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REVIEW OF URBAN TRENDS AND POLICIES IN KOREAByung-Nak Song and Sang-Chuel Choe  
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May 1981

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# REVIEW OF URBAN TRENDS AND POLICIES IN KOREA

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## I. Policy Issues - Background and Problems

### 1. Historical Syndrome - Unique Policy Environment

As urban and regional development does not occur within a vacuum, historical and socio-political attributes built in the national system will continuously play an important role for the understanding of the current urban and regional policies and in shaping the future course of urban and regional development in a country. Historical inputs are not subject to short-term changes and are largely determined outside the domain of the regional development system.

The following points would appear to characterize in a somewhat loose fashion the unique policy environment in Korea.

#### A. Style of Regional Policies

Definitional problems surrounding terms used in discussions of regional development are assumed to be extremely boring. One is faced with the task of finding equivalences between terms in different languages. The Korean term 'Kukto kaehyuk' literally means "national land planning". It cannot be translated without substantial confusion.

The term is a direct borrowing of the Japanese 'kokuto kaihaku', the use of which goes back to 1930's. However, this concept was only later given legal definition in Japan under the Comprehensive National Land Development Planning Law of 1950. This law was adopted with minor textual changes in Korea in 1963. The Comprehensive National Land Development Planning Law of 1963 was to facilitate a legal base for regional planning with regard to:

- 1) management and conservation of natural resources;
- 2) human settlement systems with special reference to urban and rural development;
- 3) location of industries;
- 4) location and investment of social overhead capital and infrastructure; and
- 5) preservation of environmental amenities.

As is self-explanatory in the title of the law, the style of regional policies of Korea has been molded by strong concern with land. Since Korea is one of the most densely populated countries in the world and land is its scarce resource, the strong emphasis on land should not come as a surprise. The rapid rise of land prices by more than 20 times over the last twenty years and consequent land speculation has forced the government to place strong emphasis on the management of land in the name of regional planning.

## B. Central Political Dynamics

When the modern concept of national politico-administrative systems was set up under Japanese colonialism, the local government was expected to function as a purely administrative body. Local government bodies were subject to the bureaucratic control of the central government for the reason of administrative convenience. Although there had been several attempts to make the western concept of local autonomy work in Korea since the Liberation in 1945, the political environment and weak local financial resources resulted in a total negation of local autonomy after the military revolution in 1961. Since then, no office below the national level has been elective. The Ministry of Home Affairs has held powers previously exercised by local councils since 1961.

From provincial governors to county chief and city mayors, all local government officials are now appointed. This has been followed by the assimilation of local administration into the central government and the subsequent degradation of local government to defacto field offices of the central government. The vertical integration and alignment of central-local functions has increased as a natural consequence of effects to expand organizational domains in order to reduce administrative uncertainty and delays in the process of central-local coordination. The distinction between central and local governments has gradually become blurred.

The national government has the power to consolidate or annex local jurisdictions without the concurrence of local governments and can delegate or withdraw authority to and from local governments. All these factors are extremely important for the understanding of regional development dynamics in Korea.

Local planning authorities are barely able to formulate their own plan without very detailed instructions and the strong endorsement of the central government and, even if a plan can be worked out at the discretion of the local planning authority, local governments know that the probability of implementing the plan is not great. Most decisions made by local government are highly contingent on the actions of other agencies external to local planning system. Since more than 50 percent of local revenue comes from the national government, any kind of long-range financial commitments and investments implied by local plans are highly dependent upon changes in national priority. As funds from the national government often become available only upon short notice and normally require matching contributions for a specified purpose, any local plan-making effort requires coordination beforehand so as to minimize uncertainty in the process of implementing the local plan.

If a distinction can be made between national-regional planning and local-regional planning,<sup>1/</sup> indigenous efforts in local-regional planning, which is initiated by one or more local governments, hardly exist in Korea.

### C. Ministerial Sectionalism

From the outset of modernization, Korean society has been molded by the visible hand of government intervention. Likewise, government administration was almost synonymous with control and therefore, a certain kind of planning function was taken for granted. It was never consciously recognized, however, and was far from being a fully articulated modern concept of planning. When it was applied to the Korean tradition of administrative processes, centripetal political dynamics were strong enough to incorporate the concept of planning for the sake of centralized control. The whole structure of the decision-making process and planning function was characterized by the top-down leadership and the bottom-up expectation of benefits. This planning process has some merits such as efficiency and promptness in arriving at decisions, but is founded upon the policy maker's idealistic search for an imaginary "public interest" without acceding to true public interest.

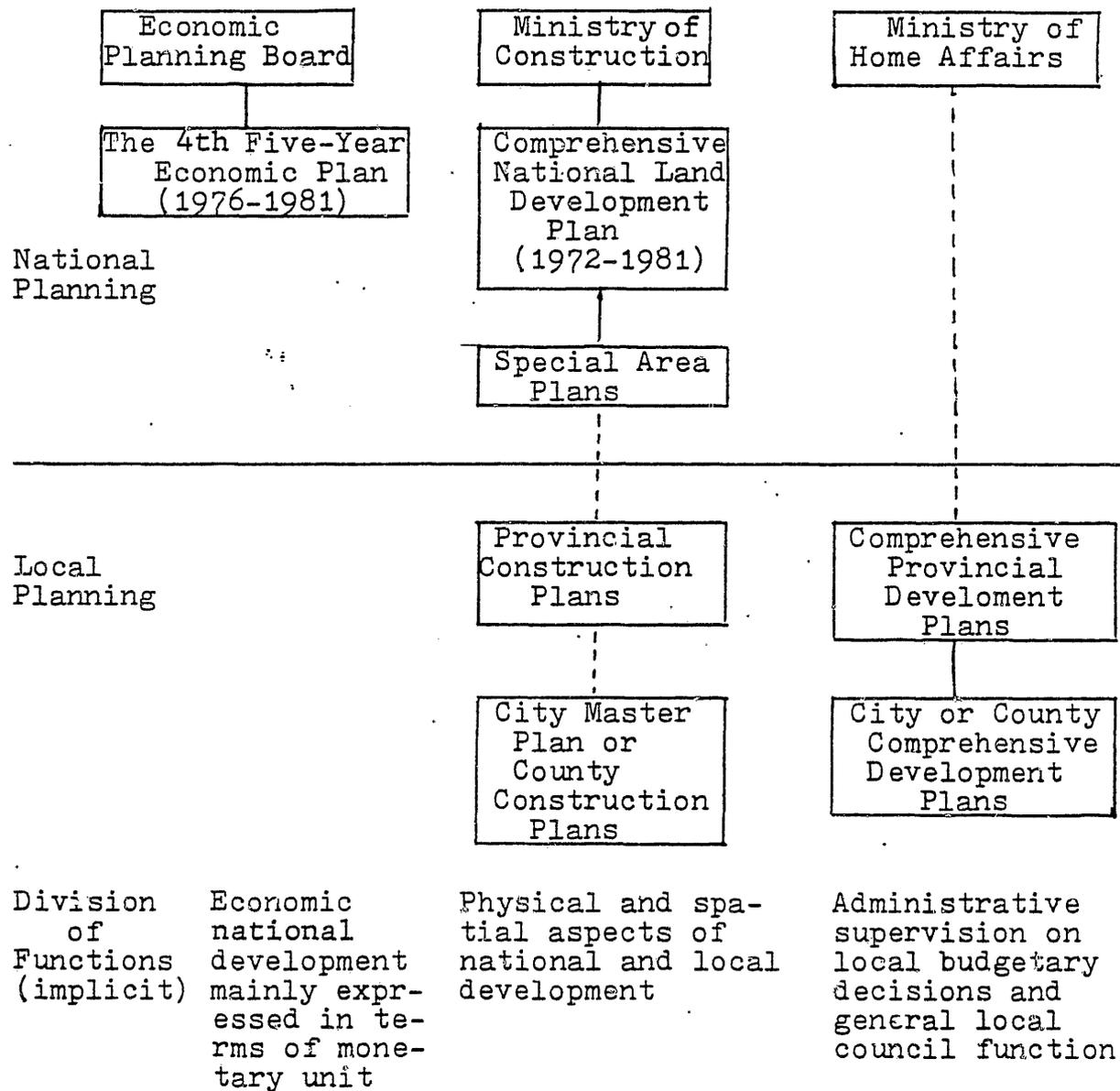
<sup>1/</sup> E. Kalk, Regional Planning and Regional Government in Europe. The Hague, International Union of Local Authorities, 1971, pp. 37-51.

Each ministry of the national government arbitrarily insists on its own identification with public interest. The integration of plan-making efforts rarely takes place among different ministries, or even among different bureaus and sections within the same ministry. Planning functions are scattered among a number of entities of the government without provisions for their integration. Consequently, the national government is highly fragmented to the extent that it suffers from a strong tendency toward what may be called 'departmental sectionalism' or a mosaic of planning enclaves within the government.

A schematic picture of planning units and functional relations is shown in Figure 1. At first glance, there are some clear functional responsibilities for the three major planning units; Economic Planning Board (EPB), Ministry of Construction (MOC), Ministry of Home Affairs (MOHA). EPB works for economic planning concentrating on capital use. Targets are usually set in terms of levels and patterns of investment, income, output, employment, and so forth; but the plan implies a certain location of industry and a certain distribution of population and thus a certain pattern of land use. MOC is mainly concerned with land use and spatial aspect of national development. However, a formal channel for coordination between EPB's economic planning and MOC's physical planning has not been fully articulated.

FIGURE 1

MAJOR PLANNING UNITS AND THEIR FUNCTIONS



Legend— Mandatory referral relation  
 --- Advisory information exchange

Although MOHA tends to play a minimum role at the national planning level, EPB's economic plan and MOC's physical plan certainly cannot possibly be implemented at the local and regional levels without the practical involvement of MOHA.

EPB has mainly concerned with economic growth in terms of sectoral priorities and balance through the successive Five-Year economic plans. While EPB's economic plan has been the most powerful reference point and overshadows all other national plans, other planning efforts by various central ministries are regarded as technically implementing the economic plan. The MOC's First Comprehensive National Land Development Plan(1972-1981) has almost been lost in the strong shadow of the prestigious economic plan. According to the Comprehensive National Land Development Planning Law of 1963, Korean regional planning consists of the four levels of plans;

- 1) nation-wide plans,
- 2) special area plans,
- 3) provincial construction plans,
- 4) city plans and county construction plans.

The hierarchy of the plans is supposed to be from the top-downward but no clear provisions are specified for plan-making procedures between the four sets of plans.

As the title of the plans implies, they provide the public works construction schemes of the central and local governments. From the beginning, the Comprehensive National Land Development Plan has suffered from the plan's unclear role and its long ten-year time horizon. Finally, the plan has not been implemented and exists only on paper. With MOC's weak leadership in the central ministries and the failure in meeting an increasing demand for planned regional development, MOHA, which had kept low voice in regional development, began to intervene into the field of regional planning with thorough compilations of comprehensive provincial or county development plans in the early 1970s. Another confusion in the national planning system was added. As the two central ministries, MOC and MOHA continue to claim their own legitimate involvement for regional development, the dilemma of two-horned regional planning system at the local level has not been solved.

#### D. Rigid Blueprint Approach

The first cadre of Korean government officials who entered the field of urban and regional development consisted largely of engineers who had been trained in civil engineering and architecture. Urban and regional policies have been built on the inherited tradition of physical planning. From the viewpoint of policy implementation, urban and regional policies are highlighted by the extensive use of public works programs. Physical planners easily accepted the proposition that improved physical amenities will ultimately fulfill regional development objectives. They tend to believe in blueprint determinism whereby a blueprint determines its objective with a predetermined degree of precision over a long period of time. This consequently leads to rigidity of policy implementation. Policy papers and planning documents are full of blueprints showing a list of public works and the layout of the infrastructure to be built.

Only crude information about social and economic conditions of a region is presented. The rigid blueprint approach to regional planning without operational flexibility may have resulted in a degenerated form of regional planning, concentrating attention on marginal and vague goals and avoiding the issues that are really important for the region.

The First National Land Development Plan has not been revised since its announcement in 1972. As time goes on, the relevance of the plan become less practical. Although the coverage of the plan in terms of subject gives an impression of superficial comprehensiveness, its actual contribution to regional development is very much in doubt. It is rather clear from the Korean experience that regional planning has to be adaptive depending on constraints from within and without regional planning unit.

#### E. National Security Issue

Other important factors have also greatly influenced development objectives and methodological orientation of regional development planning since 1970 in Korea. Beginning in the early 1970's, urban problems began to erupt all at once: Revolts among urban slum dwellers, a worsened public utilities situation, and some political fallout from shabby public works projects. From the viewpoint of national security, the government also strongly felt a need to take some measures about the fact that one third of the nation's population and one half of the nation's industrial facilities were directly vulnerable to a potential bomb attack by aggressive North Korea.

As Seoul is situated within 40 miles of the demilitarized zone, the government determined to devise strong measures for population and industrial dispersal. Korea's regional policies, especially in the 1970s, are difficult to understand without taking into account the issue of national security which had been decided upon by extra-rational judgement. The construction of a new capital city away from Seoul metropolitan area and the strong push behind the industrial relocation program have to be understood in this context.

#### F. Regionalism and Sense of Deprivation

Another specific issue underlying Korea's regional policies has not come about solely in response to economic rationales. Regional issues are very often rooted in historical incidents or socio-political factors, even though the main cause may differ from country to another. Korea, having a homogeneous racial composition, has been able to concentrate her resources quite successfully upon achieving goals for industrialization without being much hampered by racial conflicts or disputes over religion and language. But lingering regionalism dies hard.

The south-western provinces of Noth and South Jeonra, comprising the so-called Honam region, are relatively poor and lag behind the rest of the country in development. In terms of gross regional product the region was below the national average by 22 percent in 1961 and by 24 percent in 1978 as shown in Table 1. Conditions in two provinces of Noth and South Jeonra have, at best, remained largely unchanged in spite of planned efforts to reduce disparities between regions. If regional policy is aimed at reducing the gap in incomes between regions, the absolute gap between the richest and poorest regions in a country becomes more meaningful than an aggregate index. As shown in Table 2, the richest region is, of course, Seoul and the poorest are the provinces of Jeonnam and Jeonbug, although the gap has narrowed somewhat since 1970.

