Demand, Supply, Equilibrium

Principles of Micro Lecture 2

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Demand

Examples

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Examples

Opening the first Lidl store in BG, 2011

Demand and Supply of Labor

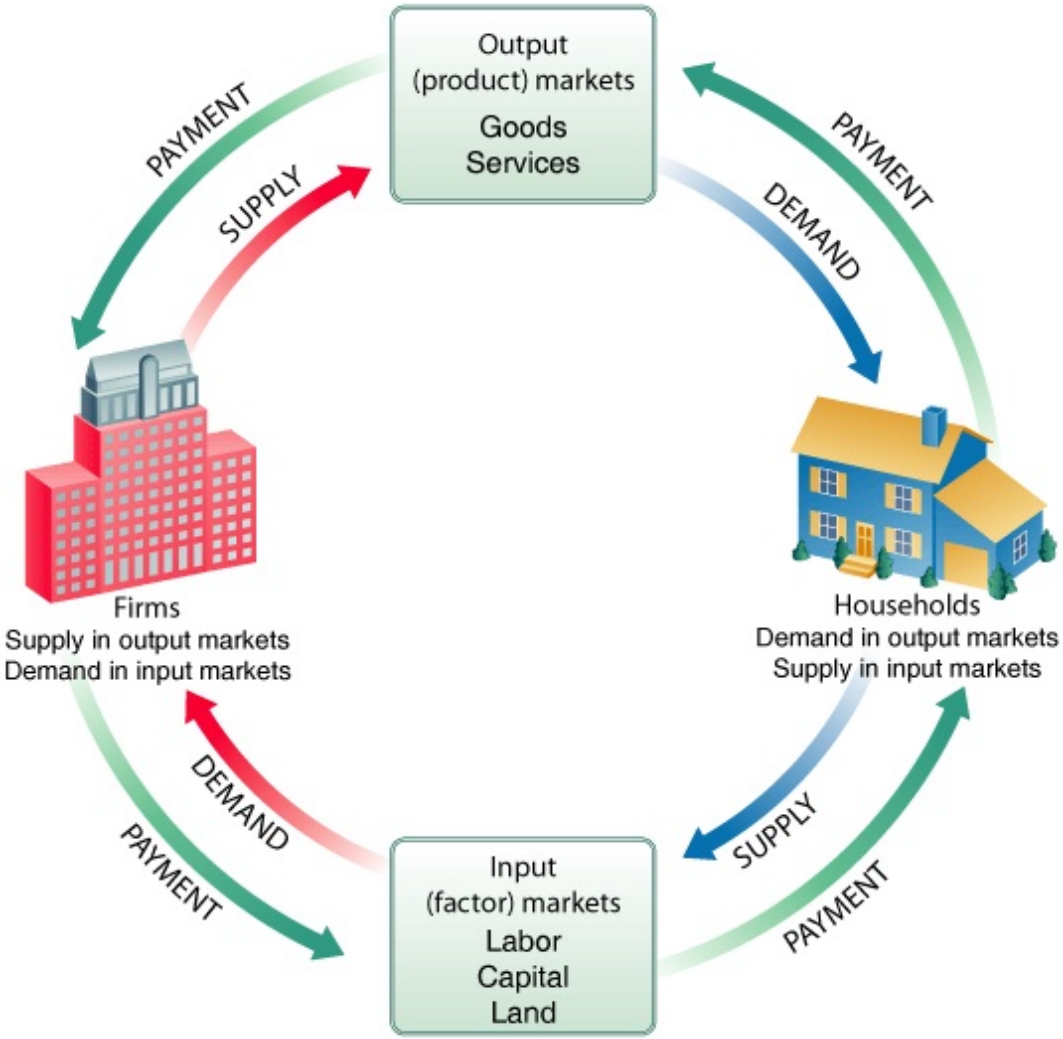
Examples

Demand for labor in times of growth

Supply of labor during the Great Recession

Economy-wide Demand and Supply

Streams of incomes, expenditures, goods and services



The Circular-Flow Diagram for the entire economy

Demand: a Microeconomic Perspective

Definition, intuition, modelling, and a graph

Demand

A rational decision on whether to buy, and if yes, how much.

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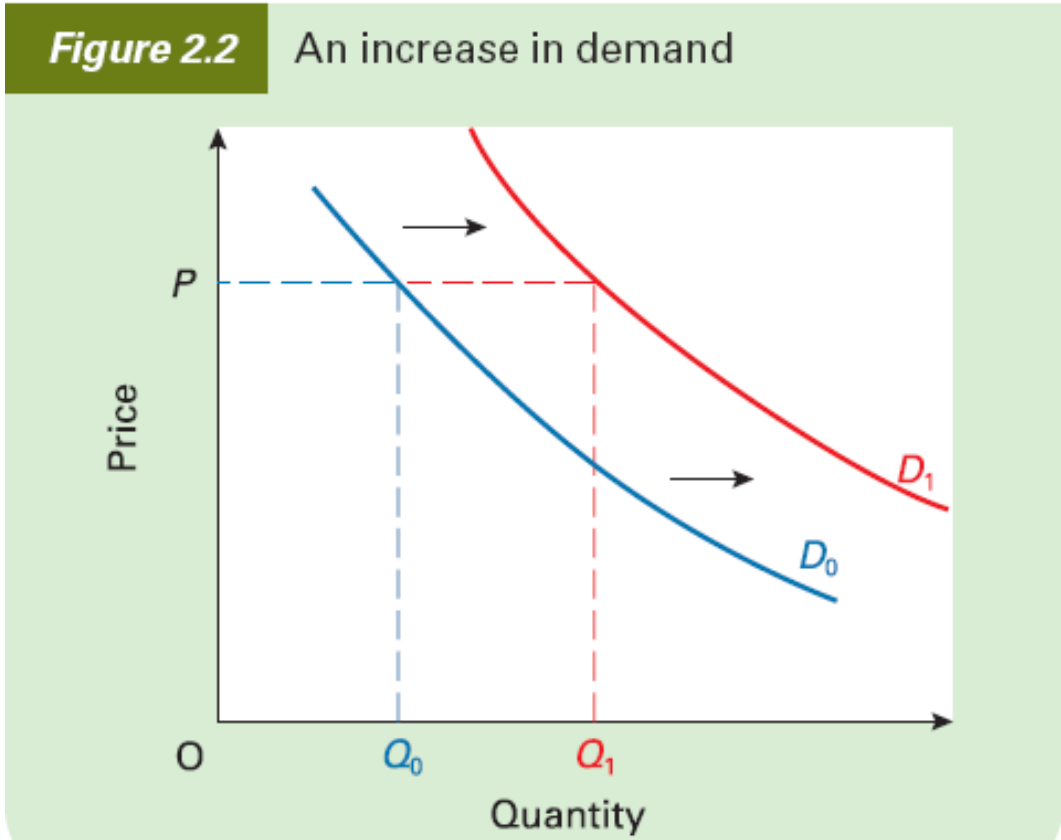


