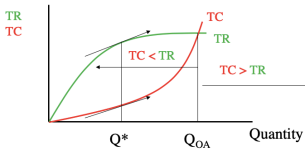
ECON 303 – Law and Economics

Property Rights

Topic 1 – Property Rights – Introduction

- Economy Rights, Contracts, Crime and Torts
- Who is entitled to rights?
- Setting initial entitlements – who has the right to do what
- Provides with a legal framework for allocating resources and distributing wealth – the economic goal is the efficient resource allocation
- Entitlements – first order decision – when there is scarcity there will be conflicting interests – the law must decide whose rights will prevail
- After making the decision society must decide how to enforce the choice
- How do you protect those entitlements – **Property rule** – highest level of freedom of exchange – your right is protected by a property rule – but I can buy that right from you in a voluntary exchange
- **Liability rule** – if you own a house that's in the path of a new motorway – they can through legislation take your land – involuntary exchange – but you will be compensated – the value of the land will be determined through some process
- Hold out – when someone chooses not to give up their property right
- **Inalienable rule** – legally not possible to trade – such as organ sale and rights of women to work
- Economic efficiency
  - Administrative efficiency – low transaction costs – we assume there are no transaction costs – but in the real world there are many – such as hiring legal aid to help with contract interpretation
  - Pareto efficiency
  - Dynamic efficiency – reward innovators by protecting their inventions which benefit society
  - If wealth comes into play, then negotiations could lead to different outcome – this is because a person with deep pockets can influence decisions
- 1st welfare theorem – is that markets will eventually produce a pareto efficient outcome
- Pareto efficiency is achieved when you cannot make one party better off without making another worse off – the result you end at to achieve pareto efficiency depends greatly on the initial endowment
- 2nd welfare theorem – you tell me what your initial endowment is and I can adjust that to achieve efficiency
- Distribution goals – you tell me the initial endowment that is relevant – and I can deliver that to you – government through tax and grants
- We all use access to space – it became a scarce resource in the digital age – the right to use space is tradeable and companies compete to use that space
- When setting initial entitlements – there is a concern that some people in society do not have the ability to compete due to wealth or cultural reasons – so you set aside those rights to allow them to use it
- You do not have absolute rights – some of those rights are controlled by the government

- Attenuation is a dilution of rights
- Liability rules – we could simply enforce initial entitlements and enforce voluntary contracts
- Inalienable entitlements – forbidding sale of certain goods and services – some examples in NZ are Maori fishing quota, conservation land, body parts
- **Harold Demsetz (1964)** – the market provides a valuable and costly service
- The market facilitates exchange of goods and services – gives us information such as price – P=MC also informs us of the costs
- Acceptable allocation mechanism we need it to provide us with the benefits and costs – and you need people to take account of the information
- And you need individuals to be motivated to take on that information – by willing to pay
- The value depends on the property rights – depends on how those rights are enforced – for example, if anyone could use your property the value of it would be zero because people a free riding on your investment
- Common pool resources – oil, water, fish, gas, geothermal – absence of property rights results in too rapid depletion – prices reflect private costs and benefits
- Importance of exclusion – has a valuation function – ability to stop others from utilizing the benefits that flow from your investment
- Public goods – non-excludability and non-rivalry in consumption – transaction costs depend on technology
- Demsetz recommends that when transaction costs exceed value of information received the price should be zero
- If you are maximizing your profit you produce at MVP=W – if there is open access however, you will give hire labour until the point where there is no extra profit to be made – this leads to depletion of resources



- Evolution of property rights – as benefits-costs change due to technology as long as there are net benefits the rights will continue
- For example, fur market – value of fur increased this resulted in over-hunting which led to a negative externality
- This led to restriction on where and when you could hunt – so there were net benefits so property rights would arise
- NZ example would be the kauri gum – all you needed was a spear and axe to get it and it was the main export of Auckland between 1850-1900
- In 1890s there was resource depletion as people started cutting the trees to get the gum – and new oil-based machines made the price of gum fall and by 1940s the market came to end
- The land was owned by the crown – before 1888 it was open access and then restrictions were placed – but a lot of costs associated with recovering the revenue from those licenses