The impetus forcing the government to take action for regional development has been a mixture of socio-political factors accompanied by economic backwardness. The Honam region disparaged since the founder of the Koryo Dynasity, King Taejo one millennium ago admonished that the people of the Honam region should not be given government positions because they are untrustworthy and rebellious. This superstitious legacy dies hard and many people still live with this bias. Therefore, the perceived degree of deprivation of the people of the region may be greater than other quantitative measures.

Table 1

Gross Regional Product Per Capita By Province

(Unit: in Won at market price)

Provinces	1961	1965	1970	1975	1978
Seoul	19,906	48,441	138,422	400,974	791,035
Gyeonggi	9,116	24,071	76,218	288,973	691,006
Gangwon	9,617	23,267	64,264	207,338	485,130
Chungbug	8,326	24,117	67,915	246,647	532,160
Chungnam	7,586	22,080	63,898	207,685	476,175
Jeonbug	8,330	22,856	61,359	208,638	456,866
Jeonnam(A)	7,517	21,105	56,494	203,361	474,334
Gyeongbug	8,196	24,332	79,139	234,652	526,367
Gyeongnam <sup>1)</sup>	8,526	29,226	73,612	330,228	731,663
Jeju	7,982	31,037	65,684	267,626	514,872
National <sup>(B)</sup>	9,580	27,226	81,421	267,352	620,096
(A)/(B)	0,78	0,78	0,69	0,74	0,76

1) including the City of Busan

Sources: Ministry of Home Affairs, Annual Report of Gross Regional Product, 1975 and 1979

The Special City of Seoul, Annual Account of City Income, 1975 and 1978.

Bank of Korea, Regional Income Accounts, 1962, 1965 and 1970.

Table 2

Regional Disparity Between Richest and Poorest Regions

	1961	1965	1970	1975	1978
Richest(Seoul)	2.65	2.29	2.45	2.97	1.80
Poorest (Jeonnam and Jeonbug)	1.00	1.00	1.00	1.00	1.00*

Note: Per Capita Gross Regional Product

Sources: Ministry of Home Affairs

This sensitive regional issue has been delicately exploited for political reasons. Korea was on the verge of national collapse last year as the student-led anti-government riot in the region grew into general regional unrest.

## 2. Profiles of Current Urban and Regional policies

Since governmental actions which are considered to constitute a body of regional policies are not clearly defined, it is not always possible to follow them without much confusion. As mentioned earlier, regional policies over the last two decades or so have been largely embodied within a three-legged administrative apparatus consisting of MOC, MOHA and EPB at the national level. However, thanks to the increased awareness of regional issues in national development, many other ministries have been involved since the late 1970s and policy measures have accordingly been diversified, although an overall picture of the interrelationship among these measures has not clearly evolved.

Policy instruments which have recently been directed toward balanced regional development include the introduction of differential residence tax rates in 1973 which disfavor by the residents of the larger cities, the government office dispersal program, the announcement of educational measures including the faculty exchange program between universities

in Seoul and in regional cities in 1973, and the designation of green belts around large urban areas in 1971, the New Community Movement since 1972, the enactment of Industrial Redistribution Law in 1978, the initiation of plan for the eventual construction of a new capital city in 1976 and the formulation of the National Plan for Population Redistribution from Seoul Metropolitan Area. Many of these measures were hastily formulated without horizontal reference to other measures and the initiating government authorities themselves have usually lacked competence for full implementation. Among others, the following three policies and plans are outlined to highlight some features and major emphasis of urban and regional policies in Korea.

A. The First Comprehensive National Land Development Plan(1972-1981)

The Comprehensive National Land Development Plan is the Korean version of national urban and regional plan. The time horizon of the plan was elongated to match with the 3rd and 4th Five-Year Economic Plans of EPB. The contents of the plan is briefly given below:

- 1) establishment of industrial bases,
- 2) improvement of agro-fishery production base,

- 3) improvement and expansion of transportation and communication networks,
- 4) urban development,
- 5) enhancement of the living environment,
- 6) water resource development,
- 7) land utilization and conservation.

The main objectives of the plan are the decentralization of population and industries from Seoul metropolitan area, the revitalization of small and medium-sized cities, the raising of the level of infrastructure facilities and services, through which the balanced development of regions can be secured by means of maximizing economic efficiency and the promotion of regional self-sufficiency. The plan introduced the concept of planning regions including four major regions, eight intermediate regions and seventeen sub-regions as shown in Map 1.

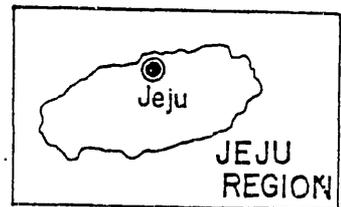
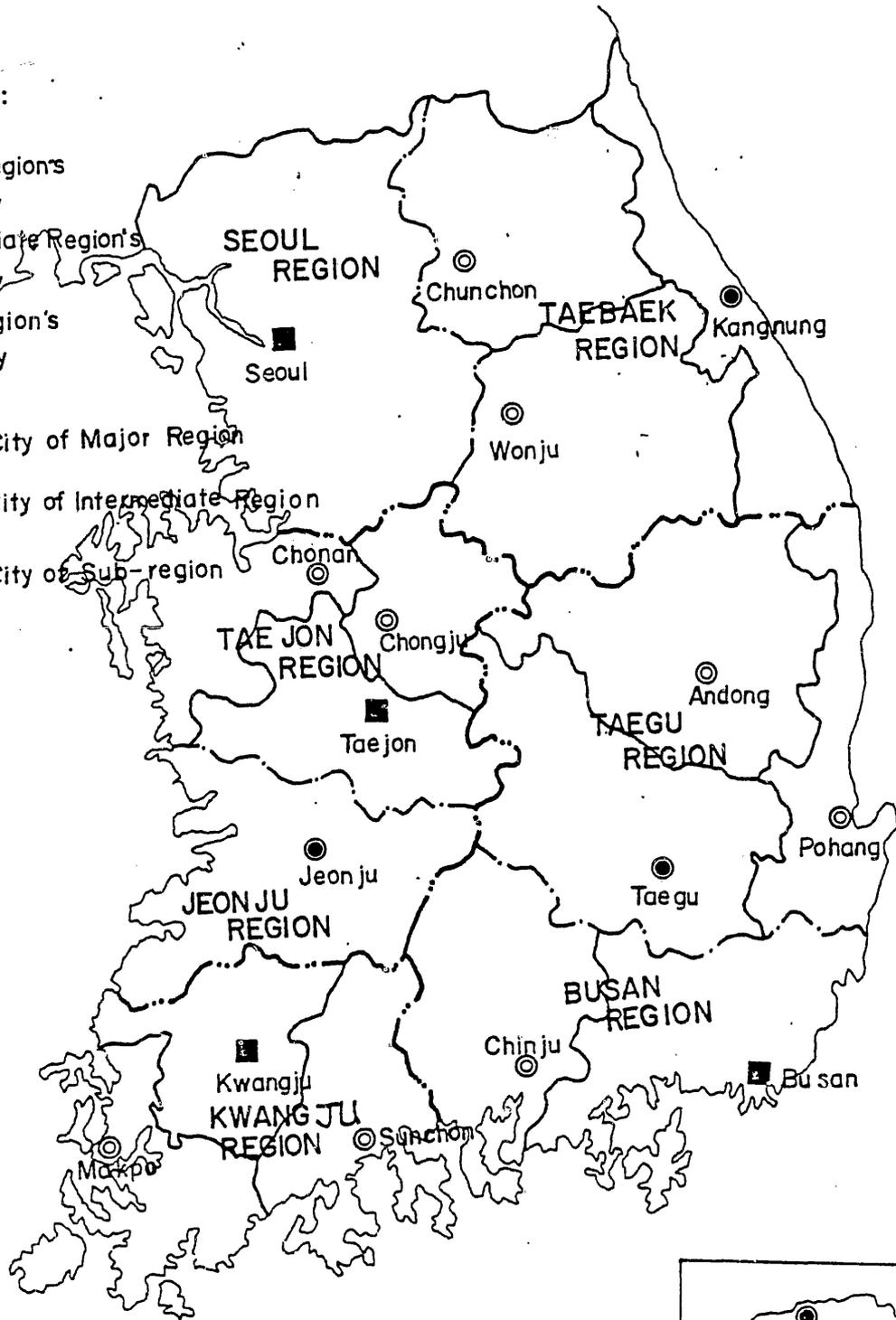
The three-tier system of planning regions seems to have some hierarchic order. The major regions are delineated to aim at promoting regional development through an integrate river basin schemes. Each major region is divided into three or more intermediate regions which are mainly derived from the concept of a 'center-periphery' or 'polarization' criterion. The intermediate regions take into account the patterns of movement in geographic space and an integrated development between a dominant center and its periphery.

Map I Regional Map

Legend:

Major Regions  
Boundary  
Intermediate Region's  
Boundary  
Sub-region's  
Boundary

- Center City of Major Region
- Center City of Intermediate Region
- ⊙ Center City of Sub-region



Seventeen sub-regions are designated on the basis of local market catchment areas and the uniformity of population size. Each sub-region contains five and more counties in which a core city should be included.

Out of eight intermediate planning region the Kwangju region has the focus of a detailed project plan which has been partly implemented with a World Bank loan.

The objectives of the Kwangju Regional Plan were

- 1) the maximum reduction in net out-migration from the region,
- 2) reduction in the disparity of per capita income between the Kwangju region and other regions,
- 3) improvement of the level of infrastructure facilities, particularly in the major urban areas in the region; and
- 4) strengthening the planning capability at the provincial government level.

As an overall evaluation, the effectiveness of the plan has been largely symbolism in terms of investment and the enthusiasm on the part of government as well as the people living in the region.

Plans for two more intermediate regions, the Taeback region and the Seoul region, have been worked out by the Korea Research Institute for Human settlements which was

established in 1979 as a research arm for MOC. However, plans for the two regions are far from being implemented.

B. National Plan for Population Redistribution from  
Seoul Metropolitan Area

The Plan (1977-1986) was announced by the Minister without Portfolio in 1977. Although the population and industrial dispersal program comes under MOC's domain by the statutory provision of the Comprehensive National Land Development Planning Law, the low profile of MOC in leadership among central ministries and the visionary nature of the Comprehensive National Land Development Plan was judged not workable, and prevented the realization of the program by MOC. Subsequently the President assigned the Minister without Portfolio, who is more and less a neutral party between ministries, to prepare an intensive and workable plan for population dispersal from the Seoul metropolitan area.

The main objective of the plan is to monitor actions which are taken by the government and which may have a substantial impact on the further growth of Seoul and its outlying areas. The coverage of the plan is very comprehensive ranging from the relocation of firms, the provision of industrial sites for exiting firms, the development of new industrial cities like Banwol, and harsh school enrollment

limitations, to the imposition of reduced volume density levels in building permit issued for Seoul.

The plan tried to be logically coherent in tying together two sets of policy measures for the effective implementation of the programs. The nature of the first set of policy measures are restrictive and preventive;

- 1) the control of expansion of firms and of the new location of firms,
- 2) active dispersal of existing firms to the region other than Seoul metropolitan area,
- 3) the prevention of over-utilization of vacated sites previously occupied by the relocated firms,
- 4) the control of expansion and new location of higher educational institutions in Seoul,
- 5) the imposition of strict quotas on the number of local students in educational institution in Seoul,
- 6) the designation of green belts to check further growth of Seoul,
- 7) the lowering of the floor area ratio and volume density of new buildings in Seoul,
- 8) the relocation of public facilities generating heavy traffic such as bus terminals and wholesale markets away from the center of Seoul,
- 9) and strengthened slum-squatter clearance.

The second set of measures are to increase the holding capacity of the regions from where people and industry are leaving for Seoul;

- 1) the adoption of national industrial zoning,
- 2) the development of local industrial and national heavy industrial estates outside Seoul,
- 3) the creation of a new industrial city of Banwol to accomodate the relocating firms,
- 4) the selective development of five growth poles,
- 5) the revitalization of small towns,
- 6) the priority development of depressed areas where heavy outmigration flows originate,
- 7) and priority investment for local educational institutions in terms of investment and the number of enrolment.

If any kind of relocation program is to be successful, it has to be coined with two sets of measures: namely 'stick for dispersal' and 'carrot for inducement'. However, policy measures which have actually gone in to action under the plan are mainly of the restrictive type and very few incentives have been provided for inducement in to the receiving areas.

### C. Industrial Location Policies

Government intervention visavis industrial location hardly existed until the government enacted the Local Industrial Development Law in 1969. The law aims at promoting the decentralization of industries, narrowing economic disparity between the regions, and insuring an increase in employment opportunities in regions where economic growth is lagging behind the national average. Under the provision of the Local Industrial Development Law, a local industrial district may be designated if an area meets the following conditions:

- 1) sites for factories and housing are easy to secure;
- 2) water, electricity, transportation and other public facilities are easily provided;
- 3) location of the district allows an adequate supply of labor and furnishes adequate marketing conditions;
- 4) interindustrial linkages are properly achieved.

Once a local industrial district is designated, the government will provide such supports as the cost of replotting land, the construction of roads leading to the estate and for an industrial water supply system. Land owned by the national and local governments can be leased or sold to those who have attained approval for the development of industrial estates.

