Investing in North Dakota's Future Economy Through State Funded College Scholarships: A Return-on-Investment Analysis

EXECUTIVE SUMMARY

North Dakota was experiencing persistent labor shortages prior to the Covid-19 pandemic, and the situation has worsened since the onset of the pandemic amidst a tightening national labor market. The state has launched recruiting efforts nationwide to attract out-of-state workers to fill job openings within the state, yet the effectiveness of these efforts and the contributions of these workers to the state's long-run economic growth remain largely uncertain.

In addition to recruiting workers from elsewhere, the state has invested in human capital acquisition through its universities and colleges. During the 63rd legislative assembly, the state launched the North Dakota Higher Education Challenge Grant Program. The program operates as a matching fund, where one dollar is provided as a match "for every two dollars of nonstate, non-federal dollars raised by the institutional foundations of North Dakota public colleges and universities for funds dedicated to the advancement of academics" (NDUS). Since its inception, 62 percent of funds have been allocated to scholarships. This report provides an estimate of the return on investment the state can expect to realize from this program using Modified Internal Rate of Return (MIRR), a well-documented methodology utilized in previous academic studies.

Key Findings

- ❖ The study estimates an 9.4 to 11 percent rate of return to the state from funding scholarships through the Challenge Grant Program.
- ❖ Similarly, the study estimates the present value of benefits exceed the present value of costs for the program by between \$310 million and \$590 million. It estimates that the present value of benefits is between 11 times and 20 times the present value of costs.
- Benefits realized from this program are from three sources:
 - Increases in state tax revenues resulting from higher incomes of residents due to more having college degrees
 - Increases in lifetime earnings of residents due to more having college degrees
 - Increases in state economic output due to more productive workers resulting from more with college degrees
- ❖ A sensitivity analysis shows that the rate of return from this program exceeds alternatives under reasonable conditions.
- ❖ The estimated rate of return between 9.4 and 11 percent is only for the public portion of the scholarship investment. To the extent that private dollars going into this program are incentivized by the public investment, the ROI to the public sector is much larger. Under an extreme assumption that no private dollars on these scholarships would be invested without the state program, the rate of return to the public sector investment would be between 11.5 and 13 percent.

Authors

Xudong Rao, Ph.D.

Department of Agribusiness and Applied Economics, North Dakota State University

Dean Bangsund, M.S.

Department of Agribusiness and Applied Economics, North Dakota State University

William Nganje, Ph.D.

Department of Agribusiness and Applied Economics, North Dakota State University

John Bitzan, Ph.D.

Challey Institute for Global Innovation and Growth, North Dakota State University

Read the report "Investing in North Dakota's Future Economy Through State Funded College Scholarships: A Return on Investment Analysis" for our complete findings.

