



Everyone's Smart
University

Introduction to economics

Chapter 3

CONSUMER DEMAND

CONSUMER DEMAND



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Learning Outcomes

Patterns of Consumption

Utility Theory

Marginal Utility

Law of Diminishing Marginal Utility

Price and Quantity

Price Elasticity



Patterns of Consumption

- Consumption represents 2 out of every 3 dollars of GDP.
- About 70% of a household's budget is spent on housing, transportation, food, and health expenditures.
- "Essential" items have changed from years ago.

Weekly consumption patterns



Determinants of Demand



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What determines what we buy?

- The Sociopsychiatric Explanation
- The Economic Explanation

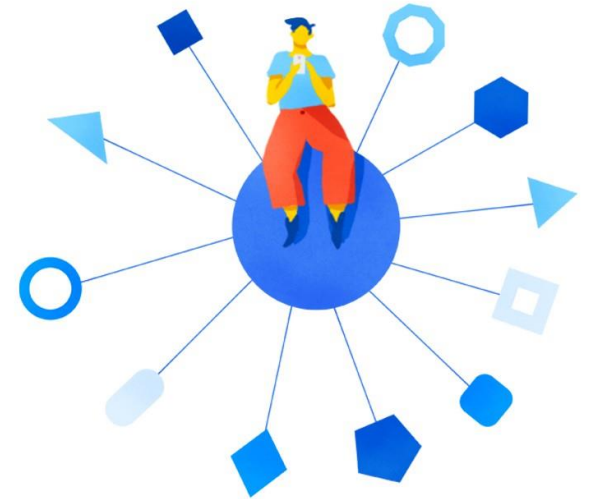


Sociopsychiatric Explanation

- The desire for goods and services arises from our needs for social acceptance (or envy), security, and ego gratification.
- “Keeping up with the Joneses”
- Self preservation
- Expressions of affluence

The Economic Explanation

- Prices and income are just as relevant to consumption decisions as more basic desires and preferences.
- **Demand** – The ability and willingness to buy specific quantities of a good at alternative prices in a given time period, *ceteris paribus*.



Determinants of Demand

Tastes - desire for this and other goods

- If a study says ice cream is good for you, the demand for ice cream would increase.



Determinants of Demand

Income (of the consumer):

- If you won the lottery you might buy more ice cream.
- The demand for ice cream would increase, shifting the demand curve to the right.

Determinants of Demand

Expectations (for income, prices, tastes)

- If you knew you were going to get rich soon you might deplete savings to buy more ice cream now.
- This would increase the demand for ice cream.

Determinants of Demand

Other goods (their availability and price):

- If the price of chocolate candy bars increased, you might buy ice cream instead of a candy bar.
- This would increase the demand for ice cream.

Determinants of Demand

The number of consumers in the market:

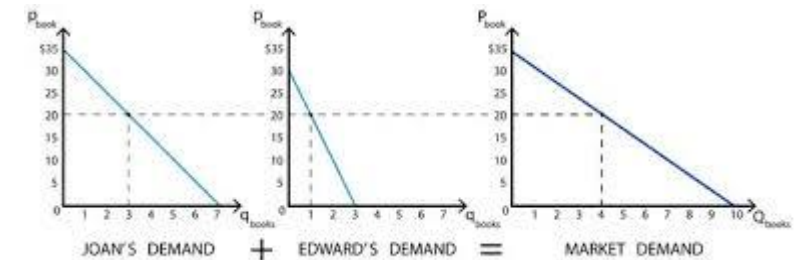
- If the number of buyers in the ice cream market increased, the market demand for ice cream would increase.

