

The future of Auckland: What is the role of economics for urban policy? Chris Parker, Chief Economist



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Goals of the session

- **My brief:**
 - Big growth challenges
 - How economics helps (or not)
- **My goals:** Improve understanding of:
 - Urban economics and urban planning
 - The urban land market as The Great Confounder
 - What's needed

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The big levers



1. Land use regulation
(strategy, policy, plans, consents)

Resource Management Act

2. Infrastructure (pipes, roads, social etc) (policy, strategy, delivery etc)

Local Govt Act, Land Transport Management Act

3. Other – bylaws, regulatory compliance (buildings etc), misc

Performance?

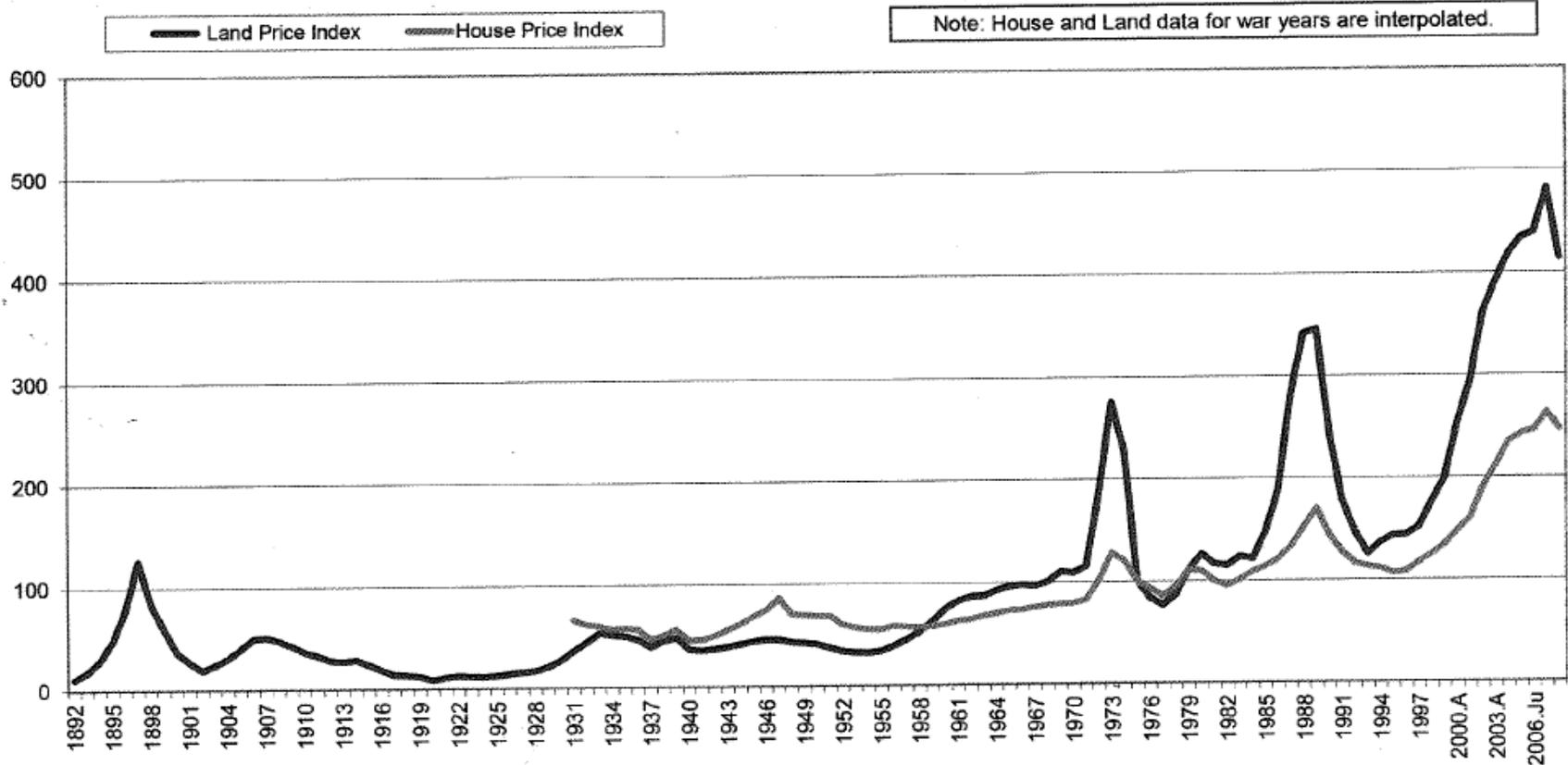
The best cut-through indicator is the 'median multiple'

Global economic challenges

- Short to medium term cyclical problems
 - Worldwide, record low inflation and interest rates, slow growth
 - But high asset price inflation, particularly in real estate
 - Monetary policy not working like it used to
- Long-term structural issues
 - Thomas Piketty's thesis that wealth inequality will worsen over 21st century
 - But it seems real estate is bucking normal economic relationships (Stiglitz, Rognlie)
- Many economists turning towards housing supply inelasticity as underpinning much of these issues...
- Urban planning policy is turning housing as a consumption good into a rare speculative good like gold

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UK real land and house price indices (1975=100)



Sources: Land prices: Vallis (1972a, b, c), DOE Housing and Construction Statistics and VOA; house prices: DCLG/National Statistics (2008, Table 502).

