation that follows.
- The **occupation** field provides a drop-down list of pre-populated occupations. If, as in the example ROI calculation that follows, the occupation the user is looking for can't be found in the existing list selecting Other Occupation will generate a new field (**Unlisted Occupation**) to manually enter the occupation.
- The **Average Employee Output** field requires the user to input the value of work (or output) produced by an experienced employee in a specified period that matches the average length of an apprenticeship period (see Number of Learning Periods below). Employee output is defined as the quantity of goods or services produced or provided by that employee in a specific period (in the example provided in a 6-month period or 1,000 hours). An experienced employee may be defined as a fully qualified worker, a worker that has completed the apprenticeship program, or an employee hired with the level of skill expected of an apprentice after completing the program. Different ways to quantify the value of employee output are discussed in more detail later in this section, together with an example calculation.
- **Apprenticeship County** provides a drop-down list of all Alabama counties. However, if the apprenticeship isn't specific to a single county, the user can select the *State Wide* option that appears first in the list, as shown in the example below.
- **Length of Apprenticeship** is a two-part field. The user should first enter the total length of the apprenticeship, up to a maximum of 10,000 hours. The length can also be entered as the number of months. The example below is a two-year program, consisting of a total of 4,000 hours.
- **Number of learning periods** will break the calculation into the specified number of periods. These can either represent the typical

time required to meet certain competencies, or the standard points in the program when apprentices receive wage increases. The example provided breaks the program into four learning periods of 1,000 hours each corresponding to four progressions from one salary level to the next higher salary level.

- **Levels** provides two options, *Apprentice* and *Journey worker*. The user can select one or both options. The selection in this field will set the tool up to model an apprentice ROI scenario and/or a journey worker scenario. Selecting both will require the user to enter data for both an apprentice and journey worker and the final calculations will compare the ROI of an apprentice to the ROI of a journey worker over the same time frame. The example calculation that follows will only show the apprentice level.

**Average Employee Output** is used in subsequent sections to calculate the value of output for an apprentice and/or journey worker per period. The terms output and productivity are used interchangeably in the discussion that follows.

Employers will have different methods for measuring the productivity of an employee, depending on how the business generates revenue. Ways to measure output include:

- For companies where the product is integrated into a complex product or for companies that provide services, one way to measure output is **through billable hours and billing rates**. To calculate output with this method the employer will need to know the percentage of time employees typically spend on tasks that can be billed or invoiced. Additionally, the employer will need to know the rate that employees are billed at. For example, if an electrician typically spends 7 out of every 8 hours of work on billable tasks and 1 hour on shop time, the percentage of billable hours is 87.5% billable. If that same electrician bills time at \$80 per hour, the output of that employee for every 1,000 hours is \$70,000 (1,000 hours x \$80 per hour x 87.5% billable hours).

Other ways to capture the value of output per hour include the mark-up per hour or the hourly rate above the direct wage rate if the employee were to be charged out to a client or another company. For example, if the electrician in the example above has a direct wage rate of \$28 per hour, then the mark-up is \$52 per hour.

Profit margin is another example of how to measure employee output. In the electrician example, a simplified version of the profit margin is 65%, calculated as \$80 billing rate minus \$28 direct wage rate divided by \$80 billing rate.

- For businesses that produce discrete goods, parts, or services, one way to measure employee output is the **marginal value** generated by the employee. The marginal value could be the number of machine parts the employee makes. Options for assessing marginal value include the total quantity of goods produced per hour, per month or per year, and the price per good produced.

In the ROI example provided in **Exhibit 1**, an employer interviewed indicated that Water Operators typically spend 100% of the time on billable tasks annually. Research into utility industry sales and experienced employee wages demonstrate an approximately 70% profit margin. Therefore, employee output per hour is estimated at \$61.50, calculated as the direct wage rate of nearly \$18.50 per hour for the experienced employee in the first 6 months of work divided by (1-70%). This is converted to the per period output shown in **Exhibit 1** by multiplying by 1,000 hours worked during the 6-month period and 100% billable hours.

## Exhibit 1. Employer ROI Setup Page Example

EMPLOYER ROI INFORMATION

**Employer ROI Setup**

Period Setup

Cost Setup

Cost Worksheet

Cost Summary

Offset Setup

Offset Worksheet

Offset Summary

ROI Calculations

Complete the apprenticeship information fields below

In the fields below, please provide the information requested to create an occupation ROI. Information can be partially entered and returned to later, by clicking the "Edit" button on the My Employer ROI Calculations page.

