

QUARTERLY ECONOMIC REPORT

THE FISCAL RETURN ON HIGHER EDUCATION IN MAINE

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MAINE
DEVELOPMENT
FOUNDATION



Among its programs, the Maine Development Foundation (MDF) staffs the Maine Economic Growth Council, an independent body created in statute to develop a long-term vision for Maine's economic growth and develop a broad range of indicators to assess our progress toward that vision. The Growth Council issues the annual *Measures of Growth In Focus*, a reliable and trusted report measuring Maine's progress on 27 critical economic indicators. MDF has partnered with the University of Maine's School of Economics (SOE) on this quarterly newsletter, which explores these topics further and provides a timely look at the various elements of Maine's economy.

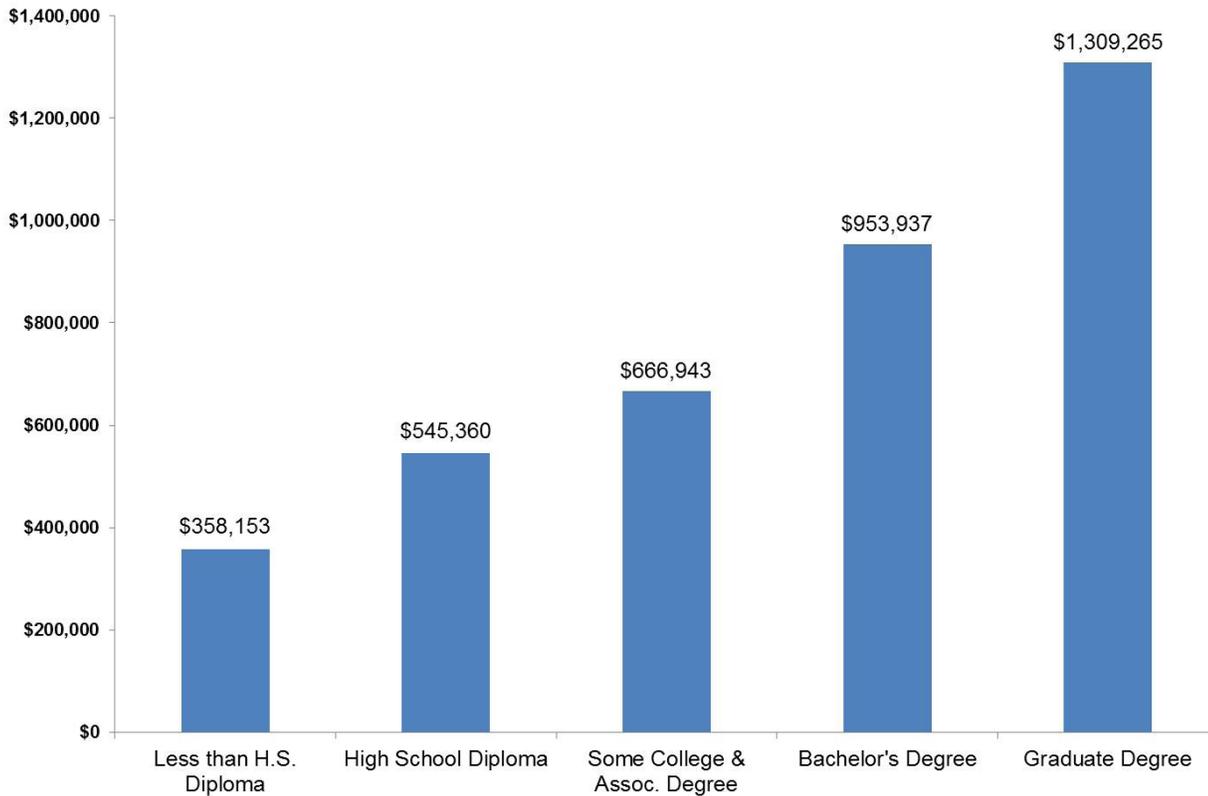
Education is critical to providing Maine's people with the knowledge and skills they need to fully engage in our economy and to ensuring that our employers can find the workers they need to succeed. It also increases the earning potential of Mainers, which has far-reaching benefits for individuals and the state.

The Fiscal Return to Education in Maine

There is a common belief that young adults cannot remain in Maine because there are no good jobs for college graduates here. This unfortunate notion is, however, clearly refuted by data on earnings. For example, the Maine Development Foundation's *Measures of Growth in Focus 2014* shows that, in 2012, median earnings in Maine increased with each level of educational attainment: from \$20,950 for those without a high school degree, to \$26,650 for those with a high school diploma, to \$30,400 for those with some college but less than a bachelor's degree, to \$40,450 for those with bachelor's degrees, and finally, to \$51,050 for those with graduate or professional degrees.

