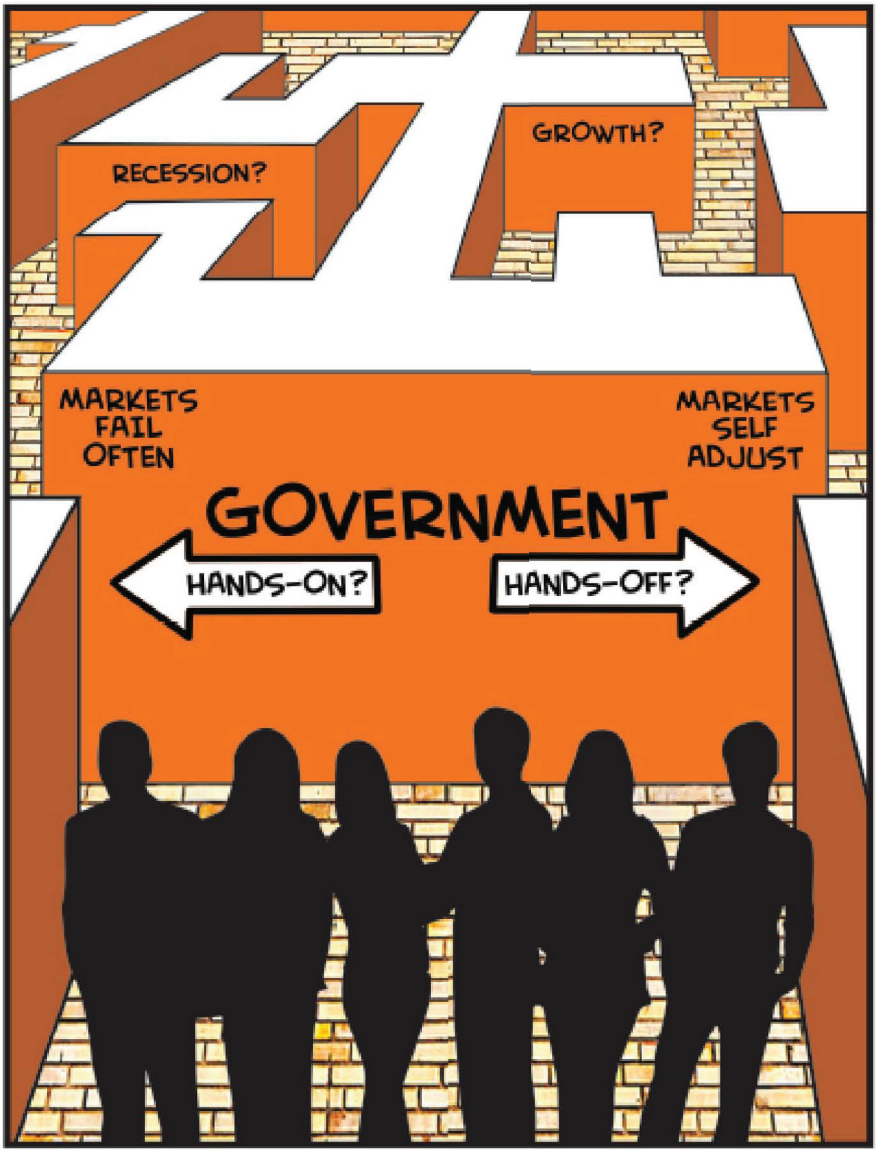
MACROECONOMICS FOR LIFE

SECOND EDITION

AVI J. COHEN



SMART CHOICES FOR ALL?

Instructor's Manual

INSTRUCTOR'S MANUAL

to accompany

Macroeconomics for Life: Smart Choices for All? Second Edition

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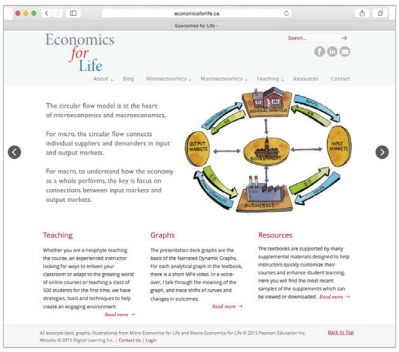
Overview

I wrote the *Economics for Life* textbooks to get more students interested in economics as a way of thinking that will help them make smarter choices in life and become economically literate citizens. If you are reading this, you probably share at least part of that goal.

I have taught Introductory Economics for over 30 years, in classrooms ranging from 30 to 500 students. I love my job, especially when I see that students are engaged, the moment when their eyes widen and the light bulb goes on because they "get it." To help them get it, I use motivational techniques, group work, technologies including big sidewalk chalk (so students at the back of classrooms can see what I am writing), video clips to stimulate discussion, online quizzing to help students keep up, clickers, one-minute papers, digital lecture capture …. The list is long at my age!

The Instructor's Manual (IM) will make it easier for you to prepare and teach introductory economics classes, whether you are new at the job or an experienced instructor looking for ways to enliven your classroom or adapt to the growing world of fully or partially online courses.

This IM is meant to be read on screen, so you can click web links and instantly access the resources. As well, the textbook site, economicsforlife.ca will be updated regularly with media stories, commentary and teaching strategies. Adopters of the textbook also have access to my library of old tests and exams. The IM is part of the rich package of resources for the *Economics for Life* textbooks, and is meant to be used in conjunction with those resources. Here is what you will find in the IM for every chapter of the textbook, followed by descriptions of the full set of Pearson resources.



www.economicsforlife.ca

Chapter Organization

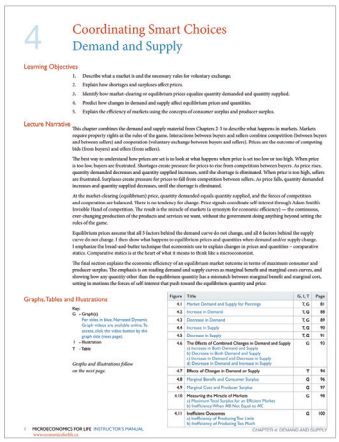
There is an IM chapter for each textbook chapter. All chapters share a standardized format. Chapter-wide resources are presented first, followed by resources for each section.

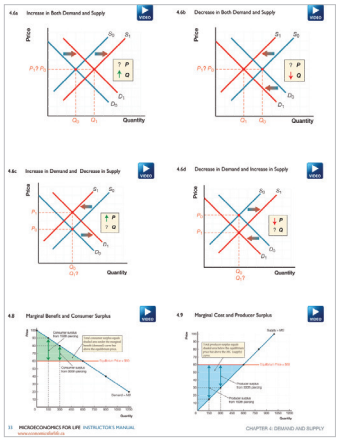
Learning Objectives

There is one learning objective for each section in the chapter.

Lecture Narrative

Rather than just list the main points in the chapter, it is helpful to hear the story that ties all of those points together. This will help you develop your own presentations in a more flowing and engaging way. I developed the lecture narrative together with the PowerPoint lecture deck (see PowerPoint details on Page 2).


4 Coordinating Smart Choices
Demand and Supply
Learning Objectives
Lecture Narrative
Graphs, Tables and Illustrations


4.6a Increase in Both Demand and Supply
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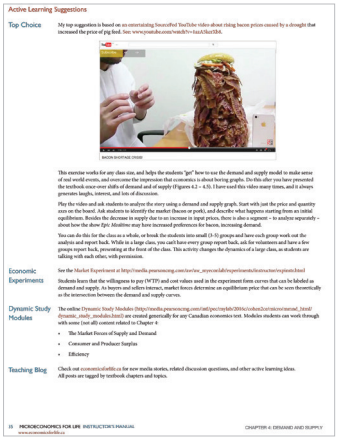
Graphs, Tables and Illustrations

A table lists all figures in the chapter (tables, graphs, illustrations) with page numbers. For titles in blue, Narrated Dynamic Graph videos are available online in MyEconLab on each Chapter Resources page.

Active Learning Suggestions – Top Choice

While economicsforlife.ca will have many suggestions and links for active learning, it takes time to search and evaluate options. So I thought it would be useful to pick one "Top Choice" for each chapter. These are activities (for example, auctions and group assignments) and resources (for example, media stories and YouTube videos) that I have used successfully in the classroom.


Active Learning Suggestions
Top Choice
Economic Experiments
Dynamic Study Modules
Teaching Blog

Economics Experiments

Experiments are a fun and engaging way to promote active learning and mastery of important concepts. MyEconLab has microeconomics experiments including single-player experiments that allow students to play against virtual players anywhere, and multiplayer experiments that can be done online or in class. Experiments available for this chapter are linked. See the sample on Page 3.

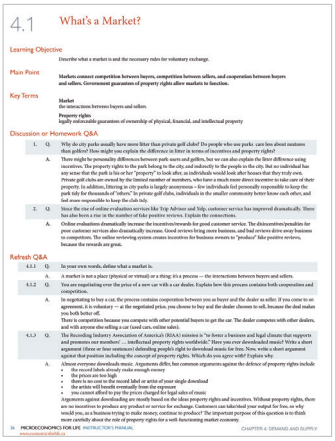
Dynamic Study Modules

Within MyEconLab, Dynamic Study Modules assess students' knowledge more granularly than with simple right or wrong questions. As students work through questions, the software assesses their knowledge and only shows questions that still require practice. Modules can be completed online using a computer, tablet, or mobile device. There is a list of relevant modules for each chapter. See the sample on Page 3.

