New Jersey
Education to Earnings
Data System

Benefits of Education in New Jersey

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Contents

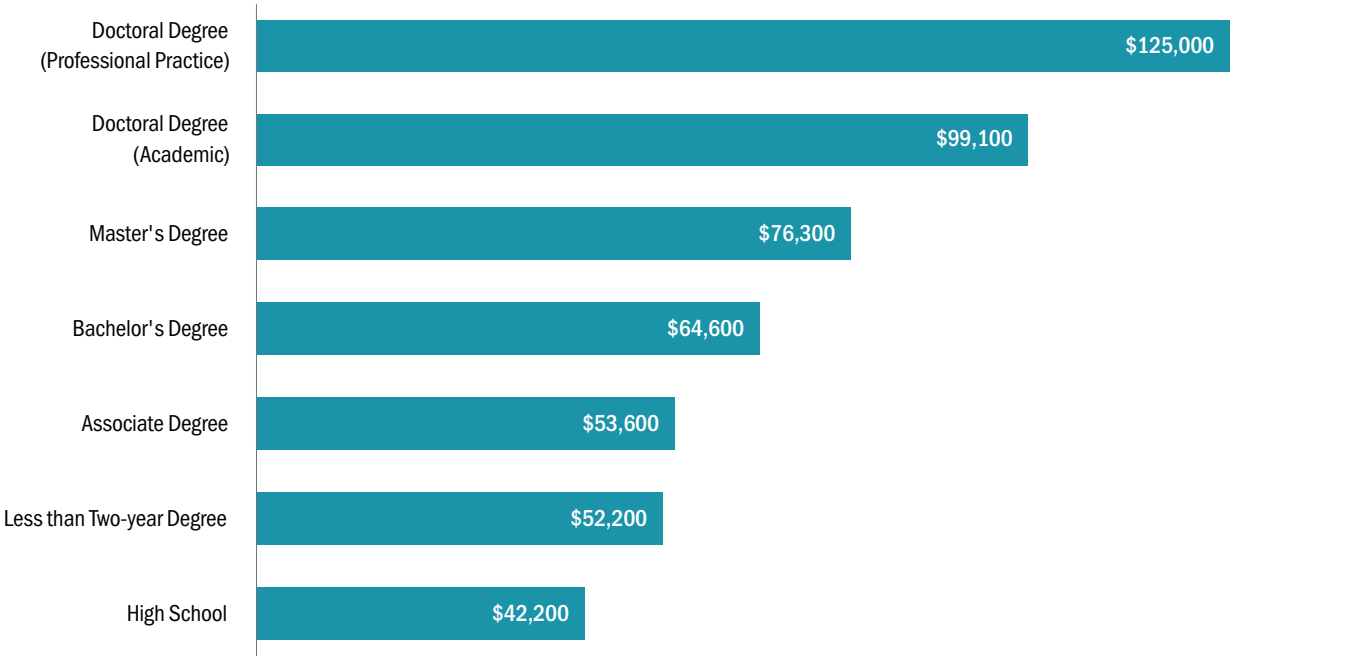
Executive Summary

Using data from New Jersey's state longitudinal data system, this report demonstrates that higher levels of education have a positive return on investment to the individual, the state, and society. Higher education not only helps individuals and families achieve upward social and economic mobility, but also results in higher tax revenues for state and federal governments. The purpose of this report is to examine the costs and benefits of pursuing postsecondary education from public institutions of higher education in New Jersey. These findings challenge the narrative in the news media that college may not be worth the investment (Long, 2015; Baumhardt & Julin, 2019; Hoffower, 2019). The researchers from the Heldrich Center for Workforce Development that prepared this study used descriptive statistics to highlight differences in earning outcomes by educational level using both the New Jersey Education to Earnings Data System (NJEEDS), and, when available, data from the U.S. Census Bureau and Bureau of Labor Statistics. The research draws from all 2012–13 higher education graduates from New Jersey public institutions and tracks their earnings seven years after completion. Unless noted, all calculations were inflated to reflect 2020 dollars. Key findings from this research are organized around the following seven metrics to capture the benefits of education to individuals, industries, and government:

1. Earnings by Educational Award Level

Median earnings increase consistently with higher levels of education from high school graduates to professional doctorate degree holders.

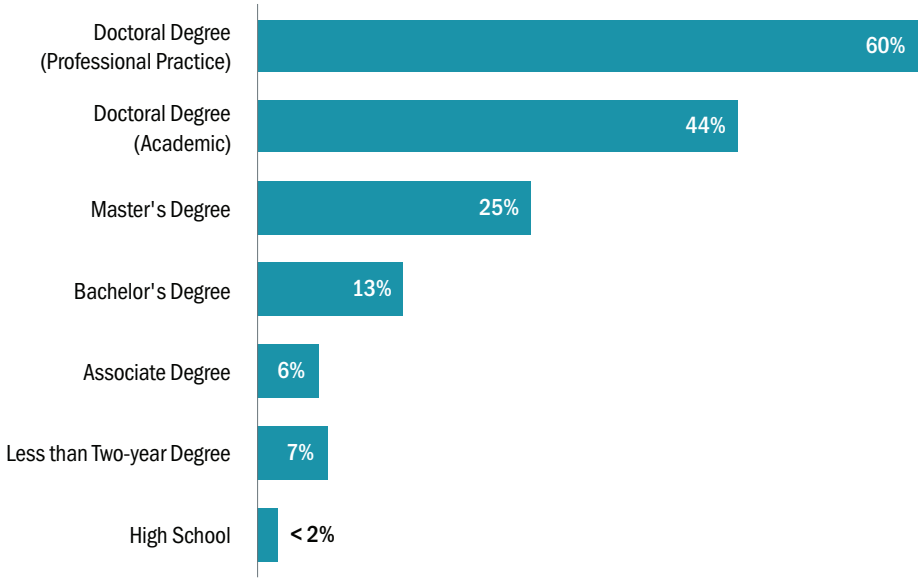
Figure E.1: 2012–13 New Jersey Graduates' Annualized Median Wages by Award Level in Constant 2020 Dollars in 2020



2. Distribution of Earnings within Levels of Education

Earning levels vary by different levels of education. More than half of the professional doctorate degree holders earned at least $100,000 annually in 2020, whereas the percentage of high school graduates earning at that level is less than 2%.

Figure E.2: Percentage of 2012–13 Graduates with More than $100,000 in Annual Earnings, by Award Level in 2020



3. Earnings and Tax Payments by Educational Award Level

Federal and state tax payments are higher for graduates with higher degree attainment, consistent with the earnings of the group.

Figure E.3: Total Estimated State Taxes Collected from 2012–13 New Jersey Graduates Between 2014 and 2043, by Award Level

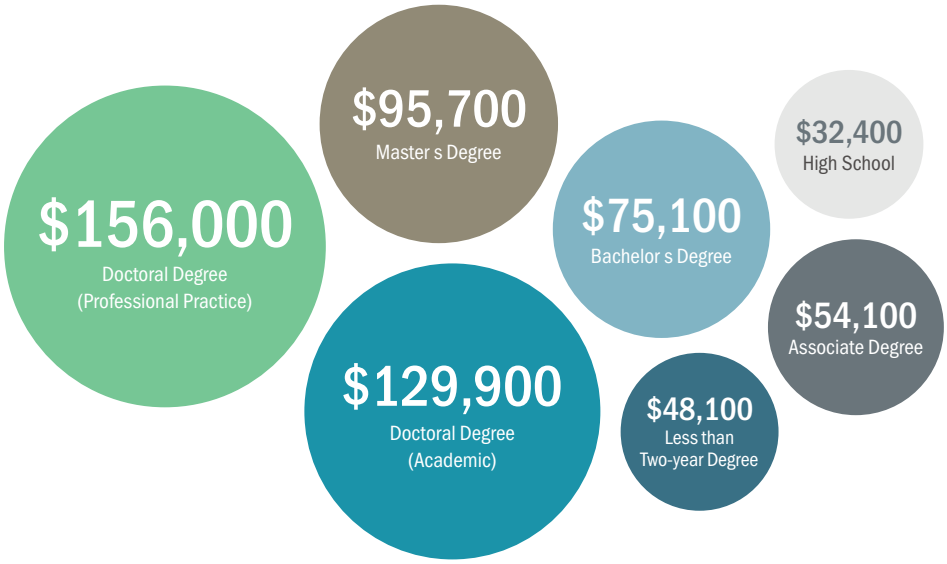
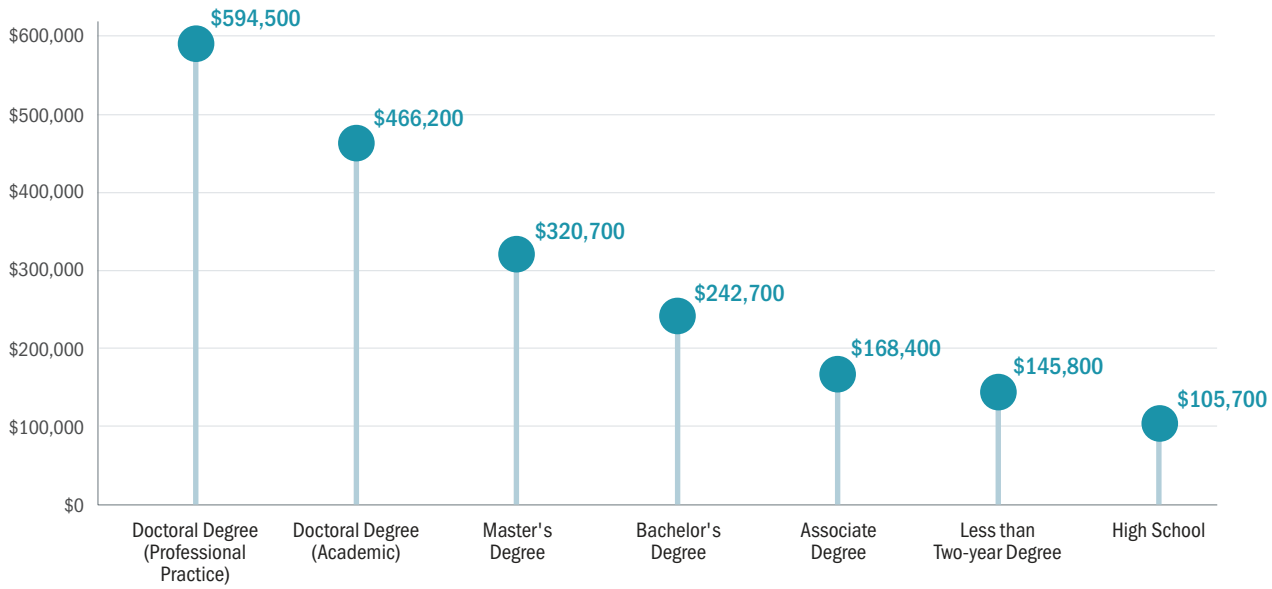


