

Colorado Minimum Value Threshold (MVT) analysis & State Longitudinal Data System (SLDS) discussions

Project Summary

October 2024

Charge

Pursuant to HB22-1349 and the Colorado Commission on Higher Education (CCHE) Strategic Plan, Education Strategy Group (ESG) – in partnership with CCHE and the Colorado Department of Higher Education (CDHE)– has convened a technical working group (“Working Group”) to:

1. “...develop student success measures that measure the progression of students through postsecondary education and the impact of postsecondary pathways on a student’s career opportunities and success,” and
2. Strategize to “create and maintain a statewide student success data system,” to be administered by the Colorado Department of Higher Education.

Item 1 will be summarized as the Minimum Value Threshold (MVT) analysis; Item 2 reflects many discussions with the Office of the Governor and other stakeholders strategizing to build a robust Statewide Longitudinal Data System (SLDS.)

The Working Group, which met monthly from June 2023 to September 2024, was composed of national thought leaders with expertise in higher education value/return on investment, CCHE Commissioners, CDHE staff, public institutions and system-level staff members, and community representatives. A full list of Working Group members is provided in **Appendix A**.

ESG is grateful for the support provided by Gary Community Ventures and Zoma Foundation to engage in this work and for the immense efforts by the CDHE Research and Strategy team, who conducted the analyses discussed below.

Minimum Value Threshold (MVT) Analysis

Over the past 18 months, the Working Group has advised CCHE on the most appropriate empirical model to estimate a Minimum Value Threshold (MVT) of postsecondary credentials in Colorado, and the best data elements to support this model. While focusing on the metrics and outcomes most relevant to Colorado, the Working Group members reviewed prior research and analysis of postsecondary education’s financial value and return on investment, particularly the work of the

Gates Foundation Postsecondary Value Commission, the Institute for Higher Education Policy (IHEP), and the Foundation for Research on Equal Opportunity (FREOPP.)

Building on the research conducted by the Postsecondary Value Commission and FREOPP, the Working Group proposes the following model to estimate the minimum value threshold of a postsecondary credential in Colorado:

Minimum Value Threshold = (Incremental Earnings – Costs Specific to Higher Education)

This model employs the following definitions:

- ***Incremental Earnings*** is defined as (Median Earnings of a postsecondary graduate by institution and field – Median earnings of a high school graduate)
- ***Costs Specific to Higher Education*** is defined as ((Tuition and fees + cost of books and supplies) – financial aid + *forgone wages*) x *time to degree*
 - ***Forgone wages*** are defined as median earnings of a high school graduate, as a student enrolled in postsecondary education has often stopped out of the workforce and/or is not employed full time.
 - ***Time to degree*** is defined as the length of time a student takes to complete a postsecondary credential, accounting for both full- or part-time enrollment and a student’s likelihood of graduation.

A technical data memo, outlining methodologies and required data sources is available [here](#). This document has been shared with members of Colorado’s higher education Data Advisory Group (DAG) and public college and university Chief Financial Officers (CFOs) for feedback; many of their questions and comments are reflected in the “Data FAQs” document, which is linked [here](#).

In addition to the monthly Working Group meetings, the following stakeholders have been engaged on an ongoing basis to navigate data challenges and methodological questions:

- ESG staff met weekly with former CCHE Vice Chairman Josh Scott during his tenure on the Commission, and approximately monthly with Chairwoman Sarah Hughes to provide updates and discuss this work. Following her appointment as CCHE Chairwoman, the ESG staff has met with Jennifer Walmer twice since her appointment.
- Updates on this work have been provided to CCHE during their Board retreat (July 2024) and during the September 2024 Commission meeting.

- Updates have been provided regularly to the Data Advisory Group (DAG) and the institutions' Chief Financial Officers approximately monthly since Spring 2024.
- Dr. Sonia Brandon and Michelle Quinn, both institutional representatives on the Working Group, have consistently met individually with the ESG team as well, providing critical university-centered feedback on this work.
- ESG staff also met weekly with the Colorado Department of Higher Education (CDHE) Research and Strategy team to discuss and troubleshoot issues related to the data analysis outlined above.

Future Considerations and Recommendations

Potential next steps and future directions for Colorado's Minimum Value Threshold (MVT) analysis are presented below. These suggestions are the result of discussions with the Working Group, CCHE Commissioners, and CDHE staff members. Each item may require additional CDHE staff capacity, resources and data to complete; items that may be more feasibly addressed with a robust State Longitudinal Data System (SLDS) are identified with an asterisk.

- To account for differences in higher education opportunities and workforce needs by urbanicity and geography, future iterations of this work may break down workforce engagement and earnings by region, county, and institutional service area.*
- Future analysis may approximate shorter-term earnings (i.e., 1-, 3-, 5-, and 10-years post-enrollment) in addition to lifetime earnings; as more data become available, "lifetime earnings" can be estimated using a timeframe longer than 15 years.*
- Moving forward, future analyses may be adjusted to better account for inflation and macro-level economic conditions (i.e., students who entered the workforce in 2008 or 2009 may have had very different job prospects than their older or younger peers, having nothing to do with their higher education experience.)*
- In partnership with the Colorado Department of Education, future iterations of this work may account for academic readiness and any substantial differences in the academic preparation of those who pursue postsecondary education and those who do not.*
- While this first version of the MVT calculations is dichotomous (i.e., "Graduates of Program X show earnings either over or under the minimum threshold") future iterations of the MVT analyses may present finer-grained earnings data to determine how far above or below the MVT earnings graduates of each of the state's academic programs is.