Source: Cheshire, Paul, Nathan, Max, and Overman, Henry (2014, P85) *Urban Economics and Urban Policy: Challenging Conventional Policy Wisdom*, Edward Elgar Publishing Ltd, Cheltenham

Housing Affordability & Land Regulation

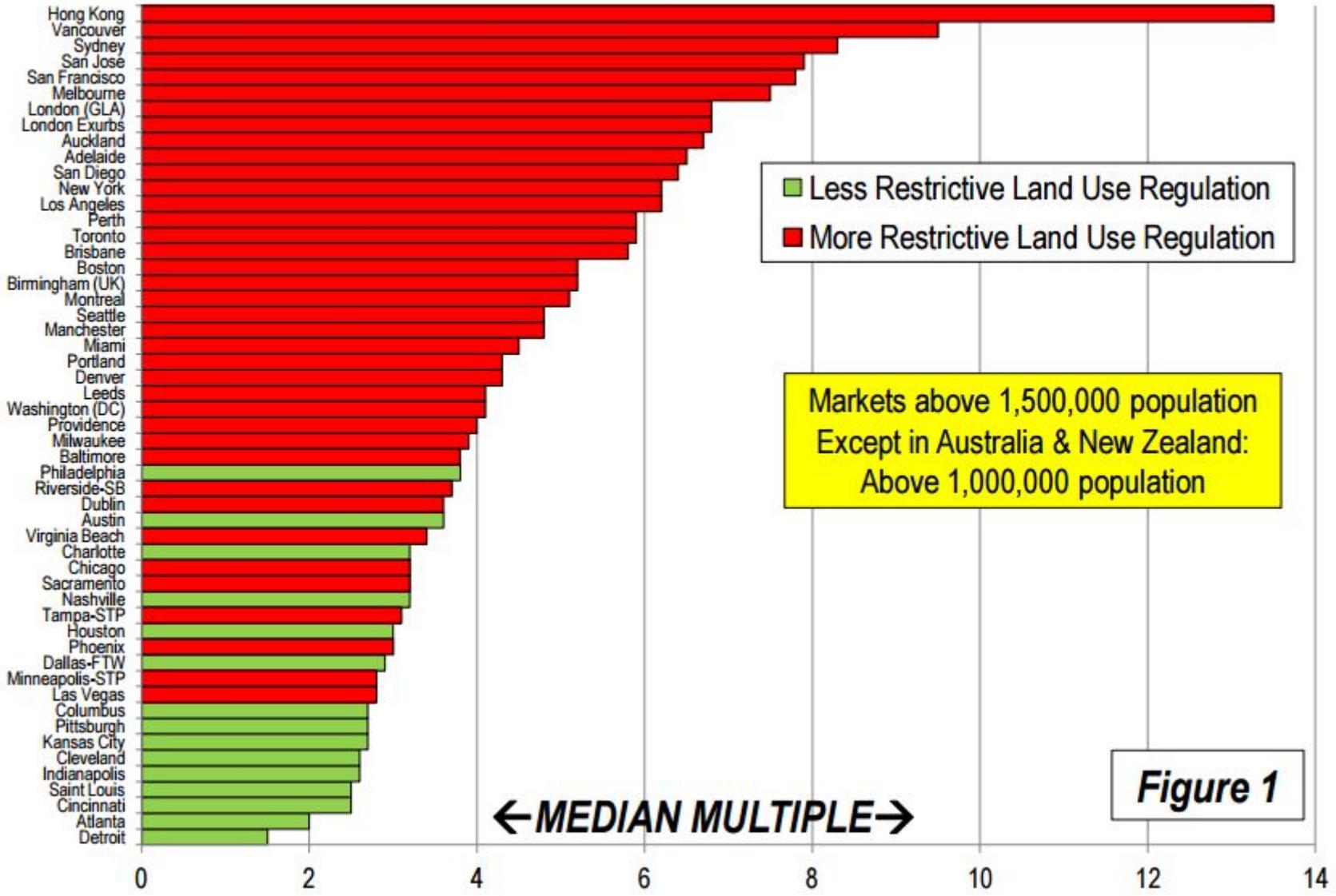
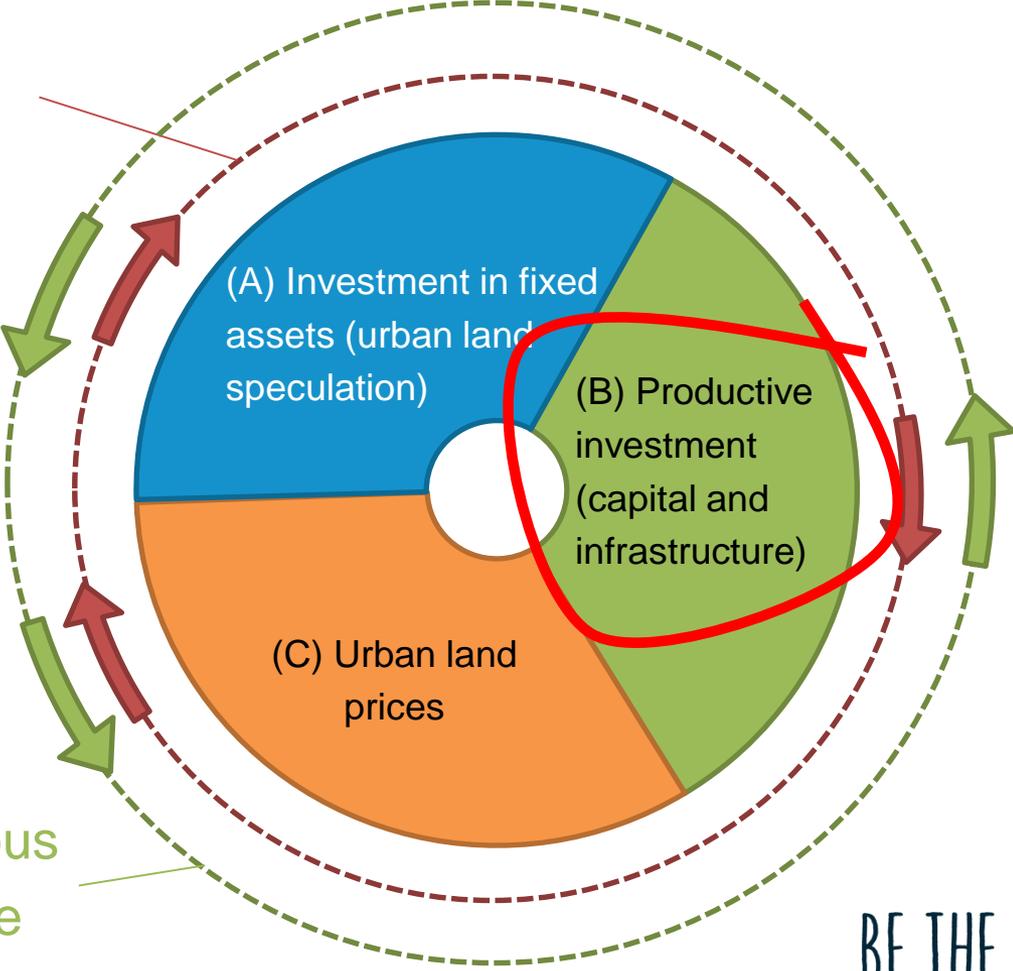


