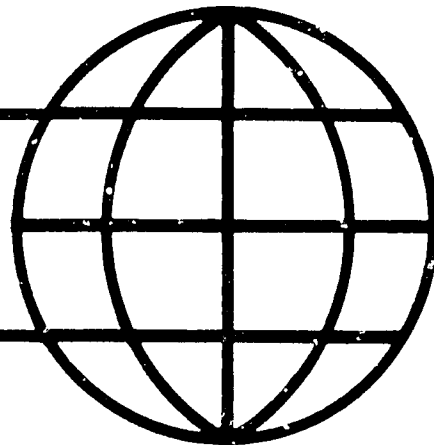


**COOPERATIVE AGREEMENT ON HUMAN SETTLEMENTS
AND NATURAL RESOURCE SYSTEMS ANALYSIS**

**INTERMEDIATE CITIES' ROLE IN INDUSTRIAL DECENTRALIZATION,
EMPLOYMENT GENERATION, AND ECONOMIC DEVELOPMENT IN SOUTH KOREA**

DENNIS A. RONDINELLI

Regional Cities Project
Clark University/Institute for Development Anthropology
Cooperative Agreement (USAID)



Clark University
International Development Program
950 Main Street
Worcester, MA 01610

Institute for Development Anthropology
Suite 302, P.O. Box 818
99 Collier Street
Binghamton, NY 13902

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South Korea has been described as one of the "economic miracles" of the last quarter century. It has had, over the past two decades, one of the fastest growing economies in the world. It has industrialized quickly, provided increasing incomes to the majority of its people, and distributed the benefits of economic growth relatively equitably. Korea is also one of the most rapidly urbanizing countries in the developing world. In the past 50 years it has gone from a predominately rural country to a highly urban one.

Korea has not only experienced rapid urbanization and industrialization over the past 20 years, but also a fundamental transformation in its urban structure. During the 1960s and early 1970s the government's policy of promoting export-oriented, capital-intensive manufacturing in and around Seoul created a "primate city" urban structure and resulted in a heavy concentration of industrial activities and employment in the capital region. Seoul grew so large in population size and share of modern productive activities as to dominate the country's urban settlement system and the national economy. The geographically concentrated pattern of investment generated regional disparities in income and wealth; encouraged high levels of rural-to-urban migration, with the large majority of migrants going to Seoul; and created security hazards for a country with a hostile political regime less than 50 miles from its capital.

The Korean government pursued a number of development policies in the 1970s to distribute the benefits of economic growth more

equitably, to stem the rising tide of migration to Seoul and to generate employment for people living in regions outside of the Seoul metropolitan area. It sought to decentralize its industrial structure and to strengthen the role of intermediate cities in order to attain these objectives. A combination of incentives and regulations were employed to control population growth in and disperse industries from Seoul. At the same time, the government used its own investments in overhead capital, social services, physical facilities and directly productive activities to make secondary cities more attractive for both large and small scale industries. A complex package of agricultural and rural development policies, price and wage controls, land use regulations, industrial estate programs and infrastructure investment and location policies were used to build the capacity of rural towns and intermediate cities to absorb larger numbers of people and to support productive activities (Kim and Donaldson, 1979; Park, 1981).

As a result, intermediate cities in Korea are now more numerous and more heavily populated than in most other developing countries. While about one-quarter of the urban dwellers in developing nations live in small towns of less than 20,000 people, less than 2 percent of Korea's urban residents can still be found in such places. But about 82 percent of Korea's urban dwellers now live in cities with 100,000 or more residents, compared to an average of about 64 percent in other developing countries (Song, 1982).

Moreover, the economic structure of secondary cities in Korea has changed rapidly over the past two decades. Cities that were

primarily service and commercial centers during the 1960s are now more diversified and many have become specialized in manufacturing and commerce. The growth and diversification of intermediate cities has helped to decrease the primacy of Seoul and to create new employment opportunities for people living outside of the national capital. Moreover, as one recent study (Song, 1982: 32) of small and intermediate cities in Korea points out, they play

...extremely important roles as rural growth centers in the process of rural development. They provide rural areas with markets, agricultural inputs such as fertilizers and farm machinery and urban services including education, medical care, etc. ... Many small and intermediate cities in Korea also play important roles in the development of "folk industries" or "native industries" such as ginseng production, wooden products, stone products and some textiles. They are essential for the development of small and intermediate industries in local areas, which are mostly non-export industries.

Intermediate cities have also been the places where the government has concentrated its investment in social, health, educational and other services to reduce the disparities in living conditions between Seoul and the rest of the country.

Some analysts (Richardson, 1977) believe that Korea is now on the verge of "polarization reversal" -- a process in which the level of primacy of Seoul will steadily decline and a hierarchical distribution of cities will emerge. As this transformation occurs, the capacity of intermediate cities to absorb population and perform important regional and national development functions is expected to expand (Rondinelli, 1983). The increasing number, size and productivity of intermediate cities could provide greater access for people living outside of the Seoul and Pusan metropolitan areas to

jobs, educational, health and other social services, urban facilities and amenities, and productive resources. A more diffuse pattern of urbanization could also contribute to creating a stronger internal economy and to expanding domestic demand for goods and services that now heavily depend on export markets (Rondinelli and Ruddle, 1978).

Thus, Korea offers one of the few cases of a developing country that has used intermediate-sized cities as an instrument of land development policy aimed at decentralizing economic activities, promoting employment in areas outside of the national capital, and balancing the urban settlement system.

This paper examines the changes that have taken place in the urban structure of Korea, especially at the intermediate level, over the past quarter of a century. It describes policies that were formulated to deal with problems of an economy that was becoming more dualistic, and a spatial system that was rapidly polarizing, during the 1960s. It assesses the effects of Korean government policy from 1960 to 1980 in creating a more balanced pattern of urbanization and in promoting economic activities and employment opportunities in secondary and middle-sized cities throughout the country. Finally, it explores the roles that intermediate cities now seem to be playing in industrial decentralization, employment generation and economic development, and the implications for future spatial development policy in Korea.

ECONOMIC DEVELOPMENT AND URBANIZATION POLICIES IN

KOREA SINCE THE EARLY 1960s

During the 1960s and 1970s Korea was one of the world's fastest growing economies, with an average growth rate in GNP of about 10 percent a year. Real percapita income tripled and employment grew at 3.9 percent a year, a growth rate substantially higher than that of the labor force. The manufacturing sector grew by 18 percent annually. Manufacturing's contribution to GNP doubled in a fifteen year period from about 15 percent in 1960 to about 30 percent in 1975. Exports increased by an average of 33 percent a year during the same period, rising from about \$41 million at the beginning of the 1960s to more than \$8 billion by the mid-1970s (Hasan and Rao, 1979).

Moreover, Korea has been one of the few developing countries to achieve rapid economic growth with a relatively equitable distribution of income. It has avoided many of the adversities that arose in other developing countries from the wide disparities in income and wealth between urban and rural areas and among regions. The widespread distribution of the benefits of growth has been attributed to a number of factors. Among them are the country's small physical size; its relatively homogeneous society and culture; the military threats of a nearby hostile political regime; and the successful land reform programs that were carried out prior to its period of rapid economic growth. National policies sought to maintain equitable terms of trade between agriculture and other

sectors and to reduce disparities between urban and rural wages. Heavy investments were made in education; and programs were created to improve productivity and living conditions in rural areas. A determined and developmentally-oriented political leadership worked to strengthen the skills and to develop the managerial capacity of an organized and disciplined labor force (Rao, 1979; Golladay and King, 1979; Harris, 1979).

Beginning in the late 1970s, the government sought to distribute economic activities widely outside of the Seoul Metropolitan Area in secondary and intermediate cities. This policy also seems to have played an important role in influencing the pace and pattern of economic development. As in most other developing countries that were pursuing the goals of rapid economic growth during the 1950s and early 1960s, Korea did so by concentrating its investment in industry and modern facilities in the largest urban center. Seoul had most of the social overhead capital and directly productive activities in the country, was the seat of government and political power and offered the highest returns on investment due to the economies of scale and proximity that it provided for most economic activities.

Observers note that the heavy concentration of investments in infrastructure and productive activities in and around Seoul--and later to some extent in the Pusan metropolitan area--followed logically from an economic development strategy based on manufacturing for export. "Since Korea has no powerful foreign exchange-earning primary export items," Kim (1978: 60) pointed out, "vigorous manufacturing export expansion is necessary to finance

economic development. Furthermore, almost all the raw materials have to be imported. Thus, efficient industrial location [was] limited to the coastal area where port facilities [were] available. During the 1960s industrialization was greatly concentrated in around Seoul and the Pusan area where two major ports of Korea existed."

It was thought that the concentration of investment in the largest cities would not only promote rapid economic growth but also, through "spread" and "trickle-down" effects, spread the impulses of economic development to other cities and to rural areas. The results, however, were that Seoul's growth was greatly reinforced by rapid economic expansion and it quickly became the dominant city in the national space-economy. By 1968, Seoul alone was contributing more than one-quarter of national product. Pusan accounted for another 9 percent. Almost 70 percent of the manufacturing value-added was generated by plants in these two metropolitan areas.

Moreover, the high levels of investment made in export industries left agriculture weak and stagnant. Food had to be imported, creating balance of payments problems. With rapid industrialization in and around Seoul, the disparities in income between farmers and the urban labor force began to rise sharply. Between 1963 and 1969, the income of urban workers quadrupled while that of farmers barely doubled. The income disparities and expanding job opportunities in Seoul encouraged high levels of migration from the rural areas to the capital.

Korean planners argued that the rapid growth of population and the

heavy concentration of modern economic activities in the national capital not only created severe social problems, but also diseconomies of scale that might slow the rate of national economic growth. "The excessive concentration of population and industries centered in the [Seoul Metropolitan] region resulted in relative stagnation in other regions," Ministry of Construction (1972) planners pointed out, "and a re-examination must be made in terms of the balanced use of the whole land area [in] plans for the location of industries and public facilities."

Although many of Korea's economic policies did not address problems of urbanization or spatial development directly, a fairly consistent set of spatial development objectives were reflected in Korean land development plans since the late 1960s. The goals have been to: 1) slow the pace of rural to urban migration generally; 2) slow the rate of urban population growth in Seoul and to a lesser extent in Pusan and Taegu, the country's second and third largest metropolitan areas; and 3) overcome the most serious and visible disparities in development among regions.

As a former head of the Economic Planning Board has pointed out (Nam and Ro, 1981: 652), "the most pressing demographic problem of the 1970s in Korea was not total population growth, but migration to the three major cities--Seoul, Pusan and Taegu. The problems of overcrowding were most acute in Seoul where population increased from somewhat over 4 million in 1966 to about 8 million in 1979. How to stem the massive flow of people into cities became a top priority issue."

The goal of creating a more diffuse pattern of urbanization and a more equitable distribution of economic activities among regions did not entirely arise from problems associated with Seoul's size, but was inextricably related to other economic and political issues. Indeed, Rivkin (1981: 3) points out that

It is not the present intractability of the primate city problems that motivates Korea's concern for building up secondary cities, but rather three quite specific objectives. One is the lesser social cost of coping with urban expansion at a scale smaller than that which continued growth of the largest cities would demand. Second is the desire for a more balanced pattern of growth throughout the country-- utilizing resources so far undeveloped and interrupting the self-propelling trend of regional disparity... . Third is the matter of national security, with so much of the nation's population and economic activity concentrated in Seoul vulnerable because of its nearness to the border with North Korea.

Thus, the Ten-Year Comprehensive National Land Development Plan of 1972 set out policies to 1) promote the economic development of all regions by encouraging a dispersed pattern of urbanization; 2) achieve a hierarchical system of cities, regional self-sufficiency and balanced urban development by fostering industrial and commercial activities in medium-sized cities and by promoting specializations in smaller cities that were appropriate to their regional characteristics; 3) encourage "optimal production decentralization" by providing public facilities and amenities in medium and small scale cities; and 4) reverse the polarized development pattern by building up the economic capacity of regional urban centers.

To achieve these goals, the government used four major sets of policies: agricultural and rural development; national land use plans

and regulations to inhibit undesirable development in Seoul; financial and other incentives to decentralize industries from the Seoul metropolitan area to secondary and intermediate cities; and investment in infrastructure and services in secondary and smaller cities.

Agricultural and Rural Development

The primary means of reducing rural to urban migration was through agricultural and rural development policies that aimed to narrow urban-rural income gaps and provide amenities in rural villages. Agricultural programs included price supports, grain subsidy programs, credit for fertilizer, the introduction of high yielding seed varieties, expansion of irrigation, land reclamation, promotion of farm mechanization and wider distribution of fertilizers and insecticides (Nam and Ro, 1981). The land reforms of the late 1940s and early 1950s ensured a wide distribution of land ownership and virtually eliminated tenancy. This allowed the agricultural development policies--and other economic growth programs as well--to benefit a large majority of the population.

Substantial investments were made in land and water resources development. Double cropping methods were introduced and used on a large amount of cultivated land. And price controls were established to keep production at pace with increases in demand. As a result, between 1966 and 1976, foodgrain production increased from 6.7 to 7.9 million tons a year at a time when both the amount of cultivated land and the percentage of the labor force in agriculture were declining.

Value added in agriculture grew by an average of 4 percent a year from the mid-1960s to the mid-1970s (Harris, 1979).

The village improvement and rural motivation campaigns conducted through the Saemaul Undong program were even more important to achieving the government's goal of slowing rural to urban migration. The program, which was organized and strongly supported with financial resources and technical assistance by the national government, sought through self-help projects to provide basic infrastructure and facilities, adequate housing and environmental improvements in "underdeveloped" villages. The program intended to strengthen indigenous leadership, motivate villagers to work together on community projects and instill a sense of competition and community spirit in poor villages. It assisted local leaders and village groups to organize income-producing activities and increase agricultural productivity in "developing villages," and to diversify the economies of and provide new job opportunities in "developed villages" (Rao, 1978; Kim and Kim, 1977; Whang, 1981).

By 1976, the Saemaul movement had been responsible for building more than 40,000 km. of village roads, nearly 43,000 km. of farm roads, and 57,000 small bridges. It accounted for the construction of more than 28,000 agricultural water projects, 118,000 village cooperative facilities and 16,000 village electrification and communications projects. More than 15,000 housing and environmental projects were undertaken and hundreds of thousands of farmers were able to make structural improvements in their houses or to build new homes.

Moreover, the program allowed villages to construct more than 150,000 well and sanitary water projects and nearly 2,000 marketing facilities. More than 450 rural savings programs were also created. Over 10,000 land development projects had been undertaken and more than 170,000 village leaders had received community development training along with 20,000 social leaders, 68,000 central government officials and nearly 50,000 villagers. Between 1971 and 1978, the Korean government mobilized the equivalent of nearly US\$3 billion for investments in the more than 36,000 villages that were participating in the program by 1979.

Saemaul Undong attempted to increase rural employment by making new job opportunities available in rural villages through agricultural projects and "Saemaul factories"--small-scale industries located in rural areas; by increasing rural villager's motivation to work; and by expanding the market for agricultural and small industry goods. Surveys estimate that between 446,000 and 448,000 households earned income from Saemaul projects every year between 1973 and 1979. By 1979, about 6 percent of the rural labor force was employed in "Saemaul factories" (Whang, 1981).

By criteria used to classify villages at the outset of the program, more than half of the nation's villages were "underdeveloped" and only 7 percent were "developed" in 1973. By 1978, using the same criteria, all of the underdeveloped villages had been improved and upgraded in rank and 67 percent were classified as "developed."

National Land Use Planning and Development Regulations

The government adopted a National Land Development Plan in 1972 to reduce regional disparities, slow the growth of Seoul and create a more balanced pattern of urbanization and economic development. The Plan sought, over a ten-year period, to increase employment opportunities, develop human resources, increase levels of education and skill, control population growth, provide infrastructure needed for industrial development, accelerate housing construction and improve social services in regions outside of the Seoul Metropolitan Area.

To reduce regional disparities and promote widespread economic development, the government divided the country into four development regions, based primarily on natural and water resource characteristics. The four regions encompassed the Seoul metropolitan area, the Pusan metropolitan area, a Southern Industrial Development Area around the city of Gwangju, and the middle and northeastern sections of the country. These four regions were further subdivided into 8 intermediate development regions based on their degree of social and economic homogeneity. These 8 sub-regions were again divided into 17 "growth pole" areas each containing a large or intermediate-sized city and a rural hinterland or periphery (Kim, 1978). The government earmarked special investments for each type of urban center. Transportation corridors were created to link metropolitan regional centers with each other and with Seoul by highway, rail, sea and air, and by energy and fuel pipeline

networks. (See Figures 1 and 2.)

The objectives of the plan, as Kim (1978: 65) points out, were to:

1) Develop new regional growth poles around industrial complexes and corridors formed by major highways and thus reduce the concentration of people and economic activities in the two major metropolitan centers.

2) Organize the national space-economy into a system of regions each encompassing a core city and a rural periphery. With their economies diversified and strengthened through the Industrial Estates Development Program, the core cities would act as "growth poles" of industrial development for their sub-regions. Rural communities in their periphery or hinterlands would benefit from agricultural development policies and from Saemaul Undong.

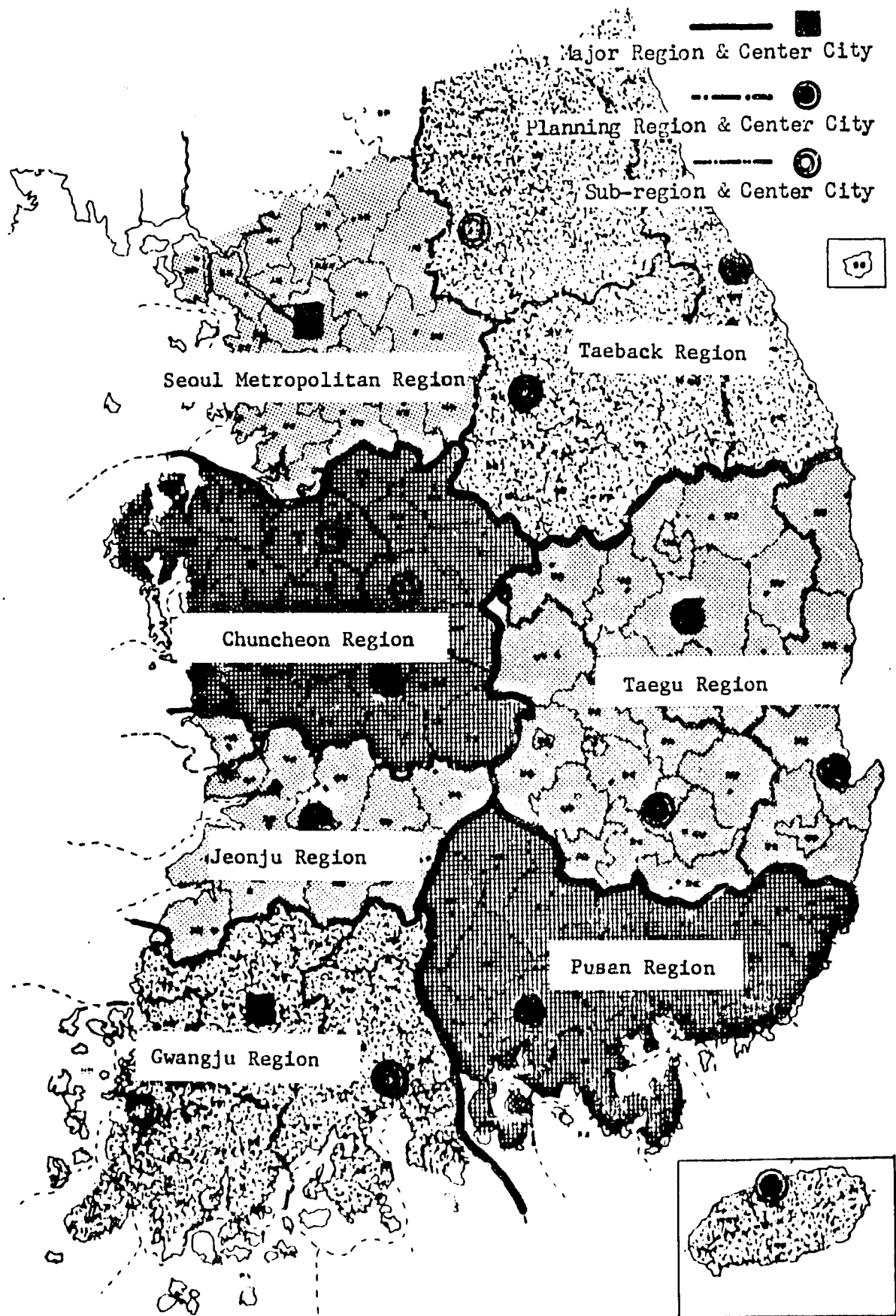
3) Increase social overhead capital investments in industrial complexes and major urban regions.