Figure 1 offers a slightly different perspective on this idea, showing conservative estimates of the present discounted value of lifetime earnings for Mainers with different education credentials. This chart is derived using data on Mainers in the 2010-12 March Social and Economic Supplement of the Current Population Survey, but converted to 2013 dollars using the Consumer Price Index. The estimates take into account the foregone earnings while in college. Dollar values are converted into present value at age 17 using a 3% real discount rate. The estimates err on the conservatively low side because they do not account for future growth in earnings.

Figure 1
Estimated Present Value of Lifetime Earnings in Maine



Rising college tuition and college student debt create challenges, but a college degree in Maine still offers a high return on investment. Over the course of their lifetimes, Mainers with bachelor’s degrees average 75% higher earnings than those with only a high school education. Average lifetime earnings of Mainers with bachelor’s degrees are nearly \$409,000 greater than for Mainers with a high school diploma but no college. This additional \$409,000 in average lifetime earnings is a conservatively low estimate, and it takes into account both the foregone earnings while in college and the time value of money (that is, future dollars are discounted).

A college degree also offers a high return on investment for Maine taxpayers. Because college graduates earn more on average, they also pay more taxes, and these additional tax revenues finance public services that benefit all Mainers. College graduates also reduce government spending in various ways. University of Maine School of Economics Professor Philip Trostel estimated the magnitude of these “fiscal externalities” in Maine in 2005 in a report published in 2007 by the New England Public Policy Center at the Federal Reserve Bank of Boston. Updates of these estimates are shown in Figures 2 through 4. The estimates are derived using data on Mainers in the 2010-12 March Social and Economic Supplement of the U.S. Census Bureau’s Current Population Survey, expressed in 2013 dollars, and discounted using a 3% real interest rate.

Figure 2
Estimated Present Value of Lifetime State and Local Taxes in Maine

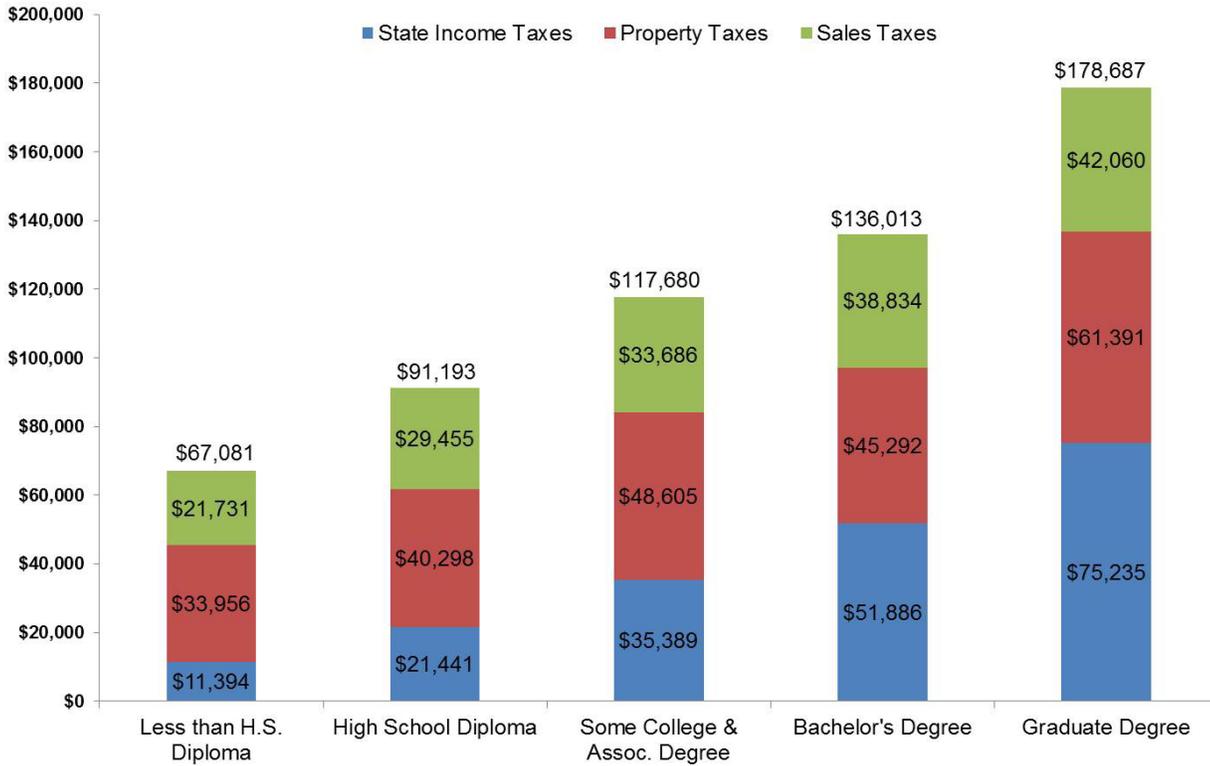


Figure 2 shows conservative estimates of the present discounted value of lifetime state and local taxes paid by Mainers with different education credentials. On average, Mainers with bachelor's degrees pay nearly \$45,000 more in state and local taxes in present value over their lifetimes than Mainers with high school diplomas but no college education.

