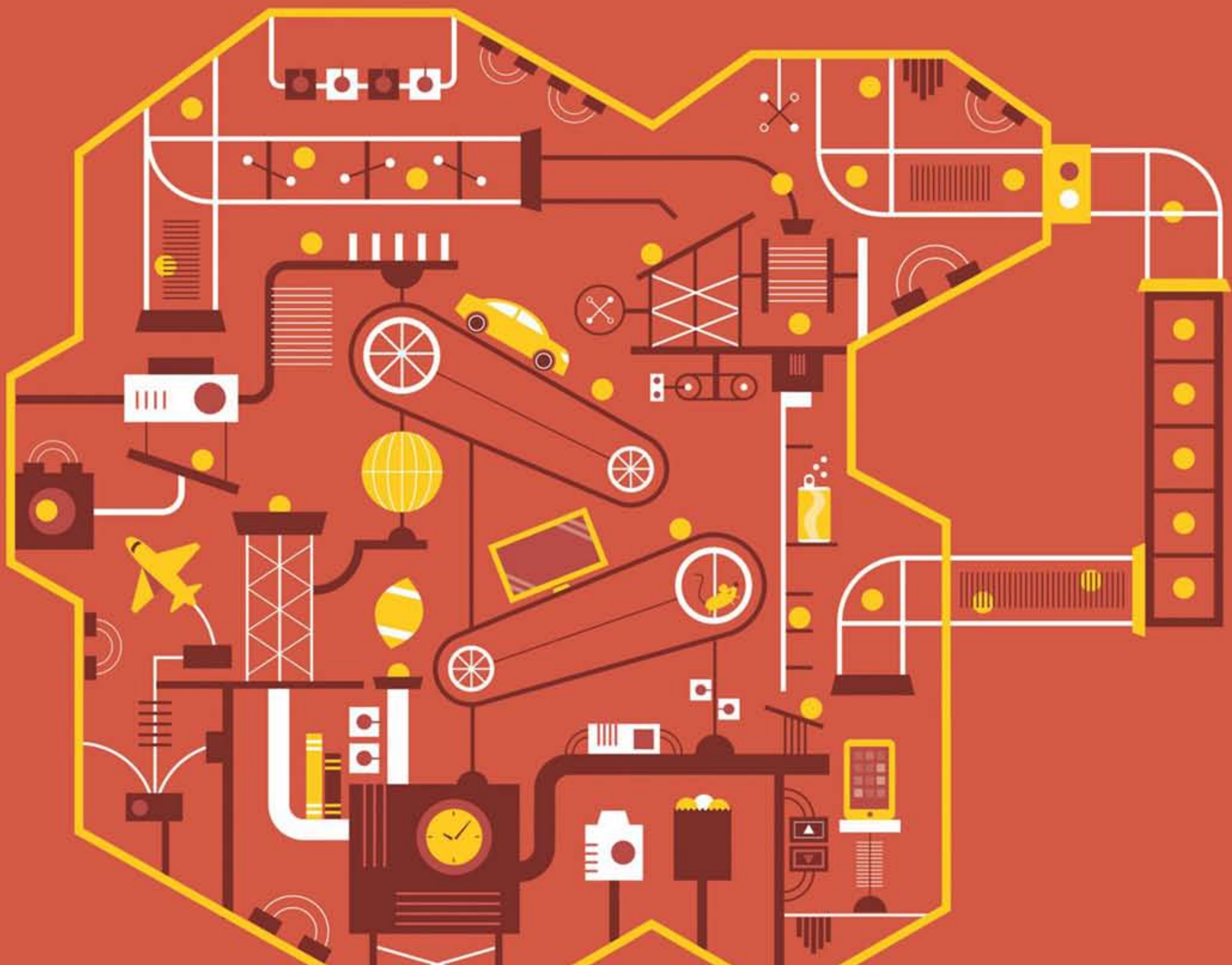
Essentials of Economics



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Essentials of Economics

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To my father, who gave up a successful career in business and found his passion teaching finance. Thanks for encouraging me to become a teacher as well.

D.M.

To Krista: Many women do noble things, but you surpass them all.—Proverbs 31:29

L.C.