4) Develop intensively the four major river basins in order to exploit domestic natural resources and increase agricultural production.

5) Promote stronger linkages between agriculture and industry in rural areas by locating small and medium scale industries in appropriate Saemaul villages and by developing in others service-oriented activities such as tourism.

6) Increase accessibility and efficiency in the transfer of goods,

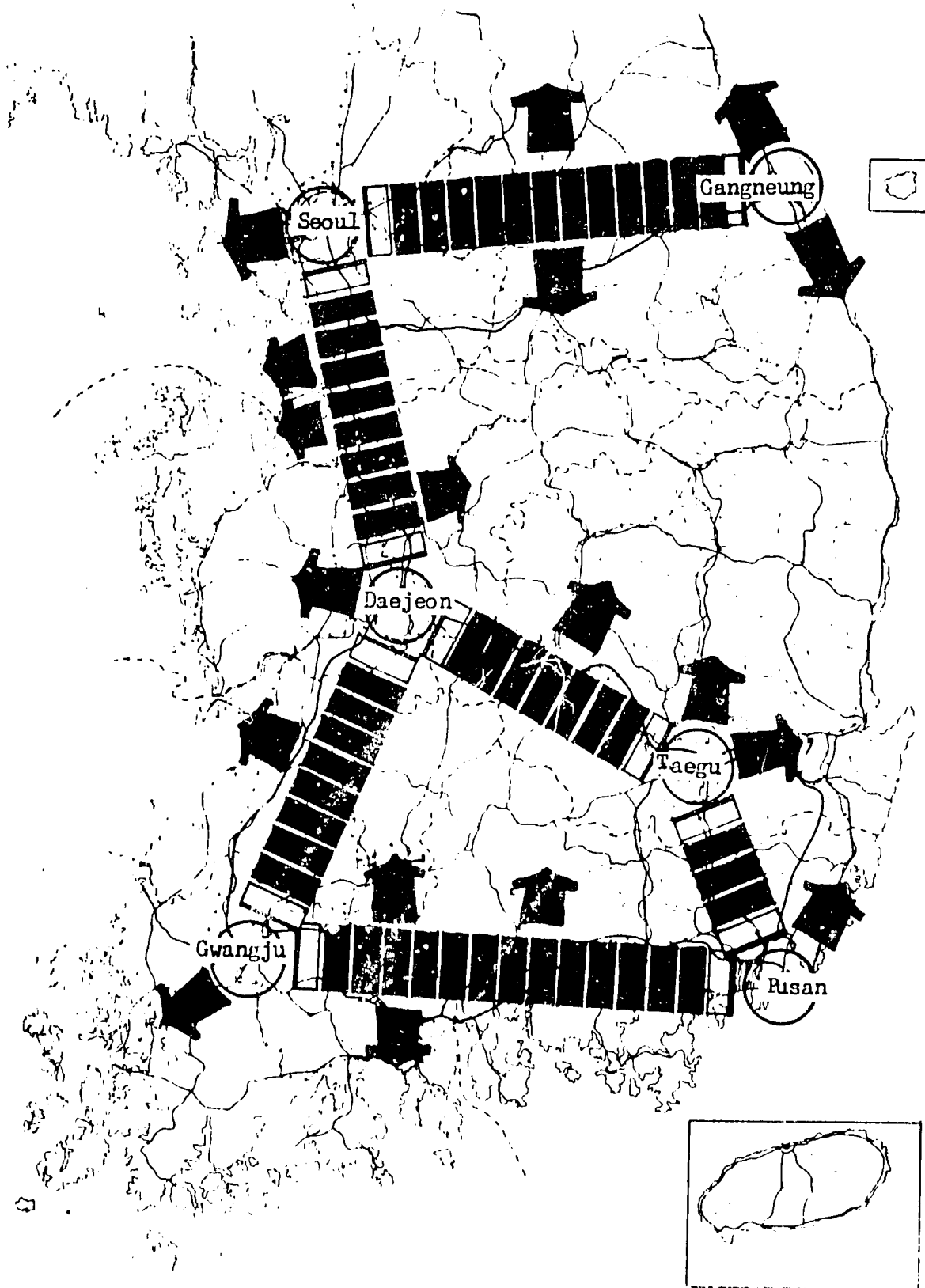
FIGURE 1
THE EIGHT NATIONAL PLANNING REGIONS



Source: KRIHS, 1980.

FIGURE 2

TRANSPORTATION CORRIDORS FOR REGIONAL DEVELOPMENT



Source: KRIHS, 1980.

services and information through development of modern transportation and communications facilities in intermediate and small cities in ways that would be compatible with or promote the new spatial structure of the economy.

As Kim (1978:65) notes, the need "to distribute the fruits of economic growth among regions and between rural and urban areas," was strongly emphasized throughout the plan. The policies attempted to guide and direct national land development in a way that would "integrate large cities, medium, and small cities and surrounding regions" into a cohesive settlement system (KRIHS, 1980).

During the 1970s, the Korean government also experimented with a number of programs for restricting the flow of migrants to the capital and redirecting people, and educational, industrial and commercial activities to secondary urban centers. Among other things, it restricted the expansion of higher education institutions in Seoul and required branches of major universities to be located in cities outside of the capital. It restricted the construction of new high schools in Seoul, provided funds to increase educational services in regional centers, and made the transfer of high school students to Seoul more difficult. All of this was based on the observation that much of the migration to Seoul was motivated by the strong commitment of Korean parents to provide their children with the best possible education. The deconcentration of educational facilities from the capital would thus slow its rate of population growth.

The government also attempted, through zoning regulations, by requiring construction permits for factory building or expansion, and by providing financial incentives for industrial relocation, to raise the costs of or make it more difficult for large industries to continue locating in Seoul (Kim and Donaldson, 1979; Hwang, 1979).

Throughout the 1970s the government formulated, adopted and revised plans for guiding the growth of the Seoul Metropolitan Area. The plans for the capital region had two primary objectives: first, to reduce Seoul's population from the projected 13.5 million to a little more than 9 million by the end of the 1990s and second, to gradually reduce Seoul's share of GNP from 33.5 percent in 1976 to a little more than 22 percent by the end of the century. The capital region's share would also be lowered from 44 percent to about 33 percent over the same period (Hwang and Kim, 1980).

Early plans for controlling Seoul's growth sought to deconcentrate population and industries from the city's core to other areas in the capital region (see Figure 3). The plans called for:

- 1) Developing agro-urban centers to serve rural areas in the region, thus stabilizing the economies of villages and small towns.

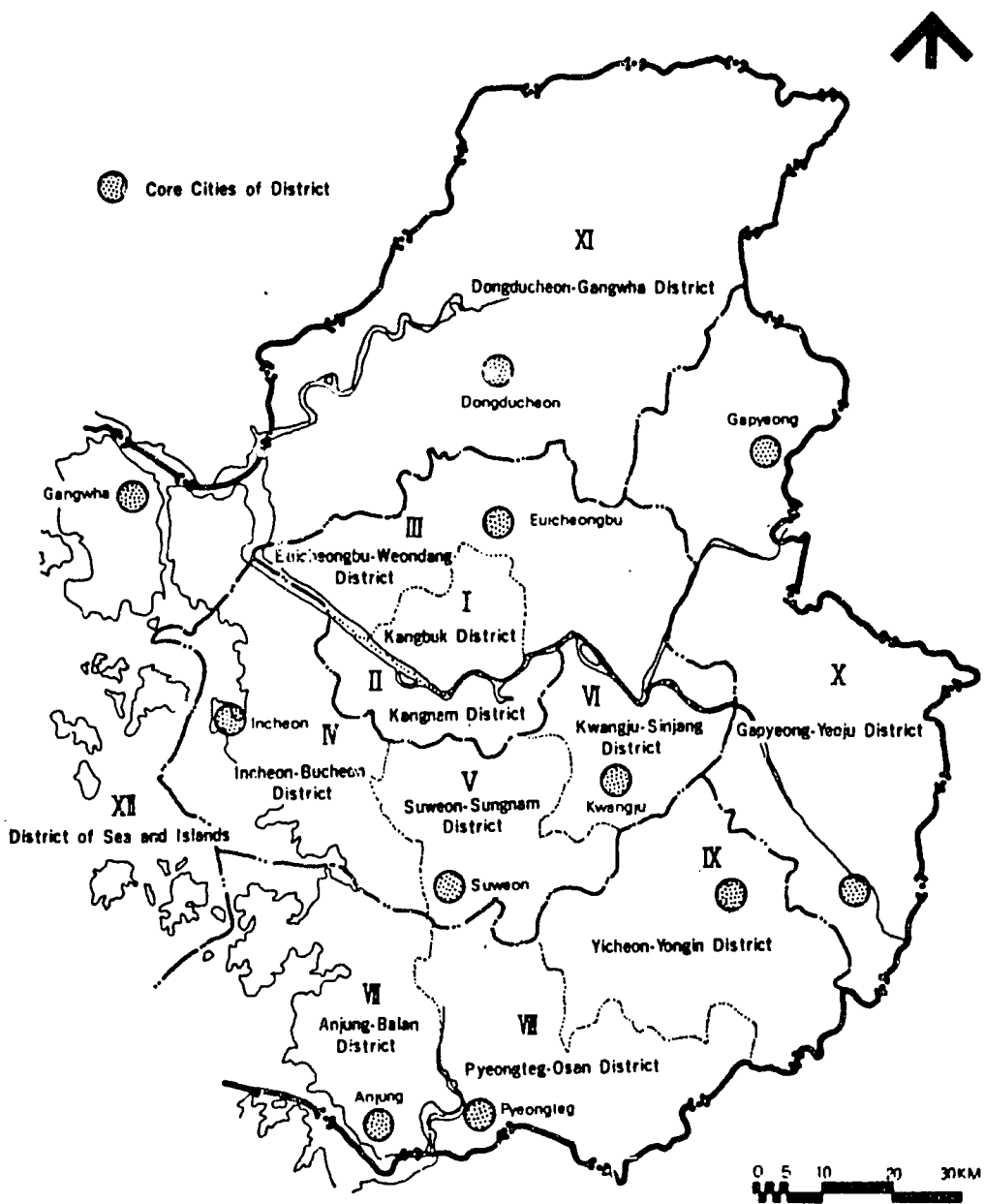
- 2) Developing new towns located far enough away from Seoul to minimize the primate city's centripetal forces.

- 3) Developing growth centers within the region to accommodate industries displaced from Seoul and its immediate vicinity.

- 4) Introducing differentiated zoning regulations to promote

FIGURE 3

DEVELOPMENT DISTRICTS AND "GROWTH CENTERS" IN THE SEOUL METROPOLITAN AREA



Source: Hwang and Kim, 1980.

different land uses and spatial patterns throughout the region.

5) Reducing urban and rural inequities in services and infrastructure within the region.

In order to achieve these objectives, development guidelines were formulated for five sub-regions within the Seoul Metropolitan area (see Figures 4 and 5). The guidelines established (Hwang and Kim, 1980):

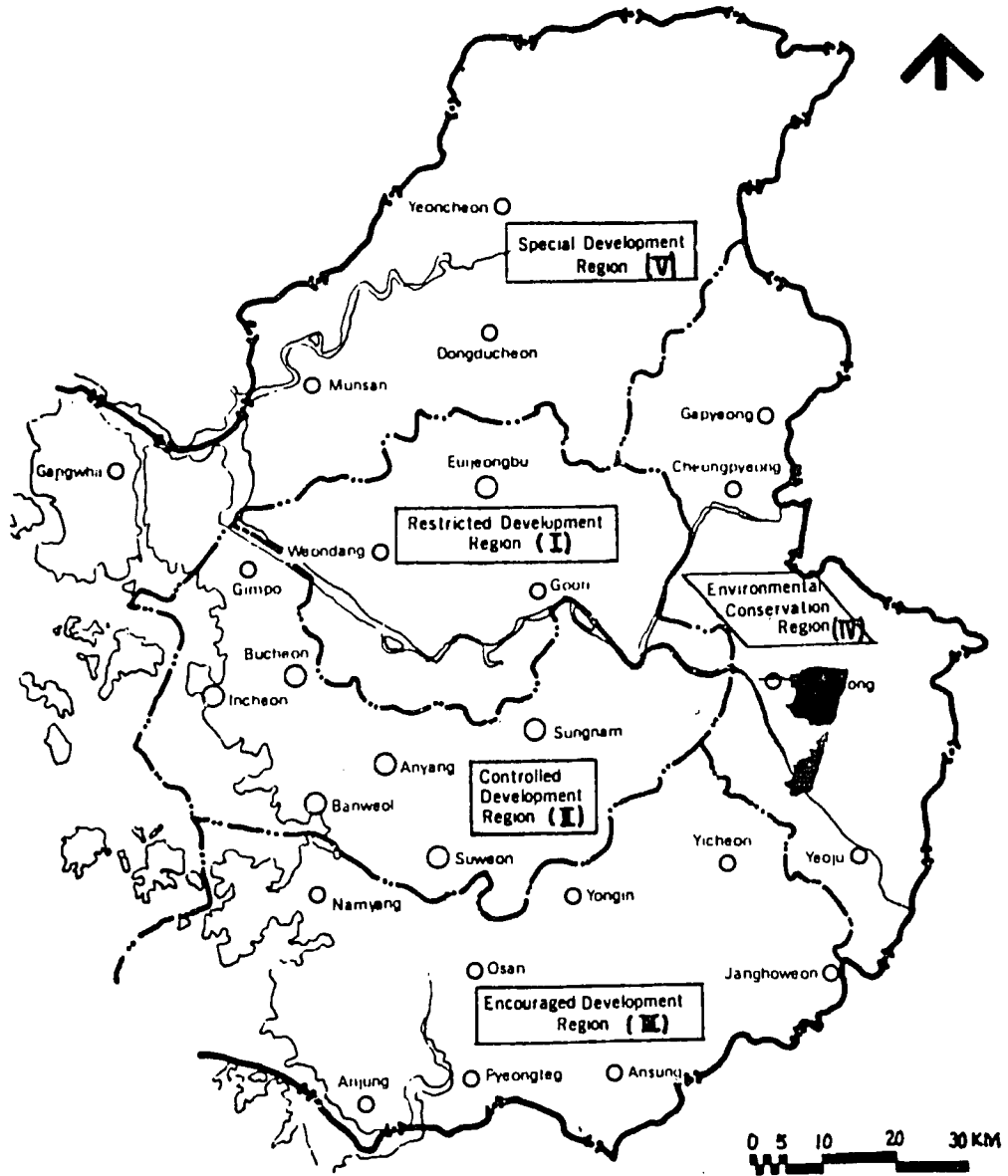
1) A Restricted Development Subregion that coincided with the city of Seoul's administrative boundary and had a radius of 15 kilometers north and south of the Han River. The core zone included Seoul, Euijeongbu, Goori and Weondang. The guidelines sought to decongest Seoul by restricting new factory construction, relocating pollution-generating firms, and restricting immigration.

2) A Controlled Development Subregion extending to the suburban areas within a radius of 35 kilometers from the inner ring and including Incheon, Suwon, Anyang and the new industrial town of Banweol. Incheon would serve as the sub-regional growth center. Regulations were aimed at controlling population growth, restricting new factory construction, accommodating some of the industries displaced from Seoul and suspending "disorderly land use practices."

3) An Encouraged Development Sub-region encompassing the rural and fringe areas for a radius of 70 kilometers around Seoul. The guidelines actively encouraged development in this subregion and called for the development of new urban centers, the expansion of

TABLE 4

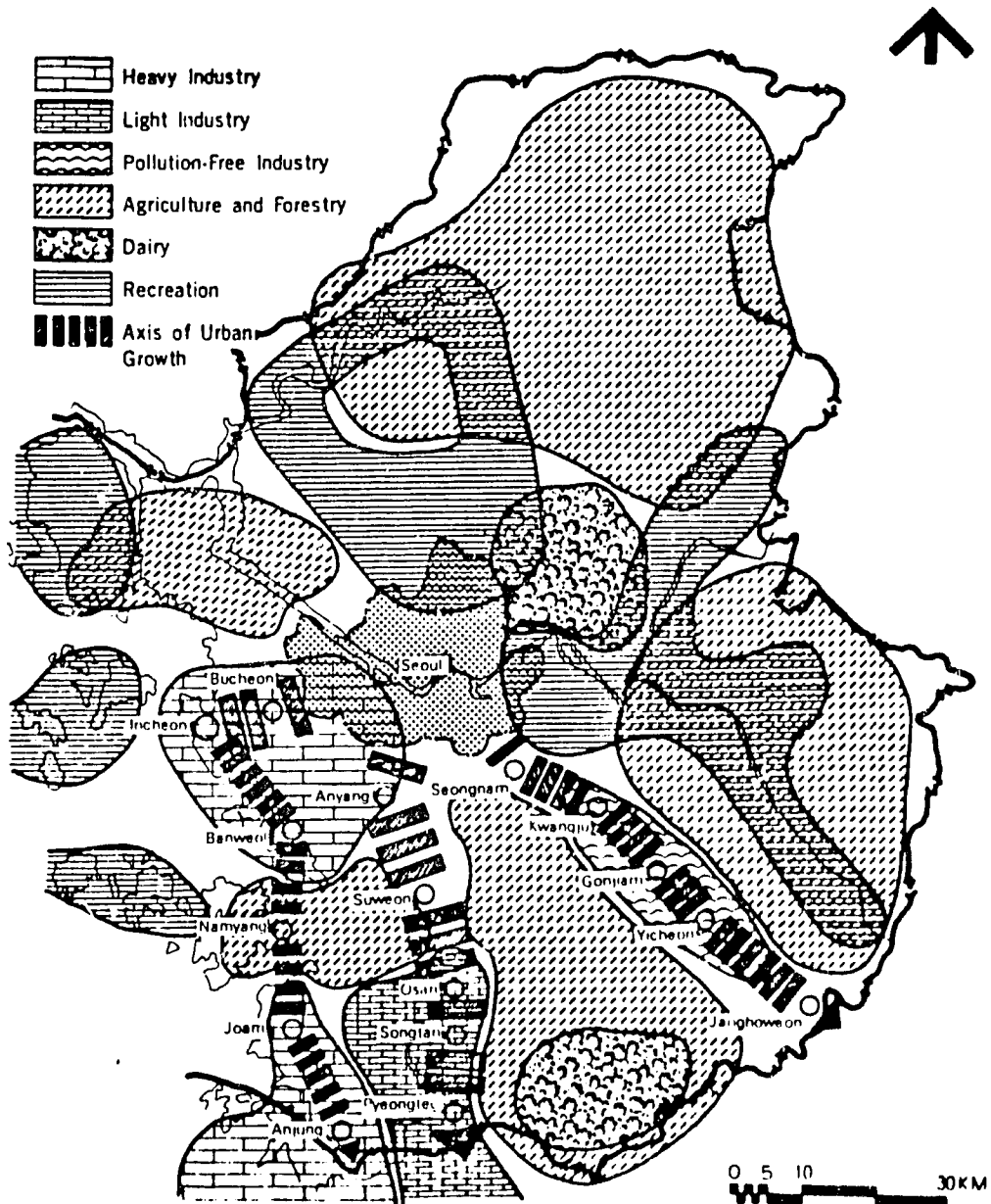
FUNCTIONAL ZONES AND SUBREGIONS IN THE SEOUL METROPOLITAN AREA



Source: Hwang and Kim, 1980.

