Chapter

6

Household Behavior and Consumer Choice

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Household Behavior and Consumer Choice

Chapter Outline

HOUSEHOLD BEHAVIOR AND CONSUMER CHOICE

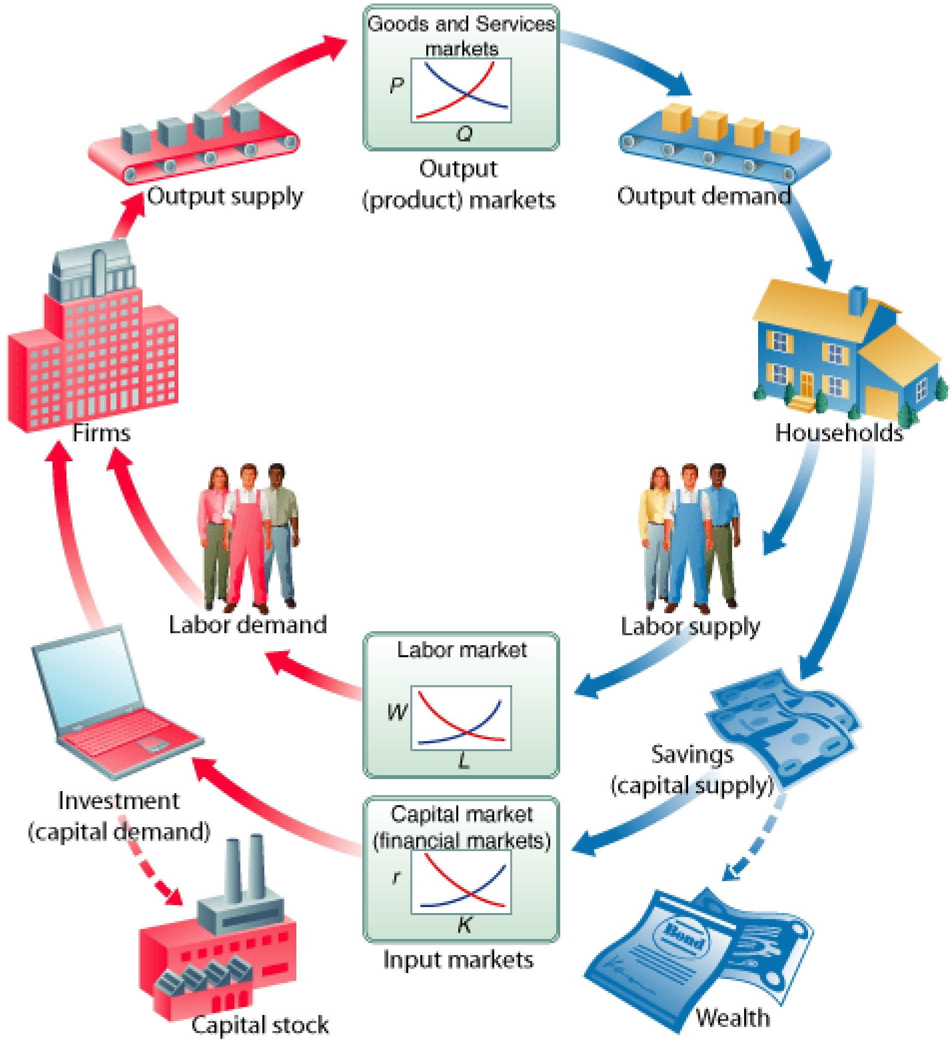


FIGURE 6.1 Firm and Household Decisions

HOUSEHOLD BEHAVIOR AND CONSUMER CHOICE

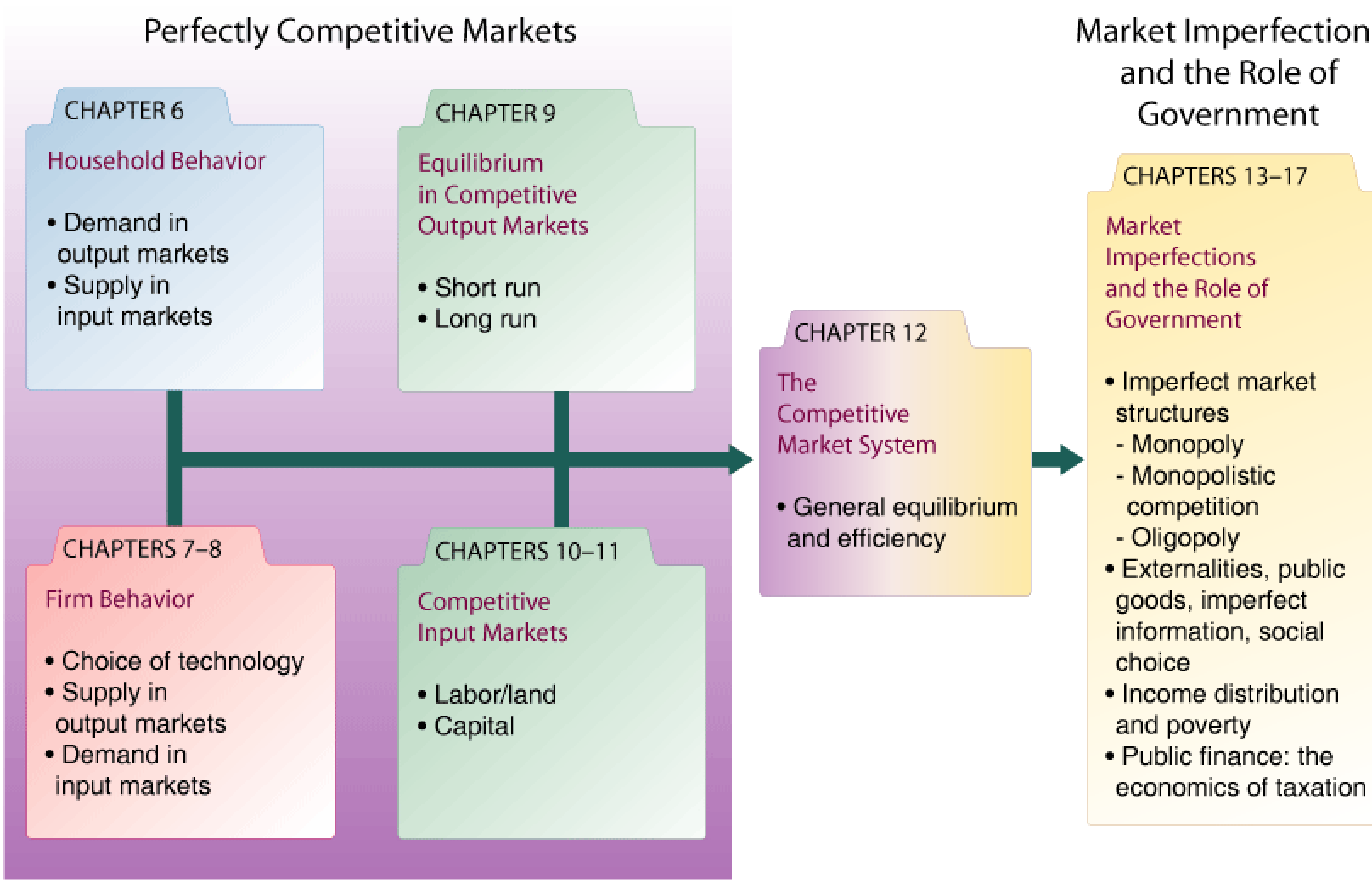


FIGURE 6.2 **Understanding the Microeconomy and the Role of Government**

HOUSEHOLD BEHAVIOR AND CONSUMER CHOICE

Assumptions

perfect competition An industry structure in which there are many firms, each small relative to the industry and producing virtually identical products, and in which no firm is large enough to have any control over prices.

homogeneous products Undifferentiated outputs; products that are identical to, or indistinguishable from, one another.

HOUSEHOLD BEHAVIOR AND CONSUMER CHOICE

perfect knowledge The assumption that households possess a knowledge of the qualities and prices of everything available in the market and that firms have all available information concerning wage rates, capital costs, and output prices.

Much of the economic analysis in the chapters that follow applies to all forms of market structure. Indeed, much of the power of economic reasoning is that it is quite general. As we continue in microeconomics, in Chapter 13 we will define and explore several different kinds of market organization and structure, including monopoly, oligopoly, and monopolistic competition. Because monopolists, oligopolists, monopolistic competitors, and perfect competitors share the objective of maximizing profits, it should not be surprising that their behavior is in many ways similar. We focus here on perfect competition because many of these basic principles are easier to learn in the simplest of cases first.