To Christie: This life is more amazing because of you.

B.O.

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PREFACE

We are teachers of economics. That is what we do. We teach students of all majors and interest levels, and have done so for, well . . . a very long time.

The Mateer/Coppock *Principles of Economics* text, on which this book is based, has been a resounding success. It has been adopted widely because it is a book by teachers for teachers, and it has a strong student focus. The task of adapting this text for the survey level has followed the same recipe for success.

The one-semester survey course presents unique challenges to instructors. For most students, this course is unrelated to their major. It will be the only economics course that they will ever take, and many approach it with trepidation, perhaps even genuine fear.

While this challenge is very real, there are also unique opportunities. Beyond this course, students will likely have no further formal education on many of the important issues that arise in this class, such as why the price of college keeps rising, why wages are stagnant, how monetary policy and fiscal policy affect them, and why credit-card debt can be a very serious problem. Economics and the economic way of thinking are extremely important for students, even if they don't yet know that. Teaching this subject to non-business students is an opportunity to help them learn about topics that will affect their lives far beyond graduation.

Thus, the survey course is not the same thing as a principles course, mainly because it is terminal. It needs to be taught differently from the principles course, and a survey text needs to be fundamentally different from a principles text. When we reviewed the existing survey books, we found that most are slimmed-down versions of existing principles texts. While that approach to writing a survey text helps to ensure that relevant topics are covered, simply transferring material from a principles book is not an effective approach for helping students learn economics in the survey course.

Why? Simply condensing a principles textbook doesn't take into account the areas that students consistently find problematic. Understanding cost curves is important for business and economics students, but survey students do not need to cover this topic in the same detail. They need to see graphs, but these graphs should be streamlined and easy to read, with no extraneous information. Similarly, while it is important for a business or economics major to know the minutiae of the market-structure models, a basic knowledge of the differences between competition and monopoly is more than sufficient for students who are getting the broader picture that comes in the survey course—which is, after all, a *survey* of economics.

Our years of experience in the classroom—both the principles classroom and the survey classroom—have taught us an important lesson: when ideas resonate with students, and stick with them through reinforcement, students are more likely to carry the basic ideas of economics into their lives beyond the classroom. In transforming the Mateer/Coppock principles text into a survey text, we had one key goal in mind: to write a textbook that connects to students where they are. No other text that we know of uses the experiences of modern students to reinforce new terminology with examples from everyday life in everyday language. While they may not know it, students are key participants in the economy and their experiences should be the platform from which our instruction begins. *Essentials of Economics* uses examples that resonate in students' lives (for instance, the market for cell phones, student-loan and credit-card payments, computing devices, ride-sharing).

So, ultimately, we wanted to develop a textbook that would engage students, one that is enjoyable to read week in and week out, a concise presentation of the discipline that encourages students to think about how economics affects their lives. As economists, we know that the "dismal science" isn't really dismal at all; rather, it's full of insights that help us better understand ourselves and the events going on around us. *Essentials of Economics* will help your students learn to think like economists by showing them how to make better choices in the workplace, their personal investments, their long-term planning, their voting—indeed, in all their critical choices. We hope that *Essentials of Economics* will be your partner in success in helping your students live more fulfilled and satisfying lives.

What does this classroom-inspired, student-centered text look like?

A Simple Narrative

First and foremost, we keep the narrative simple. We always bear in mind all those office-hour conversations with students where we searched for some way to make sense of this foreign language—for them—that is economics. It is incredibly satisfying when you find the right expression, explanation, or example that creates the "Oh, now I get it . . ." moment with your student. We have filled the narrative with those successful "now I get it" passages.

Trade-offs are important at many levels. For instance, there is a trade-off between security and convenience. When you use your credit card or shop online, there is the possibility that your personal information will be compromised. Companies store your personal data electronically when they issue credit cards. It's a fact of life in the information age: whenever data is stored, that data needs to be protected. If it isn't, it can be stolen.

Swipe a credit card, compromise your financial data?