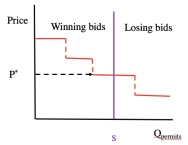
Property Rights – Initial Entitlements

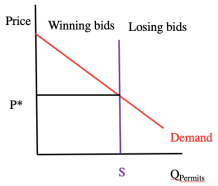
- Property rights occur as value of resource increases sufficiently to offset costs of definition & enforcement
- Allocation mechanism
  - First-possession: Assign ownership on first-come first-served basis
    - Advantages – those with experience with exploiting, recognizes innovations supports risk takers and low-cost method
    - Disadvantages – discriminates new entrants and ring fence their innovation
  - Uniform allocation – equal sharing rules – divide between everyone equally and then allow people to trade
    - Advantages – if trade is allowed it will go to those who value it most, avoids measuring claims and parties are homogenous
    - Disadvantages – opposition to re-allocation by existing users and could involve costs of definition and enforcement
  - Auction – directly allocate resource to those that attach high value to ownership
    - Advantages – avoid TC's of reallocation, generates revenue and if rents accrue to the state then avoid distributional arguments
    - Disadvantages – resistance from incumbents and obvious costs of running an auction
- Roles of state and market
  - Property rights are clear, secure and certain – so that you can trade
  - Markets require clear assignment of initial entitlements and well-enforced rules of contract
  - Property rights are produced in response to market demand – government and market has a role to make it work

Auctions

- First Price Auction – winner is the one that bids the highest
- Second Price Auction – the winner is the highest bidder but pays the second highest price
- Floor Price –
  - Hard Floor minimum the seller is prepared to accept – will not accept anything below
  - Soft Floor – if bids do not know the hard floor – soft floor could be used to catch those bids that are below but close to the hard floor
- Auctioning similar items – Treasury bonds – Carbon emission permits
- Private value auctions – each bidder knows his/her own valuation. Value of painting to me is $500, to you it is $300. My valuation does not depend on your information
- Art Auction – ascending bid start low and bid up – descending bid auction start high and bids decline (first person to put their hand up gets the good)
- Ascending: Yes bidders reveal their true valuation – bidding up to your true valuation is the dominant strategy
- Descending: No – each bidder "shades down" his bid
- Common value auctions – all bidders have the same valuation but they don't know what it is – most real world auctions have a mixture of private and common – example can be price of a barrel of oil is $70

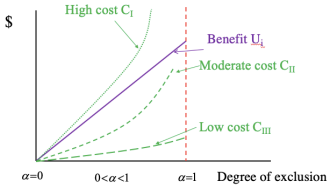
- Winner's curse – tendency to overbid due to the fact that bidder with highest estimate (or signal) will win
- The optimal strategy in this case is to bid less than your estimated value
- Common types of bids
  - Open outcry bid – ascending – auctioneer announces increasing prices
  - Descending – decreasing bids until someone puts up their hand
  - Sealed bid auction – people put their bid in an envelope and highest bid wins
- Static bids are when you have a homogenous divisible product – and two pricing is used the uniform price and pay as you bid
- In sealed bids – people will pay P* which is the market clearing rate – some may shade their bid in order to influence the price to be lower
- Pay as you bid – bidders pay the amount they bid – the tendency is to stay slightly above P* - this favors larger players
- Ascending bid auction with clock – as the clock runs out the bids will automatically have a tendency to become higher – auctioneer announces price & bidders respond
- More expensive than sealed-bid but considered transparent & possibly generates more revenue
- Reverse auction – this is where the buyers and sellers' roles are reversed – the buyer can ask for a service such as installation of a machine – and sellers bid in order to get the opportunity to provide that service – the lowest bid will usually win
- Sellers compete to obtain business from the buyer and prices will typically decrease as the sellers undercut each other