Quantity demanded with respect to p_x and a shift in demand.

A model of demand

Additional information

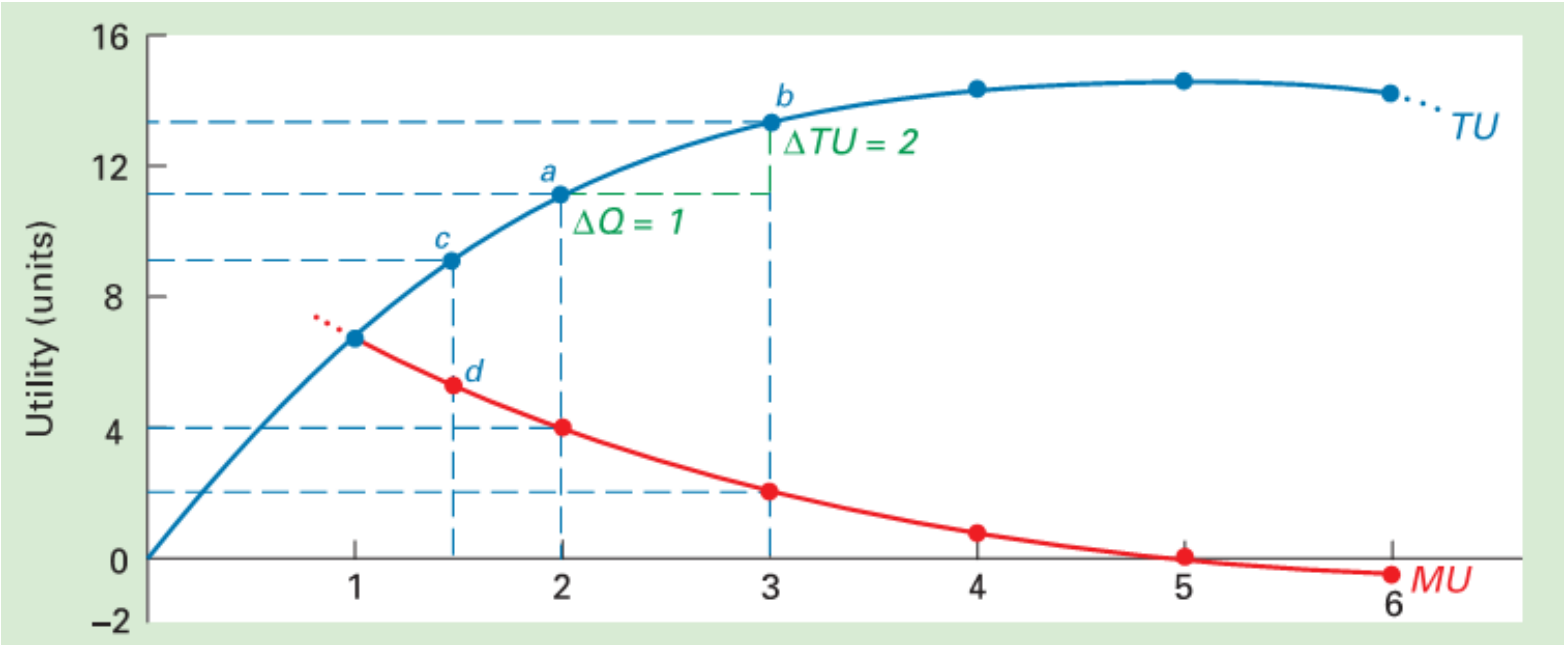
The general model: $D_x = f(p_x, E\{p_x{}^{t+1}\}, p_s, p_c, Y, \succeq, ...)$, where:

- p_x: X'es own price
- $E\{p_x{}^{t+1}\}$: the expectation of the future price of X
- p_s: prices of substitutes
- p_c: prices of complements
- Y: income
- $\succeq$: preferences
- ..., e.g. within-group effects (peer effects)

A model of demand in explicit form:
$D_x = a - bp_x + cE\{p_x{}^{t+1}\} + dY + ep_s - fp_c + \varepsilon$

Total utility

The total satisfaction from consuming all the units of a good



Why Does Demand Depend on Price?

Marginal utility

Marginal utility (MU)

The *increase* in total utility (TU) when consuming the *additional* unit of a good.

$MU = \frac{\Delta TU=?}{\Delta C=1}$

How does your willingness to pay change when your MU changes?