Figure 3 reports conservative estimates of the present discounted value of lifetime state- and local-government spending on Mainers with different education credentials. Public spending on corrections, various forms of public assistance, Medicaid, unemployment benefits, workers' compensation, and uninsured health care decline with education attainment. In total, lifetime government spending on Mainers with bachelor's degrees is nearly \$30,000 less in present value than on Mainers with high school diplomas but no college. Moreover, the amounts shown in Figure 3 are costs to Maine taxpayers, not the costs reported in the state government budget. About 70% of Maine Medicaid spending (and about 68% of public assistance) is financed by the federal government. Figure 3 shows only the 30% of Medicaid (and the 32% of public assistance) financed by Maine taxpayers.

Figure 3
Estimated Present Value of Lifetime
State and Local Fiscal Costs in Maine

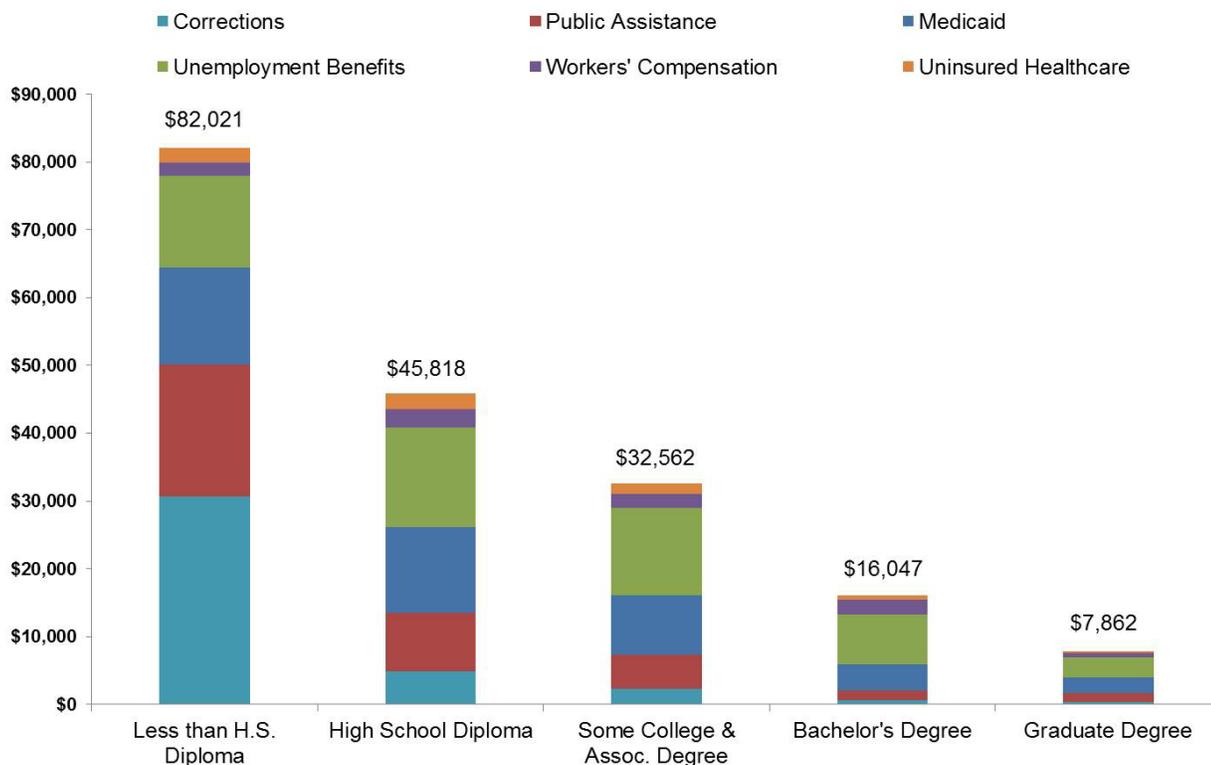
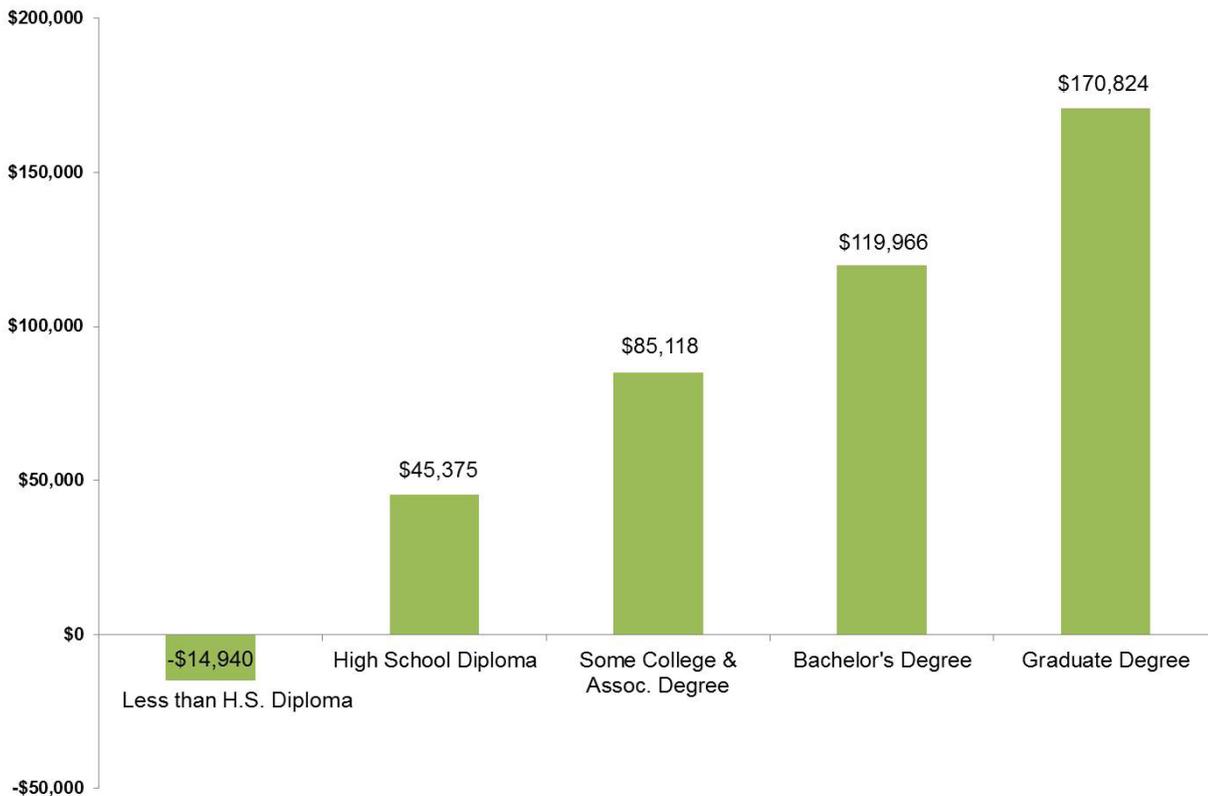


