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LECTURE 1B – Economic Concepts, Demand & Supply

Key Resources of Cities?

- Land
- Labour
- Capital (money)
- Time

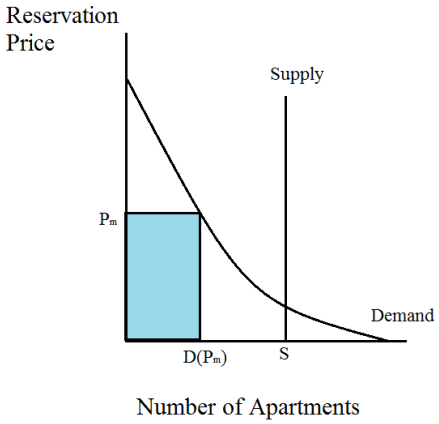
All these resources are limited. Therefore, resources have to be utilised efficiently. We study economics to understand importance of resource allocation; optimal utilisation of resources.

Seven Concepts in Economics:

1. Scarcity
    a. Given resources are limited, they are scarce.
        i. Resources include goods, time, labour, land.
    b. Auction: resource (house) is scarce, but there are numerous buyers.
    c. Productive resources are scarce.
    d. Incomes are limited but wants are unlimited. People make choices.
2. Opportunity Set
    a. Set of possible choices.
    b. People have choices from which they make decisions.
3. Trade offs
    a. Since people have choices, they make trade-offs.
    b. 'There is no such thing as a free lunch!' Having more of one thing requires giving up of something else. E.g. time for studying or watching television.
    c. Making decision requires trading off one goal for another. E.g. sand dunes at beach vs. built golf course.
    d. Scarcity leads to trade-offs.
    e. Efficiency vs. Equity
        i. Efficiency means society gets the most it can from its scarce resources – how to utilise to maximum benefit. E.g. golf course creates jobs, tourism.
        ii. Equity means the benefits of those resources are distributed fairly among members of society. E.g. golf course doesn't allow everyone to enjoy the area, as a beach does.
4. Opportunity Costs
    a. Cost of opportunity that is given up – the second-best option.
    b. Opportunity cost is what you give up to obtain a certain item. E.g. watching a movie, ticket price is paid, but it may not be the opportunity cost… if movie turns out boring, then will you watch it and give up your time or do something else? In this case, time would be the opportunity cost.
5. Incentives
    a. Bargains, sales – motivate people to buy.
    b. Benefits (e.g. sales) that motivate a decision maker in favour of a choice.
    c. Incentives play an important role in the decision making of economic agents.
6. Exchange
    a. Since resources are limited, different economic agents may own them. In order to maximise their benefit, they engage in exchange. 'Trade' at the level of individuals, cities and countries – to maximise benefit.
    b. Decisions that are made determine how the economy's limited resources are used. Economists describe situations of exchange as markets.
    c. Exchange allows people to specialise in what they do best, in different trades.
    d. People gain from their ability to exchange with one another. Mutual benefits.

