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Solutions Manual for Business in Action 10th Bovee

SOLUTIONS MANUAL SAMPLE PREVIEW

PUBLISHER
Pearson

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2024

RESOURCE TYPE
Solutions Manual

ISBN
9780138103644

Chapter 2
ECONOMICS, MONEY, AND BANKING

Chapter Overview

This chapter introduces economics from a business professional's perspective, including the interaction of supply and demand and the macro view of the economy. The second half explores money, banking, and the digital revolution known as *fintech*.

Chapter Outline

I. What Is This Thing Called the Economy?
   A. The **economy** is the sum total of all the economic activity within a given region
   B. **Economics** is the study of how a society uses its scarce resources to produce and distribute goods and services
      1. Microeconomics is the study of economic behavior among consumers, businesses, and industries that collectively determine the quantity of goods and services demanded and supplied at different prices
      2. Macroeconomics is the study of a country's larger economic issues, such as competition, government policies, and how an economy maintains and allocates its scarce resources
   C. Each society must decide how to use its economic resources or **factors of production**
      1. Natural resources—things that are useful in their natural state (land, forests, minerals, and water)
      2. Human resources—people and their individual talents and capacities
      3. Capital—money, computers, machines, tools, and buildings
      4. Entrepreneurship—the spirit of innovation, the initiative, and the willingness to take on risks involved in creating/operating a business
      5. Knowledge—the collective intelligence of an organization. *Knowledge workers* are employees whose primary contribution is the acquisition and application of business knowledge
   D. **Scarcity**—a condition of any productive resource that has finite supply
      1. Scarcity creates competition for resources
      2. Scarcity forces consumers, companies, and governments to make trade-offs
         a. Opportunity cost is the value of the most attractive option not selected when making a trade-off
   E. **Economic indicators** are statistics such as interest rates, unemployment rates, housing data, and industrial productivity
      1. Leading indicators (such as housing starts and durable-goods orders) suggest changes that may happen to the economy in the future
      2. Lagging indicators (such as the unemployment rate) provide confirmation that something has happened in the past

3. Housing starts are a leading indicator showing where several industries are headed; when housing starts drop, the construction industry contracts, and the effect ripples through other sectors of the economy
4. A rise in durable-goods orders, another key leading indicator, is a positive indicator that business spending is turning around
5. In between, coincident indicators, like personal income and industrial production, reflect current economic conditions.

F. Price indexes offer a way to monitor inflation or deflation
   1. The **consumer price index (CPI**) measures rate of inflation by comparing change in prices of a representative "basket" of consumer goods and services
   2. The **producer price index (PPI)** is a statistical measure of price trends at the producer and wholesaler levels

G. The **gross domestic product (GDP)** is the value of all the final goods and services produced by businesses located within a nation's borders
   1. GDP has largely replaced the measure GNP (gross national product). GNP considers who is responsible for production; GDP considers where it occurs

II. Economic Systems

A. An **economic system** is the basic set of rules for allocating a society's resources to satisfy its citizens' needs
   1. **Planned system**—governments largely control allocation of resources; also called a command system or a command-and-control system
      a. Often equated with socialism, which involves collective ownership of the means of production
   2. **Free-market system**—individuals and companies decide what products to produce, how to produce them, to whom to sell them, and at what price
      a. Referred to as **capitalism** or private enterprise—private parties own/operate the majority of businesses and competition, supply, and demand determine goods/services produced
      b. No economy is without limited intervention by government, creating a mixed economy or mixed capitalism
   3. Governments change structure of economy in two ways:
      a. Nationalizing—assuming ownership of selected companies or industries
      b. Privatizing—allowing private businesses to perform services once performed by the government

B. There is considerable debate over the key roles that governments play in the economy
   1. **Regulation**—relying more on laws and policies than on market forces to govern economic activity
   2. **Deregulation**—removing regulations to allow the market to prevent excesses and correct itself over time

C. The government plays a role in the economy in four major areas:
   1. Protecting stakeholders through numerous regulatory agencies
   2. Fostering competition through prevention of monopolies
      a. Antitrust legislation
      b. Merger and acquisition approval
   3. Encouraging innovation and economic development

4. Stabilizing and stimulating the economy through use of monetary policy and fiscal policy
   a. **Monetary policy** involves adjusting the nation's money supply by increasing or decreasing interest rates. It is administered by the Federal Reserve Board
   b. **Fiscal policy** involves changes in the government's revenues (taxation) and expenditures

