

SA422: Housing Economics and Finance
2008/2009

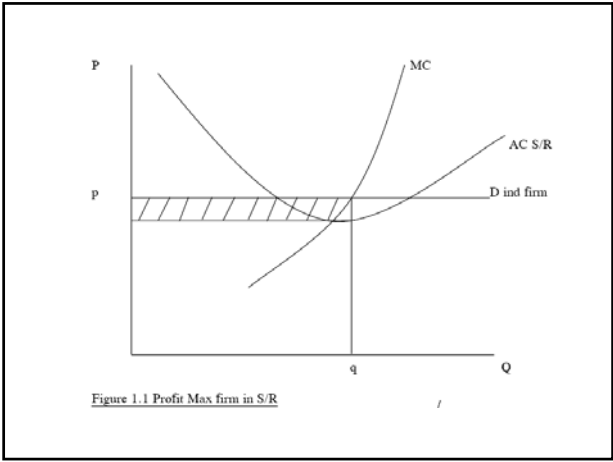
Week 3:
Housing Supply, House Prices
and Land Markets

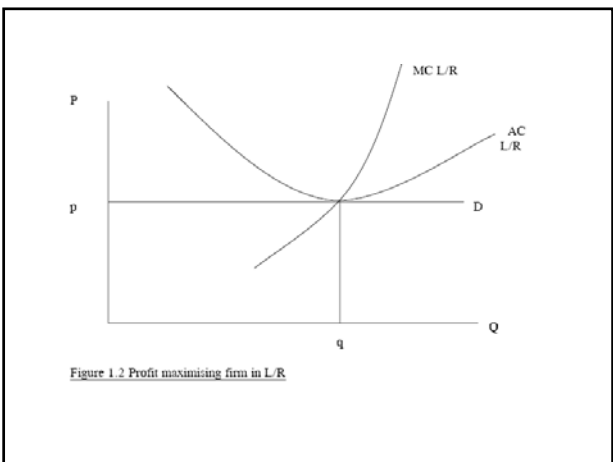
When will new building occur?

- PRIVATE –
PROFITABILITY
(Rate of Return)
CONSTRAINTS
If $P_H \uparrow \rightarrow S_H \uparrow$ but inelastic
- SOCIAL –
In principle Social Cost Benefit but
FUNDING CONSTRAINTS
LAND ALLOCATION

Firm's Decision to Provide Housing

Objective: MAX Profit
Requires: $MR = MC$
In Perfect Competition:
 $P = MR$
So produce quantity where
 $P = MC$
How Much Profit?: Depends on entry and exit
Relationship between
AC and MC (MC cuts AC @ minimum)
Optimal position:
 $AC = MC @ \min AC = \text{normal Profit}$





How Many Firms?

If $P = MC > \min AC$
 higher Q per firm than optimal and
 excess profit \Rightarrow
 more firms

If $P = MC < \min AC$
 lower Q per firm than optimal
 losses \Rightarrow
 fewer firms

Short-Term v. Long Term: Definitions

Short term – some factors cannot be adjusted $AVC < AC$

Long term – full adjustment

Equilibrium $P = L/RMC = \min L/RAC$

Long run: Not directly related to time but Housing particularly slow to adjust

Elasticity of Supply of New Dwellings

- Short-term relatively inelastic
- Problems of Adjustment
- Capacity to Replicate – heterogeneity of land
- Supply of Land

The Relationship between Housing and Land Markets

Demand for land derived from Demand for Housing

– Residual valuation

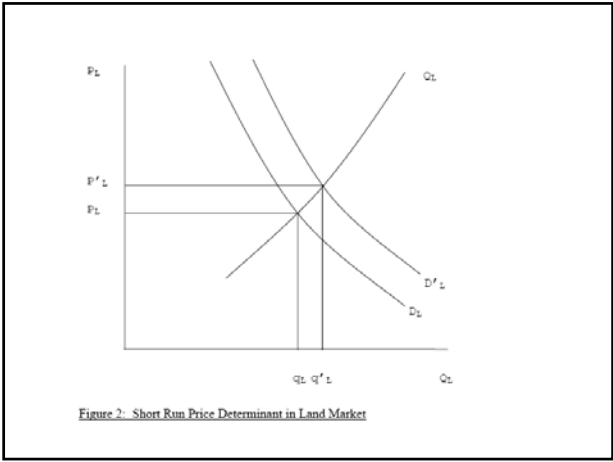
Revenue – Costs excluding land

= amount prepared to pay for Land

If can't adjust quantity of Land

$P_H \uparrow \Rightarrow P_L \uparrow$

$\rightarrow P_{\text{NEW HOUSES}} \uparrow$



Responsiveness of Land Supply

- Total land fixed quantity
- Land to a particular use
 - goes to highest bidder
 - cost of transfer
- Substitute building for land if Price of Land $\uparrow \Rightarrow$ higher density

Why is Land Supply price inelastic even in the long-term?

- Resource costs of transfer from other uses
- Infrastructure costs
- Preparation costs
- Risk and uncertainty
- Government intervention

Evidence on Long-run Costs of Housing

- Even in market based systems supply of land relatively inelastic – so costs of land \uparrow
- Relative productivity of construction industry – labour costs \uparrow
- Potential for technological change – modular construction etc.
- Quality of product \uparrow

Implications for the Price of Housing

- Demand elasticities – income elasticities offset by price elasticities
- Space versus numbers of units?
- Supply relatively inelastic
- Price of land \uparrow
- Increased densities of development

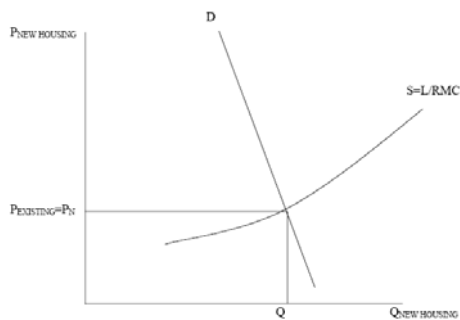


Figure 3: Price Determination in the Long-Run

Current Policy

- Expand new building to 240,000 p.a. based on requirements or economic pressures?
- Shift the supply curve or make supply more elastic?
- Social sector based on estimates of need – therefore requiring subsidy
- The new build premium – and the relationship between new building and the existing stock