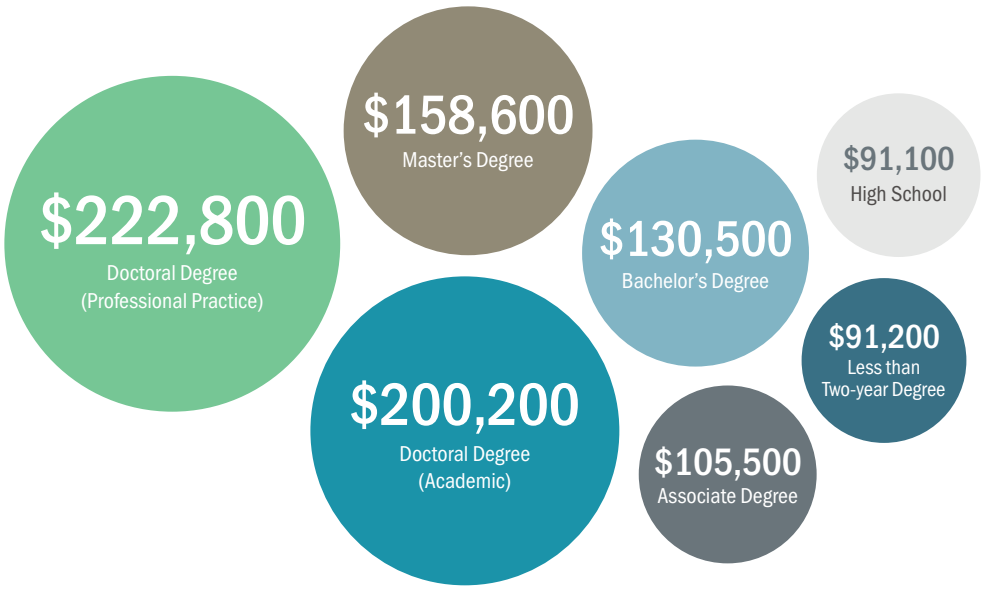
Figure E.4: Total Estimated Federal Taxes Collected from 2012–13 New Jersey Graduates Between 2014 and 2043, by Award Level



4. Projected Earnings Growth Over Time

Higher educational levels are projected to yield higher lifetime earnings, with professional and academic doctorate-level graduates expected to earn more than $200,000 per year near the end of their careers.

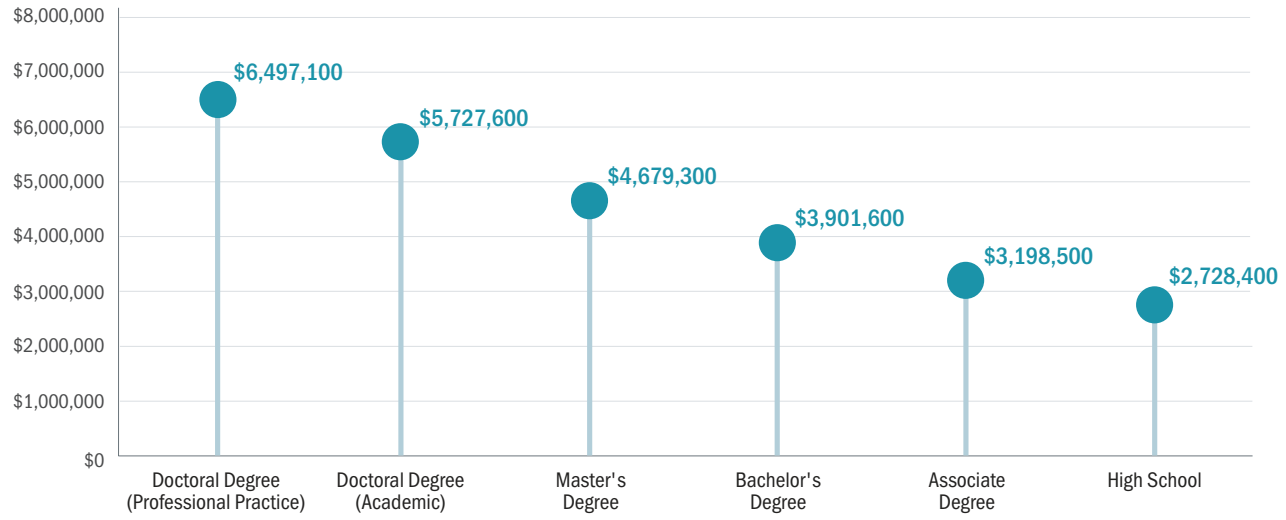
Figure E.5: Projected Annual Earnings of 2012–13 New Jersey Graduates after 30 Years



5. Earnings Premium Relative to Price of Education

All postsecondary levels of education yield positive lifetime earnings after adjusting for the cost of attending college and foregone wages.

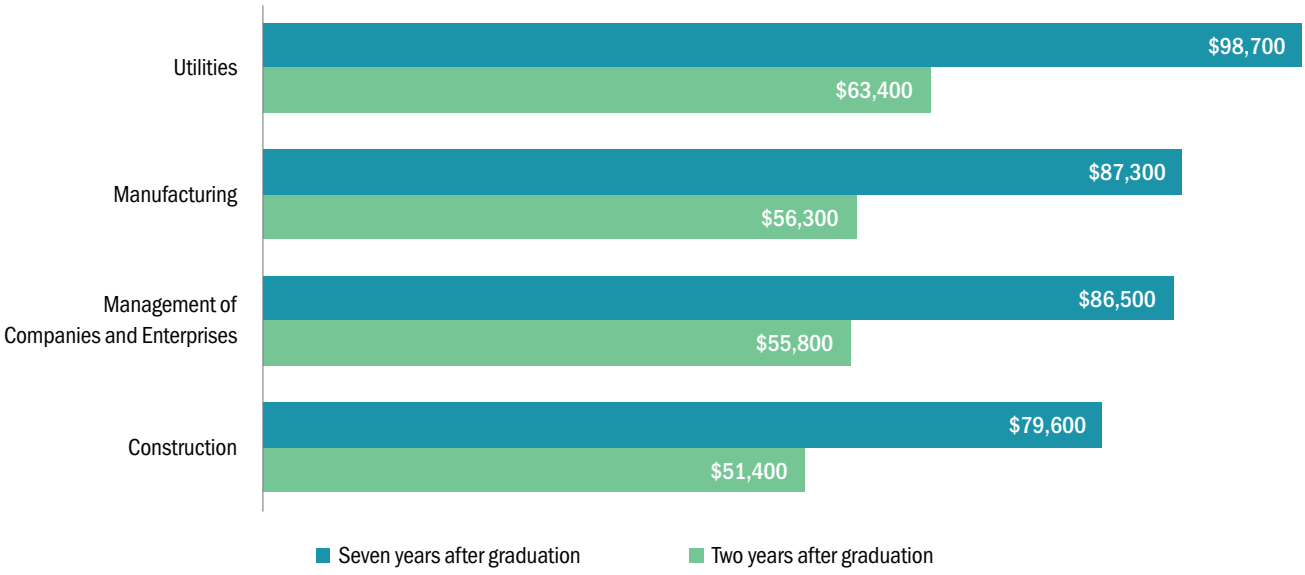
Figure E.6: Projected Lifetime Earnings Minus Cost of Education for 2012–13 New Jersey Graduates



6. Earnings by Type of Industry

Bachelor's graduates working in the utilities industry had the highest median wages after graduation.

Figure E.7: Median Earnings of 2012–13 Bachelor's Degree Graduates in Constant 2020 Dollars, by Type of Industry: Two and Seven Years Following Graduation



7. Distribution of Earnings by College Major

Engineering and computer science graduates earned the highest median wages in 2020.