*Questions marked with an asterisk (\*) are required.  
Hover your mouse over the info icon ⓘ on each question for more information.*

ROI Name: *	Sample ROI Calculation	
ROI Description:		
Occupation: *	Other Occupation	
Unlisted Occupation:	Water Operations	
Average Employee Output: *	61500.00	
Apprenticeship County: *	State Wide	
Length of Apprenticeship: *	4000	Hours
Number of learning periods: *	4 Periods	
Levels: *	Apprentice	

Click Next to enter Start Pay and Number of Work Hours for each Period and Job Level.

**BACK** **SAVE** **NEXT**

Source: AOA ROI Calculator, 2023; Community Attributes, 2023.

## PERIOD SETUP

When the Employer ROI Setup page is complete, clicking next will move the user to the Period Setup page. This page will have expandable headers for the number of periods selected on the first page. In the example calculation for a Water Operations apprentice, the program has 4 periods. Each period requires two data points. In this case, the two data points are required only for an apprentice. However, if the user selected journey worker instead or in addition in the “Level” field on the Employer ROI Setup page of the tool, the same data would be required for a journey worker.

- **Start Pay** is the starting base hourly wage for the period (not including benefits, bonuses, overtime, or any other compensation or payroll taxes). In the first period, this would be the starting wage for the apprentice. For each subsequent period it will be the hourly wage after the apprentice earns a wage increase. For most apprenticeship programs, each period will have an increased hourly wage. The user may optionally put the fully loaded wage in this field, or the wage including the value of benefits, bonuses, overtime, or any other compensation or payroll taxes. If the fully loaded wage is entered here, the user should not include benefits and taxes in subsequent pages. In this example, the Water Operator apprentice starts at a wage of \$16.00 per hour and reaches \$19 per hour in the last program period, excluding the value of benefits, as shown in **Exhibit 2** and **Exhibit 3**.
- **Number of work hours** is the number of working hours per period. For a program with 6-month periods, the typical number of work hours will be 1,000. In some cases, the apprentice will work fewer hours than a standard 40-hour week. The number of hours per period for all periods should sum to the total number of hours for the program. The Water Operator program has 4 periods, each 6 months long or 1,000 hours.

Together, these two data points are used to calculate the total wage cost per period for the apprentice and/or journey worker.

## Exhibit 2. Period Setup Page Example, Period 1

Alabama Apprenticeship ROI Calculator Home Resources

**EMPLOYER ROI INFORMATION**

- Employer ROI Setup
- Period Setup**
- Cost Setup
- Cost Worksheet
- Cost Summary
- Offset Setup
  - Offset Worksheet
  - Offset Summary
- ROI Calculations

Complete the period setup fields below

Click on each period below to expand the section and answer the questions provided. Information can be partially entered and returned to later, by clicking the "Edit" button on the My Employer ROI Calculations page.

*Questions marked with an asterisk (\*) are required.*

**Period 1** ^

**Apprentice**

Start pay:	<input type="text" value="\$ 16.00"/>
Number of work hours:	<input type="text" value="1000.00"/>

Period 2 v

Period 3 v

Period 4 v

Click Next to choose and enter cost related items. Click Back to return to the Employer ROI Setup.

**BACK** **SAVE** **NEXT**

Source: AOA ROI Calculator, 2023; Community Attributes, 2023.

### Exhibit 3. Period Setup Page Example, Period 4

EMPLOYER ROI INFORMATION

Employer ROI Setup

Period Setup

Cost Setup

Cost Worksheet

Cost Summary

Offset Setup

Offset Worksheet

Offset Summary

ROI Calculations

Complete the period setup fields below

Click on each period below to expand the section and answer the questions provided. Information can be partially entered and returned to later, by clicking the "Edit" button on the My Employer ROI Calculations page.

Questions marked with an asterisk (\*) are required.

Period 1	▼
Period 2	▼
Period 3	▼
<b>Period 4</b>	<b>▲</b>

**Apprentice**

Start pay:	\$ 19.00
Number of work hours:	1000.00

Click Next to choose and enter cost related items. Click Back to return to the Employer ROI Setup.

**BACK** **SAVE** **NEXT**

Source: AOA ROI Calculator, 2023; Community Attributes, 2023.