FIGURE 5

LAND USE PLAN FOR THE CAPITAL REGION



Source: Hwang and Kim, 1980.

existing cities and towns, the creation of industrial estates in An San Bay, and other development activities that would minimize pollution and conserve agricultural land.

4) An Environmental Conservation Sub-region that included the fringe areas of the outer ring of the metropolitan area located in the upstream basin of the Han River. The objectives of the guidelines were to preserve, conserve and protect the natural resources of the area and develop its water resources. Projects promoting outdoor and recreational activities and dairy and vegetable farming could be developed to prevent pollution of and maintain water quality in the upper Han River.

5) A Special Development Sub-region that encompassed the outer fringes of the northern part of the metropolitan region along the demilitarized zone (DMZ) and the sparsely populated rural areas south of the DMZ. This area would serve as a buffer for national defense and be reserved for future development. Farming activities oriented to urban markets, forestry and other natural resource conservation projects and some recreational and outdoor activities could be developed.

In addition, the government passed a number of laws to discourage growth in the largest cities. They included a residence tax on people living in metropolitan areas, discriminatory tax laws against factories constructed in the metropolitan area, and discriminatory school fees based on the size of the city (Kim and Donaldson, 1978).

In order to preserve the green spaces and prevent development

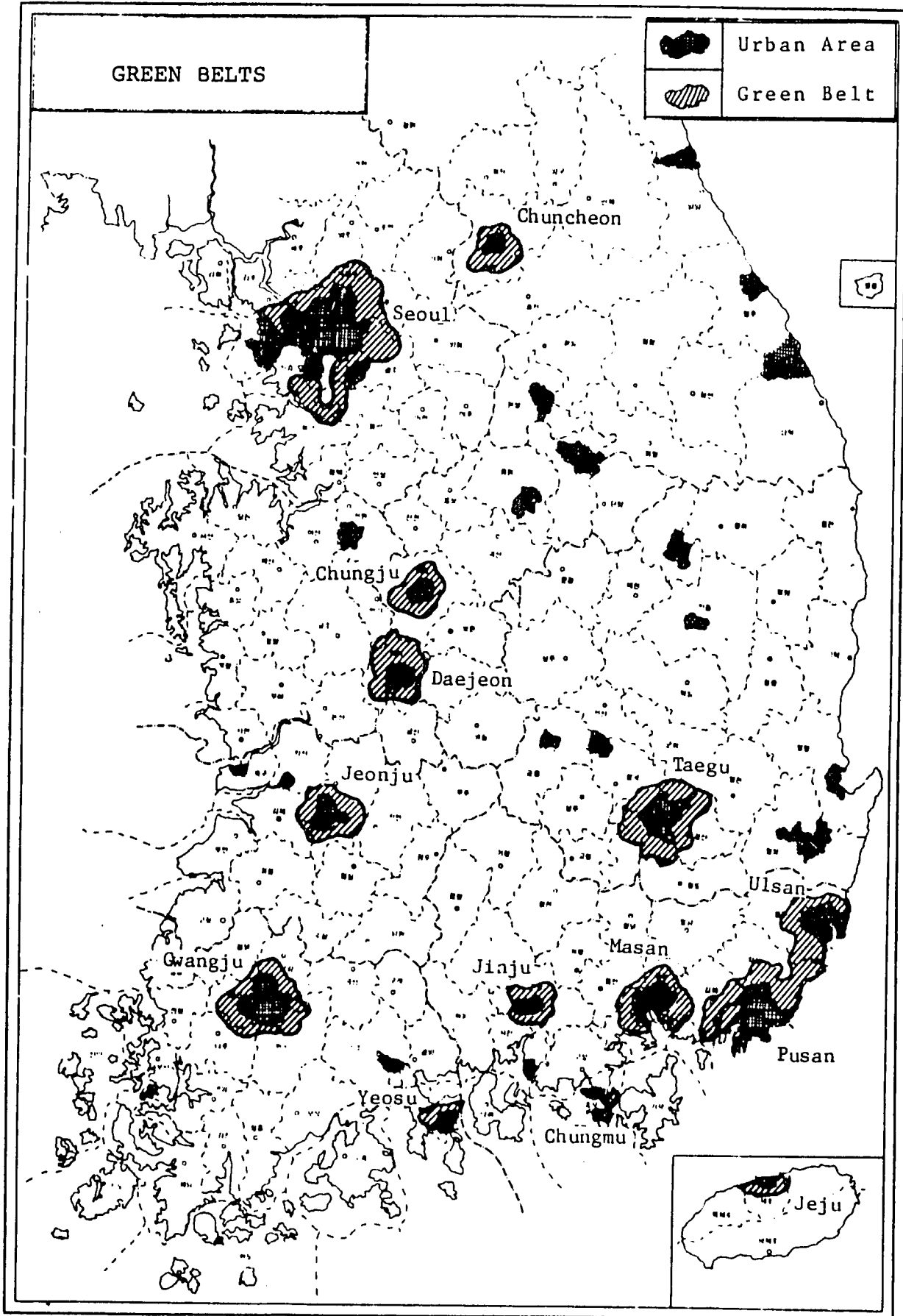
around the periphery of Seoul, the government designated more than 1,500 square kilometers of land as a greenbelt, beginning in 1971. Between 1971 and 1977, greenbelts were also created around intermediate cities that were designated as growth centers. More than 500 square kilometers in each city were assigned to greenbelts around Pusan, Taegu and Gwangju, and more than 300 square kilometers each were set aside around Chuncheon, Daejeon, Masan and Jinhae. Smaller greenbelts were created around Cheongju, Jeonju, Ulsan, Jinju, Chungmu, Jeju and Yeochan (see Figure 6).

In 1977, the government adopted the Basic Plan for Redistribution of Population of the Capital Region which would attempt to stabilize the growth of Seoul and shift population and economic activities to eight other areas of the country. These included the Banweol New Town, a new administrative capital for the national government to be constructed somewhere outside of Seoul, the Southeast shore industrial area and the Daejeon, Taegu, Masan, Jeonju and Gwangju development zones.

The plan called for developing those cities with a population of 500,000 or more and with modern urban services such as universities, general hospitals, water and sewerage systems and effective transportation facilities and that had "population attraction" power equal to that of Seoul. Development would also be encouraged in those intermediate cities located more than 100 kilometers from Seoul that acted as growth centers for their regions and were capable of providing administrative services to new industrial activities. Finally, it encouraged development of those other areas of the

FIGURE 6

GREENBELTS IN SEOUL AND INTERMEDIATE CITIES



Source: KRIHS, 1980

country with services, transport and communications facilities and water resources capable of supporting industrialization.

Although in retrospect, the plans and policies for land use regulation and development seem detailed, comprehensive, and cohesive, they were not all carried out effectively. Some were never vigorously enforced. Most were implemented in a disjointed fashion, with each government agency being responsible for enforcing the regulations that came under its jurisdiction. Hwang (1979: 3) points out that "confusion, inconsistency and sometimes even conflict exist among the objectives and strategies found in the policy measures adopted piecemeal by various government ministries and agencies." The greenbelts that were reserved around Seoul, for example, played an important role in preventing the continued concentration of industries in the city by severely restricting the amount of land available for development. But they also raised land costs enormously in the metropolitan area and encouraged higher density development in the city, making it even more congested.

However, the guidelines and regulations did focus attention on the problem, and despite weaknesses in design and implementation slowed down if not prevented continued concentration of people and industries in the national capital.

Incentives for Industrial Decentralization

Coupled with guidelines and regulations were an extensive set of financial incentives for established industries to relocate from Seoul and for new industries--or new branches--to locate outside of

the Metropolitan area. A combination of incentives and controls were used to encourage the location of export industries in smaller port cities. Heavy chemical, fertilizer, cement and petroleum refining industries were encouraged or required to build plants in government-created industrial estates in coastal cities such as Pohang, Changwon, Ulsan and Yeochon. Small and medium-sized processing plants were encouraged to locate in secondary cities such as Daejeon, Chuncheon, Jeonju, Mogpo, Gunsan, Cheongju, Gumi and Weonju, where heavy investments were made in infrastructure, supporting services and industrial estates (see Figure 7).

The industrial estate created at Ulsan in the early 1960s is an example of the process repeated in other port cities throughout the decade and into the 1970s. Between 1962 and 1967 more than 40 billion won, nearly 7 percent of the government's total investments, were allocated to creating an industrial estate in the city. In the following decade an additional 275 billion won, or about 8.6 percent of total national investments, were committed to the Ulsan industrial estate. Ulsan's locational advantages were that it had a population of about 85,000, already had a deep-water port, water and power could be provided easily, and relatively cheap land was available for constructing industrial sites. Skilled labor could be obtained in Ulsan, it was near an oil refinery and, with proper investment in transportation facilities, it was quite accessible to Seoul, Pusan and Taegu (Kim, 1978).

Along with construction of the industrial estate, Ulsan city was designated as an open port and the county in which it was located was

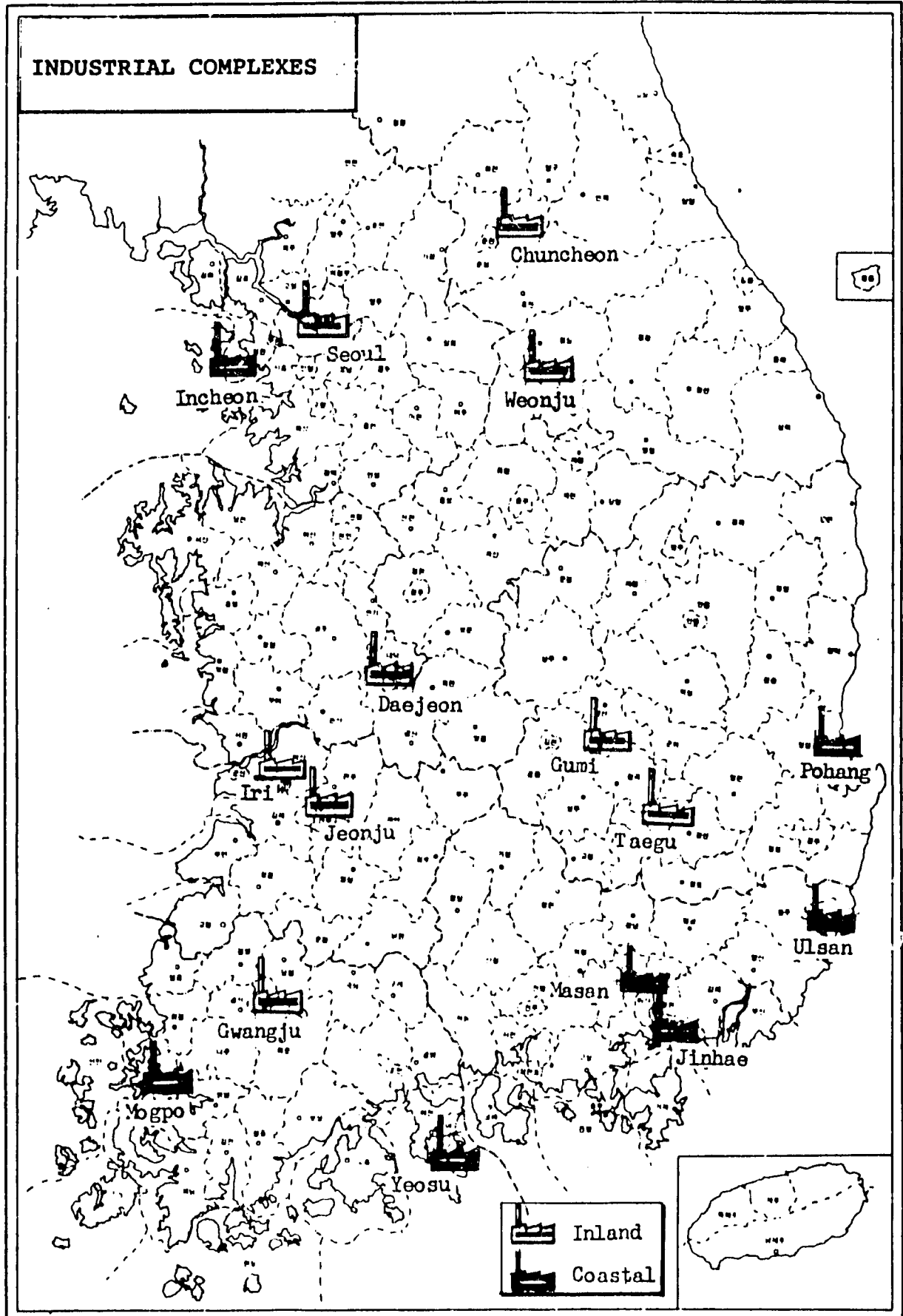
made a special industrial region. After becoming a special industrial area, 22 petrochemical plants, 15 manufacturing plants and three power plants located in Ulsan.

The impact of the industrial estate and financial incentives on the city's growth and productive capacity were enormous. The population of the city more than doubled to about 200,000 between 1962 and 1974 alone and it experienced an average annual population growth rate of 7.4 percent. Whereas migration to the city had previously been only from the surrounding rural areas of the province in which it was located, by 1974 migration from outside the province exceeded that from within. Ulsan and the five counties around the city achieved a growth rate in manufacturing value added in the early 1970s that was higher than the national average. Food and beverage, footwear, clothing, sawing and wood, furniture and equipment, printing, machinery and metal manufacturing industries in the area all achieved high rates of growth. Both production and exports of the industries in Ulsan increased 300 times between 1962 and 1973. Substantial changes also were seen in the city's economic and employment structures. In 1962, about 68 percent of Ulsan's labor force was employed in agriculture and about 30 percent was engaged in commerce and services. There were relatively few manufacturing jobs. By 1974, the share of the labor force employed in agriculture had dropped to less than 20 percent, manufacturing employment had increased to nearly 40 percent and about 45 percent of the jobs were in the commercial and services sector (Kim, 1978).

Financial incentives and other inducements were given to

FIGURE 7

INDUSTRIAL COMPLEXES AND ESTATES



Source: KRIHS, 1980

manufacturing firms to locate in other secondary cities. The types of incentives a firm received depended on where it chose to locate. Those moving to designated industrial development areas were eligible for exemptions from land speculation control taxes and from all corporate income taxes for three years and from 50 percent for three years more. They could also avoid registration, property and land acquisition taxes for five years. Those locating elsewhere outside of Seoul were eligible for exemptions from land speculation control, registration and acquisition taxes and could take advantage of a special corporate tax rate, which declined with increased corporate investment (Renaud, 1974).

The government promoted investment in heavy and chemical industries in coastal estates by building harbor facilities, installing water supply systems, and constructing roads and industrial support facilities. It offered low interest loans, tax waivers and tax reductions. Companies locating in the estates could take an eight percent tax deduction on money invested in new production capacity. Machines and materials imported for base plants were duty free.

Recent studies (Park and Wheeler, 1983: 295) indicate that the "industrial spatial policy of the 1970s, especially the development of industrial estates, had a profound impact on the decentralization of manufacturing within the Seoul Metropolitan Area." A large number of industries moved from the central core to the suburbs and with them went a large number of manufacturing jobs. The policies also seem to have encouraged industrial decentralization outside of the Seoul metropolitan area.

But in the initial stages at least, many firms simply located in the Pusan area, creating a bi-polar industrial distribution pattern. Moreover, the government's failure to adequately link the large scale export-oriented industries that were located in the industrial estates to local economic activities sometimes made them enclaves that provided little stimulation to the local economy and severely restricted the "spread effects" in the region. Few of the skilled laborers who worked in the Ulsan industrial estate, for example, came from the Ulsan area. Many migrated to the city from other metropolitan areas. Most of the supplies, equipment and raw materials for the factories came from outside of Ulsan.

The incentives, and construction of industrial estates, also successfully dispersed heavy manufacturing industries from Seoul and promoted new investment in iron, steel, primary metals, shipbuilding and petro-chemical industries in other port cities, until the late 1970s, when these "saturated" industries reached a point of overinvestment. When that occurred growth rates in cities like Ulsan began to slow down again, and by the 1980s employment in Ulsan began to drop.

Investment in Social Services and Infrastructure

The government recognized that neither incentives nor regulations would be sufficient to disperse people and economic activities from Seoul unless there were adequate alternative locations for businesses and industries to operate profitably. Moreover, migration to Seoul and the other few large cities would continue as long as large

disparities existed between Seoul and the rest of the country in standards of living, employment opportunities, and educational facilities. Thus, during the late 1960s and early 1970s the government used public investment in social overhead capital and social services and facilities to increase the growth potential and employment generating capacity of intermediate cities outside of the Seoul Metropolitan Area. It first invested heavily in electrical generating capacity, highway construction and housing in and around selected inland cities and improved the cargo handling capacity and transportation access of the coastal cities that were potentially capable of accomodating export industries. It later began to allocate investments in social services and facilities more widely among intermediate and smaller cities.

