

Introduction to Urban Economics

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Key concepts, models, and policy implications

1. What Is Urban Economics?

Aspect	Description
Definition	The study of how economic forces shape the location, size, structure, and performance of cities and metropolitan areas.
Core Questions	• Why do firms and households concentrate in cities? • How do land, housing, and transportation markets interact? • What are the impacts of public policies (taxes, zoning, infrastructure) on urban outcomes?
Disciplines Integrated	Microeconomics, public economics, regional economics, labor economics, environmental economics, and urban planning.

2. Why Cities Exist? (Theoretical Foundations)

Theory	Main Idea	Key Implications
Agglomeration Economies	Firms and workers benefit from proximity (knowledge spillovers, input sharing, labor market pooling).	Higher productivity ? higher wages & profits in cities.
Bid-Rent Theory	Different users (residents, firms, retailers) compete for land; each pays rent equal to the benefit of the location.	Land rents highest in central business districts (CBD); decline with distance.
Monocentric City Model (Alonso-Muth-Mills)	Single CBD; households choose location based on trade-off between housing cost and commuting cost.	Predicts a concentric pattern of land use and a clear "city edge."
Polycentric/Multinucleated Models	Multiple activity centers arise when congestion or transport costs make a single CBD inefficient.	Explains modern metropolitan regions with several sub-centers.

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Theory

Main Idea

Key Implications

New Economic Geography (NEG)

Incorporates increasing returns, transport costs, and factor mobility to explain the emergence of large urban agglomerations.

Highlights role of “core? periphery” dynamics and path dependence.

3. Key Market Mechanisms

3.1. Land and Housing Markets

1. Supply Side

- Land is fixed; housing supply depends on construction technology, zoning, and regulation.
- Elasticity of supply determines how quickly prices adjust to demand shocks.

2. Demand Side

- Households balance housing consumption with commuting costs, amenities, and income.
- Preferences for size, quality, and location drive spatial sorting.

3. Equilibrium Outcome

- **Bid?rent curve:** rent = maximum willingness to pay at each distance.
- **Housing price gradient:** steepness reflects transport costs and supply elasticity.

3.2. Labor Markets

- **Urban Wage Premium:** Workers earn higher wages in cities due to agglomeration benefits and skill complementarity.
- **Commuting Cost Trade?off:** Higher wages offset longer commutes; influences residential location choices.

3.3. Transportation

- **Travel Cost Function:** $(C(d) = \alpha + \beta d)$ (fixed cost + per?mile cost).

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- **Congestion Externalities:** Each additional driver imposes a marginal delay on others; leads to underinvestment in road capacity without intervention.
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4. Empirical Patterns

Phenomenon	Typical Observation	Interpretation
Population Density	Declines roughly exponentially with distance from CBD.	Consistent with bid-rent and commuting cost trade-offs.
Housing Prices	Highest near employment centers; flatten in suburbs.	Reflects land scarcity and commuting costs.
Wage Differentials	Urban workers earn 10-30% more than	