## COST SETUP

The Cost Setup page requires the user to select any apprentice or journey worker costs in addition to wages (**Exhibit 4**). The wages box will always be checked, as the data has been added to the calculation on the previous Period Setup page. The calculator has been developed to allow the user to select as many cost elements as required to capture the cost to the employer completely and accurately. The user can input the data for the cost categories selected here on the next page of the calculator (Cost Worksheet).

These cost elements are not defined, to allow the user to interpret each element in the way that their business quantifies cost. Typical cost elements include:

- **Training** is a broad term that can capture a wide range of costs. In the example calculation, training is used to capture the cost of time mentors and supervisors spend training the apprentice.
- **Supplies** could include the cost of books, learning software and videos or any other items used for non-productive activities in the workplace.
- **Equipment** could be the cost of equipment and infrastructure that was purchased or built for use within the apprenticeship program, or the opportunity cost of facility space used for apprenticeship functions.
- **Benefits & Taxes** are the cost of fringe benefits, such as insurance (medical, life, dental, disability, etc.), vacation pay, holiday pay, contribution to retirement, profit sharing, stock options, and bonuses. Also included in this category is the cost of employer taxes per employee. This box should not be checked if the user entered wage data including the value of benefits and taxes on the previous page.
- **Recruitment, Screening, and Interviewing** capture the costs to identify and hire an apprentice or employee.

Other costs capture a wide range of additional costs that an employer may track per employee. Some employers require and absorb the costs of background checks or drug screening. Employers may also cover the cost of tuition for apprentices or provide training in-house at no cost to the apprentice or employee. In the Water Operator example, apprentices have to take certification tests.

Users can also add their own cost components if one of the typical or other costs options do not capture their specific costs. Typing in the title for the cost in the box under “User Added Costs” and clicking add will create a new checked cost option for which data can be inputted on the next page of the calculator.

## Exhibit 4. Cost Setup Page Example

EMPLOYER ROI INFORMATION

Employer ROI Setup

Period Setup

Cost Setup

Cost Worksheet

Cost Summary

Offset Setup

Offset Worksheet

Offset Summary

ROI Calculations

Select the costs you wish to include on the cost worksheet

Please select each cost that will be factored in the ROI calculation. Information can be partially entered and returned to later, by clicking the "Edit" button on the My Employer ROI Calculations page.

Questions marked with an asterisk (\*) are required.

### Typical Costs

- Wages
- Training
- Supplies
- Equipment
- Benefits & Taxes
- Recruitment
- Screening
- Interviewing

### Other Costs

- Orientation
- Mentor Time Commitment
- Apprenticeship Tuition
- Teachers or Consultants
- Annual Required Continuing Education
- Background and Screening
- Curriculum Development
- Planning Apprenticeship
- Training Program Overhead
- Training Program Contribution
- Certification Exam(s)
- Marketing and Advertising
- Travel and per diem for apprentices
- Related instruction Software and curriculum
- Outcomes tracking software
- Retention incentives and activities
- Related Technical Instruction
- Stipend to apprentices for classroom time
- Classroom Space

### User Added Costs

Add New Cost

ADD

Click Next to enter values for costs selected from the Cost Setup. Click Back to return to the Period Setup.

BACK

SAVE

NEXT

Source: AOA ROI Calculator, 2023; Community Attributes, 2023.

## COST WORKSHEET

The Cost Worksheet will appear similar to the Period Setup page, with expandable sections for each period. The worksheet will include a row for each cost element selected on the prior page. These rows will be repeated for each period and for the journey worker level, if selected on the Employer ROI Setup page of the tool, see **Exhibit 5** and **Exhibit 6**.

The user adds the per period cost for each selected cost element. In the example worksheet, five cost elements are generated.