- The Working Group emphasized the need to also consider the non-financial value of higher education throughout its meetings, including measures such as job satisfaction, public health outcomes, and voter behavior. While estimating such effects may require different methodologies (i.e., collecting survey data,) exploring these outcomes will paint a more complete picture of higher education's value to Coloradans and to the state as a whole.

As Colorado continues to explore the financial (and other) value and return on investment of higher education for its citizens and for the State, Education Strategy Group (ESG) makes the following recommendations for future work on this topic:

- At this time, data and analysis pertaining to higher education's MVT in Colorado have been shared only with internal stakeholders (i.e., members of the Working Group and institutional representatives seeing only their own data.) Moving forward, CCHE and CDHE should determine the best next steps in presenting these data in a format most helpful to assist institutions to make any changes toward program improvement, and to inform students making college-going decisions.
- While continuing to explore higher education outcomes and workforce data at a finer grain, CCHE Commissioners and CDHE staff should also consider opportunities for state-level (rather than regional or institution-specific) interventions. In doing so, the state can support those students enrolled in high social value, but perhaps lower financial value, career fields (e.g., early childhood education, social work.)
- Higher education institutions must remain engaged in this conversation. While different stakeholders may hold different perspectives on the best uses of these data and analyses, it is imperative that Colorado's colleges and universities are involved in future iterations of this work.
- Colorado's colleges and universities, CCHE Commissioners and CDHE staff must continue to discuss workforce needs and labor market outcomes with Colorado's employers. When engaging employers in this discussion, higher education entities can learn a great deal about employers' perceptions of higher education's value, their own industry needs, and opportunities for work-based learning partnerships for students.
- Stakeholders across Colorado should continue to advocate for a robust State Longitudinal Data System (SLDS) such that future data collection and analysis can facilitate continued discussion of higher education's value. As discussed above, many enhancements to the analyses are contingent upon sufficient and powerful student-level data.
- Stakeholders including the Colorado Office of the Governor, Colorado General Assembly, CCHE and CDHE should determine the best uses of these data and analyses, and develop a plan for information dissemination and subsequent

actions. For example, these data may be used to develop additional scholarship programs for students, provide additional funds to high-performing in-demand workforce related programs, and/or lead to changes in academic programs to ensure that students receive a positive return on investment from their higher education experiences. It is important to note that the MVT is subject to several data limitations, as with any ROI analysis, and its value to make funding or other decisions about a particular program or institution is very limited.

State Longitudinal Data System

Since January 2024, the Working Group has spent time at each monthly meeting discussing State Longitudinal Data Systems (SLDSs) in support of HB22-1349 and additional legislation introduced during this year's legislative session (HB24-1364). Facilitated by ESG staff, these conversations have centered around:

- Data elements from higher education and other participating state agencies that should be included in an SLDS.
- The most important operational and research use cases and questions an SLDS can answer for higher education systems and institutions.
- Challenges to implementing and using to its best advantage an SLDS at the institution- and state-levels.
- Best practices for SLDS governance; establishing appropriate partnerships between state agencies.
- Challenges experienced in other states (re: SLDS purpose, governance, audiences, etc.) that Colorado should attempt to mitigate as the SLDS is established.

Working Group guest presenters have included data experts from the Tennessee Office of Evidence and Impact (the state agency that houses Tennessee's SLDS), former Indiana Commission for Higher Education research and data staff members, and national experts to discuss a 50-state scan of SLDSs and their evolution over the past two decades.

Discussions pertaining to Colorado's State Longitudinal Data System have continued following the legislature's adjournment in May 2024. Since this time, the Governor's team has convened a number of SLDS-centric committees composed of various state government representatives to discuss issues including data sharing and data governance.

Conclusion

In pursuing discussions about postsecondary education's value over the past 18 months, Colorado is leading the nation in its attention to this matter - what is emerging across the country as a critical "next chapter" in higher education policy making. Continuing conversations around this topic, coupled with the growth of Colorado's SLDS, will position the state to lead in this space and serve as a model for other states embarking on this work.

Appendix A: Members of the Colorado Technical Working Group

Jennifer Walmer, Chairwoman, Colorado Commission on Higher Education

Sarah Hughes, Former Chairwoman, Colorado Commission on Higher Education

Josh Scott, Former Vice Chairman, Colorado Commission on Higher Education

Britta Blodgett, Assistant Director of Communications and Collaboration, Colorado Workforce Development Council

Marcia Bohannon, Chief Information Officer, Colorado Department of Education

Dr. Sonia Brandon, Director of Institutional Research and Effectiveness, University of Northern Colorado

Dr. Joyce Brooks, Former Chairwoman, Colorado NAACP

Mario Carrera, President, Colorado Latino Leadership, Advocacy and Research Organization

Diane Cheng, Vice President of Research and Policy, Institute for Higher Education Policy (Working Group member through February 2024)

Preston Cooper, Senior Fellow, Foundation for Research on Equal Opportunity

Dr. Nate Easley, Secretary, Colorado State University Board of Governors

Dr. Landon Pirius, Vice Chancellor for Academic and Student Affairs, Colorado Community College System (Working Group member through March 2024)

Michelle Quinn, Vice President of Finance and Administration, Colorado Mesa University

Dr. Michael Shulman, Interim Vice Chancellor for Academic and Student Affairs, Colorado Community College System

Sean Tierney, Director of Research and Policy, Institute for Higher Education Policy

Michael Vente, Chief Performance Officer, Colorado Department of Higher Education

Maggie Yang, Senior Director of Data Systems, Colorado Department of Higher Education