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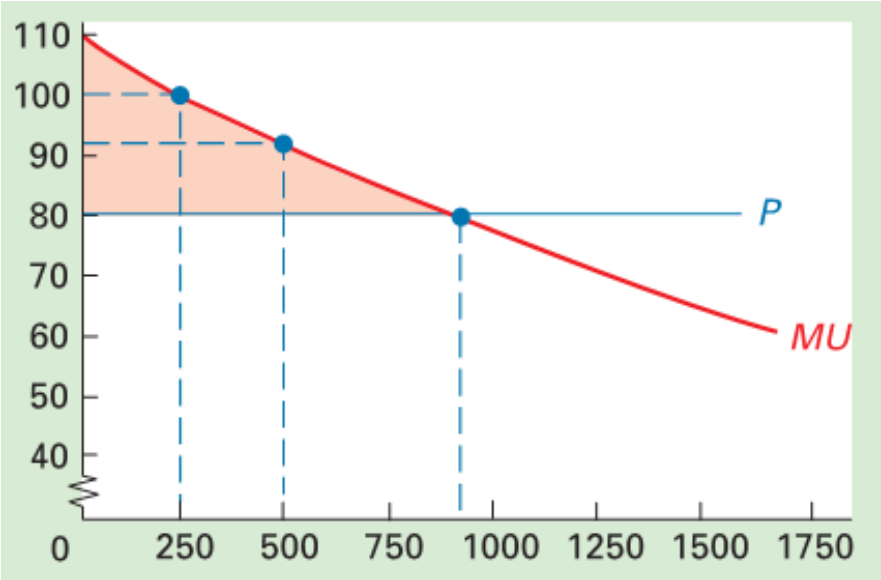
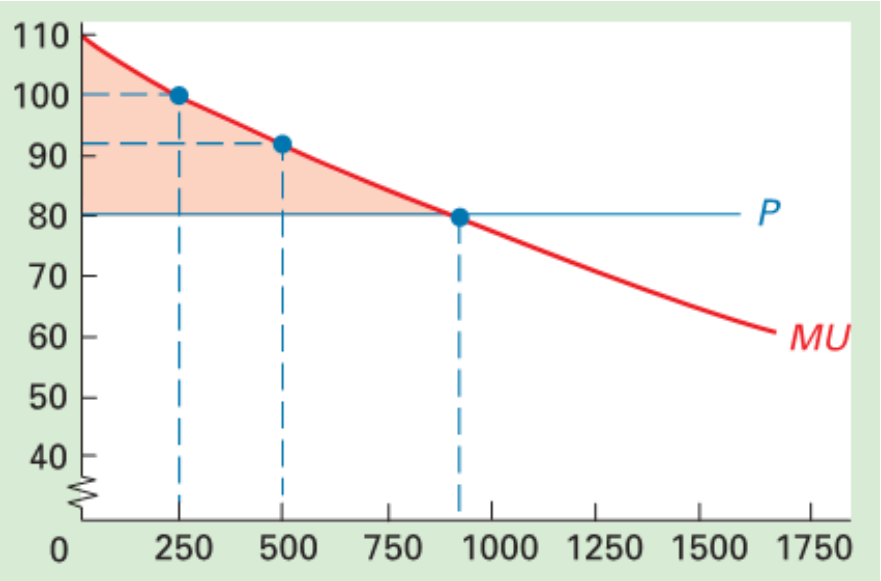


The marginal utility is the main factor behind our willingness to pay for a good, given out income.

The Consumer Surplus



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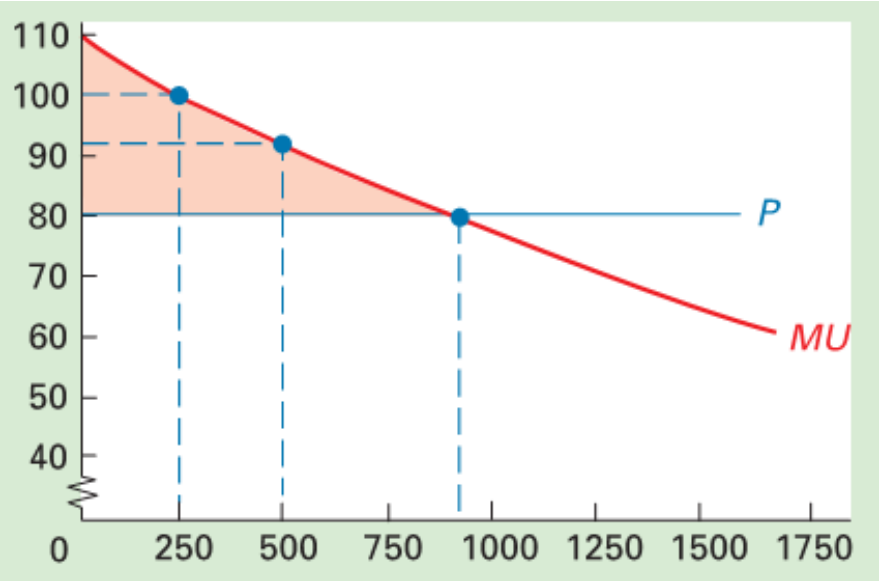

The Consumer Surplus

The *difference* between what you are *willing* to pay and what you *actually* pay at any quantity

How does your CS change when the price goes down?