HOUSEHOLD CHOICE IN OUTPUT MARKETS

Every household must make three basic decisions:

1. **How much of each product, or output, to demand**
2. **How much labor to supply**
3. **How much to spend today and how much to save for the future**

HOUSEHOLD CHOICE IN OUTPUT MARKETS

THE DETERMINANTS OF HOUSEHOLD DEMAND

Several factors influence the quantity of a given good or service demanded by a single household:

- The price of the product
- The income available to the household
- The household's amount of accumulated wealth
- The prices of other products available to the household
- The household's tastes and preferences
- The household's expectations about future income, wealth, and prices

HOUSEHOLD CHOICE IN OUTPUT MARKETS

THE BUDGET CONSTRAINT

Information on household income and wealth, together with information on product prices, makes it possible to distinguish those combinations of goods and services that are affordable from those that are not.

budget constraint The limits imposed on household choices by income, wealth, and product prices.

HOUSEHOLD CHOICE IN OUTPUT MARKETS

TABLE 6.1 Possible Budget Choices of a Person Earning $1,000 Per Month After Taxes

OPTION	MONTHLY RENT	FOOD	OTHER EXPENSES	TOTAL	AVAILABLE?
A	$ 400	$250	$350	$1,000	Yes
B	600	200	200	1,000	Yes
C	700	150	150	1,000	Yes
D	1,000	100	100	1,200	No

choice set or opportunity set The set of options that is defined and limited by a budget constraint.

HOUSEHOLD CHOICE IN OUTPUT MARKETS

Preferences, Tastes, Trade-Offs, and Opportunity Cost

Preferences play a key role in determining demand. Some people like the blues or jazz, some like classical, while others love country music.

As long as a household faces a limited budget—and all households ultimately do—the real cost of any good or service is the value of the other goods and services that could have been purchased with the same amount of money. The real cost of a good or service is its opportunity cost, and opportunity cost is determined by relative prices.

