

ROI of USHE Awards

1 | BACKGROUND

This analysis demonstrates a positive return on investment for individuals who completed postsecondary programs at a Utah System of Higher Education (USHE) institution. This study focused on individuals who obtained a two-year certificate, associate, or bachelor's degree at a USHE institution in the 2014-2016 cohort and who did not return to school. Wage data from the Department of Workforce Services Unemployment Insurance records for the year preceding the graduating year and five years following graduation were compared to individuals who attended up to one year at a postsecondary institution during 2013-2016 but did not earn an award between 2013 and 2021. The comparison group allows for DWS wage data to be linked for a cohort without a postsecondary award; this also allows cohorts to be compared to completers and serves as a group similar to those with only a high school diploma. All findings are presented in 2022 dollars.

2 | KEY FINDINGS

- The typical USHE graduate earned 79% to 167% higher wages the year after completion compared to before.
- Five years after completion, the typical USHE graduate earned 10% to 64% higher wages than the control group.
- After accounting for costs, the typical USHE graduate had higher cumulative wages eight years after completion.
- Spanning the five years after completion, the state collected approximately \$98,411,821 in additional tax revenue from USHE graduates.

3 | ANALYSIS

3.1 | Individual Returns

USHE completers earned higher wages the year after completing a certificate or degree than the year before completion (Table 1). On average, those who earned bachelor's degrees had the highest percentage wage change, followed by those who obtained a two-year certificate and then those who earned an associate degree. Short-term wages were higher across the board; the comparison group is used for long-term changes in wages rather than comparing wages pre- and post-completion.

Wages for completers are generally higher five years after program completion than for the comparison group (Table 2). The typical graduate earns higher median wages compared to the typical non-USHE award holder. The median wage

is 10% higher for certificate holders, 19% higher for associate degree holders, and 64% higher for bachelor's degree holders. The difference between negative mean and positive median wages among certificate holders is driven by some extremely high-wage earners from the 2014 and 2015 cohorts in the comparison group. These outliers may or may not reflect past or future experiences. Additionally, the typical award holder had explicit and opportunity costs for attending a postsecondary institution. These must be accounted for to fully address the long-term differences in returns on education.

Those who earned a postsecondary award incurred tuition expenses. In this analysis, the full-time

Table 1: Mean and median wages for the years preceding and following program completion, 2014-2016 USHE graduating cohorts.

Award	Mean				Median			
	Pre	Post	Diff	%	Pre	Post	Diff	%
2 Year Certificate	\$18,479	\$29,496	\$11,018	60%	\$12,225	\$26,237	\$14,012	115%
Associate	\$20,737	\$30,569	\$9,832	47%	\$14,365	\$25,707	\$11,342	79%
Bachelor's	\$19,915	\$38,510	\$18,595	93%	\$13,679	\$36,470	\$22,791	167%

Table 2: Five-year mean and median wage differences between completers and comparison group 2014-2016 cohorts.

Award	Mean				Median			
	Completers	Comparison	Diff	%	Completers	Comparison	Diff	%
2 Year Certificate	\$41,215	\$41,786	-\$572	-1%	\$37,299	\$33,968	\$3,330	10%
Associate	\$62,935	\$41,786	\$21,149	51%	\$40,293	\$33,968	\$6,325	19%
Bachelor's	\$60,666	\$41,786	\$18,880	45%	\$55,554	\$33,968	\$21,586	64%

equivalent weighted average cost for each award is the cost of tuition, while the opportunity cost is determined by the median wage of the comparison group for the respective number of years for each award. Median wages in years six through 20 were determined by the average growth rate of the median wage for those with and those without a postsecondary award between 2001 and 2021 (Flood et al., 2023). The typical certificate earner has higher cumulative wages than the comparison group by the third year after completion and is expected to have earned an additional \$100,000 20 years after completion. The median associate degree holder has higher cumulative wages by

the end of the fourth year after completion and is expected to have earned roughly an additional \$150,000 20 years after completion. The typical bachelor's degree holder will have higher cumulative wages than that of the comparison group seven years after graduation and, within 20 years, should have earned an additional \$362,000 in wages. Bachelor's degrees take longer to complete, which increases costs and leads to a longer break-even period. Overall, when considering costs, award earners are expected to have higher cumulative wages than those who do not hold a postsecondary award.