Supply

Definition, intuition, modelling and graphing

Supply

A rational decision on how much quantity to supply, if any

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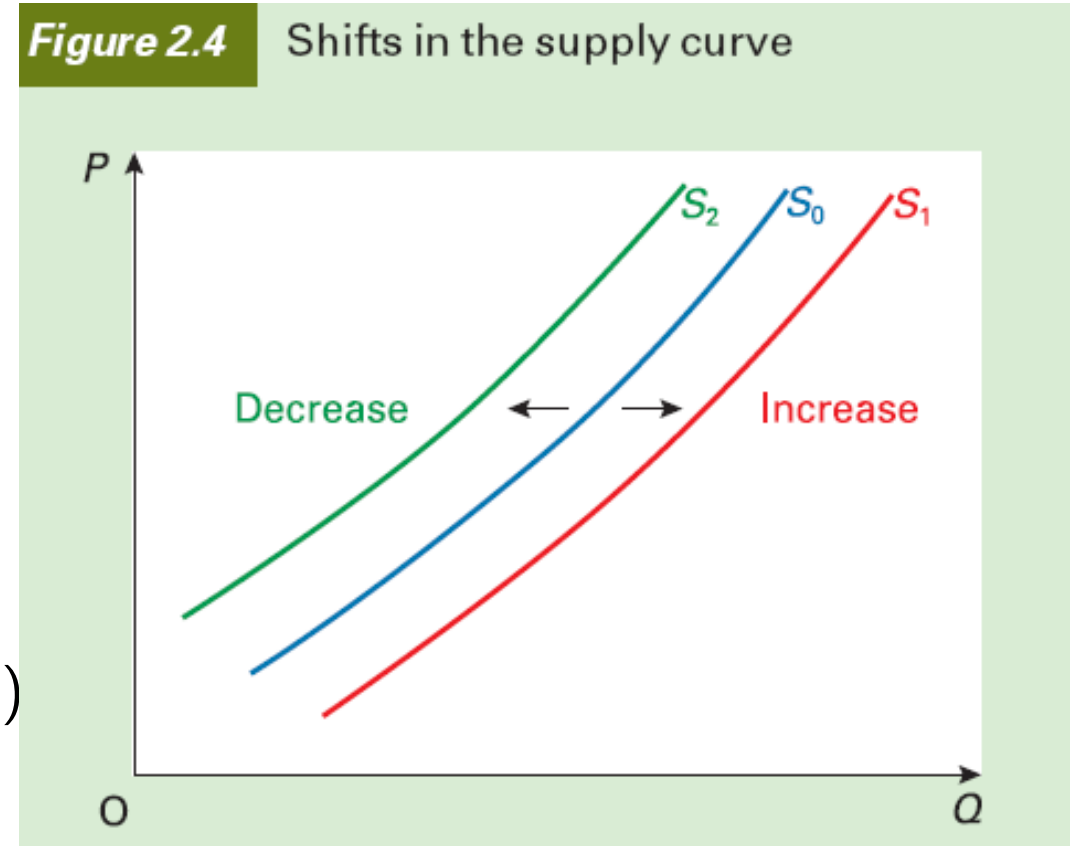
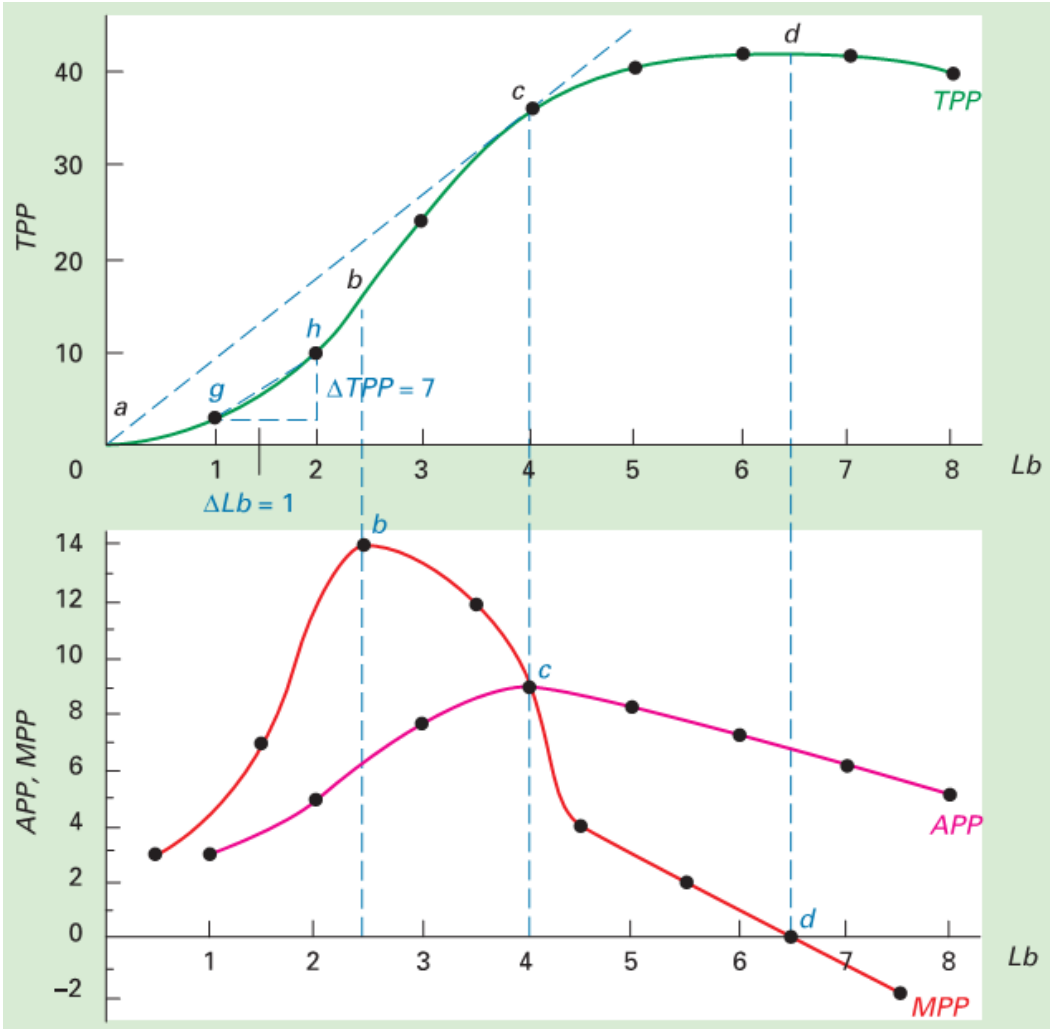
General setting: $S_x = f(p_x, E\{p_x{}^{t+1}\}, p_i, T, N, \pi_{alt}, ...)$



Supply w.r.t the price p_x and shift in supply

Why Does Supply Depend on Price?

Total, average and the marginal product



Example: studying for exams; average and marginal class performance; fuel

Why Does Supply Depend on Price?

