

Consumer Choice

LEARNING OBJECTIVES

After learning about this chapter, you should know

L05-1 Why demand curves are downward sloping.

L05-2 The nature and source of consumer surplus.

L05-3 The meaning and use of price discrimination.

L05-4 How consumers maximize utility.

Consumer Choice

- ✓ Prices are important in determining consumer behavior.
- ✓ New products have to be priced correctly. The price could be set too high and suppress sales – or too low and suppress profits.
- ✓ In this chapter we look at how the price affects consumer decisions.
 - How do we decide how much of any good to buy?
 - Why do we feel so good about our purchases?
 - Why do we buy certain products but not others?

Determinants of Demand

Sociopsychiatric theory: why people *desire* certain goods and services.

Economic theory: why goods and services are actually *purchased*.

- ✓ To buy goods, one must be both willing and able to pay for them.
- ✓ Prices and income are just as relevant to consumption decisions as are basic desires and preferences.

Determinants of Demand II

Four factors determine an individual's demand for a product.

- **Tastes** (a desire for this and other goods)
- **Income** (of the consumer)
- **Expectations** (for income, prices, tastes)
- **Other goods** (their availability and prices)

Remember that market demand is also determined by the number of buyers.



**Let's have a little fun
with a possible example**

. . .

who wants to play?

Utility Theory

The more pleasure (satisfaction, utility) we get from a product, the higher the price we're willing to pay for it.

- ✓ **Utility:** the pleasure or satisfaction obtained from using a good or service.
- ✓ **Total utility:** the amount of satisfaction obtained from the consumption of a series of products.
- ✓ **Marginal utility:** the change in total utility obtained by consuming one additional (marginal) unit of a product.

$$\text{Marginal utility} = \frac{\text{Change in total utility}}{\text{Change in quantity}}$$

Diminishing Marginal Utility

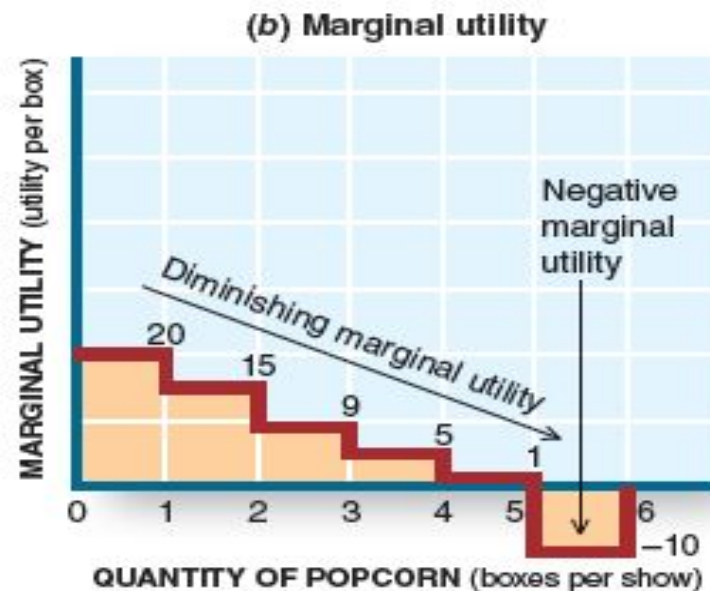
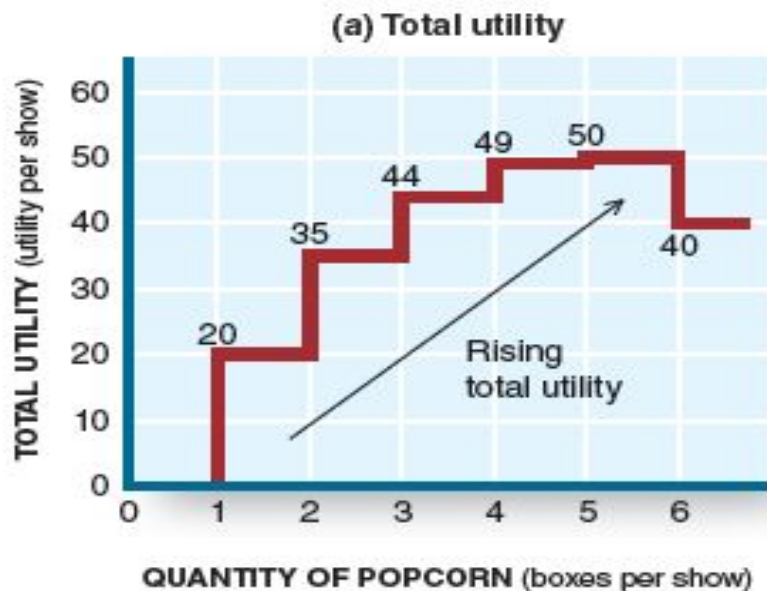
Law of diminishing marginal utility: the marginal utility of a good decreases as more of it is consumed over a given time period.