- **Training** captures the cost of mentor time spent training the apprentice. According to the employer interview for the Water Operator apprenticeship, 4 staff members provide approximately 960 hours of training or mentorship in total per period at a rate of \$50 per hour (the reported value of output for a typical mentor/supervisor). Based on this data, the total cost of mentorship is estimated at \$12,000 per period.
- **Benefits & Taxes** capture the value of fringe benefits provided to the apprentice as well as employer taxes. The Water Operator apprenticeship has fringe benefits reported by the interviewee business as a range between 27% and 80% of the base wage rate and taxes at 7.65% of the base wage rate. Based on a \$16.00 per hour starting wage, 1,000 hours per period, and assuming fringe benefits at 53.5%, estimated benefits and taxes are \$9,900 for the first period of the apprenticeship program. This increases commensurate with the increase in the base wage rate per period.
- **Supplies** include books and other learning materials the employer pays for. The Water Operator apprenticeship program example has a first period supply cost of \$400. These costs are only incurred during the first period, the value entered for each subsequent period will be zero.
- **Recruitment** captures the cost the employer incurs to hire the apprentice. In the example provided, the reported cost of recruiting an apprentice is \$150, recorded in the first period of the apprenticeship program.
- **Certification Exam(s)** captures the cost of operator certification tests. Water Operator apprentices are required to take up to 8 certification tests at a cost of \$325 per test. Assuming two tests per period, the cost to the employer is \$650 per period.

## Exhibit 5. Cost Worksheet Page Example, Period One

EMPLOYER ROI  
INFORMATION

[Employer ROI  
Setup](#)

[Period Setup](#)

[Cost Setup](#)

**Cost Worksheet**

[Cost Summary](#)

[Offset Setup](#)

[Offset  
Worksheet](#)

[Offset  
Summary](#)

[ROI  
Calculations](#)

Enter the values for each of the cost variables selected on the Cost Setup page.

Click on each period below to expand the section and answer the questions provided. Information can be partially entered and returned to later, by clicking the "Edit" button on the My Employer ROI Calculations page.

Questions marked with an asterisk (\*) are required.

### Period 1

#### Apprentice

Training	\$	12000.00
Benefits & Taxes	\$	9900.00
Supplies	\$	400.00
Recruitment	\$	150.00
Certification Exam(s)	\$	650.00

Period 2

Period 3

Period 4

Click Next to view the Cost Summary. Click Back to return to the Cost Setup.

BACK

SAVE

NEXT

Source: AOA ROI Calculator, 2023; Community Attributes, 2023.

## Exhibit 6. Cost Worksheet Page Example, Period Four

EMPLOYER ROI INFORMATION

[Employer ROI Setup](#)

[Period Setup](#)

[Cost Setup](#)

**Cost Worksheet**

[Cost Summary](#)

[Offset Setup](#)

[Offset Worksheet](#)

[Offset Summary](#)

[ROI Calculations](#)

Enter the values for each of the cost variables selected on the Cost Setup page.

Click on each period below to expand the section and answer the questions provided. Information can be partially entered and returned to later, by clicking the "Edit" button on the My Employer ROI Calculations page.

*Questions marked with an asterisk (\*) are required.*

Period 1	▼
Period 2	▼
Period 3	▼
<b>Period 4</b>	<b>▲</b>

**Apprentice**

Training	\$	12000.00
Supplies	\$	0.00
Benefits & Taxes	\$	11100.00
Recruitment	\$	0.00
Certification Exam(s)	\$	650.00

Click Next to view the Cost Summary. Click Back to return to the Cost Setup.

**BACK** **SAVE** **NEXT**

Source: AOA ROI Calculator, 2023; Community Attributes, 2023.

# COST SUMMARY

The Cost Summary page requires no inputs from the user. The page provides a table with a row for each cost element. The tool automatically calculates the summary data based on the values inputted in previous pages. Wages are calculated as the starting wage, multiplied by the number of working hours per period and summed across all periods. The remaining costs are the sum of costs for the entire program. (**Exhibit 7**)

## Exhibit 7. Cost Summary Page Example

Alabama Apprenticeship ROI Calculator Home Resources

EMPLOYER ROI INFORMATION

- [Employer ROI Setup](#)
- [Period Setup](#)
- [Cost Setup](#)
- [Cost Worksheet](#)
- [Cost Summary](#)**
- [Offset Setup](#)
- [Offset Worksheet](#)
- [Offset Summary](#)
- [ROI Calculations](#)

### Cost Summary

Review the values entered for accuracy. If you need to make changes, use the back button to navigate to the cost worksheet. If the information is correct, click the next button. Information can be partially entered and returned to later by clicking the "Edit" button on the my Employer ROI Calculations page.

*Questions marked with an asterisk (\*) are required.*

Cost	Apprentice
Wages	\$70,000.00
Training	\$48,000.00
Supplies	\$400.00
Recruitment	\$150.00
Certification Exam(s)	\$2,600.00
Benefits & Taxes	\$41,700.00

Click Next to choose and enter offset related items. Click Back to return to the Cost Worksheet.