There have been many news stories about breaches of information security. In late 2013, hackers stole financial information for over 70 million Target customers by compromising credit-card readers with a malicious software code, sometimes called malware. When the credit card was swiped, the customers' information was made available to the hackers. This lapse in security cost Target over $200 million in public-relations expenses, damage control, and updated technology, not to mention an untold loss of sales as customers worried that the company hadn't fixed the problem. However, Target could have easily prevented the problem. If Target had accepted only cash for transactions, there would have been no credit-card information to steal. Taking down the company's web site would have prevented hackers from stealing information via the Internet. Target could have then advertised itself as the most secure major retailer in America. No hacker could ever steal customers' financial information from Target simply because Target wouldn't have that information. However, taking down its web site or not accepting credit cards would severely harm Target's bottom line. Customers who are used to the convenience of using credit cards would stop patronizing the store. Online shoppers would surf to another store's web site and buy there instead. In the current environment, customers are willing to trade off security for convenience. How do we know this? They keep shopping on the Internet, and many customers have returned to Target.

Examples and Cases That Resonate and Therefore Stick: Economics in the Real World

Nothing makes this material stick for students like good examples and cases, and we have peppered our book with them. They are not in boxed inserts. They are part of the narrative, set off with an **Economics in the Real World** heading.

eCOnOmiCs in The Real WORld

Why lebron James has someone else help him move

LeBron James is a pretty big guy—6′8″ and roughly 250 pounds. In the summer of 2014, he decided to move from Miami to Cleveland to play with his hometown basketball team. Given his size and strength, you might think that LeBron would have moved his household himself. But despite the fact that he could replace two or more ordinary movers, he kept playing basketball and hired movers. Let's examine the situation to see if this was a wise decision.

Will LeBron ever ask his teammates, "Guys . . . can you help me move this weekend?"

LeBron has an absolute advantage in both playing basketball and moving furniture. But, as we have seen, an absolute advantage doesn't mean that he should do both tasks himself. Even though his move happened during the off-season, taking time away from his practice and workout schedule is an opportunity cost he has to face (not to mention the possibility of injury). The movers, with a much lower opportunity cost of their time, have a comparative advantage in moving—so LeBron made a smart decision to hire them!

However, when LeBron retires, the value of his time will be lower. If the opportunity cost of his time becomes low enough, it's conceivable that the next time he changes residence, he'll move himself rather than pay movers. ✷

economicS in the ReAL WoRLD

General motors Sales Up in china, but Down in europe

General Motors, one of the world's largest car manufacturers, now sells over 250,000 vehicles per month in China. GM announced in November 2014 that it had already sold more than 3 million vehicles in China, well ahead of its 2013 numbers. Sales of the Cadillac line were particularly strong, rising 58% from 2013. This trend is contrary to the growth of the luxury car's performance in the United States, where 2014 sales were slightly down from 2013.

GM's Buick product line does exceptionally well in China. Buick now sells about four times as many cars in China as in the United States. This sales growth for GM is thanks in large part to the growing incomes of many Chinese citizens.

In China, people say that they would rather drive a Buick.

The bad news for GM comes from Europe. Increased sales in China have been offset by slowing sales in Europe, where many economies were recovering from recessions, but only mildly. By mid-2014, GM was continuing to see declining sales of its cars in Europe. ✷

Reinforcers: Practice What You Know

Practice What You Know exercises allow students to self-assess while reading and provide a bit of hand-holding; they ask questions and then provide worked-out solutions. While other survey texts have in-chapter questions, no other book consistently frames these exercises within real-world situations to which students relate.

pRActice WHA t YoU KnoW

externalities: Fracking

In 2003, energy companies began using a process known as hydraulic fracturing, or fracking, to extract underground reserves of natural gas in certain states, including Pennsylvania, Texas, West Virginia, and Wyoming. Fracking involves injecting water, chemicals, and sand into rock formations more than a mile deep. This process taps the natural gas that is trapped in those rocks, allowing it to escape up the well. The gas comes to the surface along with much of the water and chemical mixture, which now must be disposed of. Unfortunately, the chemicals in the mix make the water toxic. Consequently, as fracking activities have expanded to more areas, controversy has grown about the potential environmental effects of the process.

How would a natural gas well affect your local area?

Question: What negative externalities might fracking generate?

