Breve introduzione all'economia politica
ai fini del corso di Economia Ecologica

1. L'equilibrio parziale: la domanda e l'offerta
   - la domanda
   - l'offerta
   - varie applicazioni (prezzi min e max)
   - spostamenti delle curve
   - elasticità
   - applicazione: l'introduzione di una imposta unitaria

2. Efficienza
   - concetto generale
   - perdita di benessere in monopolio

3. Zoom sull'offerta
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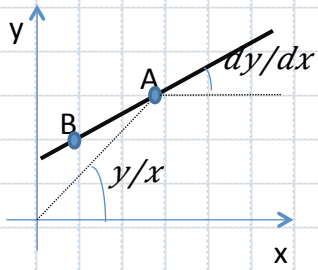
Elasticity and Its Applications

Elasticità: derivata in termini percentuali

Se *x* varia del 10% di quanto varia *y*?

Se elasticità =3 allora *y* varia del 30%

$\eta = \Delta y/y / \Delta x/x$ oppure in termini infinitesimi: $\eta = dy/dx \,/ y/x$



L'elasticità dipende sia dalla derivata che dalla sua posizione nel piano,

*h*in A è > che in B

Elasticity . . .

- … allows us to analyze supply and demand with greater precision.
- … is a measure of how much buyers and sellers respond to changes in market conditions

THE ELASTICITY OF DEMAND

- *Price elasticity of demand* is a measure of how much the quantity demanded of a good responds to a change in the price of that good.

- Price elasticity of demand is the percentage change in quantity demanded given a percent change in the price.

Computing the Price Elasticity of Demand

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

$$\text{Price elasticity of demand} = \frac{\text{Percentage change in quantity demanded}}{\text{Percentage change in price}}$$

Computing the Price Elasticity of Demand

$$\text{Price elasticity of demand} = \frac{\text{Percentage change in quantity demanded}}{\text{Percentage change in price}}$$

- If the price of an ice cream cone
- increases from $2.00 to $2.20
- and the amount you buy falls from 10 to 8 cones, then your elasticity of demand

$$\frac{\frac{(10-8)}{10} \times 100}{\frac{(2.20-2.00)}{2.00} \times 100} = \frac{20\%}{10\%} = 2$$

The Price Elasticity of Demand and Its Determinants

- Demand tends to be more elastic :
  - the larger the number of close substitutes.
  - if the good is a luxury.
  - the longer the time period.

The Midpoint Method: A Better Way to Calculate Percentage Changes and Elasticities

- The midpoint formula is preferable when calculating the price elasticity of demand because it gives the same answer regardless of the direction of the change.

$$\text{Price elasticity of demand} = \frac{(Q_2 - Q_1) / [(Q_2 + Q_1) / 2]}{(P_2 - P_1) / [(P_2 + P_1) / 2]}$$

The Midpoint Method: A Better Way to Calculate Percentage Changes and Elasticities

- Example: If the price of an ice cream cone increases from $2.00 to $2.20 and the amount you buy falls from 10 to 8 cones, then your elasticity of demand, using the midpoint formula, would be calculated as:

$$\frac{\dfrac{(10-8)}{(10+8)/2}}{\dfrac{(2.20-2.00)}{(2.00+2.20)/2}} = \frac{22\%}{9.5\%} = 2.32$$

