

Staging the Development of Seoul for the Future*

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1. Foreword

This is an attempt to delineate the developmental stages of the Seoul Metropolitan Region in the next 20 to 30 years and to propose feasible planning strategies according to the different development stages. The time length of forecasts here is not determined by any technical necessity. It is merely to signify the next generation in which we expect to see a new pattern of urbanized community.

The developmental stages of Seoul in this paper are described in terms of different patterns of spatial configuration of population prompted by different stages of economic growth. This approach is based on the assumption that urbanization in the developing countries is necessitated primarily by economic development process and that the two problems are interrelated. It is submitted specifically that, until the time when the individual's personal income reaches a certain level, the one decisive factor affecting the location behaviors of the population will be mainly economic motivations and that this level is the line of demarcation of two different sets of urban patterns in these countries.

The reason for choosing Seoul, the Capital and the primate city of Korea, is to see the focal point of the problems of urbanization in Korea. In some aspects Seoul may not be a typical case. Yet, in order to do a study of urbanization in Korea in reference to the nation's general socio-economic development process, one must examine Seoul, the center of change and action. In addition, information and statistics about Seoul are in relatively better condition for study purposes.

* This article was presented at the "Conference on the City as the Center of Change in Asia" at University of Hong Kong, 23 rd—28 th June, 1969.

It must be admitted that the assessment of information and statistical calculations in this paper are not put to the test of rigorous methodological disciplines. It is partly because of the lack of necessary information and data, and partly due to the writer's belief that, in the kind of forecasting attempted here, technical refinements of numerical figures would not necessarily reflect the true nature of the dynamism of the changing realities. This approach also coincides with the purpose of the present paper in that it is not an attempt to design a detailed master-plan for the future but merely an attempt to outline a few major policy considerations for the long-term planning.

2. The Growth Rate

The rate of growth of Seoul, the primate city of Korea, far exceeds both the national average urban growth of Korea and the average growth rate of Asian cities in general. Seoul's average population growth rate since 1956 is believed to be some 8% per annum, (See Table 1) while the national and the Asian average are both 3 to 5%. As of this year, it is a settlement of 4.6 million population, reportedly the world's 10th largest city.

Table 1

Year	Population	Increase	%
1956	1,503,865	-71,003	-4.51
1957	1,666,005	162,140	10.78
1958	1,756,406	90,401	5.43
1959	2,093,060	337,563	19.22
1961	2,577,018	131,616	5.38
1962	2,983,324	406,306	15.77
1963	3,254,630	271,306	9.09
1964	3,424,385	169,755	5.22
1965	3,470,880	46,495	1.36
1966	3,805,261	334,381	9.6
1967	3,969,218	163,957	4.3
1968	4,330,000	360,782	8.3

Sources

Seoul Population Projection, The Special City of Seoul, 1966. *The Seoul Statistical Yearbook* (1968), The Special City of Seoul, 1969.

Taking 1956 as the base year is to exclude the irregular diversion of the trend caused by the mass immigration from abroad in the late '40's and also by the Korean War from 1953. Stabilization started taking place beginning in 1956. 1956 through 1960 is the period during

which massive foreign aid began to rehabilitate the war destroyed economy and living conditions. In the process of rehabilitation some new industries were started in a few big cities, primarily in the latter part of the period. Since this period Seoul has grown as the single most dynamic center for the attraction of population.

After the cease-fire of the Korean War in 1953, it took Seoul three years to regain the pre-war size of population, about 1.5 million. But it took only 13 years to triple that size after 1956.