III. The Forces of Demand and Supply
   A. **Demand**—buyers' willingness and ability to purchase products at various price points
      1. The **demand curve** shows the relationship between price and demand—as price decreases, demand increases (i.e., more people are willing to buy)
   B. **Supply**—the quantities of a good/service that producers will provide on a particular date at various prices
      1. The **supply curve** shows the relationship between supply and demand—as price increases, the quantity that sellers are willing to supply increases
   C. Demand and supply curves intersect at **equilibrium price**—the point at which quantity supplied equals quantity demanded

IV. The Macro View: Understanding How an Economy Operates
   A. **Competition** is rivalry among businesses for the same customers
   B. There are different degrees of competition
      1. **Pure competition—**the market situation in which there are so many buyers and sellers that no single buyer or seller can individually influence market price
      2. **Monopoly—**the market situation in which one company dominates the market and can control prices
      3. **Monopolistic competition—**the market situation in which there are many sellers who differentiate their products from those of competitors in at least some small way
      4. **Oligopoly**—the market situation in which a very small number of suppliers, sometimes only two, provide a particular good or service
   C. Economic activity changes in response to factors such as investment patterns, shifts in consumer attitudes, world events, and basic economic forces—called economic fluctuation or **business cycles**
      1. Economic expansion—when the economy is growing and consumers are spending more money
      2. Economic contraction—when spending declines, employment drops, and the economy slows down
         a. A **recession** is two consecutive quarters of decline in gross domestic product
         b. A deep and prolonged recession can be considered a depression, a catastrophic collapse of financial markets
   D. **Unemployment rate**—the percentage of labor force currently without employment
      1. Four types of unemployment—frictional, structural, cyclical, and seasonal
   E. **Inflation**—the steady rise in the average prices of goods and services throughout the economy

1. **Deflation** is the sustained fall in average prices

V. Money's Role in Business
   A. **Money** is anything generally accepted as a means of paying for goods and services. It has four functions:
      1. Medium of exchange—a tool for simplifying buyer/seller transactions
      2. Unit of accounting—a measure of value
      3. Temporary store of value—a way of accumulating wealth until it is needed
      4. Standard of deferred payment—it can be used to represent debt obligations
   B. The practical value of money stems from two key properties: liquidity and trust
      1. Money is the most liquid asset because it can be exchanged easily and often instantly for something else of value
      2. Currency is accepted because of the trust that it represents real economic value
   C. The U.S. dollar and other modern currencies are called **fiat money**, issued and maintained through government fiat or proclamation
      1. A new wave of alternative money is **cryptocurrency**, digital tokens that rely on cryptography for security (e.g., Bitcoin). It has the potential to influence business and economics in the following ways:
         a. An alternative to fiat currency
         b. A disruptive force in global economics and politics
         c. A speculative investment
         d. A driver of potentially disruptive technologies
      2. **Nonfungible tokens (NFTs)** are digital certificates that convey sole ownership of a digital asset. NFTs could conceivably be created for any form of intellectual property, but so far they have primarily been used in sports, entertainment, and art.
         a. A fungible asset is something that is interchangeable and can be replaced by another unit or quantity of the same type
         b. A nonfungible asset, in contrast, is unique
   D. The **money supply** is the amount of money in circulation at any given time within an economy. It can be measured in several ways:
      1. M1 consists of cash held by the public and money deposited in a variety of checking accounts: spendable now
      2. M2 is broader, encompassing M1 plus savings accounts, balances in retail money-market funds, CDs, and spendable fairly soon

VI. Banking Institutions and Services
   A. The **Federal Reserve System** (the Fed) is the central banking system of the U.S. and is responsible for regulating banks and implementing monetary policy. Tools to manage money supply are:
      1. Two key interest rates:
         a. **Federal funds rate**—the interest rate that member banks charge each other to borrow money overnight from the funds they keep in the Federal Reserve accounts. Not set directly but "nudged" through buying/selling Treasury bonds, bills, and notes; adjusting reserve requirements; and lending through the discount window

b. **Discount rate**—the rate that member banks pay when they borrow money from the Fed. A change in it generally changes banks' **prime rate**, the rate it charges its best loan customers

B. Other government banking agencies and institutions include:
1. **Federal Deposit Insurance Corporation (FDIC)**—federal agency responsible for protecting money in customer accounts and managing the transition of assets when a bank fails
2. **NCUA**—The National Credit Union Administration (NCUA) provides regulatory supervision and account protection for credit unions
3. **Fannie Mae and Freddie Mac**—two quasi-public companies operating under the close supervision of the federal government, with a mandate to make mortgage funding more available to low- and moderate-income home buyers. They don't extend loans themselves but rather purchase and guarantee loans made by other lenders in the secondary mortgage market

