



N. Gregory Mankiw

Essentials of Economics

6th Edition

梁小民 改编



经济学原理

(第六版)

经济学原理

(第六版)

高等学校经济学类英文版教材



普通高等教育“十一五”国家级规划教材

N. Gregory Mankiw

Essentials of Economics

6th Edition

梁小民 改编

JINGJIXUE YUANLI

图字：01-2013-9272号

N. Gregory Mankiw
Essentials of Economics, Sixth Edition

Copyright © 2014 Cengage Learning Asia Pte. Ltd.

Original edition published by Cengage Learning. All Rights Reserved. 本书原版由圣智学习出版公司出版。版权所有，盗印必究。

Higher Education Press Limited Company is authorized by Cengage Learning to publish and distribute exclusively this custom reprint edition. This edition is authorized for sale in the People's Republic of China only (excluding Hong Kong, Macao SAR and Taiwan). Unauthorized export of this edition is a violation of the Copyright Act. No part of this publication may be reproduced or distributed by any means, or stored in a database or retrieval system, without the prior written permission of the publisher.

本书客户定制影印版由圣智学习出版公司授权高等教育出版社有限公司独家出版发行。此版本仅限在中华人民共和国境内（但不允许在中国香港、澳门特别行政区及中国台湾地区）销售。未经授权的本书出口将被视为违反版权法的行为。未经出版者预先书面许可，不得以任何方式复制或发行本书的任何部分。

ISBN: 978-1-305-01612-5

Cengage Learning Asia Pte. Ltd.

151 Lorong Chuan, #02-08 New Tech Park, Singapore 556741

本书封面贴有Cengage Learning防伪标签，无标签者不得销售。

图书在版编目（CIP）数据

经济学原理 = Essentials of economics : 第6版 :
英文 / (美) 曼昆 (Mankiw, N. G.) 著; 梁小民改编. --
北京: 高等教育出版社, 2014. 4
ISBN 978-7-04-029011-0

I. ①经… II. ①曼…②梁… III. ①经济学 - 高等学校 - 教材 - 英文 IV. ①F0

中国版本图书馆CIP数据核字(2014)第017395号

策划编辑 施春花
责任校对 张小楠

责任编辑 施春花
责任印制 刘思涵

封面设计 张楠

版式设计 杜微言

出版发行 高等教育出版社
社址 北京市西城区德外大街4号
邮政编码 100120
印刷 北京市密东印刷有限公司
开本 787mm × 1092mm 1/16
印张 24
字数 500千字
购书热线 010-58581118

咨询电话 400-810-0598
网址 <http://www.hep.edu.cn>
<http://www.hep.com.cn>
网上订购 <http://www.landaco.com>
<http://www.landaco.com.cn>
版次 2014年4月第1版
印次 2014年4月第1次印刷
定价 59.00元

本书如有缺页、倒页、脱页等质量问题,请到所购图书销售部门联系调换
版权所有 侵权必究
物料号 29011-00



内容简介

本书介绍经济学的基本内容，包括经济学研究对象与方法，微观经济学与宏观经济学。经济学研究稀缺资源的配置，本书把这个研究对象概括为经济学十大原理，当经济学认识世界，说明世界是什么时，用的是实证分析，当经济学设计政策时，要知道世界应该是什么，用的是规范分析法。微观经济学以价格理论为中心，说明市场机制如何调节经济；宏观经济学分析整体经济的运行，说明使经济运行更完美的政策。全书通俗易懂，且结合实际，融理论与政策为一体，是一本优秀的入门教材。

about the author



N. Gregory Mankiw is professor of economics at Harvard University. As a student, he studied economics at Princeton University and MIT. As a teacher, he has taught macroeconomics, microeconomics, statistics, and principles of economics. He even spent one summer long ago as a sailing instructor on Long Beach Island.

Professor Mankiw is a prolific writer and a regular participant in academic and policy debates. His work has been published in scholarly journals, such as the *American Economic Review*, *Journal of Political Economy*, and *Quarterly Journal of Economics*, and in more popular forums, such as *The New York Times* and *The Wall Street Journal*. He is also author of

the best-selling intermediate-level textbook *Macroeconomics* (Worth Publishers). In addition to his teaching, research, and writing, Professor Mankiw has been a research associate of the National Bureau of Economic Research, an adviser to the Congressional Budget Office and the Federal Reserve Banks of Boston and New York, and a member of the ETS test development committee for the Advanced Placement exam in economics. From 2003 to 2005, he served as chairman of the President's Council of Economic Advisers.