As a result, intermediate cities in Korea began assuming an increasingly important role in providing social and public services during the 1970s (see Tables 1 and 2). By 1975, intermediate cities had nearly 44 percent of all elementary, middle and high schools in urban areas and, by 1978, the 30 cities with 100,000 or more residents--excluding Seoul--accounted for 40 percent of medical personnel and more than 42 percent of all urban medical facilities. In 1980 all of the intermediate cities except Seongnam and Anyang had a lower percentage of shortages in elementary school classrooms than Seoul. Twenty one of the 30 intermediate cities had lower percentages of shortages in middle school classrooms, and all intermediate cities had lower percentages of shortages in high school classrooms, than the capital city. Although the mix of personnel and types of

TABLE 1

DISTRIBUTION OF SOCIAL AND PUBLIC SERVICES AMONG INTERMEDIATE CITIES
BY SIZE CATEGORY

Population Size Category 1978	Number of Cities 1978	Percent Distribution of					Percentage of Area Served by Piped Water 1978
		Medical Personnel 1978 ¹	Medical Facilities 1978 ²	Schools 1975 ³	Universities and Colleges 1975	Teachers 1975	
National Capital		50.2	42.2	17.8	23.4	51.7	92.0
500,000 or more Population	5	24.7	26.6	20.5	41.5	30.6	86.6
499,999- 200,000	7	7.3	6.6	8.9	17.5	7.6	81.5
199,999- 100,000	18	7.5	8.9	14.1	17.5	9.6	67.4

Source: Ministry of Construction, 1980.

1. Includes licensed medical doctors, dentists, and nurses.
2. Includes hospitals and clinics.
3. Includes elementary, middle and high schools.

TABLE 2

SHORTAGES OF HOUSING UNITS AND EDUCATIONAL FACILITIES IN INTERMEDIATE
CITIES, 1980

City	Shortages of Dwelling Units	Ratio of Dwelling Units to Households	Shortages of Classrooms					
			Elementary Percent	Middle School Percent	High School Percent			
Pusan	252,271	58.6	1,960	27.4	274	10.3	621	24.3
Taegu	161,816	50.4	848	23.6	259	16.2	--	--
Incheon	91,756	58.6	668	28.5	98	10.8	--	--
Gwangju	49,605	64.2	147	8.4	74	10.0	192	15.8
Daejeon	41,287	63.7	239	17.6	--	--	--	--
Masan	40,781	52.3	114	14.0	5	2.0	11	4.0
Ulsan	32,012	60.0	206	23.6	--	--	10	2.7
Jeonju	24,211	63.7	121	12.8	62	13.9	42	7.6
Seongnam	30,412	60.0	287	43.0	--	--	18	10.5
Suweon	20,582	64.2	173	26.7	--	--	--	--
Cheongju	14,240	68.6	68	12.0	40	12.3	86	17.3
Mogpo	13,970	66.8	53	8.7	79	27.0	--	--
Anyang	18,915	58.3	160	38.0	25	13.6	30	15.4
Pohang	18,153	57.9	114	27.0	23	14.6	7	2.6
Jinju	9,430	72.3	29	6.2	3	15.0	13	7.7
Gunsan	10,802	66.2	14	3.5	23	11.4	16	6.3
Bucheon	13,647	64.6	136	36.0	13	11.4	--	--
Chuncheon	7,988	73.4	--	--	34	16.2	43	16.8
Jeju	3,570	89.1	102	22.3	--	--	--	--
Yeosu	10,362	66.4	12	3.4	7	4.4	--	--
Iri	7,714	70.8	9	2.7	11	4.4	97	24.0
Weonju	8,118	69.9	--	--	19	11.4	29	15.8
Euijeongbu	10,266	59.2	33	12.3	8	6.0	23	14.0
Sunchon	4,871	75.2	34	11.5	29	16.9	--	--
Gyeongju	7,543	70.6	--	--	--	--	34	16.6
Chungju	5,432	74.4	--	--	22	13.5	7	4.5
Cheonan	5,830	72.4	10	3.7	15	8.8	11	3.4
Jinhae	4,276	81.8	--	--	--	--	--	--
Gangneung	7,605	75.9	16	6.4	18	12.9	31	16.8
Andong	6,679	66.7	2	0.8	--	--	3	1.2
Seoul	586,169	61.5	6,026	32.1	980	13.3	1,994	28.4

Source: Ministry of Home Affairs, 1980.

facilities differed among cities in different size categories --the larger cities tended to have a greater percentage of licensed doctors among their medical personnel, a larger number of general and specialized hospitals among their medical facilities and a larger percentage of high schools in their share of educational institutions--in most cases the share of these social services in intermediate cities was in proportion to their share of urban population.

While intermediate cities' educational facilities had improved tremendously, serious shortages of classrooms still existed in 1980. As Table 2 indicates, intermediate cities were more than 8,000 classrooms short of the standards set by the national government. More than 5,500 elementary, 1,100 middle school, and nearly 2,000 high school classrooms were still needed in intermediate cities in 1980.

Although by the end of the 1970s, Seoul and the other large metropolitan areas still had a high concentration of health and educational services, intermediate cities with from 100,000 to 500,000 residents had a slightly larger proportion of schools than that of their urban population.

Moreover, 21 of the 30 intermediate cities by 1980 achieved higher ratios of housing units to households than Seoul. As Table 2 indicates, the larger metropolitan areas and the fastest growing industrial estate cities still had severe shortages of housing, but many of the intermediate cities had kept better pace with population

growth in providing housing than had the capital city during the 1970s. However, taken as a group, the intermediate cities still accounted for more than 50 percent of the nation's housing shortage in 1980 and cities such as Pusan, Taegu, Incheon, Anyang, Pohang, and Euijeongbu still had numbers of dwelling units that could accommodate less than 60 percent of their households.

The government also extended public services and utilities in intermediate cities. By 1978, piped water had been extended to a large portion of the secondary cities. In those with more than a half million residents, about 87 percent of the households had access to piped water, and some large regional centers such as Taegu and Gwangju had nearly total coverage. About 81 percent coverage had been attained in those with from 200,000 to 500,000 population and 67 percent in those with from 100,000 to 200,000.

The decisions to extend services and facilities to intermediate cities was made not only on the basis of equity but also on efficiency criteria. Evidence indicated that costs of providing urban services declined with urban size class to cities of about a half million population and then began to rise again along a U-shaped curve. However, costs of providing services were lower throughout the intermediate city size class than in Seoul. Kwon (1981) later found, for example, that average percapita expenditures on municipal services in Seoul was about 15,000 won, declined to about 8,600 won for other cities of a million or more residents, and to 6,100 won for cities with from a half million to one million residents. They rose slightly in cities with from 200,000 to a half million population and

to about 7,700 won in cities with from 50,000 to 100,000 people. But costs remained less than half those in Seoul for all cities with more than 50,000 residents.

The marginal costs of providing urban services in Seoul for each additional inhabitant was found to be about a half million won and that more than 44.2 million won or about US\$6 million a year could be saved for every 100,000 people who did not move to Seoul from other places.

Thus, the government could meet both equity and efficiency criteria by making intermediate cities more attractive to industry, business and rural migrants. Through a combination of investments in services, facilities and infrastructure, financial and tax incentives and regulations on land use it sought to create a diffuse but integrated system of growth centers.

Deconcentrating and Balancing Urbanization

The Korean government's objectives, and the existing state of regional development in Korea, were both reflected in the Second National Land Development Plan for 1982 to 1991 (KRIHS, 1982). That plan laid out the government's long term strategy for development of the space economy as a continuation of its efforts to promote productive capacity and economic growth during the 1970s. During the 1970s, and the first phase of the long term strategy, the government had aimed to expand productive capacity by deconcentrating productive activities from Seoul and to build up productive infrastructure in selected "growth poles," such as Pusan, Taegu, Daejeon, and Gwangju,

and in some of the coastal cities that were chosen as sites for industrial estates (see Figure 8). The emphasis during the 1980s--in the second phase--would be on improving living conditions and spreading the accumulated benefits of development more broadly throughout the country by building up intermediate and smaller cities as growth centers for their areas. In the third phase, during the 1990s, the government would seek to conserve the natural environment and share the benefits of growth through balanced spatial development. (See Figure 9.)

Although not all of the policies enacted during the 1970s to create a more balanced distribution of population and economic activities were always coherently formulated and effectively implemented by the government, these and other economic development programs seemed to have stabilized Seoul's level of primacy and to have restructured Korea's rapidly expanding urban system. Cities of more than 100,000 grew in number and share of population and have diversified their economies, providing a base for industrial decentralization and employment generation in regions outside of the Seoul and Pusan metropolitan areas.

As will be seen in the following sections of this study, the objective of the first phase of the long term strategy--creating growth poles outside of Seoul--has largely been accomplished. By the beginning of the 1980s some progress had been made in achieving the second phase goals of improving living conditions and spreading the benefits of growth through area wide development. Progress had also been made in promoting intermediate city growth centers, although

FIGURE 8

METROPOLITAN GROWTH REGIONS FOR NATIONAL DEVELOPMENT

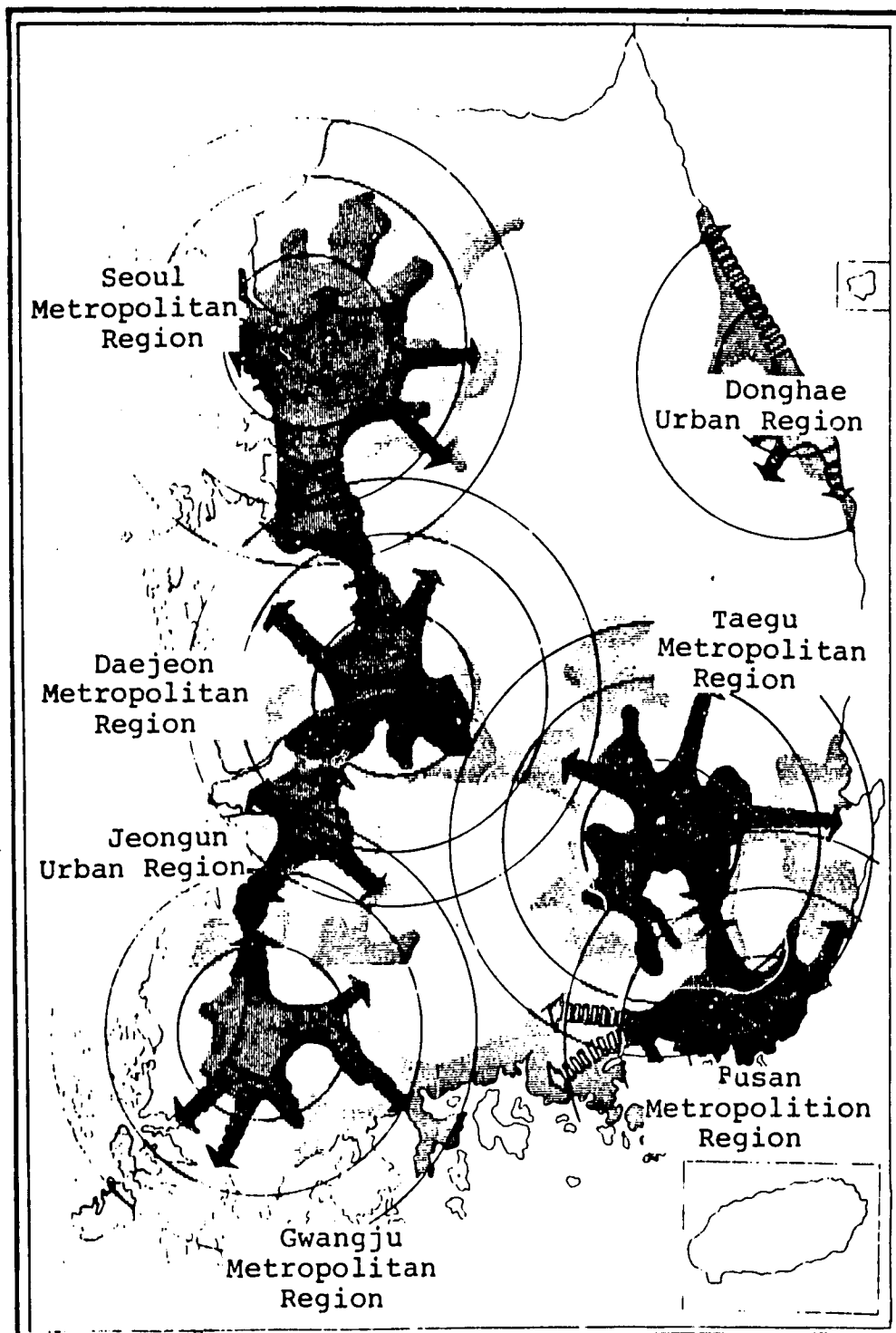
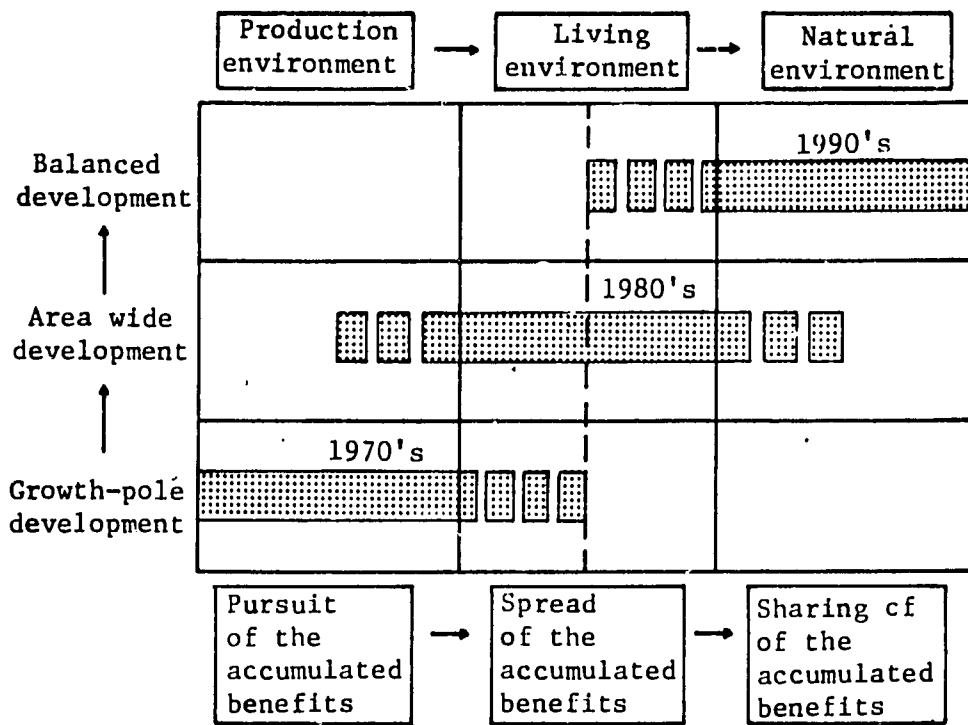


FIGURE 9

LONG-RANGE LAND DEVELOPMENT POLICY GOALS



Source: KRIHS, 1982.

much still remains to be done both to strengthen the economic and social functions of secondary cities and to achieve more balanced regional development.

THE CHANGING STRUCTURE AND FUNCTIONS OF

INTERMEDIATE CITIES

Although the specific effects of each of the policies enacted during the late 1960s and early 1970s on achieving the goals of more balanced urbanization and widespread economic development have yet to be isolated and assessed, it is clear that by the end of the 1970s the primacy of Seoul had stabilized and, indeed, its rate of growth began to decline. At the same time, the number, share of population, and functions performed by secondary metropolitan centers and intermediate cities--those with more than 100,000 residents--were steadily growing. Substantial evidence suggests that Korea's urban structure began to undergo a fundamental transformation from a polarized, primate city pattern to a multi-nucleated and more diffuse settlement system.

Polarization Reversal and the Development of Growth Poles

Although the distribution of urban population in Korea at the beginning of the 1980s was still highly skewed, with about 57 percent of the country's urban residents living in the four largest cities, the degree of population concentration in Seoul compared to the three next largest cities (the four-city primacy index) seems to have

stabilized. Seoul's index of primacy was about 0.85 in 1955, increased to 1.53 by 1970, but remained nearly stable during the 1970s and declined to about 1.40 in 1978 (Park, 1981).

Nearly all analysts agree that Seoul's population is now increasing at decreasing rate and is likely to continue doing so for the rest of the this century. Others contend that if it has not yet entered the initial stages of primacy reversal, Korea is on the verge of doing so. It could thus become one of the few developing countries to go through this process as a result of deliberate policies.

Although there is no concise measurement or indicator of polarization reversal, Richardson (1977: 21) suggests that the following characteristics may, in combination, indicate that conditions are conducive to it:

1. When the industrial structure evolves to the stage when branch plants seem feasible;
2. When scale diseconomies--congestion, deterioration in the quality of life, inability of the public sector to keep infrastructure provision in step with population growth--emerge in the primate city;
3. When the capital constraint has been relaxed as a result of a strong recent growth record in respect to GNP and investment;
4. When at at least a skeletal national transportation network has been built;

5. When political and social pressures build up for interregional equity and similar spatial objectives;
6. After the introduction of sound rural development and small-scale industry programs that offer the prospect of demographic stability in peripheral regions;
7. When percapita incomes in the periphery have risen to levels to justify industries catering to local demand;
8. When stable export products have been subject to chronic instability;
9. When the country's supply of administrators, planners, managers and professional personnel reaches levels that permit decentralization of planning, economic and political functions; and,
10. When some non-core cities begin growing faster than the primate city.

As noted earlier and will be seen later in this study, many of the conditions for polarization reversal were evident to some degree in Korea by the beginning of the 1980s. Seoul's share of urban population decreased from about 43.3 percent in 1971 to about 39.7 percent in 1979. More importantly, its rate of population growth has been declining. Seoul's population grew by 55 percent between 1960 and 1966; dropped to 45 percent between 1966 and 1970; decreased to 24 percent between 1970 and 1975; and dropped again to a little over 21 percent between 1975 and 1980. Its average annual growth rate of more than 9 percent during the late 1960s declined to about 3.9

percent by the late 1970s.

Seoul's share of new migrants dropped from about 82 percent in 1966-1970 to about 39 percent in 1975-1979 (Song, 1982). During the 1970s the flows of rural migrants to urban destinations began to shift. In the two previous decades Seoul was the strongest attractor of rural migrants and drew population from small and medium-sized cities as well as from rural areas. But by the early 1970s, as Yu (1980, 158) points out, "most of the regional cities, medium or small, had a greater inflow than outflow of migrants and drew population from rural towns and rural farm villages. Forces of migration attraction appear to have spread from the capital area in the earlier period to other cities throughout the country toward the end of the decade."