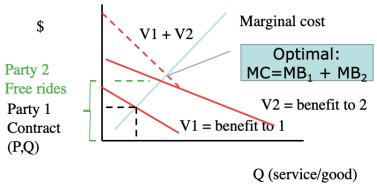


Property Rights – Structure & Shape

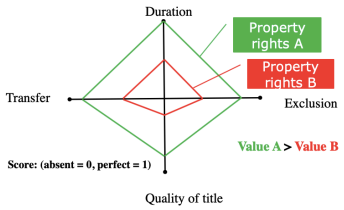
- Something is sustainable when you use up to a certain amount of it – but if you go past it the resource will deplete
- When exclusion is α=0 then anyone can come use it – α=1 is perfect exclusion so only you can use it – this means you need to monitor the use of the resource
- Present value of individual gain from use is harvest is U (α) – the value to me would be the value over time summed up and discounted to me right now – that would be the utility I get from accessing the resource
- If there is no scarcity – then there are no gains from exclusion – and if exclusion is imposed, then the sum of utility will fall
- When there is scarcity – if you don't exclude then utility falls – energy in the field will fall and we will get an unsustainable resource because of free riding – if we increase the degree of exclusion it will create benefits
- From the graph if costs are at C_1 then the degree of exclusion that is beneficial is 0 – since costs of exclusion exceed the benefits
- An example of this was fisheries – it costs a lot to prevent someone from fishing, so exclusion is left at 0
- The optimal level of exclusion is when the slope of the benefits U is equal to the slope of the costs
- In microeconomics the costs are influenced by the technology – the level of labour and capital – the costs some time ago would have been very high so it was difficult to exclude others



- If you don't have exclusion, then people will not invest in assets – if you could not exclude other people from using it because the value you gain from it is 0
- Private property – optimal exclusion – Z = U (α*) – C (U*)
- Collective ownership – Z = W (α*) – K (α*) – where W (α*) is the PV of gains – and K (α*) are the costs of negotiating and policing
- If you use Demsetz when there are open access private property rights will arise because the benefits are higher than the costs
- Common property is where people in the common area are the only ones that can utilize it
- How long do you have a claim with the benefits associated with that asset? – the longer we have right to that asset the more value we will gain from it
- When you have a public good – you add them vertically – when you have a private good you add them horizontally because of excludability
- With a purely public good – V1 will contract with producer but V2 can free ride on the benefits – since its non-excludable – so the optimal level would be the addition of V1+V2 vertically



- Transferability – transfer your interest in an asset – this is essential for market to exist
- Quality of a title – you have the right to transform your right into a leasehold title – this is derivative rights
- Security – land held in fee simple
- 0 is the center – 1 is the end points
- Duration at 0 means you don't have any access to it – 1 means you own it forever



- Transfer – at 0 means you can't transfer at all – at 1 I can transfer to anyone
- Exclusion – as 0 can't exclude anyone – 1 I can exclude everyone
- Quality of title – 0 not a good quality at all – 1 is the perfect quality of title
- Area in the diamond represents the value of the property right

Property Rights – Coase

- The problem is that there is a negative externality – such as factory producing smoke – you tax the factory owner according to the marginal cost of externality of the smoke
- We start at MPC (marginal private cost) =MSB
- We assume we can monetize these costs – if adverse health effects, you can look at the increase in health costs because of this externality
- The MEC is not internalized by the factory – so to internalize the MEC by taxing it – and it will add to the factory's total costs and will equal the MSC
- If we don't internalize the externality, then we have a DWL in the economy
- Coase considered the classic model – as show above – he says that the problem is because of poorly defined property rights – allocate the property rights and let individuals trade rights
- We can protect people through a liability rule – such as if your externality has a negative impact on me then you have to pay for the loss
- In terms of causation: both parties cause damage
- Both should take the externality into account