The yearly statistics of the past 13 years of population increase do not seem to present a consistent trend or rate. The population of Seoul in 1959 increased 19.2% over that of the prior year; 1960 and 1962 had 16.7% and 15.7% increases respectively over the population size recorded for the previous year, while 1965 showed an increase of only 1.36%. These statistics were compiled by government agencies and it is admitted by the agencies that there must have been some mismanagement or miscalculation of the statistics.⁽¹⁾ In this situation, dealing with yearly population statistics would be meaningless. The population figures must be interpreted in reference to the socio-economic development process in general. In order to relate Seoul's population growth to the general socio-economic development process in the past, the 13 year period is broken down into three developmental stages. The first in the 1956 through 1960 period, during which rehabilitation of war damages and construction of a few new urban infrastructure projects were carried out, including transportation and power line work. Most rehabilitation activities were started in Seoul, where the war damages were highest. During this time, as the central government's rehabilitation activities were virtually the only sources of economic investment in the nation, Seoul was the center of all expectations for recuperation of the entire nation. Accordingly, this period, among the three, registered the highest average annual population increase rate, 9.6%. In terms of real quantity some 940,000 people were added to the pre-War size of 1.5 million in this period.

The second period chosen is the one from 1961 through 1965. This is the time during which the first successful national economic development plan was executed.⁽²⁾ This was the first attempt at positive and systematic development planning for industrialization of the nation. Programming and management of the planning process was undertaken almost entirely by the central government in Seoul. Yet in the latter part of this period, some cities other than Seoul

(1) *Seoul Population Projection*, The Special City of Seoul, 1966. p. 40.

(2) The national average per capita income hit the \$100 mark during this period. It was some \$84 at the beginning of the period.

were given the opportunity of industrial development. Pusan, the second largest city and the largest port in Korea, started receiving a substantial amount of the benefits and began looking as another attraction point for population. In addition an entirely new industrial town, *Ulsan*, has been growing at the rate of 6.7% per annum. It is not meant that a planned decentralization as such had already started in this period. The above cities, and a few others besides Seoul just happened to be the locales of the new investments for industrialization, but not necessarily in consideration of rational locational criteria. In addition, some social overhead investments including railroad, port-facilities, and electricity, also contributed to the flow of money into other areas than Seoul.

During this stage of the development process, Seoul gained an additional million.⁽³⁾ The annual average rate of increase for this period was about 7.3%.

An interesting trend in this period is that the cities of population size of 100,000 and more, excluding Seoul, grew much faster than during the former, while Seoul kept more or less the same rate. (See Table 2) Apparently, starting with this period, other cities began to share in theurban immigration. This more widespread urbanization may have been because of the national government's concentrated industrialization efforts through the first five year economic development plan as described above and also because of the fact that these other cities began to recover from war damages as Seoul had done a few years earlier.

Table 2

Year	1943	1949	1955	1960	1965	1966	1967
No. of cities	12	19	25	27	32	32	32
pop.							
Million & above	1	1(13.9) [%]	2(49.5) [%]	2(51.6) [%]	2(52.8) [%]	2(53.3) [%]	2(53.5) [%]
500,000—999,999	0	0	—	1 (0.6)	1 (8.7)	2(14.1)	2(14.0)
100,000—499,999	3	9(49.7)	7(30.1)	6(20.3)	11(24.2)	13(21.8)	13(21.8)
50,001— 99,999	7	7(11.9)	15(19.5)	17(17.8)	18(14.3)	15(10.8)	15(10.7)
50,000—	1	2 (1.5)	1 (1.7)	1 (9.7)			

Sources

The Municipal Problems, Aug., 1967(Vol. 2, No.8), Ministry of Home Affairs, R.O.K., p. 78.
Basic Guidelines for National Physical Planning, Ministry of Construction, R.O.K., 1968, p. 73.
Municipal Yearbook of Korea, Ministry of Home Affairs, R.O.K., 1969. pp. 36—43.

(3) There was an expansion of administrative boundary of the city in 1963 from about 10 km radius ring to about 15 km radius, but this administrative boundary expansion itself brought in only about 20,000 new population, while the total increase of the city of the year are 271,306.

The third period for our consideration began in 1966. As the second five year economic development plan, providing the major parameters for development in this period, has not been completed yet, it might be premature at this time to talk about a trend for this period. However, there are enough grounds to believe that the nation's general socio-economic development process will continue to progress as it has been. Assuming that it will, it would not be too presumptuous to use the past three years statistics for the entire five year period. The annual average population growth rate of Seoul for this period is 7.3%, remaining the same as that the preceding period.

It is now possible to say that Seoul's growth rate has come to be fairly stable; and that, to the extent that it was stable; during the two consecutive periods of five year economic development planning, it was a reflection of the economic development process during this and the prior periods.