Market Demand



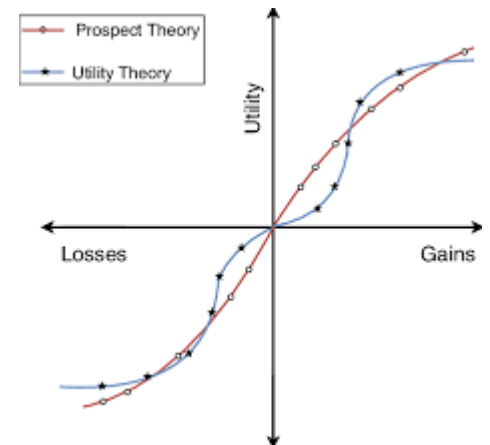
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- The total quantities of a good or service people are willing and able to buy at alternative prices in a given time period.
- Market demand is the sum of all individual demands.



Utility Theory

- Economists assume that the more pleasure a product gives, the higher price buyers are willing to pay.
- Students who like butter are willing to pay more for buttered popcorn than non-buttered popcorn because it offers more total utility.

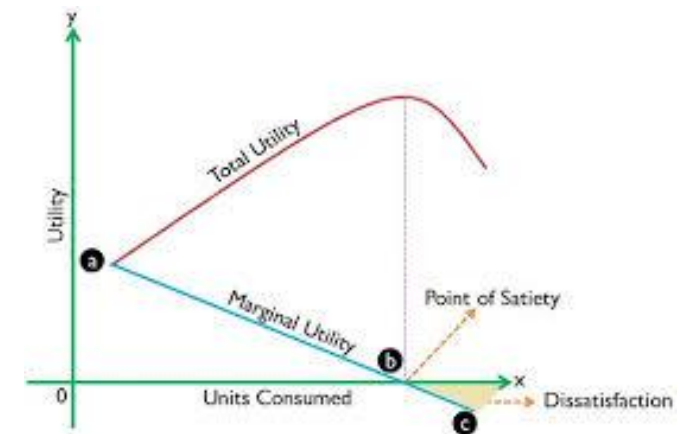


Total Utility



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- **Utility** is the pleasure or satisfaction obtained from a good or service.
- **Total utility** is the amount of satisfaction obtained from entire consumption of a product.



ويوضح جدول رقم (1-3) وحدات المنفعة الكلية المحققة عند استهلاك كميات متتالية من السلعة وذلك خلال مدة معينة ، فعند استهلاك الوحدة الأولى فإن المستهلك يحصل على (2) وحدة منفعة وعندما يستهلك (4) وحدات فإنه يحصل على (17) وحدة منفعة

المحقات المستهلكة	1	2	3	4	5	6	7	8	9	10
المنفعة الكلية (وحدة منفعة)	2	6	12	17	21	22	22	20	17	13

ترتفع المنفعة الكلية إلى 22 وحدة منفعة (Utile) عندما تستهلك 7 وحدات من السلعة ، هما يمثلان أقصى منفعة يحققها المستهلك ، وتبدأ المنفعة الكلية بالانخفاض بعد ذلك رغم زيادة عدد الوحدات المستهلكة من السلعة .

Marginal Utility

Marginal utility is the change in total utility obtained by consuming one additional (marginal) unit of a good or service.