Figure E.8: Comparison of Median Earnings of 2012–13 Bachelor's Degree Graduates Working Full Time, by College Major in Constant 2020 Dollars: 2015 vs. 2020

Introduction

Mainstream media has presented the notion that college may not be worth the investment (Long, 2015; Baumhardt & Julin, 2019; Hoffower, 2019; Farrington, 2022; Ruppel Shell, 2018), but national studies have consistently shown that higher levels of education are related to higher pay, upward mobility, improved health outcomes, and greater civic involvement (Ma, Pender, & Welch, 2019; Perna, 2005). For society and for state governments, these benefits can include citizens that are more likely to have health insurance, retirement benefits, access to preventive health care, healthy children, lower incarceration rates, and are less likely to require access to social and welfare programs (Cunningham, 2006).

The Office of the Secretary of Higher Education in New Jersey has also established statewide postsecondary attainment goals based on the current financial value of earning a college degree and projections that it will continue to rise.[1] To implement the state plan for higher education, New Jersey has created several initiatives to improve higher education accessibility, reduce college costs, and increase attainment in the state. However, this effort has been challenged in recent years due to the increasing costs of going to college (Long, 2015; Baumhardt & Julin, 2019; Hoffower, 2019).

The purpose of this report is to examine New Jersey residents' costs and benefits of pursuing postsecondary education. Researchers at the Heldrich Center for Workforce Development prepared this report using the New Jersey Education to Earnings Data System (NJEEDS) and additional public sources. This study sought to document the short- and long-term outcomes of education for New Jersey residents to determine if the benefits outweigh the costs to both the individual student and the state as a whole.

The following questions serve as a guide for this analysis:

1. To what extent is an individual's level of education in New Jersey related to individual economic benefits?
2. To what extent is an individual's level of education in New Jersey related to economic benefits to the state?

The analysis for this study used descriptive statistics to demonstrate differences in outcomes by educational level using both NJEEDS, and when available, data from the U.S. Census Bureau and Bureau of Labor Statistics. The report is organized around the following seven themes:

1. Earnings by Educational Award Level
2. Distribution of Earnings within Levels of Education
3. Earnings and Tax Payments by Educational Award Level
4. Projected Earnings Growth Over Time
5. Earnings Premium Relative to Price of Education
6. Earnings by Type of Industry
7. Distribution of Earnings by College Major

[1] https://www.state.nj.us/highereducation/documents/pdf/StateEducationplan.pdf

1. Earnings by Educational Award Level

Median earnings are higher for those with higher educational attainment:

- The majority of 2012–13 New Jersey postsecondary graduates hold a Bachelor's degree (48%) followed by those with an associate degree (29%). Graduate degrees represent 21% of the awards (Figure 1.1).
- Bachelor's degree graduates earned $22,400 more per year than those completing only a high school diploma (Figure 1.2).
- Median wages increase consistently with educational attainment level. Median wages for Bachelor's degree holders are 53% higher than high school graduates. Academic doctoral degree holders have wages at least 53% higher than those of graduates with only Bachelor's degrees (Figure 1.2).
- Professional practice doctoral degree holders had the highest median wage in 2020 (Figure 1.2).

Figure 1.1: Percentage of Awards Conferred in 2012–13 Academic Year

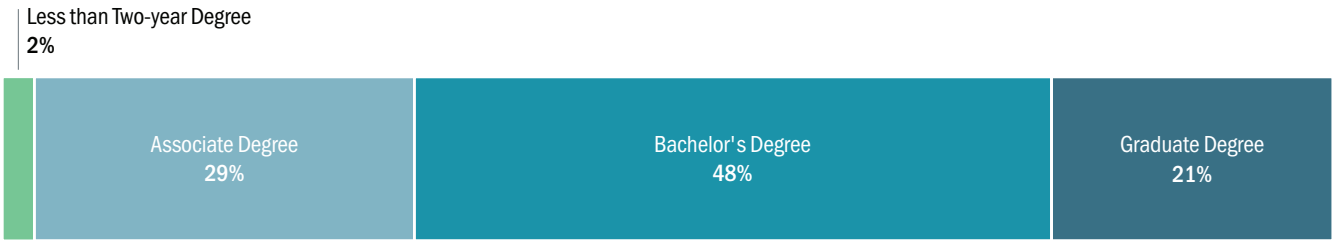
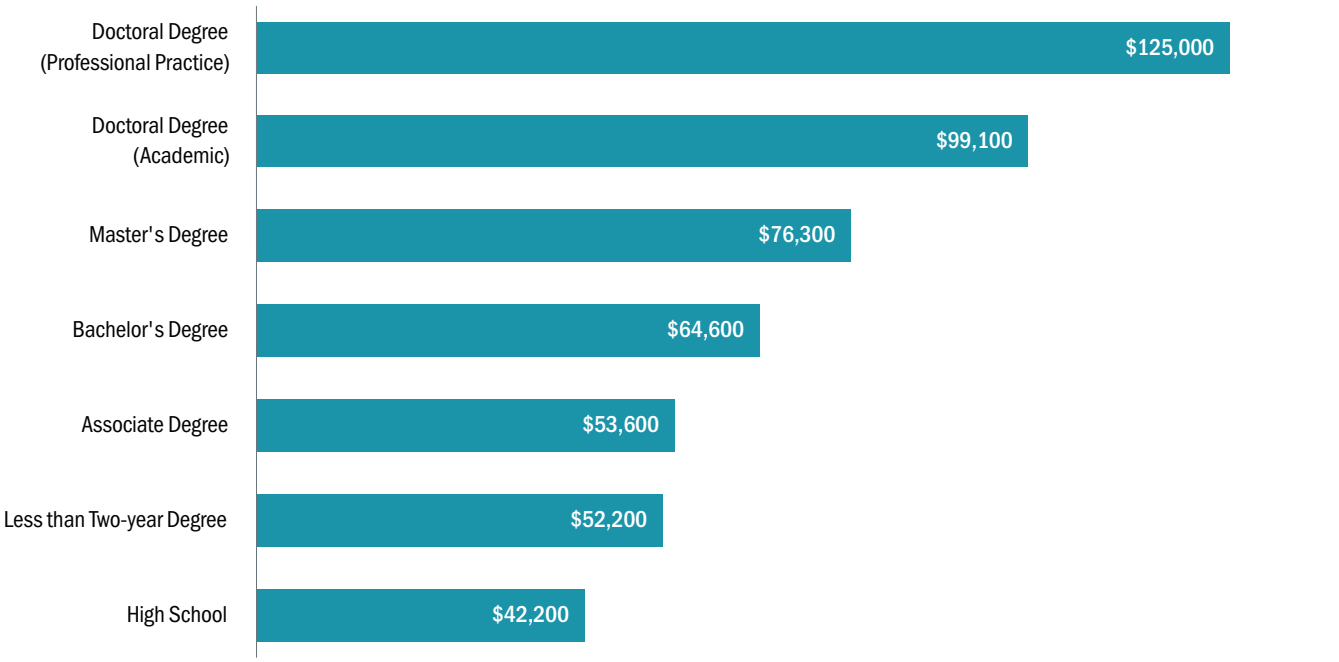


Figure 1.2: 2012–13 New Jersey Graduates' Annualized Median Wages by Award Level in Constant 2020 Dollars in 2020

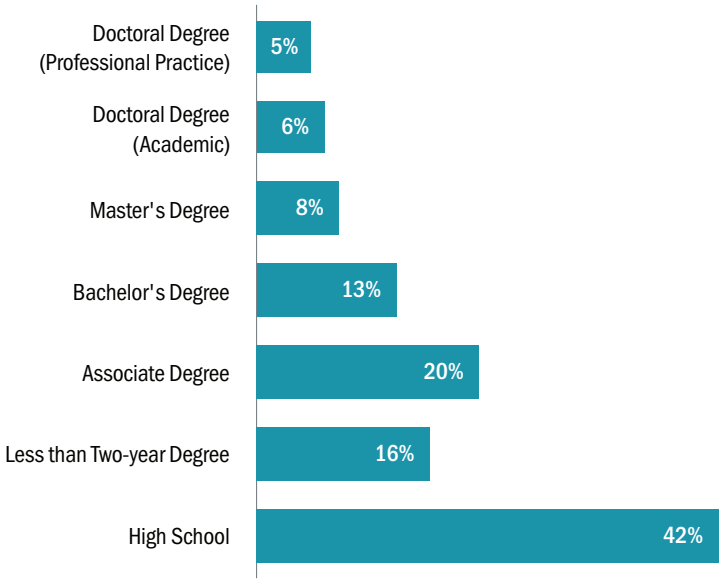


2. Distribution of Earnings within Levels of Education

Median earnings are higher for graduates with higher levels of education:

- Consistent with other literature, the higher the credential earned by New Jersey graduates, the higher the salary earned.[2] As shown in Figure 2.1, seven years after graduation, 42% of high school graduates that had jobs in New Jersey earned less than $20,000 a year compared to 20% of associate degree holders, 13% of Bachelor's degree holders, and 5% of those earning professional doctorate degrees.
- Conversely, less than 2% of high school graduates, 6% of associate degree graduates, and 13% of Bachelor's degree graduates working in New Jersey earned more than $100,000 a year, compared to 60% of those with professional doctorate degrees (see Figure 2.2).
- A higher percentage of those with lower educational attainment have wages below the full-time minimum wage in New Jersey compared to those with higher educational levels. As shown in Figure 2.3, 46% of high school graduates had earnings less than the full-time minimum wage, compared to 14% of those with Bachelor's degrees.
- In general, higher educational levels are associated with higher earnings (see Figure 2.4).