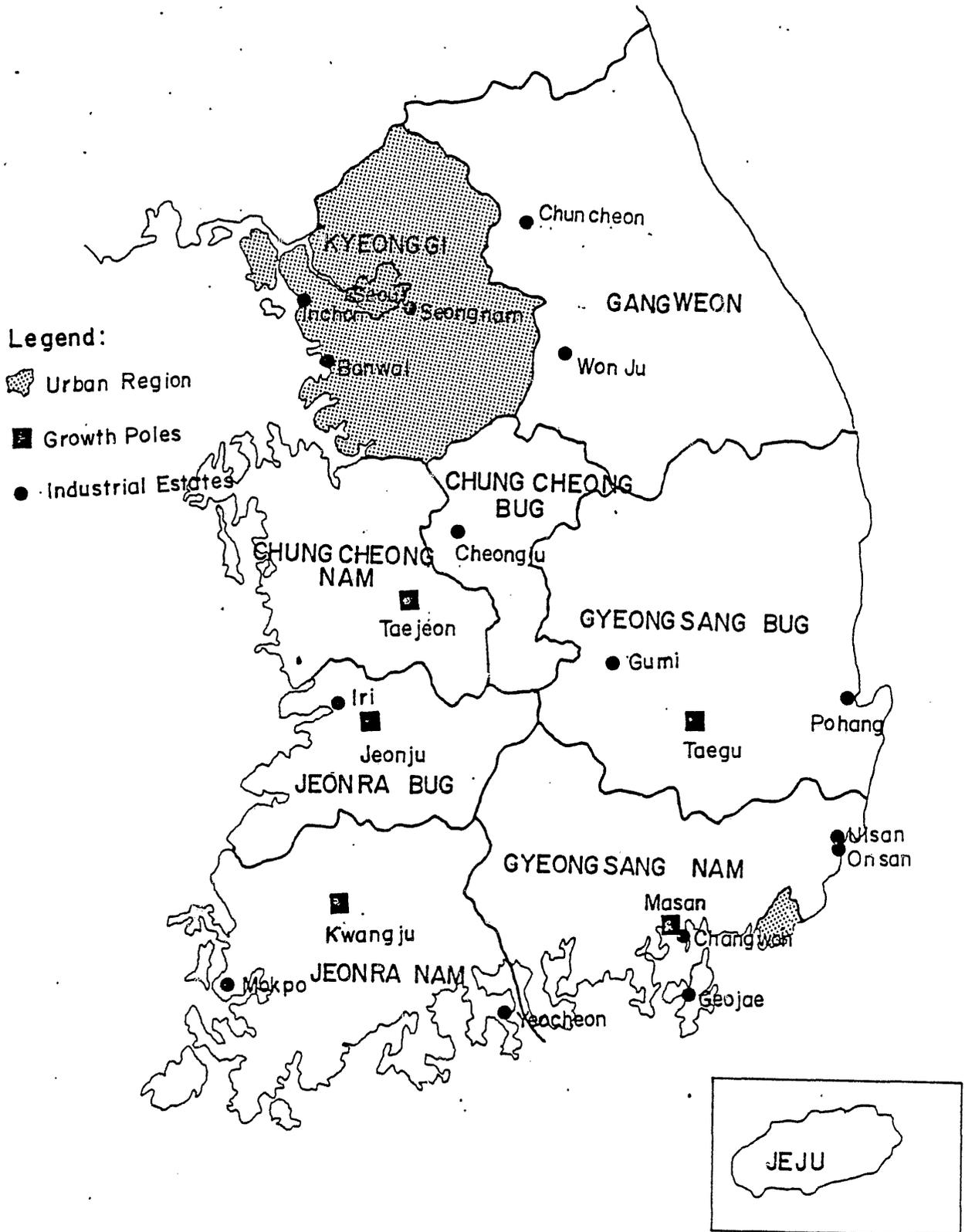
In addition, there are means for indirect subsidization in the form of local tax reduction and exemption, low interest financing, extended debt repayment periods, and the discounted sale of publicly-owned land. The provisions for the designation of local industrial districts were too general to defend the government from political pressures and ego-centric local industrial boosterism. As a result, local industrial districts have indiscriminately spread over the nation as indicated in table 3 and Map 2. The amount of public as well as private investment in the designated districts has been so thinly spread that the scale of inputs in a really needy area never reaches the critical mass needed to realize a visible impact.

As a result, the government enacted the Industrial Distribution Law in 1978. According to the Law, three types of industrial zones are to be designated:

- 1) dispersal zones,
- 2) status quo zones, and
- 3) inducement zones.

So far, national industrial zoning has not made significant impact on other regions except the Seoul metropolitan area. Seoul and its outlying areas were designated as dispersal zones where the location of new firms and the expansion of existing firms are strictly controlled. Relocation order for existing firms in Seoul has been issued.

Map 2 National and Local Industrial Estates



The number of firms and employment by industry in the dispersal zone is given in Table 4. Out of 12,533 firms in the dispersal zone, about 3,000 firms which are located in non-conforming districts have been issued relocation orders. The City of Banwol has been developed to accomodate those relocating firms from Seoul. However, there has already been a strong negative reaction from industrialists. Only 100 firms have moved out to Banwol. The industrial relocation program is waiting to be critically reexamined and requires further refinement through indepth inquiries into the location behavior of industrial establishments.

Table 3

III National Heavy and Local Industrial Estates

Name of Estates	Area(km <sup>2</sup> )	Categories
Changwon	17.45 km <sup>2</sup>	National Heavy mechanical
Yeocheon	15.14	" petro-chemical
Onsan	15.73	" non-ferrous metals
Geojae	4.87	" ship-building
Pohang	18.51	" steel mill
Ulsan	34.60	" fertilizer, auto and ship-building
Bukpeong	10.58	" cement and chemical
Incheon	1.20	Local Industrial Estate
Seongnam	1.60	"
Chuncheon	0.49	"
Wonju	0.40	"
Cheongju	0.74	"
Taejeon	0.48	"
Jeonju	1.68	"
Kwangju	1.44	"
Mokpo	0.46	"
Taegu	1.09	"
Masan	0.93	Free Export Zone
Iri	0.23	"
Gumi	10.53	Export Industrial Estate

Table 4

Number of Firms and Employment by Industry in Dispersal District  
(Seoul Metropolitan Area)

	Total				Seoul				Kyeonggi			
	No of Firm	Employment	<sup>1/</sup>		No of Firm	Employment			No of Firm	Employment		
		%	%			%	%			%	%	
Food & Beverage	481	3.8	40	6.4	394	3.4	37	6.3	87	10.8	3	8.3
Textile & Apparel	12,281	18.2	149	23.8	2,109	18.0	140	23.7	127	21.3	9	25.0
Wood Products	567	4.5	10	1.6	487	4.2	9	1.5	80	9.9	1	2.8
Paper & Printing	1,433	11.4	47	7.5	1,407	12.0	45	7.6	25	3.2	2	5.6
Chemical & Rubber	1,590	12.7	113	18.0	1,450	12.4	107	18.1	140	17.3	7	19.4
Non-Ferrous	824	6.6	23	3.7	736	6.3	20	3.4	88	10.9	3	8.3
First Metal	332	2.6	10	1.6	304	2.6	9	1.5	28	3.5	1	2.8
Machinery & Equipment	346	34.7	120	19.1	4,202	35.8	191	32.3	144	17.8	9	25.0
Others	679	5.4	34	5.4	635	5.4	33	5.6	44	5.4	1	2.8
	12,533	100.0	627	100.0	11,724	100.0	591	100.0	809	100.0	36	100.0

Source: Seoul Metropolitan Government

<sup>1/</sup> in thousands.

## II. Urban Trends

### 1. Urban concepts

The urban area in Korea is defined largely in terms of administrative regions. Therefore, the size and proportion of urban areas and population vary greatly depending upon which administrative criteria one uses as an urban designation. To review the various urban concepts used in Korean data sources, we begin with a brief description of administrative regions in Korea. Korea is divided administratively into two special cities (teukbyeol si), namely Seoul and Busan, and nine provinces (do). Special cities and provinces are of the equal administrative status. These eleven administrative regions are the basic regional units in Korea, on the basis of which almost all the statistical data including urban population and areas are compiled and reported. The areas and populations of these eleven administrative regions are shown in Table 5.

A province is administratively divided into "Si" (city) and "gun" (county). To qualify as a si, a Korean muni-

Table 5

Urban Population by Province

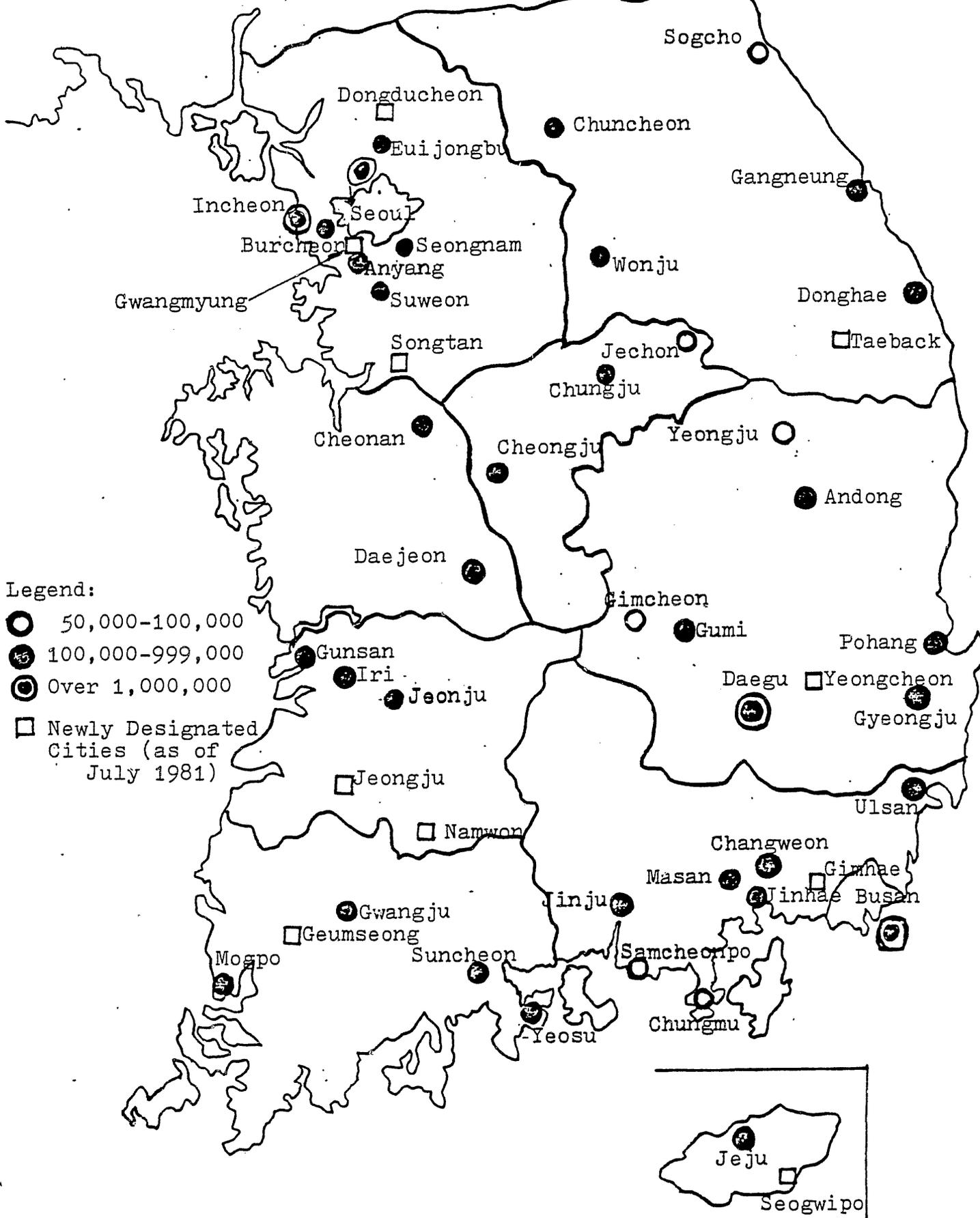
Province	Area (Km <sup>2</sup> )	Population (1,000)				Percent Urban (D/A)
		Total(A)	Si (B)	Eup(C)	Urban(D) (D=B+C)	
Gyeonggi	11,030	4,935	2,380	934	3,314	67.2
Gangwon	16,892	1,792	579	522	1,101	61.4
Choongbuk	7,433	1,424	452	190	642	45.1
Choongnam	8,784	2,956	772	692	1,464	49.5
Jeonbuk	8,075	2,287	678	347	1,025	44.8
Jeonnam	12,164	3,779	1,225	511	1,736	45.9
Gyeongbuk	19,876	4,962	2,288	781	3,069	61.9
Gyeongnam	11,847	3,323	1,372	452	1,824	54.9
Jeju	1,825	463	168	112	280	60.5
Seoul	607.3	8,367	8,367	-	8,367	100.0
Busan	432.3	3,160	3,160	-	3,160	100.0
Total	98,965.6	37,448	21,441	4,541	25,982	69.4

Source: National Bureau of Statistics, Report on Population and Mining Census, 1980.

city must have at least 50,000 residents, and being a city entails a basically different pattern of local government finance. As of 1980, there were as in Map 3, 38 cities in 9 provinces. The area or the population of the province not covered by si is classified as gun. A gun is divided into eup (town) and myeon which is the rural administrative unit belonging to gun. An eup is usually, but not necessarily, the county seat and officially has a minimum population of 20,000. But many eups have population of less than 20,000. As of 1980, there were 169 eups in 139 counties. Some counties have more than one eup. The number of myeons in 1980 was 1,256 in 139 counties. The hierarchical system of various Korean administrative areas may be stated as: 2 special cities and 9 provinces-38 cities-169 eups and 139 counties-1,256 myeons-35,553 dong.

There has not yet been any systematic definition of urban areas in Korea. Therefore, many experts and institutions still argue over the meaningfulness of various urban concepts. In Korea urban concepts such as the SMSA used in the U.S. have not yet been institutionalized. As urban areas in Korea are defined mainly in terms of administrative units, population in urbanized areas adjacent to municipal boundaries are excluded from the urban

Map 3 Spatial Distribution of Cities



population. The ways Korean experts and institutions define urban areas or urban population may be classified into the following four types.

1). Urban population as the population of all sis.

A si is, as mentioned already, municipality having at least 50,000 people. According to the results of the 1980 population census, urban population of all 40 sis<sup>1/</sup> was 21.4 million and amounted to 57.3 percent of the total Korean population of 37.4 million (see Table 6).

The si is one of the most commonly used urban concepts in Korea. This si-gun criteria for the urban-rural distinction is mainly used by the government. In terms of population density, urban structure, industrial composition, and urban function, any si may be safely viewed as an urban area. However, this urban concept excludes municipalities located in gun which have urbanized population over 50,000. Therefore, many experts choose to define urban areas differently.

