



Exploring Careers in Economics

Lesson Description

Students who become excited about their economics course and consider continuing their study of economics after high school may lose their enthusiasm when someone asks them the perennial question, what are you going to do with an economics major? Although economics is really a social science, many consider it a business major—and most people know what managers, accountants, and marketers do. But aside from a career in politics or as an entrepreneur, what can a background in economics prepare students for, and where are the jobs? What kinds of skills are most important for students who want to pursue a career in economics? This lesson explores career paths in economics and related fields as well as the importance of diversity in analyzing economic issues.

Standards and Benchmarks

National Standards for Financial Literacy

Standard: Earning Income

Students will understand that: income for most people is determined by the market value of their labor, paid as wages and salaries. People can increase their income and job opportunities by choosing to acquire more education, work experience, and job skills. The decision to undertake an activity that increases income or job opportunities is affected by the expected benefits and costs of such an activity. Income also is obtained from other sources such as interest, rents, capital gains, dividends, and profits.

Grade 8 Benchmarks

1. Careers are based on working at jobs in the same occupation or profession for many years. Different careers require different education and training.
2. People make many decisions over a lifetime about their education, jobs, and careers that affect their incomes and job opportunities.
3. Getting more education and learning new job skills can increase a person's human capital and productivity.
4. People with less education and fewer job skills tend to earn lower incomes than people with more education and greater job skills.
5. Investment in education and training generally has a positive rate of return in terms of the income that people earn over a lifetime.
6. Education, training, and development of job skills have opportunity costs in the form of time, effort, and money.

Grade 12 Benchmarks

1. People choose jobs or careers for which they are qualified based on the income they expect to earn and the benefits, such as health insurance coverage or a retirement plan, they expect to receive.
2. People choose jobs or careers for which they are qualified based on nonincome factors, such as job satisfaction, independence, risk, family, or location.

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3. People vary in their willingness to obtain more education or training because these decisions involve incurring immediate costs to obtain possible future benefits. Discounting the future benefits of education and training may lead some people to pass up potentially high rates of return that more education and training may offer.
4. People can make more informed education, job, or career decisions by evaluating the benefits and costs of different choices.

Grade Level

8–12

Concepts

African-American economists	Economics
African-American history	Economists
Careers	Human capital
Career goals	Women in economics
Diversity	

Objectives

Students will be able to:

- Identify prominent people who have studied economics and possible career paths for economists
- Recognize the contributions of African-Americans to the economics field
- Describe the type of work economists do, the outlook for the field, education needed, and median pay
- Compare the pay for economists to other related fields
- Distinguish different types of economists and the topics they study
- Compare the job market for economists across states
- Identify career fields that are related to economics
- Compare and contrast pay and educational requirements for economists and fields related to economics
- Identify skills needed to work in a field that uses economics and how the study of economics can be useful in those fields

Time Required

75 minutes

Materials

- Copy of the article “I Want to Study Economics, but What Do Economists Do?”
<https://frbatlanta.org/education/publications/extra-credit/2012/spring/i-want-to-study-economics-but-what-do-economists-do.aspx>
- Copy of the list of economics majors:
http://merrimack.edu/academics/liberal_arts/economics/famous_people_who_have_economics_degree.php

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- Copy of the article “Building Diversity in the Field of Economics,” either printed or accessed online: https://www.frbatlanta.org/-/media/Documents/education/publications/extra-credit/2016/spring/lessons-and-activities/high-school/personal-finance/exploring-careers-in-economics/extra-credit_building-diversity-in-the-field-of-economics.pdf
- **Handout 1:** Discussion Questions for “Building Diversity in the Field of Economics” for each student (if used as a written assignment; question sheet can also be used as a guide for a general classroom discussion)
- **Activity Sheet 1: Exploring Careers in Economics** for each student
- **Activity 2: Economists and Related Jobs:** Slips of paper with jobs cut out, one slip for each student or student pair, construction paper or cardstock if desired to mount slips of paper
- **Handout 2: Economists and Related Careers Fact Sheet** for each student (can also be displayed on a document camera or Smart Board)
- Internet access (for student research)

Procedure

1. Preparation:

Read the lesson description. Prior to conducting the lesson, read the articles “I Want to Study Economics, but What Do Economists Do?” and the article about economics majors to prepare for the introductory discussion. Copy the article “Building Diversity in the Field of Economics” (if students are not reading it online), Handout 1: Discussion Questions for “Building Diversity in the Field of Economics” if using as an individual assignment, and Activity Sheet 1 for each student.