Answer: People who live near wells worry about the amount of pollutants in the water mixture and the potential for them to leach into drinking water supplies. Additionally, the drilling of a well is a noisy process. Drilling occurs 24 hours a day for a period of a few weeks. This noise pollution affects anyone who lives close by. Another issue is that the gas has to be transported away from the well in trucks. Additional truck traffic can potentially damage local roads.

Question: What positive externalities might fracking generate?

Answer: Fracking has brought tremendous economic growth to the areas where it is occurring. The resulting jobs have employed many people, providing them with a good income. Local hotels and restaurants have seen an increase in business as temporary employees move from one area to another. As permanent employees take over well operation, housing prices climb as a result of increasing demand. Rising house prices benefit local homeowners.

pRActice WHA t YoU KnoW

Value of the marginal product of Labor: Flower Barrettes

Question: Penny can make five flower barrettes each hour. she works eight hours each day. penny is paid $75.00 a day. The firm can sell the barrettes for $1.99 each. What is penny's VMP of labor? What is the barrette firm's marginal profit from hiring her?

Answer: In eight hours, Penny can make 40 barrettes. Since each barrette sells for $1.99, her value of the marginal product of labor, or VMP_{labor}, is $40 \times \$1.99$, or $79.60. Since her VMP_{labor} is greater than the daily wage she receives, the marginal profit from hiring her is $\$79.60 - \$75$, or $4.60.

How many flower barrettes could you make in an hour?

Additional Reinforcers: Economics for Life, Economics in the Media

Two additional elements will help to reinforce the material with your students. The first, **Economics for Life**, appears near the end of each chapter and applies economic reasoning to important decisions that your students will face in their early adulthood, such as buying or leasing a car. The second, **Economics in the Media**, analyze classic scenes from movies and TV shows that deal directly with economics. One of us has written the book (literally!) on economics in the movies, and we have used these clips year after year to make economics stick with students.

economicS FoR LiFe

Recession- poof Your Job

Recessions are hard on almost everyone in an economy, but there are ways you can shield yourself from unemployment.

The first thing you need is a college degree. In October 2014, the U.S. national unemployment rate was 5.9% for the entire labor force, but just 3.1% for college graduates.

Unemployment can occur in the macroeconomy when wages are sticky, meaning that they don't respond to changes in the economy. This outcome applies to individuals too. If you do happen to lose your job, you may need to consider accepting a lower wage or even a change of career so as to obtain another job. The more flexible your wage range, the less likely you are to experience long-term unemployment.

Finally, if you lose your job, be sure to take advantage of all the modern job-search tools available today. There are millions of jobs available, even when unemployment rates are very high—you just need to know how to find those jobs. For example, the web site indeed.com turns up thousands of job vacancies for almost any job description. As of November 2014, searching for either "accountant" or "CPA" yielded nearly 39,000 results, a search for "civil engineer" yielded 13,732 results, and "marketing" yielded 289,884 results.

Don't let this happen to you!

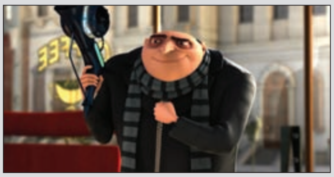
economics in tHe meDia

How Does a criminal get a Loan?

Despicable Me

In the movie *Despicable Me* (2010), we find the aging villain Gru trying to compete with other, younger villains. His plan to steal the moon would get him back in the criminal headlines, but he doesn't have the finances to put his plan into action. Like any entrepreneur looking to get his business venture off the ground, Gru goes to the bank hoping to secure a loan. Being a villain, he goes to the Bank of Evil (Formerly Lehman Brothers) and presents his business plan. While impressed with his audacity, Mr. Perkins, the bank manager, insists on seeing more progress before extending the loan. Gru has financed other schemes through the bank that haven't panned out, and Mr. Perkins is understandably reluctant to lend Gru more money when the return on investment is so uncertain. Mr. Perkins also informs Gru that there are better risks in the market—villains with more recent successes who are also seeking funding. Therefore, Mr. Perkins demands to see the shrink ray, which Gru will use in his plot to steal the moon, as a form of collateral.

This animated version of the lending process isn't all that far off from what happens in the real world. Banks do want to lend to businesses, but they want to make sure a new business has a chance of success. Otherwise, the borrower will be less likely to repay the loans, and that is bad for the bank—even an evil bank.