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

جدول (3-2) المنفع الكلية والمنفعة الحدية

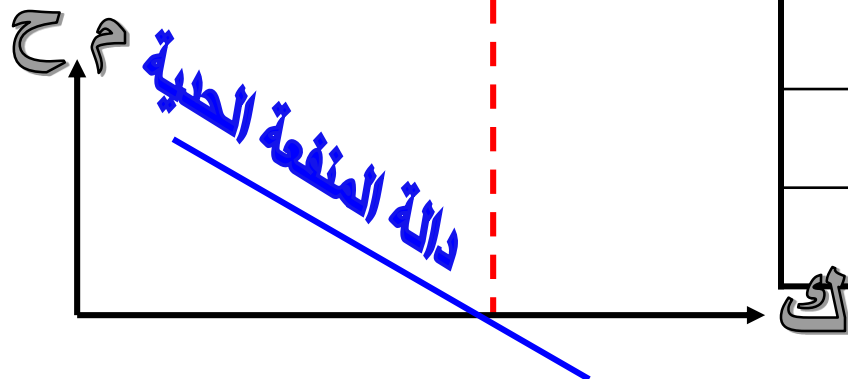
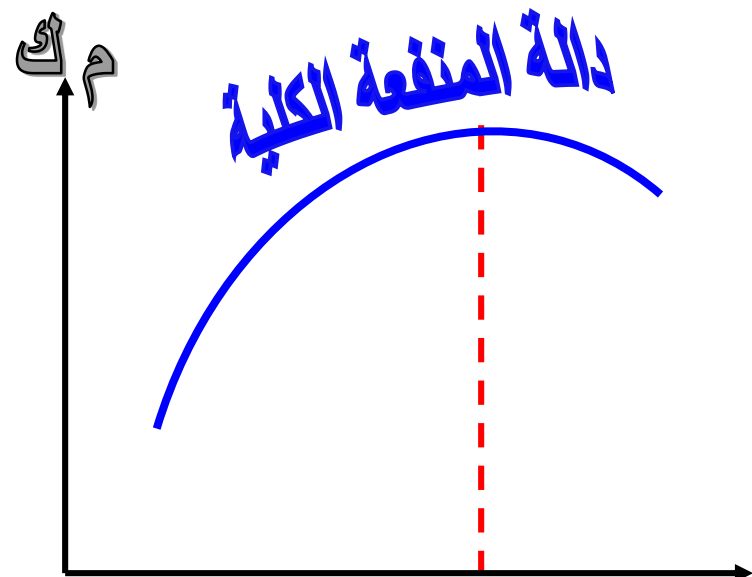


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المنفعة الحدية (MU)	المنفعة الكلية (TU)	الوحدات المستهلكة
—	2	1
6	8	2
5	13	3
4	17	4
3	20	5
2	22	6
0	22	7
2-	20	8
3-	17	9
4-	13	10

$$\text{المنفعة الحدية} = \frac{\text{مقدار التغير في المنفعة الكلية}}{\text{مقدار التغير في الكمية المستهلكة}}$$

$$4 = 1 \div 4$$



المنفعة الحدية	المنفعة الكلية	الكمية المستهلكة من السلعة
5	5	1
4	9	2
3	12	3
2	14	4
1	15	5
صفر	15	6
-1	14	7

يتبين أنه مع زيادة عدد الوحدات المستهلكة من السلعة تتزايد المنفعة الكلية أما المنفعة الحدية فهي تتناقص مع زيادة عدد الوحدات المستهلكة، وعندما تصل المنفعة الحدية للصفر (عند 6 وحدات)، تصل المنفعة الكلية إلى أعلى مستوى لها وهذا هو حد التشبع. وإذا فرض واستمر المستهلك في زيادة عدد الوحدات المستهلكة من السلعة بعد هذا الحد فإن المنفعة الحدية تصبح سالبة وتتناقص المنفعة الكلية.

Law of Diminishing Marginal Utility

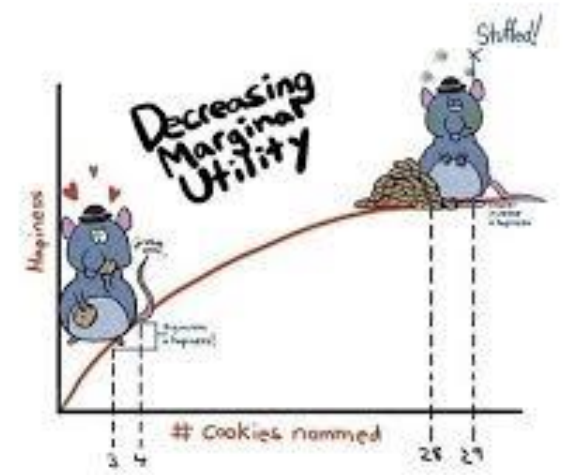


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The marginal utility of a good declines as more of it is consumed in a given time period.

Suppose a student who enjoys popcorn can eat all he/she wants for free.

