

**WHY CITIES?**

## Questions for Discussion

1. Consider a region that has a single trading city. There are no shopping externalities and communication between households is costless. Suppose that a matter transmitter is introduced into the region. The transmitter costlessly transports goods, but cannot be used to transport people. The transmitter is cheap enough that every household can purchase one at relatively low cost.
  - A. Explain the effects of the matter transmitter on urban development.
  - B. How would your answer change if cloth from one household was not a perfect substitute for cloth from another?

# Why do cities exist?

- Transportation Costs -- Economies of Scale
- Economies of Scale in Production
- Agglomeration Economies
  - Localization Economies -
  - Urbanization Economies

## Agglomerative Implications of Size & Diversity in Cities

Factor	Local-ization	Urban-ization	Production	Consumption
1. Scale Economies			transportation and storage larger plant size	defense; religion public goods; parks; sports stadiums
2. Shared inputs (scale economies in intermediate inputs)	X	X	repair, accounting, legal, advertising, knowledge	theater, restaurants, high/low culture
3. Transaction Costs	X	X	labor market matching	shopping districts & comparison shopping
4. Statistical Economies	X	X	labor market pooling; unemployment insurance; resale market for assets	substitute goods

Source: Modified from Quigley, 1998

# Evidence of Agglomeration Economies

- Industries do have a tendency to cluster
  - Theme parks; Silicon valley and Route 128 in Boston; Shopping malls
  - Other explanations for clusters?
- Knowledge spillovers and patents (Jaffe et al)
- Econometric studies and problems
  - Basic equation: Output per worker=f(Capital,Size of Industry in City, Size of City)
  - Multicollinearity; measurement error; heteroskedasticity

Establishment Growth	Employment Growth	
	Localization	Urbanization
Localization	Air transportation, Wholesale Trade, Insurance, Hotels, Credit Agencies, Security Brokers, Business services NEC, Equipment Rental, Accounting & bookkeeping, Transportation services, Engineering and architectural services	Communications
Urbanization	Radio & TV Communications, Management & public relations, personnel supply services, computer & data processing, banking, motion pictures, mailing & reproduction, trucking & warehousing, R&D laboratories, Medical & dental laboratories, Amusement & recreation services	Advertising, Hospitals, Health & Allied Services

Source: O'hUallacháin,

## **Economic Growth and Cities**

- Jane Jacobs -- Parable of New Obsidian; Cities are source of innovative activity; Emphasis on knowledge spillovers between industries and the value of diversity. Diversity important.
- Glaeser, Kallal, Sheinkman and Shleifer cite two other theories
  - Marshall-Arrow-Romer emphasize within industry spillovers and argue that concentration is good for growth.
  - Porter emphasizes within industry spillovers, but argues in favor of atomistic competition

## **Findings from Glaeser et al, 1992**

- Industry employment growth is smaller in cities where an industry is over-represented.
- Industries grow faster in cities with smaller than average firms.
- Industries grow faster in cities that have a diversity of industries.



# Are Cities Dying?

- Moomaw (1986) concludes that localization economies have declined in importance. Urbanization economies may have increased in importance.
- What is likely impact of advancements in telecommunication and information technology?
- Disadvantages of cities -- congestion, pollution, crime, poverty