Seoul Metropolitan Region:
Growth Patterns and Policy Agenda

Hee-Yun Jung
Seoul Development Institute (SDI)

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I. Profile of the Seoul Metropolitan Region (SMR)

- Political, economic and cultural center of the Korea
- Population: 46% of the national total (21.4 mil.)
- Area: 12% of total national area (11,753 km²)
**Profile of the SMR**

- **Administrative structure**
  - Seoul Capital City
  - Inchon City
  - Kyonggi province
  (25 cities and 6 counties)

- **Changes in the population**
  (unit: 1,000 persons)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Seoul</td>
<td>8,364</td>
<td>10,613</td>
<td>10,231</td>
<td>10,373</td>
</tr>
<tr>
<td>Inchon</td>
<td>1,084</td>
<td>1,818</td>
<td>2,300</td>
<td>2,563</td>
</tr>
<tr>
<td>Kyonggi</td>
<td>3,850</td>
<td>6,156</td>
<td>7,050</td>
<td>9,280</td>
</tr>
<tr>
<td>SMR</td>
<td>13,296</td>
<td>18,587</td>
<td>20,189</td>
<td>21,264</td>
</tr>
</tbody>
</table>

**Concentration in the SMR**

- **Leading role in the growth of Korea**
  - high concentration of population, economic and other activities

- **Positive Side:**
  - growth engine of national economy

- **Negative Side:**
  - overcrowding
  - cause of regional disparity

**Share of the SMR (2000)**

<table>
<thead>
<tr>
<th>Indices</th>
<th>Share of the SMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area</td>
<td>11.8%</td>
</tr>
<tr>
<td>Population</td>
<td>45.6%</td>
</tr>
<tr>
<td>GRDP</td>
<td>46.4%</td>
</tr>
<tr>
<td>Business Establishments</td>
<td>43.7%</td>
</tr>
<tr>
<td>Manufacturing Establishments</td>
<td>48.8%</td>
</tr>
<tr>
<td>Bank Deposits</td>
<td>66.1%</td>
</tr>
<tr>
<td>Bank Loan</td>
<td>61.5%</td>
</tr>
<tr>
<td>Universities</td>
<td>42.3%</td>
</tr>
<tr>
<td>Government organizations</td>
<td>69.4%</td>
</tr>
<tr>
<td>Public Enterprises</td>
<td>83.3%</td>
</tr>
</tbody>
</table>
Population Growth Trends of Major World Cities

Ⅱ. Growth Patterns of the SMR

<table>
<thead>
<tr>
<th>Year</th>
<th>Seoul</th>
<th>Tokyo</th>
<th>New York</th>
<th>London</th>
<th>Paris</th>
</tr>
</thead>
<tbody>
<tr>
<td>1900</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1910</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1920</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1930</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1940</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1950</td>
<td></td>
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<td></td>
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<tr>
<td>1960</td>
<td></td>
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<tr>
<td>1970</td>
<td></td>
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<tr>
<td>1980</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>1990</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Unit: 1,000 person

Years taken from 1 mil. To 5 mil.

<table>
<thead>
<tr>
<th>City</th>
<th>Years Taken</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seoul</td>
<td>27</td>
</tr>
<tr>
<td>Tokyo</td>
<td>50</td>
</tr>
<tr>
<td>London</td>
<td>85</td>
</tr>
<tr>
<td>New York</td>
<td>90</td>
</tr>
<tr>
<td>Paris</td>
<td>110</td>
</tr>
</tbody>
</table>
## Major Metropolitan Regions in the World (2000)

(Based on the administrative area)

<table>
<thead>
<tr>
<th></th>
<th>Seoul (SMR)</th>
<th>L.A. (L.A. Orange county)</th>
<th>London (South East region)</th>
<th>Paris (Île-de-France)</th>
<th>Tokyo</th>
<th>New York (Tri-state)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Area (㎢)</strong></td>
<td>11,753</td>
<td>12,500</td>
<td>26,976</td>
<td>12,072</td>
<td>13,494</td>
<td>32,792</td>
</tr>
<tr>
<td><strong>Population (mil.)</strong></td>
<td>21.4</td>
<td>12.4</td>
<td>18.2</td>
<td>11.0</td>
<td>33.5</td>
<td>29.3</td>
</tr>
<tr>
<td><strong>Population Density(/ha)</strong></td>
<td>18.2</td>
<td>9.9</td>
<td>6.8</td>
<td>9.1</td>
<td>24.8</td>
<td>8.9</td>
</tr>
</tbody>
</table>