The Variety of Demand Curves

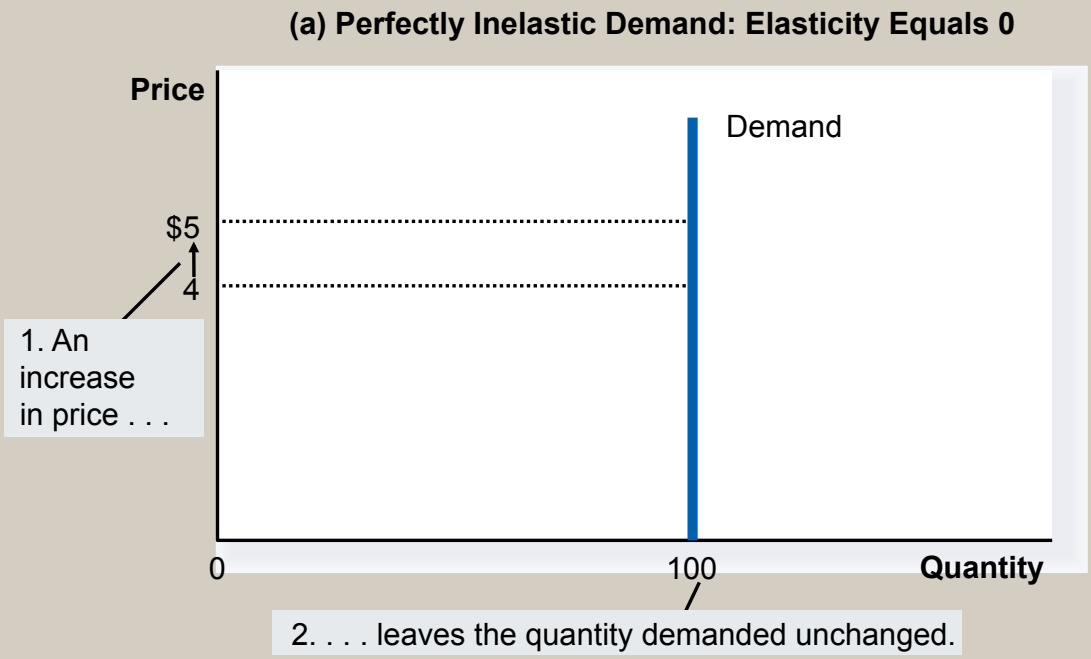
- Inelastic Demand
  - Quantity demanded does not respond strongly to price changes.
  - Price elasticity of demand is less than one.
- Elastic Demand
  - Quantity demanded responds strongly to changes in price.
  - Price elasticity of demand is greater than one.

The Variety of Demand Curves

Because the price elasticity of demand measures how much quantity demanded responds to the price,

it is closely related to the slope of the demand curve.

Figure 1 The Price Elasticity of Demand



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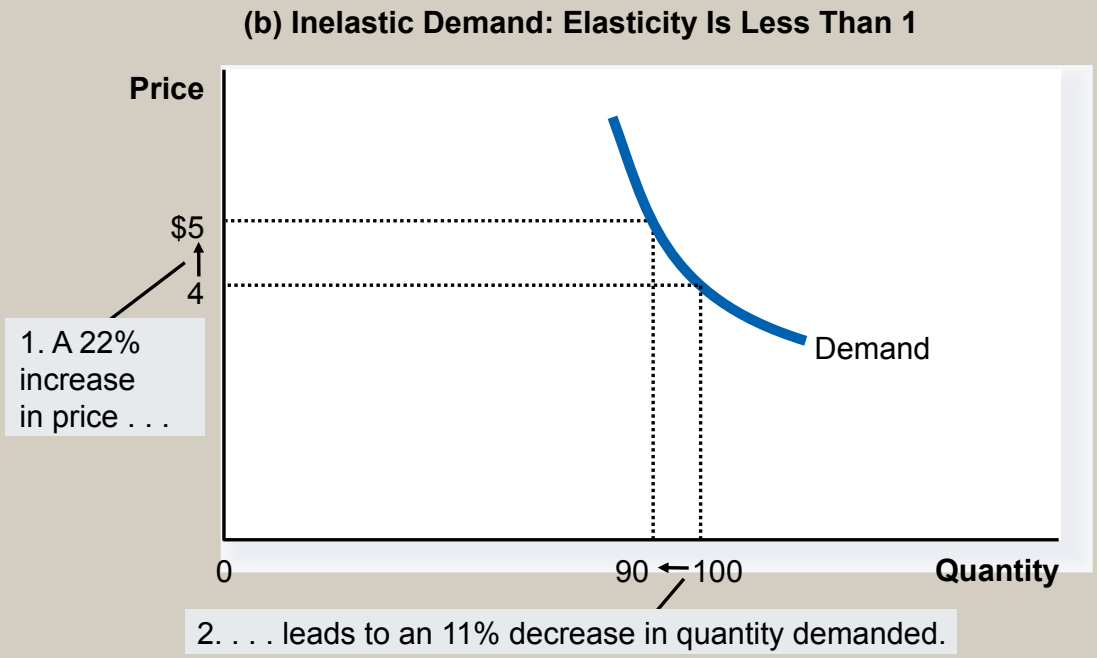