2). Urban population as the population of all sis and those eups whose population exceed 50,000. The population criterion of eup is supposedly between 20,000 and 49,999. However, many eups have population over 50,000. For instance, in 1980 16 eups had populations over 50,000.

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<sup>1/</sup> Four more eups were elevated to sis in 1980.

Table 6  
Urban Population by Size of Urban Areas

	1960	1970	1975	1978	1980 <sup>P</sup>
Total Population (A)	24,989	31,469	34,709	36,628	37,445
Population of Si (cities) (B)	6,997	12,929	16,793	19,441	21,444
Number of Si Urban population(%)	28.0	41.1	48.4	53.0	57.3
Pop. of Si and Eup (towns) over 50,000	7,121	13,549	17,658	20,331	22,470
Number of areas Urban population(%)	39 28.5	41 43.1	50 50.8	52 55.5	56 59.8
Pop. of Si and Eup over 20,000	8,950	15,683	20,269	22,775	24,940
Number of areas Urban population(%)	103 35.8	114 49.8	142 58.4	136 62.2	140 66.6
Pop. of Si and Eup	9,256	15,810	20,518	23,238	25,983
Number of areas Urban population(%)	122 37.0	123 50.2	157 59.1	162 63.4	209 69.4

Note : p - Preliminary

Sources: Economic Planning Board/Bureau of Statistics, Report on Population and Housing Census, 1960, 1970, 1975, 1980.

Ministry of Home Affairs. Municipal Yearbook of Korea, 1979.

In 1980, 56 urban areas with at least 50,000 residents had urban population of 22.5 million, and amounted to 59.8 percent of the total population of 37.4 million. Any eup whose population exceeds 50,000 becomes a legal candidate for si status. As the elevation of urban places from the status of eup to the status of si usually takes some time, some eups having population over 50,000 maintain this for some time.

This urban concept has been used by various Korean experts and institutions. For instance, Mills and Song (1979) have used it in discussing Korea's urbanization and urban problems. The Korea Development Institute has also used it in preparing the Long-Term Prospect for Economic and Social Development, 1977-91. The World Bank (1979) has also used this definition in discussing issues related to Korea's growth and urbanization.

3). Urban population as the population of all sis and those eups having population over 20,000. This is also one of the most commonly used urban concepts in Korea. Various experts and institutions have been using this urban concept. However, this definition involves the problem of including some eups, which may not be safely viewed as urban areas. Some eups having popula-

tion over 20,000 may still perform more rural-agricultural functions than urban-industrial functions. Their population density may also be very low.

In 1980, 140 urban areas with at least 20,000 residents had urban population of 24.9 million, or 66.6 percent of the total population (see Table 6).

4). Urban population as the population of all 40 sis and 169 eups. This definition has also been used very extensively in Korea, especially by the government, including the Ministry of Home Affairs. In terms of the availability of statistical data and administrative purposes, this may be the easiest concept of urban areas. However, this definition includes as urban areas those eups which have population as small as 6,000. Many small eups in Korea perform rural-agricultural function and may not be realistically viewed as urban areas.

## 2. Trends of Urbanization

Korea is an extremely crowded country. Its population density of about 380 people per square kilometer in 1980 makes it one of the most crowded countries in the world. By contrast, population density per square kilometer is 304 in Japan, 192 in India, 92 in China and 23

in the U.S.<sup>1/</sup> Like Japan, Korea is a mountainous country in which only about a fifth of the total national land of 98,966 square kilometers is flat enough for agricultural or urban uses. By contrast, Belgium and the Netherlands, with comparable population densities, are flat and most land is suitable for agriculture and cities.

Given that Korea's overall population density is 16 times that in the U.S., it is not surprising that almost any collection of nonagricultural activities and its associated households is classified as urban in Korea. Urban areas are everywhere defined explicitly or implicitly by density and any such collection is likely to reach a density that would be called urban in a country as crowded as Korea.

Both industrialization and urbanization in Korea have been extremely rapid since 1963 as shown in Table 7, with the beginning of the First Five-Year Economic Development Plan, 1962-66.

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<sup>1/</sup> Figures for these countries are for the year 1977 and from the World Bank, World Development Report, 1979.

Table 7

Major Economic and Regional Indicators, 1955-1986

	1955	1960	1965	1970	1975	1980	1986
GNP per capita (US \$)	66	81	106	242	532	1,510	3,857
Urbanization ratio (%)	24.4	28.3	33.9	43.1	50.9	57.3	66.0
Labor force participation rate			55.6	55.9	56.5	57.6	
Number of automobiles		29,100	39,126	126,500	193,927	637,548	1,145,000
Total population (in million)	21.5	25.0	29.2	31.4	34.7	37.4	42.1
Farm population (in million)	13.3	14.6	15.8	14.4	13.2	10.2	10.4
Share of total (%)	61.9	58.3	55.1	44.8	38.2	27.3	24.7
Share of agriculture in GNP (%)	43.9	35.9	36.7	26.2	24.0	15.8	13.8
Percent of non-agricultural farm household income			22.1	24.1	18.1	28.6	50.0
Exports (US million \$)	18.0	32.8	175.1	835.2	5,081.0	17,500.0	53,455
Imports (US million \$)	341.4	343.5	463.4	1,984.0	7,294.4	22,300.0	52,570

Sources: Bank of Korea, Economic Statistics Yearbook, 1980.

Figures for 1986 are from the Korea Development Institute, Long-Term Prospect for Economic and Social Development, 1977-91.

Working Committee for the Transport Sector Plan for the Fifth Five-Year Plan, The Transport Sector Plan, February 1981.

International comparisons show that the speed of Korean urbanization has been one of the highest, if not the highest, in the world, especially since 1960.

The movement of agricultural population out of rural areas has been extremely rapid in Korea as shown in Table 7 since the early 1960's, more rapid than any country at a comparable stage of development. The share of farm population fell from 58.3 percent of the total employment in 1963 to 27.3 percent in 1980. In the same period, the share of manufacturing employment rose from about 7.0 percent to 23.0 percent. But agricultural employment is less than 20 percent of the total in developed countries. In Japan, with a rice-based agricultural economy similar to Korea's, agricultural employment is presently less than 15 percent of the total. It should therefore be expected that the movement of workers out of Korean agriculture will continue for many years to come.

So far, Korea's development efforts have been directed mainly for the rapid promotion of export-oriented industrialization. The role and the importance of urbanization and urban problems closely associated with the

process of national development have been largely ignored in the successive Five-Year Plans. It was only very recently that Korea has recognized urbanization and urban problems as serious development issues, as serious perhaps as issues concerning growth, inflation, and equity. The fact that the 15-Year Long Term Perspective Plan (1977-1991) indicates urbanization and urban problems as one of the three major development issues for Korea in the future may reflect the importance of this issue.

Table 8 shows Korea's total population and the percent urban for census years from 1945-1980, with similar data from Japan and the U.S. for comparison. Urbanization is a very recent phenomenon in Korea. By 1950, Korea has not reached the percent urban that Japan had reached a quarter century earlier. The largest increase in percent urban recorded in the table are those during the most recent decade, namely, 1965-75. The 1970-75 increase of 7.8 points in the percent urban is off only slightly from the 9.2 point increase during the 1965-70 interval.

Most developed countries are on the average 74 percent urban.<sup>2/</sup> After they reach about Korea's 1980 level

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<sup>2/</sup> See, for instance, World Bank, World Development Report, 1979.

Table 8

Total and Urban Populations of Korea,  
Japan and the United States  
1945 - 1980  
(Population in million)

Year	Korea		Japan		United States	
	Population	Urban %	Population	Urban %	Population	Urban %
1945	19.4	14.5	72.0	27.8		
1950	20.2	18.4	83.2	37.5	150.7	59.6
1955	21.5	24.4	89.3	56.3		
1960	24.9	28.3	93.4	63.5	178.5	63.1
1965	28.3	33.9	98.3	68.1		
1970	31.4	43.1	103.7	72.2	203.2	73.5
1975	34.7	50.9	112.8	74.8	215.1	73.6
1980	37.4	59.8	115.9 <sup>a</sup>	75.0	220.1 <sup>a</sup>	74.0

a - 1979

Sources: Data for Japan and the U.S. are from Edwin S. Mills and Byung-Nak Song, Urbanization and Urban Problems. Harvard University Press, 1979. Korean Data are from National Bureau of Statistics/Economic Planning Board of Korea, Report on Population and Housing Census, various years, and Handbook of Korean Economy, 1980.

of urbanization, the pace of urbanization tends to decelerate. The remaining rural population urbanizes only slowly after the percent urban reaches 70 or 75 in nearly all industrialized countries. Thus, although we expect Korean urbanization to continue at a rapid pace, it is unlikely that the extremely rapid urbanization of the 1965-70 period or the 1975-80 period will continue as long as another decade.

Given that the total population growth rate averaged 1.87 percent per year from 1945 to 1980, the implication is that the urban population grew at an average annual rate of 5.9 percent. Natural increase has been less until recently in urban than rural areas, because urban birth rates have been much lower than rural. Therefore, more than two-thirds of postwar urban growth has resulted from rural-urban migration. It has been estimated that about half the population of Korea's largest cities was born elsewhere. Table 9 shows some comparisons between Korea and developing and developed countries. In 1950

Table 9

Percent Urban Population in Korea Relative to  
Other Countries, 1950 to 2000

Area	Year			
	1950	1960	1975	2000
Korea	18.4	24.9	50.9	81.6
Developing Countries	16.5		28.3	45.8
Industrialized countries	51.6	66.0	76.0	83.6
World Average	28.2		38.9	51.5

Sources: Korean data are from Edwin S. Mills and Byung-Nak Song. Urbanization and Urban Problems. Harvard University Press, 1979 and Korea Research Institute for Human Settlement. Long-Term Prospect for Urban Development in Korea Toward 2000, 1980. Data for Developing and Developed countries are from World Bank. World Development Report, 1979.

Korea was only slightly more urbanized than the average developing country at the time. Although developing countries have urbanized rapidly during the ensuing quarter century, Korea has urbanized much more rapidly. In 1975, Korea was about as urbanized as was the average developed country shortly after World War II. Although Korea's percent urban is now much closer to that in developed countries than it was in 1950, the gap is still substantial. This confirms our suggestion that the pace of urbanization will continue to be brisk in Korea during coming years, but that it will slacken somewhat, as it has in developed countries.

In Korea, in the 1960s the percent of the population that was urban was very similar to the percent of the labor force that was nonagricultural. But the discrepancy between the two ratios has increased since then. This indicates that the rural non-farm population has been increasing since the beginning of the 1970s.

### 3. Urbanization by city size

Table 10 shows the number of cities and the percentage of urban residents living in cities in various size

Table 10

Distribution of Urban Population by Size of Urban Areas, 1960-1975

Size of Urban Areas	1960		1966		1970		1975		1980	
	Percent	No. of Urban areas								
Over 1,000,000	40.0	2	42.5	2	54.1	3	52.8	3	57.0	4
500,000-1,000,000	6.6	1	11.2	2	7.3	2	9.5	3	5.5	2
200,000- 500,000	9.9	3	7.7	3	4.3	2	7.1	5	12.9	11
100,000- 200,000	7.4	5	9.8	10	10.4	12	11.1	17	9.8	19
50,000- 100,000	14.4	20	10.2	18	10.1	22	7.0	22	5.1	21
20,000- 50,000	21.7	74	18.6	77	13.8	74	12.5	90	9.7	83
Total	100.0	105	100.0	112	100.0	115	100.0	140	100.0	140

## Urban Population

Urban areas over 50,000 (A)	7,121	10,011	13,549	17,658	22,470
Urban areas over 20,000 (B)	8,950	12,301	15,683	20,269	24,940
Total Population (C)	24,989	29,160	31,469	34,709	37,445
Share of urban Population (A/C)	28.5	34.3	43.1	50.8	57.3
Share of urban Population (B/C)	35.8	42.2	49.8	58.4	66.6

Sources: Ministry of Home Affairs, Municipal Yearbook, 1972, 1974.  
National Bureau of Statistics, Economic Planning Board, Report on Population and Housing Census, 1960, 1966, 1970, 1975 and 1980.

categories for selected years from 1960 to 1980. The data display an unusually rapid shift of population to large cities during the years of rapid urbanization. Since 1960, there has been a steady decrease in the percent of urban population living in cities with less than 20,000 residents, and a corresponding increase in the percent living in cities with more than half million residents. The number of cities with population over 50,000 was 31 in 1960 but increased to 41 in 1970 and to 57 in 1980. This is due largely to the increase in the number of cities of size 100,000 to 500,000. After 1975, the number of urban areas of 20,000 to 50,000 decreased very rapidly.

When we compare the population and rank of Korea's 40 largest cities for selected years from 1960 to 1980, we can find the stability in rank order that is typical of large cities in many countries. There has been no change in rank among Korea's six largest cities, as Table 11 indicates, not only during the recent 15 years but also during the 3 decades from 1950 to 1980. By 1980, each of the 6 largest cities in 1950 had reached between 5 and 6 times its 1950 population. The stability in rank is remarkable in view of the dramatic increases in city size.

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<sup>3/</sup> 6 largest cities are, as in Table, Seoul, Busan, Daegu, Incheon, Gwangju, and Daejeon.