Average and Marginal Product, Average and MARGINAL COSTS

Figure 5.3 Average and marginal physical product

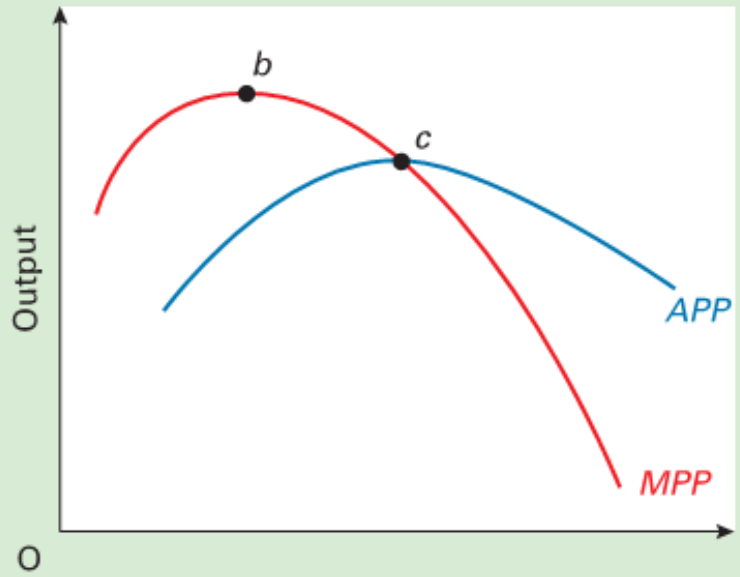
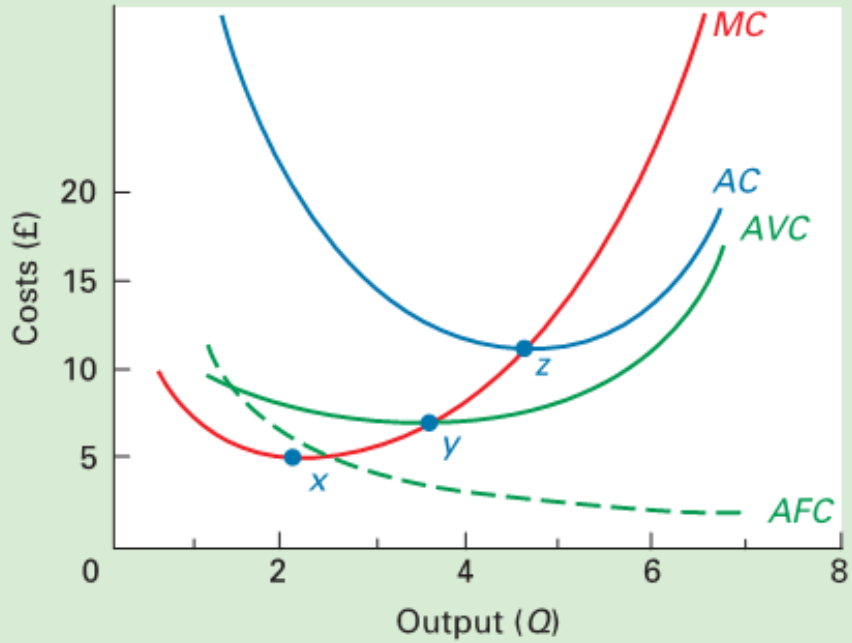
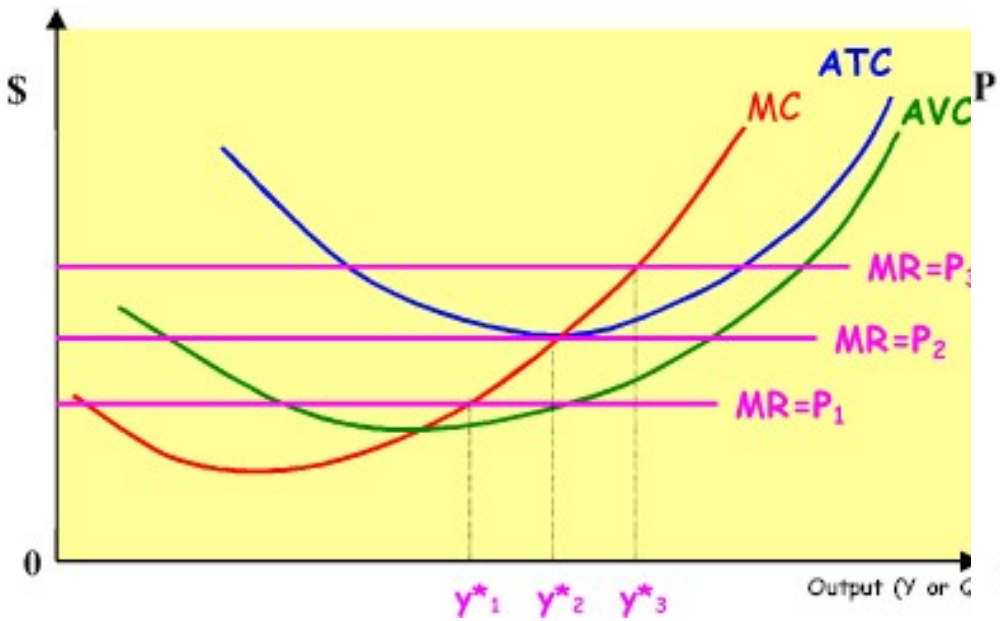