In projecting the trend into the future, we will take the above 7.3% annual rate as the maximum rate of growth. It has been chosen in consideration of the fact that the government third five year economic plan is being prepared with a view to comprehensive decentralization and the dispersal of industries.⁽⁴⁾ We assume that, if this goal of the third plan will not be achieved, the maximum rate will continue to be the population growth rate of Seoul as the development process will follow the same pattern as it has been.

On the other hand, if the dispersal policies are going to be successfully implemented, we will assume that Seoul's growth rate will be leveled down to the national average urbanization rate, beginning from the latter part of the third five year economic planning. The national average urbanization rate, 5.2% per annum,⁽⁵⁾ is independent of the distribution pattern of urban population. We will assume that, it will not drop below the current rate. The latter part of the assumption is corroborated by recent trends in other developing countries.⁽⁶⁾

To both the maximum and the minimum projections we need to add one more modification. We must consider the decreasing rate of natural growth in Seoul. As Seoul's natural growth rate has been decreasing rapidly in the past several years faster than any other city in Korea, (See Table 3) and as the trend to successful family planning in Seoul appears to be

(4) The final version of the 3rd Five Year Economic Development Plan to be operative 1972 through 1976 have not been finalized. But it has been officially announced in its preparation guidelines that its major goals will be for regional development.

(5) 5.2% per annum from 1960—1967. Source: *Municipal Yearbook of Korea*. Ministry of Home Affairs, R.O.K., 1969, pp. 40—43.

(6) Table 12, *Population Trends and Urban and Regional Planning in ECAFE Region*, United Nations Economic and Social Council, Sept., 1966, p. 51.

Table 3. Natural Pop. Growth Rates of the Nation and Seoul

Year	Nation	Seoul
1963	3.0	3.07
1964	3.0	2.23
1965	2.7	1.85
1966	2.7	1.80
1967	2.7	2.22
1968	2.7	1.91

Source

The Statistical Yearbook of Korea, Economic Planning Board, R.O.K., 1968.

continuing, the natural growth rate is expected to decrease even more in the next 20 years.

With these assumptions, it can be estimated that the maximum population of Seoul in 20 years will be 15.8 million and that the minimum will be about 12.5 million. (See Table 4). In this calculation for both the maximum and the minimum, the rate of Seoul's natural population increase is assumed to decelerate by five year periods in the following order:

1968	1.8%	average	1.6%
1973	1.3%		
1973	1.3%		1.3%
1978	1.15%		
1978	1.15%		1.1%
1983	1.05%		
1983	1.05%		1.03%
1988	1.00%		

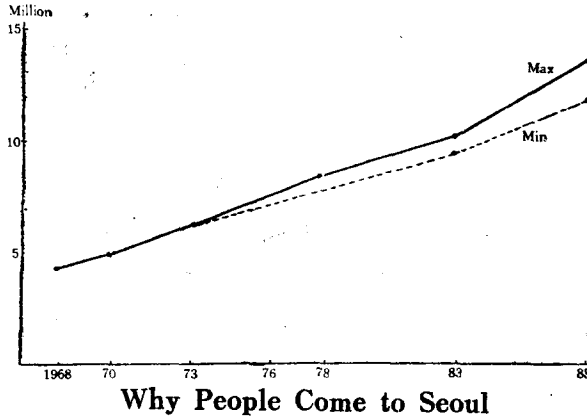
Then the average birth rate decline for each five year period is subtracted from the total rate of population increase. As stated above in case of the maximum, the projected annual total rate is 7.3%. The adjusted rate is 7.1%. The minimum annual total rate is assumed to drop to 5.1% after 1876 when the third five year economic plan for regional development will have been completed.

Table 4

Mininum	Maximum
1968: 4,300,000 persons	1968: 4,300,000 persons
N 70=4,945,000	N 70=4,945,000
N 73=6,032,900	N 73=6,032,900
N 76=7,360,138	N 78=8,385,731
N 78=8,080,432	N 83=11,572,309

N 93=10,101,790
N 88=12,586,830

N 88=15,853,962



Why People Come to Seoul

What we have attempted thus far is to see the order of magnitude we will be coping with; and for future action is it meaningful only when conceived in terms of a range. The range warns us to respect flexibility in preparation for our future actions.

