THE URBAN AND REGIONAL PLANNING PRAXIS: THEORIES, MODELS AND CASES

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Training and Extension Services Division
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I. The Concept and Scope of Planning
II. Urban and Regional Planning Theories
   A. Urban Planning Theories
   B. Regional Planning Theories
THE CONCEPT AND SCOPE OF PLANNING
Roles of a Planner

- **Regulator**: Implements government rules and standards
- **Policy Advisor**: Advises and implements government policy
- **Facilitator**: Facilitates processes and solutions
- **Mediator**: Reconciles conflicting interests of contending groups in society
- **Designer**: Works as a private consultant, creates and promotes own plan
- **Visionary**: Leads with a forward-thinking approach
- **Advocate**: Advocates for the civic agenda of the general public
- **Educator**: Educates and informs the public
# Goals of Planning

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<th>Goals of Planning</th>
<th>Generic Strategies</th>
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<tr>
<td>Efficiency</td>
<td>Engineering and entrepreneurial innovation</td>
</tr>
<tr>
<td>Effectiveness</td>
<td>Enforcement of policies</td>
</tr>
<tr>
<td>Ecology</td>
<td>Equilibrium and balance</td>
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<tr>
<td>Equity</td>
<td>Evenhandedness</td>
</tr>
<tr>
<td>Empowerment of people</td>
<td>Education and participation of different sectors</td>
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</tbody>
</table>
Urban Planning

The act of anticipating change, and arbitrating between the economic, social, physical, and environmental forces that determine the location, form and effect of urban development (John Ratcliffe)
Urban Planning

Production of citywide development plan (aspects of land use and development) that determines which site/s can be built upon
Regional Planning
Planning for an area with distinctive economic and social characteristics, opportunities and problems and setting it apart from other regions.
Urban and Regional Planning

Region

• City or central place plus the outlying territories that are functionally integrated with it.

• Based on natural/physical as well as economic/political relationships between urban areas and its surrounding rural territories.
Region

- Flexible concept referring to continuous and localized area intermediate between national and urban levels (local level)
Criteria for Defining a Region

- Geographical balance between mountains and plains (existing ecological barriers)
Criteria for Defining a Region

- Wide range of resources and development functions
- Developed urban settlements network (growth points for commerce, education and industry)
Criteria for Defining a Region

- Developed transportation facilities (good road network)
- Based on areas inhabited by ethnic groups
- Follow administrative and political boundaries of government units
Urban and Regional Planning

Why Regional Planning?

- Address problem of depressed industrial and rural regions suffering from economic malaise: economic disparities between regions

- Separate regional cultures and political identities produced necessary pressure for action
Urban and Regional Planning

Why Regional Planning?

- Movement towards a regional structure of administration and decision making
- Interregional allocation of resources
Urban and Regional Planning (URP)

URP is the unified development of urban communities and their environs and of states, regions and the nation as a whole, as expressed through determination of the comprehensive arrangement of land uses and land occupancy and their regulation.

URP refers to the scientific, orderly and aesthetic disposition of land, buildings, resources, facilities and communication routes, in use and in development, with a view to obviating congestion and securing the maximum practicable degree of economy, efficiency, convenience, sound environment.
Urban and Regional Planning

Urban Planning

Regional Planning

Place making
(creating livable human spaces and natural communities)
Place Making

Governance

Social & Cultural

Environment

Economy

Equity

Housing & Bulk

Environmentally Sensitive

Connectivity & Services

Transport & Connectivity

Well Rendered

Well Connected

Well Run

Well Design and built

Thriving

Fair for Everyone
Urban Planning Theories

1. Urban Morphology

1. Urban Growth and Spatial Interaction
## Urban Planning Theories

- **Urban Morphology**

<table>
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<tr>
<th>Theory</th>
<th>Planning Advocate</th>
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<tr>
<td>Concentric Zone</td>
<td>Ernest Watson Burgess (1886-1966)</td>
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<tr>
<td>Sector Theory</td>
<td>Homer Hoyt (1895-1984)</td>
</tr>
<tr>
<td>Multiple Nuclei</td>
<td>Edward Ullman and Chauncy Harris (1945)</td>
</tr>
<tr>
<td>Concentric Zone – Sector Theory</td>
<td>Peter Mann (1965)</td>
</tr>
</tbody>
</table>
Concentric Zone Theory (Burgess)
(Burgess Model/Bull’s Eye Model/Concentric Ring Model/Concentric Rings Model)