Table 11

## Urban Population and Ranks

(Unit: 1,000)

Rank	1960		1966		1970	
	City(Si)	Population	City(Si)	Population	City(si)	Population
1.	Seoul	2,445	Seoul	3,805	Seoul	5,536
2.	Busan	1,163	Busan	1,430	Busan	1,881
3.	Daegu	676	Daegu	847	Daegu	1,083
4.	Incheon	402	Incheon	529	Incheon	646
5.	Gwangju	315	Gwangju	404	Kwangju	503
6.	Daejeon	299	Daejeon	316	Daejeon	415
7.	Jeonju	189	Jeonju	221	Jeonju	263
8.	Masan	158	Mogpo	162	Masan	191
9.	Mogpo	130	Masan	155	Mogpo	178
10.	Cheongju	92	Suweon	128	Suweon	171
11.	Suweon	91	Cheongju	124	Ulsan	159
12.	Gunsan	90	Ulsan	113	Cheongju	144
13.	Yeosu	87	Jinju	107	Chuncheon	123
14.	Jinju	87	Weonju	104	Jinju	122
15.	Chuncheon	83	Gunsan	103	Yeosu	114
16.	Weonju	77	Yeosu	102	Gunsan	112
17.	Gyeongju	76	Chuncheon	100	Weonju	112
18.	Suncheon	69	Jeju	88	Jeju	106
19.	Chungju	69	Jangseong	87	Jangseong	103
20.	Jeju	68	Kyungju	86	Enijeongbu	95

Table 11 (countinued)

Rank	1975		1980	
	City(Si)	Population	City(Si)	Population
1.	Seoul	6,889	Seoul	8,367
2.	Busan	2,454	Busan	3,160
3.	Daegu	1,311	Daegu	1,607
4.	Incheon	800	Incheon	1,085
5.	Gwangju	607	Gwangju	728
6.	Daejeon	507	Daejeon	652
7.	Masan	372	Ulsan	418
8.	Jeonju	311	Masan	387
9.	Seongnam	272	Seongnam	376
10.	Ulsan	253	Jeonju	367
11.	Suweon	224	Suweon	311
12.	Magpo	193	Anyang	254
13.	Cheongju	193	Cheongju	253
14.	Gunsan	154	Mogpo	222
15.	Chuncheon	141	Bucheon	221
16.	Jeju	135	Jinju	203
17.	Anyang	135	Pohang	201
18.	Pohang	134	Jinju	168
19.	Yeosu	131	Gunsan	165
20.	Wonju	120	Yeosu	161

Table 11 (countinued)

Rank	1960		1966		1970	
	City(Si)	Population	City(Si)	Population	City(Si)	Population
21.	Jinhae	67	Jinhae	81	Gyungju	92
22.	Jangseong	67	Cheongju	80	Jinhae	92
23.	Iri	66	Chuncheon	79	Anyang	92
24.	Pohang	60	Iri	79	Suncheon	91
25.	Gangneung	59	Euijeongbu	75	Cheongju	88
26.	Andong	53	Cheonan	71	Iri	87
27.	Euijeongbu	51	Pohang	66	Pohang	79
28.	Gimcheon	51	Gangneung	65	Cheonan	78
29.	Samcheonpo	50	Andong	64	Andong	76
30.	Sosa	48	Sogcho	63	Gangneung	74
31.	Chungmu	48	Dongducheon	59	Sogcho	73
32.	Sangju	47	Gimcheon	56	Jecheon	62
33.	Sogcho	46	Andong	54	Gimcheon	62
34.	Cheonan	44	Samcheonpo	53	Dongducheon	60
35.	Mogpo	41	Chungmu	51	Yeongju	59
36.	Jecheon	39	Mugho	50	Sosa	57
37.	Songtan	35	Jecheon	50	Mugho	56
38.	Yeongju	32	Sangju	48	Chungmu	55
39.	Anyang	31	Yeongju	46	Samcheonpo	55
40.	Ulsan	30	Songtan	44	Sangju	53

Table 11 (countinued)

Rank	1975		1980	
	City(Si)	Population	City(Si)	Population
21.	Iri	117	Chuncheon	155
22.	Bucheon	109	Sohwaeup	146
23.	Suncheon	108	Iri	145
24.	Gyungju	108	Weonju	137
25.	Euijeongbu	108	Euijeongbu	133
26.	Cheongju	105	Gyeongju	122
27.	Jinhae	104	Cheonan	121
28.	Cheonan	97	Gangneung	117
29.	Andong	95	Suncheon	114
30.	Gangneung	85	Chungju	113
31.	Cheonan	74	Jinhae	112
32.	Sogcho	72	Changweon	112
33.	Yeongju	71	Gumi	105
34.	Gimcheon	67	Donghae	104
35.	Chungmu	67	Andong	102
36.	Hwangju	61	Jecheon	86
37.	Dongducheon	69	Yeongju	78
38.	Samcheonpo	60	Chungmu	76
39.	Sindo	59	Gimcheon	72
40.	Songtan	57	Gimhaeup	70

Every country usually has its characteristic city size distribution, but distributions from many countries and many historical periods bear a strong family resemblance. The distribution is usually highly skewed to the right, since in all countries and all historical periods there are many very small urban areas and a small number of relatively large cities. This is especially true in the case of many developing countries. Among the distributions that typically fit the urban population data best are the log-normal and the Pareto<sup>4/</sup>. Both distributions have been found to describe accurately much socio-economic data that produce skewed distributions, including incomes, firm sizes, etc.

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<sup>4/</sup> Many scholars formerly believed that city size followed the rank-size distribution, which assumes that the population of the Nth largest city is inversely proportional to N. That is,  $N = P_1 / P_N$ , where  $P_N$  is the population of the Nth largest city. Putting  $N = 1$  shows that  $P_1$  is the population of the largest city. According to this distribution, the second largest city is half the population of the largest, the third largest is one-third the population of the largest, and so on.

The size distribution of cities varies somewhat from country to country, but is remarkably persistent within countries over time. The form and parameters of the distribution change very slowly from decade to decade. Therefore, measures of primacy tend also to persist over many decades. Large countries tend to have lower primacy measures than small countries, and primacy tends to decrease as a country develops and average income rises. Primacy

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It is now widely appreciated that the rank size distribution is no more than an approximation and that other distributions fit much of the data somewhat better than the rank size distribution.

A less sophisticated measure of primacy has been proposed by Davis. Davis' measure is the ratio of the population of the largest city to the sum of those of the second, third and fourth largest cities. The Davis index is the  $D$  in the equation of the form, namely,  $D = P_1 / (P_2 + P_3 + P_4)$ . The advantage of this index is that it does not require the estimation of city size distribution of all cities and, therefore, is simple to measure. Its disadvantage is that it is calculated from an arbitrary subset of the four largest city populations. If the rank size distribution is correct, Davis's index takes usually the value  $12/13=0.92$ .

also depends on government actions and development policies.

Recently Mills and Song (1979) estimated the Pareto distribution of the following form from the data on city size in Korea for census years from 1949 to 1980.

$$\ln N = \ln P_1 - \mathcal{L} \ln P_N \quad (1)$$

For each census year, equation (1) was estimated from a sample consisting of all cities of at least 20,000 population. The results are summarized in Table 12. This table shows the remarkable stability in the distribution of city sizes and the tendency for  $\mathcal{L}$ , the Pareto coefficient, to be close to 1.

A possible conclusion of the analysis maybe that Korea is only slightly more primate than the average country and shows no strong tendency to become more primate. The size distribution of cities has shown remarkable stability during the last quarter century. Almost all Korean cities have grown rapidly, but there is no tendency for Seoul, or any other large city to become increasingly dominant.

#### 4. Urbanization by Region

The pattern and pace of urbanization by region in Korea have been influenced to a large extent by the

Table

Estimates of the Davis Index and  
Pareto Distribution in Korea, 1955-1980

Year	Davis Index	Pareto Coefficient
1955	0.87	1.01
1960	1.09	0.98
1965	1.36	1.04
1970	1.53	0.99
1975	1.51	0.94
1980	1.43	0.96

Note: The Davis index  $D$  is computed from  $D = P_1 / (P_2 + P_3 + P_4)$ , where  $P_1$ ,  $P_2$ ,  $P_3$ , and  $P_4$  denote populations of the first, second, third and fourth largest cities. . . The Pareto coefficient is " $\alpha$ " in  $N = P_1 / P_N^\alpha$  or  $\ln N = \ln P_1 - \alpha \ln P_N$ , where  $P_1$  and  $P_N$  are populations of the first and Nth largest cities. . The equation was estimated from a sample consisting of all urban areas of at least 20,000 population.

spatial distribution of export industries. Export industries in Korea are largely manufacturing industries and have tended so far to locate close to cities having international ports. This tendency is inevitable because most Korean export industries rely heavily on foreign countries for raw materials as well as markets. This was even more so in the early 1960s when Korea's export oriented industrialization strategy had just begun.

The cities which have large ports suitable for international trade are mainly Incheon in the Seoul region and Busan. Therefore, the Seoul-Incheon region and the Busan region have played dominant roles in the process of Korean urbanization. The discussion in this section will focus on these two regions. We begin with a brief description of overall pattern of urbanization by region in Korea.

#### A. Overall Pattern of Urbanization by Province

The spatial distribution of cities in Korea is shown in Map 3. As stated above, the regions in Korea most suitable for the location of export-oriented manufacturing

industries are the Seoul-Incheon and the Busan regions, which have the largest international ports in Korea.

According to the findings by Kye Sik Lee,<sup>5/</sup> the share of manufacturing employment by the Seoul region in 1978 was 46.5 percent (Seoul 24.3 percent plus Gyeonggi province 22.2 percent) and that by the Busan region 27.1 percent (Busan 16.9 percent and Gyeongnam province 10.2 percent) respectively. The share of manufacturing employment by these two regions amounts to 63.6 percent. According to the 1980 Population Census data, the share of total population by these regions in 1980 was 52.8 percent (the Seoul region 35.5 percent plus the Busan region 17.3 percent). These two regions share 63.6 percent of manufacturing employment and 52.8 percent of population in Korea. This is why there are many large cities in these two regions.

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<sup>5/</sup> Kyu Sik Lee investigated the regional distribution of manufacturing employment in Korea using Korea's 1978 manufacturing census data. See, for instance, his "Tabulation of Manufacturing Employment by Region," draft, 1980.

Map 3 shows that the number of cities in the Seoul region is 7 including Seoul and in the Busan region 8 including Busan. If we add three new cities which will be designated as cities as of July 1, 1981 in the Seoul region, the number of cities in the Seoul region will be 9 and in both regions 18.

As the southwestern part of the country is largely agricultural and is not suitable for the construction of large ports, it remains largely as agricultural. This is why there are only few cities in the agricultural provinces of Jeonbuk and Jeonnam.

#### B. The Seoul Metropolitan Region

The Seoul metropolitan region is the special city of Seoul and the Gyeonggi province which, as in Maps 2 and 4, geographically surrounds Seoul. This is the concept of SMA defined in the Comprehensive National Land Development Plan (1972-81) and still in use by various experts and institutions in Korea. A concept similar to SMR is the Capital region which was defined, as in Map 5, by the Population Redistribution Plan for the Capital

Seoul Region and Capital Region

Legend

 Newly Defined Capital Region

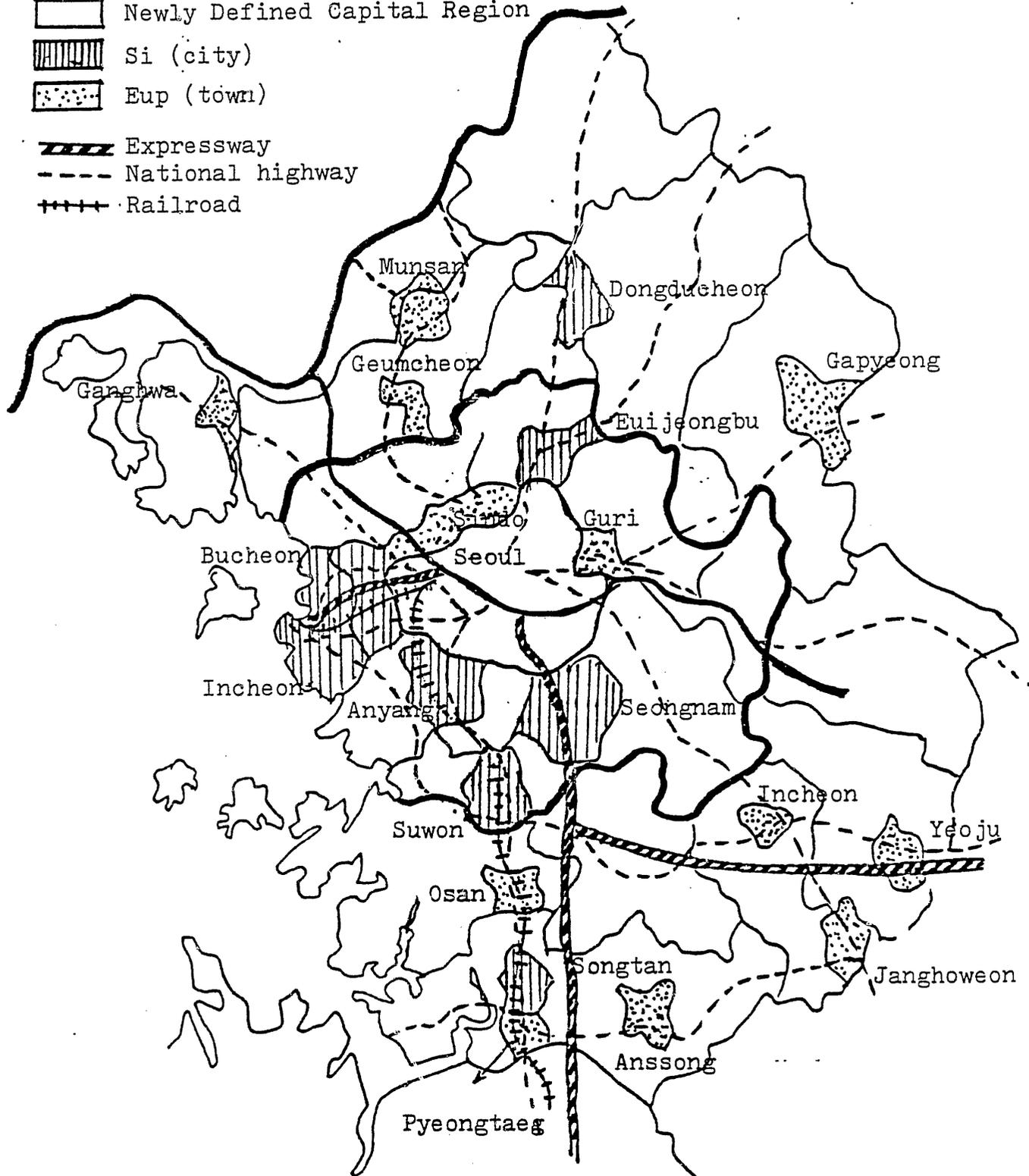
 Si (city)

 Eup (town)

 Expressway

 National highway

 Railroad



Region (1977-1986) formulated by the Office of the Minister without Portfolio.

The discussion in this section on urbanization in the Seoul region will be based largely on these two concepts and in connection with various government policy measures for the Seoul region. We begin with the city of Seoul.