Gru: Evil villain, motivated entrepreneur, or both?

Bonus Chapter: Personal Finance

Too many students (and adults) have little to no understanding of the massive debts they can incur via student loans and credit-card debt. Chapter 19, "Personal Finance," is a primer on student and consumer borrowing, interest rates, personal debt, and home purchases. The chapter covers both the short run and the long run: Students who read this chapter will think twice before making their next credit-card purchase while also thinking about the decision to rent vs. buy and how to save for retirement.

The Costs and Benefits of Home Ownership

Home ownership is expensive. There is homeowner's insurance to pay and property taxes to pay. If there is damage to your home or property, you have to pay to have it fixed. Leaks in the basement need to be repaired, the driveway needs to be cleared during the winter, the grass needs to be cut, occasional broken windows need to be replaced—and the homeowner pays for (or does) all of this. Homeowners also have to pay for utilities—water, sewer, electric, cable, and trash pick-up. That adds up!

As a homeowner, fixing this is your responsibility.

If you're a renter, many of these headaches go away. You pay a fixed amount for your rent, which may include some of your utilities and almost always provides for snow removal and lawn care. In addition, you don't have to pay property taxes directly (although your rent does pay part of them) or pay for homeowner's insurance (although you might want to buy renter's insurance to guard against theft or fire).

Why do so many people want to own a home when there are so many added costs associated with the purchase? Much of this decision has to do with building equity. There are also tax implications to owning your own home. Let's look at both of these issues.

How Do Interest Rates Affect Borrowers?

Now we'll return to your credit card bill. Let's say that the **minimum payment**, the smallest amount the credit card company requires you to pay each month so as not to damage your credit score, is \$2. "Fine," you say to yourself. "That means it'll take about five months to pay off my \$10.50 Blake Shelton music purchase." You calculate that \$2 a month for five months equals \$10, and if you add 50 cents to the last payment you're free and clear. That would be the case if interest payments weren't included; however, there are interest payments to make, and you need to take that into consideration. But here is where you can get yourself into real trouble if you make only the minimum payment every month: the interest *compounds*. In the context of borrowing, **compounding** means that interest is added to your balance, so you end up paying interest on the increasingly higher balance.

On the saver's side, compounding interest can be a very good thing. When you're saving money, compounding interest helps you save more. (We'll see how this type of compounding works a little later in this chapter.) Unfortunately, when you're borrowing money, compounding interest can cause your repayment plan to drag on and on and on.

The **minimum payment** is the smallest amount that a lender requires a borrower to pay each month so as not to damage the borrower's credit score.

compounding of interest (in the context of borrowing money) means that interest is added to an account balance so that the borrower ends up paying interest on an increasingly higher balance. In the context of saving, compounding means that interest is added to your total savings: you get paid interest on your savings plus any prior interest earned.

Big-Picture Pedagogy

Chapter-Opening Misconceptions

When we first started teaching we assumed that most of our students were taking economics for the first time and were therefore blank slates on which we could draw. We were wrong. We now realize that students come to our classes with a number of strongly held misconceptions about economics and the economy, so we begin each chapter recognizing these misconceptions and then establishing what we will do to help students onto the path of accurate knowledge.

CHAPTER 4 market efficiency

misconception

The minimum wage helps everyone earn a living wage.

You are probably familiar with the minimum wage, which is an example of a *price control*. If you've ever worked for the minimum wage, you probably think that raising it sounds like a great idea. You may support minimum-wage legislation because you believe it will help struggling workers to make ends meet. After all, it seems reasonable that firms should pay a living wage to cover necessities.

Price controls are not a new idea. The first recorded attempt to control prices was four thousand years ago in ancient Babylon, when King Hammurabi decreed how much corn a farmer could pay for a cow. Similar attempts to control prices occurred in ancient Egypt, Greece, and Rome. Each attempt ended badly. In Egypt, farmers revolted against tight price controls and intrusive inspections, eventually causing the economy to collapse. In Greece, the Athenian government set the price of grain at a very low level. Predictably, the quantity of grain supplied dried up. In 301 CE, the Roman government under Emperor Diocletian prescribed the maximum price of beef, grains, clothing, and many other items. Almost immediately, markets for these goods disappeared.