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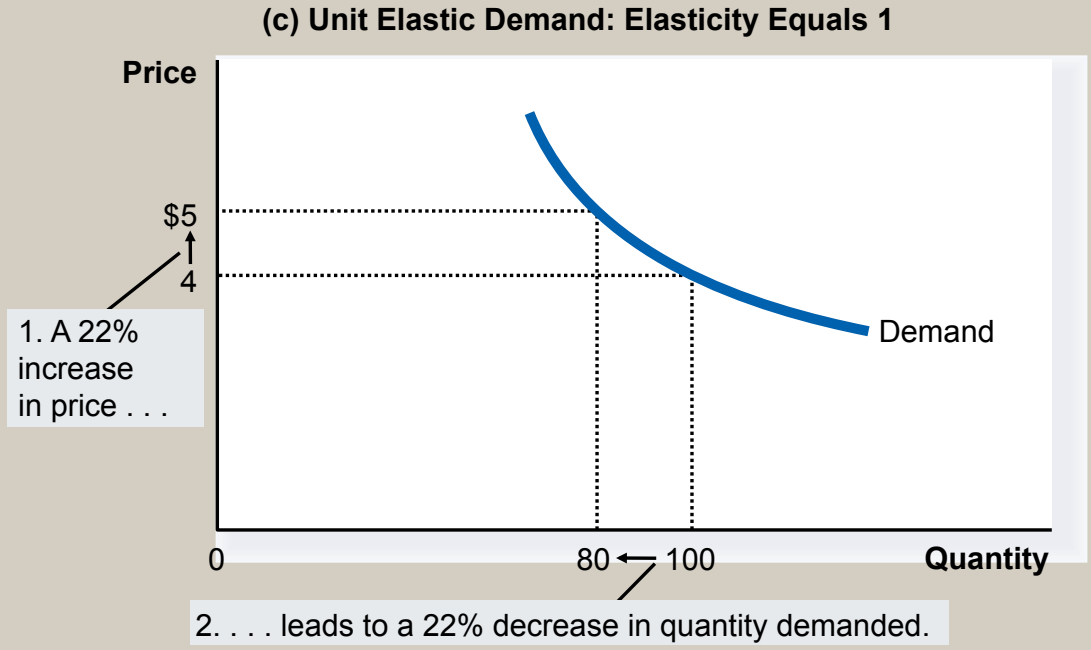

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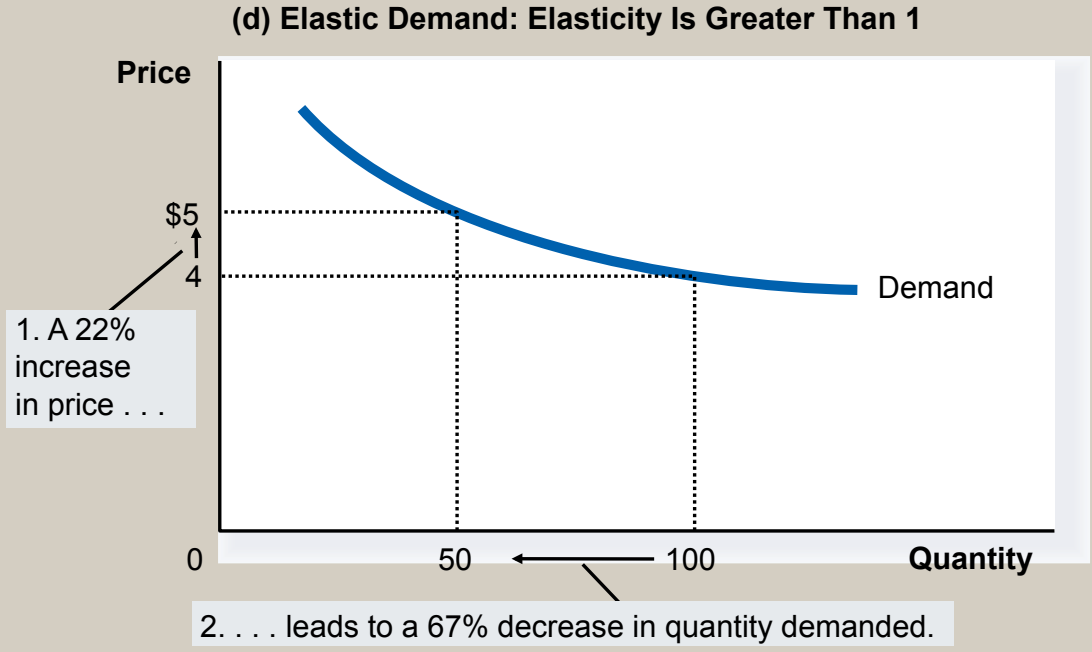