Seoul is an extremely crowded city. At the end of 1980, 8.3 million people lived in a total area of 627 square kilometers. The population density in 1980 is over 13,000 people per square kilometer, the highest in the country. The recent government policy of moving both population and industries from North Seoul (north of the Han river) to South Seoul (south of the Han rivers) has caused a severe shortage of land in South Seoul, producing a rapid increase in land prices.

It is expected that the concentration in South Seoul will continue in the future and will cause an even more severe shortage of land for future urban activities. To alleviate the problem of the severe shortage of urban land in South Seoul, various decentralization policies have been taken. The future growth pattern of Seoul will be determined to a significant degree by various

decentralization policies. The growth of decentralization policies may be classified into the following stages.

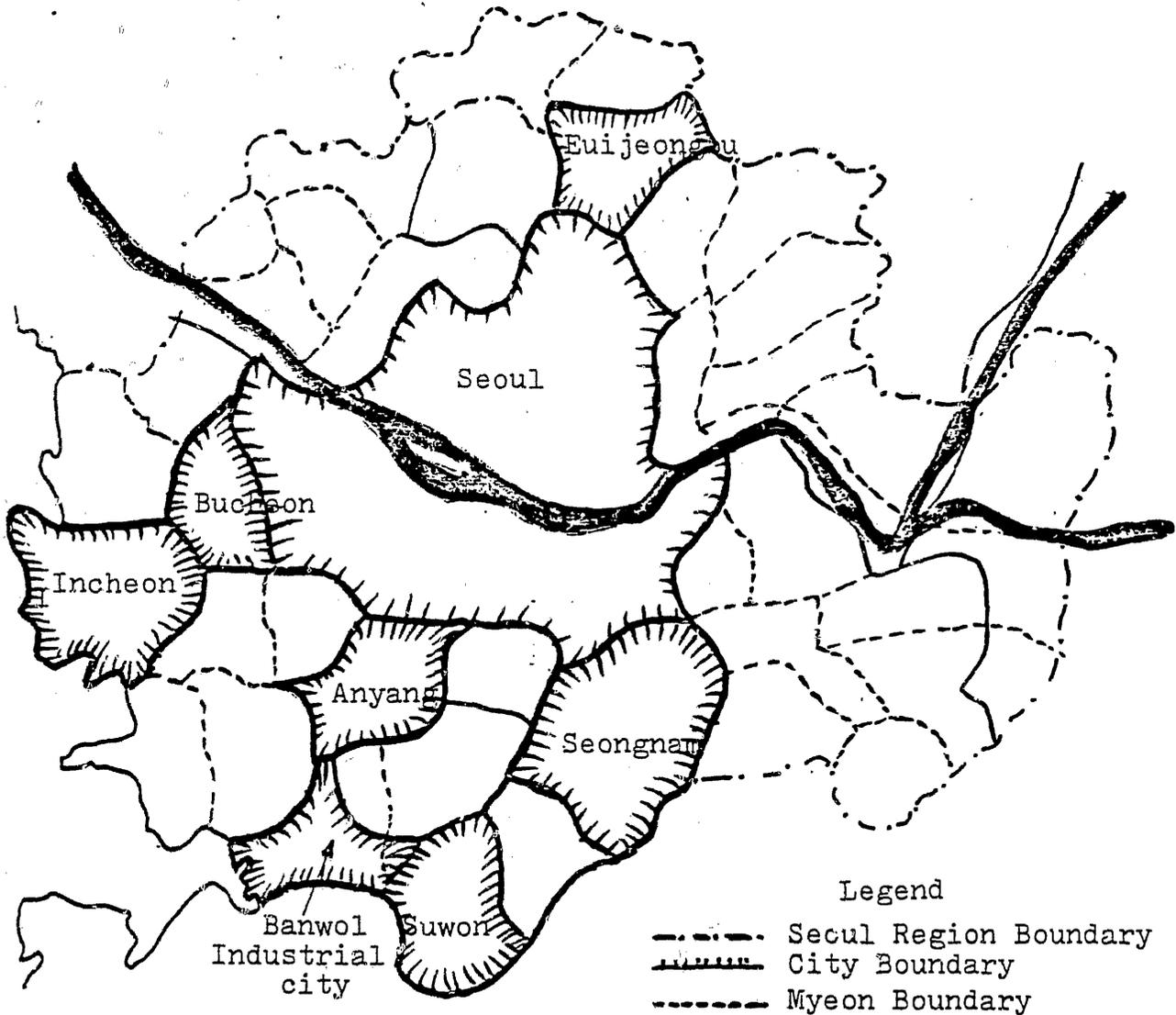
The first stage was the stage for controlling the growth, especially the growth of population, of Seoul City as a whole. The second stage is the stage for controlling the growth of the northern half of Seoul.

The second stage policy measures also include relocating population and various urban activities from North Seoul to South Seoul. The third stage marks the new era for systematic urban planning in Korea. It was at this stage that the concept of metropolitan area planning was first introduced in Korea. In this connection the capital region was newly defined. The decentralization policies at this stage include those dispersing population and industries from the city of Seoul to the area inside the newly defined capital region south of Seoul's administrative boundary. The third stage decentralization strategy include the policy of developing a new industrial city, namely, the Banwol industrial city, as indicated in Map 5.

The decentralization strategy for Seoul will require efficient spatial reallocation of population, jobs, and infrastructure facilities. It also necessitates the

Map 5

Map of the Newly Designated Capital Region



efficient transformation of land resources from agricultural to urban uses, and the flexible readjustment of city boundaries.

The growth of Seoul has been very rapid. The population of Seoul grew at a rate of 9.4 percent per year, as in Table 13, in the late 1960's. The year 1970 may mark a turning point for the growth of Seoul. Richardson's "Polarization reversal" for Seoul, in terms of the population growth rate, appears to have taken place around 1970. It maybe said that the change in the pattern of growth of Seoul around 1970 was due largely to the market forces, because there had not been much urban planning in Seoul prior to 1970. At any rate, it maybe safely said that the growth of Seoul was caused to a great extent by the growth of manufacturing industries.

The Population Redistribution Plan for the Capital Region (1977-1986) formulated by the Ministry without Portfolio may mark another turning point for the growth of Seoul. Since the plan requires relocation of most manufacturing industries in Seoul, it will encourage Seoul to become largely a service-oriented city. Thus, the city of Seoul will face another turning point entailing a shift from being both a manufacturing and service-oriented city to simply a service-oriented city.

Table 13

Changes in the  
Population Distribution of the Seoul Region  
1960 - 1980

	1960	1966	1970	1975	1980	Growth Rates (%)		
						1966-70	1970-75	1975-80
A. Seoul Region	5,194	6,913	8,894	10,924	13,302	6.30	4.11	3.93
1. Seoul	2,445	3,805	5,536	6,889	8,367	9.37	4.37	3.89
2. Periphery	2,749	3,108	3,358	4,035	4,935	1.93	3.67	4.03
a. Urban	543	845	1,174	1,816	2,777	8.22	8.72	8.49
Incheon	401	529	646	800	1,085	4.99	4.28	6.09
Suwon	91	128	171	224	311	7.24	5.40	6.56
Anyang	-	54	92	135	254	13.32	7.67	12.64
Euijeongbu	51	75	96	108	133	6.17	2.36	4.16
Seongnam	-	-	-	272	376	-	-	6.47
Bucheon	-	-	57	109	221	-	12.97	14.14
Other (Eups)	-	59	112	168	397	16.02	8.11	17.20
b. Rural	2,206	2,236	2,184	2,219	2,158	0.89	0.32	-0.56
3. Seoul Regional, Urban	2,937	4,650	6,710	8,705	11,144	9.17	5.21	4.94
B. Korea	24,989	29,193	31,435	34,681	37,445	1.85	1.96	1.53
Share by Seoul Region								
a. Total Population (A/B)	20.8	23.7	28.3	31.5	35.7			
b. Seoul Population (1/B)	9.8	13.0	17.6	19.9	22.3			

Note : Eups in the periphery are those with population over 50,000.

Source: National Bureau of Statistics, Economic Planning Board, Report on Population and Housing Census, 1960, 1966, 1970, 1975 and 1980.

In addition, because the plan divides Seoul into North Seoul and South Seoul and intends to disperse population and industries from the former to the latter, it may mark another turning point for the growth of Seoul in terms of the transformation of its internal spatial structure.

The reversal of the growth of Seoul resulting from the planned relocation of manufacturing industries out of Seoul may be called a planned polarization reversal. The reversal of the growth of North Seoul due to the planned population dispersal may also be called a "planned polarization reversal".

If Tokyo can be used as an example, Seoul may, unlike big cities such as London or New York, continue to grow. This may be largely connected with Seoul's Central Managerial Function (CMF). Even without much manufacturing employment, Seoul, like Tokyo, will continue to grow due to the enhancing effectiveness and strength of its CMF. Seoul's CMF effectiveness will be substantially strengthened in the future. This will lead to the continuous growth of Seoul.

Seoul may experience another turning point in connection with the planned development of Gwacheon, a small

urban area adjacent to the southern boundary of Seoul, and Banwol, a rural area located about 20 kilometers from the city's southwestern boundary. Gwacheon will be developed as an administrative city with population of about 50,000 to accommodate central government offices to be relocated from the center of Seoul after 1981. Banwol will be developed as an industrial city to accommodate industries moved from Seoul. Thus, development of both Gwacheon and Banwol will lead to a functional integration of areas presently located in the southern periphery of Seoul with the central part of the city. It also implies a southward spatial expansion of the Seoul metropolitan area.

The planned development of the Asan bay area, as the new industrial zone centered around the proposed second largest steel mill in Korea and related industries, will also have a great impact on the future growth pattern of Seoul.

The role and function of Seoul are extremely important in the process of Korean development, civilization, and even everyday life itself. However, planners in Korea underestimate the importance of Seoul in the process of national economic development. They tend to ignore the

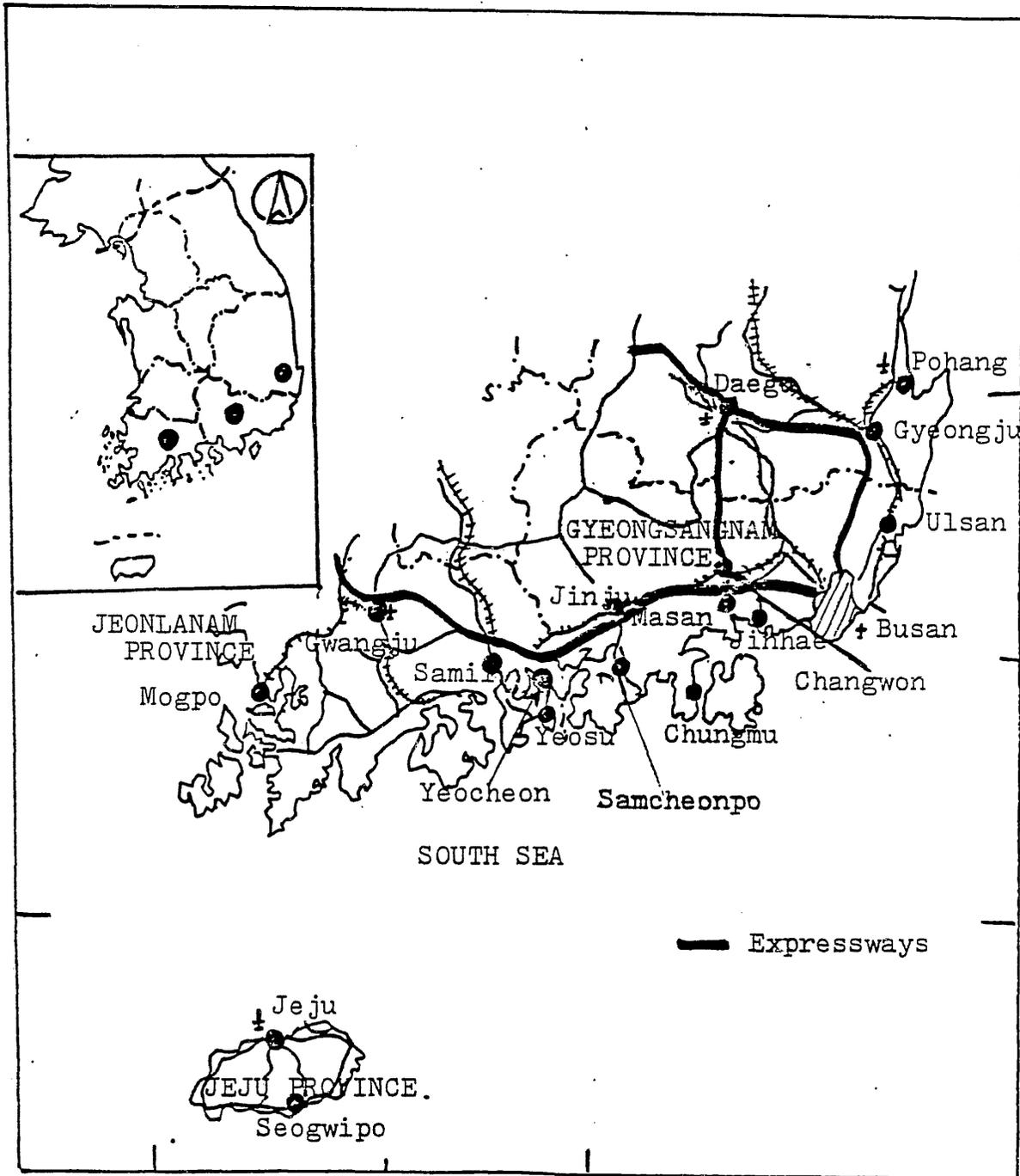
positive role of Seoul and dramatize the negative aspects of the rapid concentration of population and industries. This is reflected in past Korean policy measures that emphasize only the control of rapid urbanization and metropolitan growth. Thus far, various policy measures have been devised to control Seoul's growth but the policy measures will have to be undertaken to improve the management of Seoul.