Professor Mankiw lives in Wellesley, Massachusetts, with his wife, Deborah, three children, Catherine, Nicholas, and Peter, and their border terrier, Tobin.



前言

本书是曼昆《经济学原理》的改编版。这本教科书自1998年出版以来就成为西方国家最畅销的经济学教科书，至今不衰。到现在为止，这本书已出到第六版，有十几种语言文字的译本。中文版自1999年出版以来亦在国内成为最畅销的经济学教材，被许多高校采用。

本书包括三部分内容。第1~3章介绍经济学研究对象与方法，是了解经济学理论的基础。第4~14章是微观经济学的基本内容。第15~19章是宏观经济学的内容。

经济学研究什么呢？第1章“经济学十大原理”回答了这一问题。作者明确指出，经济学“研究社会如何管理自己的稀缺资源”。管理稀缺资源包括哪些问题呢？作者把这些问题概括为经济学十大原理。原理一“人们面临权衡取舍”，人不能满足无限的欲望，这说明资源是稀缺的，稀缺性的存在正是社会要管理资源的原因。也正因为稀缺性，所以，得到某种东西就必须放弃另一些东西。原理二“某种东西的成本是为了得到它而放弃的东西”，这就是机会成本。经济学假设人是理性的，人在考虑得失时考虑的是增量，原理三“理性人考虑边际量”，说明经济学中运用增量分析，即边际分析法。原理四“人们会对激励作出反应”，表明理性人追求个人经济利益，会对利益引导作出反应。原理五“贸易可以使每个人的状况都变得更好”，说明人的利益可以通过贸易来实现。贸易通过市场来实现，这就有了原理六“市场经济通常是组织经济活动的一种好方法”。但市场经济并非是万能的，所以，原理七是“政府有时可以改善市场结果”。以上七大原理是关于微观经济学的。以下三个原理是关于宏观经济学的。原理八“一国的生活水平取决于它生产物品与劳务的能力”，说明一国的经济状况取决于其生产能力。原理九“当政府发行了过多货币时，物价上升”，说明经济中通货膨胀的基本原因。原理十“社会面临通货膨胀与失业间的短期权衡取舍”，是政府运用宏观经济学的重要原则。把经济学研究的问题概括为十大原理是作者的创举，理解这十大原理对学好经济学至关重要。读完全书之后读者可以更深刻地体会到这十大原理对学习经济学的重要性。

经济学用什么方法来研究这些问题？第2章“像经济学家一样思考”介绍经济学的研究方法。这种方法是通过观察抽象出理论，再通过观察检验理论。在研究经济学中，假设是重要的，是理论成立的前提条件。运用这种方法可以建立经济模型来认识世界，书中介绍了循环流量图模型和生产可能性边界模型。以上介绍的实际上是实证分析的方法，即说明世界是什么，而研究政策决定时，往往应该说明世界应该是什么，这就是规范的方法。第3章“相互依存性与贸易的好处”说明经济中人与人之间、组织与组织之间、国与国之间的经济联系是通过在市场上的相互贸易来实现



的，贸易会给各方带来好处。

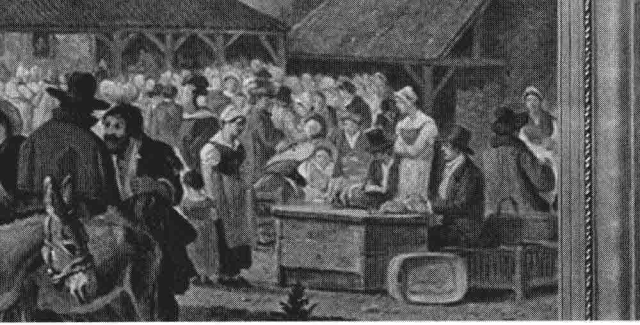
第4~14章是微观经济学的内容。第4~6章说明市场机制如何调节经济，即市场经济如何运行。第4章“供给与需求的市场力量”论述供求如何决定价格，以及价格如何调节经济。这一章虽然简单，但它是整个微观经济学的核心，因此，微观经济学也称为价格理论。第5章和第6章是这一章的延伸和深化。第5章“弹性及其运用”进一步说明价格对供求的影响。如果说上一章说明了价格对供求变动方向的影响，即定性分析，那么这一章就是说明价格变动会引起供求量多大的变动，即定量分析。需求弹性说明价格变动会引起需求量多大变动，供给弹性说明价格变动会引起供给量多大变动。第6章“供给、需求与政府政策”说明政府政策对价格机制的影响。这些政策包括政府确定价格上限与价格下限，以及税收政策。