Figure 2.1: Percentage of 2012–13 Graduates with Less than $20,000 in Annual Earnings, by Award Level in 2020



[2] https://www.state.nj.us/highereducation/documents/pdf/StateEducationplan.pdf

Figure 2.2: Percentage of 2012–13 Graduates with More than $100,000 in Annual Earnings, by Award Level in 2020

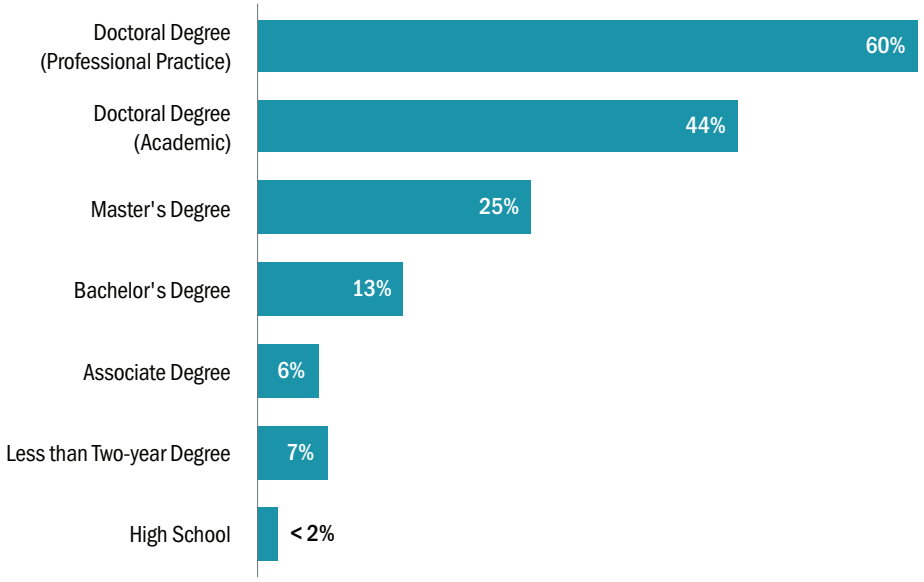


Figure 2.3: Percentage of 2012–13 Graduates with Earnings Below Full-time Minimum Wage in New Jersey, by Award Level in 2020

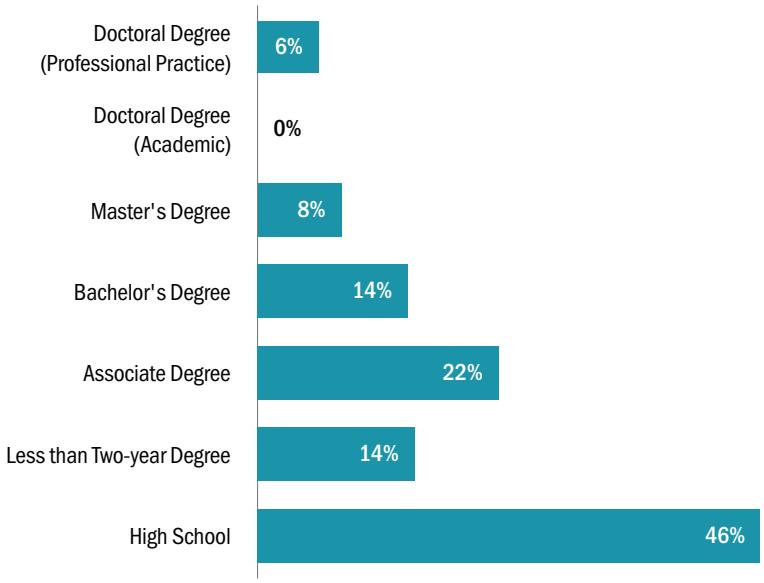
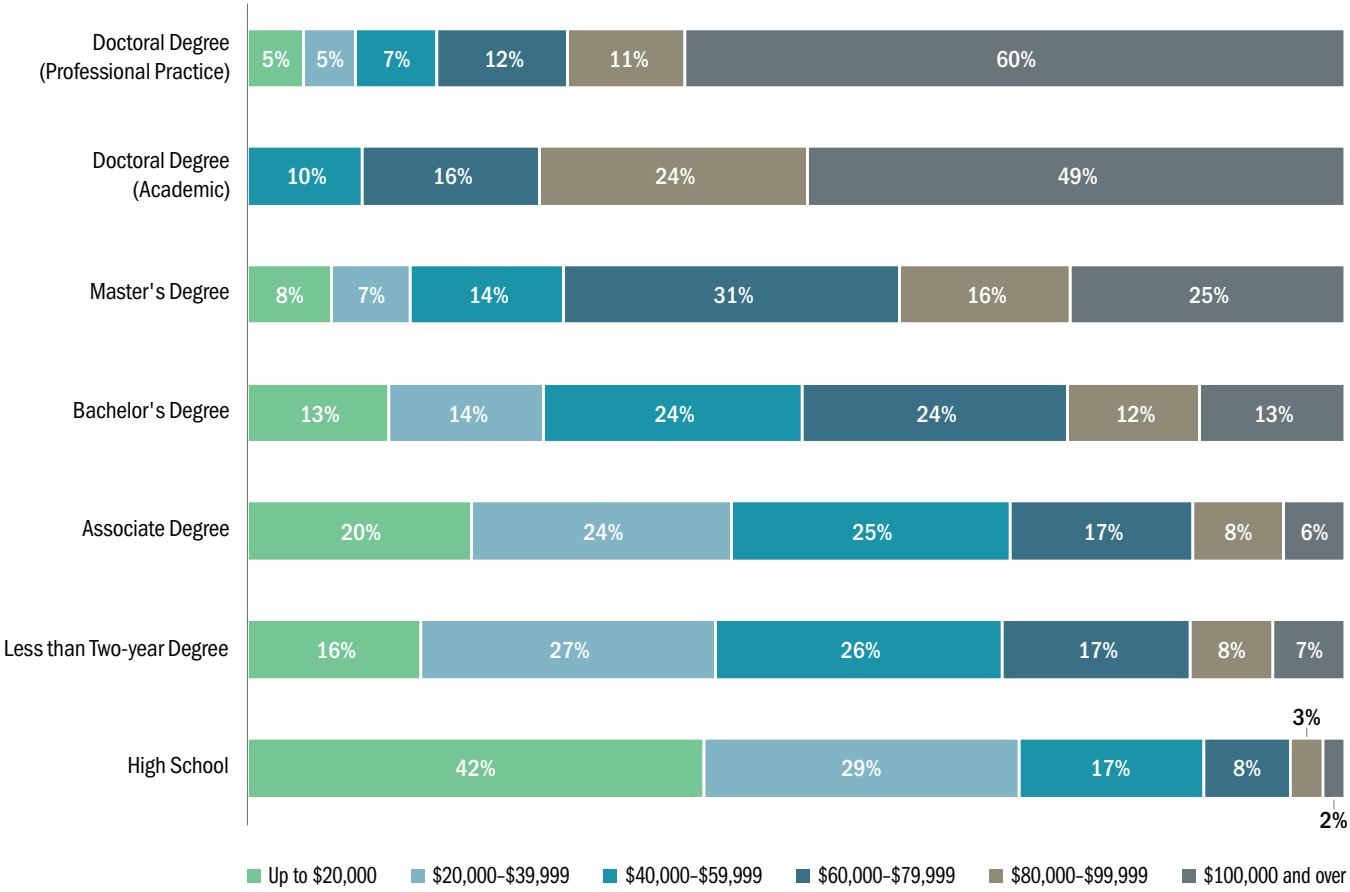


Figure 2.4: Percentage of 2012–13 Graduates within Annual Earnings Bands, by Award Level in 2020