- The first box consumed is very rewarding.
- The third box is decent, etc.
- After eating the sixth box, she gets sick.



Law of Diminishing Marginal Utility

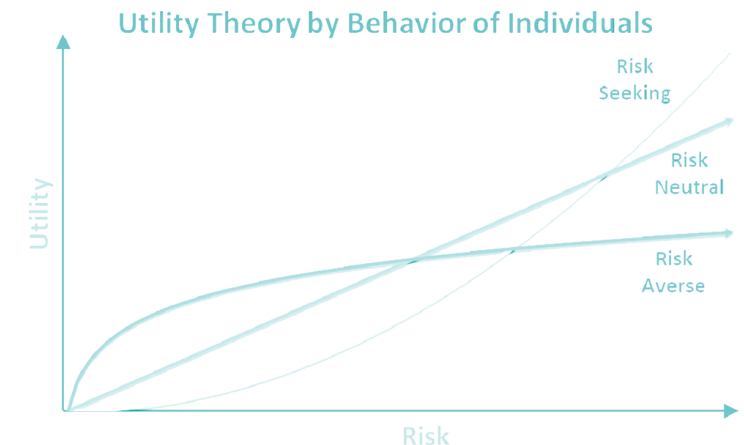


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- As long as the marginal utility is positive, the consumer receives additional satisfaction and total utility increases.
- Additional quantities of a good yield increasingly smaller increments of satisfaction.

Utility Theory

- An absolute measure of utility is not possible because the perception of satisfaction differs among individuals.
- Diminishing marginal utility is a common experience.
- It is a sufficient basis for economic predictions of consumer behavior.



Price and Quantity



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Many forces determine how much we are willing to buy.

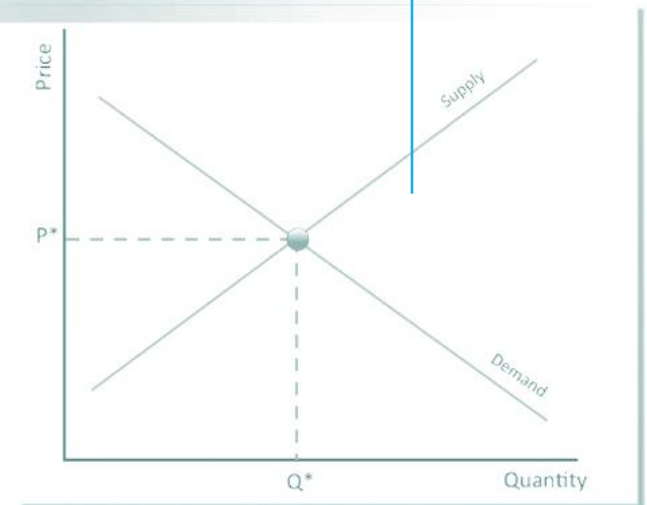
Economists focus on the relationship between price and quantity rather than trying to explain all the forces at once.

- This is the *ceteris paribus* (all other things equal) assumption.

الكمية

السعر

DEFINITION

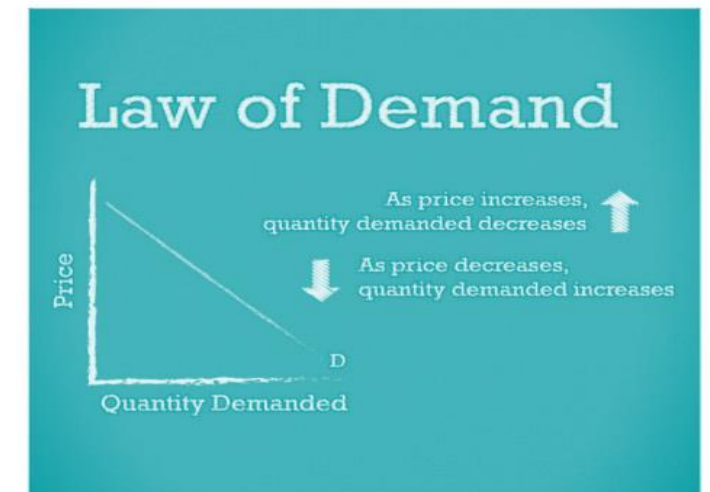


Law of Demand



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- The concepts of marginal utility and *ceteris paribus* explain the downward slope of the demand curve.
- With given income, tastes, expectations, and prices of other goods and services, people are willing to buy additional quantities of a good only if its price falls.



