



Choice:

ECONOMICS MATERIALS FOR
SUCCESS

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Degrees of Return: Is College Worth the Investment?

Related news article: [Is going to college worth it? Ask these 5 questions to make sure it's a good investment for you.](#) (MarketWatch, April 18, 2025)

Essential Question: What is the return on a college degree, are all majors the same, and what should you consider when you make a decision?

Summary: This worksheet could be used for in-class or homework practice. Students will be asked to read the *excerpts* from a short article about the return from college. While a college degree produced a median return of 12.5% in lifetime earnings in 2024, the return on the college investment varies by major. The article explains that college is an investment, so it is risky; there is no guaranteed payoff for any investment. Students will discuss five questions that prospective college students should answer when they decide whether to attend college, choose a major, a career and a university. They will apply the concepts of opportunity cost and sunk costs to real-world scenarios they can relate to and discuss the ROI from the college investment. **Answers are provided at the end of this document.**

Learning objectives: At the end of this worksheet, students will be able to:

- o Analyze why the ROI from college varies between students;
- o Understand why college is considered an investment;
- o Explain the sunk costs of attending college for students who do not complete their degree;
- o Analyze the opportunity cost of obtaining a college degree;
- o Calculate the opportunity cost of attending college given the costs and the value of alternative options.

National Voluntary Content Standards in Economics & Benchmarks: Standard 1 Scarcity, Standard 2 Decision Making

National Jump\$tart Standards for Personal Financial Education Standard 1 Earning Income, Standard 5 Managing Credit

Microeconomics Topic 1 Basic Economic Concepts OR **Macroeconomics** Topic 1 Basic Economic Concepts, Personal Finance

Economics concepts: Decision making, Opportunity cost, Investment, Personal finance, Sunk cost, Net value, Return on investment



Suggested excerpts:

“College graduates still tend to earn more than people with a high-school degree — yet due to the dynamics of today’s job market, the lowest-earning college grads now earn about as much as the typical high-school grad. In other words, “college does not pay off for everyone,” according to a new report from the Federal Reserve Bank of New York.”

“Some majors, such as engineering, math and computers, and business and economics, have significantly higher returns on investment than other majors, such as education, leisure and hospitality, and liberal arts, the analysis found.”

“Overall, the researchers estimated, graduating from college produced a “substantial” return of 12.5% in lifetime earnings in 2024, “a rate well above the threshold for a sound investment,” which they compared with an 8% long-term return from the stock market. Still, they noted, such analyses are often based on median wages, and it’s important to remember that “half of college graduates earn less than the median.””

“College is ultimately an investment, and “investments, by definition, have an inherent risk to them,” Zack Mabel, director of research at the Georgetown University Center on Education and the Workforce, told MarketWatch. “There is no guaranteed payoff to any sort of investment...””

“... while some may assume that Ivy League credentials would lead to the highest earnings, the researchers said in a 2020 report that this was not necessarily the case.”

“Prospective students looking to make the most of this investment should consider a few important questions, Mabel said. **1. What career do I want to pursue?**”

“The Bureau of Labor Statistics publishes [wage data by occupation](#), so people can also consider the typical earnings potential of any kind of work they are passionate about...”

“2. How well does this occupation support today’s cost of living?” For prospective students interested in a barometer of the cost of living in the area where they intend to start their careers, the MIT Living Wage calculator provides estimates of the average cost of necessities such as food, housing, and transportation...in cities around the country.”

“3. What are the educational requirements for the jobs I want?” “The [BLS Occupational Outlook Handbook](#) lists the typical education requirements for different occupations.”

“4. Which schools provide the [best ROI](#) for that degree or certification?”

“5. How long will it take to complete the degree?” One negative financial outcome for college students can be that they don’t complete their degree after paying tuition and taking out student loans. This scenario is not uncommon: About one-third of college students do not graduate within six years.”

“Taking longer than four years to complete a bachelor’s degree means missing out on both earnings and work experience, which can impact a person throughout their career. Researchers at the New York Fed estimate the opportunity cost of taking five years to graduate to be \$234,500, and the opportunity cost of taking six years to be \$319,000.”