#### C. The Southeastern Coastal Region

Much attention has so far been focused on growth in the Seoul area. But since the late 1960's, the southeastern coastal region has emerged as the country's major growth area. In many ways it was natural that this area should develop as Korea industrializes. It is the part of the country closest to sources of raw materials, most of which are imported, and to Japan and other foreign markets. It has good natural harbors and a mild climate. Unlike Seoul and its port of Incheon, undeveloped land is still available on the southeastern coast on which to locate large manufacturing facilities. Finally, it is a good location from a military viewpoint in that it is the most distant part of the country from North Korea, and was the only

Map 6

Map of the Southeastern Coastal Region



part of the country that was not overrun during the Korean War. Since the late 1960's, much of Korea's new heavy industry has located in this region. Prominent industries are oil refining and petrochemicals, other chemical industries, steel and shipbuilding. Reference to the accompanying map shows that the main cities in the region are Busan, Masan, Yeosu, Jinhae, Ulsan and Pohang. The region is bounded, as in Map 6, by Yeosu in the southwest and by Pohang in the northeast.

The growth and shifts of population in the region have been staggering. Most dramatic has been the growth of Ulsan as in Table 14. In 1960 it was Korea's 40th city with a population of 30,000. By 1980, it was 7th, with a population of 416,000, representing a compound annual population growth of 13.1 percent per year. Pohang rose from the 27th city to 17th in the 1970-1980 decade. Some cities such as Changwon and Yeosu are just beginning to industrialize and will undoubtedly grow rapidly in the 1980's.

During the 1970's, the growth of several cities in the region outstripped Seoul's. Between 1970 and 1980, Seoul's population grew 4.1 percent per year, whereas Busan grew 5.2 percent, Pohang 9.3 percent, Masan 7.1

Table 14

Growth of Cities in the Southeastern Coastal Region

(Unit: 1000s)

	1960 (A)	1970 (B)	1980 (C)	$\frac{C}{A}$
Pohang	60	79	201	3.4
Ulsan	30	159	418	13.9
Busan	1,163	1,881	3,160	2.7
Changwon	-	-	112	-
Masan	158	191	387	2.4
Jinhae	67	92	112	1.7
Choongmu	48	88	76	1.6
Samcheonpo	50	55	65	1.3
Yeosu	87	114	161	1.9
Total	1,663	2,659	4,692	2.8

Note : Changwon became a city in 1977.

Source: National Bureau of Statistics, Report on Population and Housing Census, 1960, 1970 and 1980.

percent, and Ulsan 9.7 percent.

There can be no doubt that manufacturing has been the driving force of recent growth in the region. Between 1966 and 1973, manufacturing value added increased 34.8 percent per year in current prices in Seoul. In Busan, the annual growth of value added was only 32.5 percent. But in Pohang it was 83.9 percent and in Masan 67.4.

#### 5. New Urban Administrative System

The government announced in late March a new urban administrative system which will be effective as of July 1, 1981. The major differences between the old and new urban systems are described below.

	<u>Old system</u> (as of 1980)	<u>New system</u> (as of 1981)
Number of special cities	1 (Seoul)	1 (Seoul)
Number of "directly administered" cities	1 (Busan)	3 (Busan, Daegu, Incheon)
Number of cities	38	46
Number of eups	204	188
Number of myeon	1,256	1,253

Table 15

Newly Designated Cities in Korea

Name of Cities	Area (Km <sup>2</sup> )	Population (1,000)	Location
1. Gwangmyung	36.47	145.8	Siheung county in Gyeonggi Province (Soha eup, Gwangmyungri, etc.)
2. Songtan	27.1	63.7	Pyungtack county in Gyeonggi Province (Songtan eup and 10 ris)
3. Dongducheon	87.0	96.4	Dongducheon eup in Gyeonggi Province (Dongducheon eup and 7 ris)
4. Taebaek	259.7	111.8	Samcheok county in Gangwon Province (Intergration of Hwangji and Jangsung eups)
5. Youngcheon	58.8	54.2	Youngcheon county in Gyeongbuk Province (Youngcheon eup and surrounding ris)
6. Gimhae	63.96	69.5	Gimhae county in Gyungsangnamdo (Elevation of Gimhae eup)
7. Namwon	43.35	57.4	Namwon county in Jeonbook Province (Namwon eup and 16 myeons)
8. Jeongjoo	27.52	66.7	Jeongeup county in Jeonbook Province (Elevation of Jeongjoo eup)
9. Geumseong	60.59	57.5	Najoo county in Jeonnam Province (Integration of Najoo and Youngsanpo eups)
10. Seogwipo	253.9	77.1	Namjeju county in Jeju Province (Jeju eup and Joongmon myeon)
Total	918.39	800.1	

Note: These 10 urban places will be designated as cities as of July 1, 1981.

Source: Ministry of Home Affairs.

The new urban system consists, as shown above, of 1 special city, 3 "directly administered" cities, 46 cities, 188 eup and 1,253 myeons. The 10 new cities to be designated as of July 1, 1981 are as shown in Table 15. The new system includes also the plan of relocating the provincial government of Gyeongnam province from Busan to the industrial city of Changwon in Gyeongnam province. With the elevation of the urban status of Daegu to a directly administered city, the area of Daegu city also will be expanded from 180 square kilometers to 460 square kilometers.

### III. Effectiveness and Consequences of Urban and Regional Policies

#### 1. Industrial Location Policies and New Industrial City

The government's determination to decentralize industry and people from Seoul and the confidence in being able to finance a grand new project worked together to bring forth during the economic boom of the 1970s the ideas of creating a new industrial city and a new capital city. The industrial city of Banwol, under construction 40 kilometers away from Seoul is planned to accomodate the industrial establishments to be dispered from Seoul, especially those which generate environmental nuisances and are also located in non-conforming site under the terms of the zoning ordinance of the City of Seoul.

The number of non-conforming to which relocation orders have been issued since 1976 is about 3,058. Out of the firms under relocation orders, 1,920 firms or 62,8 percent have actually relocated, as shown in Table 16.

It is interesting to note that a proportionately larger number or relocation orders has been issued to small-and-medium size firms which are likely to be more docile in following governmental directives.

Table 16

Relocation Order Issued and Actual Relocation

	1976	1977	1978	1979	1980	Total
Relocation Orders Issued*	186	187	242	1,813	613	3,058
Actually Relocated Firms (%)	180 (93.3)	172 (92.0)	229 (94.6)	1,114 (60.8)	225 (36.7)	1,920 (62.8)

\* Firms in non-conforming area by uses; commercial area 578 residential 2,258 conservation area 80 and others 147.

Even among firms received relocation orders, large firms have responded more slowly than small-scale firms.

As of November 1980, ninety-seven firms had moved in Banwol whereas about 7,000 workers were employed on the basis of either commuting from Seoul and other nearby cities, or were living in Banwol. Firms located in Banwol can be divided into two categories: relocated firms from somewhere (largely from Seoul) and newly located firms in Banwol.

Industrial establishments which have moved into Banwol are medium-sized ones as compared with the national average, as shown in Table 17. About 89 percent of the firm have between 20 and 299 employees which means that small firms of less than 20 and large firms with over 300 employees have shown a very low rate of relocation. Reasons for the difference of relocation rate between small and large firms may not be same. Small firms can not pay for the cost involved in relocation and can not survive without the externalities which they may enjoy in large metropolis like Seoul, while large firms may be able to stand against the government's relocation order through one means or another.

Contrary to its optimistic start, the whole project has stalemated because of the low rate of relocation and the sluggish sale of developed land to finance Banwol's continuing development.

Table 17

## Firm Size and Employment Distribution

Region \ size	Total	less than 20	20-49	50-99	100-299	300 and more
Seoul	11,724(100.0)	7,363(62,8)	2,434(20,0)	965(8,2)	706(6,0)	256(2,2)
Busan	4,399(100,0)	2,293(52,1)	1,118(25,4)	411(9,3)	406(9,2)	171(3,9)
Gyeonggi	6,937(100,0)	3,393(48,9)	1,614(23,3)	838(12,1)	792(11,4)	300(4,3)
Gangwon	796(100,0)	623(78,3)	86(10,8)	29(3,6)	44(5,5)	14(1,8)
Chungbuk	688(100,0)	493(71,7)	90(13,1)	41(5,9)	44(6,4)	20(2,9)
Chungnam	1,714(100,0)	1,139(66,5)	319(18,6)	116(6,8)	90(5,3)	50(2,9)
Jeonbug	822(100,0)	470(57,2)	202(24,6)	68(8,3)	46(5,6)	36(4,4)
Jeonnam	1,750(100,0)	1,292(73,8)	270(15,4)	91(5,2)	70(4,0)	27(1,5)
Gyeongbug	5,125(100,0)	2,840(55,4)	1,288(25,1)	462(9,0)	388(7,6)	147(2,9)
Gyeongnam	2,155(100,0)	1,231(57,1)	420(19,5)	178(8,3)	185(8,6)	141(6,5)
Jeju	154(100,0)	125(81,2)	17(11,0)	3(1,9)	9(5,8)	- --
Nation	36,264(100,0)	21,262(58,6)	7,858(21,7)	3,202(8,8)	2,780(7,7)	1,162(3,2)
Banwol	97(100,0)	10(10,3)	30(30,9)	32(33,0)	24(24,8)	1(1,0)

Table 18

## Firm Size by Employment in Banwol

	Total	less than 20	20-49	50-99	100-299	300 and more
Textile	13		5	5	2	1
Machinery	70	2	24	22	21	
First Metal	5	1	1	2	1	
Chemical	7	7				
Others	2			2		
Total(%)	97 (100,0)	10 (10,3)	30 (30,9)	32 (33,0)	249 (24,8)	1 (1,0)

From the start, the plan for the industrial city of Banwol had some intrinsic limitations which have contributed to the project's poorer performance.

Being different from the earlier heavy and local industrial estates where modern and capital intensive industries were newly located with heavy support of the government in terms of infrastructure investment and finance, Banwol was developed as a business venture by the development corporation, the Korea Industrial Estate Development Corporation with almost no support from the government. Consequently, the selling price of development land has become so high that small firms cannot afford the cost of relocation.

Secondly, local industrial development efforts should go beyond providing an appropriate environment for industrialists. The provision of a livable environment for new or relocated workers should be weighed as much as the industrialists requirements. Given a highly centralized system of government finance, it is nearly impossible to expect local government to bear the burden of additional social demands on the part of new employees. Substantial investment for the settlement of new workers should have been made by the national government.

From the viewpoint of policy effectiveness, it is a fundamental aim that a new industrial city would be developed as a self-contained community in which new employees will find work as well as settlement.

Beside the provision of incentives to attract industrialists, a new industrial city must appeal to workers as well as their dependents. Many of the new comers otherwise refuse settle down on a permanent basis in the region and are likely to drift back to a more prosperous and livable region if any chance is available. The problem is especially acute where new plants are built in a formerly rural and small village like Banwol which does not have the public facilities to accomodate an abrupt increase in new immigrants. A loosely organized housing market with sharply soaring rent and land price have resulted in the dislocation of the families of the new employees.

## 2. Planning A New Capital City

One of the most dramatic measures with regard to national spatial policy was the announcement of the initiation of planning for a new capital city. Capital cities embody and exemplify the nature of their nations and are a reflection of the wealth, organization, and power of the political entity. Some nations have poured considerable resources into constructing wholly new capitals in order to create an image of the nation as it hopes to in the future and to provide a source of national pride.

In the case of Korea, the reasons for considering shifting the capital to a new site is somehow different from that in other nations. The idea of constructing of a new capital city

arose from more immediate motivations. The first of these is national security. More than ten millions people are under the risk of direct bomb attack from belligerent North Korea, living only 40 miles away from the demilitarized zone. One out of every five Koreans is now living in Seoul, and the pace of immigration into Seoul has shown no prospect of slowing down. The locational disruption raised by the national territorial division has distorted the spatial efficiency of national development, as the over-concentration of people and industries in the capital city located at the north-western corner of the country has generated much more movement than would occur with a centrally located capital. Policy makers have strongly felt that external economies of scale in Seoul have already become negative and are expected to become aggravated as time goes on.

All of these facts have gradually combined to bring about the striking announcement that the capital would be moved. The implications of shifting the nation's capital, which has existed for six-hundred years would be enormous in terms of the spatial and socio-economic structure of the nation.

The proposed population of the new capital city would be approximately one half million when the city is completed. The location of the capital is to be near the center of gravity of the country. The location should be neutral in terms of regionalism and should be equally accessible from all parts of the country and, at least, facilitate the remodelling of the nation's spatial

organization. The momentum of shifting the capital city should be utilized to reduce regional disparities existing between Seoul and other regions. Although the motivation behind creating a new capital city has been political and to express the nation's grandeur in many countries, in the case of Korea it has to be understood as a part of the national spatial development strategy.

According to the preliminary plan for the new capital city, three stages of development are implicitly introduced in moving toward the target population of one half million as shown in Table 19. The first stage is dominated by construction workers through the period of construction. Tens of thousands of workers from rural areas and other cities will naturally trek to the designated site to participate in the building of this great and grand new city. This initial stage is to be followed by the stage of administrative specialization in which the local economy broadens to include government services, and deepens by extending forward or backward linkages of government-related establishments and by adding some residential services for the government employees and their families. The third and final stage is the stage of economic maturity in which the weight of government services in the capital's economy diminishes as the other sectors of the local economy fill out the range of business and consumer services.

The dynamics of urban growth may not be so simple. The impacts of a completely new capital city of one half million on the existing spatial pattern and the consequent changes in the socio-political structure would be greater than any other policy measures implemented so far.

Table 19  
Stages of Growth and Major Development Indicators  
of New Capital City

	First Stage	Second Stage	Third Stage
Population (persons)	75,000	250,000	500,000
Characteristics	construction- leading	Administrative- specialization	Economic maturity
Construction	Construction period	Transfer period	Full-fledged city
Development Area (Km <sup>2</sup> )	300	300	300
Built-up Area (Km <sup>2</sup> )	20	46	64
Persons Employed	46,600	133,400	203,300
Industrial Structure	100.0%	100.0%	100.0%
Agriculture	28.0%	7.5%	3.5%
Manufacturing	-	4.1%	11.3%
SOC & Service	72.0%	88.4%	85.2%

### 3. Impacts of Rural Policies on Urban Development

As far as national spatial policies are concerned, rural development has been ambivalent since the Independence from Japan after the World War II. Four alternative policies for rural development have appeared without being necessarily consistent over the period, a policy or another has been dominant at any one time. Rural development strategies have had nation-wide impact on the distribution of population and economic activities, especially on migration and regional economic disparities.