Figure 1

Urban planning can break the cycle

Vicious spiral



Virtuous cycle

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Will cover off some key economics of land markets

- Core characteristics
- Classical Ricardian model vs neoclassical model
- Growth, and growth containment
- Pass through, or not, to land prices
- Speculation
- Monopolistic competition and market power

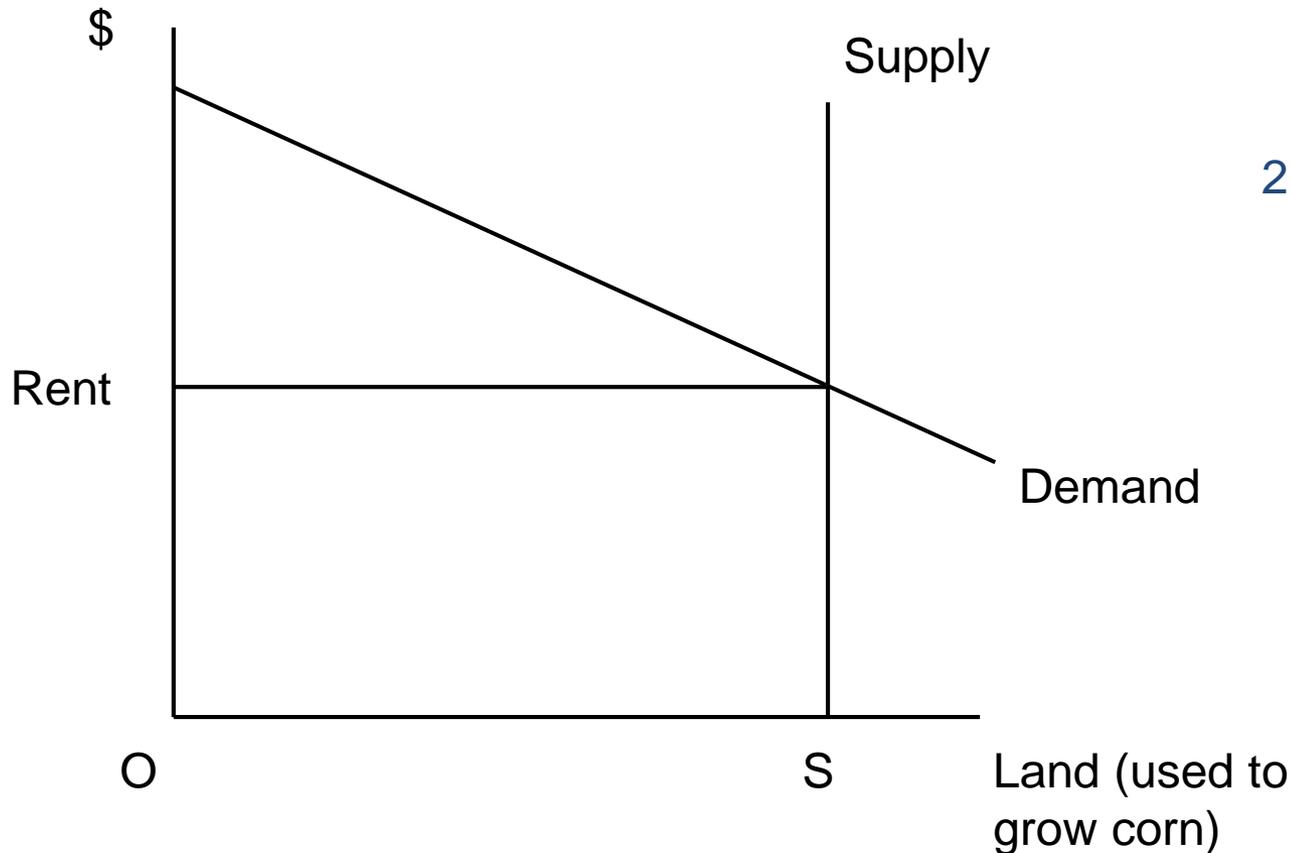
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Land market characteristics and imperfections

- Similarities to normal markets
 - Land owners vary in willingness to supply
 - Potential market power problems
- Specific imperfections
 - **land isn't fungible** — whereby one piece of land isn't necessarily easily exchangeable for land elsewhere
 - **the 'problem of contiguity'** — whereby scale developments and infrastructure corridors need to aggregate adjacent sites
 - **urban land is heterogeneous** — which means urban land can always sustain a mark-up of price over cost