Copy Activity 2: Economists and Related Jobs and cut into strips; mount on card stock or construction paper if desired.

Copy Handout 2: Economists and Related Careers Fact Sheet for each student, or arrange to show on a document camera or Smart Board.

2. To begin the lesson, ask students what comes to mind when they think of an economist. (*Answers will vary, but may include boring, male, good at math, geeky, rich.*) Ask students the following: “What do Ted Turner, the former CEOs of Microsoft (and current owner of the LA Clippers) and Hewlett Packard, Warren Buffett, presidents Ford, Reagan, George H.W. Bush, and Trump, and former Fed Chair Janet Yellen have in common with Mick Jagger, Arnold Schwarzenegger, and Karina Smirnoff from *Dancing with the Stars*?” (*Answers will vary, but may include they are famous, they are on TV, they belong to a similar political party.*)

The answer: they all majored in economics. Other illustrious econ grads include Walmart founder Sam Walton and former Supreme Court justice Sandra Day O'Connor as well as many heads of state worldwide and numerous stars of the sporting world, stage, and screen. (You may want to share with students these and other examples found on the list of economics majors).

3. Tell students the following: the American Economic Association categorizes five areas that draw the most economics majors after graduation:

- a. the corporate world
- b. economic consulting
- c. law
- d. government and nonprofit work
- e. academics and research

Have students identify people from the list or others they may know who majored in economics that fit into each of these five categories.

Examples

- a. The corporate world (Ted Turner, Donald Trump, Sam Walton, Meg Whitman [former CEO of Hewlett Packard], Steve Ballmer [former Microsoft CEO], Warren Buffett)
 - b. Economic consulting (many people have served in this role—Warren Buffett famously gave LeBron James financial advice: <http://www.cnn.com/2015/03/02/warren-buffetts-advice-to-lebron-james.html>.)
 - c. Law (justice O'Connor; president Ford was also a lawyer).
 - d. Government and nonprofit work (presidents Ford, Reagan, Trump, and George H.W. Bush, Arnold Schwarzenegger as governor of California, former Chair Yellen)
 - e. Academics and research (economics teachers, professors; former Chair Yellen was previously an economics professor and is currently an economist at the Brookings Institution)
4. Show the AEA video *A Career in Economics... It's Much More Than You Think*, https://www.aeaweb.org/video/career_in_economics.php.
 5. Ask students if there was anything they found surprising about the video. (*Answers will vary, but may include I didn't know economics was about people or solving policy problems, I didn't think a doctor could use economics.*) Ask students why diversity in the economics field is important. (*Answers will vary, but may include people with different perspectives can find different solutions to economic problems, the health of the economy affects everyone, economic decisions have an impact on people's daily lives, the field is made stronger and better decisions are made when people with different backgrounds contribute to policy discussions.*)
 6. Assign students to read the article "Building Diversity in the Field of Economics."
 7. Distribute Handout 1. Have students answer the questions either as a written assignment, in groups, or as a class. (You may also use the handout to guide class discussion, rather than as an individual assignment.)
 8. Have students investigate careers in economics using Activity Sheet 1, and turn in as an assignment or for discussion as a class.
 9. Tell students that there are many occupations similar to being an economist. Give each student a slip from the Activity 2 page. (If you have a large class, more than one student may have the same slip, or students may pair up.) You may also mount the slips on cardstock or construction paper, writing the name of the career on the front and taping the slips on the back.
 10. Have students line up at the front of the class, facing the desks and the seated students who may not have a career slip. In turn, have each student read their name and occupation on the slip of paper. For example, "Hello, my name is Rosa and I'm an economist," or "Hello, my name is Steven and I'm a political scientist."
 11. As each student introduces him- or herself and the job title, have the rest of the students respond in unison, asking: "What does a(n) (economist, political scientist, actuary, etc.) do?" Then have each student read his or her job description until all those holding career slips have participated.
 12. After all the students have read their job descriptions, have them sort themselves in groups according to the type of education needed for each job (bachelor's, master's, or PhD degree).
 13. Have the students reidentify themselves, going group by group, so everyone knows what job belongs in each category. Discuss the requirements and time needed to earn each type of degree. Be sure to note that all of these jobs require at least a college education (bachelor's degree).