Resources for Each Section of Each Chapter

For each section of a chapter, the IM has:

- Learning Objective
- Main Point – one sentence capturing the most important idea in the section. This main point also appears for students in red italics in the Study Guide Chapter Summary.
- Key Terms – all key terms and definitions that appear in the margins (and included in the Glossary and student digital flash cards) are listed.
- Discussion or Homework Questions and Answers – there are two questions (and answers) that can be used for classroom discussion or assigned as homework.
- Refresh Questions and Answers – the Refresh Questions appearning in the textbook as the end of each section are repeated, together with the answers that are available to students on MyEconLab.


4.1 What's a Market?

Learning Objective

Describe what a market is and the necessary rules for voluntary exchange.

Main Point

Markets connect competition between buyers, competition between sellers, and cooperation between buyers and sellers. Government guarantees of property rights allow markets to function.

Key Terms

Market
the interaction between buyers and sellers

Property rights
legally enforceable guarantees of ownership of physical, financial, and intellectual property

Discussion or Homework Q&A

1. Q. Why do city parks usually have more litter than private golf clubs? Do people who use parks care less about neatness than golfers? How might you explain the difference in litter in terms of incentives and property rights?

A. There might be personality differences between park users and golfers, but we can also explain the litter difference using incentives. The property rights to the park belong to the city and indirectly to the people in the city. But no individual has any sense that the park is his or her "property" to look after, as individuals would look after houses that they truly own. Private golf clubs are owned by the limited number of members, who have a much more direct incentive to take care of their property. In addition, littering in city parks is largely anonymous – few individuals feel personally responsible to keep the park tidy for thousands of "others." In private golf clubs, individuals in the smaller community better know each other, and feel some responsibility to keep the club tidy.

2. Q. Since the rise of online evaluations services like Trip Advisor and Yelp, customer service has improved dramatically. There has also been a rise in the number of fake positive reviews. Explain the connections.

A. Online evaluations dramatically increase the incentives/rewards for good customer service. The disincentives/penalties for poor customer services also dramatically increase. Good reviews bring more business, and bad reviews drive away business to competitors. The online reviewing system creates incentives for business owners to "produce" fake positive reviews, because the rewards are great.

Refresh Q&A

4.1.1 Q. In your own words, define what a market is.

A. A market is not a place (physical or virtual) or a thing; it's a process — the interactions between buyers and sellers.

4.1.2 Q. You are negotiating over the price of a new car with a car dealer. Explain how this process contains both cooperation and competition.

A. In negotiating to buy a car, the process contains cooperation between you as buyer and the dealer as seller. If you come to an agreement, it is voluntary — at the negotiated price, you choose to buy and the dealer chooses to sell, because the deal makes you both better off.
There is competition because you compete with other potential buyers to get the car. The dealer competes with other dealers, and with anyone else selling a car (used cars, online sales).

4.1.3 Q. The Recording Industry Association of America's (RIAA) mission is "to foster a business and legal climate that supports and promotes our members' ... intellectual property rights worldwide." Have you ever downloaded music? Write a short argument (three or four sentences) defending people's right to download music for free. Now, write a short argument against that position including the concept of property rights. Which do you agree with? Explain why.

A. Always varies. Arguments differ, but common arguments against the defence of property rights include
- the record labels already make enough money
- the prices are too high
- there is no cost to the record label or artist of your single download
- the artists will benefit eventually from the exposure
- you cannot afford to pay the prices charged for legal sales of music

Arguments against downloading are mostly based on the ideas property rights and incentives. Without property rights, there are no incentives to produce any product or service for exchange. Customers can take/steal your output for free, so why would you, as a business trying to make money, continue to produce? The important purpose of this question is to think more carefully about the role of property rights for a well-functioning market economy.

30 MICROECONOMICS FOR LIFE INSTRUCTOR'S MANUAL www.economicsforlife.ca CHAPTER 4: DEMAND AND SUPPLY

Additional Resources

PowerPoint Slides

The PowerPoint® slides are a set of lectures based on the textbook content, paralleling the Chapter Summary found in the end-of-chapter Study Guide material. I developed the content in the slides to enable you to prepare and present a focused, manageable lecture without having to wade through an excessive number of slides. The parallels between the slides and the Study Guide's Chapter Summary make it easier for students to connect the textbook material, your classroom presentation, and the Study Guide exercises. The design of the slides matches the textbook design so students connect more easily the material they have read and the content of your classroom presentation. The font sizes of the slides have been tested for readability from the back of a 500-seat lecture hall as well as on mobile devices.

There are two PowerPoint decks for each chapter.

1. The primary Lecture deck is a curated set of slides. Most analytical graphs have transitions that appear (like shifting curves) as you click through.
2. The secondary deck contains alternative versions of graphs in the lecture deck but paired with tables of numbers, and figures in the textbook that contain multiple graphs. Also included are all textbook Refresh Questions, which you can project to show how to work through the problem or to stimulate a discussion about the answer. Refresh answers are found in the PowerPoint Notes view, as well as in this IM.

Fig. 4.1 Primary Lecture Deck

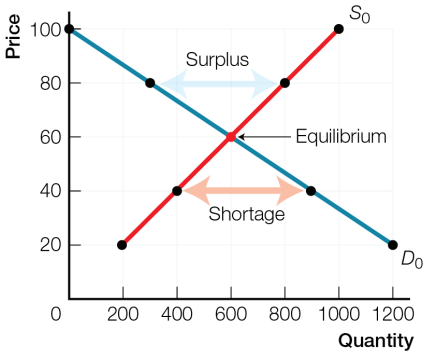
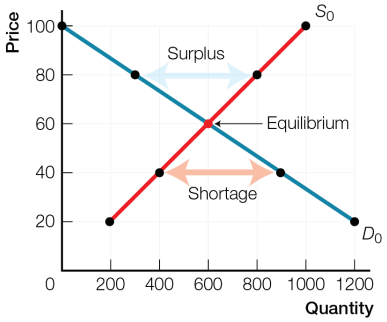


Fig. 4.1 Secondary Lecture Deck

Price	Quantity Demanded	Quantity Supplied	Shortage (2) or Surplus (1)
$ 20	1200	200	−1000
$ 40	900	400	−500
$ 60	600	600	0
$ 80	300	800	+500
$100	0	1000	+1000



Narrated Dynamic Graphs

The PowerPoint graphs, built from the textbook graphic files, are the basis of the Narrated Dynamic Graphs. For key analytical graphs in the textbook, there is a short MP4 video. In a voice-over, I talk the student through the meaning of the graph, and traces shifts of curves and changes in outcomes. There is a moving cursor directing students' attention to the portion of the graph being discussed in the narration. These MP4 files, which tell the story of each graph, can be streamed to a student's computer or mobile device.

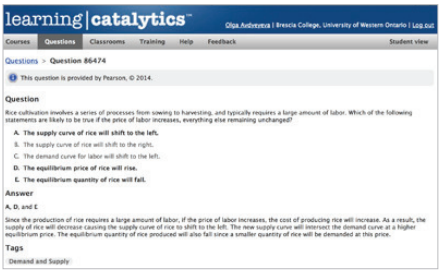
Narrated Dynamic Graphs

Pearson TestGen Testbanks

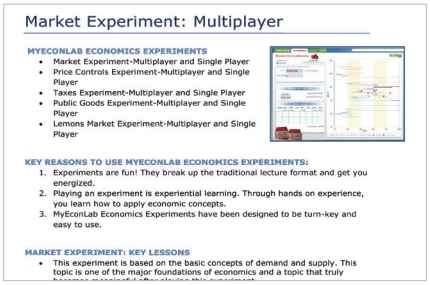
I created or edited all multiple choice and true/false questions in the micro and macro testbanks. Multiple choice questions have five good choices. "None of the above" and "All of the above" are actually used as correct answers, and sometimes the fifth choice is humorous. Questions are classified by chapter learning objectives, level of difficulty (1 – 3), and as recall or analytical.

Learning Catalytics

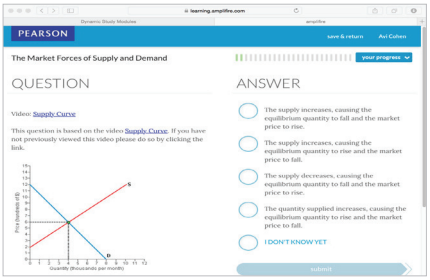
Learning Catalytics is a Wi-Fi "bring your own device" student engagement and assessment system that allows instructors and students to work together to generate classroom discussion, guide your lectures, and promote peer-to-peer learning and interaction with real-time analytics. Students bring their devices (phones, tablets, computers) to class, and then input the login code provided by the instructor. Instructors release questions (multiple choice, matching, many right choices, graph sketching, numerical), and students answer in real time. The results are aggregrated and help direct class discussion and/or assessment. They can also be saved for more analysis after class. Note: you must be logged in to Pearson MyLab to access Learning Catalytics.