History has shown us that price controls generally do not work. Why? Because they disrupt the normal functioning of the market. By the end of this chapter, we hope you will understand the importance of market efficiency and how price controls (such as minimum-wage laws) erode that efficiency. Higher wages or lower prices may sound good on the surface, but there are always trade-offs. However, interfering with markets can lead to unintended consequences.

Big Questions

After the opening misconception, we present the learning goals for the chapter in the form of **Big Questions**. We come back to the Big Questions in the conclusion to the chapter with a summary titled **Answering the Big Questions**.

BIG QUESTIONS

- What are the roles of profits?
- How are profits and losses calculated?
- How much should a firm produce?

ANSWERING THE BIG QUESTIONS

What are the roles of profits?

- Profits provide the financial incentive for entrepreneurs to enter a business. Without the prospect of financial gain, very few people would take the risk of starting a business.
- Profits also direct (allocate) resources to businesses that are producing things consumers want. If you don't make a profit, it's difficult to afford the inputs necessary to continue production.
- Profits determine which companies stay in business and which ones do not. A company that isn't making profits isn't covering its costs and will have to shut down.

How are profits and losses calculated?

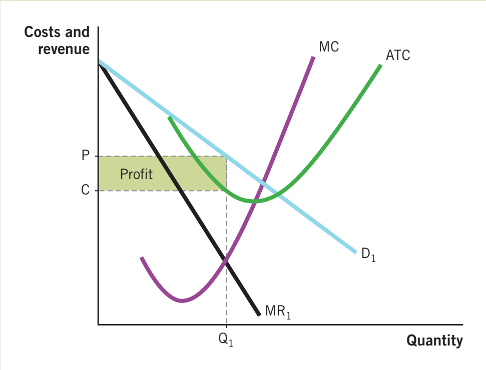
- Profits and losses are determined by calculating the difference between expenses and revenue.
- Economists break cost into two components: explicit costs, which are easy to calculate, and implicit costs, which are hard to calculate. Economic profit accounts for both explicit costs and implicit costs. If a business has an economic profit, its revenues are larger than the combination of its explicit and implicit costs.

Solved Problems

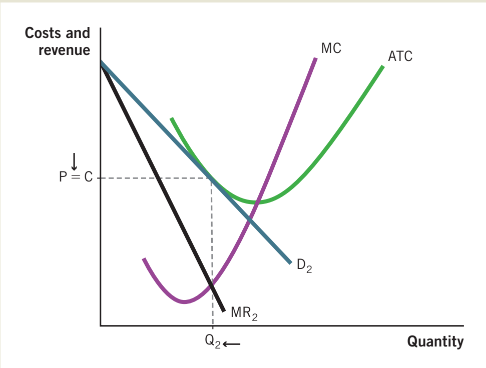
We conclude each chapter with a full set of problems, including at least two fully solved problems that appear on the last page of the chapter.

SOlVeD PRObleMS

6. There is a two-part answer here. The first graph shows the monopolist making a profit:



Now we show what happens if demand falls:



Lower demand causes the price to fall, the output to decline, and the profit to disappear. Note: When the demand curve falls, the marginal revenue curve falls as well.

9. The cardboard firm manufactures a product that is a component used mostly by other firms that need to package final products for sale. As a result, any efforts at advertising will only raise costs without increasing the demand for cardboard. This contrasts with the bookseller, who advertises to attract consumers to the store. More traffic means more purchases of books and other items sold in the store. The bookstore has some market power. In this case, it pays to advertise. A cardboard manufacturing firm sells exactly the same product as other cardboard producers, so it has no monopoly power, and any advertising expenses will only make its cost higher than its rivals'.

Essentials of Economics: Structure and Content

Essentials of Economics is structured as a typical survey text, with microeconomic topics preceding macroeconomics. The order of chapters will also appear familiar, but the similarities end there. This book has been specifically designed to meet the needs of students who will not be taking another course on economics. Therefore, the content focuses not only on understanding the basics, but also on how economics applies to life.