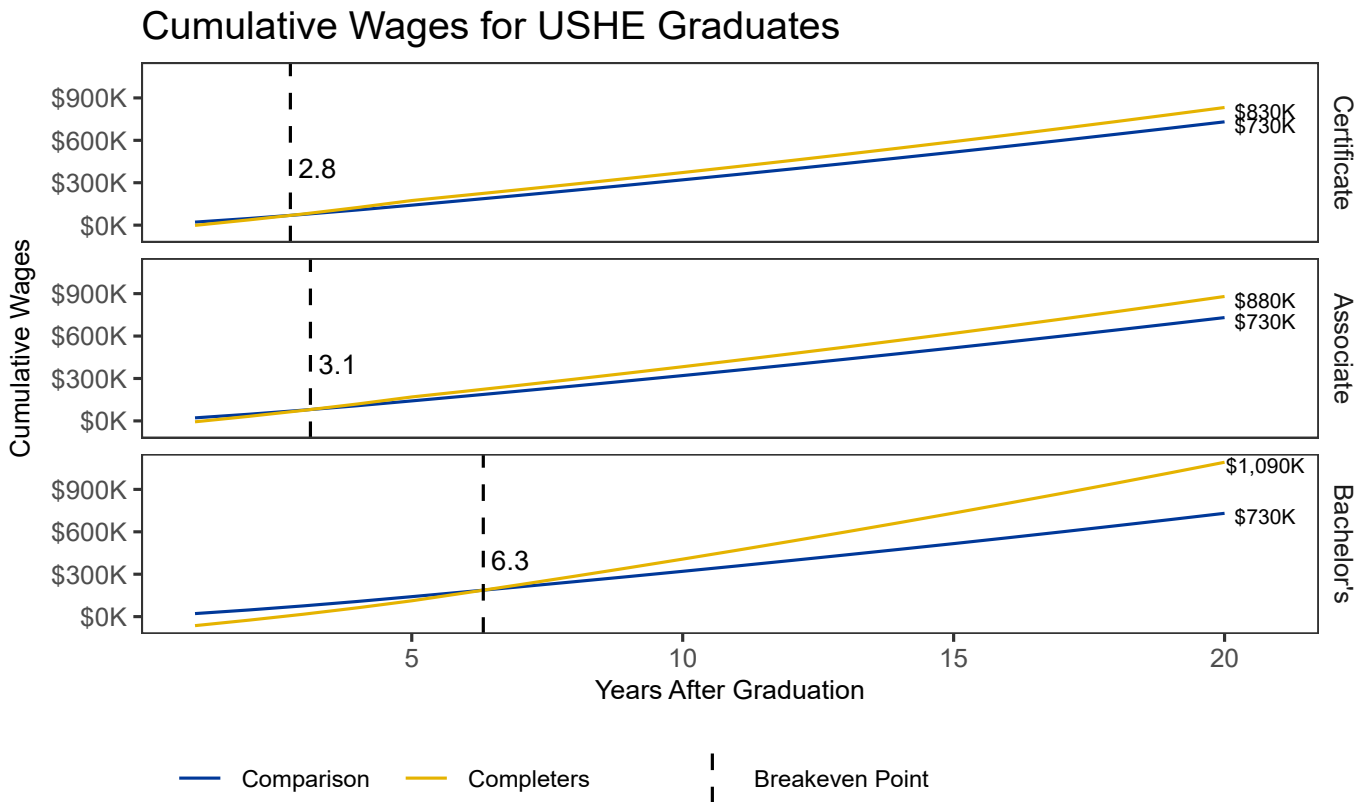


Figure 1: Cumulative median wages for the completion and comparison groups, cohorts 2014-2016.



3.2 | Public Returns

The state of Utah also benefited from increased tax revenue from its investment in postsecondary education. Increased tax revenue is the difference in average wages between award holders and the comparison group multiplied by the number of award holders who earned a wage in each year multiplied by the state tax rate for each year. This group suffers from attrition as some completers left the state or the labor market between the first and fifth year after completion. The 2014 cohort

contributed an additional \$34.8 million in tax revenue spanning the five years after completion, the 2015 cohort contributed an additional \$26.4 million, and the 2016 cohort contributed an additional \$37.1 million. In total, the five years after graduation, the three cohorts contributed an additional \$98.4 million in tax revenue than had these cohorts earned the same average wages as the comparison group.

Table 3: Additional Tax revenue for cohorts 2014-2016

Year	Cohort		
	2014	2015	2016
2015	\$2,692,268		
2016	\$4,318,905	\$3,391,861	
2017	\$5,285,954	\$4,589,710	\$5,448,871
2018	\$6,159,226	\$5,689,196	\$6,523,033
2019	\$16,397,125	\$6,238,447	\$7,013,996
2020		\$6,515,711	\$8,389,326
2021			\$9,758,191
Cohort Total	\$34,853,478	\$26,424,925	\$37,133,418
Grand Total			\$98,411,821

4 | SUMMARY

This analysis shows that USHE awards have a positive ROI. Individuals earning an award are expected to have from 47% to 93% higher wages depending on the award earned the first after earning an award compared to the year before. Five years after completion, median wages are between 10% and 64% higher, depending on the

award earned, than those of the comparison group. Twenty years after graduation, cumulative wages are between \$100,000 and \$360,000 higher. The three cohorts added approximately \$98,411,821 in additional tax revenue than if they had the same average wages as the comparison group.

REFERENCES

Flood, S., King, M., Rodgers, R., Ruggles, S., Warren, J. R., Warren, D., Chen, A., Cooper, G., Richards, S., Schouweiler, M., & Westberry, M. (2023). *IPUMS, Current Population Survey: Version 11.0* (11.0) [dataset]. Minneapolis, MN: IPUMS. <https://doi.org/10.18128/D030.V11.0>

DATA PARTNERS