Moreover, between 1966 and 1978 a number of other cities grew faster than Seoul. While the capital's population grew by 105 percent over the period, Taegu's increased by 171 percent, Masan's by 153 percent, Suwon's by 107 percent, Ulsan's by 222 percent, and Pohang's by 178 percent. Nearly all of the faster growing cities were sites of large-scale industrial estates constructed by the government. As Table 3 indicates, between 1970 and 1980, 13 of the 20 largest cities in Korea experienced a higher rate of population growth than Seoul. While Seoul's population increased by about 51 percent over the decade, both Incheon's and Pusan's grew by more than 67 percent. Several cities more than doubled their populations during the 1970s. Masan, Seongnam, Anyang, Pohang and Bucheon all had less than 100,000 residents prior to 1970 and had grown to more

TABLE 3

POPULATION SIZE AND RANK OF 20 LARGEST CITIES, SOUTH KOREA, 1960-1980

1960			1970			1980		
Rank	City	Population (000's)	Rank	City	Population (000's)	Rank	City	Population (000's)
1.	Seoul	2,445	1.	Seoul	5,536	1.	Seoul	8,367
2.	Pusan	1,163	2.	Pusan	1,881	2.	Pusan	3,160
3.	Taegu	676	3.	Taegu	1,083	3.	Taegu	1,607
4.	Incheon	402	4.	Incheon	646	4.	Incheon	1,085
5.	Gwangju	315	5.	Gwangju	503	5.	Gwangju	728
6.	Daejeon	299	6.	Daejeon	415	6.	Daejeon	652
7.	Jeonju	189	7.	Jeonju	263	7.	Ulsan	418
8.	Masan	158	8.	Masan	191	8.	Masan	387
9.	Mogpo	130	9.	Mogpo	178	9.	Seongnam	376
10.	Cheongju	92	10.	Suweon	171	10.	Jeonju	367
11.	Suweon	91	11.	Ulsan	159	11.	Suweon	311
12.	Gunsan	90	12.	Cheongju	144	12.	Anyang	254
13.	Yeosu	87	13.	Chuncheon	123	13.	Cheongju	253
14.	Jinju	87	14.	Jinju	122	14.	Mogpo	222
15.	Chuncheon	83	15.	Yeosu	114	15.	Bucheon	221
16.	Weonju	77	16.	Gunsan	112	16.	Jinju	203
17.	Gyeongju	76	17.	Weonju	112	17.	Pohang	201
18.	Suncheon	69	18.	Jeju	106	18.	Jeju	168
19.	Chungju	69	19.	Jangseong	103	19.	Gunsan	165
20.	Jeju	68	20.	Euijeongbu	95	20.	Yeosu	161

Sources: Ministry of Construction, 1980
Ministry of Home Affairs, 1980

than 200,000 by 1980.

In recent years, Seoul's dominance in the national economy seems also to have weakened. Its share of value-added by manufacturing dropped from 33.5 percent in 1968 to 21.0 percent in 1978 during a period of rapid national economic growth. Whereas about 35 percent of the new industrial construction took place in Seoul in 1967, by 1978 the capital was receiving less than 5 percent. At the beginning of the 1960s, Seoul's gross regional product per capita was double that of any other province in the country. By 1978, although Seoul's was still the highest, it was only about 27 percent higher than the national average and the province containing Pusan and the southeastern coastal port cities was beginning to approach Seoul's level.

Diseconomies of scale in Seoul began to manifest themselves in the forms of air and water pollution, traffic congestion, increasing land costs, and housing shortages. Seoul surpassed the usually accepted standards of air pollution tolerance in 1969. Land costs increased by 2,600 percent between 1963 and 1974. By the mid-1970s the city government estimated that there were only about 40 square kilometers of land available within the city that was suitable for industrial development, and Hwang (1978: 8) reported that "it is becoming almost impossible, therefore, for prospective enterprises to acquire plants in Seoul at a reasonable cost." Congestion and high land costs drove up housing costs and created severe housing shortages. From 1968 to 1980 about 46 percent of Seoul's population was living in substandard housing and the average was increasing (Park, 1981).

Changing Structure of Intermediate Cities

Perhaps the more important indicators of polarization reversal than changes in Seoul's population and economy have been the changes in population distribution and in economic and social functions of intermediate cities. The changes were especially strong in the larger secondary cities that had been designated as "growth poles" in the first phase of the government's long-term land development policy.

1. Changes in Number and Size of Intermediate Cities.

By the mid-1970s it was clear that a rapid and substantial demographic shift had taken place in Korea. In 1960, less than one-third of its population was living in cities; by 1980 about 60 percent of Koreans were urban dwellers. Between 1966 and 1980 more than 9.3 million people moved from rural areas to cities (Park, 1981). In the initial stages, a large percentage of those moving from rural areas went to Seoul, Pusan and Taegu. These three largest cities increased their share of urban population from about 46 percent in 1960 to more than 56 percent by 1975. During the 1960s and 1970s the share of urban population living in small cities--with less than 20,000 people--also declined substantially from 66 percent to about 41 percent. Cities in the 20,000 to 50,000 category also lost population. Generally, fishing towns, those cities in lagging agricultural regions, towns and cities close to the DMZ and those in mountainous areas all declined.

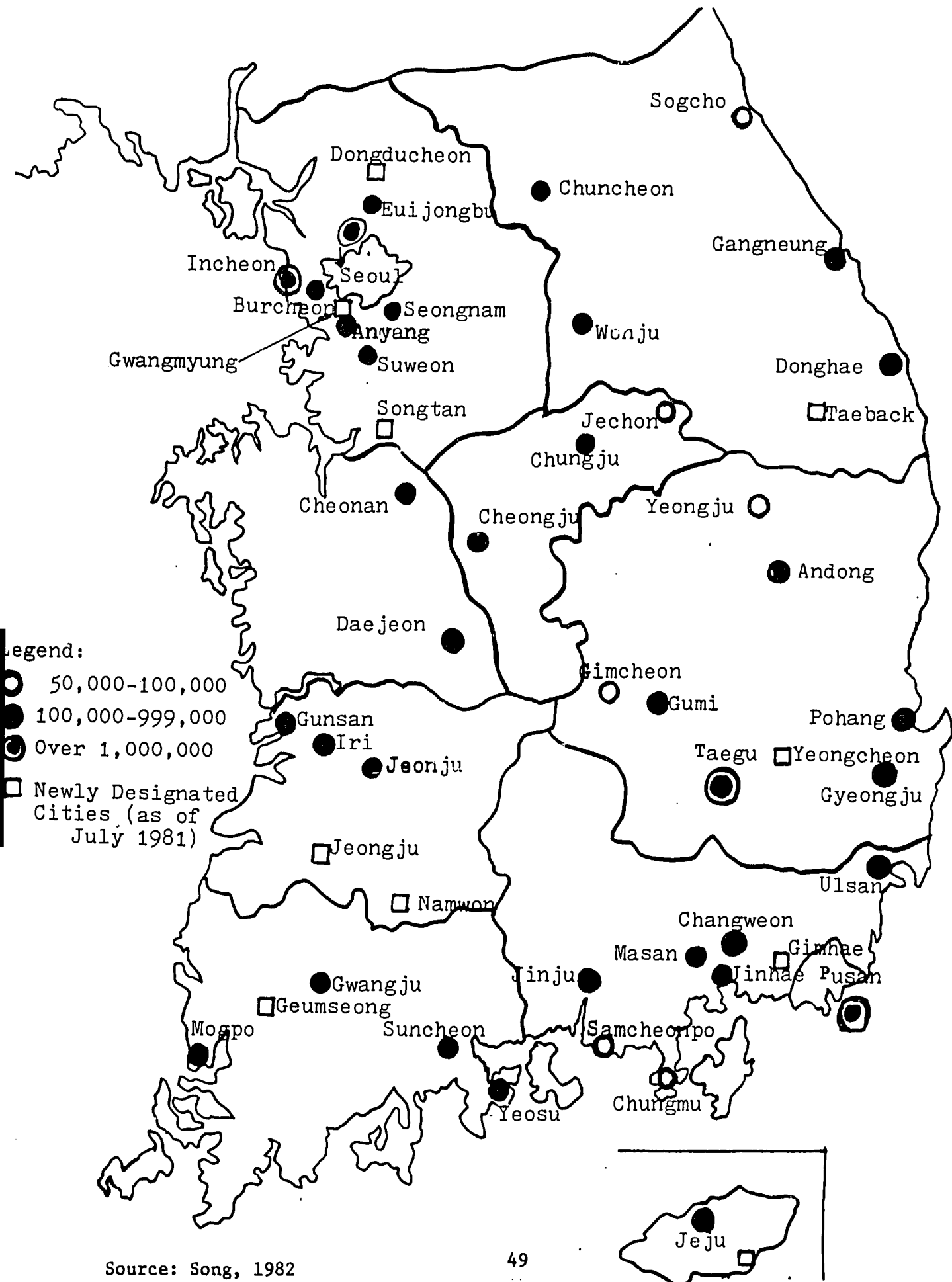
But cities with more than 100,000 residents increased their share of urban population from about 20 percent in 1955 to more than 47 percent in 1975. Cities in the Seoul and Pusan metropolitan areas, those along major transportation routes, those with significant manufacturing activities and some that are attractive to tourists had grown. As a result, the number of people living in cities with more than 100,000 population quadrupled between 1950 and 1975 (Song, 1978).

The number of cities with from 100,000 to 200,000 population increased from 3 to 11 and those with more than a half million residents increased from 2 to 5. The Pareto Distribution of city sizes for all cities over 20,000 also indicates that primacy has been decreasing over the past quarter century. Although the size distribution of cities remained rather stable, there have been significant changes in size ranks among many cities and towns and a large number of cities at the upper end of the distribution have increased in size (Song, 1978).

Moreover, the growth of intermediate cities has been widely dispersed geographically (see Figure 10). During the 1960s and early 1970s only Seoul and Pusan were able to attract migrants from throughout the country. Even many of the migrants who went to Pusan and Taegu, however, came from nearby provinces. The dominant pattern of migration was directly from rural areas to Seoul. Middle-sized cities were able to attract migrants only from the rural hinterlands of their own provinces. During the late 1970s, however, intermediate cities throughout the country were not only attracting a greater

FIGURE 10

SPATIAL DISTRIBUTION OF KOREAN CITIES, 1981



Source: Song, 1982

share of migrating population, but also were able to hold them for a sufficient period of time to begin to create a step-wise pattern of migration. Larger numbers of migrants went first to an intermediate city and either stayed permanently or resided there for some time before moving to a larger city (Yu, 1980). By 1980, a little more than 25 percent of the urban population lived in the 31 urban areas with between 100,000 and one million residents and every region of the country had intermediate-sized cities.

2. Changes in the Economic Structure of Intermediate Cities.

A more important indicator of the transition that took place in Korea's urban structure between 1960 and 1980 was the change that occurred in the economies and employment structures of intermediate cities. During the 1960s, Korea was still a predominantly rural country with an urban structure not much different from that of most poor developing nations. It had a primate-city spatial structure dominated by Seoul and in which only two other cities--Pusan and Taegu--had reached population sizes of more than a half million.

Although agricultural employment was relatively strong in many smaller towns and cities in 1960, few cities with more than 50,000 residents were still relatively specialized in agriculture. Manufacturing also played a relatively weak role in the economies of cities with populations over 100,000. Other than Seoul only four cities had more than 20 percent of their labor force employed in manufacturing, although nearly all cities with populations larger than 200,000 were approaching that share of manufacturing

employment. No city with less than 90,000 residents had more than 20 percent of its workers engaged in manufacturing, although in the national economy manufacturing activities were clearly concentrated in the larger secondary cities (see Table 4).

Employment statistics indicate that every city in Korea with more than 50,000 residents in 1960 had a predominantly commercial-service economy. Every city with a population larger than 90,000 had at least 44 percent of its labor force engaged in commerce and services and about 73 percent of those cities had at least half of their labor force working in the tertiary sector. Table 4 indicates the heavy concentration of service and commercial employment in intermediate cities within the national economy.

In brief, those cities that had reached a population size of 90,000 or more in 1960 were predominantly commercial and service economies; agricultural employment was relatively weak; and manufacturing did not play an important role in the economic structure of any but the largest secondary cities.

By 1970, the percentage of employment in manufacturing in Korean cities still remained rather small, and generally declined with city-size category. The strength of commerce and services in providing employment in intermediate cities was still evident in every size group. Employment in agricultural processing and related food industries remained significant in only a few intermediate-sized cities. By the early 1970s, Seoul accounted for slightly more than 35 percent of all manufacturing employment in the country. The three

TABLE 4

LOCATION QUOTIENTS OF EMPLOYMENT SPECIALIZATION IN INTERMEDIATE CITIES OF KOREA, 1960

City	Population 1960 (000's)	Employment Sector												Percent of Labor Force in Tertiary Sector
		Agriculture			Manufacturing			Commerce			Services			
		% of Labor Force	Urban L.Q. ¹	Nation- al L.Q. ²	% of Labor Force	Urban L.Q.	Nation- al L.Q.	% of Labor Force	Urban L.Q.	Nation- al L.Q.	% of Labor Force	Urban L.Q.	Nation- al L.Q.	
Pusan	1,163.7	4.9	.21	.07	22.8	*1.42	*3.35	22.8	*1.21	*1.44	34.5	.84	*4.11	57.3
Taegu	676.7	13.6	.59	.21	29.4	*1.83	*4.23	20.6	*1.09	*1.30	26.9	.65	*3.20	47.5
Incheon	401.5	14.2	.62	.21	18.7	*1.16	*2.75	17.1	.90	*1.08	33.7	.82	*4.01	50.8
Gwangju	314.4	33.2	*1.45	.50	14.1	.88	*2.07	15.8	.84	1.00	28.9	.70	*3.44	44.7
Daejeon	228.9	5.4	.24	.08	21.6	*1.35	*3.17	23.4	*1.24	*1.48	36.1	.88	*4.30	59.5
Jeonju	188.2	25.7	*1.12	.40	17.3	*1.08	*2.54	15.0	.80	.94	33.6	.82	*4.00	48.6
Masan	158.0	7.9	.34	.12	18.4	*1.15	*2.70	23.5	*1.24	*1.49	38.6	.94	*4.59	62.1
Hogpo	129.7	7.4	.32	.11	16.9	*1.05	*2.49	26.1	*1.38	*1.65	33.7	.82	*4.01	59.8
Cheongju	92.1	9.4	.41	.14	19.3	*1.20	*2.83	22.5	*1.19	*1.42	38.5	.94	*4.58	61.0
Suwon	90.8	9.2	.40	.14	19.8	*1.24	*2.91	21.7	*1.15	*1.37	34.7	.84	*4.13	56.4
Gunsan	90.4	12.3	.53	.19	22.2	*1.39	*3.26	21.4	*1.13	*1.35	32.2	.79	*3.83	53.6
Yeosu	87.2	20.6	.90	.31	9.9	.62	*1.45	23.6	*1.25	*1.49	33.5	.82	*3.99	57.1
Jinju	87.1	25.4	*1.11	.38	18.7	*1.17	*2.75	16.3	.86	*1.03	30.1	.74	*3.58	46.4
Chuncheon	82.5	10.7	.47	.16	11.3	.70	*1.66	20.9	*1.10	*1.32	44.0	*1.08	*5.23	64.9
Ueongju	76.9	14.1	.62	.21	9.9	.62	*1.45	20.6	*1.09	*1.30	42.3	*1.03	*5.03	62.9
Gyeongju	75.9	51.5	*2.25	.78	8.3	.52	*1.22	14.9	.79	.94	18.3	.45	*2.17	33.2
Suncheon	69.5	51.7	*2.25	.78	7.4	.46	*1.09	12.0	.63	.76	19.9	.49	*2.36	31.9
Chungju	68.7	32.2	*1.41	.49	15.3	.96	*2.25	17.4	.92	*1.10	23.4	.57	*2.79	40.8
Jeju	67.9	67.0	*2.92	*1.01	4.8	.30	.71	8.2	.43	.51	14.1	.34	*1.68	22.3
Jinhae	67.7	11.7	.51	.18	7.1	.45	*1.04	12.9	.68	.82	58.8	*1.44	*7.00	71.7
Iri	65.8	17.4	.76	.26	16.9	*1.06	*2.48	19.9	*1.05	*1.26	34.9	.85	*4.15	54.8
Pohang	59.5	23.8	*1.04	.36	12.1	.75	*1.78	21.0	*1.11	*1.33	30.6	.75	*3.64	51.6
Gangneung	58.7	40.3	*1.76	.61	11.3	.71	*1.67	14.5	.77	.92	22.7	.56	*2.70	37.2
Andong	53.4	18.5	.81	.28	12.8	.80	*1.89	22.3	*1.18	*1.41	33.6	.82	*4.00	55.9
Urban Sector		22.9			16.0			18.9			40.9			59.8
Nation		66.4			6.8			15.8			8.4			24.2

Source: Calculated from data in Ministry of Construction, 1980; Table 1/2-7.

*Relatively specialized compared to base area

1. Location Quotient for Employment in Urban Areas

$$\text{Urban L.Q.} = \frac{e_i/e_t}{E_i/E_t}$$

where: e_i = Number of workers employed in sector i in city

e_t = Total number of workers employed in city

E_i = Number of workers employed in sector i in all urban areas

E_t = Total number of workers employed in all urban areas

2. Location Quotient for Employment in National Economy

$$\text{National L.Q.} = \frac{e_i/e_t}{N_i/N_t}$$

where: e_i = Number of workers employed in sector i in city

e_t = Total number of workers employed in city

N_i = Number of workers employed in sector i in nation

N_t = Total number of workers employed in nation

largest cities had about 56 percent of the country's manufacturing employment, while the 29 cities with populations of from 100,000 to 500,000 accounted for only 15 percent.

But significant changes took place in the economies of intermediate cities during the 1970s (see Tables 5 and 6). By 1980, the number of cities with more than 100,000 population nearly tripled. In only 3 of the 30 intermediate urban centers did agriculture play an important role in employment. As Table 5 indicates, employment in manufacturing had dramatically increased to an average of 55 percent of the labor force in cities with more than 200,000 residents and to 40 percent in cities with from 100,000 to 200,000. The averages increased primarily because of the large number of manufacturing jobs created in the large secondary cities and in those with industrial estates, but smaller intermediate cities also shared in the deconcentration of industrial employment.

Perhaps more dramatic changes were evident in the tertiary sector. In cities of 200,000 or more residents employment in commerce and services dropped from more than 43 percent in 1960 to about 22 percent in 1980. In cities with populations of from 100,000 to 200,000 it dropped from an average of nearly 40 percent to a little more than 26 percent. Although the tertiary sector remained a strong part of the occupational structure of secondary cities, in those with more than a half million residents, production-oriented services accounted for about 12 percent of employment and personal services dropped to less than 10 percent.

TABLE 5
DISTRIBUTION OF EMPLOYMENT BY SECTORS IN INTERMEDIATE CITIES BY
DIFFERENT SIZE CATEGORIES, 1960, 1974, 1980

Population Size Category 1978	Number of Cities	Percent Distribution of Employment														
		Agriculture and Mining			Manufacturing			Wholesale and Retail Trade			Constr., Util. Transp. & Commnc.			Services		
		1960	1974	1980	1960	1974	1980	1960	1974	1980	1960	1974	1980	1960	1974	1980
500,000 or more	5	14.5	6.3	1.4	21.3	30.4	55.6	19.9	27.8	21.7	11.1	15.3	12.6	32.0	19.8	9.6
499,999- 200,000	7	17.4	14.2	6.6	16.9	28.7	55.2	17.4	22.1	16.5	10.4	14.2	8.8	34.0	20.5	13.2
199,999- 100,000	18	28.1	20.4	4.7	14.1	21.3	39.7	17.5	23.4	29.2	8.8	12.9	9.2	31.0	21.4	17.1

Source: Compiled from Ministry of Construction, 1980; and Ministry of Home Affairs, 1980.