BACK NEXT

Source: AOA ROI Calculator, 2023; Community Attributes, 2023.

## OFFSET SETUP

The Offset Setup page follows the same format as the Cost Setup page. The user selects any offsets or benefits generated by the apprentice or journey worker. The employee output box will always be checked as the data has been added to the calculation on the Employer ROI Setup page. The user may select as many offsets or benefits as required to accurately capture the benefits to the employer. Similar to cost elements, offset elements are not defined, allowing the user to interpret each element in the way that captures benefits for the specific program and employer they are modeling.

Typical offsets are benefits commonly reported by employers, including reduction in errors, increased retention, avoided overtime, reduced lateness in jobs, increased productivity, improved skills and culture fit, and skilled worker pipeline. Many of these typical offsets are challenging for employers to quantify as they don't show up on the company's balance sheet or accounts payable. The user can select as many benefits as they feel apply to their program, even if they cannot quantify these elements.

Other offsets include a variety of grants and tax credits that employers can receive to support apprenticeship. Similar to the Costs Setup page, users can also add their own offset components if one of the typical or other options do not capture their specific benefits. In the example, the Water Operator apprenticeship provides employers with a cost savings for recruitment, which has been manually added to the setup page as shown under User Added Offsets in **Exhibit 8**.

If an employer reports benefits that they do not typically quantify, one strategy is to ask the employer to estimate the value of the benefit relative to the value of apprentice wages or employee productivity. The value can then be approximated based on the wage data.

## Exhibit 8. Offset Setup Page Example

EMPLOYER ROI INFORMATION

Employer ROI Setup

Period Setup

Cost Setup

Cost Worksheet

Cost Summary

Offset Setup

Offset Worksheet

Offset Summary

ROI Calculations

Select the offsets you wish to include on the offset worksheet

Please select each offset that will be factored in the ROI calculation. Information can be partially entered and returned to later, by clicking the "Edit" button on the My Employer ROI Calculations page.

Questions marked with an asterisk (\*) are required.

Typical Offsets

- Employee Output
- Reduction in Errors
- Increased Retention
- Avoided Overtime
- Reduced Lateness in Jobs
- Increased Productivity
- Improved Skills & Culture Fit
- Skilled Worker Pipeline

Other Offsets

- Enhanced Employee Flexibility
- Increased Firmwide Skills & Mentorship
- Increased Community Connection
- Increased Diversity
- Increased Innovation
- Increased Mentor & Firmwide Productivity
- Fill Shortfall in Number of Staff
- GI Bill - Tuition Reduction
- Pell Grant - Tuition Reduction
- OJT Grant - Wage Reimbursement
- ASE Grant - Wage Reimbursement
- Voc Rehab - Wage Reimbursement
- AL Apprenticeship Tax Credit
- Federal Work Opportunity Tax Credit
- Other Grants - Wage Reimbursement
- Other Grants - Tuition Reduction
- Increased pool of employees for internal leadership development

User Added Offsets

- Recruitment Savings

Add New Offset

ADD

Click Next to enter values for offsets selected from the Offset Setup. Click Back to return to the Cost Summary.

BACK

SAVE

NEXT

Source: AOA ROI Calculator, 2023; Community Attributes, 2023.

## OFFSET WORKSHEET

The Offset Worksheet will appear similar to the Period Setup page and the Cost Worksheet, with expandable sections for each period. The worksheet will include a row for each offset element selected in the prior page. These rows will be repeated for each period and for the journey worker level if selected on the Employer ROI Setup page of the tool.

The user adds the per period offset or benefit for each selected cost element. In the example worksheet for the Water Operations apprenticeship, one offset is generated as well as the Productivity Factor and Employee Output, see **Exhibit 9** and **Exhibit 10**.

- The **Productivity Factor** is the ratio of the apprentice's relative productivity compared to an average employee. For example, if an apprentice billing rate is 50% of the average employee rate, or can only be billed for 50% as much time compared to the average employee, or produces 50% of the number of widgets compared to the average employee, then the productivity factor would be 0.5.

In the example scenario, the business interviewed indicated that Water Operator apprentices are 0% productive in the first period of the apprenticeship program. This increases to 35% in period 2, compared to the average employee. Productivity further increases to 70% in period 3, and to 90% in period 4.