## Growth Patterns of the SMR
Physical Growth Patterns

- Rapid urbanization of the SMA expanded from Seoul
- Dispersed pattern with new development corridors
- Leap-frog type urban sprawl beyond the RDZ

Population Growth Pattern ('60~'00)

II. Growth Patterns of the SMR
Population Growth Patterns

II. Growth Patterns of the SMR

![Population Growth Patterns Map]

Estimated Population of the SMA in 2020

IV. Policy Agenda

Projected to Add approx. 4mil. More in next 20 years

  (source: Office of Statistics)

Estimated Land to Accommodate Increased Population

- About 300km²
  (If 120 persons/ha is taken as a guide)

* Demand about half of Seoul’s Total Administrative Area
Net In-migration by Regions

No. of Employment by Regions
### Employment shares of the SMR by Region

<table>
<thead>
<tr>
<th>Year</th>
<th>Seoul</th>
<th>Incheon</th>
<th>Kyonggi</th>
</tr>
</thead>
<tbody>
<tr>
<td>1981</td>
<td>19.5</td>
<td>24.8</td>
<td>57.7</td>
</tr>
<tr>
<td>1986</td>
<td>65.6</td>
<td>27.0</td>
<td>7.4</td>
</tr>
<tr>
<td>1991</td>
<td>58.1</td>
<td>36.3</td>
<td>5.6</td>
</tr>
<tr>
<td>1996</td>
<td>53.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Employment of Population by Sub-regions
Employment /Job-Housing balance

Employment density ('97)

Trend of Job-Housing balance

Urban Hierarchy System

Ⅱ. Growth Patterns of the SMR

<table>
<thead>
<tr>
<th>Metropolitan Center</th>
<th>Seoul</th>
<th>3,241</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metropolitan Sub Center</td>
<td>Inchon</td>
<td>388</td>
</tr>
<tr>
<td></td>
<td>Suwon</td>
<td>156</td>
</tr>
<tr>
<td>Regional Center</td>
<td>Songnam</td>
<td>103</td>
</tr>
<tr>
<td></td>
<td>Puchon</td>
<td>101</td>
</tr>
<tr>
<td></td>
<td>Anyang</td>
<td>91</td>
</tr>
<tr>
<td></td>
<td>Yangpyong</td>
<td>79</td>
</tr>
<tr>
<td></td>
<td>Ansan</td>
<td>92</td>
</tr>
<tr>
<td></td>
<td>Pyongtaek</td>
<td>82</td>
</tr>
<tr>
<td></td>
<td>Koyang</td>
<td>75</td>
</tr>
</tbody>
</table>

Benison's Method
III. Mobility Patterns of the SMR

Proportion of Trip Purpose in the SMR

- Private Matters: 14.4%
- Entertainment: 8.5%
- Shopping: 8.4%
- School: 25.1%
- Business: 16.8%
- Commuting: 31.9%

Proportion of Interregional Trip Purposes in the SMR

- Private Matters: 12.1%
- Entertainment: 6.5%
- Shopping: 3.8%
- School: 8.0%
- Business: 20.5%
- Commuting: 49.9%
III. Mobility Patterns of the SMR

Modal Shares of Trips in the SMR

Mode shares of Interregional Trips in the SMR

Interregional work trip patterns of the SMR in 1980

Interregional work trip patterns of the SMR in 2000
III. Mobility Patterns of the SMR

Commuting Patterns

Commuting Trip in SMR ('97)

Commuting Ratio to Seoul ('97)
Commuting Patterns

Commution Ratio to Seoul by Distance from Seoul CBD

Interregional Commuting Trip Pattern

Trends in Commuting to Seoul ('90-'97)
Traffic Modal Patterns to Seoul ('97)