HOUSEHOLD CHOICE IN OUTPUT MARKETS

The Budget Constraint More Formally

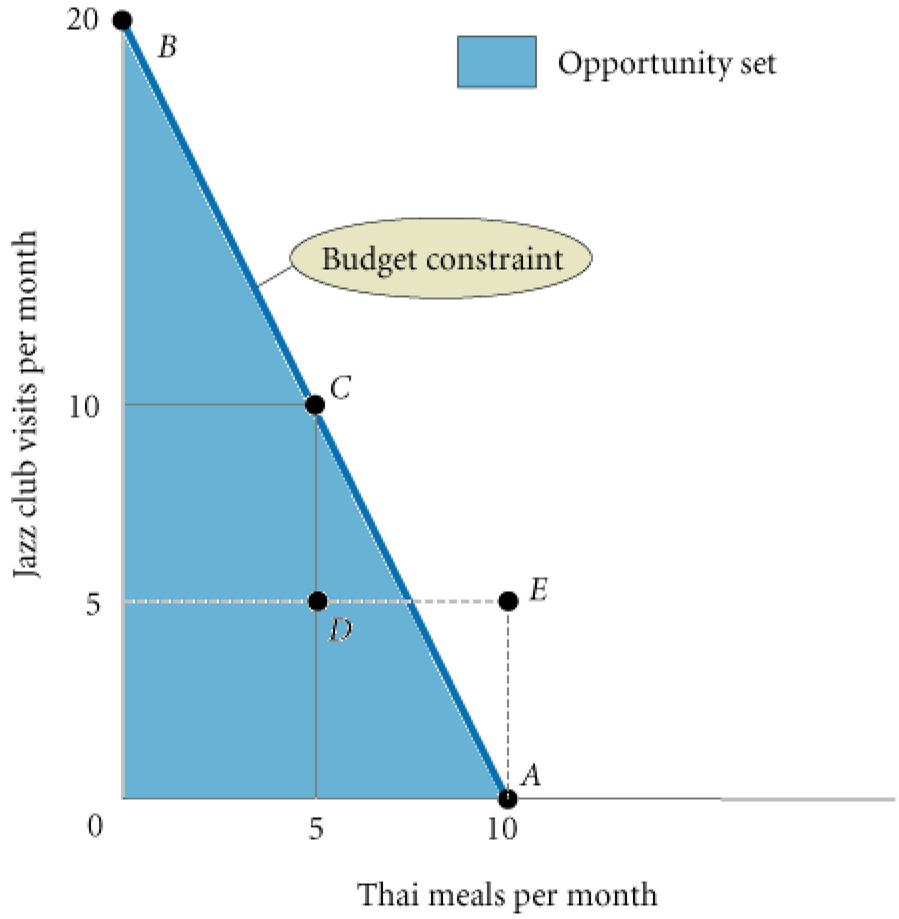


FIGURE 6.3 **Budget Constraint and Opportunity Set for Ann and Tom**

HOUSEHOLD CHOICE IN OUTPUT MARKETS

real income Set of opportunities to purchase real goods and services available to a household as determined by prices and money income.

HOUSEHOLD CHOICE IN OUTPUT MARKETS

THE EQUATION OF THE BUDGET CONSTRAINT

In general, the budget constraint can be written:

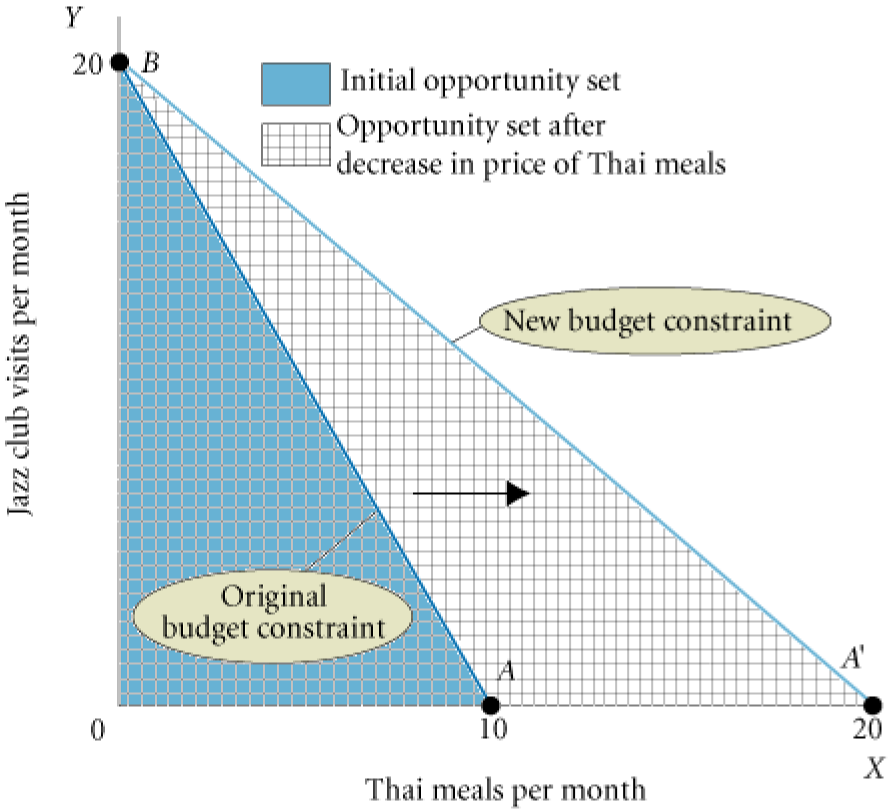
$$P_X X + P_Y Y = I,$$

where P_X = the price of X, X = the quantity of X consumed, P_Y = the price of Y, Y = the quantity of Y consumed, and I = household income.

HOUSEHOLD CHOICE IN OUTPUT MARKETS

Budget Constraints Change When Prices Rise or Fall

FIGURE 6.4 **The Effect of a Decrease in Price on Ann and Tom's Budget Constraint**



The budget constraint is defined by income, wealth, and prices. Within those limits, households are free to choose, and the household's ultimate choice depends on its own likes and dislikes.

THE BASIS OF CHOICE: UTILITY

utility The satisfaction, or reward, a product yields relative to its alternatives. The basis of choice.