C. **Investment banks** offer a variety of investing and advisory services to organizational customers, including corporations, other financial institutions, pension funds, and governments. They provide some combination of these services:
- Facilitating mergers, acquisitions, sales, and spin-offs of companies
- Underwriting initial public offerings
- Managing and advising on investments
- Raising capital on behalf of corporate or government clients
- Advising on and facilitating complex financial transactions
- Investing in or lending money to companies
- Providing risk management advice
- "Making markets" for clients

D. **Commercial banks** are financial institutions that accept deposits, offer various types of checking and savings accounts, and provide loans. Five major types are as follows:
1. Retail banks provide financial services to consumers
2. Merchant banks offer financial services to businesses
3. Thrift banks offer deposit accounts and focus on offering home mortgage loans
4. Credit unions are not-for-profit, member-owned cooperatives that offer deposit accounts and lending services to consumers and small businesses
5. Private banking is a range of banking services for wealthy individuals and families

E. Other financial services:
1. Independent mortgage companies originate mortgages using their own funds
2. Mortgage brokers initiate loans on behalf of a mortgage lender in exchange for a fee
3. Finance companies are nonbank institutions that lend money to consumers and businesses
4. Credit rating agencies are companies that offer opinions about the creditworthiness of borrowers and of specific investments

F. For all the benefits banking provides, its role in the economy hasn't been without harm or controversy. Financial firms of all types and sizes played a central role in triggering the Great Recession of 2007–2009.
   1. Shadow Banking
      a. A vast amount of consumer and commercial lending is provided by nonbank lenders, a group that includes mortgage companies, personal finance companies, insurance firms, investment banks, money market funds, and some fintech companies (covered in the next section). These lenders are sometimes referred to as shadow banks because their lending activities take place outside the purview of the regulatory agencies that oversee banks.
      b. Nonbank lenders in the mortgage market played a major role in the financial crisis that triggered the Great Recession of 2007–2009 when some of these firms collapsed, and the sector has grown even larger since then
   2. The too-big-to-fail dilemma
      a. The banking industry has consolidated dramatically in recent years; the largest banks hold a staggering proportion of the country's cash accounts
      b. Calling a bank "too big to fail" doesn't mean a bank can't fail because it is too big; it means a bank's role in the economy is so big that regulators will take special action to make sure it doesn't fail
   3. The boundaries of commercial banking and investment banking
      a. Starting in the 1980s, waves of deregulation reshaped the banking and financial services industry; in the opinions of some, this helped create the conditions that led to the Great Recession
      b. Debate continues about whether the Glass-Steagall wall should be reinstated to prevent the risks posed by colossal, multifaceted financial firms

VII. Thriving in the Digital Enterprise: Fintech
   A. **Fintech**—technologies with the potential to improve or disrupt financial services. Involves a variety of technologies, including:
      1. Artificial intelligence (AI)
      2. Cloud computing
      3. Mobile apps, with both customer-facing and back-office technologies
   B. Five major areas are seeing benefits from new fintech, including making financial services more inclusive
      1. Crowdfunding and peer-to-peer lending bypass intermediaries in the conventional banking system
      2. Opening stock market investing to more people and at lower costs, helping more food retailers support the U.S. government's Supplemental Nutrition Assistance Program, and providing banking services to the millions of unbanked or underbanked consumers who don't use conventional banks and rely instead on high-cost alternatives such as payday lenders
   C. Improving efficiency of financial activities
      1. A group of fintech activities lower the costs, delays, and complexity of traditional banking activities
      2. TransferWise lowers the costs and fees associated with international money transfers

D. Strengthening security of financial systems; for example, with automated AI-based threat intelligence
E. Improving the customer experience in financial services
   1. Popular fintech apps include mobile banking apps, peer-to-peer cash transfer apps like Venmo and Zelle, and financial planning services like Mint
   2. **Neobanks** provide banking services entirely through mobile and digital channels
F. Enhancing financial decision-making with robo advisers that aim to improve investors' returns by removing emotions-driven decision-making and automating time-consuming manual tasks

Classroom Activities

Break-out group discussion: *Capitalism versus Socialism*

Goal: Ask students to discuss the pros and cons of both capitalism and socialism and to come away with the understanding that each system has its own benefits and shortcomings.

Time Limit: 15 minutes.

Details:

1. Break students into groups of five. (2 minutes)
2. Ask each group to come up with the top pros and cons of capitalism or socialism. Sample list items include capitalism's efficient self-adjusting market mechanism via "demand versus supply," encouragement of hard work and entrepreneurship, lower taxes, higher income disparity, and generally poorer records in the public sector such as education, healthcare and social welfare, and socialism's generally better records in education, healthcare and social welfare, lower income disparity, higher taxes and less incentive for hard work, and entrepreneurship. Use examples of countries and regions to illustrate such differenWSSces; for example, U.S. and Hong Kong for capitalism, and France and Canada for socialism. (10 minutes)
3. Ask representatives/speakers from each group to present their results to the whole class, either verbally or written (on the blackboard). (3 minutes)

Summary: Instructor summarizes the top pros and cons for both capitalism and socialism and concludes that the best system tends to be a mixed system that incorporates the beneficial elements of both systems.