Learning Catalytics



Economics Experiments



Dynamic Study Modules

Economicsforlife.ca

Economicsforlife.ca links to all textbook-related resources, advice on creating or teaching blended and online courses, links to web-resource elsewhere on the internet, and a teaching blog. I will continually update the website with new media stories, discussion questions, data, blog posts and links to other teaching resources. All resources are tagged by topics and chapters in the *Economics for Life* textbooks, and are searchable.

There also is a password-protected area with additional materials for adopters like old tests, exams, and answer guides.

Lets Go!

Pearson Canada has helped me develop a rich set of resources to make our jobs easier and to do them better. I hope the resources organized in this Instructor's Manual help you succeed in teaching Economics and help your student learn, and retain, what you give to them.

If you have questions or suggestions, please contact me at avicohen@yorku.ca.

1 What's in Economics for You? Scarcity, Opportunity Cost, Trade, and Models

Learning Objectives

1. Explain scarcity and describe why you must make smart choices among your wants.
2. Define and describe opportunity cost.
3. Describe how comparative advantage, specialization, and trade make us all better off.
4. Explain how models like the circular flow of economic life make smart choices easier.
5. Differentiate microeconomic and macroeconomic choices, and explain the Three Keys model for smart choices.

Lecture Narrative

George Bernard Shaw's quote, "Economy is the art of making the most out of life," introduces economics and the problem of scarcity. I define economics in a way that focuses on the choices of key players – how individuals, businesses, and governments make the best possible choices to get what they want, and how those choices interact in markets. Because of scarcity, choices involve a trade-off, leading to the concept of opportunity cost – the single most important concept in all of economics. Incentives are also crucial for understanding choices. Opportunity cost and comparative advantage are key to understanding why specialization and voluntary trade make us all better off. The most basic choice is producing for yourself or specializing, trading in markets and depending on others. There is a simple example of two previously self-sufficient pioneers in the same country coming together to trade. This example of the gains from trade purposefully avoids the politically charged issue of trade between countries, focusing instead on the general benefits of markets and exchange.

I then introduce models (using a road map example) and what it means to think like an economist. The circular flow model reduces the complexity of the economy to three sets of players who interact in markets – households, businesses, and governments. Without using the phrase *ceteris paribus*, I compare the assumptions of "all other things unchanged" to the mental equivalent of controlled experiments in a laboratory. The positive/normative distinction is also part of thinking like an economist. Finally, I distinguish microeconomics from macroeconomics and introduce the 3 Keys to Smart Choices as the microeconomic "model" that focuses attention on the information most useful for making smart choices:

1. Choose only when additional benefits are greater than additional *opportunity costs*.
2. Count only *additional* benefits and *additional* costs.
3. Be sure to count *all* additional benefits and costs, including *implicit costs* and *externalities*.

If you watch "The Five Minute University" (https://www.youtube.com/watch?v=kO8x8eoU3L4) mentioned in the Instructor's Preface to the textbooks, the 3 Keys model is what I want my students to remember 5 years (at least!) after they have taken introductory economics. This is students' first look at the 3 Keys, which recur throughout the book.

Graphs, Tables and Illustrations

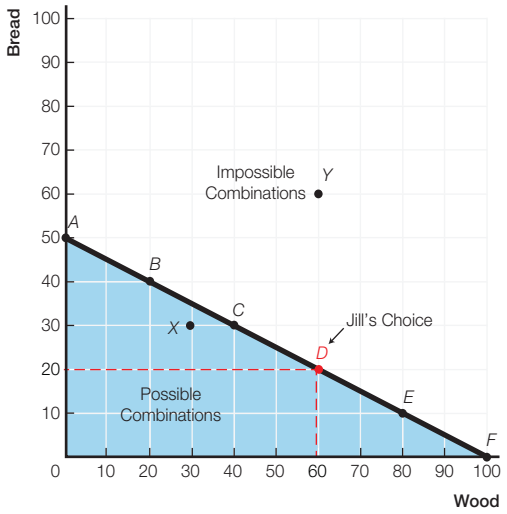
Figure	Title	G, I, T	Page
1.1	Jill's Production Possibilities	T, G	8
1.2	Marie's Production Possibilities	T, G	8
1.3	Opportunity Costs for Jill and Marie	T	10
1.4	Mutually Beneficial Gains from Trade a) Jill's Gains from Trade b) Marie's Gains from Trade	 G G	11
1.5	Circular Flow of Economic Life	I	14
1.6	Three Keys to Smart Choices	I	19

Key:
G - Graph(s)
For titles in blue, Narrated Dynamic Graph videos are available online on each Chapter Resources page.
I - Illustration
T - Table

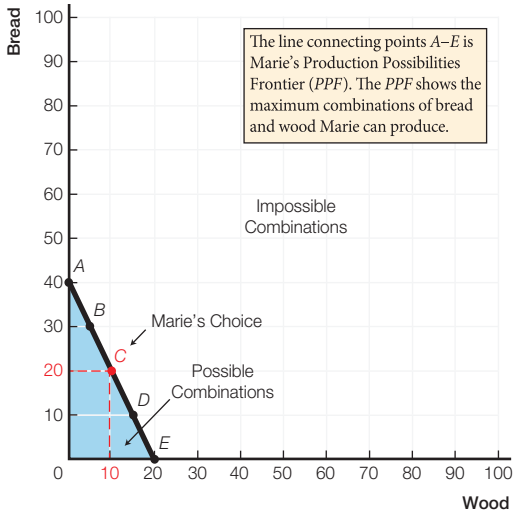
Graphs and illustrations follow on the next page.

Narrated Dynamic Graphs are identified with a blue video button. To access them, log into the Pearson course website (pearsonmylab.com), click on Chapter Resources, and then Chapter 1.

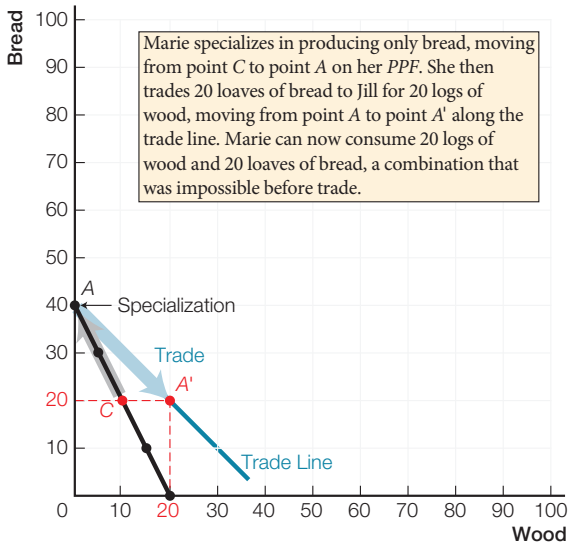
1.1 Jill's Production Possibilities



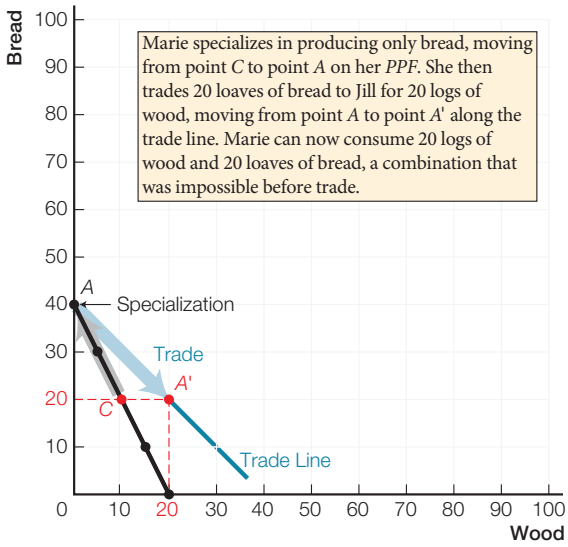
1.2 Marie's Production Possibilities



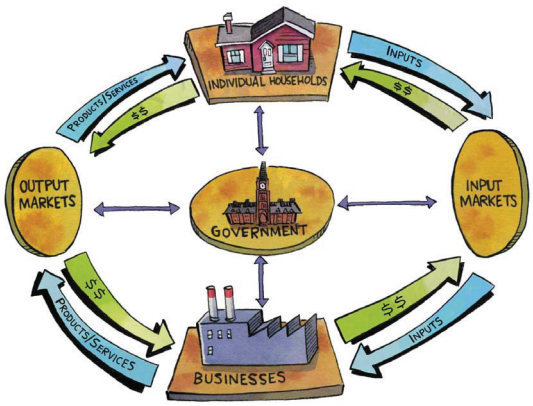
1.4a Jill's Gains from Trades



1.4b Marie's Gains from Trades



1.5 Circular Flow of Economic Life



1.6 Three Keys to Smart Choices

Active Learning Suggestions

Top Choice

First class meetings are often short and focus on administrative course details. I try to also use the time for a small group activity to help students get to know each other.