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Bachelor's: actuary, budget analyst, financial analyst, market research analyst, operations research analyst

Master's: economist, mathematician/statistician, political scientist, survey researcher, postsecondary teacher, urban and regional planner

PhD: Postsecondary teacher

14. Next, have students line up according to their median salary. Ask them the following questions:
- What education level do the highest-paying jobs require? Where does an economist rank? (*Out of the top five, three require a master's degree; economist ranks second.*)
 - What is the highest-paying job on the list that requires a bachelor's degree? (*Actuary*)
 - Why do postsecondary teachers have two levels of education listed? (*Some institutions require only a master's degree to teach at the postsecondary level, but in order to get tenure, most universities and colleges require faculty to have earned a PhD.*)
15. (Optional) In the "More Info" section on the U.S. Bureau of Labor Statistics Occupational Outlook Handbook page for economists, <http://www.bls.gov/ooh/life-physical-and-social-science/economists.htm>, have students find information about five universities hiring economists and five private companies or government agencies with jobs for economists, and ask students to list them on the board. (This information can be found on the link to the American Economic Association website, <https://www.aeaweb.org>, where there is a link to Job Openings (JOE), or on the link USAJOBS for government jobs, <https://www.usajobs.gov/>. (*Answers will vary; see examples below.*)

University Jobs

Auburn University

Boston University

Cornell University

Princeton University

University of Georgia

University of Maryland

University of Virginia

West Virginia University

Government or Private Sector Jobs

Bureau of Economic Analysis

Congressional Budget Office

Consumer Financial Protection Bureau

Department of Energy

Department of Homeland Security

Internal Revenue Service

JP Morgan Chase Institute

Moody's Analytics

Note: Federal Reserve jobs for economists will be found on the websites of each of the 12 Federal Reserve Banks.

Assessment

Pass out Handout 2, and have students write an essay with the following prompt:

Of the jobs listed, do any of them appeal to you? Why or why not? Choose one of the jobs listed on the student jobs fact sheet (or one that interests you) and answer the following:

- What skills are needed to be successful in this job?
- How would the study of economics help prepare you for this job?

(Answers will vary to the first question, as students have different interests. Answers to the second question may include: skills needed are mathematical and analytical skills, critical thinking skills, communication skills, writing skills, and an ability to understand and interpret economic data. The study of economics helps students prepare for these careers by helping them to understand how the economy works. The study of economics builds analytical and critical thinking skills and math skills.)

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Handout 1: Discussion Questions for “Building Diversity in the Field of Economics”

1. Are African-Americans underrepresented in the economics field? How many African-Americans earned a PhD in economics in 2016?
2. What phrase did one author use when discussing African-American economists, since they are small in number? What do you think the author was trying to say by using this phrase?
3. What award was given to Cecelia Conrad in 2018? What type of award is this? How could this award encourage more students to study economics?
4. Has an African-American won the Nobel Prize in economics? If so, why was the win especially significant?
5. Raphael Bostic is the first African-American to serve as president and chief executive officer of a Federal Reserve Bank, the Federal Reserve Bank of Atlanta. As a Federal Reserve Bank president, he serves on the Federal Open Market Committee (FOMC), which is the Fed’s monetary policy making body. The members include the presidents of the 12 regional Reserve Banks and also the seven members of the Board of Governors. Have other African-Americans served on the FOMC? Which members were economists? Did any serve in a leadership role on the Board? (For research, this website may be helpful: www.federalreservehistory.org/people?inFields=Role:Federal%2520Reserve%2520Board%2520Member.)
6. The value of having role models is mentioned in the article. What did the late Rhonda Williams say about role models? What point does she emphasize about the importance of the work done by African-American economists? Do you think role models are important?