THE BASIS OF CHOICE: UTILITY

DIMINISHING MARGINAL UTILITY

marginal utility (*MU*) The additional satisfaction gained by the consumption or use of one more unit of something.

total utility The total amount of satisfaction obtained from consumption of a good or service.

law of diminishing marginal utility The more of any one good consumed in a given period, the less satisfaction (utility) generated by consuming each additional (marginal) unit of the same good.

THE BASIS OF CHOICE: UTILITY

TABLE 6.2 Total Utility and Marginal Utility of Trips to the Club Per Week

TRIPS TO CLUB	TOTAL UTILITY	MARGINAL UTILITY
1	12	12
2	22	10
3	28	6
4	32	4
5	34	2
6	34	0

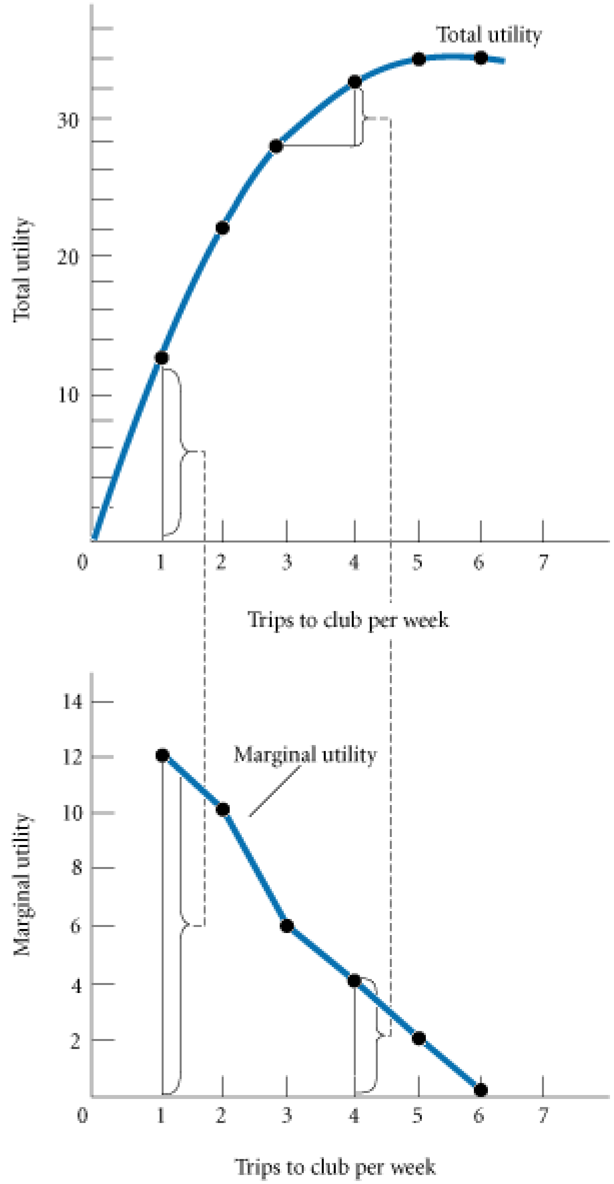


FIGURE 6.5 Graphs of Frank's Total and Marginal Utility

THE BASIS OF CHOICE: UTILITY

ALLOCATING INCOME TO MAXIMIZE UTILITY

TABLE 6.3 Allocation of Fixed Expenditure per Week Between Two Alternatives

(1) TRIPS TO CLUB PER WEEK	(2) TOTAL UTILITY	(3) MARGINAL UTILITY (*MU*)	(4) PRICE (*P*)	(5) MARGINAL UTILITY PER DOLLAR (*MU*/P)
1	12	12	$3.00	4.0
2	22	10	3.00	3.3
3	28	6	3.00	2.0
4	32	4	3.00	1.3
5	34	2	3.00	0.7
6	34	0	3.00	0
(1) BASKETBALL GAMES PER WEEK	**(2) TOTAL UTILITY**	**(3) MARGINAL UTILITY (*MU*)**	**(4) PRICE (*P*)**	**(5) MARGINAL UTILITY PER DOLLAR (*MU/P*)**
1	21	21	$6.00	3.5
2	33	12	6.00	2.0
3	42	9	6.00	1.5
4	48	6	6.00	1.0
5	51	3	6.00	.5
6	51	0	6.00	0