Mode Shares of Trips to Seoul by Regions

<table>
<thead>
<tr>
<th>Mode</th>
<th>Inchon to Seoul</th>
<th>Kyonggi to Seoul</th>
</tr>
</thead>
<tbody>
<tr>
<td>Car</td>
<td>38.8</td>
<td>20.6</td>
</tr>
<tr>
<td>Subway</td>
<td>10.1</td>
<td></td>
</tr>
<tr>
<td>Bus</td>
<td>28.4</td>
<td></td>
</tr>
<tr>
<td>Taxi</td>
<td>42.6</td>
<td></td>
</tr>
<tr>
<td>Other Mod</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Walk</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Inchon to Seoul Kyonggi to Seoul

Traffic Volume on the Main Interregional Roads

Interregional Traffic Volume ('98)  Prospect of V/C in SMA ('96 → 2011)
IV. Policy Agenda

Major Policy Responses of Central Gov’t

Major Policies and Control Measures

- The Restriction of Population Growth in Seoul (1964)
- A Comprehensive Decentralization Policy for Seoul (1969)
- Designation of Greenbelt around the Seoul (1971)
- Regulation of factory and higher education institutions
  - The First Capital Region Management Plan established
- The Capital Region Management Plan was revised (1997)
  - Discriminated zoning, Ceiling system on factory establishment
  - Controlling large size of development activities,
  - Congestion charges (applied to Seoul only) etc.

Currently, Capital Relocation Policy is in progress and in dispute.
**Current Policy Framework of the SMR**

**Zonal Division of the SMR**

- **Congestion Relief Zone**
  - Core areas covering Seoul, Inchon, Suwon and other cities surrounding Seoul City
  - Strategies:
    - Regulation of population concentration
    - Dispersal of factory, university, public offices
    - Prohibit new establishment of industrial site, new university and new public office

- **Environmental Conservation Zone**
  - Fringe areas of the outer ring of Seoul located in the basin of upstream Han River (7 cities, 8 counties)
  - Strategies:
    - Prevention of water pollution in Han River Basin
    - Natural resource preservation and promotion of recreational activities

- **Growth Management Zone**
  - Suburban areas located Southern and Northern of the Capital Region (3 cities, 5 counties)
  - Strategies:
    - Relocate facilities from congestion relief zone
    - New town development and expansion of existing sub-regional centers
Challenges to the Policy Responses

- **The Common Goal of Regional Policy since 1960s:**
  - to steer people and industries away from Seoul to local provinces

- **Major Criticism**
  - After 4 decades, regulatory policy is not quite effective in achieving intended policy goal
  - the containment policy is generally defined as the number of population and major facilities
  - the true nature of concentration in the SMR is not just the volume of population itself
    but the social cost that it entailed (e.g., congestion, pollution, land price etc.)

- **Challenges for the SMR**
  - More deliberated and direct solutions need to be developed
  - More collaborative growth management system at regional level is needed
    (Devolution of central power + Capacity building of local authorities, Corporate Sector, NGOs)

Implementing regional solutions at the local level seem to be key

Policy Agenda for the SMR

- **Seoul-Oriented and Mono-centric Spatial Structure**
- **Urban Sprawl Along Major Arterial Roads**
- **The Urban Consumption of Agricultural Land and Environmentally Sensitive Area**
- **Job-Housing Mismatch**
- **Lack of Interregional Functional Mix**
- **Automobile Dependent Traffic System and Congestion**
- **Lack of Interregional Cooperative System**
**Spatial Structure of the SMR**

**Toward Decentralized City with Multi-Nuclei**

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**Key Issue for Discussion**

- **Spatial Restructuring**
  - What policy measures would be effective in implementing sub-regional centers in the metropolitan areas?
  - What measures would be used to encourage employment in residential centers in the metropolitan areas?

- **Land Use Planning**
  - What criteria is used to differentiate land-use categories such as urbanized land, developable land and conservation area?
  - What kinds of measures could be effective to conserve environmentally sensitive areas at the metropolitan level?

- **Transportation Planning**
  - How do you cost and fund metropolitan-wide transport service system?
  - What kinds of policy tools are effective to encourage more transit-oriented development?
Region-wide public facilities
- How do you ensure balance in the provision of public facilities and services at the metropolitan level?
- What kind of measures are effective to secure site for NIMBY facilities? (e.g. disposal facilities, waste treatment facilities)

Policy implementation
- What are most important factors and issues in setting up cooperative mechanism among various interested parties such as central government, local authorities, corporate sector and NGOs?
- Who should fund the required region-wide urban infrastructure and public services?