City grows outward in concentric rings and has single center (CBD)
Concentric Zone Theory (Burgess) (Burgess Model/Bull’s Eye Model/Concentric Ring Model/Concentric Rings Model)

**Zonal Description**

<table>
<thead>
<tr>
<th>Zone</th>
<th>Characteristics</th>
</tr>
</thead>
</table>
| Zone 1: Central Business District (CBD) | • “loop” district  
• location of most tertiary employment and urban transport infrastructure making it the most accessible zone. |
| Zone 2: Zone of Transition (residential) | • area of older industry  
• low income and mix of low-end uses  
• near labor and market  
• where transport terminals (port and railyards) are located |
Concentric Zone Theory (Burgess) (Burgess Model/Bull’s Eye Model/Concentric Ring Model/Concentric Rings Model)

Zonal Description

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<th>Zone</th>
<th>Characteristics</th>
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<tr>
<td>Zone 3: Zone of Low Cost Homes</td>
<td>Working Class Residence Ring (slums, contains poorest segment of urban population)</td>
</tr>
<tr>
<td>Zone 4: Zone of Better Residences</td>
<td>High Class Apartment and Single Family Ring (including shopping &amp; commercial) – white collar workers and middle class families</td>
</tr>
<tr>
<td>Zone 5: Commuter Zone (sub-urban and semi-rural)</td>
<td>Middle class and upper income groups</td>
</tr>
</tbody>
</table>
Sector Theory – 1939 (Homer Hoyt)

1 – CBD

2 – Wholesale and light manufacturing (factories/industry) – transitional

3 – Low-class residential (old inner city area)

4 – Middle-class residential

5 – High class residential (modern suburbs)
Sector Theory – 1939 (Homer Hoyt)
Recognizes existence of land use zones

Presence of sectors or wedges of land uses in the city due to emergence of star-shaped transportation routes (bus lines and streetcar lines)
Industries would lie in a sector along the rail lines coming into the city centre.
Poorer people live adjacent to industries near their jobs.
Rich live on the opposite side of town far from the industry and poor-middle income in between.
Multiple Nuclei Theory
(Chauncy Harris and Edward Ullman, 1945)

1 – CBD
2 – Wholesale and light manufacturing
3 – Low class residential
4 – Middle-class residential
5 – High-class residential
6 – Heavy manufacturing
7 – Outlying business district
8 – Residential suburb
9 – Industrial suburb
Multiple Nuclei Theory
(Chauncy Harris and Edward Ullman, 1945)

- City grows from several independent points or growth centers where activities revolve rather than from one CBD
- No clear CBD
- Separate nuclei often a result of:
  - Requirements of specialized facilities (retail district with need for accessibility, port with need for waterfront, etc.)
  - Certain activities repel each other (factories and high class residential)
  - Rent
Concentric – Sector Theory
(Peter Mann, 1965)

Structure of a city is a complex interplay between rings and sectors (combination of Burgess and Hoyt)

Main feature: commuter village separated from built up areas
## Urban Planning Theories

- **Urban Growth and Spatial Interaction**

<table>
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<th>Theory</th>
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<td>Central Place Theory</td>
<td>Walter Chrystaller</td>
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<tr>
<td>Range and Threshold</td>
<td>Berry and Garrison</td>
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<tr>
<td>Rank Size Rule</td>
<td>George Zipf</td>
</tr>
<tr>
<td>Bid Rent</td>
<td>William Alonso</td>
</tr>
</tbody>
</table>
“Settlements function as central places providing services to surrounding areas”
Central Place Settlement

- Settlement providing one or more services for the population living around it.

- **Low Order Services**
  - Simple basic services (e.g. grocery stores, bakeries)

- **High Order Services**
  - Specialized services (e.g. university, large shopping arcades, malls)
Central Place Settlement

Settlements providing LOS (HOS)
- Are said to be low (high) order settlements

Existence of High Order Services
- There are low order services around it, but not vice versa
Hierarchy of Central Place: The Case of Tarlac City
# Hierarchy of Center