TABLE 6

CHANGES IN DISTRIBUTION OF EMPLOYMENT BY SECTOR IN INTERMEDIATE CITIES
1960, 1974 and 1980

City	Percent Employment														
	Agriculture and Mining			Manufacturing			Construction, Utilities, Transportation, Storage			Wholesale and Retail Trade			Services		
	1960	1974	1980	1960	1974	1980	1960	1974	1980	1960	1974	1980	1960	1974	1980
Pusan	5.8	3.2	0.4	22.8	37.3	70.1	13.1	16.8	5.9	22.8	25.9	13.4	34.5	16.7	10.1
Taegu	13.9	3.6	--	29.4	35.6	47.9	8.1	14.7	7.5	20.6	28.4	30.2	26.9	17.5	14.3
Incheon	14.4	8.2	0.7	18.7	31.9	72.2	15.2	15.3	6.7	17.1	25.7	17.9	33.7	18.0	2.4
Gwangju	33.4	12.0	--	14.1	18.9	32.8	17.3	15.3	18.5	15.8	29.3	32.2	28.9	24.3	16.3
Daejeon	5.5	4.5	0.3	21.6	28.2	55.8	12.4	14.8	24.7	23.4	29.9	14.7	36.1	22.4	4.9
Masan	8.2	12.2	0.6	18.4	32.6	77.4	9.9	11.2	2.3	23.5	25.6	12.5	38.6	18.3	7.2
Ulsan	43.7	21.6	--	10.3	34.3	69.4	7.2	13.7	4.6	18.8	18.3	4.9	25.1	11.8	18.9
Jeonju	25.8	22.8	--	17.2	20.7	40.2	7.6	14.3	20.4	15.0	17.4	25.7	33.6	24.9	13.6
Seongnam	NA	10.5	--	NA	36.2	76.8	NA	17.3	2.3	NA	22.4	16.3	NA	13.1	4.4
Suweon	9.3	7.7	0.2	19.8	33.1	56.4	13.6	13.7	5.9	21.8	20.0	23.9	34.7	25.3	13.5
Cheongju	9.5	11.1	--	19.3	23.5	40.0	9.7	15.6	17.9	22.5	22.2	12.0	38.4	27.4	29.7
Mogpo	7.7	13.9	40.0	16.9	20.9	26.1	14.3	13.3	7.9	2.6	28.9	20.5	33.7	22.7	5.4
Anyang	20.4	11.1	4.3	37.2	40.6	77.2	6.9	10.7	2.5	11.2	20.5	10.0	21.4	16.8	5.2
Pohang	23.8	13.4	--	12.0	27.6	68.2	11.3	18.3	6.1	21.0	25.0	19.1	30.6	15.3	6.6
Jinju	25.4	16.3	--	18.7	24.6	30.3	8.7	12.2	6.5	16.3	24.6	22.4	30.1	22.0	40.8
Gunsan	12.4	15.7	5.9	22.2	30.8	76.6	10.9	10.5	2.6	21.4	21.6	10.4	32.2	21.2	4.3
Bucheon	25.8	8.4	1.4	23.7	40.7	85.8	10.9	13.4	1.9	14.4	15.3	8.9	24.0	16.1	1.9
Chuncheon	10.8	9.1	--	11.3	14.5	18.0	11.7	15.8	8.2	20.9	24.8	25.6	44.0	35.5	48.0
Jeju	67.0	38.9	3.7	4.8	9.7	14.3	5.4	12.6	13.7	8.2	21.9	41.0	14.1	16.8	27.3
Yeosu	51.7	31.2	1.7	9.9	14.5	34.7	9.8	8.7	8.4	23.7	28.9	46.6	33.5	16.3	8.5
Iri	17.4	28.4	0.3	16.9	23.1	20.9	9.6	9.8	8.9	19.9	21.9	55.3	34.9	16.4	14.5
Weonju	14.1	12.4	0.6	9.9	18.6	35.4	8.9	15.2	4.8	20.2	25.2	39.2	42.3	28.5	19.9
Euijeongbu	14.4	7.4	--	8.5	19.3	41.0	10.8	11.4	10.6	19.1	30.4	33.4	45.7	31.2	14.8
Suncheon	51.8	29.4	2.0	7.4	9.8	24.9	7.3	13.9	14.3	12.0	23.9	41.6	19.9	22.6	17.0
Gyeongju	51.5	44.3	--	8.3	8.6	35.4	5.8	9.4	6.0	14.9	22.7	39.7	18.3	14.7	18.8
Chungju	34.6	21.7	1.5	15.3	23.6	39.0	8.5	15.9	7.4	17.2	20.8	25.8	23.4	17.9	26.2
Cheonan	14.1	18.6	42.3	17.3	25.2	40.9	13.3	11.8	4.8	25.2	23.8	8.3	29.1	20.4	3.6
Jinhae	11.7	18.3	20.2	17.2	23.8	30.3	7.9	11.9	7.3	12.9	17.7	28.3	58.8	26.4	13.7
Gangneung	40.4	23.6	0.2	11.3	13.7	25.5	9.4	14.3	41.3	14.5	24.0	6.1	22.7	24.1	26.8
Andong	18.5	18.5	--	12.8	14.9	16.5	11.9	16.4	10.5	22.3	27.4	63.0	33.6	22.4	9.8

Source: Ministry of Home Affairs, Korea Municipal Yearbook, 1961, 1975, 1982.

NA= Not available

--= less than 0.1

Moreover, during the 1970s Korean cities began to exhibit a stronger division of labor and a higher degree of functional specialization. (See Table 7.) Employment location quotients indicate that four cities with less than a quarter million population had become relatively specialized in agricultural processing and related food industries. Mogpo and Cheonan had about 10 times the share of their labor forces working in primary industries than did all urban places in Korea, and Jinhae had about 5 times the agricultural work force of other urban places. Anyang and Gunsan had a slightly higher concentration of agricultural workers than the average city in Korea. Nine cities, all with more than 160,000 residents, had attained relative specializations in manufacturing.

Four cities with more than 300,000 people--Taegu, Gwangju, Ulsan and Cheongju--emerged as regional service centers with high degrees of relative specialization in production oriented services. Although all had relatively large numbers of workers in manufacturing, their economies were still dominated by commerce and services. Daejeon also emerged as a strong center of production-oriented services as did a smaller city, Gangneung. All of the intermediate cities with populations smaller than 150,000 remained highly specialized in commerce and services and none attained relative specializations in manufacturing, although in four cities with between 150,000 and 200,000 residents, industrial employment increased.

Analysis of employment location quotients indicates that, by 1980, at least 7 functional types of intermediate cities had emerged in Korea:

TABLE 7

LOCATION QUOTIENTS OF EMPLOYMENT SPECIALIZATION IN INTERMEDIATE CITIES, 1980

City	Population 1978 (000's)	Employment Sector									
		Agriculture		Manufacturing		Production-Oriented Svcs ¹		Commerce		Other Services	
		% of Labor Force	Urban L.Q.	% of Labor Force	Urban L.Q.	% of Labor Force	Urban L.Q.	% of Labor Force	Urban L.Q.	% of Labor Force	Urban L.Q.
Pusan	2,879.6	.4	.10	70.1	*1.21	5.9	.81	13.4	.68	10.1	.92
Taegu	1,487.1	--	--	47.9	.82	7.5	*1.04	30.2	*1.52	14.3	*1.30
Incheon	963.5	.7	.18	72.2	*1.24	6.7	.93	17.9	.90	2.4	.21
Gwangju	694.6	--	--	32.8	.56	18.5	*2.57	32.2	*1.63	16.3	*1.48
Daejeon	580.6	.3	.08	55.3	.95	24.7	*3.43	14.7	.74	4.9	.44
Masan	391.9	.6	.15	77.4	*1.33	2.3	.32	12.5	.63	7.2	.65
Jeonju	384.1	--	--	69.4	*1.19	4.6	.63	4.9	.25	18.9	*1.72
Ulsan	364.5	--	--	40.2	.69	20.4	*2.83	25.7	*1.29	13.6	*1.23
Seongnam	324.1	--	--	76.8	*1.32	2.3	.32	16.3	.82	4.4	.40
Suwon	266.1	.2	.05	56.4	.97	5.9	.81	23.9	*1.20	13.5	*1.22
Cheongju	223.1	--	--	40.0	.68	17.9	*2.49	12.0	.60	29.7	*2.70
Hogpo	210.9	40.0	*10.26	26.1	.45	7.9	*1.10	20.5	*1.04	5.4	.49
Anyang	187.9	4.3	*1.10	77.2	*1.33	2.5	.35	10.0	.50	5.2	.47
Pohang	184.0	--	--	68.2	*1.48	6.1	.84	19.1	.96	6.6	.60
Jinju	174.9	--	--	30.3	.30	6.5	.90	22.4	*1.13	40.8	*3.70
Gunsan	167.4	5.9	*1.15	76.6	.24	2.6	.36	10.4	.52	4.3	.39
Bucheon	163.5	1.4	.35	85.8	.60	1.9	.26	8.9	.45	1.9	.17
Chuncheon	152.6	--	--	18.0	.36	8.2	*1.38	25.6	*1.29	48.0	*4.36
Jeju	152.5	3.7	.95	14.3	.61	13.7	*1.90	41.0	*2.07	27.3	*2.48
Yeosu	151.3	1.7	.43	34.7	.71	8.4	*1.17	46.6	*2.35	8.5	.77
Iri	132.3	.3	.07	20.9	.42	8.9	*1.24	55.3	*2.79	14.5	*1.32
Wonju	131.0	.6	.15	35.4	.61	4.8	.66	39.2	*1.97	19.9	*1.80
Kuijeongbu	117.8	--	--	41.0	.71	10.6	*1.47	33.4	*1.68	14.8	*1.34
Suncheon	114.6	2.0	.51	24.9	.42	14.3	*1.98	41.6	*2.10	17.0	*1.54
Gyeongju	113.9	--	--	35.4	.61	6.0	.83	39.7	*2.00	18.8	*1.71
Chungju	110.1	1.5	.38	39.0	.67	7.4	*1.02	25.8	*1.30	26.2	*2.38
Cheonan	109.3	42.3	*10.84	40.9	.70	4.8	.66	8.3	.42	3.6	.33
Jinhae	108.7	20.2	5.78	30.3	.52	7.3	*1.01	28.3	*1.42	13.7	*1.24
Gangneung	102.2	.1	.05	25.5	.44	41.3	*5.74	6.1	.31	26.8	*2.43
Andong	101.5	--	--	16.5	.28	10.5	*1.45	63.0	*3.18	9.8	.89
Urban Area:		3.9		58.1		7.2		19.8		11.0	

Source: Calculated from Ministry of Home Affairs, 1980; Table 36.

*Relatively specialized compared to all urban areas.

1. Includes gas, utilities, construction, transportation, warehousing and communications.

- a. Three smaller intermediate cities--Mogpo, Cheonan and Jinhae--had become agricultural processing and distribution centers;
- b. Two cities--Anyang and Gunsan--had relatively high concentrations of workers in both agriculture and manufacturing;
- c. Four large secondary cities--Pusan, Incheon, Masan and Seongnam--and one smaller port city, Pohang, were highly specialized in manufacturing;
- d. One large secondary city, Jeonju, had relatively high concentrations of employees in manufacturing and services;
- e. Three smaller intermediate cities--Andong, Iri and Yeosu--were relatively specialized in commerce;
- f. Seven cities of various sizes had become service centers; and,
- g. Nine relatively smaller intermediate cities remained service and commercial centers.

Thus, over a 20-year period both the urban structure in Korea and the occupational composition of intermediate cities changed markedly. Manufacturing became the dominant sector in most of the larger secondary cities that had been designated as growth poles in the first phase of the government's long-term land development policy. Agriculture became an insignificant source of employment in all but a few intermediate cities. Services and commerce decreased drastically as a source of employment in nearly all intermediate urban centers, although in absolute terms the tertiary sector

remained an important employer in all intermediate cities and especially in those with populations less than 200,000. As economic growth accelerated and industrial activities were deconcentrated, there was a stronger division of labor among intermediate cities. A larger number gained population and their economies became more diversified.

Finally, during the 1970s all of the intermediate cities except Mogpo and Yeosu increased the percentage of municipal revenues collected locally and raised the level of their financial self-sufficiency (see Table 8). Although all middle-sized cities were substantially weaker in their capacity to raise local revenues than Seoul, some of the larger secondary cities such as Pusan, Taegu, Incheon, Ulsan and Anyang had achieved more than 87 percent financial self-sufficiency by 1981. No city came close to Seoul's level of municipal expenditures, but a few such as Mogpo, Gunsan, and Yeosu did increase their percapita expenditures above those of the capital city.

3. Changes in the Agricultural Role of Intermediate Cities.

The agricultural sector ceased to play an important role in the occupational structure of most intermediate cities in Korea during the late 1960s, but as these cities grew they began to play an important function in commercializing agriculture in the rural areas surrounding them. Studies of Taegu, for example, indicate that extensive changes occurred in surrounding rural areas as it grew from a regional commercial and manufacturing center into a nationally

TABLE 8

MUNICIPAL FINANCIAL SELF-SUFFICIENCY AND PERCAPITA EXPENDITURES
1970, 1981

City	Percent Financial Self-Sufficiency		Total Municipal Expenditures		Percapita Municipal Expenditures, 1981
	1970	1981	(000s of Won)	1981	
Pusan	63.7	93.8	52,879.8		16,272
Taegu	68.8	88.1	30,418.9		16,550
Incheon	51.9	94.9	25,441.6		22,284
Gwangju	57.2	72.6	18,234.1		23,686
Daejeon	43.8	73.2	10,232.1		15,313
Masan	41.8	73.0	7,649.6		19,100
Ulsan	43.2	91.0	10,532.9		23,380
Jeonju	45.2	62.4	3,564.7		9,488
Seongnam	--	80.8	4,291.1		11,054
Suwon	62.5	68.6	6,685.7		20,622
Cheongju	39.6	52.4	3,973.3		14,870
Mogpo	33.1	27.0	9,928.8		43,797
Anyang	NA	87.1	7,178.4		27,769
Pohang	33.3	78.8	1,757.9		8,521
Jinju	48.6	58.6	5,409.4		25,710
Gunsan	43.5	56.0	9,374.4		55,634
Bucheon	NA	75.4	4,151.2		16,882
Chuncheon	40.8	54.6	1,775.2		11,129
Jeju	38.5	60.7	6,041.6		35,543
Yeosu	34.4	30.7	6,064.9		36,058
Iri	43.9	54.0	4,213.8		27,012
Weonju	22.0	38.7	2,370.4		17,115
Euijeongbu	27.2	48.0	2,304.8		17,085
Suncheon	31.6	34.7	1,597.1		13,961
Gyeongju	20.6	47.0	1,922.4		15,294
Chungju	36.0	47.4	906.8		7,857
Cheonan	29.6	53.1	1,208.2		9,380
Jinhae	22.7	60.0	803.1		7,039
Gangneung	17.3	65.0	3,780.6		31,478
Andong	28.6	49.4	936.7		9,085
Seoul	90.3	96.3	301,346.2		34,733

Source: Ministry of Home Affairs, 1970, 1982

important metropolis. Park (1971) observed that as Taegu grew in size and diversified its economic base, agricultural resources in its hinterland came to be used more productively. Croplands in areas around the city were cultivated more intensively and generated higher incomes for farmers. As this happened, farmers used more hired labor and members of farm families obtained off-season and part-time work in the city to supplement household income. Population growth in the Taegu area increased the demand for new agricultural products, including fruit, vegetables, livestock, poultry, grain, and tobacco. As demand increased, land was used more efficiently. The use of manufactured farm tools and implements spread rapidly and the production and repair of farm machinery and equipment became an important part of the city's economy. Farmers living close to the city improved their managerial abilities and tested new production and cultivation techniques more quickly than those living in areas farther from Taegu. Park (1971: 152) concluded from his analysis that

the urbanization and industrialization of Taegu have a complementary relationship with the increasing commercialization of regional agriculture. In the Korean agricultural setting, the decentralization of urbanization and industrialization is an accelerating factor for modernization of the rural sector. And modernization in the surrounding rural sector contributes to the industrial and commercial growth of the city by providing a market not only for more consumption goods, but, as farm incomes increase, also for more consumption goods wanted by farm people. With better roads, people get to town more often even though they would seldom go to Seoul.

Some indication of the effects of the growth of intermediate cities on agriculture is reflected in changes in agricultural land use. Between 1967 and 1978, land in agricultural use increased from about 388 square kilometers to about 446 square kilometers in the 18 cities

with populations of between 100,000 and 200,000 (Ministry of Construction, 1980). As cities grew in population up to about a quarter of a million, they seemed to have generated increased demand and provided larger markets for agricultural products and more land was brought into agricultural production in and around those cities. But as they continued to grow to over 250,000, other employment opportunities were created, population densities on the peripheries and within the cities began to rise, land values increased and agricultural production became more efficient. Pressures were then created to convert agricultural land to other uses. Agricultural production in the hinterlands, however, increased or could be maintained with less land in and around those cities devoted to agricultural use.

4. Changing Role of Intermediate Cities in Social Transformation.

Some evidence also indicates that as the number of intermediate cities increased and their populations grew, these urban centers began to take on more important social functions. Although few studies have been done of the impact of individual intermediate sized cities on social change in Korea, there is growing evidence that they are becoming more important in fostering changes in attitudes and behavior and in easing the transition from rural to urban living for people who migrate to cities. As noted earlier, Korean intermediate cities as a group have become more important centers of social services over the past decade as a result of government's investments to improve living conditions in them and to make them more attractive for industry.

Some analysts note that as cities grew in size they assumed a more crucial role in providing social services because of the new opportunities afforded by greater economies of scale and agglomeration. Yu (1971: 450) observes of Taegu that as it grew from an a regional intermediate center to a large metropolitan core city its growth both allowed it to play a strong role as an educational center for the southeastern part of the country and its educational functions contributed to its continued growth. Although industrialization undoubtedly attracted many of the migrants who came to the city, Yu claims that "it has been urbanization--the concentration of people in Taegu--which had much more effect and bestowed more functional benefits on education in Taegu." And he noted, "the opportunities of Taegu's educational system have had a strong reciprocal effect on the process of urbanization."

Studies by Oh and Lee (1980) show that social and occupational mobility have increased with the deconcentration of urbanization. Moreover, Kim and Pai (1980) have found that the degree of individual modernity among urban residents is positively correlated to the size of the urban center in which they live, implying that as the number and size of intermediate cities have increased they have played a more important role in changing the attitudes and behavior of a larger number of people. In their study of rural migrants to cities Kim and Pai (1980: 254) found that "those who move to the larger urban areas tend to acquire significantly more modern attitudes than those moving to smaller cities (si) or to towns (eup)." Using the Inkeles (1966) indicators of modernity, Kim and Pai concluded from

their surveys that

Urban residents were generally more modern in their beliefs and attitudes than were the rural residents. The urban-born individuals were more modern than were the migrants who have arrived recently to the city environment. The migrants, because of their exposure to the city life showed more modern attitudes than did the rural population. The migrants to larger and more modern cities had significantly more modern perspectives than other migrants moving to smaller cities. Finally, among the migrants themselves, the longer they stayed in cities, the more modern their attitudes and beliefs become. The evidence, therefore, overwhelmingly supports the proposition that the urban centers provide a major social context in which individuals gain modernity.

Some evidence also strongly supports the proposition that exposure to urban life-style in intermediate cities has reduced fertility and family size among rural migrants to those cities. Lee and his associates (1981) argue that adaptation to urban lifestyle is reflected in fertility patterns during the mid-1960s to mid-1970s. Fertility decreased with the increasing population size of the destination. Migrants to small and medium sized Korean cities had 1.2 fewer children than those who remained in rural areas. Those who went to Pusan and the larger secondary cities had 1.9 fewer children and those who went to Seoul had 2.9 fewer offspring. These studies concluded that "adaptation to urban life is a significant phenomenon explaining lower fertility of rural-urban migrants compared with that of rural stayers." Lee and his associates estimated that 945,000 women who migrated to cities from 1965 to 1970 reduced their fertility by 1.3 million births, or 2.7 percent, compared to their expected fertility over their childbearing years had they remained in rural areas.