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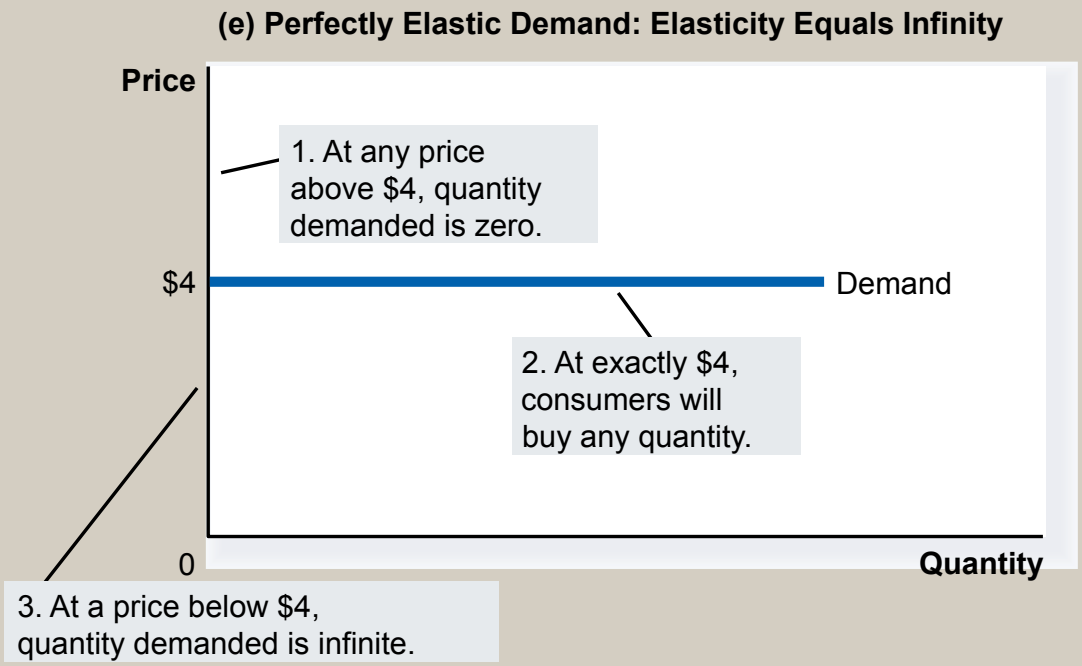


The Variety of Demand Curves

- Perfectly Inelastic
  - Quantity demanded does not respond to price changes.
- Perfectly Elastic
  - Quantity demanded changes infinitely with any change in price.
- Unit Elastic
  - Quantity demanded changes by the same percentage as the price.

Income Elasticity of Demand

- *Income elasticity of demand* measures how much the quantity demanded of a good responds to a change in consumers' income.
- It is computed as the percentage change in the quantity demanded divided by the percentage change in income.

Computing Income Elasticity

$$\text{Income elasticity of demand} = \frac{\text{Percentage change in quantity demanded}}{\text{Percentage change in income}}$$

Income Elasticity

- Types of Goods

•Higher income raises the quantity demanded for normal goods but lowers the quantity demanded for inferior goods.