Handout 1: Discussion Questions for “Building Diversity in the Field of Economics” (Answer Key)

1. Are African-Americans underrepresented in the economics field? How many African-Americans earned a PhD in economics in 2016? *African-Americans earned 6.6 percent of the doctorates awarded in 2016 in the United States but just 3.5 percent of all doctorates in economics, for total of 18. At the bachelor’s level, African-Americans earned just over 5 percent of economics degrees.*
2. What phrase did one author use when discussing African-American economists, since they are small in number? What do you think the author was trying to say by using this phrase?
African-American economists were called “an elite clan of warrior intellectuals.” Answers will vary but may include that the author believes they are smart, small in number, and are fighters (warriors).
2. What award was given to Cecelia Conrad in 2018? What type of award is this? How could this award encourage more students to study economics?
In 2018, Conrad was awarded the Samuel Z. Westerfield Award, given every three to five years by the National Economic Association to honor outstanding scholarly achievement and public service by an African-American economist. Answers will vary to the last question, but students may mention that because this award helps increase awareness of African-American economists it could encourage more students of color to enter the field.
4. Has an African-American won the Nobel Prize in economics? If so, why was the win especially significant?
Yes, Sir Arthur Lewis won the Nobel Prize in economics in 1979. His win was the first medal given to an African-American in a category other than peace.
5. Raphael Bostic is the first African-American to serve as president and chief executive officer of a Federal Reserve Bank, the Federal Reserve Bank of Atlanta. As a Federal Reserve Bank president, he serves on the Federal Open Market Committee (FOMC), which is the Fed’s monetary policy making body. The members include the presidents of the 12 regional Reserve Banks and also the seven members of the Board of Governors. Have other African-Americans served on the FOMC? Which members were economists? Did any serve in a leadership role on the Board? (For research, this website may be helpful: www.federalreservehistory.org/people?inFields=Role:Federal%2520Reserve%2520Board%2520Member.) *Yes, three other African-Americans have served on the FOMC. Andrew Brimmer served on the Board of Governors from 1966–74, Emmett Rice served on the Board from 1979–86, and Roger W. Ferguson Jr. served from 1997–2006. All worked as economists. Roger Ferguson served as Vice Chair of the Board from 1999–2006. (Other facts that may be of interest to students and they may discover in their research include Ferguson, as the only Federal Reserve Governor in Washington, DC, during the September 11, 2001, terrorist attacks (other governors were traveling), led the Federal Reserve’s initial response to the attacks. Both Andrew Brimmer and Emmett Rice spent part of their careers as Federal Reserve economists. Brimmer helped advise the Sudanese government on the establishment of a central bank; Rice helped establish the central bank of Nigeria. Rice was also a Tuskegee Airman and the father of Susan Rice, former U.S. ambassador to the United Nations and the country’s former national security adviser.)*
6. The value of having role models is mentioned in the article. What did the late Rhonda Williams say about role models and the importance of the work done by African-American economists? Do you think role models are important? *Williams said that although black economists and black physicists may both be rare, physicists don’t run the Federal Reserve Bank or make everyday decisions that will influence the quality of life of millions of African-Americans. Answers to the third question will vary.*

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Activity 1: Exploring Careers in Economics

Instructions: Open the Bureau of Labor Statistics' Occupational Outlook Handbook to the page on economists: <http://www.bls.gov/ooh/life-physical-and-social-science/economists.htm>.

Answer the following questions:

1. What was the median pay for economists in 2018? What does “median wage” mean? (*Click on the? symbol to find out.*)
2. What type of education is typically needed to work as an economist?
3. How many economist jobs were there in 2018? Are these jobs growing?
4. What are some of the things economists do?
5. According to the “Work Environment” section, in what type of business environment do most economists work? What sector of the economy do more than one in five economists work in?
6. According to the “How to Become an Economist” section, what skills are needed in addition to a degree?
7. How does the pay of economists compare to the total for all occupations? How does it compare to the pay for occupations in the social sciences?
8. Go to the website <http://www.bls.gov/oes/current/oes193011.htm#st> to answer the following questions. How many economists are employed in your state? What is the average mean wage for an economist in your state?

Activity 1: Exploring Careers in Economics (Answer Key)

Instructions: Open the Bureau of Labor Statistic's Occupational Outlook Handbook to the page on economists: <http://www.bls.gov/ooh/life-physical-and-social-science/economists.htm>.