Thus, the significant changes that began to occur in the urban structure of Korea over the past two decades were seen not only in the weakening of Seoul's social, economic and physical dominance in the space economy, but in the growth and transformation of many of the intermediate-sized cities as well.

URBAN DECONCENTRATION, INDUSTRIAL DECENTRALIZATION AND EMPLOYMENT GENERATION IN INTERMEDIATE CITIES

One of the most important changes that occurred in intermediate cities between 1960 and 1980 was the generation of new sources of employment in the larger secondary cities and changes in the structure of employment in many smaller intermediate urban centers.

Employment in the 30 cities with more than 100,000 population increased by nearly 1.5 million between 1970 and 1980 alone. Although much of the increase reflected the government's policy of creating growth poles outside of Seoul and took place in the largest secondary cities--Pusan, Incheon and Taegu--significant gains were also recorded in intermediate cities that had been chosen as industrial estates. Over one million new jobs were created in Pusan, Taegu and Incheon between 1970 and 1980. Employment in Masan, Jeonju, Cheongju, Mogpo, Pohang and Cheonan grew by more than 300 percent. Similarly new jobs in Suwon, Anyang, Gunsan and Gyeongju had grown by more than 200 percent over the decade. But many of the intermediate cities that had been by-passed by industrial

development, such as Andong and Gangneung lost jobs. And jobs were lost as well in some of the cities such as Ulsan and Weonju where industrial estates had been created in the 1960s for industries that later became oversaturated or faced declining export markets.

Employment in Commerce and Services

Although the share of employment in the tertiary sector declined drastically in intermediate cities during the 1970s, commerce and services still played an important role in the economic and occupational structures of most middle-sized cities and a dominant one in those at the lower end of the intermediate-city size scale. As noted earlier, more than half of the labor force in all medium-sized and small cities was employed in the tertiary sector in 1960, with services alone accounting for nearly one-third of intermediate city employment. Wholesale and retail trade establishments employed about 20 percent of the labor force in cities with over a half million residents and a little more than 17 percent in cities with between 100,000 and a half million population.

By 1980, commerce and services still played a strong, but relatively less significant, role in the economies of the larger secondary cities. The tertiary sector accounted for about 44 percent of employment in cities with more than a half million residents and for about 39 percent in cities with 200,000 to 500,000 population. It remained both an absolutely and relatively strong source of employment--accounting for nearly 56 percent of the jobs--in cities with from 100,000 to 200,000 dwellers.

In 1980, commercial establishments provided employment for nearly 450,000 people in intermediate cities, production oriented services offered about 197,000 jobs and social and commercial services employed about 280,000 workers. Employment in wholesale and retail trade increased on average in the largest and smallest intermediate cities, as did employment in production oriented services. Employment in both these sectors decreased slightly in cities of from 200,000 to 500,000 where gains in manufacturing employment were greatest.

With the growth of manufacturing, employment in transport, communications and storage services increased in a number of intermediate cities. Cities with populations over a half million had about 9 percent of their labor forces employed in this sector in 1980. Those urban centers with from 100,000 to 500,000 residents had over 7 percent of their workers employed in production oriented services. The sector was even a stronger source of employment in the growing industrial cities of Pusan, Taegu, Incheon, Jeonju, Daejeon, Cheongju, and Suncheon. Gangneung, a small intermediate city in northeastern Korea, became specialized in transportation and storage, and nearly 35 percent of its labor force was employed in this sector in 1980.

For the most part, however, the tertiary sector in intermediate cities remained one composed of large numbers of small enterprises with weak employment generating capacity. In many of the smaller cities the characteristics of commercial establishments are not much different today than they were in Taegu more than a generation ago.

In 1968, almost 99 percent of the stores in Taegu had less than four employees (Lee, 1971). In contemporary intermediate cities, as in Taegu then, these establishments cater primarily to demand for small purchases of consumption goods. Owners have relatively small amounts of money to invest in inventory; they use traditional methods of accounting and management, employ only family members or close relatives, and they survive on small margins of profit. As cities in Korea grew, the average size of commercial establishment increased slightly. But in all intermediate cities except Pusan, Taegu and Gangneung, wholesale and retail establishments employed an average of only two people in 1980. Service establishments in cities with more than a half million residents employed slightly larger numbers of workers, but in most smaller intermediate cities they remain small businesses. In only a few cities does the average number of employees exceed seven (Ministry of Home Affairs, 1982).

Employment in Manufacturing

Although much of Korea's rapidly growing manufacturing employment is still concentrated in Seoul and the largest secondary cities, many medium-sized cities have come to play an increasingly important role as manufacturing centers. In 1980, manufacturing firms in the five largest intermediate cities employed more than a million people, almost double the number working in industries in those cities in 1974. More than a half million people were employed by industries in smaller intermediate cities. In 1974, establishments located in intermediate cities contributed about 54 percent of the country's manufacturing value-added (Ministry of Construction, 1980). Although

no individual secondary city's manufacturing sector produced as much as that of Seoul's, the middle-sized cities together contained a substantial portion of Korea's production capacity.

The Korean experience shows that intermediate cities can play an important role in distributing industrial jobs in countries where government seeks to deconcentrate manufacturing from the largest metropolis. Korea's industrial relocation and industrial estates programs undoubtedly played a major role in creating manufacturing employment in intermediate cities. As Table 9 indicates, the investments in industrial estates attracted a large number of firms to many intermediate cities and employment in the industrial estates now accounts for a large percentage of total manufacturing employment in those cities. In Changweon, Gumi, Suncheon, Iri and Banweol more than 90 percent of the city's manufacturing employment is concentrated in the industrial estates. More than 25,000 jobs were created in Taegu, Incheon, Seongnam, Gumi, Ulsan, Changweon and Jinju during the 1970s as the result of firms locating in the estates constructed in those cities.

By 1980, although small-scale establishments still accounted for about 90 percent of all industrial firms in intermediate cities, large industries--those employing more than 100 people--engaged more than half of the industrial labor force in nearly half of those cities with 100,000 or more residents. In larger cities such as Pusan, Incheon and Daejeon, large factories employed from 55 to 68 percent of the industrial workers. In smaller secondary cities where the government created industrial estates, a large majority of the

TABLE 9

EMPLOYMENT AND INVESTMENT IN INDUSTRIAL ESTATES
IN KOREAN CITIES, 1980

City	Types of Industries in Estate	Number of Industries	Number of Employees	Total Investment (Millions of Won)	Percent of City's Manufacturing Employment in Industrial Estate <u>a/</u>
Daegu	All types	540	46,617	31.3	48.5
Incheon	All export items, machinery, metal, timber, steel	252	45,820	36.2	21.1
Seongnam	Textile, chemical, machinery, metal	174	30,110	2.2	69.1
Banweol	All types	202	12,384	49.7	91.0
Chuncheon	Light manufacturing	28	2,081	0.3	33.4
Weonju	Paper, electronics, chemical, timber, leather, nonferrous metal	22	1,264	0.7	35.4
Cheongju	Textile, electronics, food, machinery	62	11,498	9.1	55.0
Daejeon	Machinery, textile, chemical	85	10,424	3.4	24.5
Cheonan	Machinery	57	4,700	2.7	--
Jeonju	Textile and related industries	54	7,613	0.6	68.9
Gunsan	Machinery and related	25	1,165	51.1	10.6
Iri	Textile	103	14,676	2.2	92.2
Gwangju	Food and agro-processing	161	9,063	14.4	39.1
Mogpo	Food and agro-processing	34	4,965	1.1	29.2
Yeocheon	Oil refining, chemical	17	5,295	1,251.1	98.2
Suncheon	Food and related	1	24	3.9	2.6
Pohang	Iron	49	11,043	2.7	20.7
Gumi	Textile, electronics, computer	225	46,526	8.1	97.8
Ulsan	Shipbuilding, auto-mobiles	13	68,846	93.4	--

TABLE 9 (continued)

City	Types of Industries in Estate .	Number of Industries	Number of Employees	Total Investment (Millions of Won)	Percent of City's Manufacturing Employment in Industrial Estate
Changweon Jinju	Machinery Textiles, machinery, ceramics, spinning and weaving	80	35,679	33.7	96.4
Samcheonpo (under construction)	Electronics	1	28,000	-- 246.0	-- --

Source: Republic of Korea, Municipal Yearbook of Korea 1982, (Seoul: Ministry of Home Affairs, 1982).

^{a/} Estimated by dividing industrial estate employment by total manufacturing employment in city.

manufacturing work force is employed by large industries: for example, 82 percent in Masan, 80 percent in Ulsan, 61 percent in Cheongju, 70 percent in Pohang, and more than half in Chuncheon, Iri, Gunsan, Weonju and Andong.

By 1980, industrial firms had an average of 54 workers in cities with from 100,000 to 200,000 residents and 85 employees in cities with 200,000 or more population. In only one-third of Korean intermediate cities did more than 60 percent of the manufacturing labor force still work in small-scale industries, although small scale firms still accounted for the overwhelming majority of the industrial establishments in those cities.

Korea's policy of extending highways, providing utilities, upgrading power and energy capacity and establishing essential infrastructure in middle-sized cities allowed them to support successfully large-scale industries that generated more employment. By 1980 half of the intermediate cities with populations of less than 200,000 had more than 5 large factories, as did all larger cities.

TOWARD BALANCED URBANIZATION: FUTURE POLICIES FOR

DEVELOPING INTERMEDIATE CITIES

Intermediate-sized cities have come to play a more important role in achieving Korean development goals during the past decade: in absorbing an increasing share of urban population growth and rural to urban migration, as channels of investment to reduce interregional

disparities in income and living conditions, as centers of public, social, commercial and administrative services, as locations for geographically dispersed industrial growth and as places where nonagricultural employment could be generated or increased.

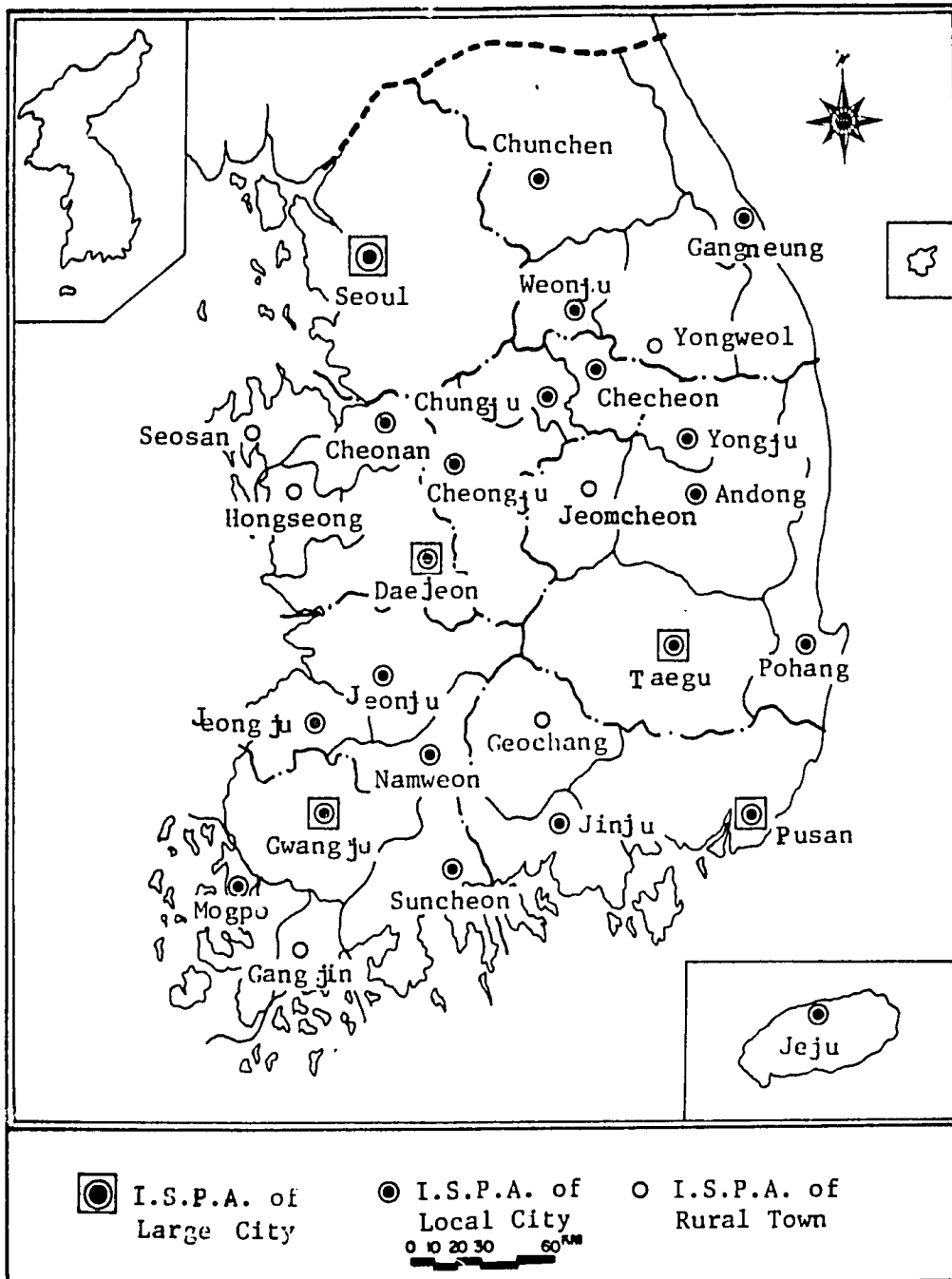
The importance of intermediate cities is reflected in the strategic role they have been assigned in the government's Second Land Development Plan for 1982-1991. In that plan the government seeks to move towards achieving the third-phase goals of its national land development policies: achieving balanced urbanization and equitable participation in the benefits of economic and social progress. To achieve more balanced urbanization and widespread distribution of productive capacity, the country's eight planning regions were divided into 28 "integrated service provision areas" (see Figure 11). The ISPAs included:

1. Five national metropolitan centers--Seoul, Pusan, Taegu, Daejeon, and Gwangju--in which central administrative functions serving the country as a whole, and highly specialized social and economic activities, would continue to be concentrated.

2. Seventeen "local cities" in which high level commercial, industrial, and administrative functions would be developed and in which some of the population now migrating to the large metropolitan areas would be encouraged to settle. These local centers include Chuncheon, Gangneung, Weonju, Chungju, Cheonan, Yeongju, Andong, Cheongju, Jeonju, Mogpo, Suncheon, Namwon, Jinju, Jeju, Pohang, Jeongju and Jecheon.

FIGURE 11

INTEGRATED SERVICE PROVISION AREAS



Source: KRIHS, 1982

3. Six rural service centers--Yeongweol, Hongseong, Gangjin, Geochang, Jeomchon, and Seosan--in which small-scale commercial, manufacturing, agroprocessing, service and market functions would be strengthened to meet the daily needs of the rural population.

In addition, some cities are to be developed as satellite centers for Seoul and Pusan and will be encouraged to provide social and economic functions for these metropolitan areas and to relieve population pressures on the core areas. The satellite cities will include Incheon, Suwon, Anyang, Bucheon, Seongnam, Euijeongbu, Songtan, Gwangmyeong, Dongducheon, Masan, Chongwon, Ulsan, Chungmu, Jinhae, and Kimhae.

From among the 28 integrated service areas, 3 cities were designated as primary, and 12 as secondary, "growth inducement cities" (see Figure 12). The growth inducement cities, listed in Table 10, were selected because of their potential capacity to share with the major metropolitan areas the provision of central government functions, their strategic location to promote regional development, their capacity to accommodate migrants who might otherwise move to Seoul or Pusan, their relatively high concentration of urban services and facilities and their relatively high growth potential and capacity to yield acceptable rates of return on public investment (KRIHS, 1982). The government aims to expand the size of their population, industrial sites, residential sites and water supplies to the levels indicated in Table 10 by 1991.

Labor-intensive industries will be promoted in these intermediate

FIGURE 12

LOCATION OF GROWTH INDUCEMENT CITIES

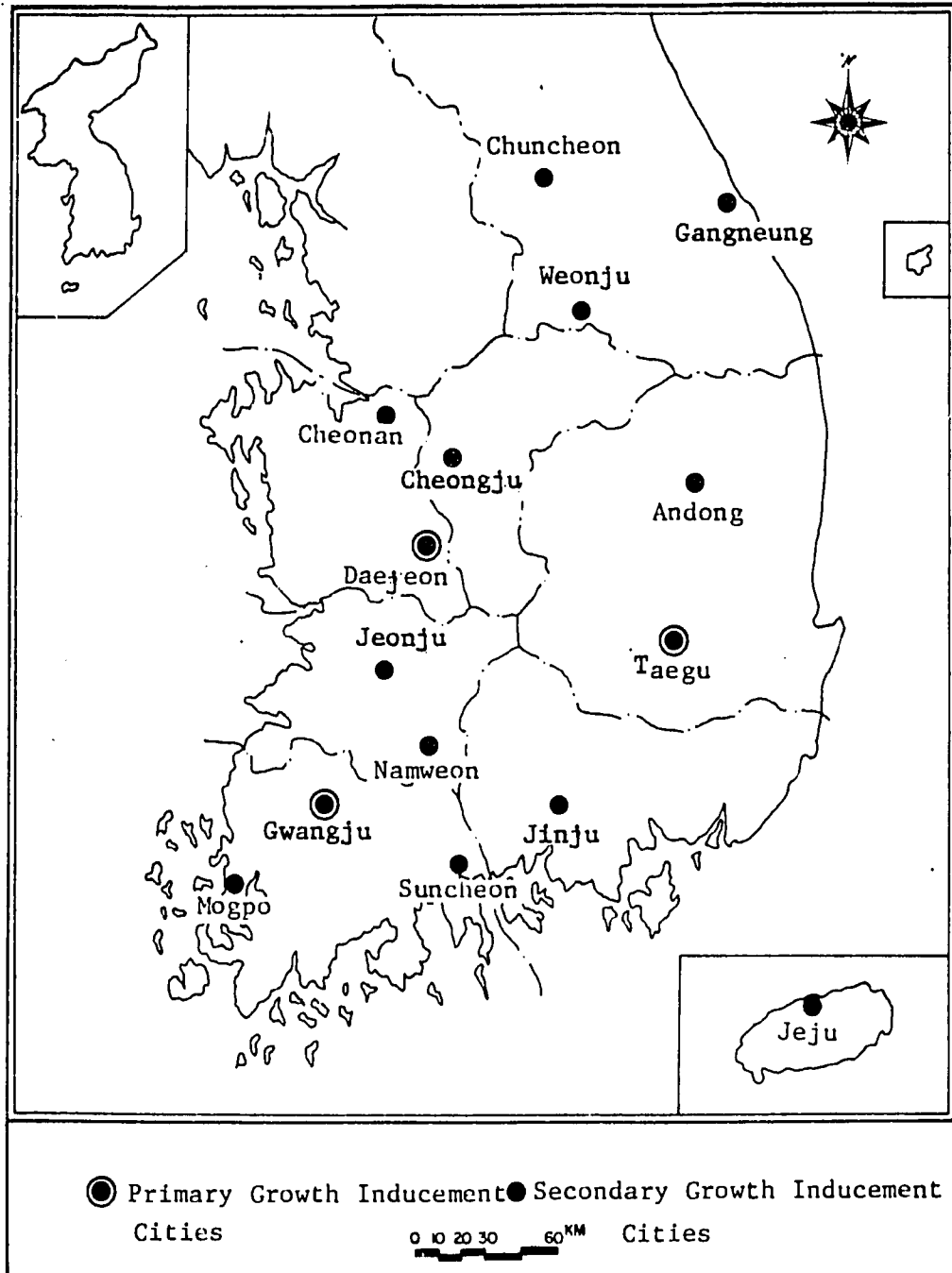


TABLE 10
DEVELOPMENT TARGETS FOR SELECTED INDICATORS IN "GROWTH INDUCEMENT CITIES"
1980-1991

City	Population (000s)		Industrial Sites (Sq.Km.)		Residential Sites (Sq.Km.)		Percent Coverage of Piped Water Supply	
	1980	1991	1980	1991	1980	1991	1980	1991
Daejeon	663	1,240	7.03	18.68	17.64	40.29	82	95
Gwangju	741	1,300	3.62	11.96	18.95	39.63	77	95
Taegu	1,636	2,600	8.25	15.82	39.16	76.22	93	98
Chuncheon	158	230	.48	.48	5.45	7.75	84	95
Weonju	139	230	.66	1.98	5.42	8.49	78	95
Gangneung	119	200	2.64	8.32	3.88	6.79	79	95
Cheongju	258	430	1.50	4.03	11.17	16.82	75	95
Cheonan	123	210	.90	2.83	3.01	6.49	52	90
Jeonju	373	610	2.59	3.20	11.00	17.54	83	90
Namweon	58	95	.10	.60	NA	NA	47	90
Mogpo	226	350	.67	4.69	5.34	9.58	93	98
Suncheon	116	200	.62	1.71	3.36	6.31	64	90
Andong	104	180	.23	1.11	4.00	6.38	87	95
Jinju	206	345	1.65	2.23	3.67	8.11	84	95
Jeju	171	260	.67	1.00	3.62	7.33	96	99

Source: KRIHS, 1982

cities, urban services and facilities will be provided, roads and highways will be upgraded and extended to create a high degree of intra-regional accessibility, and new housing will be constructed on a large scale. Higher education and research institutions will be encouraged to locate in areas now zoned for greenbelts around these cities.