- **Employee Output** is a field calculated automatically by the tool. It is equal to the productivity factor multiplied by the figure for employee output entered in the first Employer ROI Setup Page.
- **Recruitment Savings** shows the average cost of recruiting a skilled worker is \$250 reported by the interviewed business for the Water Operator apprenticeship program example. This is included in the offsets category since it is considered a cost saving for the business. The net benefit after deducting the cost of recruiting an apprentice (\$150) which was included in the Cost Worksheet is \$100.

## Exhibit 9. Offset Worksheet Page Example, Period 1

EMPLOYER ROI  
INFORMATION

Employer ROI  
Setup

Period Setup

Cost Setup

Cost Worksheet

Cost Summary

Offset Setup

Offset  
Worksheet

Offset  
Summary

ROI  
Calculations

Enter the values for each of the offset variables selected on the Offset Setup tab.

Click on each period below to expand the section and answer the questions provided. Information can be partially entered and returned to later, by clicking the "Edit" button on the My Employer ROI Calculations page.

Questions marked with an asterisk (\*) are required.

### Period 1

#### Apprentice

 Productivity Factor	<input type="text" value="0"/>
Employee Output	<input type="text" value="\$ 0.00"/>
Recruitment Savings	<input type="text" value="\$ 250.00"/>

Period 2

Period 3

Period 4

Click Next to view the Offset Summary. Click Back to return to the Offset Setup.

[BACK](#) [SAVE](#) [NEXT](#)

Source: AOA ROI Calculator, 2023; Community Attributes, 2023.

## Exhibit 10. Offset Worksheet Page Example, Period 4

EMPLOYER ROI INFORMATION

Employer ROI Setup

Period Setup

Cost Setup

Cost Worksheet

Cost Summary

Offset Setup

**Offset Worksheet**

Offset Summary

ROI Calculations

Enter the values for each of the offset variables selected on the Offset Setup tab.

Click on each period below to expand the section and answer the questions provided. Information can be partially entered and returned to later, by clicking the "Edit" button on the My Employer ROI Calculations page.

Questions marked with an asterisk (\*) are required.

- Period 1
- Period 2
- Period 3
- Period 4**

### Apprentice

 Productivity Factor	<input type="text" value="0.9"/>
Employee Output	<input type="text" value="\$ 55350.00"/>
Recruitment Savings	<input type="text" value="\$ 0.00"/>

Click Next to view the Offset Summary. Click Back to return to the Offset Setup.

**BACK** **SAVE** **NEXT**

Source: AOA ROI Calculator, 2023; Community Attributes, 2023.

# OFFSET SUMMARY

Like the Cost Summary page, the Offset Summary page requires no input from the user. The page provides a table with a row for each offset element, including employee (apprentice or journey worker) output. The tool automatically calculates the summary data based on the values inputted in previous pages. All rows are the sum of offsets for the entire program.

**Exhibit 11. Offset Summary Page Example**

Alabama Apprenticeship ROI Calculator Home Resources

**EMPLOYER ROI INFORMATION**

- Employer ROI Setup
- Period Setup
- Cost Setup
- Cost Worksheet
- Cost Summary
- Offset Setup
- Offset Worksheet**
- Offset Summary**
- ROI Calculations

### Offset Summary

Review the values entered for accuracy. If you need to make changes, use the back button to navigate to the Offset worksheet. If the information is correct, click the next button. Information can be partially entered and returned to later by clicking the "Edit" button on the my Employer ROI Calculations page.

*Questions marked with an asterisk (\*) are required.*

Offset	Apprentice
Recruitment Savings	\$250.00
Employee Output	\$119,925.00

Click Next to view the ROI Calculations. Click Back to return to the Offset Worksheet.

**BACK** **SAVE** **NEXT**

Source: AOA ROI Calculator, 2023; Community Attributes, 2023.

## ROI CALCULATIONS

The final page of the calculator provides a summary of offsets and costs, as well as calculations for net profit and return on investment. The results are presented in this order and represent the following:

- **Offset** is the sum of all offsets, including employee (apprentice) output, as well as any other offsets identified in the Offset Setup and Offset Worksheet pages. Offsets are summed across all periods.
- **Cost** is the sum of all costs, including wages, as well as any other costs identified in the Cost Setup and Cost Worksheet pages.
- **Net profit** is the difference between total offsets and total costs, as defined above.
- **ROI**, or Return on Investment, is calculated as (Total Offsets minus Total Costs) divided by Total Costs. In other words, ROI is Net profit divided by total cost.

