

# Methodological appendix

## Overview

This report synthesizes existing evidence about the business case for apprenticeships in the United States. The research was conducted from June to December 2025, combining a literature scan of employer return on investment (ROI) studies and qualitative interviews with subject matter experts and employers. The goal was to understand what we know—and don't know—about the business case for apprenticeships and to provide a framework for building stronger evidence. Interviews lasted 45 to 60 minutes and were conducted virtually with Institutional Review Board (IRB) approval.

## Literature scan

The literature scan focused on evaluation reports, state-funded studies, and intermediary-led analyses because rigorous, peer-reviewed research on employer ROI for apprenticeships remains limited in the U.S. The scan also incorporated evidence from Switzerland and Germany, which have more mature data infrastructure and established evidence bases. The international evidence provided useful theoretical frameworks and methodological approaches relevant to U.S. contexts. Most U.S. studies have been published since 2016, while Swiss and German research started in the early 2000s.

We examined how ROI was defined and measured across studies, what costs and benefits were included, methodological approaches and challenges, key findings during and after programs, and variation across industries, occupations, firm sizes, program models, and durations. We also reviewed Swiss and German literature on employer willingness to train apprentices to formulate a research framework for building stronger U.S. evidence.

## Subject matter expert interviews

We conducted 14 interviews with researchers and practitioners who have conducted ROI studies or are experienced in communicating apprenticeship's value proposition to employers. Four experts were Swiss academics who have published peer-reviewed research based on robust cost-benefit surveys implemented since the early 2000s. Interview participants were given a choice about whether to have quotes attributed to them or not.

Interview topics included:

- Experience with apprenticeships and measuring ROI
- Cost-benefit analysis approaches
- Data and measurement challenges
- Policy and communication strategies
- Future research directions

## Switzerland field visit and Summer Institute

We organized a delegation of U.S. employer intermediaries and funders to the Center on the Economics and Management of Education and Training Systems (CEMETS) Summer Institute at ETH Zurich in June and July 2025. The institute included lectures from leading Swiss researchers, visits with employers and apprentices in different

industry sectors, and discussions about applying Swiss insights to U.S. contexts. We gathered feedback from participants about key takeaways and insights related to ROI measurement and a research agenda for understanding the business case for apprenticeships more broadly.

## **Employer interviews**

We conducted nine interviews with employers referred by intermediaries who attended the CEMETS Summer Institute. Employers represented a range of industries, firm sizes, and locations. We conducted a brief demographic survey at the beginning of each interview to contextualize responses.

Industries represented:

- Health care (two); life sciences (two); professional services (two); manufacturing (one); media/entertainment (one); technology/software (one)

Firm size (by number of employees globally):

- More than 10,000 employees (five); 11 to 50 employees (one); one to 10 employees (three)

Interview topics included:

- Talent strategies and workforce challenges
- Cost-benefit analysis and decisionmaking processes
- Apprenticeship experience and value assessment
- Data systems informing talent decisions
- Use of external resources

A goal of these preliminary interviews was to pilot a questionnaire about employer talent needs and decisionmaking, and to gather insights for designing a more systematic study.

## **Analysis**

We organized findings from interviews and the literature scan into thematic areas:

- High-level findings across studies
- Approaches to measuring ROI
- Methodological and data collection challenges
- Contextual and program design factors that shape ROI
- Research gaps and priorities

This synthesis forms the basis for the findings in the main report.

## **Limitations**

This study was exploratory and preliminary, based on a small body of U.S. literature. The literature scan was not exhaustive, but captures the most widely cited studies and publicly available reports. Studies varied in methodological design and rigor; some had small sample sizes but contributed meaningful qualitative insights. This is to be expected given the early stage of research on this topic in the U.S. and the aims of the report to provide a framework and recommendations for strengthening the evidence base over the long term.

Most studies focused on specific states, program models, or grant programs, limiting comparability. The variation in what “apprenticeship” means in practice makes it inappropriate to draw broad conclusions about employer ROI overall, as noted in the report. Our employer interviews represented a convenience sample appropriate for preliminary research. Subject matter experts were selected purposively to include widely cited authors, Swiss experts, and practitioners with significant experience and demonstrated success in increasing employer participation in apprenticeships.