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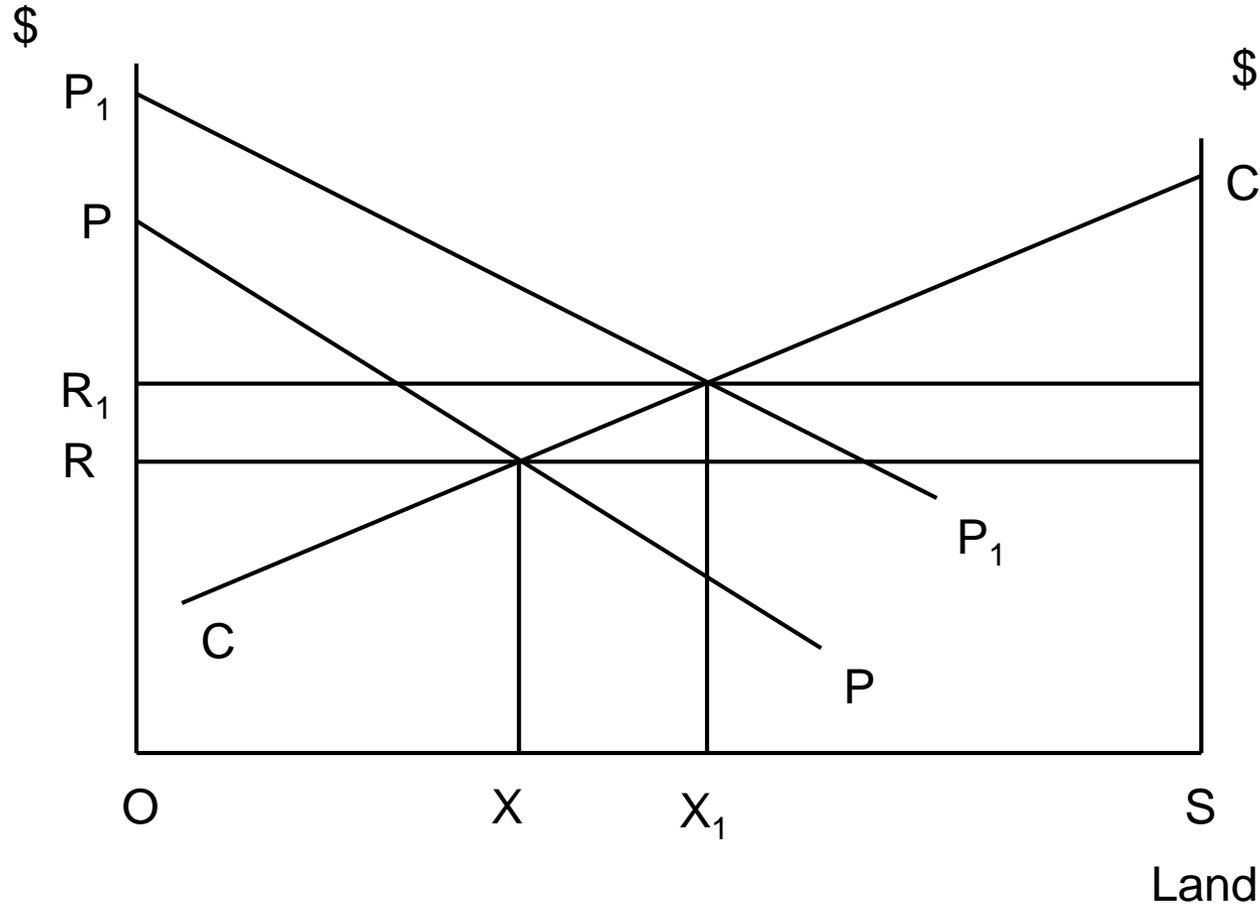
Ricardian rent theory



Implications:

1. The rent of land is solely determined by the demand for the product (corn)
2. Taxes on rents do not affect rent paid or quantity of land supplied