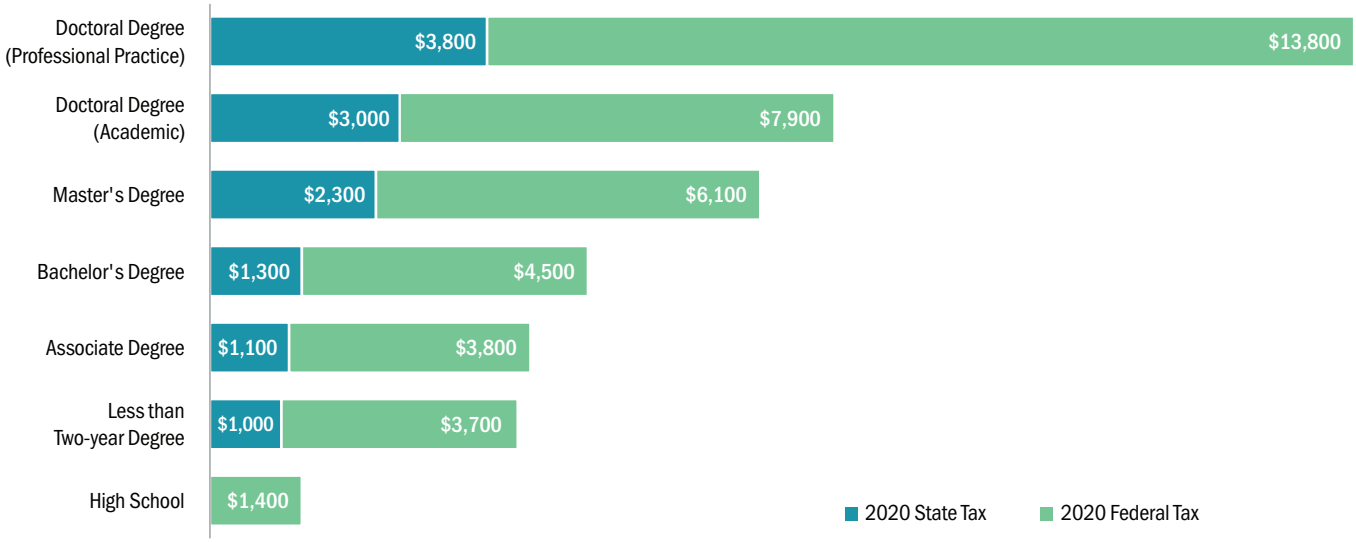
Note: Eleven percent of doctoral degree (academic) graduates were suppressed from the estimates because they did not meet NJEEDS reporting data standards (see https://njeeds.org/wp-content/uploads/2020/04/Acceptable_Use_Guidelines_Revised_2019.pdf). Percentages may not sum to 100% due to rounding.

3. Earnings and Tax Payments by Educational Award Level

Federal and state tax payments are higher for graduates with higher degree attainment:

- Estimated state and federal taxes are higher for doctoral degree holders compared to individuals with lower educational levels (Figure 3.1).
- State and federal tax payments for Bachelor's degree graduates are estimated to be $4,400 higher than those with only high school diplomas (Figure 3.1).
- Federal taxes for individuals with professional practice doctoral degrees are estimated at $13,800 in 2020, compared to $1,400 for high school graduates (Figure 3.1).
- All taxes collected for individuals with professional practice doctoral degrees are more than 3 times higher than those who earned an associate degree and 12 times higher than those with only a high school diploma (Figure 3.1).
- Federal tax collection is higher than that of the state in 2020 for each award type due to higher tax rates for each income level (Figure 3.1).

Figure 3.1: 2012–13 New Jersey Graduates' Estimated Taxes by Award Level in Constant 2020 Dollars in 2020



Over time, differences in tax revenues by attainment level increase:

- Total estimated state taxes collected over 30 years from graduates with professional doctoral degrees ($156,000 per graduate) are approximately two times higher than those with Bachelor's degrees ($75,100 per graduate), and just under five times higher than high school graduates ($32,400 per graduate) (Figure 3.2).
- Similarly, total estimated federal taxes collected over 30 years from graduates with professional doctoral degrees are also approximately two times higher than those with Bachelor's degrees ($594,500 versus $242,700 per graduate) (Figure 3.3). High school graduates contributed nearly six times less than those with doctoral degrees and two times less than Bachelor's degree graduates.

Figure 3.2: Total Estimated State Taxes Collected from 2012–13 New Jersey Graduates Between 2014 and 2043, by Award Level

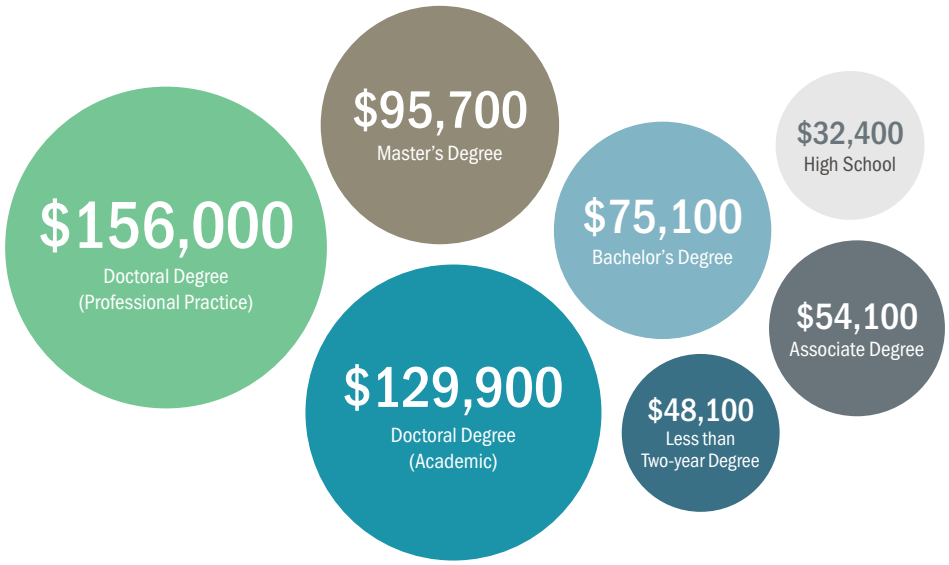
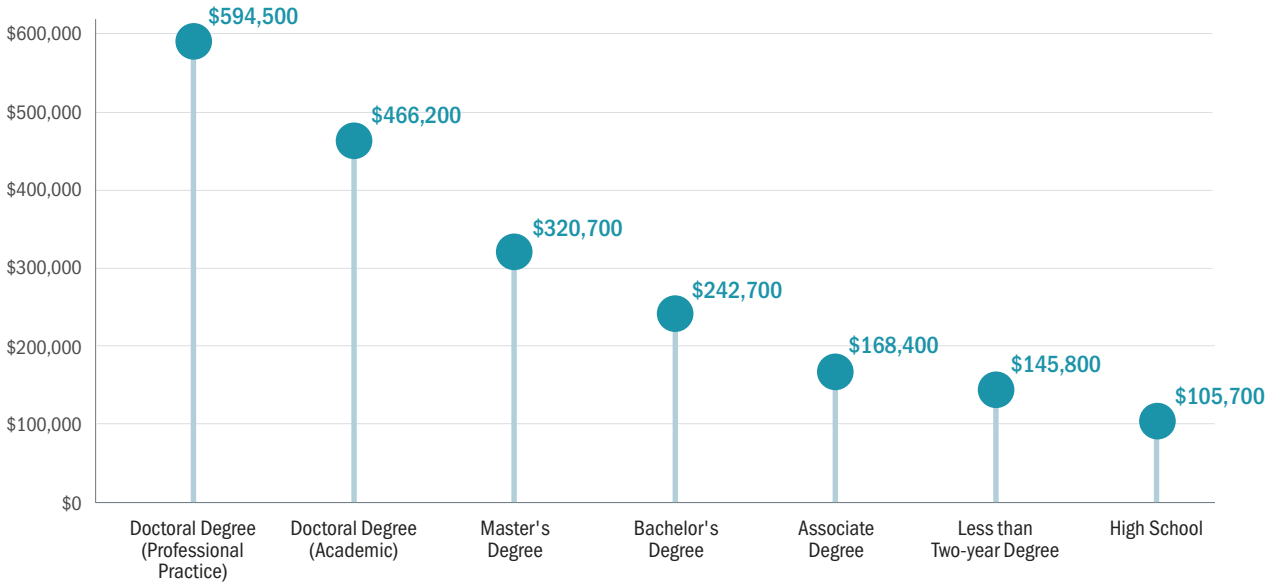


Figure 3.3: Total Estimated Federal Taxes Collected from 2012–13 New Jersey Graduates Between 2014 and 2043, by Award Level



4. Projected Earnings Growth Over Time

The research team developed growth projections of wages as the graduate ages starting with the baseline wage using data available from NJEEDS via a linear regression model of postsecondary graduates:

- After 30 years, high school graduates have the lowest median projected wages with $91,100. The estimated amount is lower than Bachelor's degree recipients at $130,500. Wages of Bachelor's graduates are projected to be $39,400 higher per year compared to high school graduates after 30 years. (See Figure 4.1.)
- Higher degree levels yield higher wages over time. Degree holders have higher median wages after 30 years compared to high school graduates and those with less than a two-year degree. The median salaries for degree holders after 30 years were all over $100,000 (in current dollars) compared to those non-degree holders that were all below $100,000 (Figure 4.1).
- Doctoral degree recipients are projected to have the highest wages after 30 years, at $200,200 for academic doctorates and $222,800 for professional degrees (Figure 4.1).