第7~9章是对市场价格机制的评价，以及用价格机制来分析税收与国际贸易的问题。第7章“消费者、生产者和市场效率”论证市场价格机制的优越性，即用消费者剩余和生产者剩余这两个概念说明市场是有效率的。第8章“应用：赋税的代价”说明政府赋税如何扭转价格机制，从而降低了市场效率。第9章“应用：国际贸易”用价格理论说明了政府对国际贸易的限制如何降低了市场效率。

第10~11章说明市场价格机制的不足及纠正。这就是说价格机制并不是万能的，它的缺点可以由政府来纠正。第10章“外部性”说明经济活动的外部性引起市场无效率，这就要通过政府政策或私人方法来解决。第11章“公共物品与公共资源”说明公共物品和公共资源的特殊性决定了市场用于解决这些问题的不足，但这并不是否定市场机制，有些问题是可以确立私有产权来解决的。

第12~14章分析企业在市场上的行为。第12章“生产成本”分析企业生产中的成本。这是企业作出决策的依据。企业在市场上作出决策，在论述供求决定价格的市场机制时，假设市场是完全竞争的，但现实中每个企业都有一定的垄断能力，市场并不都是完全竞争的，存在着垄断。第13章“竞争市场上的企业”说明在竞争市场上企业如何作出决策，即如何决定产量与价格。第14章“垄断”说明垄断形成的原因，垄断市场上产量与价格的决定，以及垄断引起的社会福利损失及政府的反垄断政策。

第15~19章是宏观经济学，包括了两部分内容。第15~16章讲的是宏观经济数据的核算。对宏观经济状况的判断取决于数据，其中最重要的数据是国内生产总值（GDP）和代表物价水平的消费物价指数（CPI）。第15章“一国收入的衡量”是关于GDP的，说明GDP的定义与用支出法计算GDP的方法，以及真实GDP与名



义GDP的区分。同时，也强调指出，尽管GDP决定一国的生活水平，但其本身也有一些缺点，并不能准确地衡量经济福利。这就表明，我们在观察一国宏观经济状况时，GDP是重要的，但绝不能“唯GDP论”。第16章“生活费用的衡量”说明一国物价水平最重要的指标CPI的计算及其在衡量生活费用中所存在的问题。

第17~19章论述长期宏观经济问题，这里论述的中心是经济增长问题。第17章“生产与增长”说明一国经济增长的关键是生产率的提高，并分析了各种促进经济增长的政策。经济增长以及生产率提高的重要因素是投资，第18~19章就讲这一问题。同时金融体系对宏观经济运行至关重要，这一部分也对金融市场的基本知识作了介绍。第18章“储蓄、投资和金融体系”介绍相关金融体系的构成及金融理论。第19章“基本金融工具”介绍各种金融工具的基本知识。

由此，本书概括了经济学的基本内容，是初学者了解经济学最好的教科书。

梁小民

2013年11月

preface

to the student



“Economics is a study of mankind in the ordinary business of life.” So wrote Alfred Marshall, the great 19th-century economist, in his textbook, *Principles of Economics*. Although we have learned much about the economy since Marshall’s time, this definition of economics is as true today as it was in 1890, when the first edition of his text was published.

Why should you, as a student at the beginning of the 21st century, embark on the study of economics? There are three reasons.

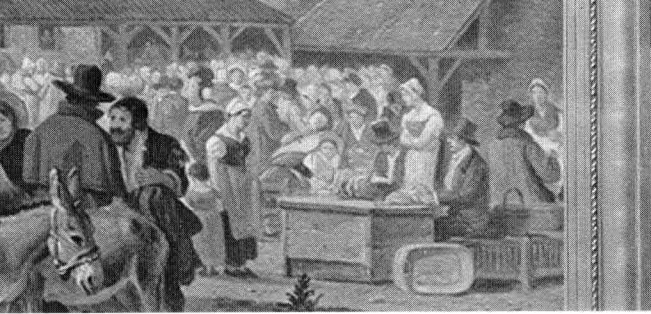
The first reason to study economics is that it will help you understand the world in which you live. There are many questions about the economy that might spark your curiosity. Why are apartments so hard to find in New York City? Why do airlines charge less for a round-trip ticket if the traveler stays over a Saturday night? Why is Johnny Depp paid so much to star in movies? Why are living standards so meager in many African countries? Why do some countries have high rates of inflation while others have stable prices? Why are jobs easy to find in some years and hard to find in others? These are just a few of the questions that a course in economics will help you answer.