On the other hand, if the range of the numerical calculations is only the reflection of the changing patterns of the society's general development process, the basis of our future actions must be on an understanding of the nature, forces, and the changing aspects of the development process itself. In fact, the more dynamic is the development process, the less meaningful would be the numerical projections. In such a situation, the maximum of the range should really be the *highest possible* number with the minimum being the *lowest possible*. We are then left with the tremendous responsibility of constructing plans flexible to be adaptable to population growth indeterminate with the range of millions.

Our purpose in this chapter, the identification of the causes of population growth in Seoul, is to ground our choice closer to reality. It is also in recognition of the truism that the totality of urban problems is not determined by population alone but also by the interactions between people and their spatial environment, assuming that there is a high degree of correlation between people's "location behaviors" (7) and their motivations for immigration into Seoul.

Not many extensive studies have been done to investigate the causes of the immigrations. It has been commonly understood that there are "pushes" from the rural communities and "pulls"

(7) The concept of "location behavior" in this paper refers to the same as conceived by Prof. F. Stuart Chapin, Jr. See Urban Land Use Planning (2nd Ed.), F.S. Chapin, Jr., Univ. of Illinois Press, Urbana, 1965, p. 92.

from the city. But why are they pulled and pushed? The nature of the forces that push and pull determines the general pattern of the urban process and the spatial configuration thereof. This assumption is deemed most valid in regard to most of the Asian cities whose structural environments are still in a formative stage and where the motivations for in-migration are less individual than communal in origin.

Two studies show that the bulk of the recent in-migrants have come to Seoul because of "economic" reasons. One of these studies were done by the municipal government and the other by a sociology scholar. The government study dealt with 67,860 in-migrants who entered Seoul during the period from January through June, 1965. Only 8% of these interviewed replied that their living conditions had been "sufficient." Whereas, 43% reported "difficult," or "very difficult". Others responses were either ambiguous or "not too bad".⁽⁸⁾ As for more specific reasons, the study shows that 28% came to "get" or "look for" jobs, while 6% came for transfer of employment and 5% for transfer of schools. Others are assumed to be included in the bracket of the families of the above groups.

The latter study, done by a sociology professor of Seoul National University, is a sample survey of 500 persons with no reference to the times of in-migration. The sample would seem to be too small. However, as the results are outstandingly lopsided, it can be used at least to corroborate the former study. Being asked the reason for moving into Seoul, 175 of the 500 sample group answered "to get job," 103 because there are more job opportunities, and 135 to do business. 413 out of 500 are reported to have come to Seoul for economic reasons. 80% of the 500 had non-industrial flexible means of earning a living, such as trading (13.9%), service (18.3%), agriculture (27.0%), and others (18.8%).⁽⁹⁾

The best opportunities to make a living in these occupational categories exist in Seoul, the nations most prosperous commercial, trading, and service center.

Besides these survey data, general statistics exist to show the economic difference between Seoul and the rest of the country. In the past four years for which statistics are available, Seoul's per capita income has been almost two times larger than the national average. (see table 5)

All these data add up to the conclusion that, in terms of individual household economies, most of the in-migrant families and individuals are coming to Seoul with the expectation of

(8) *The Seoul Population Projection*, the Special City of Seoul 1966, pp. 40-41.

(9) Man Gap Lee. "Exploding Seoul Population," *The New Farmers*, Vol. 9, No. 6 (1969).

Table 5. Per Capita Income

unit : \$

Year	Mation	Seoul
1965	101.2	157.3
1966	114.3	181.7
1967	123.5	226.2
1968	165.0	281.2

Source

Major Economic Indicators, Economic Planning Board, R.O.K., March, 1969

filling the assumed income gap or to find better sources of income. It is not the intention here to entirely disregard other causes of in-migration, such as cultural or political factors even in the majority of in-migrants whose overriding motivations are of economic. It is only to point out that the other factors are either ancillary to the major cause or at least negligible for a study of the problem of Seoul's urban growth process now.