Figure 4.1: Projected Full-time Wages for 2012–13 Graduates, by Degree Level and Years from Graduation

	1 year after graduation	10 years after graduation	20 years after graduation	30 years after graduation
Doctoral Degree (Professional Practice)	$46,300	$134,800	$173,300	$222,800
Doctoral Degree (Academic)	$72,300	$108,600	$147,500	$200,200
Master's Degree	$61,000	$83,900	$115,400	$158,600
Bachelor's Degree	$38,500	$70,900	$96,200	$130,500
Associate Degree	$28,800	$58,600	$78,600	$105,500
Less than Two-year Degree	$31,400	$56,200	$71,600	$91,200
High School	$25,100	$38,700	$59,400	$91,100

5. Earnings Premium Relative to Price of Education

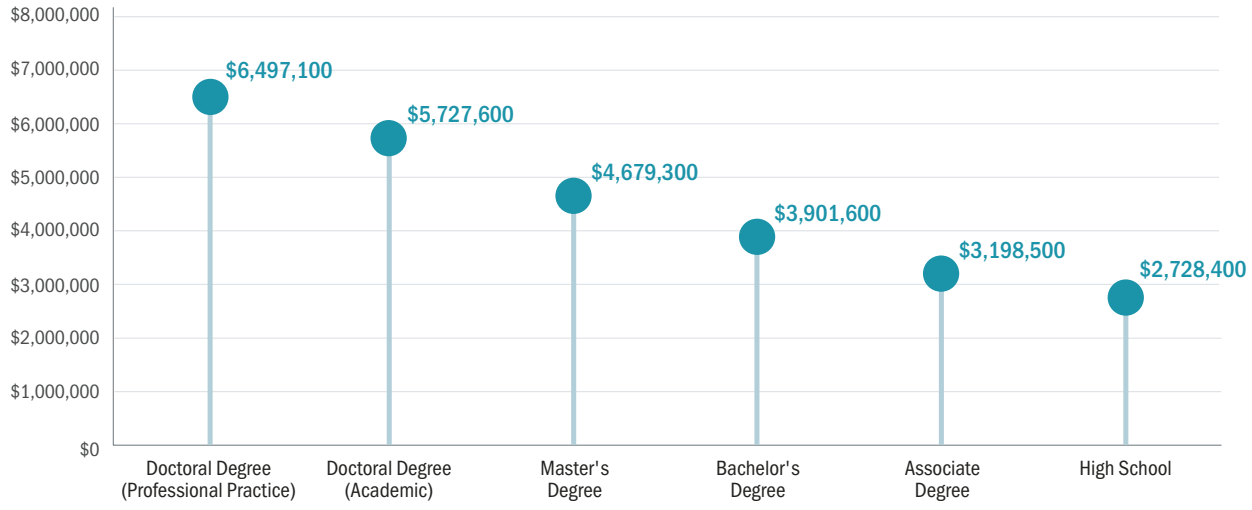
This section estimates the total economic value of additional education minus costs (both actual costs and foregone wages or the high school wage one would have earned by not going to college):

- In general, higher levels of education yield higher lifetime earnings.
- The overall cost of attending college, taking into account foregone wages and the total cost of attendance, ranged from $121,600 for associate degrees, to $214,300 for Bachelor's degrees, and up to $639,300 for doctorate-level degrees. (See Figure 5.1.)
- The lifetime earnings (defined as 40 years of work post-graduation) for high school graduates is $2.7 million, which is lower than all other degree levels. Associate degree holders earn $3.3 million and Bachelor's degree holders earn $4.1 million (Figure 5.1). Doctorate-level degree holders earn more than $5.7 million over their lifetime, minus the cost of education (Figure 5.2).
- All levels of higher education yield net positive lifetime earnings when taking into account the overall costs. After accounting for costs, college graduates still earn more over their lifetime, with associate degree recipients earning $470,100 more than high school graduates, all the way up to professional doctorate degree holders earning $3.8 million more than high school graduates.
- On average, it takes around 8 to 10 years to cumulatively earn enough money to justify the cost of additional postsecondary education (Figure 5.1).

Figure 5.1: Estimated Foregone Wages to Attend College, the Total Cost of Education, Lifetime Wages, Net Wages after Accounting for Total Costs, and Years Until Graduate's Net Income is Higher than High School Graduates for 2012–13 Public New Jersey Graduates: 2014–2053

	Costs			Income		
	Foregone Wages	Total Cost of Attendance	Total Cost	Lifetime Earnings	Net Lifetime Earnings Above H.S.	Break-even Year
High School	–	–	–	$2,728,400	–	–
Associate's Degree	$49,200	$72,400	$121,600	$3,320,100	$470,100	9
Bachelor's Degree	$106,500	$107,800	$214,300	$4,115,900	$1,173,100	8
Master's Degree	$170,700	$161,700	$332,300	$5,011,600	$1,950,900	8
Doctorate - Academic	$316,000	$323,300	$639,300	$6,366,900	$2,999,200	10
Doctorate - Professional	$316,000	$323,300	$639,300	$7,136,400	$3,768,700	9

Figure 5.2: Projected Lifetime Earnings Minus Cost of Education for 2012–13 New Jersey Graduates



6. Earnings by Type of Industry

Median earnings for Bachelor's degree graduates vary by industry type:

- Graduates going into the utilities, manufacturing, or the management of companies and enterprises industries make the highest earnings, with median earnings in 2020 of $98,700, $87,300, and $86,500, respectively. Those working in accommodation and food services or retail trade made the least, with median earnings of $51,500 and $51,900, respectively (see Figure 6.1). Between 2015 and 2020, the median earnings increased across all industries as shown in Figure 6.1.
- Individuals who worked in the utilities industry had the highest median earnings both two years after graduation and seven years following graduation ($63,400 in 2015 and $98,700 in 2020). Individuals who worked in accommodation and food services had the lowest median earnings ($30,900 in 2015 and $51,500 in 2020) (see Figure 6.1).
- Over the span of five years (2015 to 2020), accommodation and food services experienced the highest percentage growth rate (67%) in median earnings (see Figure 6.2). In that same time span, educational services had the lowest percent change (18%) compared to other industries with at least 48% or more growth.

Figure 6.1: Median Earnings of 2012–13 Bachelor's Degree Graduates in Constant 2020 Dollars, by Type of Industry: Two and Seven Years Following Graduation