- Normal Goods  Necessities → η<1; Luxuries → η>1
- Inferior Goods η<0

Income Elasticity

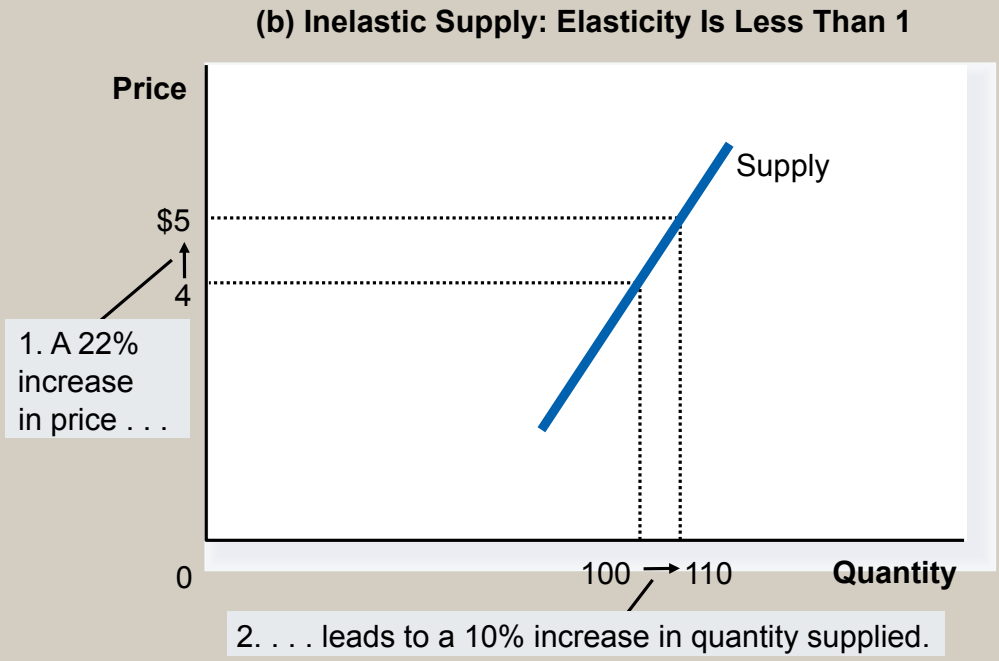
- Goods consumers regard as necessities tend to be income inelastic
  - Examples include food, fuel, clothing, utilities, and medical services.
- Goods consumers regard as luxuries tend to be income elastic.
  - Examples include sports cars, furs, and expensive foods.

THE ELASTICITY OF SUPPLY

- *Price elasticity of supply* is a measure of how much

  the quantity supplied of a good responds to a change in the price of that good.
- Price elasticity of supply is the percentage change in quantity supplied resulting from a percent change in price.

Figure 6 The Price Elasticity of Supply



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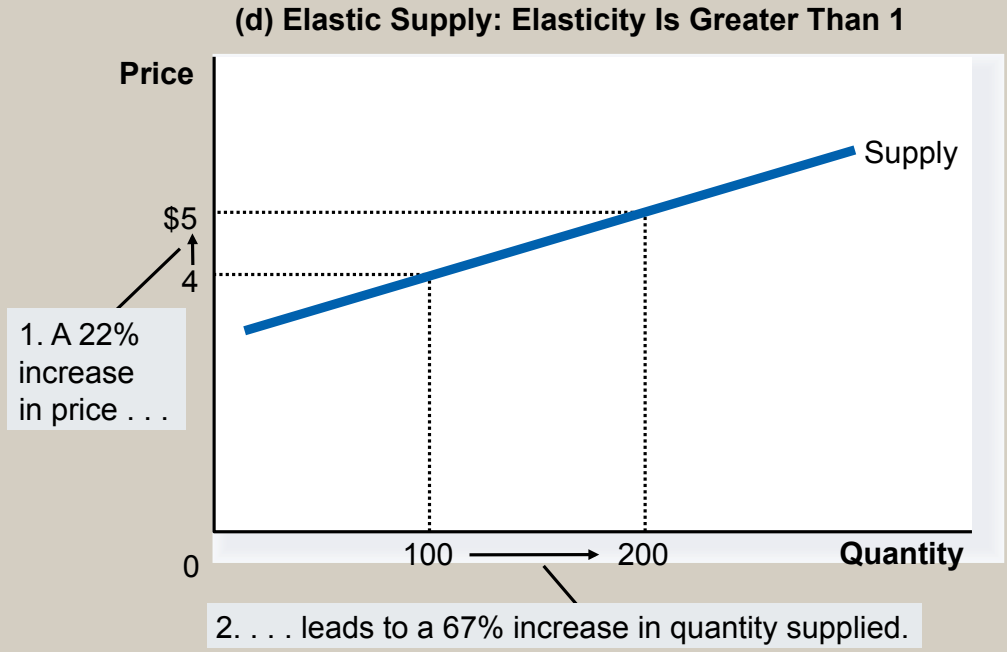