Also included are two graphs, showing return on investment calculated per period as well as a comparison of cost and employee (apprentice) productivity. The cost line in the second chart is the cost per period, less offsets, **except** employee output. Apprentice production is equal to employee (apprentice) output.

Users have the option to print the report as well. Clicking print report generates a PDF with the scenario results suitable to save or print.

## Exhibit 12. ROI Calculations Page Example

**EMPLOYER ROI INFORMATION**

[Employer ROI Setup](#)

[Period Setup](#)

[Cost Setup](#)

[Cost Worksheet](#)

[Cost Summary](#)

[Offset Setup](#)

[Offset Worksheet](#)

[Offset Summary](#)

**ROI Calculations**

### ROI Calculations

Occupation:  
 Location: State  
 Length of Apprenticeship: 4000 Hours  
 Number of Periods: 4

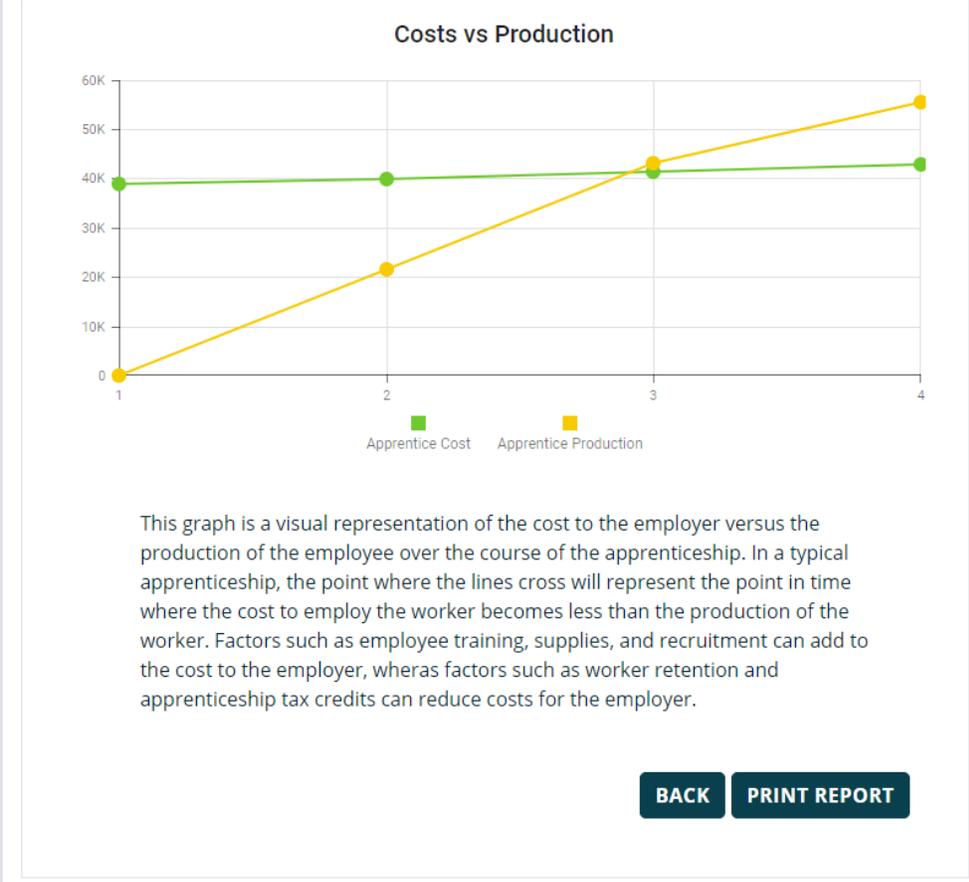
	Apprentice
Offset	\$120,175.00
Cost	\$162,850.00
Net Profit	-\$42,675.00
ROI	-26.21%



This graph is a visual representation of the employer's profit on workers over the course of the apprenticeship. The graph shows the cumulative profit to the employer at each period, with the last period representing the total profit to the employer. In a typical apprenticeship, the point where the line crosses from negative value to positive value represents the point at which the employer stops losing money on the apprenticeship and begins profiting from the apprenticeship.

*Source: AOA ROI Calculator, 2023; Community Attributes, 2023.*

**Exhibit 13. ROI Calculations Page Example, Continued**



Source: AOA ROI Calculator, 2023; Community Attributes, 2023.