It is hard to predict when the economic gap between Seoul and other parts of the country will be lessened to the point that the primary cause of migration will not be economic betterment. This occurrence will be related to the time intervals of the population growth projection in the last chapter. If the decentralization and dispersal policies, as planned by the central government, are to be successfully implemented, the year 1976 might well mark a turning point of the trend, as far as the causes of migration are concerned. Nonetheless, it is not implied that the government's decentralization policies, once implemented, will immediately stop the current trend. They may only start generating a new trend. Besides, even if the gap is shortened or even closed, the economic factor would continue to be the single most significant variable. The national average household income will not be so high in 1976 as to discount much of the economic impetus for migration.⁽¹⁰⁾ This we can validly assume to be the case for at least five years or so after the third five year plan, when the Seoul population is projected to some 10 million. (see Table 4 above)

4. Where They Settle Down and Why

When the settlement locations of the in-migrants are mapped, they appear to agglomerate along the major transit lines directly connected to the Central Business District (CBD). They also tend to follow rather strictly the equilibrium pattern between the rent and the transporta-

(10) \$ 345 per capita income is reportedly the goal of the 3rd Five Year Plan now being prepared.

tion time-distance-cost to the central place of the city. Hence, the City of Seoul has been growing in a larger and larger circle concentrically, with transportation lines radially extending from the center. It appears to follow a Concentric Zone pattern.⁽¹¹⁾

There seem to be three major factors that influence the structure and pattern of land development in Seoul: one is the factor described in the last chapter. The migrants overriding motivation for coming to Seoul is to improve their economic predicaments. In-migration was the single most important contribution to the growth of growth of Seoul in the recent past and will be in the next couple of decades.⁽¹²⁾ For people with economic motivations, transportation-time-cost to their place of income and the rent distribution pattern would be the two most important factors to consider in locating their homes and offices. These would seem to be the only factors that are taken into consideration by the settlers. Other factors, such as the city's water and services, distance to schools, fire protection, or proximity to cultural facilities, appear to have not affected location behaviors very much. Insofar as basic public services are concerned, the city has been busy just trying to provide facilities for new settlements which seem to rise almost spontaneously.

Another factor that has influenced the radial-concentric land use structure of Seoul is the municipal transportation network. As shown in the above drawing, most of the city's major road building projects have been to extend the mass transportation lines radially from the existing Central Business District. In many instances, the city's efforts in building the radial-concentric road system and the land-use pattern which has developed have been closely inter-related. The city government's "Housing Site Development Projects" have served to create a need for extension of the radial-concentric transportation lines, as they have been developed in a circle in the outlying areas of the city.⁽¹³⁾ The current trend in transportation network development may be thought of as a simple, almost straight line extension of the old roads from the innermost ring⁽¹⁴⁾ to overcome the surrounding mountains. Once the topographic constraints were overcome, it was easier to keep on extending rather than to stop in the face of the mass migration settlements rising in the outlying areas of the city.

(11) cf. F.S. Chapin, Jr., *Urban Land Use Planning* (2nd ed.), op. cit., pp. 114-15

(12) Compare the total population growth rate and the natural growth rate shown in Table 1 and Table 3 above.

(13) The Housing Site Development has been one of the most active development projects of the city government; and it is virtually the only project so far that has defrayed the cost.

(14) The 5 km radius innermost ring is the old city boundary surrounded by circumferential wall built some 500 years ago during the Yi dynasty.

The third important factor is the fact that the bulk of Seoul's population, recent migrant or old-timers, live on tertiary economic activities, primarily commercial-trading and personal services. (See Table 6)

Table 6. Seoul Population Growth By Industries

Year	Total pop.	Primary	Secondary	Tertiary
1956	354,467	4.4	8.4	87.2
1957	346,931	3.9	8.1	88.0
1958	349,080	3.7	8.3	88.0
1959	449,433	2.7	8.8	88.5
1960	—	—	—	—
1961	531,987	2.3	9.7	88.0
1962	744,200	6.9	15.6	77.5
1963	703,615	7.4	16.8	75.8
1964	714,086	5.9	16.1	78.0
1965	722,977	5.8	17.8	76.4

Source

The Seoul Population Projection, The Special City of Seoul, 1966, p. 65.