The second reason to study economics is that it will make you a more astute participant in the economy. As you go about your life, you make many economic decisions. While you are a student, you decide how many years to stay in school. Once you take a job, you decide how much of your income to spend, how much to save, and how to invest your savings. Someday you may find yourself running a small business or a large corporation, and you will decide what prices to charge for your products. The insights developed in the coming chapters will give you a new perspective on how best to make these decisions. Studying economics will not by itself make you rich, but it will give you some tools that may help in that endeavor.

The third reason to study economics is that it will give you a better understanding of both the potential and the limits of economic policy. Economic questions are always on the minds of policymakers in mayors’ offices, governors’ mansions, and the White House. What are the burdens associated with alternative forms of taxation? What are the effects of free trade with other countries? What is the best way to protect the environment? How does a government budget deficit affect the economy? As a voter, you help choose the policies that guide the allocation of society’s resources. An understanding of economics will help you carry out that responsibility. And who knows: Perhaps someday you will end up as one of those policymakers yourself.

Thus, the principles of economics can be applied in many of life’s situations. Whether the future finds you reading the newspaper, running a business, or sitting in the Oval Office, you will be glad that you studied economics.

N. Gregory Mankiw
December 2010



brief

contents

- 1 Ten Principles of Economics 1
 - 2 Thinking Like an Economist 19
 - 3 Interdependence and the Gains from Trade 47
 - 4 The Market Forces of Supply and Demand 61
 - 5 Elasticity and Its Application 83
 - 6 Supply, Demand, and Government Policies 103
 - 7 Consumers, Producers, and the Efficiency of Markets 121
 - 8 Application: The Costs of Taxation 139
 - 9 Application: International Trade 153
 - 10 Externalities 173
 - 11 Public Goods and Common Resources 193
 - 12 The Costs of Production 207
 - 13 Firms in Competitive Markets 225
 - 14 Monopoly 245
 - 15 Measuring a Nation's Income 273
 - 16 Measuring the Cost of Living 293
 - 17 Production and Growth 309
 - 18 Saving, Investment, and the Financial System 329
 - 19 The Basic Tools of Finance 349
- Glossary** 365

Ten Principles of Economics

1

The word *economy* comes from the Greek word *oikonomos*, which means “one who manages a household.” At first, this origin might seem peculiar. But in fact, households and economies have much in common.

A household faces many decisions. It must decide which members of the household do which tasks and what each member gets in return: Who cooks dinner? Who does the laundry? Who gets the extra dessert at dinner? Who gets to choose what TV show to watch? In short, the household must allocate its scarce resources among its various members, taking into account each member’s abilities, efforts, and desires.

Like a household, a society faces many decisions. A society must find some way to decide what jobs will be done and who will do them. It needs some people to grow food, other people to make clothing, and still others to design computer software. Once society has allocated people (as well as land, buildings, and machines) to various jobs, it must also allocate the output of goods and services they produce. It must decide who will eat caviar and who will eat potatoes. It must decide who will drive a Ferrari and who will take the bus.

The management of society’s resources is important because resources are scarce. **Scarcity** means that society has limited resources and therefore cannot produce all the goods and services people wish to have. Just as each member of a household cannot get everything he or she wants, each individual in a society cannot attain the highest standard of living to which he or she might aspire.

Economics is the study of how society manages its scarce resources. In most societies, resources are allocated not by an all-powerful dictator but through the combined actions of millions of households and firms. Economists therefore study how people make decisions: how much they work, what they buy, how much they save, and how they invest their savings. Economists also study how people interact with one another. For instance, they examine how the multitude of buyers and sellers of a good together determine the price at which the good is sold and the quantity that is sold. Finally, economists analyze forces and trends that affect the economy as a whole, including the growth in average income, the fraction of the population that cannot find work, and the rate at which prices are rising.

The study of economics has many facets, but it is unified by several central ideas. In this chapter, we look at *Ten Principles of Economics*. Don’t worry if you don’t understand them all at first or if you aren’t completely convinced. We will explore these ideas more fully in later chapters. The ten principles are introduced here to give you an overview of what economics is all about. Consider this chapter a “preview of coming attractions.”

scarcity

the limited nature of society’s resources

economics

the study of how society manages its scarce resources

How People Make Decisions

There is no mystery to what an economy is. Whether we are talking about the economy of Los Angeles, the United States, or the whole world, an economy is just a group of people dealing with one another as they go about their lives. Because the behavior of an economy reflects the behavior of the individuals who make up

the economy, we begin our study of economics with four principles of individual decision making.

Principle 1: People Face Trade-offs

You may have heard the old saying, “There ain’t no such thing as a free lunch.” Grammar aside, there is much truth to this adage. To get one thing that we like, we usually have to give up another thing that we like. Making decisions requires trading off one goal against another.