THE BASIS OF CHOICE: UTILITY

THE UTILITY-MAXIMIZING RULE

In general, utility-maximizing consumers spread out their expenditures until the following condition holds:

$$\text{utility-maximizing rule: } \frac{MU_X}{P_X} = \frac{MU_Y}{P_Y} \text{ for all pairs of goods}$$

THE BASIS OF CHOICE: UTILITY

DIMINISHING MARGINAL UTILITY AND DOWNWARD-SLOPING DEMAND

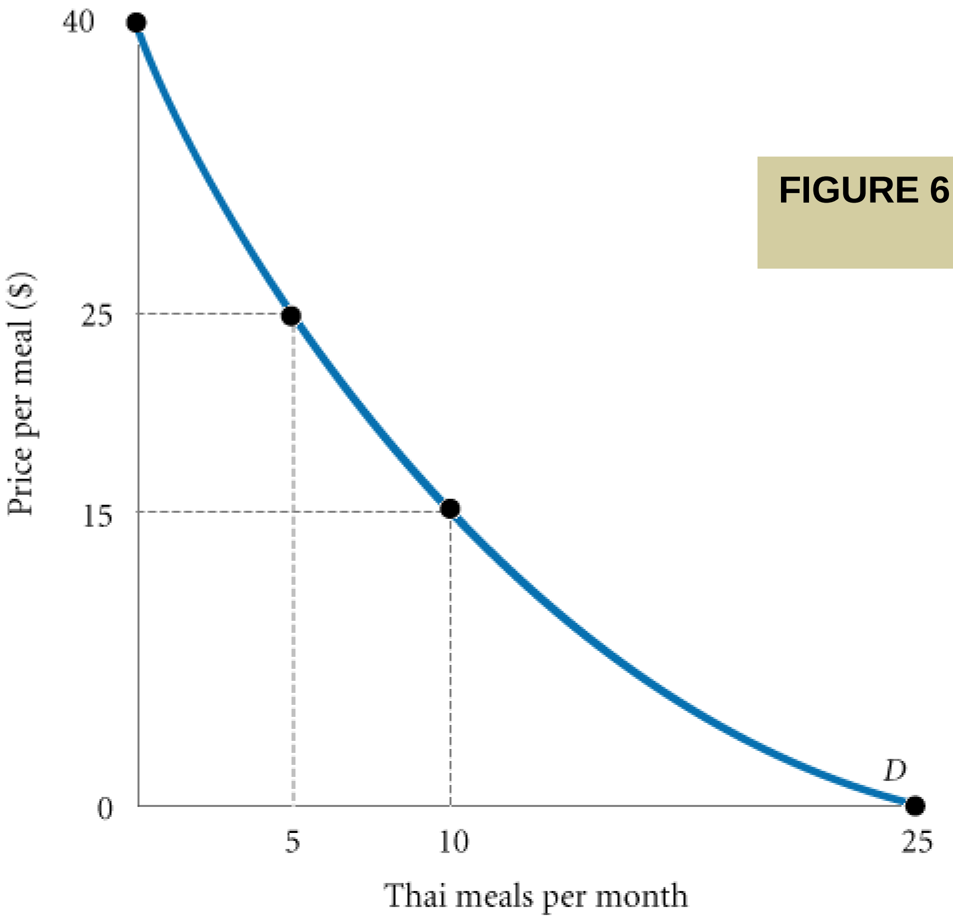


FIGURE 6.6 Diminishing Marginal Utility and Downward-Sloping Demand

INCOME AND SUBSTITUTION EFFECTS

THE INCOME EFFECT

When the price of something we buy falls, we are *better off*. When the price of something we buy rises, we are *worse off*.

INCOME AND SUBSTITUTION EFFECTS

THE SUBSTITUTION EFFECT

Both the income and the substitution effects imply a negative relationship between price and quantity demanded—in other words, downward-sloping demand. When the price of something falls, ceteris paribus, we are better off, and we are likely to buy more of that good and other goods (income effect). Because lower price also means "less expensive relative to substitutes," we are likely to buy more of the good (substitution effect). When the price of something rises, we are worse off, and we will buy less of it (income effect). Higher price also means "more expensive relative to substitutes," and we are likely to buy less of it and more of other goods (substitution effect).