In-class activity: *GDP versus GNP*

Goal: Help students differentiate between Gross Domestic Product (GDP) and Gross National Product (GNP).

Time Limit: 10 minutes.

Details:

1. Draw a table with three columns and four rows on the blackboard with the following column headings respectively: "Scenarios," "Which Country's GDP," and "Which Country's GNP."
2. List the following three scenarios under the column heading "Scenarios."
    a. An American banker working in London
    b. A Chinese factory worker in a Coca-Cola bottling plant in Shanghai
    c. An Australian volunteer in South Africa
3. Ask students to pair up and recreate the content of the blackboard in their notebooks. They then need to populate the rest of the table by listing the names of countries under the two column headings corresponding to GDP and GNP.
4. Make it clear to students that the main difference between GDP and GNP is that GDP considers *where* the production occurs and GNP considers *who* is responsible for the production. For instance, in Scenario A, the goods and services produced by an American banker in London should be classified as the GDP of United Kingdom (UK) and the GNP of United States (U.S.).

    Hint: GNP excludes the value of production from foreign-owned businesses within a nation's boundaries (Scenario B). Volunteering is not a component of GDP or GNP (Scenario C).

End-of-Chapter

Behind the Scenes
Gig Wage Rethinks Financial Software to Meet the Needs of Today's Business World

Critical Thinking Questions

2-1. What factors of production does Gig Wage use to create and sell its software?
To create and sell its software, Gig Wage uses all five factors of production: natural resources, human resources, capital, entrepreneurship, and knowledge. (LO: 1, AACSB: Analytical thinking)

2-2. How might the various ups and downs of the business cycle affect Gig Wage's success?
The up-and-down swings of the economy could greatly influence Gig Wage's success. In a period of economic decline, employers may hire a greater percentage of gig and contract workers, increasing demand for Gig Wage's services. A period of economic strength or stability could have the opposite effect. (LO: 4, AACSB: Analytical thinking)

2-3. How is Gig Wage working to make financial services more inclusive?
Craig J. Lewis of Gig Wage Lewis envisions rebuilding the entire financial infrastructure to make sure gig workers have the same financial security as employees, and that includes having access to health insurance, retirement

savings, insurance, and credit. For him, it goes beyond a business opportunity to a mission: "People should be able to earn a decent living and should have access to the financial services and tools they need because that's what they deserve." (LO: 7, AACSB: Analytical thinking)

Learn More Online
Students' responses will depend, in large part, on the material currently posted on the website. (LO: 7, AACSB: Analytical thinking)

Test Your Knowledge

Questions for Review

2-4. What are the five primary factors of production?
The five primary factors of production are natural resources, human resources, capital, entrepreneurship, and knowledge. (LO: 1)

2-5. Why is the economic concept of scarcity a crucial one for businesspeople to understand?
The economic concept of scarcity is a crucial concept for businesspeople to understand because scarcity creates competition for resources and forces trade-offs on the part of every participant in the economy. First, businesses and industries compete with each other for the resources they need, including materials, employees, and customers. Second, given this universal scarcity of resources, businesses are constantly forced to make trade-offs, such as deciding how much money to spend on advertising a new product versus how much to spend on the materials used to make it, or deciding how many employees to have in sales versus customer support. (LO: 1)

2-6. What is the difference between macroeconomics and microeconomics?
The study of economic behavior by consumers, businesses, and industries that collectively determine the quantity of goods and services demanded and supplied at different prices is considered microeconomics. The study of larger economic issues, such as unemployment, the effect of government policies, and how a country maintains and allocates its scarce resources, falls under the umbrella of macroeconomics. (LO: 1)

2-7. What is the difference between monetary policy and fiscal policy?
Monetary policy is government policy and actions taken by the Federal Reserve Board to regulate the nation's money supply. Fiscal policy is the use of government revenue collection and spending to influence the business cycle. (LO: 2)

2-8. What are the Fed's three objectives in conducting monetary policy?
The three objectives are maximizing employment, keeping prices stable, and keeping inflation under control. (LO: 6)

2-9. Why might a government agency seek to block a merger or an acquisition?
To preserve competition, a government agency may stipulate requirements companies must meet to gain approval of a proposed merger or acquisition. If the

governmental agency thinks a proposed merger or acquisition might restrain competition, it may deny approval altogether. (LO: 2, AACSB: Ethical understanding and reasoning)