Consider a student who must decide how to allocate her most valuable resource—her time. She can spend all her time studying economics, spend all of it studying psychology, or divide it between the two fields. For every hour she studies one subject, she gives up an hour she could have used studying the other. And for every hour she spends studying, she gives up an hour that she could have spent napping, bike riding, watching TV, or working at her part-time job for some extra spending money.

Or consider parents deciding how to spend their family income. They can buy food, clothing, or a family vacation. Or they can save some of the family income for retirement or the children’s college education. When they choose to spend an extra dollar on one of these goods, they have one less dollar to spend on some other good.

When people are grouped into societies, they face different kinds of trade-offs. One classic trade-off is between “guns and butter.” The more a society spends on national defense (guns) to protect its shores from foreign aggressors, the less it can spend on consumer goods (butter) to raise the standard of living at home. Also important in modern society is the trade-off between a clean environment and a high level of income. Laws that require firms to reduce pollution raise the cost of producing goods and services. Because of the higher costs, these firms end up earning smaller profits, paying lower wages, charging higher prices, or some combination of these three. Thus, while pollution regulations yield the benefit of a cleaner environment and the improved health that comes with it, the regulations come at the cost of reducing the incomes of the regulated firms’ owners, workers, and customers.

Another trade-off society faces is between efficiency and equality. **Efficiency** means that society is getting the maximum benefits from its scarce resources. **Equality** means that those benefits are distributed uniformly among society’s members. In other words, efficiency refers to the size of the economic pie, and equality refers to how the pie is divided into individual slices.

When government policies are designed, these two goals often conflict. Consider, for instance, policies aimed at equalizing the distribution of economic well-being. Some of these policies, such as the welfare system or unemployment insurance, try to help the members of society who are most in need. Others, such as the individual income tax, ask the financially successful to contribute more than others to support the government. While achieving greater equality, these policies reduce efficiency. When the government redistributes income from the rich to the poor, it reduces the reward for working hard; as a result, people work less and produce fewer goods and services. In other words, when the government tries to cut the economic pie into more equal slices, the pie gets smaller.

Recognizing that people face trade-offs does not by itself tell us what decisions they will or should make. A student should not abandon the study of psychology just because doing so would increase the time available for the study of economics. Society should not stop protecting the environment just because envi-

efficiency

the property of society getting the most it can from its scarce resources

equality

the property of distributing economic prosperity uniformly among the members of society

ronmental regulations reduce our material standard of living. The poor should not be ignored just because helping them distorts work incentives. Nonetheless, people are likely to make good decisions only if they understand the options they have available. Our study of economics, therefore, starts by acknowledging life's trade-offs.

Principle 2: The Cost of Something Is What You Give Up to Get It

Because people face trade-offs, making decisions requires comparing the costs and benefits of alternative courses of action. In many cases, however, the cost of an action is not as obvious as it might first appear.

Consider the decision to go to college. The main benefits are intellectual enrichment and a lifetime of better job opportunities. But what are the costs? To answer this question, you might be tempted to add up the money you spend on tuition, books, room, and board. Yet this total does not truly represent what you give up to spend a year in college.

There are two problems with this calculation. First, it includes some things that are not really costs of going to college. Even if you quit school, you need a place to sleep and food to eat. Room and board are costs of going to college only to the extent that they are more expensive at college than elsewhere. Second, this calculation ignores the largest cost of going to college—your time. When you spend a year listening to lectures, reading textbooks, and writing papers, you cannot spend that time working at a job. For most students, the earnings given up to attend school are the largest single cost of their education.

The **opportunity cost** of an item is what you give up to get that item. When making any decision, decision makers should be aware of the opportunity costs that accompany each possible action. In fact, they usually are. College athletes who can earn millions if they drop out of school and play professional sports are well aware that their opportunity cost of college is very high. It is not surprising that they often decide that the benefit of a college education is not worth the cost.

opportunity cost
whatever must be given up to obtain some item

Principle 3: Rational People Think at the Margin

Economists normally assume that people are rational. **Rational people** systematically and purposefully do the best they can to achieve their objectives, given the available opportunities. As you study economics, you will encounter firms that decide how many workers to hire and how much of their product to manufacture and sell to maximize profits. You will also encounter individuals who decide how much time to spend working and what goods and services to buy with the resulting income to achieve the highest possible level of satisfaction.

rational people
people who systematically and purposefully do the best they can to achieve their objectives