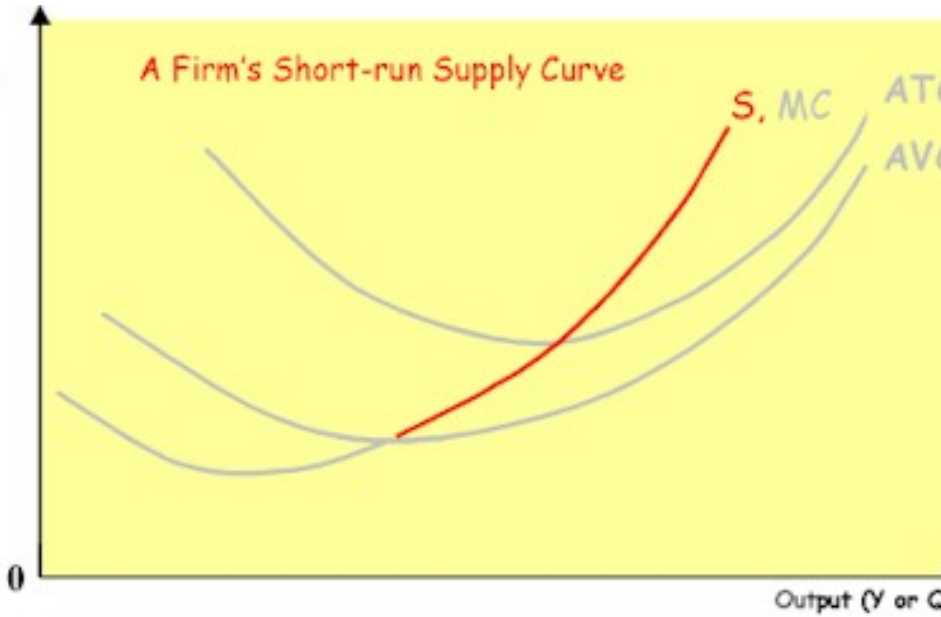
Figure 5.4 Average and marginal costs



Why Does Supply Depend on Price?

Price and marginal costs





How does the Marginal Costs curve shift? How does that affect quantity supplied?

Equilibrium: Definition, graphical representation

Market equilibrium

Equilibrium is: Price p_x^* and quantity q_x^* for which:

1. consumers are maximizing utility
2. firms are maximizing profit
3. markets clear

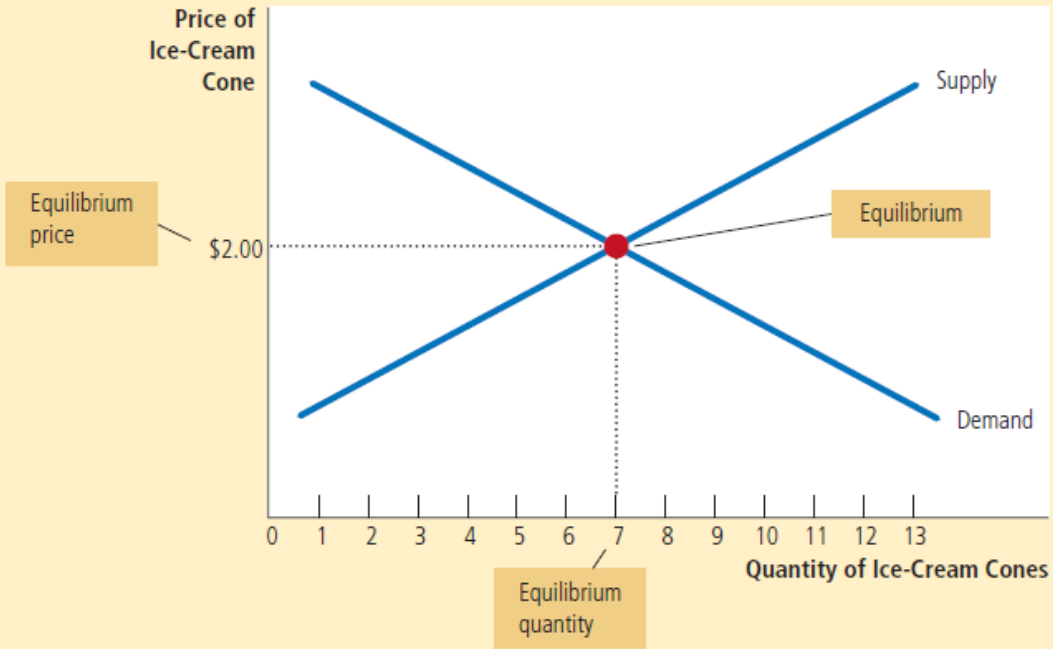
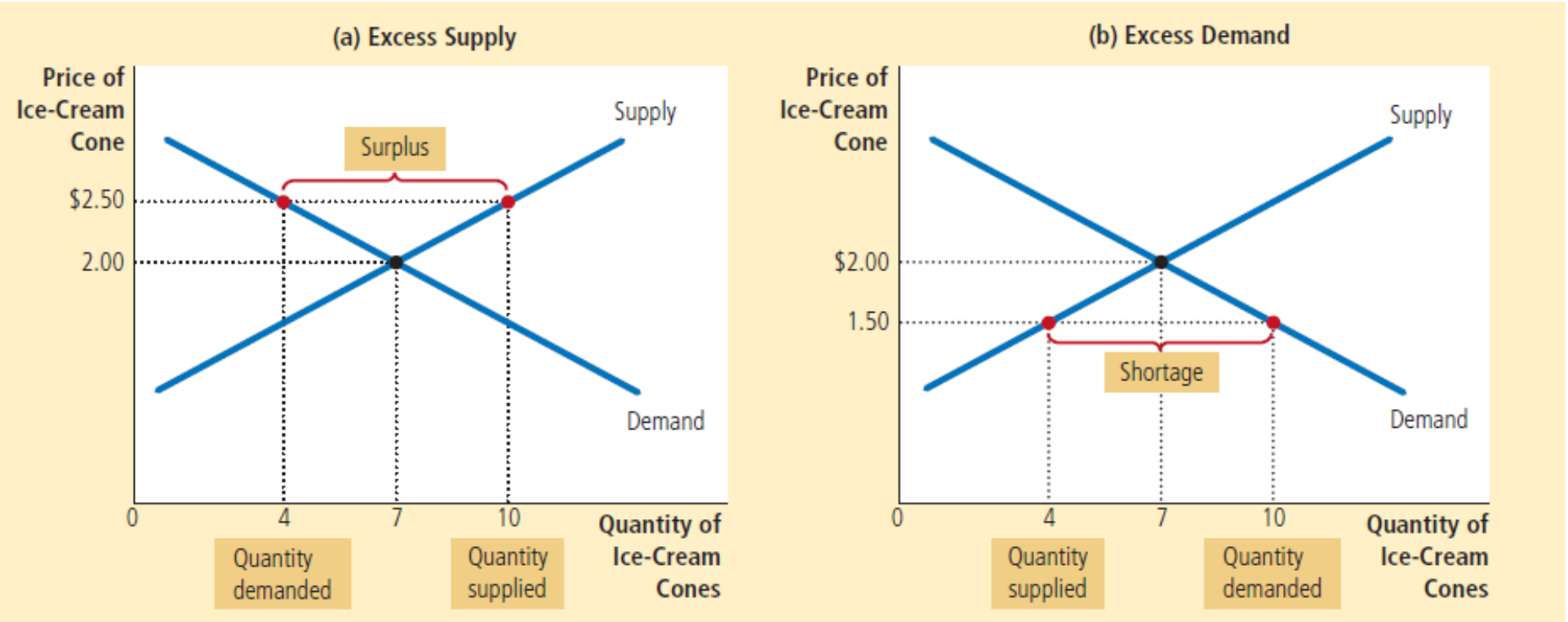