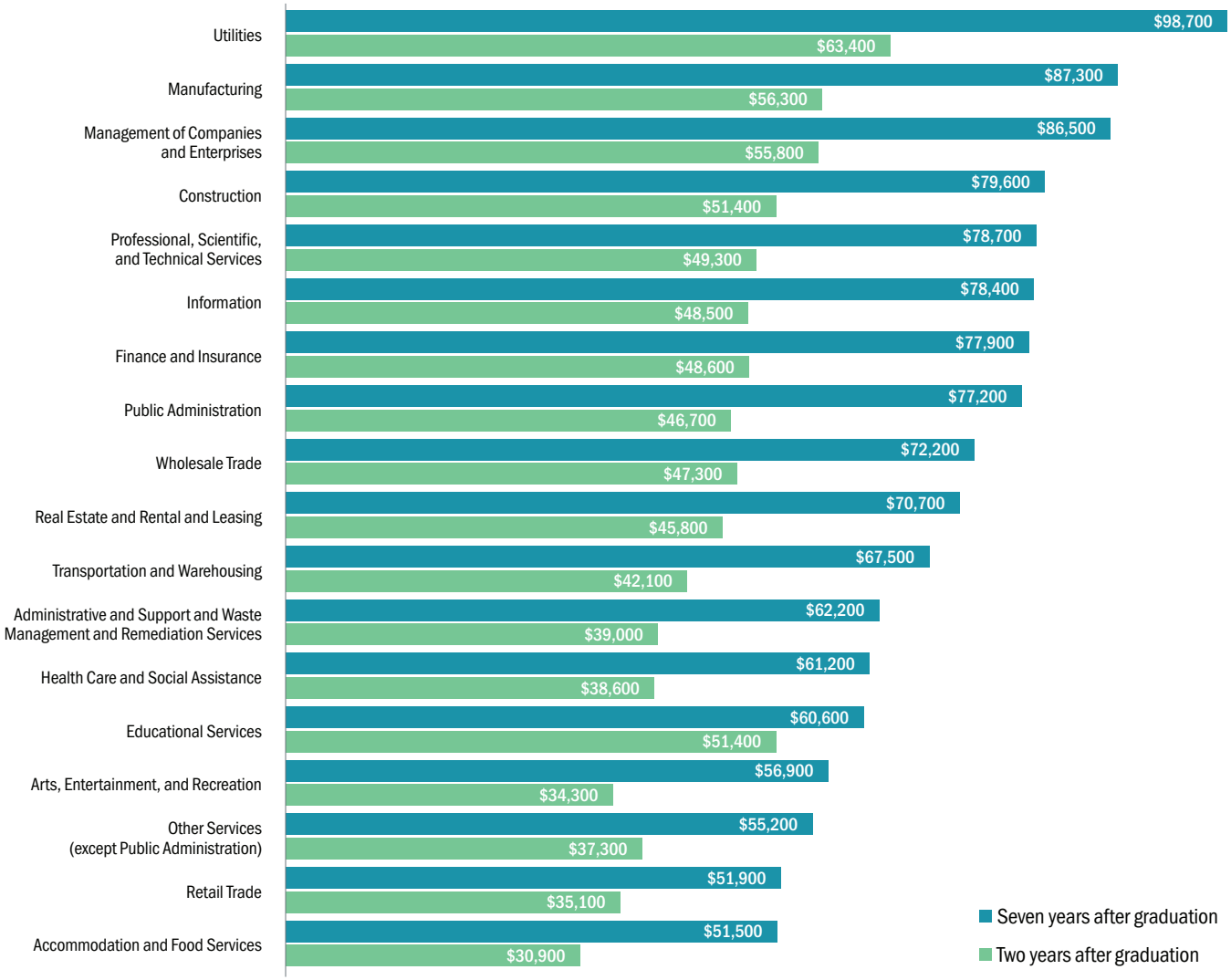
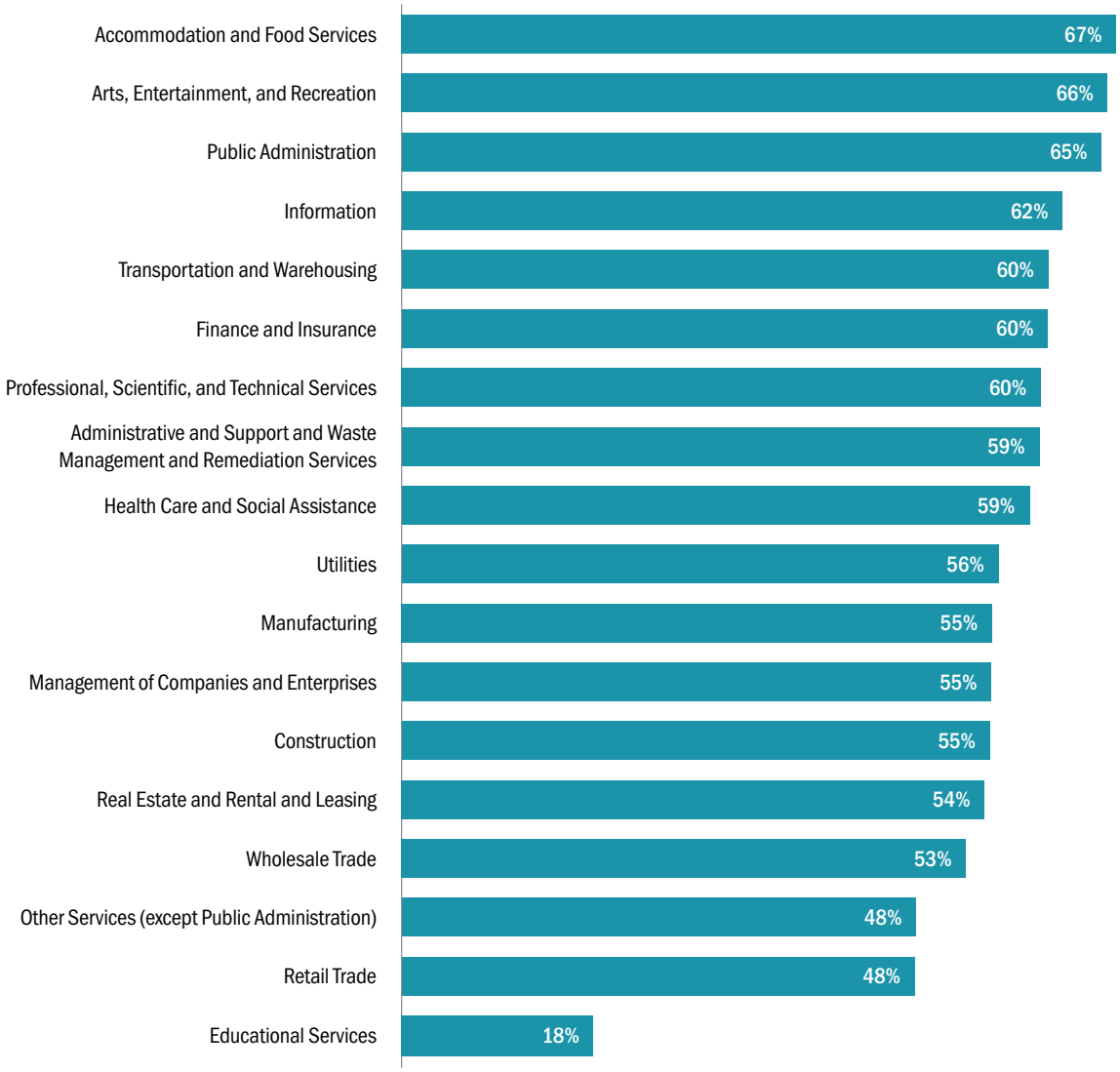


Figure 6.2: Percentage Increase of the Median Earnings of 2012–13 Bachelor's Degree Graduates, by Type of Industry: 2015–2020



7. Distribution of Earnings by College Major

Median earnings vary depending on a graduate's choice of major:

- Median wages earned by major presented in Figure 7.1 are all above the 2020 full-time minimum wage in New Jersey of $22,880 per year or the median full-time wage of $34,000 earned by workers with only a high school diploma.
- Graduates who completed majors in engineering, computer and information sciences, and engineering technologies earned the highest wages, all above $80,000 in median earnings in 2020. Engineering graduates earned the highest ($95,300) followed by computer and information sciences and support services ($91,300) (see Figure 7.1).
- The lowest wages are earned by those with degrees in communications technologies ($45,900) and public administration and social service professions ($51,800) (Figure 7.1). These median earnings are more than double the full-time minimum wage in New Jersey.
- As illustrated in Figure 7.2, individuals in philosophy and religious studies experienced the highest percentage growth rate (81%) from 2015 to 2020, but still had the fifth lowest wage in 2020 (Figure 7.1).
- Conversely, graduates who completed education majors experienced the lowest percentage growth rate (13%) from 2015 to 2020 (Figure 7.2). Median earnings of education graduates increased from $54,700 in 2015 to $61,900 in 2020 (Figure 7.1). Despite the low growth, starting education wages were higher. Education graduates had the seventh highest starting salary in 2015.

Figure 7.1: Comparison of Median Earnings of 2012–13 Bachelor's Degree Graduates Working Full Time, by College Major in Constant 2020 Dollars: 2015 vs. 2020

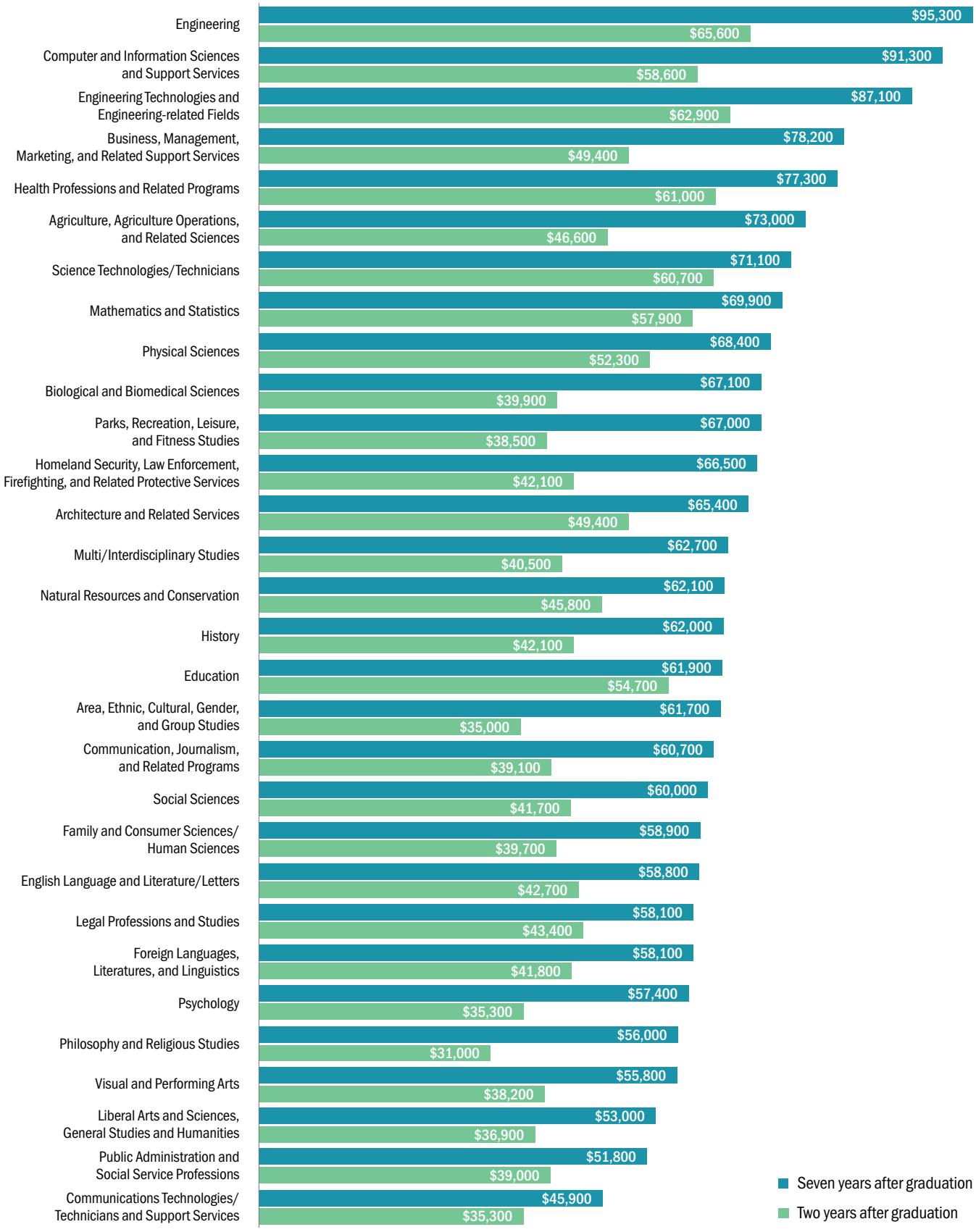


Figure 7.2: Percentage Increase of the Median Earnings of 2012–13 Bachelor's Degree Graduates Working Full Time, by College Major: 2015–2020