2-10. What are the four essential functions of money?
The four essential functions of money are: a medium of exchange, a unit of accounting, a temporary store of value, and a standard of deferred payment. (LO: 5)

Questions for Analysis

2-11. Why is entrepreneurship considered a factor of production?
Entrepreneurship, one of the five factors of production, is the spirit of innovation, the initiative, and the willingness to take the risks involved in creating and operating businesses. It is considered such because it is a finite resource. (LO: 1)

2-12. How do countries know if their economic systems are working?
Economic indicators are statistics such as interest rates, unemployment rates, housing data, GNP, GDP, and CPI. A country's professional economists sort and interpret these data to monitor and measure the country's economic performance and predict its future performance. (LO: 1)

2-13. To what degree are fluctuations in the business cycle predictable?
Fluctuations are rarely predictable. (LO: 4)

2-14. Is it beneficial for the country as a whole for individual U.S. states to compete with one another to attract companies? Why or why not? (Offering tax breaks in exchange for building new facilities is a common tactic that states use to attract commercial investment, for example.)
It may not be wise for such competition to get out of control because each competing state will hurt from low tax revenues. (LO: 2, AACSB: Analytical thinking)

2-15. If risk is a part of doing business, why should the Fed be concerned with systemic risk?
Systemic risk is risk that extends beyond any single bank or other company. The Fed seeks to minimize it to maintain the stability of the financial system. (LO: 6)

2-16. Would bitcoin be a smart choice for replacing the dollar as the official U.S. currency? Why or why not?
For any currency to come into wide use, it will need to have low transaction costs and fairly stable value. Purchasers will be reluctant to spend it if they think its value could increase after payment is made, and suppliers will be reluctant to accept it if they think its value could decrease after payment is accepted. Many businesses now accept crypto, and its use is growing in employment contracts and other areas, but it continues to exhibit a degree of volatility that will make many people hesitate to use it in place of dollars, euros, or other established currencies. (LO: 5, AACSB: Analytical thinking)

2-17. What are the benefits of a fintech company's ability to bypass traditional intermediaries in a financial system?
Crowdfunding and peer-to-peer lending services allow customers who would not be served by traditional banking institutions to store or borrow money to do so. This not only allows some who would not qualify for loans with traditional banks to borrow money but also the process is often much faster and less expensive than conventional loan applications. Innovative fintech services such as Betterment give more people access to the stock market and other investment opportunities by allowing small-scale investments and by encouraging regular saving. (LO: 7, AACSB: Analytical thinking)

2-18. If you are getting ready to apply for a home loan, would the federal funds rate be of any concern to you? Why or why not?
Someone getting ready to apply for a home loan would be interested in the federal funds rate, as it influences short- and long-term interest rates. (LO: 6, AACSB: Analytical thinking)

2-19. Ethical Considerations. The risk of failure is an inherent part of free enterprise. Does society have an obligation to come to the aid of entrepreneurs who try but fail? Why or why not?
Students' answers will vary but may reflect some of the following concerns:

- Entrepreneurs willing to face risks of failure are a vital force in capitalist economies.
- Such entrepreneurs will be rewarded handsomely when they become successful.

Many such entrepreneurs are involved in multiple ventures and may use earnings from successful ventures to fund, develop, or improve ventures that are less successful. (LO: 6, AACSB: Ethical understanding and reasoning)

Questions for Application

2-20. How might government and education leaders work with businesses to minimize structural unemployment?
Government and education leaders might work with businesses to provide educational opportunities and training programs that would best match workers' skills with the current needs of employers in an effort to minimize structural unemployment. (LO: 4, AACSB: Analytical thinking)

2-21. How would you respond to someone who said that the U.S. government must protect our free-market system?
Answers will vary. Thoughtful responses should include the idea that no economy exists in a pure form, and that the U.S. economy is more accurately called a mixed economy or mixed capitalism. Some important elements of the U.S. economy, like public schools, transportation infrastructure, and some utilities, are socialized and have been for many years. (LO: 2, AACSB: Analytical thinking)

2-22. If you work as an independent historical tour guide and have your clients use a mobile app you created that provides augmented reality enhancements to your walking tours, how might you use embedded finance in your business?
With embedded finance, the financial aspect of a transaction is seamlessly built into the retail experience in such a way that it requires little or no effort on the part of the consumer. For your app, you could have the various augmented reality opportunities available for purchase, like in-app purchases in a game app. (LO: 7, AACSB: Analytical thinking)

2-23. Concept Integration. What effect might the technological environment discussed in Chapter 1 have on the equilibrium price in a given market?
Students' answers may vary; however, the following provides a possible scenario:

- Technological advances may help reduce the cost of producing goods and services and therefore increase the supply for a given market at every price, thus moving the equilibrium point as well. (LO: 3, AACSB: Analytical thinking)

Expand Your Knowledge

Discovering Career Opportunities
Thinking about a career in economics? Find out what economists do by reviewing the *Occupational Outlook Handbook* in your library or online at **www.bls.gov/ooh**. This is an authoritative resource for information about all kinds of occupations. Search for "economists" and then answer these questions:

2-24. Briefly describe what economists do and their typical working conditions.
Economists study the production and distribution of resources, goods, and services by collecting and analyzing data, researching trends, and evaluating economic issues. They also interpret and forecast market trends, advise businesses, governments, and individuals on economic topics, design policies or make recommendations for solving economic problems, and write articles for publication in academic journals and other media sources.

Economists apply economic analysis to issues within a variety of fields, such as education, health, development, and the environment. Some economists study the cost of products, healthcare, or energy. Others examine employment levels, business cycles, or exchange rates. Still others analyze the effect of taxes, inflation, or interest rates.

Economists held about 16,900 jobs in 2021. Economists typically work independently in an office. However, many economists collaborate with other economists and statisticians, sometimes working on teams. Most economists work full time during regular business hours, but occasionally they work overtime to meet deadlines. (LO: 1)

2-25. What is the job outlook for economists? What is the average salary for starting economists?
Employment of economists is projected to grow 6 percent from 2021 to 2031, about as fast as the average for all occupations. Job prospects should be best for those with a master's degree or Ph.D., strong analytical skills, and experience using statistical analysis software.

Businesses and organizations across many industries use economic analysis and quantitative methods to analyze and forecast business, sales, and other economic trends. Demand for economists should come from the increasing complexity of the global economy, additional financial regulations, and a more competitive business environment.

The median annual wage for economists was $105,630 in 2021. The median wage is the wage at which half the workers in an occupation earned more than the amount and half earned less. (LO: 1, AACSB: Ethical understanding and reasoning)

2-26. What training and qualifications are required for a career as an economist? Are the qualifications different for jobs in the private sector than for those in the government?
A master's degree or Ph.D. is required for most economist jobs. Positions in business, research, or international organizations often require a combination of graduate education and work experience.

Students can pursue an advanced degree in economics with a bachelor's degree in a number of fields, but a strong background in math is essential. A Ph.D. in economics may require several years of study after earning a bachelor's degree, including completion of detailed research in a specialty field.

Candidates with a bachelor's degree qualify for some entry-level economist positions, including jobs with the federal government. An advanced degree is sometimes required for advancement to higher-level positions. (LO: 1)

Intelligent Business Technology: Robo Advisers
Research the techniques used to create robo advisers (often spelled *robo advisors*). **In a brief report, explain how these fintech tools work and how they can promise to help ordinary investors make better financial decisions without the cost of a professional financial adviser.**

Students' answers will vary but should touch on the following points: assessing each client's risk tolerance, resources, and objectives; removing emotion-driven decision-making; and automating tasks that are time-consuming to do manually. (LO: 7, AACSB: Information technology)

Practice Your Skills

Resolving Ethical Dilemmas
Assume you're launching a robo adviser automated investment service for young adults in which you offer three portfolio models with varying levels of risk and

potential reward: low risk/low reward, medium risk/medium reward, and high risk/high reward. However, these are only models, and the past performance of various investment approaches is no guarantee of future results. Even the low-risk portfolio could encounter steep losses if the stock market goes into a long-term decline. Conversely, there is no guarantee that the high-risk portfolio will yield high returns. **In a brief memo, explain how you would present the three portfolios to your potential customers**.

Students' answers will vary but should make clear the aims of each account while making clear that past performance is no guarantee of future results. They should also touch on the following points regarding robo advisers:

- aim to improve investor returns by removing emotion-driven decision-making
- save time and money by automating tasks that are time-consuming to do manually
- automatically rebalance portfolios over time
- automatically sell investments that have declined in value and use the loss as a tax write-off, allowing the ability to buy back into market.

(LO: 7, AACSB: Information technology)

Sharpening Your Communication Skills

Identify any mobile app that falls within the realm of fintech. Identify its target market, basic features, and user benefits that set it apart in the marketplace. Assume that you write a blog on personal finance for young adults, and use the information you found about this app to write a 100- to 200-word overview of the product.