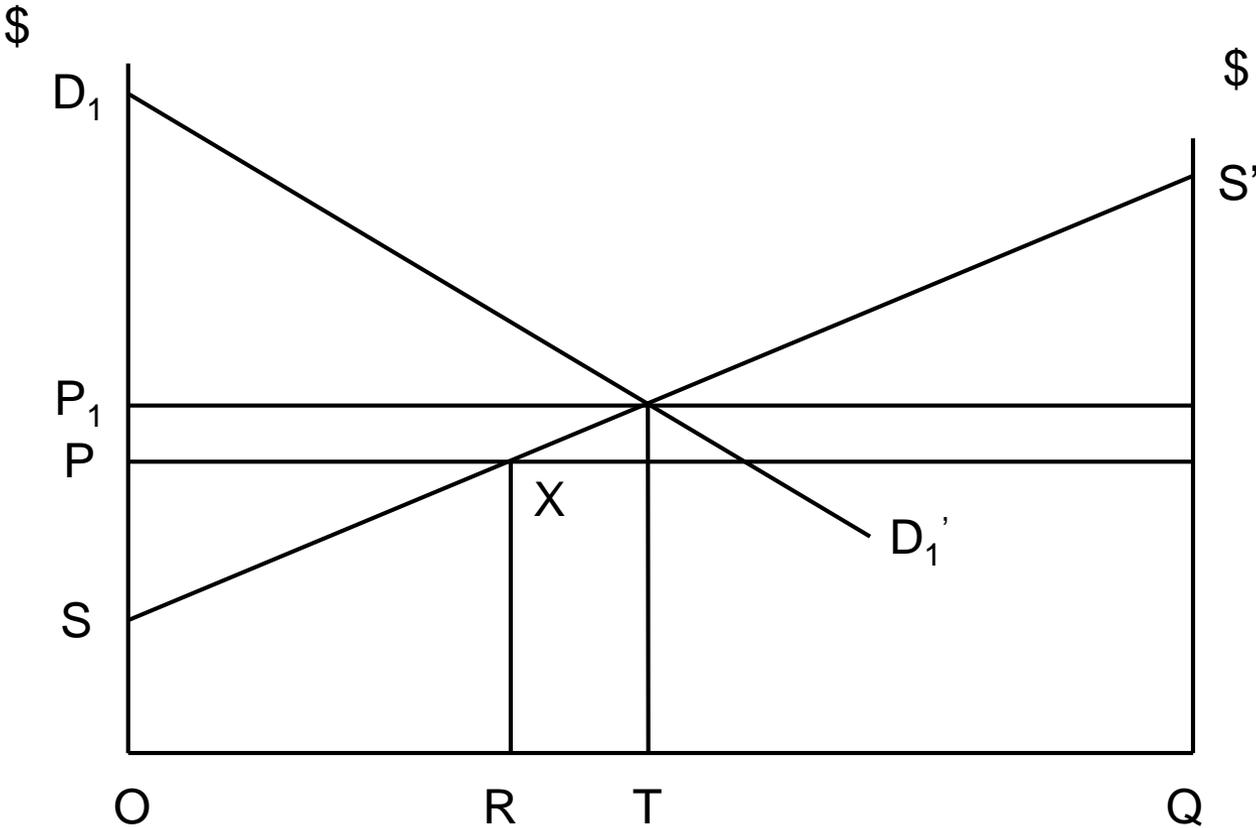
Neoclassical rent theory



Implications:

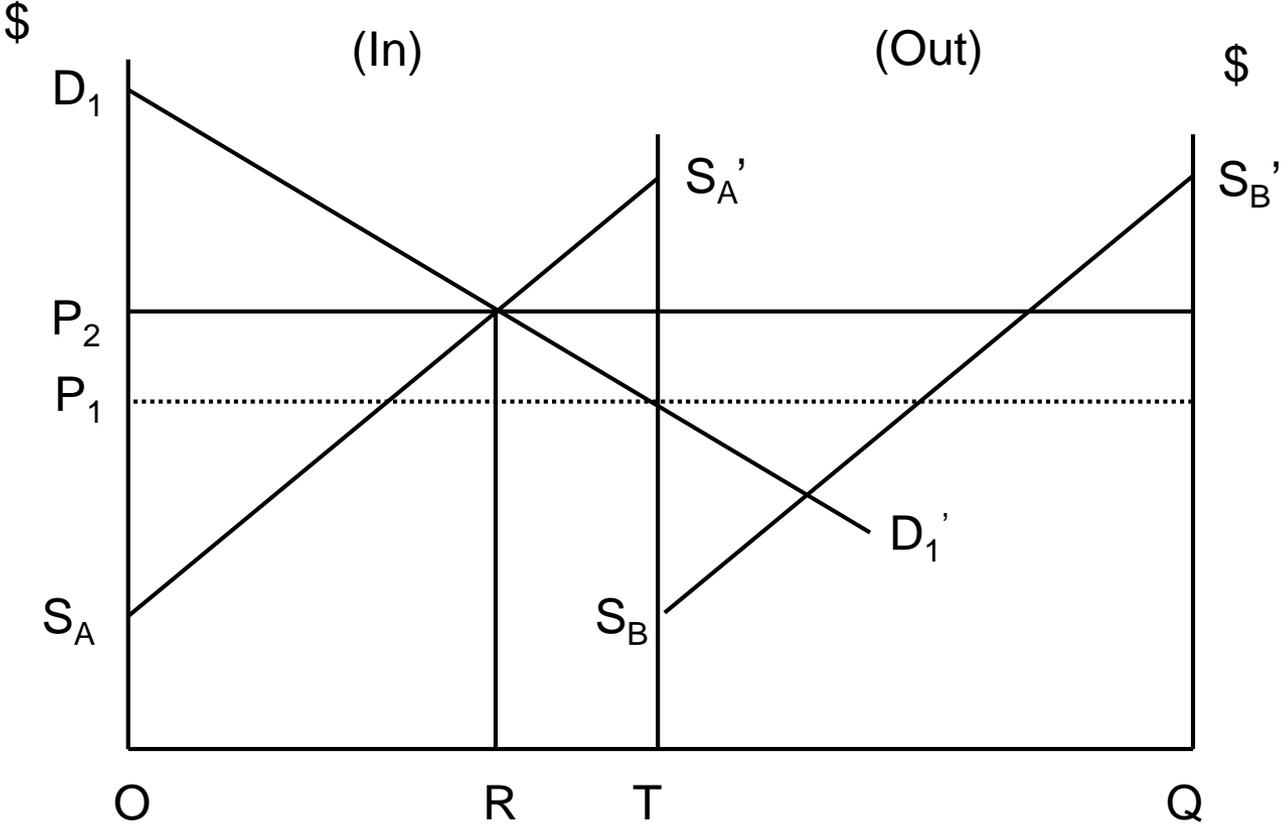
1. The rent of land is not solely determined by the demand for the product
2. Unequal taxes on rents can affect rent paid or quantity of land used for a purpose

Upward sloping supply, and growth



Source: Evans, Alan (2004a p85) *Economics and Land Use Planning*, Blackwell Publishing Ltd, Oxford UK