<table>
<thead>
<tr>
<th>Hierarchy of Center</th>
<th>Primary Role</th>
<th>Indicator Function</th>
<th>Population Size Range</th>
<th>Municipality/City</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small City</td>
<td>Inter-regional distribution center Provincial service and administrative center Industrial center Major center of trade, commerce and business</td>
<td>Financial institutions, telecommunication facilities, supermarkets, housing estates and subdivisions, recreation centers, tertiary education, health services, and drugstores</td>
<td>150,000 and above</td>
<td>Tarlac City</td>
</tr>
<tr>
<td>Large Town</td>
<td>1. Provider of lower level amenities 2. Serve as link to primary growth center</td>
<td>Financial institutions, telecommunication facilities, shopping centers and consumer shops, restaurants, transportation facilities, manufacturing firms, training centers, warehousing</td>
<td>50,000-149,999</td>
<td>Camiling Paniqui Capas Concepcion</td>
</tr>
<tr>
<td>Medium Town</td>
<td>3 Agro-forestry 4 Agriculture 5 Aquaculture production 6 Tourism</td>
<td>Processing establishments, some commercial banks and financial institutions, post-harvest facilities, manufacturing firms, slaughter house, secondary education and municipal hospital, health services</td>
<td>5,000-24,999</td>
<td>Bamban Gerona La Paz Moncada San Jose Mayantoc Sta. Ignacia Victoria</td>
</tr>
<tr>
<td>Small Town</td>
<td>6 Tourism</td>
<td>Extension services, convenient shops, sari-sari stores, rural banks, cottage industries, public calling offices, agricultural production, cooperatives, multipurpose center, basketball court, eatery</td>
<td>&lt;4,999</td>
<td>San Manuel Anao San Clemente Ramos Pura</td>
</tr>
</tbody>
</table>

Range and Threshold
Distribution of central places controlled by the concepts of “range and threshold”

Each service activity has range and threshold
Rank Size Rule
Settlements in a given country may be ranked in order of their size.

\[ P_n = \frac{P_1}{n^q} \]

- \( P_n \) = population of nth settlement
- \( P_1 \) = population of largest settlement
- \( n \) = settlement rank
- \( q \) = exponent which usually approximates unity
The population of a given urban area tends to be equal to the population of the largest city divided by the rank of the population size into which the given urban area falls, the population of settlements thus being arranged according to the series 1, ½, 1/3, ¼, etc.
Rank Size Rule

(George Sipf 1949 – American Linguist)

• The 2\textsuperscript{nd} rank city will have \( \frac{1}{2} \) the population of the 1\textsuperscript{st}

• The 3\textsuperscript{rd} rank city will have \( \frac{1}{3} \) the population of the 1\textsuperscript{st}

• The 4\textsuperscript{th} rank city will have \( \frac{1}{4} \) the population of the 1\textsuperscript{st}
Example

• The population of the largest city is 1,000,000

• The population of the 2\textsuperscript{nd} largest city is \( \frac{1,000,000}{2} = 500,000 \)

• The population of the 3\textsuperscript{rd} largest city is \( \frac{1,000,000}{3} = 333,333 \)

• And so on...
<table>
<thead>
<tr>
<th>District/Barangay</th>
<th>Rank</th>
<th>Total</th>
<th>Pn</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tondo</td>
<td>1</td>
<td>630,604</td>
<td>315,302.00</td>
</tr>
<tr>
<td>Sampaloc</td>
<td>2</td>
<td>354,514</td>
<td>315,302.00</td>
</tr>
<tr>
<td>Sta. Ana</td>
<td>3</td>
<td>178,769</td>
<td>210,201.33</td>
</tr>
<tr>
<td>Sta. Cruz</td>
<td>4</td>
<td>118,779</td>
<td>157,651.00</td>
</tr>
<tr>
<td>Malate</td>
<td>5</td>
<td>78,132</td>
<td>126,120.80</td>
</tr>
<tr>
<td>Pandacan</td>
<td>6</td>
<td>76,134</td>
<td>105,100.67</td>
</tr>
<tr>
<td>Paco</td>
<td>7</td>
<td>69,300</td>
<td>90,086.29</td>
</tr>
<tr>
<td>Port Area</td>
<td>8</td>
<td>46,864</td>
<td>78,825.50</td>
</tr>
<tr>
<td>San Nicolas</td>
<td>9</td>
<td>43,225</td>
<td>70,067.11</td>
</tr>
<tr>
<td>Quiapo</td>
<td>10</td>
<td>23,138</td>
<td>63,060.40</td>
</tr>
<tr>
<td>San Miguel</td>
<td>11</td>
<td>16,115</td>
<td>57,327.64</td>
</tr>
<tr>
<td>Binondo</td>
<td>12</td>
<td>12,100</td>
<td>52,550.33</td>
</tr>
<tr>
<td>Ermita</td>
<td>13</td>
<td>6,205</td>
<td>48,508.00</td>
</tr>
<tr>
<td>Intramuros</td>
<td>14</td>
<td>5,015</td>
<td>45,043.14</td>
</tr>
</tbody>
</table>

**CONCLUSION:**

Rank Size rule does not apply given the case of Manila.
Bid Rent Theory
Bid Rent Theory (William Alonso: 1960)

How price and demand for land changes as the distance from the center (CBD) increases.
Theories of Spatial Interaction
Gravity Model of Human Interaction

Analyze spatial interaction between spatially separated nodes (migration, commodity flows, traffic flows, residence-workplace trips, etc)

Interaction between two centers is directly proportional to their size and inversely proportional to the distance between them.
Friction Factors:

If you are going to go shopping at one of the two identical shopping centers described below, which would you choose?