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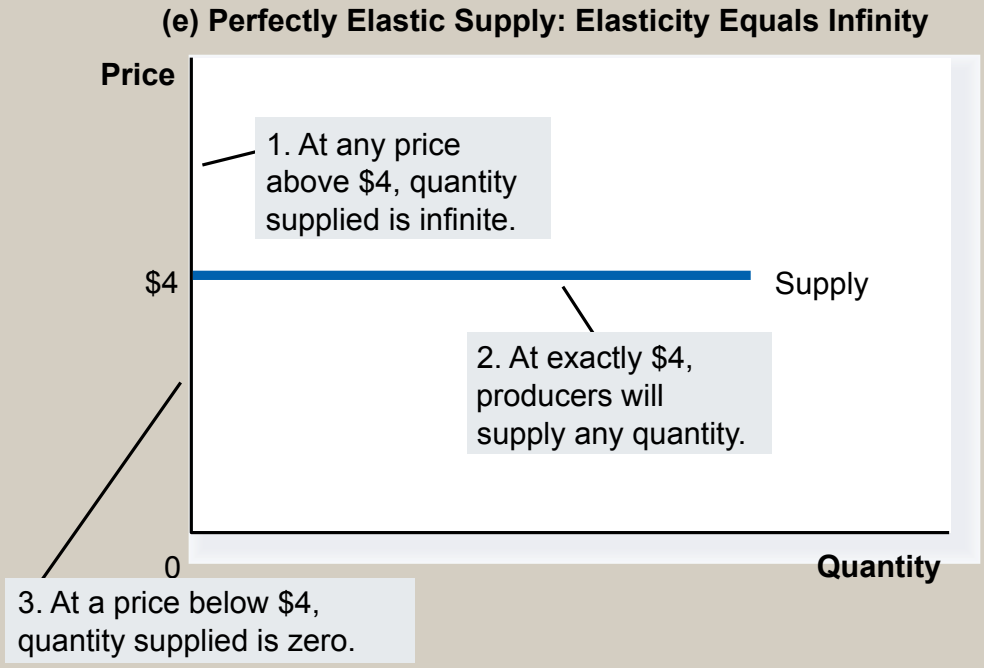
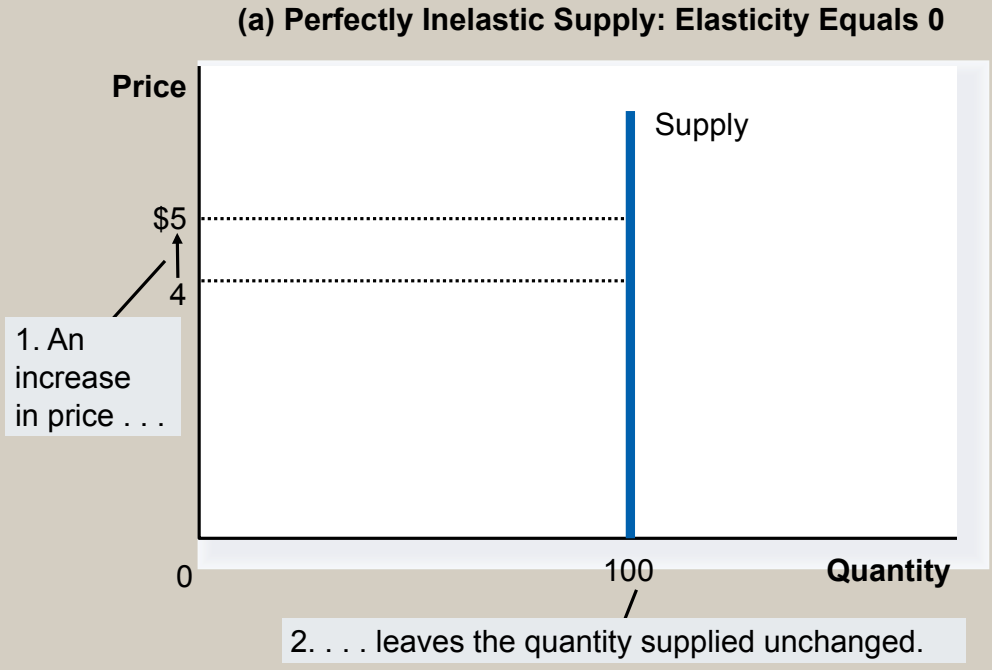


Determinants of Elasticity of Supply

- Ability of sellers to change the amount of the good they produce.
  - Books, cars, or manufactured goods are elastic.
- Time period.
  - Supply is more elastic in the long run.

Figure 6 The Price Elasticity of Supply

- Beach-front land is inelastic.