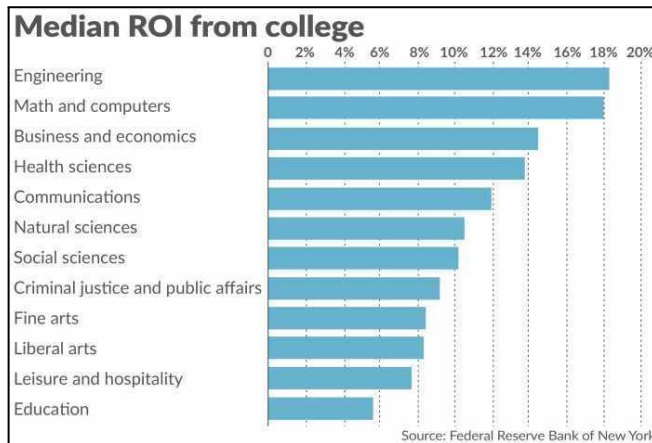
Student Questions

Name: _____ Date: _____

1. According to the article, which of the following statements about completing a college degree is correct?

- A. College and high school graduates have the same annual earnings.
- B. Completing college pays off for all graduates.
- C. College graduates with degrees in education or hospitality tend to earn more than those with degrees in business and economics.
- D. Research has shown that the overall return from a college degree was higher than the long-run return from the stock market.

2. The following graph from the article shows the median return on investment (ROI) from different college majors. Based on this figure, for which college major the median ROI is about half of that from a college degree in engineering?



- A. Criminal justice and public affairs.
- B. Education.
- C. Communications.
- D. Health sciences.

3. The article states that although “graduating from college produced a “substantial” return of 12.5% in lifetime earnings in 2024,” many college graduates earned less. What are some reasons why a student’s ROI could be lower or higher?

4. Is the payoff to earning a college degree guaranteed? Why or why not?

5. The article explains that engineering graduates from the University of California, Davis “had median student-loan debt of \$14,939 and median annual earnings of \$124,810 five years after graduation.” In comparison, the median student-loan debt and annual earnings five years after graduation of graduates with the same major from James Madison University in Virginia were \$24,750 and \$88,212, respectively. Based on this information, which of the two universities provides a higher ROI for engineering students?



6. The article explains that some college students “don’t complete their degree after paying tuition and taking out student loans.” The tuition fees and time spent at college cannot be recovered. Given this, they are:

- A. Sunk costs.
- B. Opportunity cost.
- C. Marginal cost.
- D. External cost.

7. The article explains that “taking longer than four years to complete a bachelor’s degree means missing out on both earnings and work experience.” The foregone earnings and experience are the _____ of attending college.

- A. Sunk costs.
- B. Opportunity cost.
- C. Marginal cost.
- D. External cost.

8. Suppose that a high school graduate is considering attending college, starting a job, or taking a year off to go on a long vacation in the year after finishing high school. The following table shows the cost of each option and the value this student places on each of the three alternatives:

Option	Cost	Value
Attending college	\$78,000	\$90,000
Starting a job	\$500	\$85,500
Taking a year off to travel	\$56,000	\$85,000

Given the information in the table above, which option is the best alternative to attending college?

- A. Starting a job.
- B. Taking a year off to travel.
- C. The student is indifferent between starting a job and taking a year off.
- D. Attending college is required.

9. Given the information in the table in Question 8, what is this student’s opportunity cost of attending college in the year after finishing high school?



10. The article recommends that prospective college students answer five questions to decide whether to attend college and choose a major. **Using [the chart below](#) and the hyperlinked sources provided, apply the data to explore one possible career path.**

- 1) Choose a career that interests you. *Career Name:* _____
- 2) Use the listed data sources to find:
 - a. The average wage for that occupation: _____
 - b. The typical educational requirement: _____
 - c. The estimated cost of living in a city or region where you might want to work: _____

Question	Data	Data source	Link to source
"What career do I want to pursue?"	Typical wage by occupation	Bureau of Labor Statistics (BLS) .	
"How well does this occupation support today's cost of living?"	Estimated average cost of living in different areas in the U.S.	The MIT Living Wage calculator .	
"What are the educational requirements for the jobs I want?"	Typical required education for different occupations.	The BLS Occupational Outlook Handbook .	

- 3) Summarize whether pursuing this career—with or without college—seems like a worthwhile investment for you. Support your reasoning using at least two pieces of data from your research.