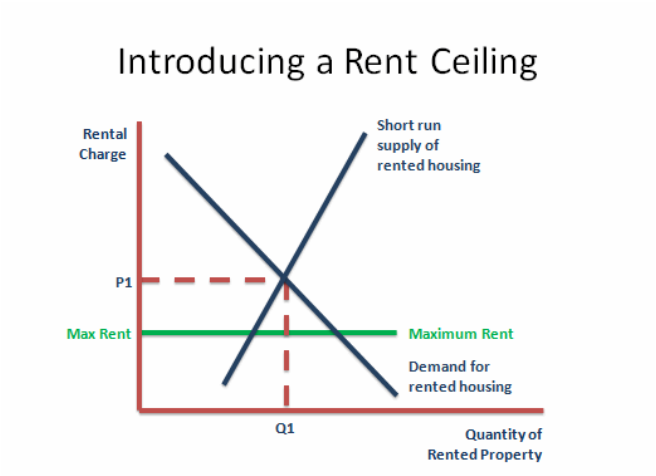
Monopolist

- Major landlord owns all apartments in inner ring = monopolist.
- Two Types:
  - *Discriminating Monopolist*
    - Knows the reservation price for each individual. Rent it out to each student based on their max price able to afford, until apartment stock is out.
    - Revenue would be cumulative sum of rent received.
    - Efficient but may not be equitable.
    - In comparison, competitive market would benefit some consumers, i.e. those who can afford to pay more, as they would still pay the same supply/demand price and end up saving some money for themselves. Part of surplus is shared by consumers.
  - *Ordinary Monopolist*
    - Doesn't have information on each consumers' max price willing to pay.
    - Keep rents fixed and higher than market equilibrium.
    - Problem: some apartments would be left vacant as some students won't be able to pay the price.
    - Revenue = (P_m) x D(P_m) = price set x max apartments rented at that price.
    - Compared to discriminating monopolist, total revenue of ordinary monopolist is lower.



Rent Control

- Intervention by government in the market, to not allow rents to go above a certain level e.g. (Pc). They control the rent.
- Rent price would be lower, but demand would exceed it, and some people would miss out. Limited resource, amongst greater demand.

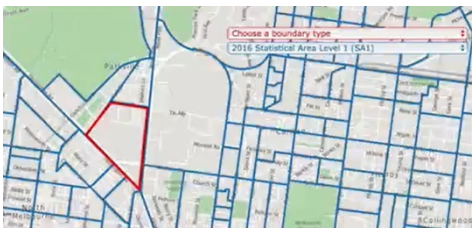


Simple models allow us to test what's better in terms of efficiency and equity in allocation of resources.

In Australia, an area (SAL1) is considered to be having urban character if it meets either of the following criteria:

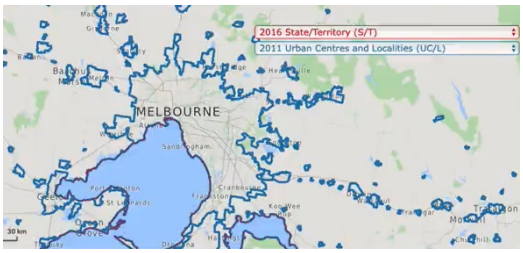
- Have a population density greater or equal to 200 people per sq. km OR
- Have a population density greater or equal to 100 people per sq. km and a dwelling density greater or equal to 50 dwellings per sq. km OR
- Have an urban mesh block population greater or equal to 45% of total population (refers to all mesh blocks that constitute an SA1) and dwelling density greater or equal to 45 dwellings per sq. km
    - *Mesh blocks* are smallest geographical area defined by the Australian Bureau of Statistics and form the building blocks for larger regions of Australian Statistical Geography Standard. Australia has 358,000 mesh blocks.

    - *Statistical Areas Level 1 (SA1)* are second smallest geographical areas built from whole mesh blocks. SA1s have a population between 200 and 800 people with an average population size of approximately 400 people. SA1s are designed to be predominantly rural or predominantly urban in character. Australia has 57,523 SA1 regions.



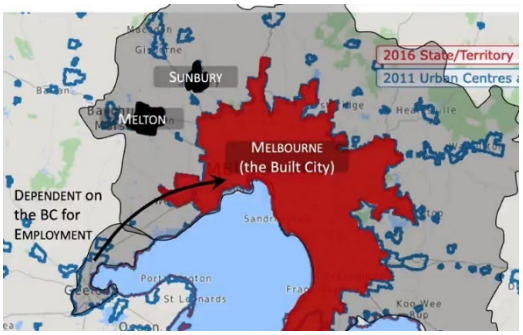
    - SA1s containing infrastructure are considered to be 'of urban character' if adjacent to an SA1 'of an urban character'.
        - Following infrastructure is not considered urban unless surrounded by urban SA1s: mines, wineries, power stations, damns and reservoirs, national parks, forests, shooting ranges, explosives handling and munitions areas, defence force training grounds.

An urban centre is a cluster of contiguous SA1s (made up of mesh blocks) with an aggregate population exceeding 1000 persons, contained within the SA1s – that are 'of urban character'.