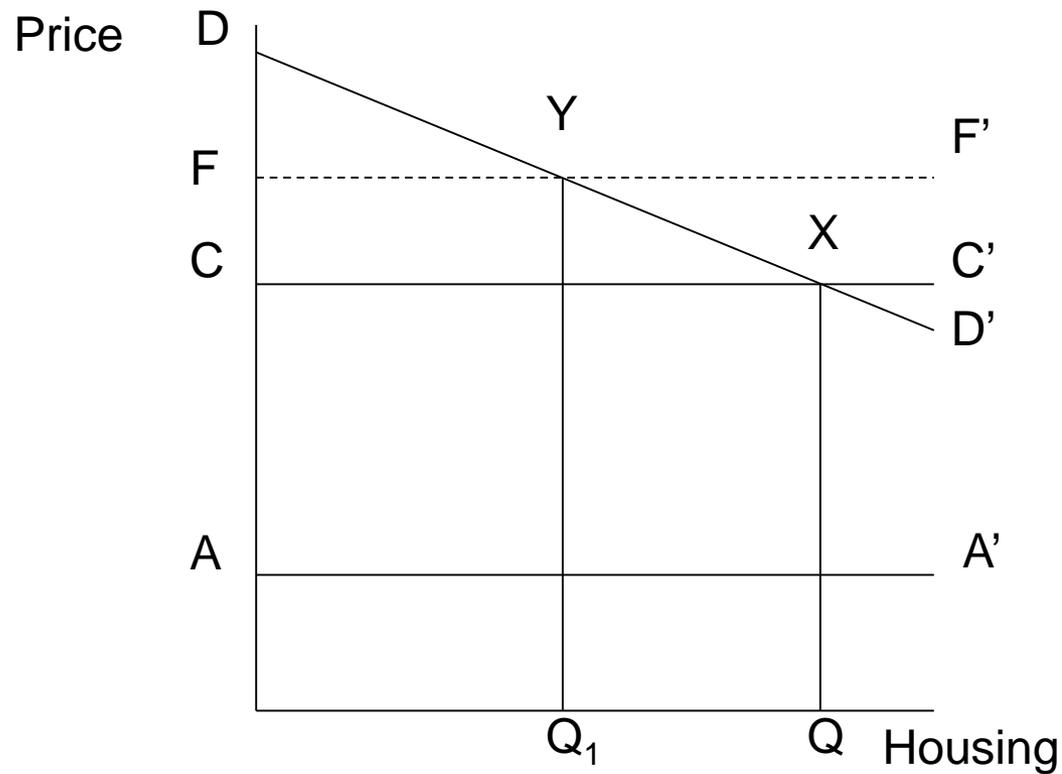
Growth containment



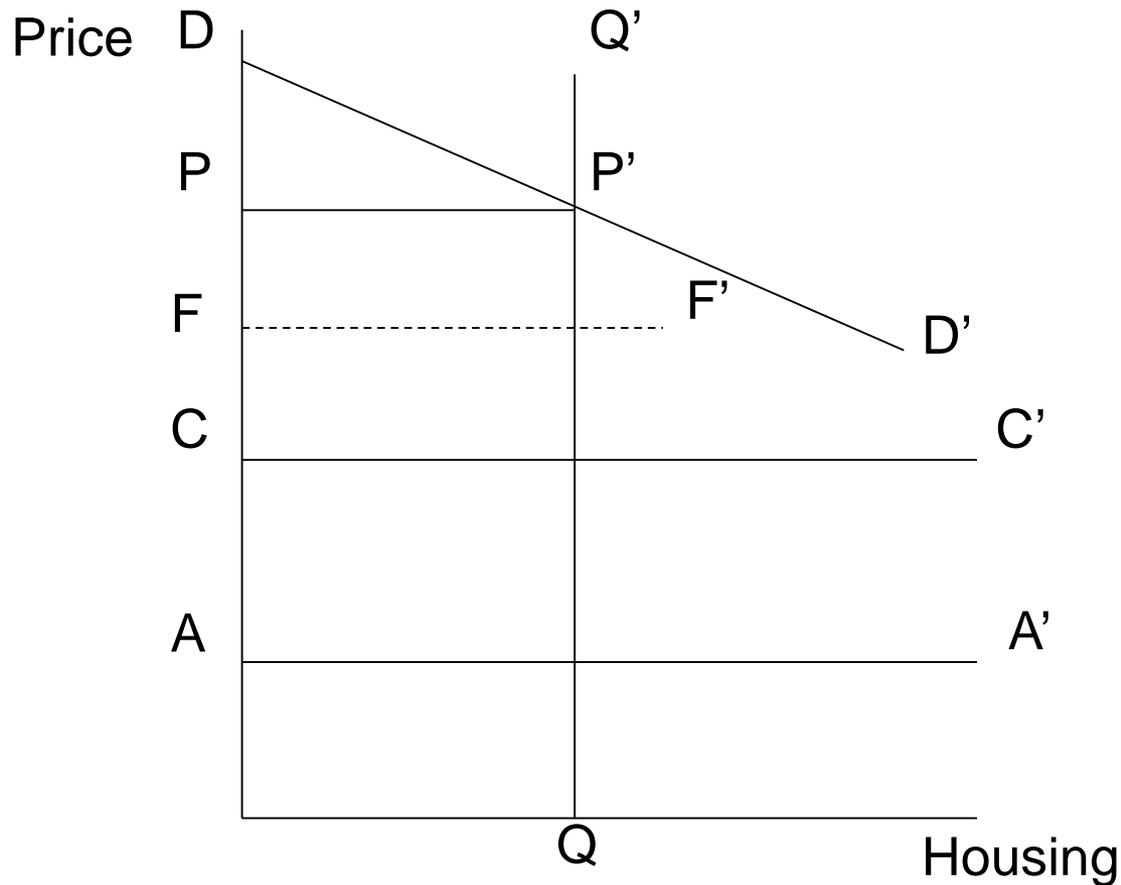
Source: Evans, Alan (2004a p86) *Economics and Land Use Planning*, Blackwell Publishing Ltd, Oxford UK