For microeconomics, I use the policy debate over whether government should impose a tax on sugary pop to counter obesity. There has been much press on the topic recently. In the U.S., former New York City mayor Michael Bloomberg proposed making giant size soft-drink cups illegal. In Canada, the Heart and Stroke Foundation called for a tax on sugary drinks (http://www.ctvnews.ca/health/heart-and-stroke-foundation-calls-for-tax-on-sugary-drinks-1.1999780). Mike Moffat has an excellent article in the September 2012 *Walrus*, "Pop and the Tax Question" (http://thewalrus.ca/pop-and-the-tax-q/). Here are the PowerPoint slides I used for the activity, focusing on these policy questions:

You are the Minister of Health and your government is considering a tax on sugary pop.

1. What are the consequences of this policy – all intended and unintended consequences? (How will people change their choices after the sugar tax?)

2. Should the government tax sugary pop? (What are the arguments for and against this policy?)

For macroeconomics, the small group exercise focuses on this policy question:

> Canada is in a deep recession, with high unemployment, manufacturing plants closing because of cheap imports from Asia. The government deficit is growing, inflation is 3%.
>
> You are the Minister of Finance, in power in government. Come up with 3 policies that would help Canadians and improve the economy.

I find this exercise bring out students' misconception about economics (most will suggest high tariffs on imports without understanding the consequences), and gives you an idea of where they are coming from, knowledge-wise.

For either group activity, if you have time it adds interest if the class votes on the best group presentation, and you award candy prizes. Of course you do not want to criticize wrong information, but rather to note it and explain how what they will learn will likely change their thinking about these issues.

Dynamic Study Modules

The online Dynamic Study Modules are created generically for any Canadian economics text. The modules students can work through with some content related to Chapter 1:

- Basic Principles of Economics
- Interdependence and Gains from Trade

Teaching Blog

Check out economicsforlife.ca for new media stories, related discussion questions, and other active learning ideas. All posts are tagged by textbook chapters and topics.

1.1 Are You Getting Enough? Scarcity and Choice

Learning Objective

Explain scarcity and describe why you must make smart choices among your wants.

Main Point

Because you can never satisfy all of your wants, making the most out of your life requires smart choices about what to go after, and what to give up.

Key Terms

Scarcity
the problem that arises because we all have limited money, time, and energy

Economics
how individuals, businesses, and governments make the best possible choices to get what they want, and how those choices interact in markets

Discussion or Homework Q&A

1.	Q.	**Olga chooses to live at home rather than move into residence during her first year of college. She often brags about the fact that she saves a lot of money by living at home. Provide some examples of what Olga may have given up by choosing to live at home.**
	A.	• freedom • some privacy • parties at the residence • readily available study partners
2.	Q.	**"If all people would only make smart choices and economize, the problem of scarcity would be solved." Agree or disagree, and explain why.**
	A.	Disagree. If everyone makes smart choices and economizes, then we would be making the best possible use of our resources and would get the greatest benefits or satisfaction possible, given the limited quantity of resources. But this does not mean that we would be satisfying all of our limitless needs. The problem of scarcity can never be "solved" as long as people have infinite needs and finite resources for satisfying those needs.

Refresh Q&A

1.1.1	Q.	**Define scarcity and give an example from your own experience.**
	A.	Scarcity is the problem that arises because we all have limited money, time, and energy. We can't have and/or do everything we may want to. While examples will differ, they should all highlight the difference between what we want and what we can actually have due to a limitation of our money, time, and energy.
1.1.2	Q.	**Write a definition of economics in your own words that includes the word *scarcity*.**
	A.	Answers will differ but should include some or all of the following: • Because of scarcity, you can never satisfy all of your wants. • Making the most out of your life requires smart choices about what to go after and what to give up. • Smart choices are at the heart of the definition of economics — how individuals, businesses, and governments make the best possible choices to get what they want, and how those choices interact in markets.
1.1.3	Q.	**Social activists argue that materialism is one of the biggest problems with society: If we all wanted less, instead of always wanting more, there would be plenty to go around for everyone. Do you agree with this statement? Why or why not?**
	A.	The claim that if we all wanted less, there would be plenty to go around for everyone is both true and false. If each individual had less, it is true that there could be more to go around for more people. But that does not eliminate the problem of scarcity. The difficulty is with the word "plenty." Even with reduced wants, we each cannot get everything we desire and would have to make choices about what to go after and what to give up.

1.2 Give It Up for Opportunity Cost!
Opportunity Cost

Learning Objective

Define and describe opportunity cost.

Main Point

Opportunity cost is the single most important concept both in economics and for making smart choices in life.

Key Terms

Opportunity cost
the cost of the best alternative given up

Incentives
rewards and penalties for choices

Discussion or Homework Q&A

1. Q. You're trying to decide whether to go camping with your friends or spend a quiet weekend at home with your significant other. What incentives (think rewards and penalties), if changed, may influence your decision?

A.
- weather
- cost of trip (gas)
- if your partner tells you the relationship is over if you go
- if your partner offers to cook for you or take you out to dinner if you stay

2. Q. Seat belts save lives. Suppose that a city doubles the penalty for being caught driving without a seat belt in attempt to increase seat belt use among drivers.
a. Explain how this policy will influence driver behaviour.
b. Now suppose the city evaluates the policy and finds that the number of fatalities actually increased after the policy was introduced. Can you think of a reason why this may have occurred?

A.
a. The increased penalty represents a rise in the price (or cost) of not wearing a seat belt, which will likely motivate more individuals to wear their seat belt.
b. Drivers adjust their behaviour and drive more dangerously because they think they are now safe wearing a seat belt.all

Refresh Q&A

1.2.1 Q. What is the opportunity cost of any choice?

A. The opportunity cost of any choice is the cost of the best alternative given up. It is what you have to give up to get your choice.

1.2.2 Q. This weekend, your top choices are going camping with your friends or working extra hours at your part-time job. List three facts (think rewards and penalties) that, if they changed, would influence your decision.

A. In deciding between camping with friends or working extra hours at your job, the rewards and penalties that could influence your choice might include (you have probably thought of others too): the weather forecast (rain or sunshine), who is paying for the camping expenses, whether you will be paid your regular wage or overtime for working extra hours, and whether you will get on your boss's good side by working more.

1.2.3 Q. Your sister is trying to decide whether to go to college or get a job after high school. What would you advise her to do based only on the money cost of attending college? based on the opportunity cost of her attending college?

A. The biggest difference between the money cost of attending college and the opportunity cost is the income that you give up from not working, or from not working as many hours. This forgone income is not part of the costs you pay directly — like the costs of tuition and books — for college. See Economics Out There on p. 6.

1.3 Why Don't You Cook Breakfast? Gains from Trade

Learning Objective

Describe how comparative advantage, specialization and trade make us all better off.

Main Point

Opportunity cost and comparative advantage are key to understanding why specializing and trading make us all better off.

Key Terms

Production possibilities frontier (PPF)
the maximum combinations of products or services that can be produced with existing inputs

Absolute advantage
the ability to produce a product or service at a lower absolute cost than another producer

Comparative advantage
the ability to produce a product or service at a lower opportunity cost than another producer

Discussion or Homework Q&A

1. Q. **France and Germany each produce both wine and beer, using a single, input—labour. Their production possibilities are:**
France has 100 units of labour and can produce a maximum of 200 bottles of wine or 400 bottles of beer.
Germany has 50 units of labour and can produce a maximum of 250 bottles of wine or 200 bottles of beer.

a. Complete this table.

	Bottles Produced by 1 Unit of Labour		Opportunity Cost of 1 Additional Bottle	
	Wine	Beer	Wine	Beer
France				
Germany				

. Use the information in part a to answer these questions.

b. Which country has an absolute advantage in wine production?
c. Which country has an absolute advantage in beer production?
d. Which country has a comparative advantage in wine production?
e. Which country has a comparative advantage in beer production?
f. If trade is allowed, describe what specialization, if any, will occur.

A. a. The completed table is shown here.

	Bottles Produced by 1 Unit of Labour		Opportunity Cost of 1 Additional Bottle	
	Wine	Beer	Wine	Beer
France	2	4	2.0 beer	0.50 wine
Germany	5	4	0.8 beer	1.25 wine

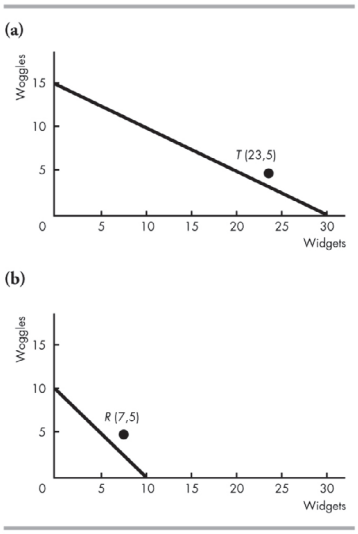
b. Germany, which can produce more wine (5 bottles) per unit of input, has an absolute advantage in wine production.
c. Neither country has an absolute advantage in beer production, since beer output (4 bottles) per unit of input is the same for both countries.
d. Germany, with the lower opportunity cost (0.8 beer), has a comparative advantage in wine production.
e. France, with the lower opportunity cost (0.5 wine), has a comparative advantage in beer production.
f. The incentive for trade depends only on differences in comparative advantage. Germany will specialize in wine production and France will specialize in beer production.

More questions follow on the next page.