Rational people know that decisions in life are rarely black and white but usually involve shades of gray. At dinnertime, the decision you face is not between fasting or eating like a pig but whether to take that extra spoonful of mashed potatoes. When exams roll around, your decision is not between blowing them off or studying 24 hours a day but whether to spend an extra hour reviewing your notes instead of watching TV. Economists use the term **marginal change** to describe a small incremental adjustment to an existing plan of action: Keep in mind that *margin* means “edge,” so marginal changes are adjustments around the edges of what you are doing. Rational people often make decisions by comparing *marginal benefits* and *marginal costs*.

marginal change
a small incremental adjustment to a plan of action

For example, consider an airline deciding how much to charge passengers who fly standby. Suppose that flying a 200-seat plane across the United States costs the airline \$100,000. In this case, the average cost of each seat is $\$100,000/200$, which is \$500. One might be tempted to conclude that the airline should never sell a ticket for less than \$500. Actually, a rational airline can often find ways to raise its profits by thinking at the margin. Imagine that a plane is about to take off with ten empty seats, and a standby passenger waiting at the gate will pay \$300 for a seat. Should the airline sell the ticket? Of course it should. If the plane has empty seats, the cost of adding one more passenger is tiny. Although the *average* cost of flying a passenger is \$500, the *marginal* cost is merely the cost of the bag of peanuts and can of soda that the extra passenger will consume. As long as the standby passenger pays more than the marginal cost, selling the ticket is profitable.

Marginal decision making can help explain some otherwise puzzling economic phenomena. Here is a classic question: Why is water so cheap, while diamonds are so expensive? Humans need water to survive, while diamonds are unnecessary; but for some reason, people are willing to pay much more for a diamond than for a cup of water. The reason is that a person's willingness to pay for a good is based on the marginal benefit that an extra unit of the good would yield. The marginal benefit, in turn, depends on how many units a person already has. Water is essential, but the marginal benefit of an extra cup is small because water is plentiful. By contrast, no one needs diamonds to survive, but because diamonds are so rare, people consider the marginal benefit of an extra diamond to be large.

A rational decision maker takes an action if and only if the marginal benefit of the action exceeds the marginal cost. This principle can explain why airlines are willing to sell a ticket below average cost and why people are willing to pay more for diamonds than for water. It can take some time to get used to the logic of marginal thinking, but the study of economics will give you ample opportunity to practice.

Principle 4: People Respond to Incentives

incentive

something that induces a person to act

An **incentive** is something that induces a person to act, such as the prospect of a punishment or a reward. Because rational people make decisions by comparing costs and benefits, they respond to incentives. You will see that incentives play a central role in the study of economics. One economist went so far as to suggest that the entire field could be summarized simply: "People respond to incentives. The rest is commentary."

Incentives are crucial to analyzing how markets work. For example, when the price of an apple rises, people decide to eat fewer apples. At the same time, apple orchards decide to hire more workers and harvest more apples. In other words, a higher price in a market provides an incentive for buyers to consume less and an incentive for sellers to produce more. As we will see, the influence of prices on the behavior of consumers and producers is crucial for how a market economy allocates scarce resources.

Public policymakers should never forget about incentives: Many policies change the costs or benefits that people face and, therefore, alter their behavior. A tax on gasoline, for instance, encourages people to drive smaller, more fuel-efficient cars. That is one reason people drive smaller cars in Europe, where gasoline taxes are high, than in the United States, where gasoline taxes are low. A gasoline tax also encourages people to carpool, take public transportation, and live closer to where they work. If the tax were larger, more people would be driving hybrid cars, and if it were large enough, they would switch to electric cars.

When policymakers fail to consider how their policies affect incentives, they

often end up with unintended consequences. For example, consider public policy regarding auto safety. Today, all cars have seat belts, but this was not true 50 years ago. In the 1960s, Ralph Nader's book *Unsafe at Any Speed* generated much public concern over auto safety. Congress responded with laws requiring seat belts as standard equipment on new cars.

How does a seat belt law affect auto safety? The direct effect is obvious: When a person wears a seat belt, the probability of surviving an auto accident rises. But that's not the end of the story because the law also affects behavior by altering incentives. The relevant behavior here is the speed and care with which drivers operate their cars. Driving slowly and carefully is costly because it uses the driver's time and energy. When deciding how safely to drive, rational people compare, perhaps unconsciously, the marginal benefit from safer driving to the marginal cost. As a result, they drive more slowly and carefully when the benefit of increased safety is high. For example, when road conditions are icy, people drive more attentively and at lower speeds than they do when road conditions are clear.