Law of Demand

- The higher the marginal utility, the more you are willing to pay.
- Diminishing marginal utility explains why price must decrease in order for you to continue to buy a good or service.

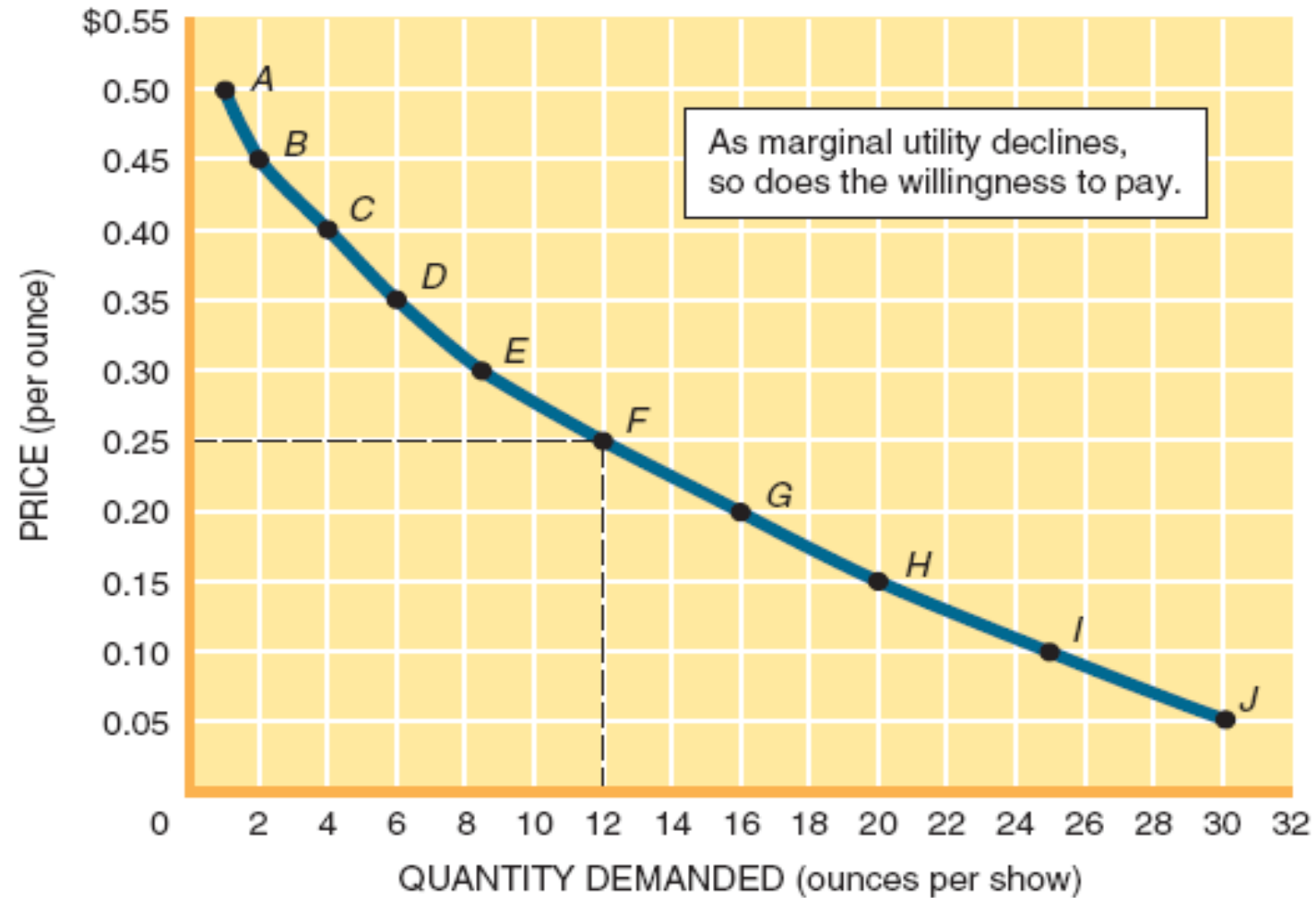
Law of Demand

According to the **law of demand**, the quantity of a good demanded in a given time period increases as its price falls, *ceteris paribus*.

Demand Curve

The quantities of a good a consumer is willing and able to buy at alternative prices in a given time period, *ceteris paribus*.

Figure 3.2



Price Elasticity



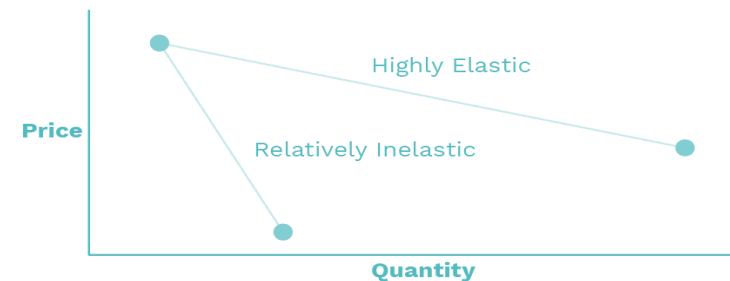
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The response of consumers to a change in price is measured by the price elasticity of demand.

Price Elasticity of Demand

Definition: the effect of change in price on the quantity of demand.

$$PED = \frac{\% \text{ change in quantity demanded}}{\% \text{ change in price}}$$



ThoughtCo.

Price Elasticity