2 Q. Tova and Ron are the only two remaining inhabitants of the planet Melmac. They spend their 30-hour days producing widgets and woggles, the only two goods needed for happiness on Melmac. It takes Tova 1 hour to produce a widget and 2 hours to produce a woggle, while Ron takes 3 hours to produce a widget and 3 hours to produce a woggle.

a. For a 30-hour day, draw an individual PPF for Tova, then for Ron.
b. Assume initially that Tova and Ron are each self-sufficient. Define self-sufficiency. Explain what the individual consumption possibilities are for Tova, then for Ron.
c. Who has an absolute advantage in the production of widgets? of woggles?
d. Who has a comparative advantage in the production of widgets? of woggles?
e. Suppose Tova and Ron each specialize in producing only the good in which she or he has a comparative advantage (one spends 30 hours producing widgets, the other spends 30 hours producing woggles). What will be the total production of widgets and woggles?
f. Suppose Tova and Ron exchange 7 widgets for 5 woggles. On your PPF diagrams, plot the new point of Tova's consumption, then of Ron's consumption. Explain how these points illustrate the gains from trade.

A. a. The individual PPFs for Tova and Ron are given by figures (a) and (b), respectively.



b. Individuals are self-sufficient if they consume only what they produce. This means there is no trade. Without trade, Tova's (maximum) consumption possibilities are exactly the same as her production possibilities—points along her PPF. Ron's (maximum) consumption possibilities are likewise the points along his PPF.

c. Tova has an absolute advantage in the production of both widgets and woggles. Her absolute advantage can be defined either in terms of greater output per unit of input or fewer inputs per unit of output. A comparison of the PPFs in the figures above shows that, for given inputs of 30 hours, Tova produces a greater output of widgets than Ron (30 versus 10) and a greater output of woggles than Ron (15 versus 10). The statement of the problem tells us equivalently that, per unit of output, Tova uses fewer inputs than Ron for both widgets (1 hour versus 3 hours) and woggles (2 hours versus 3 hours). Since Tova has greater productivity than Ron in the production of all goods (widgets and woggles), we say that overall she has an absolute advantage.

d. Tova has a comparative advantage in the production of widgets, since she can produce them at lower opportunity cost than Ron (1/2 woggle versus 1 woggle). On the other hand, Ron has a comparative advantage in the production of woggles, since he can produce them at a lower opportunity cost than Tova (1 widget versus 2 widgets).

e. Tova will produce widgets and Ron will produce woggles, yielding a total production between them of 30 widgets and 10 woggles.

f. After the exchange, Tova will have 23 widgets and 5 woggles (point T). Ron will have 7 widgets and 5 woggles (point R). These new post-trade consumption possibility points lie outside Tova's and Ron's respective pre-trade consumption (and production) possibilities. Hence trade has yielded gains that allow the traders to improve their consumption possibilities beyond those available with self-sufficiency.

More questions follow on the next page.

Refresh Q&A

1.3.1 Q. Explain the difference between absolute advantage and comparative advantage.

A. Absolute advantage is the ability to produce a product or service at a lower *absolute* cost than another producer. Comparative advantage is the ability to produce a product or service at a lower *opportunity* cost than another producer. The key difference is between the absolute, or dollar, cost and the opportunity cost — what you must give up to produce more of the product or service.

1.3.2 Q. If you spend the next hour working at Canadian Tire, you will earn $10. If you instead spend the next hour studying economics, your next test score will improve by five marks. Calculate the opportunity cost of studying in terms of dollars given up per mark. Calculate the opportunity cost of working in terms of marks given up per dollar.

A. The opportunity cost of studying for one hour is the $10 you give up from not working. That hour gets you 5 marks on your test. So the opportunity cost of each additional mark is $10 ÷ 5 marks = $2 per mark. The opportunity cost of working for one hour is the 5 extra marks you give up by not studying. So the opportunity cost of each additional dollar is 5 marks ÷ $10 = ½ mark per dollar. Remember, you always calculate opportunity cost using the formula Give Up ÷ Get.

1.3.3 Q. **The best auto mechanic in town (who charges $120/hour) is also a better typist than her office manager (who earns $20/hour). The mechanic decides to do her own typing. Is this a smart choice for her to make? Explain your answer. [Hint: The best alternative employment for the office manager is another office job that also pays $20/hour.]**

A. The question of whether the mechanic should do her own typing is the question of whether there are gains from trade between the mechanic and her office manager when each specializes in what she does best and then exchanges in the market for the other service. Gains from trade do not depend on absolute advantage; they depend on comparative advantage. So to answer the question we need to know the opportunity costs for both the mechanic and the office manager. For these types of questions, it is always helpful to draw a table like Figure 1.3 on p. 10, which would look like this.

	O.C. of 1 Additonal Hour of	
	Mechanic Services	Typing
Mechanic	$120	$120
Office Manager	Much more than $120	$20
Comparative Advantage	Mechanic	Office Manager

For the mechanic, the opportunity cost of spending one hour repairing cars is giving up working an hour repairing a different car, for which she would also earn $120. The opportunity cost for the mechanic of spending one hour typing is the $120 she could have earned repairing cars. Opportunity cost is the cost of the best alternative given up ($120 as a mechanic versus $20 as a typist).

For the office manager, to even begin to provide mechanic services, she would have to retrain as a mechanic, which would have a cost far greater than $120. And you are told that her opportunity cost of doing one hour of typing is another office job also paying $20/hour.

If we compare opportunity costs — reading down each column — for mechanic services, the mechanic has a lower opportunity cost ($120), so she has a comparative advantage in providing mechanic services. For typing, the office manager has a comparative advantage in providing typing services ($20 is lower than $120). So there are gains from trade if the mechanic specializes in repairing cars and the office manager specializes in typing. So the auto mechanic should not do her own typing.

1.4 Economists as Mapmakers and Scientists: Thinking Like an Economist

Learning Objective

Explain how models like the circular flow of economic life make smart choices easier.

Main Point

The circular-flow model, like all economic models, focuses attention on what's important for understanding and shows how smart choices by households, businesses, and governments interact in markets.

Key Terms

Model
a simplified representation of the real world, focusing attention on what's important for understanding

Inputs
the productive resources — labour, natural resources, capital equipment, and entrepreneurial ability — used to produce products and services

Positive statements
about what is; can be evaluated as true or false by checking the facts

Normative statements
about what you believe should be; involve value judgments

Discussion or Homework Q&A

1. Q. Suppose your friend, who is a history major, claims that economic models are useless because they are so unrealistic. He claims that since the models leave out so many descriptive details about the real world, they can't possibly be useful for understanding how the economy works. How would you defend your decision to study economics?

A. Models are like maps, which are useful precisely because they abstract from real-world detail. A useful map offers a simplified view, which is carefully selected according to the purpose of the map. No mapmaker would claim that the world is as simple as her map, and economists do not claim that the real economy is as simple as their models. What economists claim is that their models isolate the simplified effect of some real forces (like self-interested smart choices) operating in the economy, and yield predictions that can be tested against real-world data.

Another way to answer your friend would be to challenge him to identify what a more realistic model or theory would look like. You would do well to quote Milton Friedman (a Nobel Prize winner in economics) on this topic: "A theory or its 'assumptions' cannot possibly be thoroughly 'realistic' in the immediate descriptive sense.… A completely 'realistic' theory of the wheat market would have to include not only the conditions directly underlying the supply and demand for wheat but also the kind of coins or credit instruments used to make exchanges; the personal characteristics of wheat-traders such as the color of each trader's hair and eyes, … the number of members of his family, their characteristics,… the kind of soil on which the wheat was grown,… the weather prevailing during the growing season;… and so on indefinitely. Any attempt to move very far in achieving this kind of 'realism' is certain to render a theory utterly useless." From Milton Friedman, "The Methodology of Positive Economics," in *Essays in Positive Economics* (Chicago: University of Chicago Press, 1953), p. 32.

Refresh Q&A

1.4.1 Q. Who are the three sets of players in the circular flow of economic life?

A. The three sets of players in the circular flow of economic life are households, businesses, and governments.

1.4.2 Q. Write a positive statement linking increasing government taxes on tobacco and smoking habits. Now rewrite it as a normative statement.

A. Answers will differ but the positive statement must be fact based, that is, checkable by anyone through research. For example, "An increase in taxes on tobacco products causes a decrease in consumption." This can be checked and proven true or false by looking at past data.

The normative statement is opinion based and is different for different people, non-provable, and open to change. For example, "Government should tax tobacco products in order to show its concern for public health." There is no way validate this statement through fact checking. The statement is the opinion of the speaker.

More questions follow on the next page.

1.4.3 Q. If you are trying to decide whether to buy a car, what are the most important factors to focus on when making your decision? What are some of the factors that you ignore, or leave out of your decision? Explain how your thinking resembles an economic model.

A. Answers will vary, but should include some of the following:

- Factors to focus on include: your savings, expected income, payment costs, upkeep costs, other debts, current transportation costs.
- Factors to ignore include: the weather in Costa Rica, the probability of the Leafs winning the Stanley Cup, who is the Prime Minister of Canada.

A model is a simplified representation of the real world, focusing attention on what's important for understanding a specific idea or concept. The factors to focus on are important for understanding a smart choice about buying a car. The model is useful because it leaves out unnecessary information.