Pass through of impact fees to house prices?

Elastic supply



Pass through of impact fees to house prices? Inelastic supply



Speculation

Optimal time to harvest a stock is when the rate of change of its value equals the interest rate. Land price increased 93% between 2011 and 2014 in Auckland!

Some maths, but I assume you didn't fail 6th Form / Year 12! 😊

Value is a function of time, or $V(t)$. Discounted by e^{-rt}

Differentiate $V(t)e^{-rt}$ with respect to t , set to zero, and solve for discount rate:

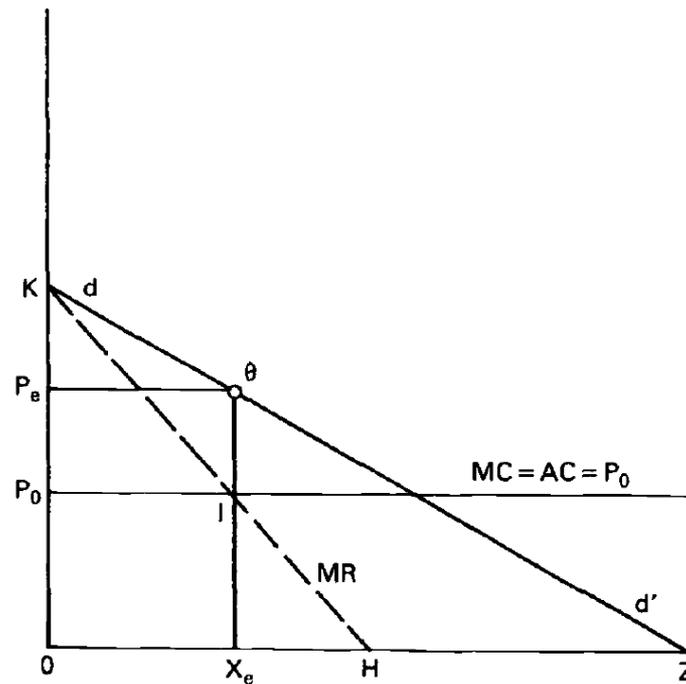
$$V'(t)e^{-rt} - rV(t)e^{-rt} = 0$$

$$\Rightarrow V'(t) = rV(t)$$

$$\Rightarrow r = \frac{V'(t)}{V(t)} = g, \text{ which is the percentage growth rate}$$

Monopolistic competition

Each piece of land can sustain prices above cost. Prices can soar under this model when there are barriers to entry that suppresses competition



1. Equilibrium of the zone

Fig. 1. Equilibrium of the urban housing and land market under co.

Source: Emmanuel, Dimitris (1985) 'Urban Land Prices and Housing Distribution: Monopolistic Competition and the Myth of the 'Law' of Differential Rent'. *Urban Studies*, 22, pp 461–480.

Policy becomes paradox

- When land markets are uncompetitive and inefficient (i.e. price above cost), many attempts to fix affordability has high risks
 - Benefits can be captured as land price increases
 - Increases speculation, and can suppress development — all else equal
- Need to ensure a competitive and efficient land market

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Areas where solutions need to lie

- Enable market-led development at scale that is ‘out of sequence’ (i.e. can leap-frog) reluctant land owners
- Need:
 - Better revenue streams for growth infrastructure
 - Better enable the use of private capital
 - Introduce stronger coordination tools and practices
 - Protect long-term infrastructure needs (i.e. corridor designations)
 - Be more permissive of localised infrastructure solutions for the medium term

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Questions?

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