Students' answers will vary based on the mobile app that students choose, but the overview must include target market, standard features, and user benefits that distinguish it from other apps in the marketplace. (LO: 7, AACSB: Written and oral communication)

Building Your Team Skills

Economic indicators help businesses and governments determine where the economy is headed. As part of a team assigned by your instructor, analyze the following headlines for clues to the direction of the U.S. economy:

- "Housing Starts Lowest in Months"
- "Fed Lowers Discount Rate and Interest Rates Tumble"
- "Retail Sales Up 4 Percent Over Last Month"
- "Business Debt Down from Last Year"
- More Manufacturers Showing Interest in Upgrading Production Equipment"
- "Local Economy Sinks as Area Unemployment Rate Climbs to 9.2 Percent"
- "Computer Networking Firm Reports 30-Day Backlog in Installing Business Systems"

Is each item good news or bad news for the economy? Why? What does each news item mean for large and small businesses? Report your team's findings to the class. Did all the teams come to the same conclusions about each headline? Why or why not? With your team, discuss how these different perspectives might influence the way you interpret economic news in the future. (LO: 6, AACSB: Analytical thinking)

- **Housing Starts Lowest in Months**
  This indicates that consumers are not very confident about the future, so they are "staying put" rather than building new houses.

- **Fed Lowers Discount Rate and Interest Rates Tumble**
  This headline indicates that aggregate demand is slow. In order to boost the economy and encourage firms to invest more, the Fed lowers the discount rate and other interest rates that follow.

- **Retail Sales Up 4 Percent Over Last Month**
  Increase in sales indicates a healthy economy with employment rates rising and rising consumer confidence as a result. Some inflationary pressure may result.

- **Business Debt Down from Last Year**
  This indicates that business owners are less confident and less willing to take on debt.

- **More Manufacturers Showing Interest in Upgrading Production Equipment**
  This headline indicates that businesses are replacing labor with machines.

- **Local Economy Sinks as Area Unemployment Rate Climbs to 9.2 Percent**
  This indicates that high unemployment rate often contributes to lower consumer spending, resulting in a shrinking local economy.

- **Computer Networking Firm Reports 30-Day Backlog in Installing Business Systems**
  This indicates growth in the economy, as businesses are growing.

Developing Your Research Skills

Some career paths have higher unemployment risks during the ups and downs of economic fluctuations. **Research three business careers that should be relatively "recession proof" in the coming years, meaning that employment is unlikely to drop dramatically (or may even increase) during a recession. Summarize your findings in a one-page report.**

Students' answers may vary but three likely such careers are healthcare, education, and green technology. (LO: 4, AACSB: Analytical thinking)

CHECKPOINTS

LEARNING OBJECTIVE 1: Define *economics,* explain why scarcity is central to economic decision-making, and identify the major ways of measuring economic activity.

Critical thinking:
(1) Why is entrepreneurship considered a factor of production?
Entrepreneurship is considered a factor of production because it is finite, just like the other four factors of production, in that not everyone has the spirit of innovation, the initiative, and the willingness to take the risks involved in creating and operating businesses. Like the other four factors, entrepreneurship can also be used to satisfy society's needs.

(2) Why is GDP considered a more accurate measure of a country's economic health than GNP?
GDP is considered a more accurate measure since it includes goods and services produced within a country's borders and enables a nation to evaluate its economic policies and to compare its current performance with prior periods or with the performance of other nations.

It's your business:
(1) Did you consider opportunity cost when you chose the college or university you are currently attending?
Students' responses will vary depending on personal experiences.

(2) What trade-offs did you make in order to read this chapter at this exact moment in your life? (Think about the decisions you made to get to a point in your life where you're taking a business course.)
Students' responses will vary depending on personal experiences.

LEARNING OBJECTIVE 2: Define *economic system*, and explain the government's role in a free-market economy.

Critical thinking:
(1) Why are no economies truly free, in the sense of having no controls or restrictions?
Economies are not truly free because in all economies, local, state, national, and even international governments intervene in the economy to various degrees to accomplish goals that leaders deem socially or economically desirable. These interventions include taxation and price controls.

(2) What are some possible risks of privatizing basic services such as prisons or the transportation infrastructure?
Some possible risks include that the private entities that are in control of transportation infrastructure could sacrifice infrastructure quality and safety to minimize costs and maximize profits. They may also be entities controlled by foreign governments that may not be friendly towards the U.S. or even become hostile both politically and militarily.

It's your business:
(1) What are your emotional reactions to the terms *capitalism* and *socialism*? Explain why you feel the way you do.
Students' responses will vary depending on personal opinions.

(2) Would you rather pay lower taxes and accept the fact that you need to pay for many services such as health care and education, or pay higher taxes with the assurance that the government will provide many basic services for you? Why?
Students' responses will vary depending on personal opinions.

LEARNING OBJECTIVE 3: Explain the interaction between demand and supply.