1.5 Where and How to Look: Models for Microeconomics and Macroeconomics

Learning Objective

Differentiate microeconomic and macroeconomic choices , and explain the Three Keys model for smart choices.

Main Point

The Three Keys model summarizes the core of microeconomics, providing the basis for smart choices in all areas of your life.

Key Terms

Microeconomics
analyzes choices that individuals in households, individual businesses, and governments make, and how those choices interact in markets

Macroeconomics
analyzes performance of the whole Canadian economy and global economy, the combined outcomes of all individual microeconomic choices

Marginal benefits
additional benefits from the next choice

Marginal opportunity costs
additional opportunity costs from the next choice

Implicit costs
Opportunity costs of investing your own money or time

Negative (or positive) externalities
costs (or benefits) that affect others external to a choice or a trade

Discussion or Homework Q&A

1. Q. **Back in the old days, professors and students could smoke in the classrooms. Today, smoking indoors in public places is illegal.**
   - **a. Provide an example of an "external cost" that indoor smokers fail to consider when deciding to light up inside the classroom.**
   - **b. Do you think that those who smoked indoors considered the "external cost" in their decision to smoke? Why or why not?**
   - **c. Another way to discourage smoking is to tax the activity. If people respond to incentives, how would we expect smokers to adjust their behaviour in response to an increase in a cigarette tax?**

   A.
   - a. Smokers often ignore the cost that non-smokers incur from inhaling their cigarettes. If they considered this cost in their decision-making process, then they may have found that the cost exceeded the benefit.
   - b. No — if they did, they wouldn't have smoked indoors because the external cost would likely have been high enough to offset personal gains.
   - c. Since a tax represents a rise in price to the end user, an increase in the tax on cigarettes should cause smokers to reduce the number of cigarette packs they buy, assuming they are sensitive to changes in the price. However, it is possible that some smokers may be addicted to the point where they cannot reduce their consumption.

2. Q. From a social point of view, external costs should be included in making smart decisions, but sometimes they are not. In each of the following examples, determine whether the market economy (in the absence ofgovernment policy) would result in too few or too many products or services being produced. Then describe one policy or program that the government has in place to force individuals to consider these costs or benefits when they make decisions.
   - a. Pollution levels
   - b. Smoking levels
   - c. Education levels

   A.
   - a. Too much pollution; carbon taxes, fines for cars that don't pass emission tests.
   - b. Too high; cigarette taxes, banning smoking indoors.
   - c. Too little education; tuition subsidies, loans.

Refresh Q&A

1.5.1	**Q.**	**List the three keys to smart choices, and highlight the most important words in each key.**
	A.	Key 1: Choose only when additional benefits are greater than additional opportunity costs. *Emphasize opportunity costs.* Key 2: Count only additional benefits and additional opportunity costs. *Emphasize the word additional which is the same as marginal.* Key 3: Be sure to count all additional benefits and costs, including implicit costs and externalities. *Emphasize what counts as benefits and costs – implicit costs and externalities, which are less obvious costs that you must look carefully for.*
1.5.2	**Q.**	**Find one story in today's news that you think is about microeconomics, and one that is about macroeconomics. How did you decide whether the story was about micro or macro economics?**
	A.	Answers will vary. The news item about microeconomics should focus on an individual's choice and it's repercussions. The macroeconomics item should focus a larger, national, international or global issue.
1.5.3	**Q.**	**Highway 407 ETR in Toronto is a toll road that uses transponders to keep track of how many kilometres you drive on it, and then sends you a monthly bill. Highway 401 runs parallel to Highway 407 and is free. Why do drivers voluntarily pay the tolls? (Use opportunity cost in your answer.) Suppose the government could calculate the cost per kilometre of the pollution damage from your driving, and send you a similar monthly bill. How might that additional cost affect your decision to drive?**
	A.	Given a choice between a free road and a toll road, drivers will be willing to pay the toll if the value of the saved time from the less congested toll road (additional benefit) is worth more to them the cost of the toll (additional cost). The opportunity cost of any choice is the best alternative you give up. So by taking the toll road, you are giving up the cost of the toll, but you are getting a savings in time. By taking the free 401 Highway, you save the cost of the toll (your "get") but you are giving up some of your time that could have been saved on toll Highway 407. You smart choice depends on the value of your saved time compared to the cost of the toll. If you received a monthly bill for the pollution damage from your driving, that increases the additional costs of driving. If the benefits from driving remain the same, the additional costs will lead some motorists to drive less – to choose public transit instead.

2 Making Smart Choices
The Law of Demand

Learning Objectives

1. Describe what determines your willingness and ability to pay for a product or service.
2. Identify why smart choices depend on marginal benefits, not total benefits, and explain what changes marginal benefits.
3. Explain the law of demand, and describe the roles of substitutes and willingness and ability to pay.
4. Explain the difference between a change in quantity demanded and a change in demand, and identify five factors that change demand.

Lecture Narrative

This chapter explains demand as a response to two questions: "How badly do you want it?" and "How much are you willing and able to give up for it?" Demands are smart choices when expected benefits are greater than costs, and I emphasize the importance of marginal benefit (Key 2). I develop quantity demanded and the law of demand from examples of choices among substitutes, focusing on what happens to buying decisions when prices change. To help students understand the importance of marginal benefit for smart choices, I illustrate the two ways to read a demand curve. Reading from price to quantity (over and down), highlights the effects of substitution. Reading from quantity to marginal benefit (up and over), highlights willingness and ability to pay at the margin.

The final section on the five factors that change demand (including substitutes, complements, and normal/inferior goods) begins with an apparent contradiction to the law of demand, when gas prices rise and the quantity of gasoline bought and sold increases. This motivates the distinction between a change in quantity demanded and a change in demand, which allows us to "save" the law of demand from the apparent contradiction. Because there are no further chapters on consumer choice, this chapter contains all of the intuition behind consumers' willingness and ability to pay for products and services.

Graphs, Tables and Illustrations

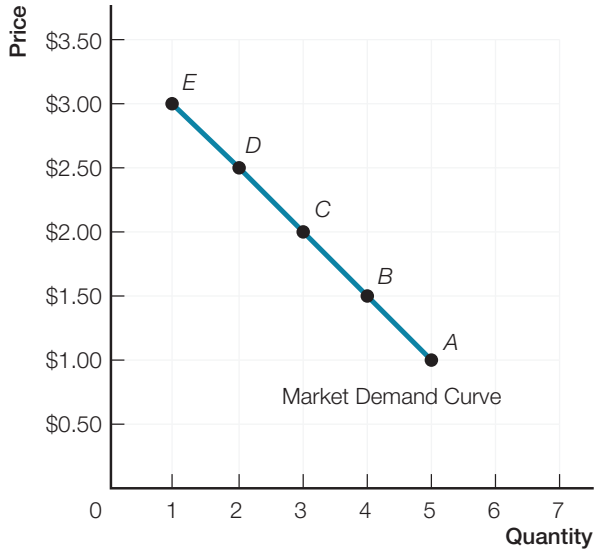
Figure	Title	G, I, T	Page
2.1	Your Demand for Beats Headphones	T	34
2.2	Market Demand for Water	T, G	35
2.3	Two Ways to Read a Demand Curve a) Reading the Demand Curve as a Demand Curve b) Reading the Demand Curve as a Marginal Benefit Curve	G G	36
2.4	An Increase in Demand for Beats Headphones	T, G	40
2.5	More Consumers Increase the Market Demand for Water	T, G	44
2.6	Change in Quantity Demanded versus a Change in Demand a) Change in Quantity Demanded b) Change in Demand	 G G	45
2.7	Law of Demand and Changes in Demand	T	46

Key:
G - Graph(s)
For titles in blue, Narrated Dynamic Graph videos are available online on each Chapter Resources page.
T - Table

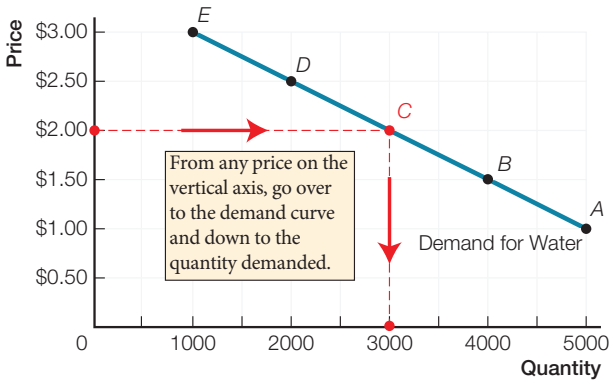
Graphs follow on the next page.

Narrated Dynamic Graphs are identified with a blue video button. To access them, log into the Pearson course website (pearsonmylab.com), click on Chapter Resources, and then Chapter 2.