FIGURE 8

The Equilibrium of Supply and Demand
The equilibrium is found where the supply and demand curves intersect. At the equilibrium price, the quantity supplied equals the quantity demanded. Here the equilibrium price is $2.00: At this price, 7 ice-cream cones are supplied and 7 ice-cream cones are demanded.

What if the Market is NOT in Equilibrium?



Shortage, surplus, and market clearing.

Changes in Equilibrium

Case 1: Demand increases. How does Eqm. change?

Figure 2.6 Effect of a shift in the demand curve

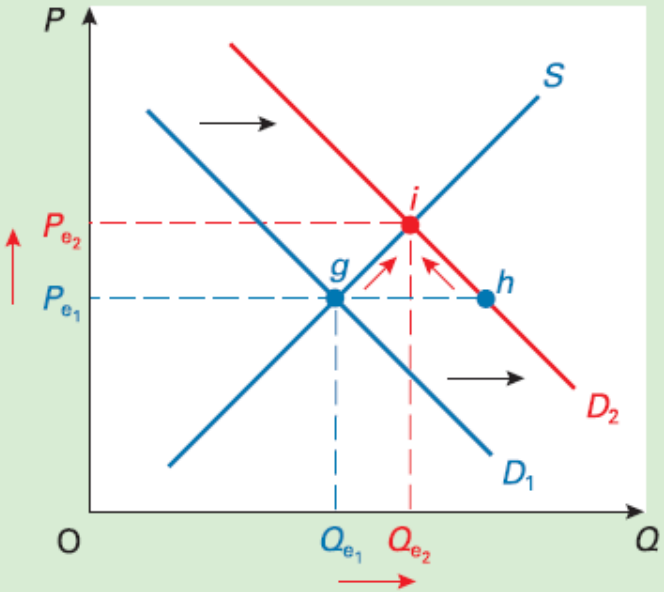
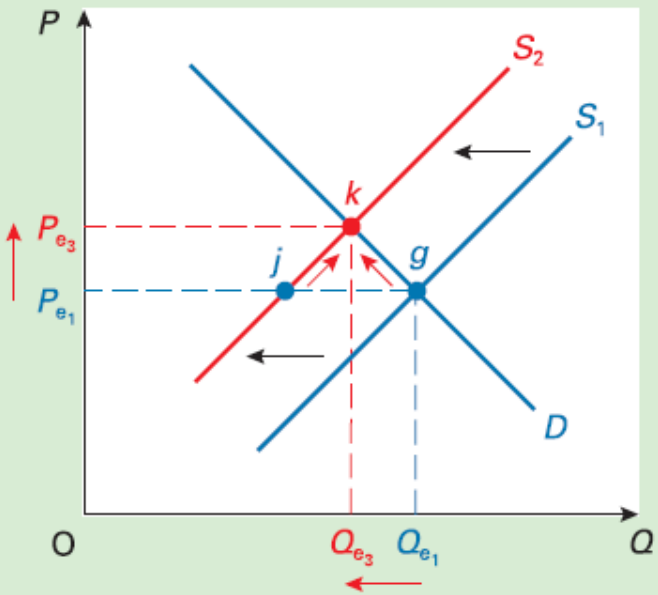


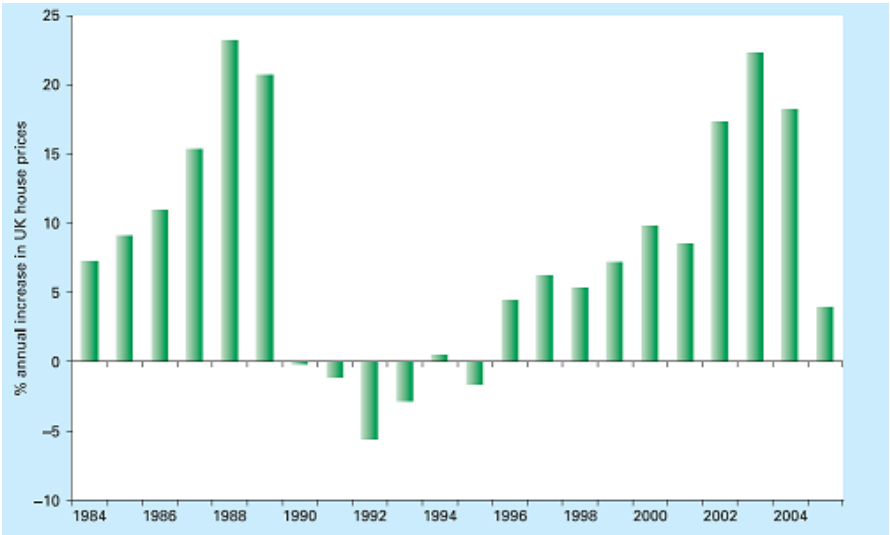
Figure 2.7 Effect of a shift in the supply curve