Consider how a seat belt law alters a driver's cost-benefit calculation. Seat belts make accidents less costly because they reduce the likelihood of injury or death. In other words, seat belts reduce the benefits of slow and careful driving. People respond to seat belts as they would to an improvement in road conditions—by driving faster and less carefully. The result of a seat belt law, therefore, is a larger number of accidents. The decline in safe driving has a clear, adverse impact on pedestrians, who are more likely to find themselves in an accident but (unlike the drivers) don't have the benefit of added protection.

At first, this discussion of incentives and seat belts might seem like idle speculation. Yet in a classic 1975 study, economist Sam Peltzman argued that auto-safety laws have had many of these effects. According to Peltzman's evidence, these laws produce both fewer deaths per accident and more accidents. He concluded that the net result is little change in the number of driver deaths and an increase in the number of pedestrian deaths.

Peltzman's analysis of auto safety is an offbeat and controversial example of the general principle that people respond to incentives. When analyzing any policy, we must consider not only the direct effects but also the less obvious indirect effects that work through incentives. If the policy changes incentives, it will cause people to alter their behavior.

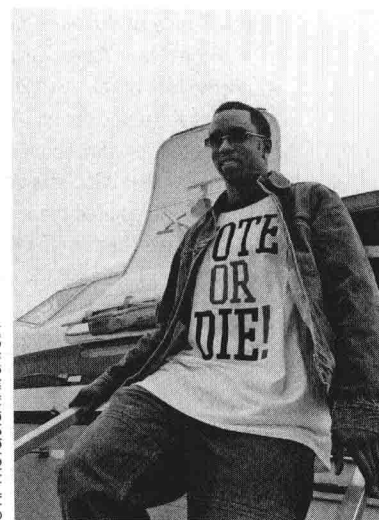
CASE STUDY

The Incentive Effects of Gasoline Prices

From 2005 to 2008 the price of oil in world oil markets skyrocketed, the result of limited supplies together with surging demand from robust world growth, especially in China. The price of gasoline in the United States rose from about \$2 to about \$4 a gallon. At the time, the news was filled with stories about how people responded to the increased incentive to conserve, sometimes in obvious ways, sometimes in less obvious ways.

Here is a sampling of various stories:

- "As Gas Prices Soar, Buyers Are Flocking to Small Cars"
- "As Gas Prices Climb, So Do Scooter Sales"
- "Gas Prices Knock Bicycles Sales, Repairs into Higher Gear"
- "Gas Prices Send Surge of Riders to Mass Transit"
- "Camel Demand Up as Oil Price Soars": Farmers in the Indian state of

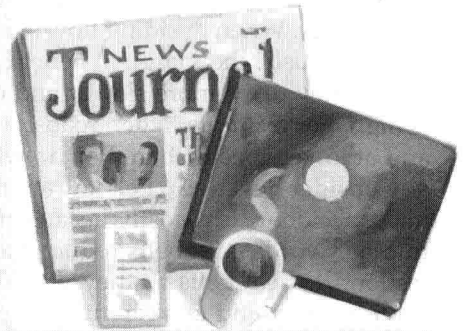


Hip-hop mogul Sean "Diddy" Combs responds to incentives.

Rajasthan are rediscovering the humble camel. As the cost of running gas-guzzling tractors soars, even-toed ungulates are making a comeback.

- “The Airlines Are Suffering, But the Order Books of Boeing and Airbus Are Bulging”: Demand for new, more fuel-efficient aircraft has never been greater. The latest versions of the Airbus A320 and Boeing 737, the single-aisle workhorses for which demand is strongest, are up to 40% cheaper to run than the vintage planes some American airlines still use.
- “Home Buying Practices Adjust to High Gas Prices”: In his hunt for a new

in the news



Incentive Pay

As this article illustrates, how people are paid affects their incentives and the decisions they make. (The article's author, by the way, subsequently became one of the chief economic advisers to President Barack Obama.)

Where the Buses Run on Time

BY AUSTAN GOOLSBEE

On a summer afternoon, the drive home from the University of Chicago to the north side of the city must be one of the most beautiful commutes in the world. On the left on Lake Shore Drive you pass Grant Park, some of the world's first skyscrapers, and the Sears Tower. On the right is the intense blue of Lake Michigan. But for all the beauty, the traffic can be hell. So, if you drive the route every day, you learn the shortcuts. You know that if it backs up from the Buckingham Fountain all the way to McCormick Place, you're better off taking the surface streets and getting back onto Lake Shore Drive a few miles north.