- *The satisfaction received from the next slice of pizza, say, is less than the satisfaction received from the previous slice.*

Additional quantities of a good yield smaller and smaller increments of satisfaction.

Diminishing Marginal Utility

As long as marginal utility > 0 , total utility increases. When marginal utility reaches zero, total utility maxes out, and when marginal utility becomes negative, total utility decreases.



Choosing Among Products

- While shopping consumers usually select from several goods.
- The goal is the same: to get as much satisfaction (utility) as possible from our available income.
- To do this, rational behavior requires buyers to compare the anticipated utility of each good with its price. That is, make the marginal utility to price comparison (MU/P).
 - ✓ All MU/P ratios must be greater than 1 to be considered.
 - ✓ That means the marginal utility exceeds the price and the exchange will be beneficial.

Utility and Consumer Decision Making

Total Utility and Marginal Utility from Eating Pizza and Drinking Coke

NUMBER OF SLICES OF PIZZA	TOTAL UTILITY FROM EATING PIZZA	MARGINAL UTILITY FROM THE LAST SLICE	NUMBER OF CUPS OF COKE	TOTAL UTILITY FROM DRINKING COKE	MARGINAL UTILITY FROM THE LAST CUP
0	0	--	0	0	--
1	20	20	1	20	20
2	36	16	2	35	15
3	46	10	3	45	10
4	52	6	4	50	5
5	54	2	5	53	3
6	51	-3	6	52	-1

Converting Marginal Utility to Marginal Utility per Dollar

Where: Pizza is \$2 / slice and Coke is \$1 / cup

(1) Slices of Pizza	(2) Marginal Utility (MU_{PIZZA})	(3) Marginal Utility per Dollar $\left(\frac{MU_{PIZZA}}{P_{PIZZA}}\right)$	(4) Cups of Coke	(5) Marginal Utility (MU_{COKE})	(6) Marginal Utility per Dollar $\left(\frac{MU_{COKE}}{P_{COKE}}\right)$
1	20	10	1	20	20
2	16	8	2	15	15
3	10	5	3	10	10
4	6	3	4	5	5
5	2	1	5	3	3
6	-3	--	6	-1	--

The Rule of Equal Marginal Utility per Dollar Spent

Where: Pizza is \$2 / slice and Coke is \$1 / cup

With \$5.00 to spend

With \$10.00 to spend

(1) Slices of Pizza	(2) Marginal Utility (MU_{PIZZA})	(3) Marginal Utility per Dollar $\left(\frac{MU_{Pizza}}{P_{Pizza}}\right)$	(4) Cups of Coke	(5) Marginal Utility (MU_{COKE})	(6) Marginal Utility per Dollar $\left(\frac{MU_{Coke}}{P_{Coke}}\right)$
1	20	10	1	20	20
2	16	8	2	15	15
3	10	5	3	10	10
4	6	3	4	5	5
5	2	1	5	3	3
6	-3	--	6	-1	--

Choosing Among Products II

- 1) Rank order the choices according to MU/P.
- 2) Choose the highest one first, then the next, etc. Remember, for successive units of a good, MU decreases.
- 3) Keep doing this until all of the next MU/P ratios are equal and you are indifferent to choosing among them.
- 4) At this point, you have maximized your utility.

Utility Maximization Rule

- Choose according to MU/P ratio, taking the highest first, then the next, etc.
- When all of the next MU/P ratios are the same, you have **optimum consumption**: the maximum total utility for the limited amount of income you have to spend.