The first half of the text covers microeconomics. Basic introductory chapters address four ways to think like an economist (opportunity cost, marginal thinking, incentives, and trade creates value) and how economists approach the subject. These chapters explain what economics is all about and lay the groundwork for the rest of the book.

We then discuss markets, emphasizing the importance of markets as mechanisms for distributing goods. To avoid muddying the waters too much, we provide two appendixes, one on multiple demand and supply shifts, and another explaining basic concepts of elasticity. These topics can be addressed or not, depending on instructor preference.

While we have certainly not abandoned the use of graphs, we have minimized their complexity, especially when examining a firm's costs. The focus is on marginal decision-making, as this is the most important concept in the choices that businesses make. Market structure is streamlined to a single chapter. Including competitive and monopolistic firms in one chapter forced us to target the basics of market structure and be judicious with our use of graphs.

Following the discussion of market structures, we include a chapter on behavioral economics and game theory. An understanding of these topics is helpful to students who major in a number of areas (including psychology and political science) and the topics themselves have become quite popular as areas of research and discussion within the economics profession.

The labor chapter emphasizes the factors that affect wages. Students are paying a tremendous amount of money to attend college and if they hope to repay their student loans, an understanding of what and why people get paid will be of great use.

The chapter on the role of government helps students to consider the consequences of government action. In most survey texts, if this topic is covered at all, the solutions to market failure are deemed to be governmental in nature with few or no potential side effects. We highlight the idea that even the best intentions have costs and consequences.

The macro section of the text condenses the mundane measurements of the macroeconomy, providing an opportunity to explore how different parts of the macroeconomy work. We introduce GDP, unemployment, and inflation (the key macro variables) in the opening macro chapter, and then devote a single chapter to the measurement of all three variables.

The aggregate demand and supply chapter appears earlier in this text than in most. One reason for this decision is the idea that students will still recall how the basic market model works. With the usual tweaks, the aggregate model works in a similar fashion. Additionally, understanding the AD/AS tool before they learn about growth and policy will allow students to more effectively analyze the changes in the three major macro variables. Combining AD/AS with a discussion of business cycles also helps students understand the rationale behind policies designed to increase growth, when these policies should be adopted, and the problems with timing. In short, macroeconomic policy has a direct effect on students' lives, and a better understanding of policymakers' intentions will help students better understand government policies.

Students need to be aware that economics is always evolving. The tools we use are different today than those we used in the past. Bits of economic history are woven throughout the pages of this text, showing students how the great thinkers and past events influence modern economics. Adam Smith informs the role of government. Reference to the classical and Keynesian debates illustrates the difficulty that macro policymakers encounter when trying to reach consensus. The post–World War II change to activist policy, along with some background on the Fed, also provides context regarding how we arrived at our current state of economic understanding. Providing history and perspective is also a way to engage students from a variety of majors, from the liberal arts through the social sciences and beyond.

Because it is vitally important for students to have some idea of basic finance, the final chapter focuses on personal finance. The question arises: Why include such a chapter? The answer: When students think about economics, their first thoughts are not usually centered on GDP, market structure, or even incentives. Rather, they think of the stock market and money. Students who are not business oriented, and even some who are, expect that they will learn a little something about finance when they sign up for an economics class. And why shouldn't they? We say we want students to make better choices. Many of the bad choices people make involve their finances. So, let's provide them with some context to help them make better choices. The personal finance chapter does exactly that.

Supplements and Media

InQuizitive

InQuizitive isn't your average homework assignment. InQuizitive is a new formative, adaptive learning tool that improves student understanding of important learning objectives. Students progress through three different levels in each activity, are never allowed to give up on a question, and wager points as they go. Personalized quiz questions, game-like elements, and rich answer-specific feedback engage and motivate students as they learn.

InQuizitive for *Essentials of Economics* includes a variety of dynamic question types beyond basic multiple-choice. Image-click, numeric entry, and various graph-interpretation questions build economic skills and better prepare students for lectures, quizzes, and exams. The efficacy of formative assessment is backed by education and psychology research. Performance-specific feedback, varied question types, and gaming elements built into InQuizitive have been shown to increase student retention of material and student engagement. For more information on research supporting formative assessment, visit inquizitive.wwnorton.com.