The Greater Capital City Statistical Areas (GCCSA) are designed to reflect the functional extent of each of the eight State and Territory capital cities. This extends beyond built up edge of city to include people who regularly socialise, shop or work within city, but live in towns and rural areas surrounding the capital city.

The Built City (BC): a continuous or near continuous tract of territory which is 'of urban character'. Devoted to uses such as housing, industry, transport, public spaces etc. BC is comparable to Urban Centres in Australian definition. Parr (2007) explains the nature of dependency of BC on neighbouring areas which together form a larger urban area. Non-BC households may depend on BC and vice-versa.



Why are these theories of urban form and structure describing a reverse pattern of residential rents to what was predicted by Von Thunen and Alonso's bid-rent model?

Bid-rent Model	**Theories of urban growth patterns**
Explains land value, urban sprawl and density patterns of cities.	Explains urban forms and internal structure of cities.
• In spite of its approximation of real cities, the standard model has a strong descriptive and predictive power on the structure of most urban cities. • The model provides the building blocks for more complex models where some of the initial simplifying assumptions are relaxed, such as the assumption of monocentric, featureless cities. • However, cities without land markets cannot be described or predicted by the standard bid-rent model.	• Urban theoreticians explain market driven urban forms to be concentric, wedge-shaped, or having multiple nuclei. • Can be understood as the product of removing assumptions of the bid-rent model as monocentric, featureless cities, to see the complex urban forms that evolve. • Takes into account negative externalities, particularly of CBD (pollution, traffic, industrial wastes), whereas bid-rent model doesn't consider this.

Negative impacts of *urban sprawl*:

<u>Fiscal impact (government level):</u>

- Higher cost for public infrastructure provisions (roads, sewage, water-supply, power supply, cable grid, fibre cable, internet connection) come with greater urban area.
- Require higher taxation to cover the cost.

<u>Individual impact:</u>

- Impact of human health (physical and mental).
- Longer time spent travelling – physically and mentally tiring.
- Extra mileage of driving -> pollution -> direct impact on health.
- Financial impact at personal level -> less cost-efficient transiting and commuting.

<u>Environmental impact:</u>

- Habitat loss, species endangerment on local plants and animals.
- Clear lands, disruption of forest ecosystem, hinders sustainable growth of cities.
- Impact on air quality, water quality, have direct impact on human health.

Reading (Stiglitz Ch.9): Externalities, Public Goods

Externality: a phenomenon that arises when an individual or firm takes an action but does not bear all the costs (negative externality) or receive all the benefits (positive externality).

- *Negative externality*: social costs exceed the cost borne by the individual or firm responsible for creating those costs (the private costs). E.g. factory pollution – for which there is carbon tax by the government to hold responsibility for the factory, which will then adopt cleaner production technologies.
- *Positive externality*: actions of a firm or individual confer benefits on others, possibly everyone in a society enjoys the social benefits, which exceed those accruing to the firm or individual (the private benefits). E.g. immunisations protect self from disease, but also others from catching it from you.

Free rider: someone who enjoys the benefit of a (public) good without paying for it.

Non-excludable goods: goods that are freely available to non-paying consumers, i.e. such consumers cannot be excluded from consuming and benefitting from such goods. E.g. lighthouse may be built for signalling certain ships of dangers associated with land masses or rocks, but it could be used by all ships or boats in the vicinity.

Non-rivalrous goods: goods whose consumption or use by one person does not exclude consumption by another person. Once provided and used by one individual, the good remains available for consumption and derivation of benefit by others. E.g. road sign benefits one person without in any way affecting the ability of others to consume it and derive the same benefit.

Public goods: a good, such as national defence, that costs little or nothing for an extra individual to enjoy and the costs of preventing any individual from the enjoyment of which are high. Public goods have the properties of non-rivalrous consumption and non-excludability.

Private goods: goods with a high degree of both rivalry and excludability. E.g. a piece of clothing.

Note, excludability is about pricing, whereas rivalry is about benefits or utility.