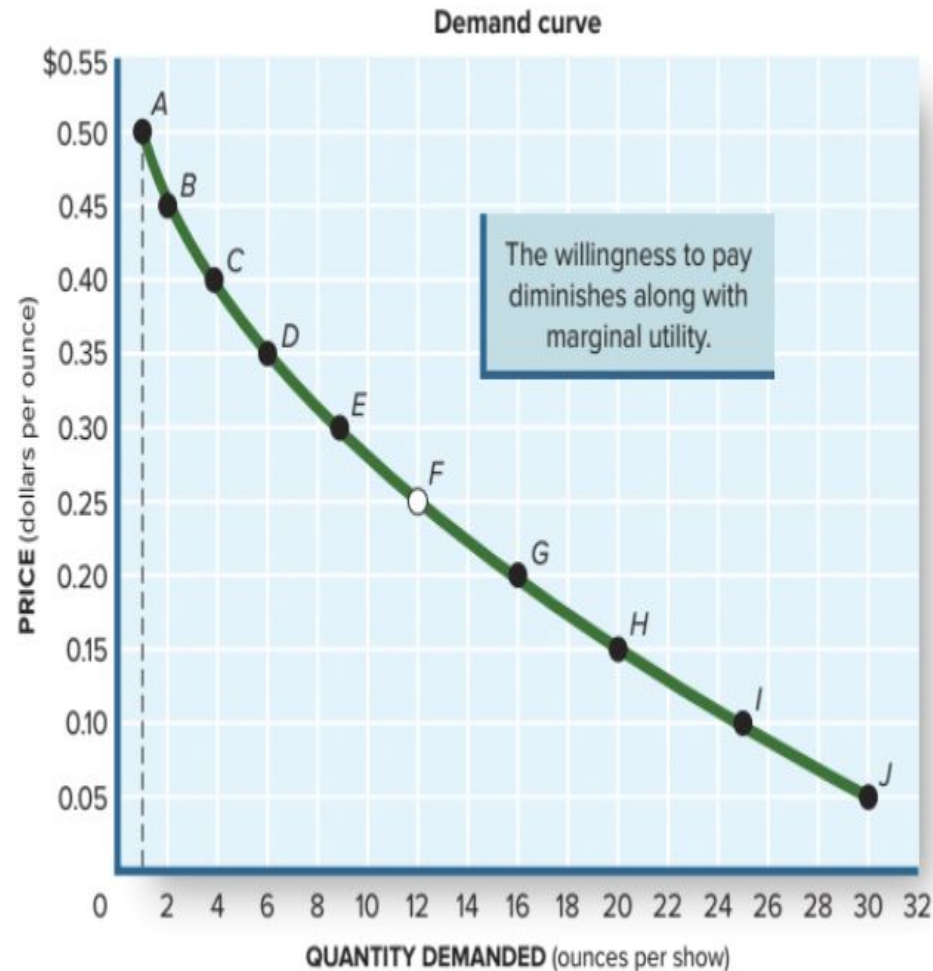
Utility-Maximizing Rule:
$$\frac{MU_x}{P_x} = \frac{Mu_y}{P_y}$$

Price and Quantity

- The more marginal utility a product delivers, the more we are willing to pay for it, and vice versa.
- As marginal utility diminishes, we will buy additional quantities only if the price decreases.
- The **law of demand** states that, in a given time period, the quantity of a good demanded increases as its price falls, *ceteris paribus*.

Price and Quantity II

- The demand curve slopes downward because of diminishing marginal utility.
- To justify buying more, the price must be lower.
- At \$0.25, buy 12 ounces (point **F**).
- At \$0.15, buy 20 ounces (point **H**).



Market Demand

- **Market demand** is the sum of all our individual demands for a product.
 - Its characteristics are the same as the individual's demand curve, except that the numbers are much larger.
 - It expresses the collective willingness and ability to pay

Consumer Surplus

- A person high up on the demand curve is willing to pay a lot for a good.
- A person down low on the demand curve is not willing to pay very much for a good.
- The demand curve represents what each potential buyer is willing to pay for a good.
- **Consumer surplus:** the difference between the maximum price one is willing to pay and the price actually paid.

Consumer Surplus II

If a person's maximum price **exceeds** the market price, he or she will buy and accumulate consumer surplus.