Answer the following questions:

1. What was the median pay for economists in 2018? What does "median wage" mean? *Median pay was \$104,340 per year or \$50.16 per hour. Median wage means the wage at which half of the workers in the occupation earned more than that amount and half earned less.*
2. What type of education is typically needed to work as an economist? *Master's degree*
3. How many economist jobs were there in 2018? Are these jobs growing? *There were 21,300 economist jobs and they are growing at 6 percent, about average.*
4. What are some of the things economists do? *Economists study the production and distribution of resources, goods, and services by collecting and analyzing data, researching trends, and evaluating economic issues.*
5. According to the "Work Environment" section, in what type of business environment do most economists work? What sector of the economy do one in five economists work in? *Most economists work in an office. More than one in five economists work in the federal government.*
6. According to the "How to Become an Economist" section, what skills are needed in addition to a degree? *Analytical skills, communication skills, critical thinking skills, being detail oriented, math skills, and writing skills.*
7. How does the pay of economists compare to the total for all occupations? How does it compare to the pay for occupations in the social sciences? *The median annual wage for economists is more than \$60,000 more per year than the median annual wage total for all occupations and over \$20,000 more than the median annual wage for other social scientists.*
8. Go to the website <http://www.bls.gov/oes/current/oes193011.htm#st> to answer the following questions. How many economists are employed in your state? What is the annual mean wage for an economist in your state? *(Answers will vary; numbers are estimates and given in a range.)*

Activity 2: Economists and Related Jobs

1. Cut out the slips of paper from Handout 2 for Activity 2. If you have more than 11 students, have them work in pairs, or make two or more copies and allow more than one student to represent each job. You may also mount the slips on cardstock or construction paper, writing the name of the career on the front and taping the slips on the back.

Handout 2: Economists and Related Careers Fact Sheet

Job: Economist

2018 median pay: \$104,340 per year

Typical entry-level education: master's degree

What do economists do? Economists study the production and distribution of resources, goods, and services by collecting and analyzing data, researching trends, and evaluating economic issues.

Job: Actuary

2018 median pay: \$102,880 per year

Typical entry-level education: bachelor's degree

What do actuaries do? Actuaries analyze the financial costs of risk and uncertainty. They use mathematics, statistics, and financial theory to assess the risk that an event will occur, and they help businesses and clients develop policies that minimize the cost of that risk. Actuaries' work is essential to the insurance industry.

Job: Budget Analyst

2018 median pay: \$76,220 per year

Typical entry-level education: bachelor's degree

What do budget analysts do? Budget analysts help public and private institutions organize their finances. They prepare budget reports and monitor institutional spending.

Job: Financial Analyst

2018 median pay: \$85,660 per year

Typical entry-level education: bachelor's degree

What do financial analysts do? Financial analysts provide guidance to businesses and individuals making investment decisions. They assess the performance of stocks, bonds, and other types of investments.

Job: Market Research Analyst

2018 median pay: \$63,120 per year

Typical entry-level education: bachelor's degree

What do market research analysts do? Market research analysts study market conditions to examine potential sales of a product or service. They help companies understand what products people want, who will buy them, and at what price.

Handout 2: Economists and Related Careers Fact Sheet (page 2)

Job: Mathematician/Statistician

2018 median pay: \$88,190 per year

Typical entry-level education: master's degree

What do mathematicians and statisticians do? Mathematicians and statisticians analyze data and apply mathematical and statistical techniques to help solve real-world problems in business, engineering, health care, and other fields.

Job: Operations Research Analyst

2018 median pay: \$83,390 per year

Typical entry-level education: bachelor's degree

What do operations research analysts do? Operations research analysts use advanced mathematical and analytical methods to help organizations investigate complex issues, identify and solve problems, and make better decisions.

Job: Political Scientist

2018 median pay: \$117,570 per year

Typical entry-level education: master's degree

What do political scientists do? Political scientists study the origin, development, and operation of political systems. They research political ideas and analyze governments, policies, political trends, and related issues.

Job: Postsecondary Teacher

2018 median pay: \$78,470 per year

Typical entry-level education: master's degree or doctoral degree (PhD)

What do postsecondary teachers do? Postsecondary teachers instruct students in a wide variety of academic and career and technical subjects beyond the high school level. They also conduct research and publish scholarly papers and books.

Job: Survey Researcher

2018 median pay: \$57,700 per year

Typical entry-level education: master's degree

What do survey researchers do? Survey researchers design and conduct surveys and analyze data. Surveys are used to collect factual data, such as employment and salary information, or to ask questions in order to understand people's opinions, preferences, beliefs, or desires.

Job: Urban and Regional Planners

2018 median pay: \$73,050 per year

Typical entry-level education: master's degree

What do urban and regional planners do? Urban and regional planners develop land use plans and programs that help create communities, accommodate population growth, and revitalize physical facilities in towns, cities, counties, and metropolitan areas.