Shopping Center A--10 kilometers away/8 minutes by expressway

Shopping Center B--5 kilometers away/20 minutes by city streets

You'd probably choose shopping center A, because the trip takes less than half as long as a trip to shopping center B, even though B is closer. Friction factors represent the effect that various levels of travel time have on travel between zones.
REGIONAL PLANNING THEORIES

1. Growth Poles Concept

1. Regional Development Planning
Perroux’s Growth Pole Thesis

“Growth does not appear everywhere at the same time, it becomes manifest at points or poles of growth, with variable intensity; it spreads through different channels, with various terminal effects on the whole of the economy.”

Francois Perroux
1903-1987
The growth point is surrounded by a swarm of affected industries, thinning out as you move away from growth point.

At a later stage, the growth point has spawned to a secondary growth point.
Cumulative Causation Theory
Gunnar Myrdal’s Theory of Cumulative Causation

Introduction of a new industry or expansion of an existing firm

Multiplier Effect

- Area becomes a growth pole

Attractions of linked industries

- Invention and innovation

- Forward linkages to firms further processing the product or using it as a component part

- Backward linkages to firms supplying raw materials or component parts

Increased income from taxes and more people increases the spending power available

- New construction activity; growth of tertiary sector

Increased population (immigration); greater local wealth

- Improved pool of trained labour

Increased demand for services (shops, schools, hospitals, etc.)

- Creates more jobs, especially in construction and infrastructure and increases purchasing power
Core-Periphery Theory (Friedman) - Spread Effects -
The theory highlights the inequality in levels of development between core and periphery.

Core – propulsive & can be represented by concepts such as metropolitan areas, growth poles and growth centers

Periphery: Have-Nots

Core: Haves

People usually shift from periphery to core.

SCURP 2016: A Basic Course in Urban and Regional Planning
Regional Planning Theories

Polarization and Trickle Down Effect (Albert Hirschman)

- **Growth at poles** = decline in peripheral areas
- "Backwash effect" = loss of jobs and migration of young to growth poles (Polarization)
- Counteracted over time by "trickle down" effect which makes periphery more attractive spurring urban and rural migration
Industrial Location Theory
Industrial Location Theories

- Comparative Advantage
- Theory of Agricultural Location
- Industrial Location Theories
  - Least Cost Approach (Weber)
  - Market Area Approach (Losch, Hooever)
  - Profit Maximizing Approach (Isaard and Greenhut)
Industrial Location

- Comparative Advantage
- (David Ricardo-1772-1823)
  - Site that has the tendency to produce more output per unit of input given factors such as natural endowments, transportation, institutional advantages, amenity factors, etc.
  - Sites near metropolitan areas enjoy high comparative advantage
Regional Planning Theories and Concept

Industrial Location

- Theory of Agricultural Location
- (Johann Heinrich von Thunen-1783 to 1850)
  - Use of a piece of land = function of cost of transport to market and land rent a farmer can afford to pay (determined by yield)
  - Agricultural land use = accessibility, costs, distance, and prices
Johann Heinrich von Thünen's model of agricultural distribution around a city in concentric circles.
Industrial Location Theories

- Market Area Approach (Losch and Weber)
- Profit Maximizing Approach (Walter Isaard, 1956 and Melvin Greenhut, 1974)
Industrial Location Theories

Least Cost Approach (Alfred Weber)

Choose location where the costs (transportation, labor and agglomeration) are least.

If sources of raw materials are found in a single site and the principal market in another site, firm should be located at the market or some site between the source of raw materials and the market.
Industrial Location Theories

**Market Area Approach**
(Loesch and Weber, 1909)

Optimum location is a function of aggregate demand

Optimum location is the place where profits are maximum (revenues exceed costs by largest amount)
Industrial Location Theories

Profit Maximizing Approach (Isaard and Greenhut)

Companies locate to maximize revenues not locations with least cost

Costs and revenues vary with location
Thank you for your attention!