Less emphasis will be given to building large-scale manufacturing complexes and, instead, industrial sites will be prepared in dispersed locations for small and medium scale industries. Land devoted to industrial sites will be expanded from the 330 square kilometers existing in 1980 to about 468 square kilometers in 1991. Emphasis will be placed on promoting machinery, textile and food industries in the Daejeon-Chungju area; machinery and food in Gwangju; textiles and electronics in the Taegu-Gumi area; nonmetallic minerals and chemicals in Jeonju and Gunsan; textiles and machinery in Weonju and nonmetallic minerals in Donghae. Agricultural processing and parts manufacturing that can be accommodated in small plants will be encouraged to locate in small cities and rural towns.

Finally, the Second National Land Development Plan (KRIHS, 1982) calls for:

1. Construction of more than 3.2 million dwelling units to relieve the housing shortages in most cities and to raise the ratio of dwelling units to households from 74.5 percent in 1980 to 81.3 percent in 1991.

2. Expansion of the coverage of piped water supplies from 55 to 81

percent of households, with the highest priorities given to extending waterworks systems in "growth inducement cities."

3. Extension of tidal and slope land reclamation projects to add 944 square kilometers of new agricultural land.

4. Construction of extensive water resources projects to increase the supply of water for industrial, agricultural and domestic uses.

5. Extension of the highway network, and especially of linkages among "growth inducement cities," to support balanced growth among regions. About 346 kilometers of new expressways will be constructed and existing ones will be expanded from Seoul to Incheon, Suwon and Saemal, between Daejeon and Gwangju, and from Masan to Jinju and Taegu (see Figure 13).

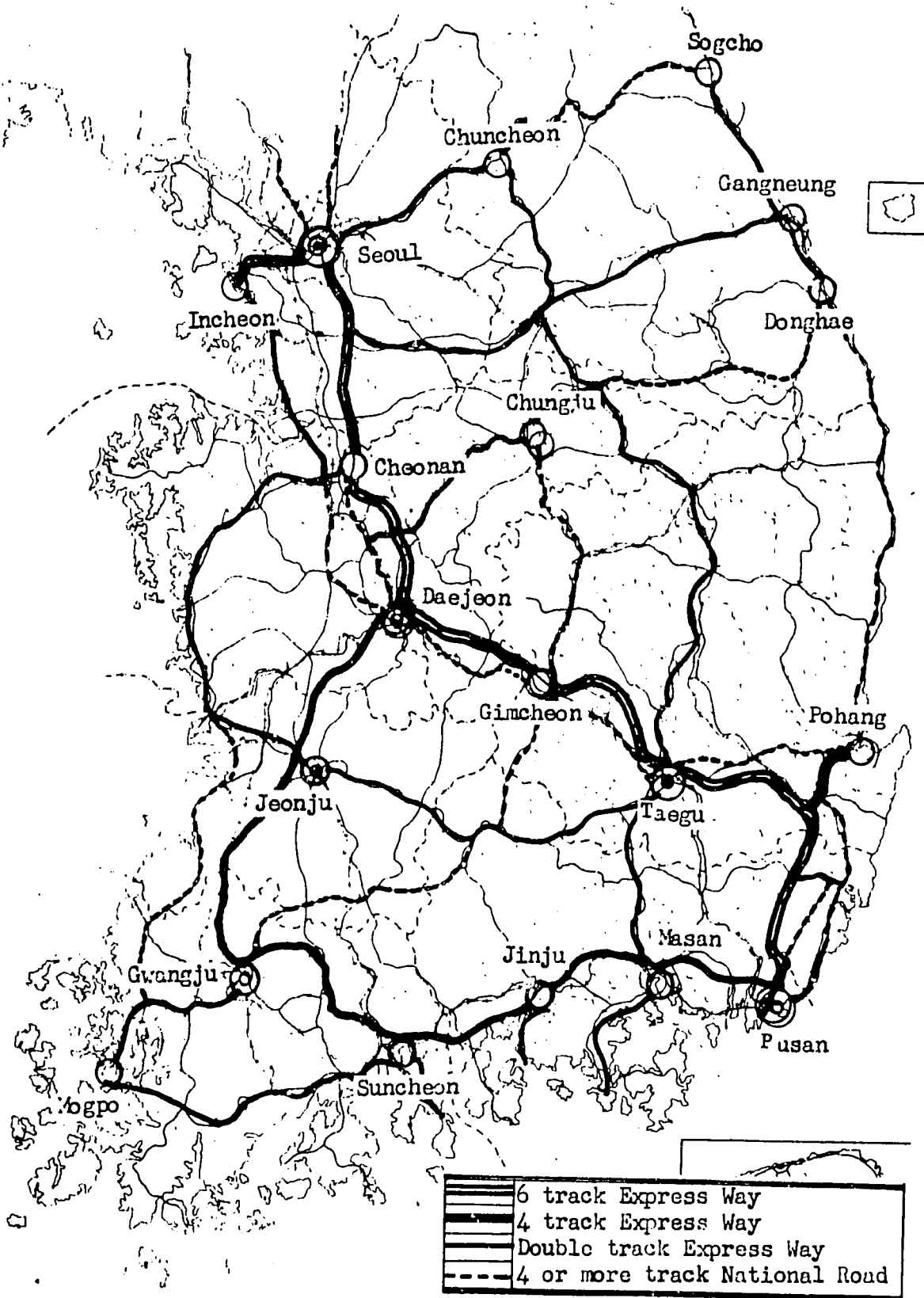
6. Construction of a highspeed train track between Seoul and Pusan and extension of rail lines between Seoul and Daejeon, Iri and Mogpo, and Jecheon, Yeongju and Cheolan.

7. Expansion of port capacities from 82 to 220 million tons a year by 1991.

By 1990, the government intends to improve people's living conditions throughout the country by promoting widespread economic development, balanced urbanization and equitable regional development and by creating a dispersed and multinucleated system of cities through which economic growth can be continued and maintained.

FIGURE 13

EXISTING AND PLANNING HIGHWAY SYSTEM



Source: KRIHS, 1980

CONCLUSIONS

In brief, the Korean government has pursued a variety of policies aimed at balancing urban development and ameliorating regional disparities over the past 20 years. Since 1960, it has been one of the few governments in the developing countries to successfully stabilize the growth of its largest metropolitan area and reduce its level of primacy. The size and share of urban population in Korean intermediate cities has increased, as has their number and share of productive economic activities. Although urban population and modern economic activities are still somewhat concentrated in the largest secondary cities, this is a reflection of the government's intention during the 1960s and 1970s to deconcentrate people and industry from Seoul, creating growth poles outside of the capital region, primarily in the larger port cities. The second phase of the long-term land development plan is to strengthen the role of intermediate cities as growth centers for areas throughout the country.

Since the mid-1970s, intermediate cities have continued to grow and become more economically diversified. They now perform important roles as administrative, service, commercial, marketing and agricultural processing centers, as centers of small and medium scale industry, as industrial estates for large export enterprises, and as centers of social transformation and modernization.

The ability of the Korean government to achieve the goals of the third phase of its national land development policies--balanced

urbanization and equitable economic growth among regions--will depend on a carefully conceived and effectively implemented strategy that recognizes the spatial implications of overall development policy and that more closely links the economic development of intermediate and smaller cities to the economies of their regions. Clearly, land development policies cannot be pursued in isolation from other public investment policies that may have a stronger influence on the pattern of urbanization than physical development controls. Locational implications must be given attention equal to financial and technical feasibility factors in the analysis of large scale investment projects for services, facilities and infrastructure.

Moreover, although the government's emphasis on achieving balanced urban development by creating functionally specialized cities and towns in regions outside of Seoul may be effective in the early phases of polarization reversal, plans must also be made to diversify the economies of intermediate cities later. Highly specialized cities are extremely vulnerable to fluctuations in demand for their products, especially if those products depend on export markets. Thus, while functional specialization based on existing comparative advantages may be an appropriate way of promoting the growth of intermediate cities initially, it must be followed by economic diversification to prevent individual cities from experiencing severe cyclical fluctuations that could create regional economic depression and new disparities later.

Attention must also continue to be given to allocating investments in social services, municipal facilities, health, sanitation, water

and other basic services more widely among intermediate cities if the government's population and industrial diffusion policies are to be successful. The current disparities between Seoul, the large metropolitan areas, and the other intermediate cities, in the share and quality of urban services can undermine or override the effects of land development regulations and economic incentives in attracting industries and population to the "growth inducement cities." Attempts to push industries from the capital before adequate support services and infrastructure are available in intermediate cities can lead to economic inefficiencies that slow the overall rate of national growth. In the long-run the availability of adequate supporting services and efficient transportation in intermediate cities will probably be more important for industrial dispersal than economic incentives or punitive regulations.

At the same time provisions in the Second National Land Development Plan for constructing housing, controlling land prices and improving educational facilities must also be implemented effectively if skilled workers and managers are to be attracted to intermediate cities. Much more attention also needs to be given to promoting energy-efficient land uses in secondary cities and to providing physical and economic incentives that will encourage the expansion of small and medium-scale industries that can cater to local demand as intermediate cities grow and diversify.

The only cities that have successfully become growth centers in developing countries are those that have developed a combination of externally-oriented and regionally based economic activities and that

have developed strong links between the urban and rural sectors within their regions (Stohr, 1974; Misra and Sundaram, 1978; Rondinelli, 1983). Intermediate cities must be linked physically and economically to each other, as well as to larger metropolitan areas and to smaller towns within their rural hinterlands. Korean development plans provide the basis for creating such a balanced and integrated system of cities; their success will depend on effective implementation.

REFERENCES

- Golladay, Frederick and Timothy King (1979), "Social Development," in P. Hasan and D.C. Rao (eds), Korea: Policy Issues for Long Term Development, Baltimore: Johns Hopkins University Press: 135-172.
- Harris, Randolph (1979), "Agriculture," in P. Hasan and D.C. Rao (eds), Korea: Policy Issues for Long Term Development, Baltimore: Johns Hopkins University Press: 205-232.
- Hasan, Parvez and D.C. Rao (1979), "Overview," in P. Hasan and D.C. Rao (eds), Korea: Policy Issues for Long Term Development, Baltimore: Johns Hopkins University Press: 3-14.
- Hwang, Myong-Chan (1979), "A Search for A Development Strategy for the Capital Region of Korea," in Y.H. Rho and M.C. Hwang (eds), Metropolitan Planning: Issues and Policies, Seoul: Korea Research Institute for Human Settlements: 3-32.
- Hwang, Myong-Chan and Jeong-Ho Kim (1980), "Planning Strategies for Metropolitan Seoul," in Won Kim (ed), The Year 2000: Urban Growth and Perspectives for Seoul, Seoul: Korea Planners Association: 31-53.
- Inkeles, Alex (1966), "The Modernization of Man," in M. Weiner (ed), Modernization, New York: Basic Books: 138-150.
- Kim, An-Jae (1978), "Industrialization and Growth Pole Development in Korea: A Case Study of the Ulsan Industrial Complex," in F.C. Lo and K. Salih (eds), Growth Pole Strategy and Regional Development Policy: Asian Experience and Alternative Approaches, London: Pergamon Press: 53-77.
- Kim, Chong-Lim and Seong-Tong Pai (1980), "Urban Migration, Acquisition of Modernity and Political Change," in Y.S. Chang (ed), Korea: A Decade of Development, Seoul: Seoul National University Press: 241-272.
- Kim, K.D. and O.J. Kim (1977), "Korea's Saemaul Undong: Social

Structure and Role of Government in Integrated Rural Development," Bulletin of Population and Development Studies Center, VI: 1-15.

- Korea Research Institute for Human Settlements [KRIHS] (1980), National Land Development Planning in Korea, Seoul: KRIHS.
- Korea Research Institute for Human Settlements [KRIHS] (1982), "Summary: The Second National Land Development Plan, 1982-1991," Seoul: KRIHS.
- Kwon, Won-Yong (1981), "A Study of the Economic Impact of Industrial Relocation: The Case of Seoul," Urban Studies, 18: 73-90.
- Lee, Bun-Song, Stephen C. Farber, A.M.M. Jamal and Michael V.E. Rulison (1981), The Influence of Rural-Urban Migration on the Fertility of Migrants in Developing Countries: Analysis of Korean Data, Washington: U.S. Agency for International Development.
- Lee, Yu-Sang (1971), "An Economic Survey: Efficiency, Equity, and Growth," in M.G. Lee and H. Barringer (eds), A City in Transition: Urbanization in Taegu, Korea, Seoul: Hollym: 187-219.
- Ministry of Construction, Republic of Korea (1972), Comprehensive National Land Development Plan, Seoul: Ministry of Construction.
- Ministry of Construction, Republic of Korea (1980), Long-Range Planning for Urban Growth to the Year 2000: Data Collection (Unofficial Translation), Seoul: Ministry of Construction.
- Ministry of Construction, Republic of Korea (1981), Second Ten-Year Physical Development Plan, Seoul: Ministry of Construction.
- Ministry of Home Affairs, Republic of Korea (1980), Municipal Yearbook of Korea, 1980, Seoul: Ministry of Home Affairs.
- Ministry of Home Affairs, Republic of Korea (1982), Municipal Yearbook of Korea, 1982, Seoul: Ministry of Home Affairs.
- Misra, R.P. and K.V. Sundaram (1978), "Growth Foci as Instruments of Modernization in India," in A. Kukiński (ed), Regional Policies in Nigeria, India, and Brazil, The Hague: Mouton: 97-204.

- Nam, Duck-Woo and Kong-Kyun Ro (1981), "Population Research and Population Policy in Korea in the 1970s," Population and Development Review, 7: 651-669.
- Oh, Kap-Hwan and Hae-Young Lee (1980), "Urbanism in Korea: A New Way of Life?" in Y.S. Chang (ed), Korea: A Decade of Development, Seoul: Seoul National University Press: 219-240.
- Park, Sam-Ock and James O. Wheeler (1983), "Industrial Relocation Policies and Manufacturing Employment Change," in Gill-Chin Lim (ed) Urban Planning and Spatial Strategies in Rapidly Changing Societies, Princeton: Consortium on Urban and Regional Policies in Developing Countries: 281-313.
- Park, Soo-Young (1981), "Urban Growth and National Policy in Korea," paper presented at Pacific Science Association Fourth Inter-Congress, Singapore: mimeographed.
- Rao, D. C. (1978), "Economic Growth and Equity in the Republic of Korea," World Development, 6: 383-396.
- Rao, D. C. (1979), "The Pattern of Economic Growth 1961-1976," in P. Hasan and D.C. Rao (eds), Korea: Policy Issues for Long Term Development, Baltimore: Johns Hopkins University Press: 15-44.
- Renaud, Bertrand (1974), "Regional Policy and Industrial Location in South Korea," Asian Survey, 18: 267-283.
- Richardson, Harry W. (1977), City Size and National Spatial Strategy in Developing Countries, World Bank Staff Working Paper No. 252, Washington: World Bank.
- Rivkin, Malcolm (1981), Korea Case Study: Intermediate Size Cities, Washington: U.S. Agency for International Development; mimeographed.
- Rondinelli, Dennis A. and Kenneth Ruddle (1978), Urbanization and Rural Development: A Spatial Policy for Equitable Growth, New York: Praeger.
- Rondinelli, Dennis A. (1983), Secondary Cities in Developing Countries: Policies for Diffusing Urbanization, Beverly Hills: Sage Publications.
- Song, Byung-Nak (1978), "Economic Growth and Rural-Urban Relations

in Korea," Working Paper No. 78-04, UNCRD Working Papers, Nagoya, Japan: United Nations Centre for Regional Development.

- Song, Byung-Nak (1982), "The Role of Small and Intermediate Size Cities in National Development: The Korean Case," paper presented at Expert Group Meeting on the Role of Small and Intermediate Size Cities in National Development, United Nations Center for Regional Development, Nagoya, Japan.
- Stohr, Walter (1974), "Some Hypotheses on the Role of Secondary Growth Centers as Agents for the Spatial Transmission of Development in Newly Developing Countries--The Case of Latin America," in F. Helleiner and W. Stohr (eds), Proceedings of the Commission on Regional Aspects of Development of the International Geographical Union, Vol. II, Toronto: IGU: 75-111.
- Yu, Si-Joong (1971), "Educational Institutions," in M.G. Lee and H. Barringer (eds), A City in Transition: Urbanization in Taegu, Korea, Seoul: Hollym: 423-451.
- Yu, Eui-Young (1980), "Internal Migration and Development of Cities," Y.S. Chang (ed), Korea: A Decade of Development, Seoul: Seoul National University Press: 143-178.
- Whang, In-Joung (1981), Management of Rural Change in Korea: The Saesaul Undong, Seoul: Seoul National University Press.