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The price elasticity of demand is the percentage change in quantity demanded divided by the percentage change in price.

$$\text{Price elasticity (E)} = \frac{\text{percentage change in quantity demanded}}{\text{percentage change in price}}$$

Price Elasticity



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- The price of popcorn goes up 20% and the quantity demanded goes down 10%.
- The price elasticity of demand is:

$$(E) = \frac{\text{percentage change in quantity demanded}}{\text{percentage change in price}} = \frac{-10\%}{20\%} = -0.5$$

عند انخفاض سعر سلعة معينة بمقدار 10% مما أدى الى زيادة الكمية المطلوبة من تلك السلعة بمقدار 5% المطلوب احسب مقدار التغير في المرونة السعرية

$$\text{مرونة لطلب السعرية} = \frac{\text{نسبة التغير في الكمية المطلوبة}}{\text{نسبة التغير في الثمن}} = \frac{5 +}{10 -} = -5$$

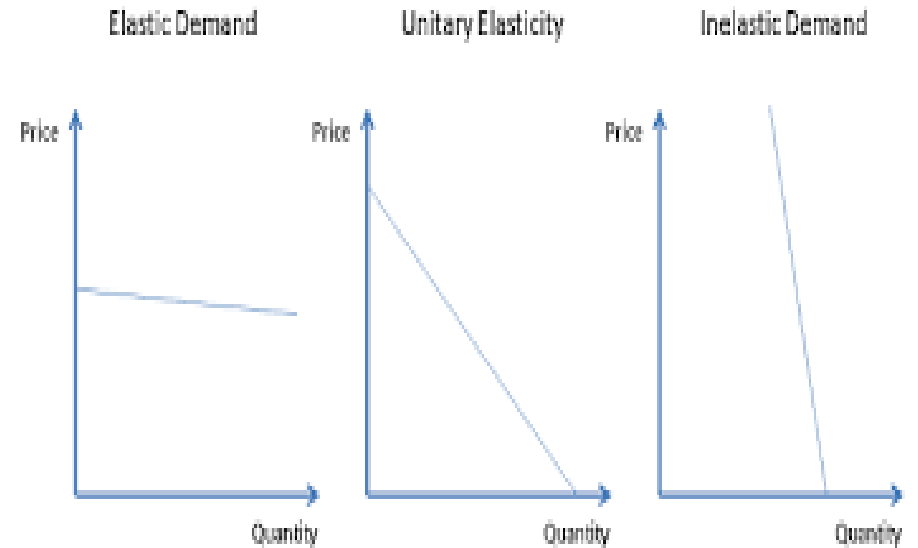
السالب يدل على العلاقة العكسية لا توجد قيمة رياضية