Critical thinking:
(1) How does the interaction of demand and supply keep a market in balance, at least approximately and temporarily?
The interaction between demand and supply keeps a market in balance through the equilibrium point.

(2) If the prices of complementary products for a given product go up, what effect is this increase likely to have on demand for that product?
This increase will likely reduce the demand for that product.

It's your business:
(1) Are there any products or brands you are so loyal to that you will purchase them at almost any price? Will you accept less expensive substitutes?
Students' responses will vary depending on personal opinions.

(2) Have you ever purchased something simply because it was on sale? Why or why not?
Students' responses will vary depending on personal experiences.

LEARNING OBJECTIVE 4: Identify four macroeconomic issues that are essential to understanding the behavior of the economy.

Critical thinking:
(1) Are colleges and universities an example of pure competition or monopolistic competition? Why?
They are monopolistic competition since they offer products that can be distinguished from competing products in at least some small way, such as strengths in certain majors or facilities.

(2) Are monopolies always harmful to consumers? Why or why not?
Not necessarily. There are some government-sanctioned monopolies such as utilities and the U.S. Postal Service that are not really harmful to consumers.

It's your business:
(1) What state of the business cycle is the economy currently in? Is this influencing your career plans?
Students' responses will vary depending on personal experiences and opinions.

*(2) Have you ever been unemployed (at a time when you were actively looking for work)? Which of the four categories of unemployment would you have fallen under?
Students' responses will vary depending on personal experiences and opinions.
**Students may elect not to answer this question.*

LEARNING OBJECTIVE 5: List the four financial functions of money, and define two key measures of the money supply.

Critical thinking:
(1) What might happen if people lose trust in their country's currency?
The practical value of money stems from two key properties: liquidity and trust. The only reason people accept money as payment, essentially just pieces of paper with ink splashed on it, is because they trust that the bill being handed over represents a certain amount of real economic value. If that trust were lost, people could refuse to accept currency as payment and grind the economy to a halt.

(2) Why couldn't you buy your groceries using an amount of gold of equal value to the cost of the items you want to purchase?
At one point in U.S. history, the value of that paper rectangle would've been tied to the price of gold and you could exchange your bills for a specific amount of gold, but the value of money is no longer linked to gold. Instead, there is basically a mutual agreement that the bill represents a certain amount of exchangeable value, so the grocery store can take your money and use it to pay its bills, and so on through the entire economy.

It's your business:
(1) What actions have you had to take in your own life to overcome liquidity problems?
Students' responses will vary depending on personal experiences.

(2) Did those actions negatively affect your financial health later on? Explain your answer.
Students' responses will vary depending on personal experiences.

LEARNING OBJECTIVE 6: Explain the role of the Federal Reserve System, list the major types of banking institutions, and summarize banking's role in the economy.

Critical thinking:
(1) Why would a company's financial managers want to pay attention to the federal funds rate?
Financial managers would want to pay attention to the federal funds rate because it is a fundamental driver of economic behavior, influencing short- and long-term interest rates, foreign exchange rates, and inflation.

(2) Rather than promising to support any "too-big-to-fail" banks, could the federal government instead simply warn everyone that doing business with one of these firms is risky? Why or why not?
If the federal government simply warned people that doing business with a too-big-to-fail bank is risky, people wouldn't necessarily hear or heed this warning.

It's your business:
(1) If you are hoping to get a loan to expand your business, will you welcome the news that the Fed is raising the discount rate? Why or why not?
A business owner in need of a loan would not be happy about the Fed raising the discount rate. Raising the discount rate discourages loans and therefore tightens the money supply; lowering it encourages lending and expands the money supply.

(2) Would you put any of your life savings into cryptocurrency? Why or why not?
Students' responses will vary depending on personal experiences and opinions.

LEARNING OBJECTIVE 7: Define *fintech*, and discuss five ways that financial institutions are innovating with digital technology.

Critical thinking:
(1) If a substantial portion of the public has been underserved by conventional banks, as many in fintech assert, why shouldn't the Fed or other regulatory bodies step in and require banks to serve these customers?
Forcing banks to serve these customers at a financial loss could destabilize the economy as a whole.

(2) What questions should anyone ask before moving personal funds from a conventional bank to a neobank?
Before moving funds to a neobank, customers should ask whether the neobank is FDIC (or otherwise) insured, what fees may apply, what services are provided, and what transactions are possible.

It's your business:
(1) Do you use a mobile banking app now? If so, what are its advantages and disadvantages compared to doing your banking in person at a physical bank branch?
Students' responses will vary depending on personal experiences and opinions.

(2) Would you be comfortable leaving your retirement portfolio in the hands of a robo adviser? Why or why not?
Students' responses will vary depending on personal experiences and opinions.