INCOME AND SUBSTITUTION EFFECTS

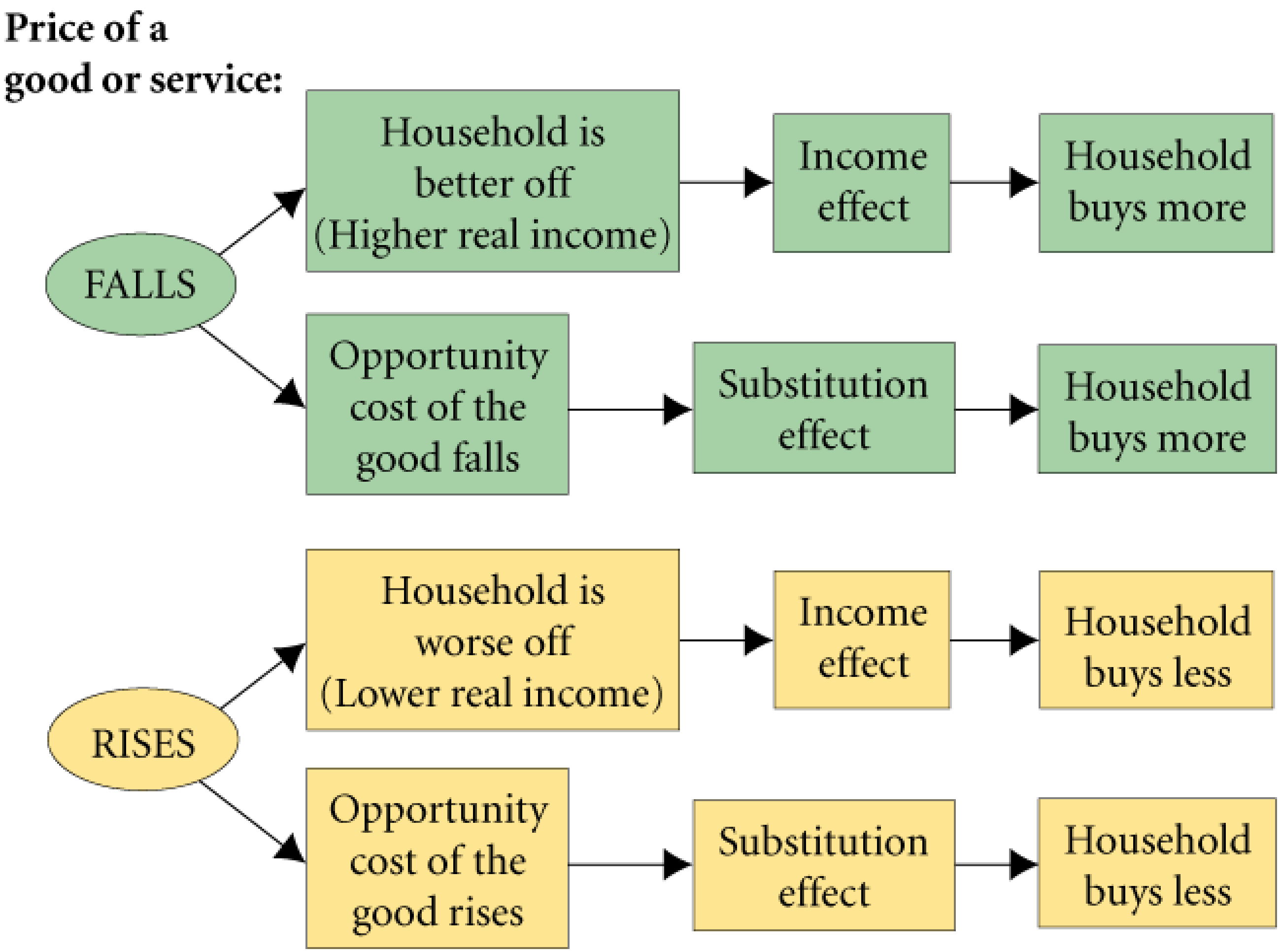


FIGURE 6.7 **Income and Substitution Effects of a Price Change**

REVIEW TERMS AND CONCEPTS

budget constraint

choice set or opportunity set

cost-benefit analysis

homogeneous products

income effect of a price change

law of diminishing marginal utility

marginal utility (*MU*)

perfect competition

perfect knowledge

real income

substitution effect of a price change

total utility

utility

utility-maximizing rule