Elastic versus Inelastic Demand



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Demand can be elastic, inelastic, or unitary elastic.



Elastic Demand



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- Consumer response is large relative to the change in price.

$$5 - = \frac{5 +}{10 -} = \frac{\text{نسبة التغير في الكمية المطلوبة}}{\text{نسبة التغير في الثمن}} = \text{ مرونة لطلب السعرية}$$

طلب مرن

Inelastic Demand



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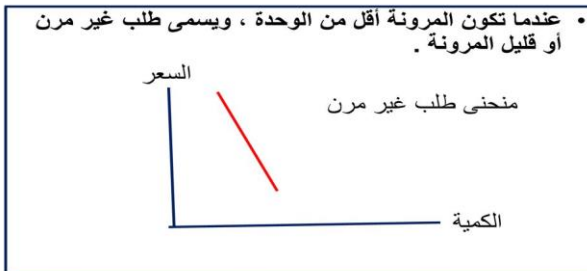
Demand is inelastic if the absolute value of E is less than 1.

Consumers are not very responsive to price changes.

التغير النسبي في الكمية المطلوبة > اقل من التغير النسبي في السعر
25% 20%

طلب غير مرن
سلع ضرورية

حالات المرونة



Unitary Elastic Demand



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- Demand is unitary elastic if the absolute value of E *equals* 1.
- The percentage change in quantity demanded is *equal* to the percentage change in price.

Price Elasticity & Total Revenue

- Price elasticity explains why producers cannot charge the highest possible price.
- Although one would think otherwise, higher prices may actually reduce total sales revenue.

Price Elasticity & Total Revenue



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Total revenue - the price of a product multiplied by the quantity sold in a given time period.

