

SA 422 Housing Economics and Finance
2008/2009

**Finance lectures
3 & 4: Subsidy options**

- Demand side subsidy:
 - Increase household income (Lecture 4)
- Supply side subsidy:
 - Regulate rent
 - Subsidy to the landlord (Lectures 2 & 3)

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**Finance Lectures
3: Supply-side mechanisms**

- 3a: Options**
- 3b: Capital subsidies**
- 3c: Revenue subsidies**
- 3d: Reinvestment**
- 3e: Assessment**

Principles

$$\begin{aligned} &\text{Rent income} \\ &= \\ &\text{Management \& maintenance} \\ &+ \text{long term repair} \\ &+ \text{cost of capital} \end{aligned}$$

Principles

- 1) Affordable rent + subsidy = M&M + long term repair + cost of capital
- 2) Affordable rent = M&M + long term repair + subsidised cost of capital

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Finance Lectures 3a: Supply-side mechanisms Options

Rent regulation / control

- Existed in UK up to 1989
- Reintroduced in social sector 2001
- Landlord could choose to:
 - run at a loss (real / nominal)
 - reduce spend on management & maintenance
 - sell and exit the sector
- Re-introduced to the subsidised sector

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Finance Lectures
3b: Supply-side mechanisms
Capital subsidies

Decrease the cost of capital

- Capital grant to reduce private investment
- Reduce interest rates
- Tax breaks on affordable housing activity

Grant calculation

Cost of providing a new home = private finance
raised by landlord + capital subsidy

Income from providing the home = net rent, used
to service private finance

Capital subsidy required = cost – amount of
borrowing that can be supported by the rent

Borrowing against rent income

Value today of payment in future year
= payment / (1+ discount rate)^{number of years}

Receive £1,000 next year, 4.5% discount rate
Value today = £ (1000/(1.0455)) = £ 957

Receive £1,000 in 5 years, 4.5% discount rate
Value today = £ (1000/(1.045)⁵) = £802

How much capital grant?

Assume net rent of £2,500 per year

Yr 1 NPV = £2,500 / 1.05 = £2,381

Yr 2 NPV = £2,500 / 1.05² = £2,268

Yr 3 NPV = £2,500 / 1.05³ = £2,160

Yr 4 NPV = £2,500 / 1.05⁴ = £2,057

Yr 5 NPV = £2,500 / 1.05⁵ = £1,959

5 years' rent therefore worth £10,824

How much capital grant?

Net present values of £2,500 per year

– 5 years £ 10,824

– 10 years £ 19,304

– 15 years £ 25,949

– 30 years £ 38,431

Infinite stream of payments

NPV = payment / discount rate = £2,500/.05 = £60,000

How much capital grant?

- Grant = capital cost – NPV rental income
- E.g. if capital cost = £125,000 and NPV taken over 30 years: Grant required = £125,000 - £38,400 = £86,600 (=69%)

Competitive grant system

- Surpluses from other properties
- Efficiency in management costs
- Innovation in procurement mechanisms
- Loss-leading share of grant programme

Similar approaches

- Sale/refinance of existing municipal stock
Stock value = NPV income
= NPV (rents – repair costs) (Lecture 3)
- Stream of tax credits can be capitalised within a similar model