Answer Key

FEE.Org Related Reading: [The High Cost of Free College](#)

1. According to the article, which of the following statements about completing a college degree is correct?

- A. College and high school graduates have the same annual earnings.
- B. Completing college pays off for all graduates.
- C. College graduates with degrees in education or hospitality tend to earn more than those with degrees in business and economics.
- D. **Research has shown that the overall return from a college degree was higher than the long-run return from the stock market.**

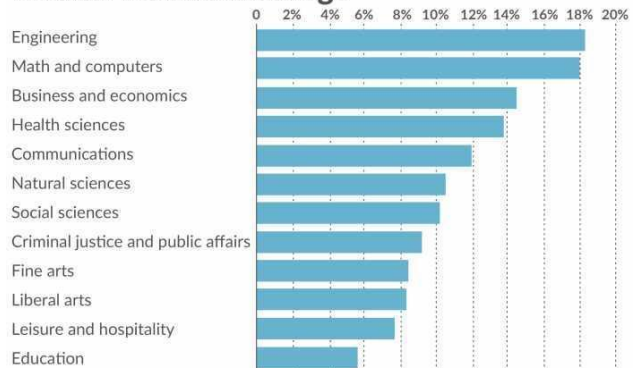
Answer: The article states that “college graduates still tend to earn more than people with a high-school degree,” but “the lowest-earning college grads now earn about as much as the typical high-school grad. In other words, “college does not pay off for everyone.” The article also mentions that “some majors, such as engineering, math and computers, and business and economics, have significantly higher returns on investment than other majors, such as education, leisure and hospitality, and liberal arts.” In addition, ““overall, the researchers estimated, graduating from college produced a “substantial” return of 12.5% in lifetime earnings in 2024, “a rate well above the threshold for a sound investment,” which they compared with an 8% long-term return from the stock market.”

2. The following graph from the article shows the median return on investment (ROI) from different college majors. Based on this figure, for which college major the median ROI is about half of that from a college degree in engineering?

- A. **Criminal justice and public affairs.**
- B. Education.
- C. Communications.
- D. Health sciences.

Answer: A. The median ROI from a degree in engineering is a little more than 18%. The median ROI from a degree in criminal justice and public affairs is a little more than 9%.

Median ROI from college



Source: Federal Reserve Bank of New York

3. The article states that although “graduating from college produced a “substantial” return of 12.5% in lifetime earnings in 2024,” many college graduates earned less. What are some reasons why a student’s ROI could be lower or higher?

Answer: As the article suggests, the analysis in the article was based on median wages, and “it’s important to remember that “half of college graduates earn less than the median.” Major, university, time to graduation, tuition and other costs of attending college, including the opportunity cost of attendance, and the cost of living where a college graduate chooses to live are among the factors that influence the ROI on a college degree.



4. Is the payoff to earning a college degree guaranteed? Why or why not?

Answer: No, a college degree may not pay off. The article explains that college is an investment, and “investments, by definition, have an inherent risk to them.” “There is no guaranteed payoff to any sort of investment”, including earning a college degree.

5. The article explains that engineering graduates from the University of California, Davis “had median student-loan debt of \$14,939 and median annual earnings of \$124,810 five years after graduation.” In comparison, the median student-loan debt and annual earnings five years after graduation of graduates with the same major from James Madison University in Virginia were \$24,750 and \$88,212, respectively. Based on this information, which of the two universities provides a higher ROI for engineering students?

Answer: Engineering students from the University of California, Davis had lower median debt and higher median annual earnings five years after graduation.

6. The article explains that some college students “don’t complete their degree after paying tuition and taking out student loans.” The tuition fees and time spent at college cannot be recovered. Given this, they are:

- A. **Sunk costs.**
- B. Opportunity cost.
- C. Marginal cost.
- D. External cost.

Answer: A. Sunk costs are costs that have been paid and cannot be recovered.

7. The article explains that “taking longer than four years to complete a bachelor’s degree means missing out on both earnings and work experience.” The foregone earnings and experience are the _____ of attending college.

- A. Sunk costs.
- B. **Opportunity cost.**
- C. Marginal cost.
- D. External cost.

Answer: B. An opportunity cost is the highest-valued alternative that an individual must give up to obtain something else. The opportunity cost of attending college is the salary and work experience a college student gives up.