These activities by their nature require intensive interpersonal transactions. The intense face to face communication necessary for these activities is most efficiently attained when there is a single center in which to conduct the business. It would be valid to assume that the people engaged in these kinds of economic activities tend to encircle the center in locating themselves. The equilibrium points of the radius indicate the measure of accessibility with the circle approximating the latitude of rent. This pattern of concentric circumferential development has so far been reinforced by the city government's circumferential location plan for housing site development projects, as described above.

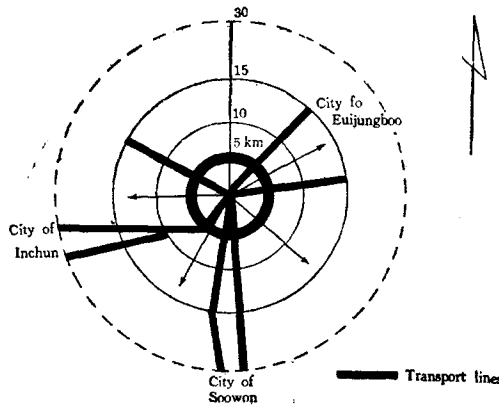
As for prediction of the future, we can rely on extrapolation of the existing trends. Until the mid-80's, when the national average of per capita income is expected to reach \$ 600, the primary motivation for urban migration will still be "economic." Statistical projection shows that until the mid-80's the major portion of Seoul's population will still be engaged in tertiary activities.⁽¹⁵⁾ It is hard to predict now what will be the composition of "tertiary activities" in the 1980's. Perhaps, a substantial portion of the tertiary activities will be industrial services, rather than "commercial-trading or personal services". Yet it seems a fair guess that, at least until the

(15) cf. Table 6.

early 80's, a major portion of Seoul population will continue to work in the same kinds of tertiary activities as today, those that require intensive interpersonal communication. Finally, the government's transportation plan, as it is presently designed, seems to follow the same pattern as it has in the past. Thus we can expect the land use development pattern of the past to continue at least until the mid 1980's.

Before concluding this chapter, it must be mentioned that the center of the city is intensifying its function as the center of commercial trading activities. In mapping the change in the residential population gravity centers in the old city core for the past 20 years, it was found that they are moving away from the center of the city. (See the following diagram) This trend indicates that the center of the city is in the process of pushing residential uses out and purifying its function as a Central Business District.

Diagram



5. What Must and Can Be Done

The City of Seoul's administrative boundary now reaches some 15 km in radius in circle from the center. This boundary approximates the real sphere of metropolitan urbanization. The average density within this boundary as of 1967 was 5,744 people per sq. km. Each house occupies about 72.6 sq. m. of building area on the average. This is admittedly a very high density. The outwardly dispersed residential growth combined with the central concentration of commercial-trading activities had created tremendous needs for considerable extension of the transportation network and other services. The rapid expansion has caused much congestion within the existing traffic and communication systems. In addition, people's mobility

has been increasing at almost the same rate as the rate of population increase. (See Table 7) This increase in activity has led to even more congestion.

Table. 7. Increase of Average Trips Per Person Per Day

Year	Trips	Year	Trips
1964	0.6	1967	0.93
1965	0.75	1968	0.95
1966	0.84		

Source

Road Traffic Study Report. The Special City of Seoul, 1967.

The Statistical Yearbook (1998), The Special City of Seoul, 1969.

As the population increases and the spatial configuration grows according to the same pattern as described above, the need is for additional services and the confusion resulting from overcrowding will lead to an even greater intensification of existing problems.

Daytime population density and traffic congestion in and around the central business district may reach unmanageable proportions. We may reach a point of diminishing returns where economies of scale are strangled by over-concentration.

The alarm is being heard by many already. Both on the metropolitan and the national levels, possible alternatives to deal with the anticipated problems are being posed and discussed.