The first strategy is to raise agricultural productivity through increases in capital investment in the agricultural sector. This capital intensive method entailing the mechanization of agricultural production usually results in decreased demand for agricultural labor and consolidation of small farms into large farms, both of which tend to induce rural-to-urban migration. Korea's economy has been marked by little connectivity between the agricultural and non-agricultural sectors even if compared with the performance of most developing economies. A smooth transfer from a subsistence agricultural labor-surplus economy to an advanced industrialized economy has not been taking place, but the concentration on the mechanization of agricultural production

has brought a discontinuous shift from a labor-surplus for the nation as a whole to a premature labor shortage in rural areas, accentuating the labor surplus in urban areas.

The second policy instrument which requires specific attention is the New Community Movement. This aims at improving the welfare of the rural populace as well as to increase agricultural productivity through the sequential and progressive introduction of comprehensive rural development. This strategy of rural development would presumably slow rural-to-urban migration. But this presumption has not been substantiated by in-depth inquiry into the magnitude and selectivity of migration.

In the late 1960s, after ten-year indulgence in aggregate economic growth, it was strongly felt in Korea that there would be great difficulty in enhancing the general welfare of the lower stratum of the nation's population and of reducing distributive inequalities without promoting the agricultural sector. Although the New Community Movement was not the very first such effort, it was instituted as a nation-wide popular movement in 1971. The New Community Movement was initiated as a reaction against the macro and aggregate national planning approach.

The top-down conceptualization of macro-aggregate national development, its technical sophistication and the lack of relevance to daily life were accepted by the majority of people. The deteriorating rural situation widened the gap between the modern industrial sector and the traditional agricultural sector. This became a major source for the rapid shift of rural population into a few large cities. The New Community Movement heavily relies on the materialization of the idle labor force, the mobilization of marginal resources and intermediate technology. Achievements was very striking in the early phase but, as time goes on, the estimated multiplier effect of increased government inputs seems to have declined from 9.5 in 1972 to 1.9 in 1977, as shown in Table. 20.

In spite of the difficulty of separating the net effect of the New Community Movement from other policy instruments, it is generally accepted that the New Community Movement has made a significant contribution to slowing down out-migration and even to stimulating return-migration through the enhanced morale of rural population and increased income.

Thanks to the success of the New Community Movement and other development policies geared to improving the rural areas, the rural economic situation in terms of average household income is at least advanced to the level of urban areas even though socio-cultural amenities are still lagging

behind the national average. Average household income in the rural areas was 67.1 percent of that in the urban areas in 1970 but average income per rural household is getting ahead of urban areas by 100.4 percent in 1976 as given in Table 21.

The third policy instrument has been to encourage the development of the intermediate market towns or rural centers. This instrument, if carried out in conjunction with a program of comprehensive rural development, will greatly contribute to more balanced regional development and is expected to lower migration to the large cities by diverting migratory flow from large cities to the intermediate market towns. In a highly urbanized and densely populated country like Korea, it is unrealistic to separate the rural from the urban areas. It is also very dangerous to view a village as an isolated island for integrated rural development. The need for a spatial development strategy to integrate a number of villages into a meaningful cluster as a development unit and to further link the group of villages with a low-order urban center is strongly felt. Since 1976 the Ministry of Home Affairs has introduced policy instruments in this regard: the Village Cooperative Scheme and the Small Town Revitalization Program. The Village Cooperative Scheme was introduced to make it possible for a group of village to undertake general and specific projects because one village had become too small a unit to carry out its own project in terms of scale economies.

Table 20

## Government Support and Achievements of the NCM

(Unit: 1,000 Million Won)

	1971	1972	1973	1974	1975	1976	1977	Total
Government Support (A)	41	33	215	308	1,653	1,651	2,460	6,361
Estimates of Achievements* (B)	122	313	984	1,328	2,957	3,226	4,665	13,547
B/A	3.0	9.5	4.6	4.3	1.8	2.0	1.9	2.1

\* included the central and local governments

Source: Ministry of Home Affairs, Saemaul Undong, 1978, pp. 42-44.

Table 21

Comparison of Rural and Urban Household Income  
by Years

Unit: 1,000 Won

Years	1970	1972	1973	1974	1975	1976
Rural Household Income (A)	255.8	429.4	480.7	674.5	872.1	1,156.3
Urban Household Income (B)	381.2	517.4	550.2	644.5	859.3	1,151.3
A/Bx100	67.1	83.0	87.4	104.6	101.6	100.4

Source: Ministry of Agriculture and Fisheries, 1978.

There are approximately 550 small towns in Korea with populations ranging from 3,000 to 5,000.

These small towns are quite evenly distributed over the country, and are being selectively revitalized to provide basic needs that cannot be supported by a single village and or through multi-village cooperative. Basic rural needs, which cannot be provided locally should be accessible within reasonable distance. Each village cannot realistically be provided with services and facilities such as a middle school, hospital and similar large public facilities for its sake alone. If rural services are to be made easily accessible in terms of monetary and time costs, there would be no serious problem whether services and facilities are located within or outside the village. It is therefore necessary to promote the importance of low-order centers to integrate the urban core and rural periphery through comprehensive rural development. The small town revitalization program is still in an initial stage. Since the meager financial resources of local government do not permit a substantial investment in the small town revitalization program, it is felt that the program has not had a visible impact on out-migration from rural areas. Rural development will succeed, only when the rural sector is reduced in size and the urban sector is more effectively integrated with it.

#### 4. National Land Use Policies

As mentioned earlier, norms and instruments of the Korean regional planning have had particular relevance for the planning and management of national land. By the provision of the City Planning Law of 1971, the Ministry of Construction has designated fifteen Development Retriktion Zones (green belts) around major urban areas to preserve productive agricultural land from urban sprawl and to promote natural amenities. As of 1980, the total area covered by the zones 5,046 square kilometers, or approximately 5 percent of the nation's land. Twenty-two cities out of a total of 40 cities are circumscribed by the green belts.

Another revolutionary measure concerning the management and planning of land was the enactment of the National Land Use and management Law of 1974. By the Law all areas of national land are subject to zoning plan and the government has the right to declare the base land price by which the government can purchase land at the base price on the date of declaration and to designate a special regulation area where there is a high potential for land speculation. Once a special regulation area is designated, a higher rate of transfer tax on the sale of land will be levied. A variety of techniques for recapturing windfall profits were also built in the Law.

With the increased regulation of land use in recent years,

harsh land use controls are imposed. As far as Korea's regional policy is concerned, the legal bases are the Comprehensive National Land Development Planning Law of 1963 and the National Land Use and Management Law of 1974. These are the most important two legal devices which have made Korea's regional planning workable at the practical level.

#### 5. Effects of Non-spatial Policies on Urban Development

The most important nonspatial policy that has had great impacts on urban development in Korea appears to be the Korea's national development strategy of export-oriented industrialization itself. Export industries in Korea are mostly manufacturing industries and depend heavily on foreign countries for both raw materials and markets. This was especially true in the early 1960s when Korea's rapid industrialization just began. As international ports play important roles in the development of export industries, manufacturing industries catering to foreign markets tend to be located close to the large cities having good international ports such as Incheon and Busan. Thus the rapid development of the Seoul-Incheon area the Busan region could be explained to a substantial degree by the Korea's national development strategy itself.

Because of the Korea's export-oriented industrialization strategy, development of other cities also is affected greatly by the availability of international ports. Examples are cities in the south-eastern coastal region such as Pohang, Ulsan, Masan, Changwon, Yeosu and Jinhae. The rapid growth

of many of these cities is due largely to the development of heavy manufacturing industries relying heavily on foreign countries.

Other important nonspatial policy that has had great impacts on urban development in Korea may be the financial subsidy policy for export industries. Since the beginning of the export-oriented industrialization strategy in the early 1960s, the government provided export industries with various financial subsidies which resulted in the further growth of urban areas having a large number of export industries. This financial policy contributed to great extent toward increasing discrepancy in growth rates between industrial cities and others.

The third important nonspatial policy may be the social overhead capital policy. Because of the export-oriented industrialization strategy, the government adopted the policy of allocating as much investment resources as possible to, in Hirschmanian terminology, the directly productive activities. The investment resources allocated to social overhead sector are only those closely related to productive activities. The result is that cities having a large number of export industries are able to obtain more investment resources than other cities.

Other nonspatial policies include the education policy that encourages development of mainly universities in major regional centers, and the fiscal policy which mainly discourage the location of firms in large metropolitan areas. But it is generally understood that those educational and fiscal policies have not had much impacts on the growth or control of congestion of large cities.

## 6. Educational and Service Sector Policies

Among educational and service sector policies having spatial implication, the two policies seem to have special interest with regard to urban and regional development in Korea. They are the dispersal program of government offices and range of measures under the name of the so-called educational decentralization program.

The government office dispersal program is not very new. It has been frequently expressed in government circles and by regional planners since 1964. But, so far, actual relocation have been that the Central Official Training Institute has been relocated in Taejon near the geographical center of South Korea. A new research and university town is being built in the suburb of Taejon to accomodate the Ship-building Institute, the National Oceanographic Research Institute, the Precision Machinery and Mechanic Center and Chungnam National University. A couple of government agencies, which are in Seoul, are scheduled to be dispersed, although the details have not been materialized for full implementation.

The faculty exchange program was initiated in 1973 to reduce educational disparity between the universities in Seoul and local universities by means of exchanging

faculty on a voluntary base, The implications of the program is not simply to exchange faculty numbers but to discourage the movement of high school graduates in local provinces to the universities in Seoul, where better qualified faculty members are known to overly concentrated. Making them available at the local universities is intended to reduce the incentive to enroll in universities in Seoul.

Another educational measure concerning regional development is the creation of university advancement districts. The Ministry of Education promulgated administrative measures for reducing school disparity and controlling over-concentration of higher educational facilities in Seoul in 1973. These measures are intended to restrict movement to universities across provincial jurisdictions from where the applicant's high-school is located. Previously, the high-school graduates were able to go any universities in the nation, if they passed an entrance examination given by individual universities. According to the new measures, high-school graduates are given a limited choice of two provinces. After high-school graduates wanting to advance to the university have passed a nation-wide qualification examination, they can apply for the entrance examination to a university in the provinces where they have previously registered. These complicated measures are intended to countercheck the concentration of university enrollment in Seoul.

The relationship between education and internal migration

has been discussed from two aspects; the influence of education on migration and the adaptation of the educational system caused by the changing pattern of population distribution. The expansion of educational institutions has been seen as aggravating internal migration, especially from rural to urban areas and from small-and-medium size cities to large cities.<sup>6/</sup> Although the government lacks accurate knowledge of the results in the absence of corrective efforts, policy measures initiated by the Ministry of Education have been implemented to tackle the influx of population into the largest cities, especially into Seoul.

#### 7. Intra-Metropolitan Area Policies

Traditionally many manufacturing industries were located in the centre of Seoul. The city shows the remnants of industry right in the middle of its central business districts.

Many industrial establishments were there before the modern concept of land use controls was introduced, thereby generating many critical problems such as traffic bottlenecks and environmental hazards. From such new concerns the dispersal program of the so-called non-CBD activities has been introduced. Since the first comprehensive development plan for Seoul was adopted in 1966, repeated emphasis has been given to the planned growth of subcenters which are expected to gear to a multi-nuclei

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<sup>6/</sup> Sang-Chuel Choe, "Education and Population Migration", in Korean Educational Development Institute ed., Population Dynamics and Educational Planning, 1974, pp. 187-203.

city and to check the on-going growth of the central city. But the pace of development and attractiveness of those planned sub-centers never effectively compete with the central city.

Non-CBD activities have been categorically defined as follows:

- 1) activities generating excessive traffic and population movement,
- 2) manufacturing establishments under non-conforming uses,
- 3) facilities causing environmental pollutions like noise, dust, fumes and noxious odors,
- 4) activities having a high risk of industrial disasters such as fire and explosion,
- 5) non-CBD locational requirements in terms of marketing and distribution.

According to the above criteria, manufacturing establishments and other non-CBD activities were extensively filed for relocation as indicated in Table 22. As expected, the dispersal program of non-CBD activities will continue to face many problems in implementation. Spatial inertia and uncertain business perspectives on the part of enterprenuers make it difficult for the government to push the program with certain mandate. Extensive analysis has been made in search of locational rationality and supportive measures for the pursuation of eligible relocators. The city government has taken initiative of looking for a site of relocation and has negotiated with the representatives of different business groups, offering a favorable terms of selling

Table 22  
Classification of Non-CBD Activities

Sectors	Activities	No. of Establishments
Wholesale and Distribution	Automobile Parts	1,750
	Steel & Steel Products	839
	Tools & Equipments	2,921
	Building Materials	377
	Bulky Second-hand Goods	124
	Chemicals & Pharmaceuticals	160
	Electrical and Electronic	1,100
	Packing and Packing Materials, Paper and Paper Products	89 920
Manufacturing	Printing	537
	Garment and Apparel	5,648
Transportation related Activities	Automobile Repair	104
	Second-hand Automobile Row	64
	Inspection	10
	Freight Terminals	2
	Bus Terminals	6
Agricultural and Fishery Products	Grains	240
	Fish	35
Educational Facilities	Training Institutes	39
	Schools	34
Energy related Facilities	Gas Stations	18
	Propane Gas Stations	4
	Soft Coal Distribution	2
Markets	Wholesale Markets	38

Source: Seoul Metropolitan Area Study Center, A Study of Relocation on Non-CBD Activities in Seoul, The City University of Seoul, 1978 and Korea Environmental Planning Studies Institute, Survey of Activity Systems in the Central Business District of Seoul, 18 1978.

publicly-owned land and the provision of infrastructure facilities with priority. Locational preference of business groups has been given a prime consideration. However, negative attitude and slow response to the program is prevailing among most business groups which do not have ability to take the burden of cost involved in relocation and of which locational advantages heavily rely on the very nature of urban economies endowed by the central business district. Indiscriminated push for the program will cause economic and spatial disorder in the short-run.

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