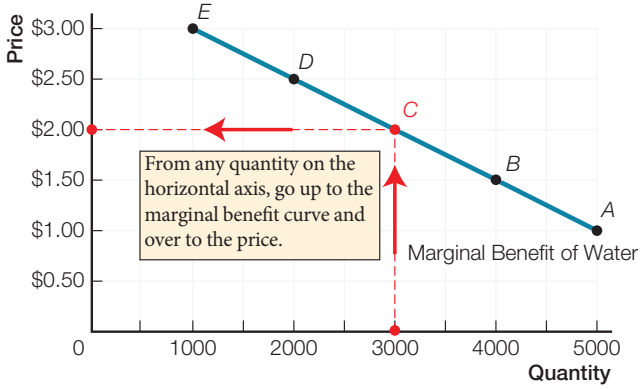
2.2 Market Demand for Water



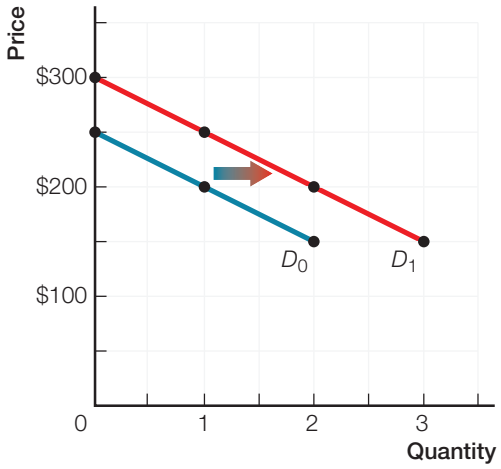
2.3a Reading the Demand Curve as a Demand Curve



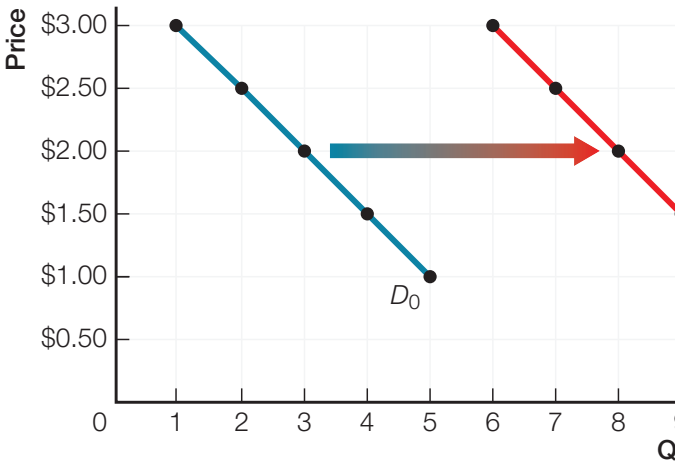
2.3b Reading the Demand Curve as a Marginal Benefit Curve



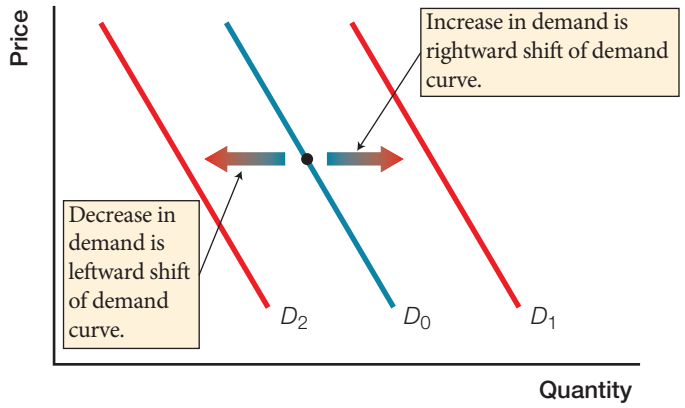
2.4 An Increase in Demand for Beats Headphones



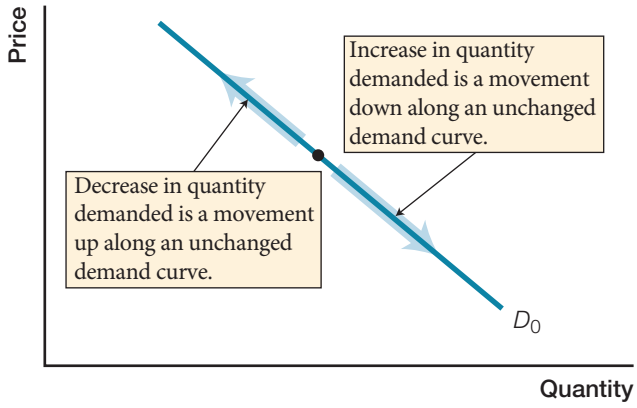
2.5 More Consumers Increase the Market Demand for Water



2.6a Change in Quantity Demanded



2.6a Change in Demand



Active Learning Suggestions

Top Choice

The best way to introduce the law of demand is to hold a real auction in class. I bring something students like (a Coke on a Pepsi-only campus, cookies from the bakery where my daughter works, ….) and start playing promoter, selling a wonderful (ice-cold Coke! Cookies made with real ginger!) product. The rules are that I put prices on the board, starting at $0, and ask students who are willing and able to pay that price to raise their hands. Then I count (very roughly in large classes) the number of hands and write that quantity next to the price. The key rule is that students must have the cash (no debit or VISA) and must buy the product if they are the highest bidder. I usually start with 50 cent increments, but use my judgment about jumping to larger increments. What appears on the board is the inverse relation between price and quantity demanded. At prices get really high, this often turns into a "pissing contest" between a few student who want to win and come up to the front of the class to claim their prize, and the number of hands can increase at the highest prices.

After the fun and shouting (the more the better) subside (you should do your best imitation of a game show host), the teaching part of the activity comes from asking students what factors went into their decisions, at each price, to raise their hand or not. From their answers, you get all of the assumptions behind the law of demand. One important answer that always emerges is that the quantity demanded drops off dramatically as you pass the price most students think the product sells for elsewhere. This emphasizes the importance of substitutes for the law of demand. Even the bidding at the end that violates the law of demand allows discussion of status goods (see Refresh question 2.4.3).

Come prepared with lots of change, and let students know you are donating the money to a scholarship fund or student association at your school. I have sold a Coke for $20 and a box of 6 cookies for $50!

Dynamic Study Modules

The online Dynamic Study Modules (http://media.pearsoncmg.com/intl/pec/mylab/2016c/cohen2ce/micro/mmnd_html/dynamic_study_modules.html) are created generically for any Canadian economics text. Modules students can work through with some (not all) content related to Chapter 2:

- The Market Forces of Supply and Demand
- The Theory of Consumer Choice
- The Basis of Consumer Behaviour

Teaching Blog

Check out economicsforlife.ca for new media stories, related discussion questions, and other active learning ideas. All posts are tagged by textbook chapters and topics.

2.1 Put Your Money Where Your Mouth Is: Weighing Benefits, Costs, and Substitutes

Learning Objective

Describe what determines your willingness and ability to pay for a product or service.

Main Point

Your willingness to buy a product or service depends on your ability to pay, comparative benefits and costs, and the availability of substitutes.

Key Terms

Preferences
your wants and their intensities

Demand
consumers' willingness and ability to pay for a particular product or service

Discussion or Homework Q&A

1. Q. What is a smart choice?

A.
- when making a decision consider only additional (marginal) costs and additional (marginal) benefits
- all the sunk costs are ignored
- a smart choice is very important when facing scarcity

2. Q. If you don't have enough money to get a product, can you still have a demand for it?

A.
- no
- demand is a willingness and ability to pay
- if you can't pay, your willingness alone does not count

Refresh Q&A

2.1.1 Q. What is the difference between wants and demands?

A. Wants are much greater than demands. Your wants for products or services are limitless, and economists describe your wants and their intensities as your *preferences*. *Demand* describes your willingness and ability to pay for a particular product or service. You must put your money (or time) where your mouth is in order to demand a product or service.

2.1.2 Q. What is the key factor that would make you choose to download a song for free rather than pay for it on iTunes? Explain your choice.

A. Answers will differ, but whatever the students' personal decision between buying music and downloading music for free, some factors that are likely to influence their choice are:
- how much they like the song (their preferences and expected benefits from listening)
- whether the song is available for free
- how much it costs to buy
- what they can afford to pay
- their values about the ethics of downloading

2.1.3 Q. You have just started at a school that is a 30-minute drive from home or a 90-minute transit ride. What is your smart choice, taking the transit or buying a car? Justify your choice.

A. In making the choice between transit or buying a car, you should determine what the marginal benefits will be and if they are greater than the costs.

In choosing between taking transit to school or driving, the benefits comparison includes:
- the convenience and speed of driving versus the fixed transit schedule and longer ride
- how much you value your time
- the costs of owning and driving a car versus transit fares

If you are concerned about the environment, you might also consider the environmental advantages of public transit in making your choices.

2.2 Living on the Edge: Smart Choices are Marginal Choices

Learning Objective

Identify why smart choices depend on marginal benefits, not total benefits, and explain what changes marginal benefits.

Main Point

Key 2 states, "Count only additional benefits and additional costs." Additional benefits mean marginal benefits — not total benefits — and marginal benefits change with circumstances.