Figure 4 shows the present discounted value of the average lifetime net fiscal impact on Maine taxpayers for different education credentials. Conservatively, each bachelor’s degree in Maine creates a benefit to Maine taxpayers of about \$74,600 (in present value over an average lifetime). This is the difference between the average net fiscal impact of bachelor’s degree holders (\$120,000) and the average net impact of high school graduates (\$45,400). This estimate errs on the conservatively low side, it takes into account that earnings and tax revenues are lower while in college, and it accounts for the time value of money. While the costs to Maine taxpayers for public higher education are substantial, they are more than offset by the increased earnings realized by the individual and the positive fiscal effects that accrue to the state after college graduation.

Figure 4
Estimated Present Value of Lifetime Net Fiscal Effect in Maine



About the Maine Development Foundation (MDF)

The Maine Development Foundation is a private, non-partisan membership organization that drives sustainable, long-term economic growth for the State of Maine. MDF's strategic focus is a productive workforce. We believe that a productive worker is one that is educated, healthy, innovative, and engaged in their community and the economy.

MDF stimulates new ideas, develops leaders, and provides common ground for solving problems and advancing issues by:

- **Empowering** leaders
- **Strengthening** communities
- **Guiding** public policy with trusted economic research

Created in statute in 1978, MDF is a unique and trusted non-profit 501(c)(3) corporation. MDF works statewide across all sectors.

About the University of Maine's School of Economics (SOE)

The SOE serves as the University's hub of economics research and teaching while also embracing broader social science perspectives through its primary and affiliated faculty in law, social psychology and human-ecology. The faculty works closely with stakeholder groups to generate information and policy recommendations to help solve Maine and national needs. SOE offers both undergraduate and graduate programs (such as resource economics and policy, financial economics, and international economics) that train students to think analytically and critically about social, environmental, and economic issues, and lead to careers in economics, law, public service, business, and other applied policy fields. Explore SOE's website (<http://www.umaine.edu/soe/>) to learn more about their academic and research programs, and their faculty, staff, and students.

Acknowledgements

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