8. Suppose that a high school graduate is considering attending college, starting a job, or taking a year off to go on a long vacation in the year after finishing high school. The following table shows the cost of each option and the value this student places on each of the three alternatives:

Option	Cost	Value
Attending college	\$78,000	\$90,000
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Given the information in the table above, which option is the best alternative to attending college?

- A. **Starting a job.**
- B. Taking a year off to travel.



- C. The student is indifferent between starting a job and taking a year off.
- D. Attending college is required.

Answer: A. The net value from starting a job is $$(85,500 - 500) = \$85,000$. The net value from taking a year off is $$(85,000 - 56,000) = \$29,000$. Therefore, the best alternative to starting college for this student is starting a job.

9. Given the information in the table in Question 8, what is this student's opportunity cost of attending college in the year after finishing high school?

Answer: The opportunity cost of attending college in the year after finishing high school includes the cost of attending college that year (\$78,000) plus the forgone net benefit from the next best alternative, that is, from starting a job (\$85,000). Therefore, the opportunity cost of attending college that year is $$(78,000 + 85,000) = \$163,000$.

10. The article recommends that prospective college students answer five questions to decide whether to attend college and choose a major. Using [the chart below](#) and the hyperlinked sources provided, apply the data to explore one possible career path.

- 1) Choose a career that interests you. *Career Name:* _____
- 2) Use the listed data sources to find:
 - a. The average wage for that occupation: _____
 - b. The typical educational requirement: _____
 - c. The estimated cost of living in a city or region where you might want to work: _____

Question	Data	Data source	Link to source
"What career do I want to pursue?"	Typical wage by occupation	Bureau of Labor Statistics (BLS) .	
"How well does this occupation support today's cost of living?"	Estimated average cost of living in different areas in the U.S.	The MIT Living Wage calculator .	
"What are the educational requirements for the jobs I want?"	Typical required education for different occupations.	The BLS Occupational Outlook Handbook .	

- 4) Summarize whether pursuing this career—with or without college—seems like a worthwhile investment for you. Support your reasoning using at least two pieces of data from your research.

Suggested Answers will Vary:

**Yes, pursuing this career with college is worthwhile:**

- The occupation (e.g., software developer) has high average wages (\$120,000+ annually) that exceed local cost of living estimates.
- A bachelor's degree is required, but student loan debt can be offset within a few years due to strong earning potential.
- The job market for this field is projected to grow rapidly, offering job security.

Yes, pursuing this career without college is worthwhile:

- The occupation (e.g., electrician) pays a solid wage (e.g., \$70,000) and only requires certification or an apprenticeship.
- Local cost of living is affordable, and no college debt means a quicker path to financial independence.
- Demand for skilled trades is growing, making it a stable long-term option.

No, pursuing this career may not be a worthwhile investment:

- The occupation (e.g., librarian) requires a master's degree but has relatively low median earnings (~\$64,000), making it difficult to justify student debt.
- Cost of living in the desired city is high, reducing disposable income.
- The job market is competitive or shrinking, reducing the likelihood of stable employment.

It depends on the college and location:

- Some colleges offer the same degree at a much lower cost with similar earnings outcomes.
- In-state tuition and scholarships could reduce debt and make the investment more worthwhile.
- Location affects both job opportunities and cost of living, changing the ROI significantly

Alternative Assessment:

The article recommends that prospective college students answer five questions to decide whether to attend college and choose a major. The first column of the table below lists three of these questions. The second column specifies data that is useful to answer these questions. The third column lists data sources. Connect each question with the data that are relevant to answer it and a source where these data could be found.

Question	Data	Data source
"What career do I want to pursue?"	Estimated average cost of living in different areas in the U.S.	The MIT Living Wage calculator.
"How well does this occupation support today's cost of living?"	Typical required education for different occupations.	The BLS Occupational Outlook Handbook.
"What are the educational requirements for the jobs I want?"	Typical wage by occupation.	Bureau of Labor Statistics (BLS).



Answer: Based on the article, the following is the correct table:

<i>Question</i>	<i>Data</i>	<i>Data source</i>
“What career do I want to pursue?”	Typical wage by occupation.	Bureau of Labor Statistics (BLS).
“How well does this occupation support today’s cost of living?”	Estimated average cost of living in different areas in the U.S.	The MIT Living Wage calculator.
“What are the educational requirements for the jobs I want?”	Typical required education for different occupations.	The BLS Occupational Outlook Handbook.