$$\textit{Total revenue} = \textit{price} \times \textit{quantity sold}$$

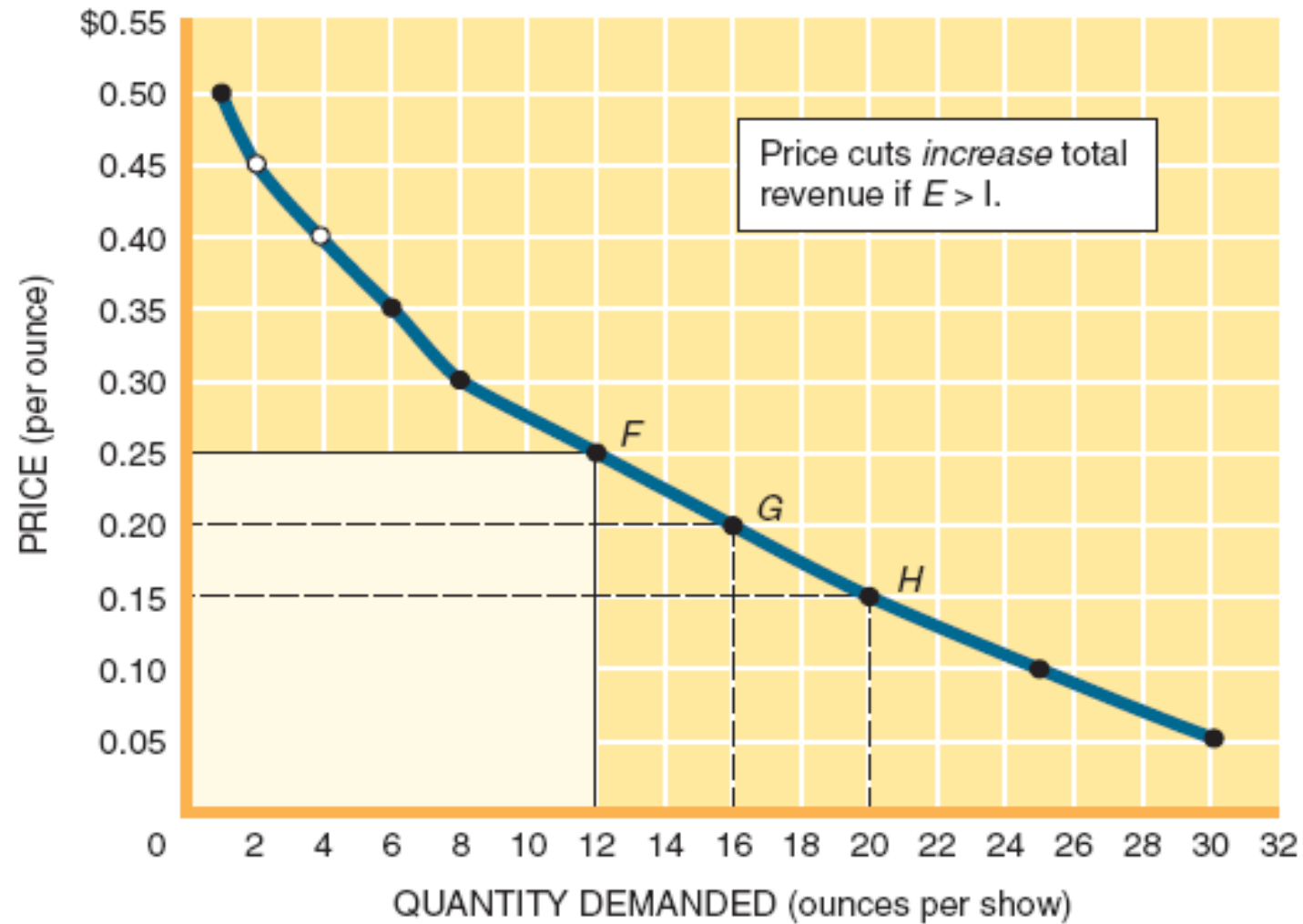
Elasticity and Total Revenue



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- A price cut increases total revenue if demand is price elastic.
- A price cut decreases total revenue if demand is price inelastic.
- A price cut does not change total revenue if demand is unitary elastic.

Figure 3.5



Determinants of Price Elasticity



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Differences in price elasticity are explained by several factors:

- Whether the Good is a Necessity or Luxury
- The Availability of Substitutes
- The Price Relative to Income

Necessities versus Luxuries

- Some goods are so critical to our everyday life that we regard them as **necessities**.
- Demand for necessities is relatively inelastic.

Necessities versus Luxuries



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- A **luxury good** is something we'd like to have but aren't likely to buy unless our income jumps or the price declines sharply.
- Demand for luxury goods is relatively elastic.

Availability of Substitutes



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- The greater the availability of substitutes, the *higher* the price elasticity of demand.
- The smaller the availability of substitutes, the *lower* the price elasticity of demand.

Price Relative to Income

- If the price of a product is very high relative to the consumer's income, the demand will tend to be elastic.
- If the price of a product is very low relative to the consumer's income, the demand will tend to be inelastic.

Substitute & Complementary Goods

Substitute Goods:

- The demand for a good *increases* when the price of a substitute for the good goes up.

Complementary Goods:

- The demand for a good *decreases* when the price of a complement to the good goes up.

Changes in Income

Income is a determinant of demand.

- We illustrate income changes with shifts of the demand curve.

Are Wants Created?

- Advertising is not the only reason consumption has increased.
- Personality and social interaction dynamics have changed how much we consume.
- A successful advertising campaign is one that shifts the demand curve to the right.

End of chapter 3



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