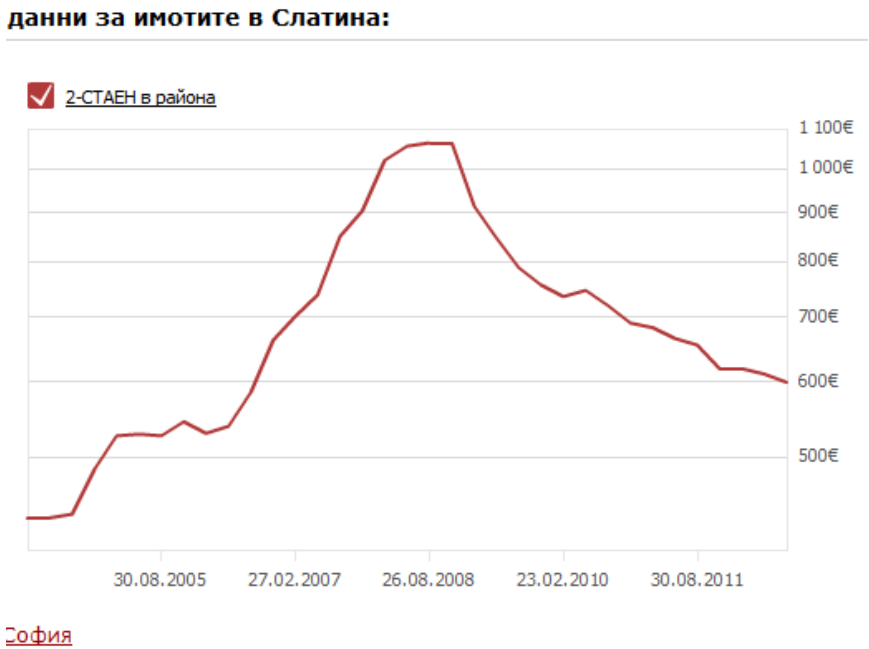


Case 2: Supply decreases. How does Eqm. change?

Changes in Equilibrium

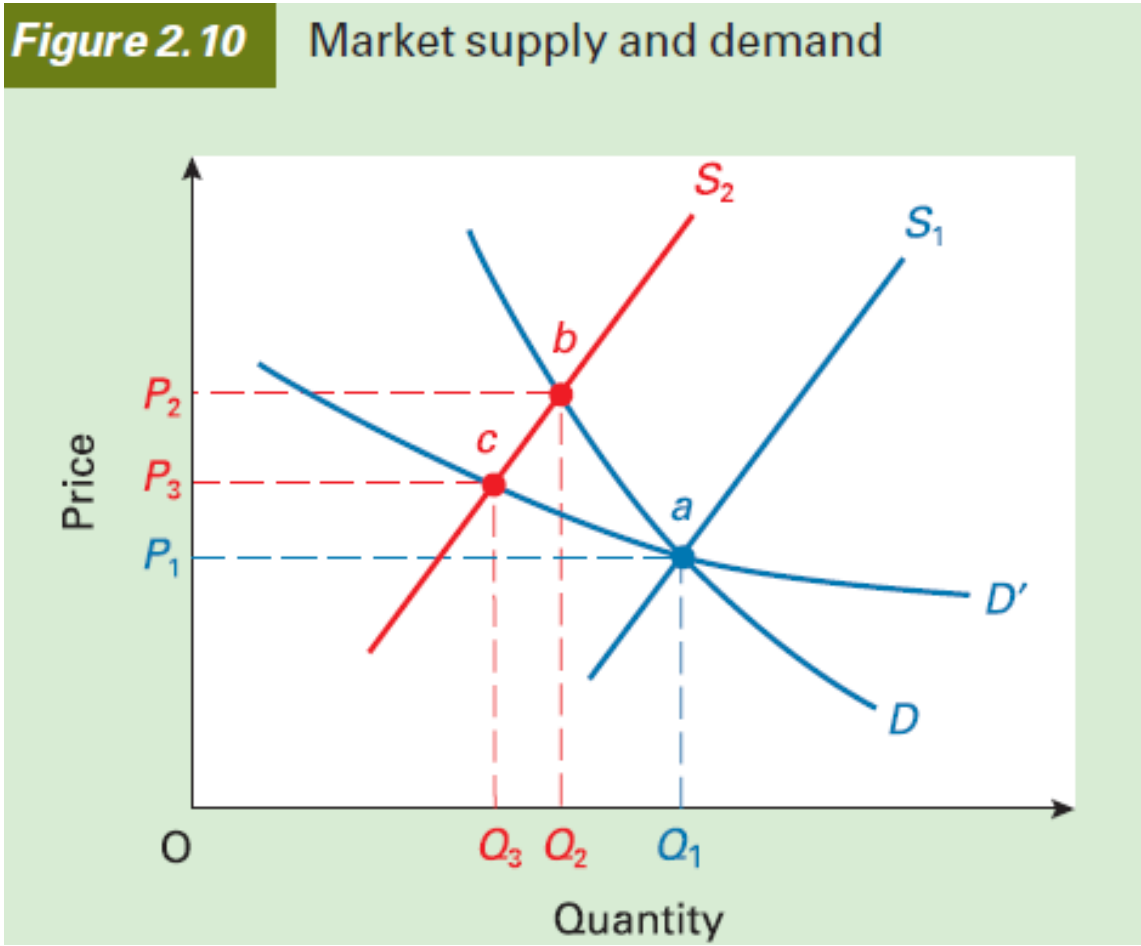
The case of the housing market in UK and in BG





Why do we witness such movements? Draw the S and D graphs for the two markets. Which of the two has increased more if the price increased/decreased?

Equilibrium changes



Case: Supply decreases.

Reading

Reading: M-T, Ch.3: 41-71

Bedtime reading:
economist.com; wsj.com; cnbc.com