ECON3021
Urban Economics
Lecture 2 – Location Theory

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1 History continued

1. Summary of lecture 1.
   (a) Early cities established because of technological advances.
      i. IRS: agriculture, defense, transport, etc.
      ii. Input substitution: capital for land (e.g. irrigation.)
      iii. Agglomeration economies allow for specialisation and trade.
         A. In economics, agglomeration economies exist if different production processes operating in close spatial proximity mutually increase productivity through some sort of positive external effect. That is, if production of nearby neighbours increases productivity of my industry, then I benefit from agglomeration economies. Examples include nearby neighbours sharing information on production, nearby neighbours benefiting from each others irrigation canals, or from mutual suppression of weeds, pests, etc.
         B. Negative agglomeration economies would describe negative local externalities in production.
   (b) Early Mesopotamia 3000-2000 BC: 50,000 people in Babylon.
   (c) Rome: 200 AD 1 million people.

2. Feudal cities in Europe.

   (a) Innovations in trade and defense. Variety of products increased to include: wood, iron, grain, wine, wool medicine, dye, linen, cotten leather metals, handicrafts, etc.

   (b) In Europe, many small cities emerged.

      i. Large cities expanded in southern Europe in Cordoba, Spain, Constantinople, Turkey.

      ii. Large cities in other parts of the world also expanded.

   (c) Population of London: 60AD, 30,000; 200 AD, 45,000; 1100 AD, 16,000.

   (d) Largest city in Germany in 14th century 40,000.

   (e) Economies centered around feudal estates, defense and local trade. Limited long distance trade existed with limited capital.

3. Market cities emerged in Europe in the middle and late middle ages.

   (a) Generally were safer with a larger merchant class and with many craftsman.

   (b) Limited in size by capital, transport, sanitation, etc.

   (c) Famines and plagues in Europe between 1350 and 1450 cut population by 33% - 50%.

   (d) Mercantile cities began to emerge with large capital intensive global trade. Innovations in transport (shipping) and in information technology allowed for coordination of information and capital throughout city and nations. Ocean going trade expanded.

4. Not all one direction, example, English Woolen Industry.

   (a) Before 1066 wool cloth in England made by individual households and villas.

   (b) Small number of towns and cities involved in local trade.

   (c) William the Conqueror increased interaction with continent, lowered trade barriers, increased demand.

(d) 12th century flourishing cloth industry in several cities including Lincoln, Northhampton, York, and Bristol: commercial and production centers, labor economies and specialisation.

(e) 13th century water power caused industry to move back to rural areas, large centers declined, new towns and cities near mills increased.

(f) 19th century steam powered machinery replaced hand weaving, mills moved to be near coal, Bradford, Halifax, Leeds, Huddersfield, and Wakefield.

(g) Rise and decline due to ebbs and flows of technology and market opportunities.

(h) This is only a very thin slice of history. Many other things were going on at same time, other industries rose and fell. Other technologies emerged or declined.

(i) Crucial factors affecting the relative growth or decline of cities

i. Changes in returns to scale for different goods

ii. Changes in transportation costs for different goods

iii. Size of market and competition for markets from other cities or other producers

iv. Health and productivity shocks (e.g. plague and famine.)

5. Until the 20th century, the world's population was predominantly rural.

(a) Estimate 3% urban in 1800.

(b) Prior to 1900, productivity agriculture in agriculture was relatively low, transport costs were relatively high, and IRS were relatively small.

(c) By 1970, 39% of the world's population lived in urban and suburban areas.

(d) 1990 75% US population in urban areas up from 6% in 1800.

i. US agricultural employment declined from 69% in 1840 to 2.8% in 1988.

ii. Same thing happened throughout the OECD, Japan was much later and faster.

6. Innovations that led to 19th 20th century urban growth.

   (a) Agriculture: much more productive, mechanized, cross breeding, fertilizer, pest chemicals.

   (b) Manufacturing: much higher IRS.

   (c) Intercity transport/communication: Faster, cheaper, first canals, then steam, rail, automobile.

   (d) Intracity transport: Faster, cheaper, bicycle, trams, trains, buses , cars, trucks.

   (e) Construction methods, skyscrapers.

   (f) Public health and sanitation, clean water and sewers.

   (g) Transportation costs and increasing returns to scale crucial, both within and across industries.

7. Cities form due to increasing returns to scale of various forms.

   (a) Limited by IRS and transportation.

   (b) Grow and decline throughout history.

   (c) Diversity of goods, work and competition important.

   (d) Said nothing really about internal organisation of city.

8. Late 20th century, expansion of service industry, decline of manufacturing, suburbanisation.

   (a) Cities spread out, more than one centre.

   (b) 50% jobs in suburbs.

   (c) Suburban subcenters.

2 Transition

- Set the context for the city in Europe and North America, ignore Asia, Africa, South America, Australia.
- Informally touch on definitions of cities, size, forces that shape them.

- This history has led up to the cities of today, formation of cities, size but what happens within cities.
- Ignored most complexities.
  - Rigorous statistical analysis of above anecdotes.
  - Where to live within the city.
  - Transportation network within the city, how is it paid for.
  - Infrastructure, housing, types of businesses within city, forms of governance, problems, innovation.
- Definitions of city, location choice within city, transportation, housing, government, problems like pollution and crime.
- Take the history, rough outline of how cities have grown in importance, and now begin to analyse cities.

3 What are urban places?

1. Urban places – how defined – not-trivial.
   (a) What is the population of London?
      i. City of London 10,000.
      ii. Inner London, 3 million.
      iii. Greater London 7.5 million.
   (b) Political definition – political boundaries.
      i. Change over time.
      ii. Ignore economic effects that spill over political boundaries.
      iii. Often have important economic effects since different political jurisdictions have different policies.
   (c) Statistical definition – MSA.
      i. Somewhat arbitrary, requires care.
      ii. Place where population density is relatively high.
      iii. Place where people live and where they don't farm.

iv. Urban place >2,500 people.

v. Urbanized area, central city >50,000 people + surrounding high density population area.

vi. MSA – contains central city >50,000 people + contiguous counties with large portion non-agricultural workforce.

vii. PMSA and CMSA : if two MSA's grow together.

(d) Economic definition – abstract, approximation for purposes of analysis.

i. Based on land use, predominant land use, and population density.

ii. Definition will change depending on application.

iii. Area of land used for housing or business. i.e. not agricultural.

A. In practice, "predominant land use."

iv. Model with three sectors.

A. Agriculture.

B. Housing.

C. Business (central business district).