Summary

- Price elasticity of demand measures how much the quantity demanded responds to changes in the price.
- Price elasticity of demand is calculated as the percentage change in quantity demanded divided by the percentage change in price.
- If a demand curve is elastic, total revenue falls when the price rises.
- If it is inelastic, total revenue rises as the price rises.

Summary

- The income elasticity of demand measures how much the quantity demanded responds to changes in consumers' income.
- The cross-price elasticity of demand measures how much the quantity demanded of one good responds to the price of another good.
- The price elasticity of supply measures how much the quantity supplied responds to changes in the price. .

Summary

- In most markets, supply is more elastic in the long run than in the short run.
- The price elasticity of supply is calculated as the percentage change in quantity supplied divided by the percentage change in price.
- The tools of supply and demand can be applied in many different types of markets.

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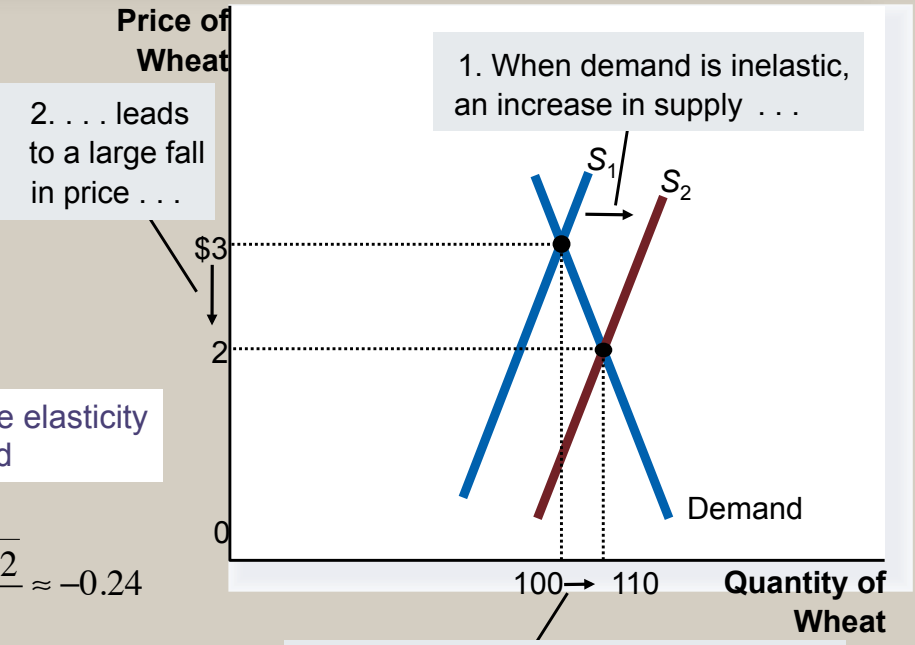
Figure 8 An Increase in Supply in the Market for Wheat



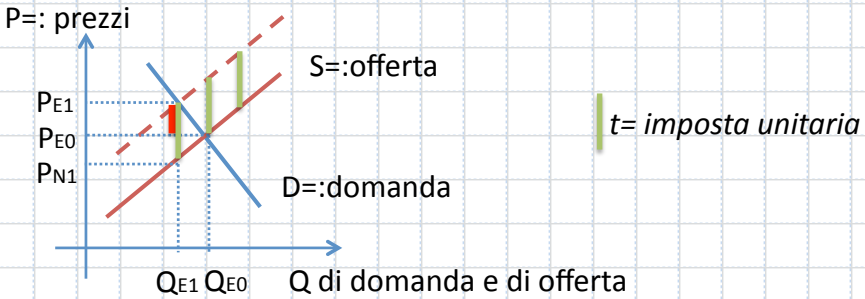
Computing the price elasticity of demand

$$E_D = \frac{\frac{110-100}{(100+110)/2}}{\frac{2-3}{(3+2)/2}} \approx -0.24$$

Demand is inelastic

1. L'equilibrio parziale: la domanda (D)e l'offerta (S) *(c)*

L'introduzione di una imposta unitaria (o specifica) sui venditori



ONERE o INCIDENZA dell'imposta: su chi ricade effettivamente?

Incidenza sul consumatore: aumento di prezzo imposta

Incidenza sul produttore: il resto (ancora in termini relativi)

Chi paga effettivamente l'imposta? Dipende dall'inclinazione relativa delle due curve: ad es. se la domanda è quasi verticale i consumatori