– *He or she may consider it to be a bargain!*

If a person's maximum price **is less than** the market price, he or she will not buy and will gain no consumer surplus.

– *He or she may just think the good is not worth the price.*

Consumer Surplus III

Price = \$847,975

Consumer surplus:

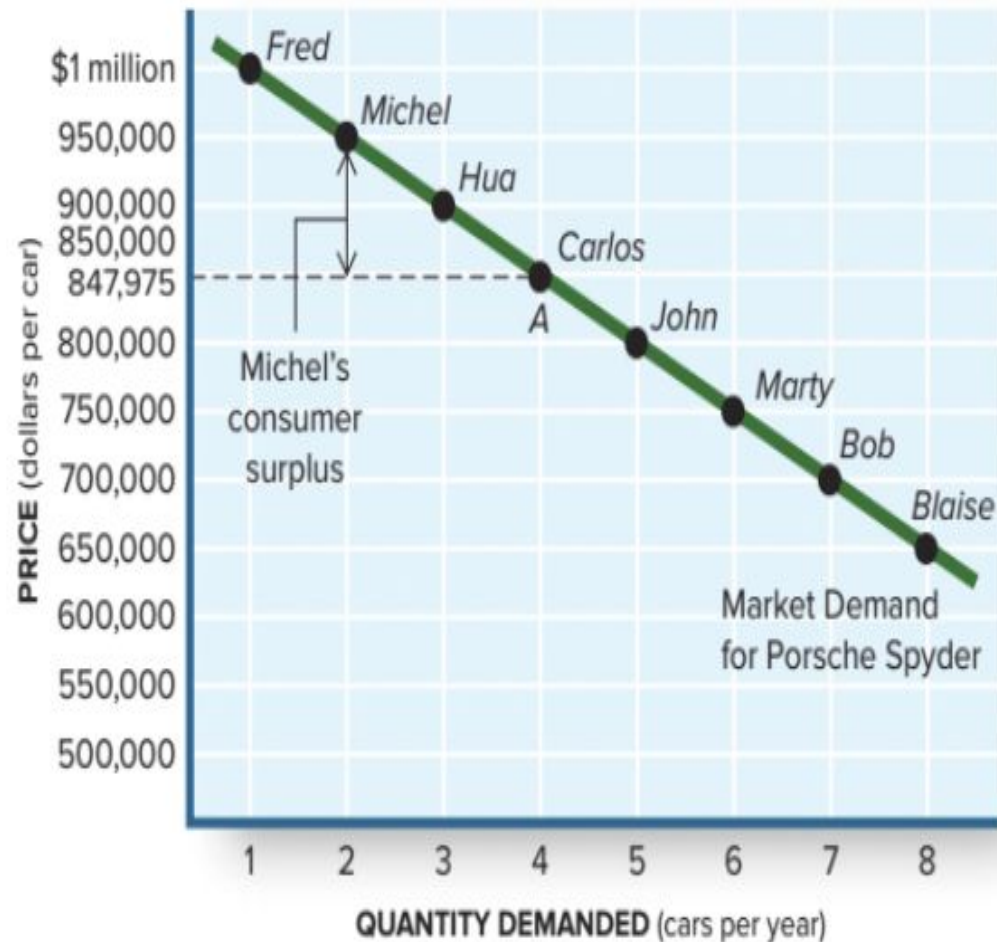
Fred = \$152,025

Michel = \$102,025

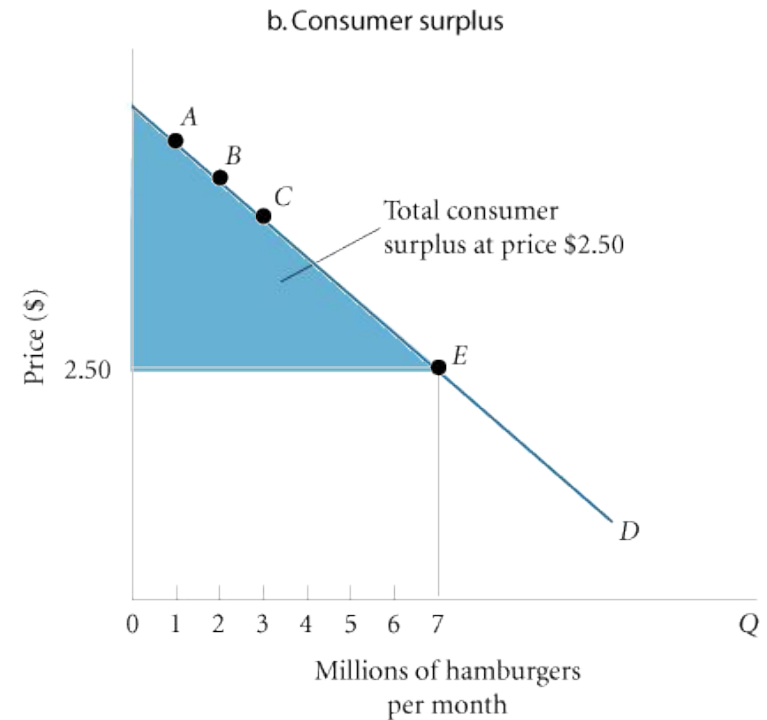
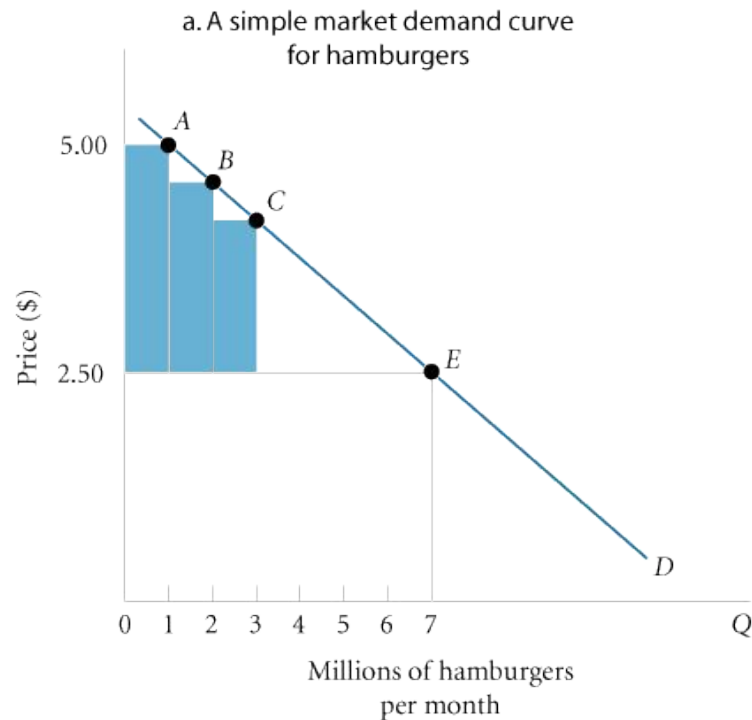
Hua = \$ 52,025

Carlos = \$ 0

All others will not purchase at this price.



Market Demand and Consumer Surplus



- ✓ *The hamburgers moved from the seller to the buyers who valued them more than the price.*
- ✓ *The blue area shows how much better off (value added) all of society is due to trade for this product.*

Price Discrimination

- **Price discrimination:** the sale of a good at different prices to different consumers.
- Assume a seller could charge the maximum price each potential customer is willing to pay.
- Total sales revenues (the price of a good times the quantity sold in a given time period) would go up.
- Consumer surplus would be zero.

Price Discrimination II

- How to price discriminate
 - Separate the customers and deal with them individually. Discover their maximum prices and make the deal at that price.
 - This technique works best when consumers do not have perfect information and when consumers make only occasional purchases.

Actual Practice

- Nobody on a shopping trip calculates MU/P ratios and compares them.
- However, if you are familiar with the goods being considered, you have a good idea of the diminishing marginal utility of each and what you might be willing to pay for it.
- By trial and error, you adjust your behavior and come remarkably close to optimum consumption.

Application: The Economy Tomorrow

- Caveat emptor: Let the buyer beware!
- Advertising and promotion are designed to increase a consumer's marginal utility of a product.
- In doing so, sellers can ask (and get) a higher price.
- They use **sociopsychiatric** techniques to do this: ego, pride, insecurity, guilt, love.

Application: The Economy

Tomorrow II

- A successful advertising campaign increases the perceived marginal utility of a product, thereby increasing the demand for that product.