A lot of buses, however, wait in the traffic jams. I have always wondered about that: Why don't the bus drivers use the shortcuts? Surely they know about them—they drive the same route every day, and they probably avoid the traffic when they drive their own

cars. Buses don't stop on Lake Shore Drive, so they wouldn't strand anyone by detouring around the congestion. And when buses get delayed in heavy traffic, it wreaks havoc on the scheduled service. Instead of arriving once every 10 minutes, three buses come in at the same time after half an hour. That sort of bunching is the least efficient way to run a public transportation system. So, why not take the surface streets if that would keep the schedule properly spaced and on time?

You might think at first that the problem is that the drivers aren't paid enough to strategize. But Chicago bus drivers are the seventh-highest paid in the nation; full-timers earned more than \$23 an hour, according to a November 2004 survey. The problem may have to do not with how much they are paid, but how they are paid. At least, that's the implication of a new study of Chilean bus drivers by Ryan Johnson and David Reiley of the University of Arizona and Juan Carlos Muñoz of Pontificia Universidad Católica de Chile.

Companies in Chile pay bus drivers one of two ways: either by the hour or by the passenger. Paying by the passenger leads to significantly shorter delays. Give them

incentives, and drivers start acting like regular people do. They take shortcuts when the traffic is bad. They take shorter meal breaks and bathroom breaks. They want to get on the road and pick up more passengers as quickly as they can. In short, their productivity increases. . . .

Not everything about incentive pay is perfect, of course. When bus drivers start moving from place to place more quickly, they get in more accidents (just like the rest of us). Some passengers also complain that the rides make them nauseated because the drivers stomp on the gas as soon as the last passenger gets on the bus. Yet when given the choice, people overwhelmingly choose the bus companies that get them where they're going on time. More than 95 percent of the routes in Santiago use incentive pay.

Perhaps we should have known that incentive pay could increase bus driver productivity. After all, the taxis in Chicago take the shortcuts on Lake Shore Drive to avoid the traffic that buses just sit in. Since taxi drivers earn money for every trip they make, they want to get you home as quickly as possible so they can pick up somebody else.

home, Demetrius Stroud crunched the numbers to find out that, with gas prices climbing, moving near an Amtrak station is the best thing for his wallet.

- “Gas Prices Drive Students to Online Courses”: For Christy LaBadie, a sophomore at Northampton Community College, the 30-minute drive from her home to the Bethlehem, Pa., campus has become a financial hardship now that gasoline prices have soared to more than \$4 a gallon. So this semester she decided to take an online course to save herself the trip—and the money.
- “Diddy Halts Private Jet Flights Over Fuel Prices”: Fuel prices have grounded an unexpected frequent-flyer: Sean “Diddy” Combs. . . . The hip-hop mogul said he is now flying on commercial airlines instead of in private jets, which Combs said had previously cost him \$200,000 and up for a roundtrip between New York and Los Angeles. “I’m actually flying commercial,” Diddy said before walking onto an airplane, sitting in a first-class seat and flashing his boarding pass to the camera. “That’s how high gas prices are.”

Many of these developments proved transitory. The economic downturn that began in 2008 and continued into 2009 reduced the world demand for oil, and the price of gasoline declined substantially. No word yet on whether Mr. Combs has returned to his private jet. ■

QUICK QUIZ Describe an important trade-off you recently faced. • Give an example of some action that has both a monetary and nonmonetary opportunity cost. • Describe an incentive your parents offered to you in an effort to influence your behavior.

How People Interact

The first four principles discussed how individuals make decisions. As we go about our lives, many of our decisions affect not only ourselves but other people as well. The next three principles concern how people interact with one another.

Principle 5: Trade Can Make Everyone Better Off

You may have heard on the news that the Japanese are our competitors in the world economy. In some ways, this is true because American and Japanese firms produce many of the same goods. Ford and Toyota compete for the same customers in the market for automobiles. Apple and Sony compete for the same customers in the market for digital music players.

Yet it is easy to be misled when thinking about competition among countries. Trade between the United States and Japan is not like a sports contest in which one side wins and the other side loses. In fact, the opposite is true: Trade between two countries can make each country better off.

To see why, consider how trade affects your family. When a member of your family looks for a job, he or she competes against members of other families who are looking for jobs. Families also compete against one another when they go shopping because each family wants to buy the best goods at the lowest prices. In a sense, each family in the economy is competing with all other families.

Despite this competition, your family would not be better off isolating itself from all other families. If it did, your family would need to grow its own food, make its own clothes, and build its own home. Clearly, your family gains much from its ability to trade with others. Trade allows each person to specialize in the



“For \$5 a week you can watch baseball without being nagged to cut the grass!”