Methodology

The analysis for this report uses descriptive statistics to demonstrate differences in outcomes by educational level using both NJEEDS, and when available, data from other external federal and state data sources. The report focuses on seven themes, which each yield one to four visualizations plus a brief narrative to provide context. They include:

- Earnings by Educational Award Level
- Distribution of Earnings within Levels of Education
- Earnings and Tax Payments by Educational Award Level
- Projected Earnings Growth Over Time
- Earnings Premium Relative to Price of Education
- Earnings by Type of Industry
- Distribution of Earnings by College Major

Population

The analyses presented in this report indicate results based on data on all students completing their education in the 2012–13 academic year at New Jersey public institutions of higher education reporting data to the New Jersey Office of the Secretary of Higher Education. The 2012–13 academic year was used because it is the earliest data available for high school graduates and it left sufficient time to examine workforce outcomes seven years after graduation. New Jersey workers who earned their postsecondary degrees outside of New Jersey or from independent institutions in the state are not included in the analyses. Independent colleges were excluded due to inconsistent reporting from those institutions during the 2012–13 academic year. New Jersey workers who earned non-credit-bearing credentials, such as those offered through employers or workforce training, are also not included in the analyses.

To allow for comparisons to high school completers (who are age censored and are typically between the ages of 17 and 19), undergraduate credentials were examined for completers who were age 25 and younger and graduate credentials were examined for completers who were age 35 and younger. This should allow for comparable time in the workforce after graduation across educational levels. The high school graduate cohort was identified by removing all graduates attending a New Jersey postsecondary institution and those with a wage in 2014 or 2015 since researchers are unable to determine if high school graduates after that period earned a postsecondary credential from out of state.

Data Sources and Methodology

The proposed populations, measures, and methodological notes for each theme are listed below. Unless noted, all calculations were inflation adjusted to reflect 2020 dollars.

1. Earnings by Educational Award Level

To examine earnings by educational award level, researchers used data from NJEEDS' high school graduates (postsecondary extract), higher education (Student Unit Record, or SURE) completions, and Unemployment Insurance (UI) wages tables.

2. Distribution of Earnings within Levels of Education

This theme uses data from NJEEDS' high school graduates (postsecondary extract), higher education (SURE) completions, and UI wages tables. The minimum wage in 2020 was $11 per hour or $22,880 per year. Note that this is not equivalent to a living wage in New Jersey.

3. Earnings and Tax Payments by Educational Award Level

The earnings and tax payments visualizations were derived from data from NJEEDS' high school graduates (postsecondary extract), higher education (SURE) completions, and UI wages tables. Tax revenues are estimated by using the average tax rate compared to adjusted gross income for federal taxes and total income for state taxes. These rates reflect the average of filing status (single, married, head of household), deductions taken, and special tax situations. Tables were estimated by the authors using state and federal statistics of income to estimate the effective New Jersey state and federal tax rate (and amount) for the income range for the graduate. The rates used are presented in Tables M.1 and M.2.

Table M.1: Federal Tax Year: 2019

Income Range	Rate
$1 under $5,000	0%
$5,000 under $10,000	0%
$10,000 under $15,000	0%
$15,000 under $20,000	1%
$20,000 under $25,000	2%
$25,000 under $30,000	3%
$30,000 under $40,000	4%
$40,000 under $50,000	5%
$50,000 under $75,000	7%
$75,000 under $100,000	8%
$100,000 under $200,000	11%
$200,000 under $500,000	17%
$500,000 under $1,000,000	23%
$1,000,000 under $1,500,000	26%
$1,500,000 under $2,000,000	27%
$2,000,000 under $5,000,000	28%
$5,000,000 under $10,000,000	27%
$10,000,000 or more	25%

Table M.2: State Tax Year: 2018

Income Range	Rate
$0 under $5,000	0%
$5,000 under $10,000	0%
$10,000 under $15,000	0%
$15,000 under $20,000	0%
$20,000 under $25,000	0%
$25,000 under $30,000	0%
$30,000 under $35,000	0%
$35,000 under $40,000	1%
$40,000 under $50,000	1%
$50,000 under $70,000	2%
$70,000 under $75,000	2%
$75,000 under $80,000	2%
$80,000 under $100,000	2%
$100,000 under $150,000	2%
$150,000 under $200,000	3%
$200,000 under $500,000	4%
$500,000 under $1,000,000	4%
$1,000,000 under $1,500,000	5%
$1,500,000 under $2,000,000	6%
$2,000,000 under $5,000,000	6%
$5,000,000 under $10,000,000	6%
At least $10,000,000	6%

4. Projected Earnings Growth Over Time

NJEEDS researchers used a linear regression model to project wages into the future for the lifetime earnings, projected earnings, and estimated taxes tables. The source data from the model used graduates from the 1989–90 academic year and extracted their lifetime earnings from UI wages in NJEEDS. The model included award level, sex/gender, major, and 1998 wage to predict the 2020 wage. The coefficients for this regression were used to project annual growth rates, which were applied to the 2012–13 graduates. Wages were not inflation adjusted.

5. Earnings Premium Relative to Price of Education

The data used for earnings projections and the earnings premium relative to the price of education is from NJEEDS' high school graduates (postsecondary extract), higher education (SURE) completions, and UI wages tables. When generating estimates for lifetime wages, researchers used the annual projections developed from the linear regression model described above in the section titled, "Projected Earnings Growth Over Time." The slopes from those graduates were applied to the graduates' wages from the 2012–13 academic year. Total cost of attendance is the weighted average of New Jersey public two-year, in-district or public four-year, in-state tuition, fees, room, board, and supplies as they were reported to the Integrated Postsecondary Education Data System for the academic year preceding the 2012–13 academic year. This value excludes the reduction in costs due to grants, scholarships, assistantships, fellowships, or other non-loan student aid programs. It also excludes additional costs due to loans such as origination fees and interest. Projections were not inflation adjusted.

Earnings and costs were summed over the course of a lifetime to present the estimates. Estimates show that it takes 8 to 10 years to break even with high school graduates' lifetime earnings. This means that lifetime earnings exceed that of high school students even when accounting for the costs of going to college. This value is calculated by examining the year-to-year changes in income compared to the costs of education and foregone wages. Researchers calculated the "break-even year," which occurred when the earnings up to that date, minus the higher education costs, is more than high school graduates.

6. Earnings by Type of Industry

This analysis used data from NJEEDS' high school graduates (postsecondary extract), higher education (SURE) completions, and UI employment and wages. The wages and full-time minimum thresholds are inflation adjusted to the first quarter of 2020. Two industries were not reported due to low cell sizes. Mining, quarrying, and oil & gas extraction and agriculture, forestry, fishing, and hunting industry data were suppressed.

7. Distribution of Earnings by College Major

This theme included data from NJEEDS' higher education (SURE) completions, UI wages, and classification of instructional programs (CIP). CIP codes were used to classify students into major groups at the two-digit or broader level (e.g., Office of the Secretary of Higher Education categories or science, humanities, health, etc.). Only Bachelor's degree graduates are included.

Missing Data and Bias Reduction

The UI wage records only include data from employers in the state that participate in the UI program. It does not include wages on employment of New Jersey residents who work outside of the State of New Jersey, work for the federal government, are self-employed, or who otherwise do not contribute to the UI program. The match rates from 70% to 80% of the higher education graduates depending on the institution sector.

To reduce the impact of the missing cases on the analysis, and to reduce bias, a full-time equivalent annual wage is calculated. Annual wages are computed by summing four quarters of wages beginning five years after the end of the graduation window (third quarter of 2020) through June 30, 2021 (second quarter of 2021). Those students with missing data for a quarter are included and are assigned a zero wage for that quarter. The full-time equivalent annual wage is estimated by including students with annual wages at or above the full-time minimum wage. The full-time minimum wage is calculated by multiplying the New Jersey minimum wage by 2,080 hours, which is 40 hours a week for 52 weeks. Annualizing wages using this method has been shown to reduce the bias introduced by these missing populations (Simone, 2022). From this group, researchers compute a median annual wage.

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About NJEEDS

The New Jersey Education to Earnings Data System (NJEEDS) is the State of New Jersey's centralized longitudinal data system for education and workforce data. Its mission is to safely use the state's existing administrative data for evidence-based policymaking. Developed in 2012 through a grant from the U.S. Department of Education, NJEEDS creates a single place where state education, postsecondary education, employment, and workforce longitudinal data are securely stored to help stakeholders make data-informed decisions to improve student learning and labor market outcomes. The data system is owned by the State of New Jersey and operated by the John J. Heldrich Center for Workforce Development at Rutgers, The State University of New Jersey. NJEEDS is a collaboration between the New Jersey Office of the Secretary of Higher Education, the New Jersey Department of Labor and Workforce Development, the New Jersey Department of Education, and the New Jersey Higher Education Student Assistance Authority.

Learn more: www.njeeds.org

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New Jersey Education to Earnings Data System

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