Key Term

Marginal benefit
the additional benefit from a choice, changing with circumstances

Discussion or Homework Q& A

1.	Q.	**Consider the diamond/water paradox — diamonds are very expensive but not required for life, but water, a necessity for life, is relatively inexpensive. What if you are Bill Gates walking through the desert alone with pockets full of diamonds? How will this affect your marginal benefits?**
	A.	Water is scarce in the desert, so its marginal benefit is very high while having pockets full of diamonds makes their marginal benefit low. In this situation, the price of water may exceed the price of diamonds.
2.	Q.	**A demand curve shows visually the relationship between two variables – price and quantity demanded. Explain what it means to "read" this relationship in two ways.**
	A.	There are correlations between the two variables. Reading two ways is to attach different causation stories to the relationship. The demand curve story tells for any price, what quantities consumers will demand. The marginal benefit story tells for any quantity, how much someone is willing to pay.

Refresh Q&A

2.2.1	Q.	**In your own words, define marginal benefit.**
	A.	Answers may vary but should include the following concepts. *Marginal benefit* is the *additional* benefit from a choice. Marginal benefit changes with circumstances. For example, the additional benefit you get from studying for one more hour depends on if you have hardly studied at all (marginal benefit will then be high) or if you have studied your brains out already (marginal benefit will then be low).
2.2.2	Q.	**Explain why we are willing to pay more for a diamond than a glass of water even though water is essential for survival and diamonds are an unnecessary luxury.**
	A.	The difference in willingness to pay more for a diamond than a glass of water is connected to the difference between marginal benefit and total benefit. Willingness to pay depends on marginal benefit, not total benefit. Because water is abundant, the marginal benefit of an additional glass of water is low, even though the total benefit of all water consumed, including the first lifesaving glass, is high. Because diamonds are scarce, marginal benefit is high, even though total benefit of the few diamonds available is low.
2.2.3	Q.	**You and your entrepreneurial buddy have a concession stand on the beach. It is a hot, sunny, crowded day, and you are selling a few $5 collapsible umbrellas as sun shades. The skies suddenly darken, rain begins to pour, and your buddy quickly switches the umbrella price sign to $10. Will you sell more or fewer umbrellas? Explain your thinking, including your analysis of the customer's decision.**
	A.	Even though you raise the price of umbrellas from $5 to $10, you might still sell more umbrellas as it starts raining. The rain dramatically increases the marginal benefit of an umbrella to customers, so they might still be making a smart choice to buy an umbrella, even at the $10 price. Two factors for consumers' choices have changed — increased cost (leading to fewer sales) and increased benefits (leading to higher sales) — so it is hard to predict if you will sell more or fewer umbrellas.

2.3 Move on When the Price Isn't Right: The Law of Demand

Learning Objective

Explain the law of demand and describe the roles of substitutes and willingness and ability to pay.

Main Point

The demand curve combines two forces — switch to substitutes; willingness and ability to pay — determining quantity demanded, and can be read as a demand curve and as a marginal benefit curve.

Key Terms

Quantity demanded
the amount you actually plan to buy at a given price

Market demand
the sum of demands of all individuals willing and able to buy a particular product or service

Law of demand
if the price of a product or service rises, quantity demanded decreases, other things remaining the same

Demand curve
shows the relationship between price and quantity demanded, other things remaining the same

Discussion or Homework Q&A

1.	Q.	**Advertising is designed to increase your preference for a product or service. Give an example of a slogan that changed or shaped your preference.**
	A.	• "There's always Coca-Cola" (you should keep on having colas) • "You've always got time for Tim Hortons" (go out of your way but come to the doughnut shop) • "Harveys: Have it your way" (have a customized burger every time)
2.	Q.	**Suppose a city is considering the idea of returning to a flat monthly rate payment scheme for water usage instead of its current fee for use structure. Explain what will happen to the demand for the following products: water, orange juice, soap, rubber ducky bath toys.**
	A.	Water: quantity demanded will increase because price has fallen Orange juice: demand will decrease because, water, a substitute good, is now cheaper Soap: demand will increase because water, a complement good, is now cheaper. Longer showers! Rubber ducky bath toys: demand will increase because it is a complement good

Refresh Q&A

2.3.1	Q.	**In just a couple of sentences, explain the law of demand to a friend who is not taking this economics course.**
	A.	Answers may differ, but should include all or most of the following: • If the price of a product or service rises, quantity demanded decreases. • At a higher price, fewer consumers are willing and able to pay for the product or service. • Some consumers switch to cheaper substitutes as prices rise.
2.3.2	Q.	**You own a car and work at a job that you cannot get to by public transit. If the price of gasoline goes up dramatically, does the law of demand apply to you? Explain the choices you might make in responding to this price rise.**
	A.	As the price of gasoline goes up, your commute to work becomes more expensive. Although public transit is not available as a substitute, there are still choices you can make to reduce the quantity demanded of gasoline. You might arrange a carpool with other employees, which would reduce the total quantity demanded of gasoline. You might also keep your car tuned up to save gas, or turn off the engine instead of idling. With more time to adjust, you might move closer to this job, find a different job that is closer to home or accessible by transit, or buy a hybrid or more fuel-efficient car. All of these choices will decrease your quantity demanded of gasoline.

More questions follow on the next page.

Refresh Q&A (continued)

2.3.3	Q.	**You have tickets for a concert tonight that you have been looking forward to. Your mother, who is helping you pay your tuition, phones and says that it's very important to her that you come to Grandma's birthday party tonight. Using the law of demand, explain your decision — the concert or Grandma's party? [Hint: Think about opportunity cost]**
	A.	According to the law of demand, as the price rises, quantity demanded decreases. The "price" of going to the concert includes the ticket price, but also includes the opportunity cost of what you give up to attend the concert. Your mother's request to come to Grandma's birthday party increases the opportunity cost of going to the concert. As the concert "price" rises, your choice to go to the party decreases your quantity demanded of concert tickets from 1 to 0.

2.4 Moving the Margins: What Can Change Demand?

Learning Objective

Explain the difference between a change in quantity demanded and a change in demand, and identify five factors that change demand.

Main Point

Quantity demanded is changed only by a change in price. Demand is changed by all other influences on consumer choice.

Key Terms

Increase in demand
increase in consumers' willingness and ability to pay. Rightward shift of demand curve.

Decrease in demand
decrease in consumers' willingness and ability to pay. Leftward shift of demand curve.

Substitutes
products or services used in place of each other to satisfy the same want

Complements
products or services used together to satisfy the same want

Normal goods
products or services you buy more of when your income increases

Inferior goods
products or services you buy less of when your income increases

Discussion or Homework Q&A

1. Q. Identify the factor responsible for changing demand – i.e. preferences, prices of related goods, income, expected future prices or the number of consumers – after the following events take place:
- **a. The impact on the demand for groceries at a local store after a new 120-unit apartment building is built.**
- **b. The impact of downloading music on the demand for CDs.**
- **c. The impact on the demand for cars and houses in anticipation of a 1% decrease in GST.**
- **d. A popular band's last year's album that became a bestseller can suddenly be found in a discount bin at the music store for only $1.99.**

A.
- a. number of consumers
- b. prices of related goods
- c. expected future prices
- d. preferences

2. Q. Young drivers account for more than 35% of all drivers involved in fatal accidents, despite only representing 20% of all licensed drivers. Explain how each of the following policies would affect the demand for alcohol:
- **a. increasing the minimum age for drinking**
- **b. raising the price (e.g. through higher taxes) of alcohol**
- **c. using advertising campaigns to deter alcohol usage**

A.
- a. decrease demand
- b. decrease in quantity demanded
- c. decrease demand

Refresh Q&A

2.4.1 Q. Explain the difference between a change in quantity demanded and a change in demand. Identify the five factors that can change demand.

A. A change in the quantity demanded of a product or service is due to a change in the price of that product or service. A change in demand for a product or service is caused by a change in anything else. The five ("anything else") factors that can change market demand are changes in preferences, prices of related products, income, expected future prices, and number of consumers.

Refresh Q&A (continued)

2.4.2	Q.	**Roses sell for about $40 a bouquet most of the year, and worldwide sales are 6 million bouquets per month. Every February, the price of roses doubles to $80 a bouquet, but the quantity of roses demanded and sold also increases, to 24 million bouquets per month. The cost of producing roses doesn't change throughout the year. Can you explain what else is going on that saves the law of demand?**
	A.	A rise in price decreases quantity demanded, as long as other factors besides price do not change. The key "other factor" that changes in February is Valentine's Day. Because of the Valentine's Day tradition of giving roses as gifts, preferences for roses increase (a greater willingness to pay for roses) in February. It is this increase in preferences that saves the law of demand and accounts for the increase in sales of roses even though the price of roses is higher.
2.4.3	Q.	**There are some "status goods," like Rolex watches, that people want to own because they are expensive. In contradiction to the law of demand, if Rolex watches were less expensive, few "status-seeking" consumers would demand them. Reconcile status products or services with the law of demand. How does the existence of cheap "knock-off" imitations of Rolex watches fit with the law of demand?**
	A.	Consumers who demand "status goods" like Rolex watches are mostly demanding the status of appearing able to afford the expensive watch, rather than the time-keeping qualities of the watch itself. A cheap, non-Rolex watch is not a substitute for a status-seeking consumer. But knockoff Rolex watches illustrate the law of demand for status goods. As long as the consumer believes that others cannot tell the difference between a real Rolex and a knockoff, the knockoff supplies the same status at a lower price. The fact that more knockoffs are sold than real Rolex watches illustrates the law of demand for status goods.