Generally speaking, two alternatives have been proposed regarding the long term development of the metropolitan region. One would continue the currently expanding circumferential development and surround it by a ring of satellite towns or sub-centers. (the City's Plan) The other one, only very recently proposed and having only a very few protagonists, proposes rather drastic change in the spatial structure of development for future growth. It has been suggested that a linear-axis development corridor serve as the physical framework for future growth. (17) Some central business district functions would eventually be located in these corridors. The former appears to accommodate itself more to the space order of the ongoing development process and the immediate planning decisions of households and private firms. The latter proposal is an attempt to avoid the long term problems anticipated if the ongoing development process is allowed to continue.

If the ongoing development process continues, as would be the case with the City's plan,

(16) It is proposed that the linear-axis can be stretched from Seoul either to Incheon, a port-city of 600,000 pop., some 24 km from the center of Seoul, or either to Soowon of 150,000 about 30 km from Seoul's center, or to both.

Seoul will "experience excessive complexity and expanse" of the communication (and transportation systems and lack of space for expansion of the center city, which is physically restricted on all sides by mountains".⁽¹⁷⁾ The plan envisages some dispersion of population to the so-called subcenters in the suburbs or to the satellite towns. Yet, it is quite probable that these suburbs and satellites would only be bedroom communities as long as the majority of Seoul's population was engaged in the commercial-trading tertiary activities which require the highest possible degree of intensity of communication at a single concentrated center. It is presumptuous to expect at least for the next 10 to 20 years that multi-nuclei suburban development as is found in more industrialized countries will occur in Seoul. Furthermore, arranging the land for different uses in the circumferentially sprawling development and planning and managing the interweaving transportation network connecting the clusters of the subcenters, would require highly sophisticated techniques and prohibitive costs.

On the other hand, the linear-axis development proposal appears to overcome those shortcomings, insofar as the basic scheme of the spatial structure is concerned. It will first provide an outlet for the everswelling business activities now confined to a rather small area limited by mountain-walls. Second, by having the business activities develop along the center line of the development corridor while residential and other uses are located in zones alongside of the business use, the complexity of transportation lines converging at a central place in a spider-web-like system will be avoided. This scheme will also meet the requirements of flexibility in regard to the dynamic population growth process because of the open-endedness of the development corridor. Finally, development in a corridor would be easier controlled than expansion in all directions. For these and other reasons, it is submitted that, insofar as the design of Seoul's future spatial development structure is concerned, the linear-axis development proposal is more insightful. At least it is a better general framework for the solution of the problems arising from the current development process as described above.

However, the concern of the present paper is not so much with the physical design of the proposal as with the process of actually guiding the development. The guiding interventions, whatever they are, can be effective only when they are in consonance with the general rate and process of socio-economic change. Based on our projections of the socio economic change, as stated in the preceding chapters in terms of population growth dynamics and the changing patterns of economic activities, it is proposed that the linear-axis development planning be

(17) Kim Tai-Soo, A Master Plan for Seoul City, 1968, p. 1.

phased in consideration of the following guidelines.

First, extending the complex CBD functions as such into the new development corridor will have to wait until the time when a substantial portion of the economic activities of the Seoul metropolitan population shift to secondary industries and the industrial tertiary functions necessitated thereby. Or rather, we warn against the hasty action to build a new town all at once in that corridor. Extension before then would be an unfeasible and economically undesirable attempt at diffusing the necessary intensive face-to face communication functions of the center. It would require a tremendous amount of investment, but to no avail. People would still come to the existing center to meet others. The same holds true with the satellite cities idea. We think that the late '80's will be the beginning years of the change.

Second, when positive actions are taken in the linear-axis development corridor, they would be concentrated on establishing one or two nodal points or attraction poles in-between the two existing urban centers. ⁽¹⁸⁾ Development of these nodal points may very well be started even now, but the above mentioned problems should be taken into consideration. The national government's industrial dispersal policy can be linked with the establishment of nodal points. Developments other than those industrial in nature, must be carefully evaluated on the basis of cost-benefit calculation.

There is a proposal being made that the central government offices be moved out of the existing center. This must be reassessed with respect to the costs to be born by the citizens as well as by the government itself. There is evidence indicating that about 30% of the total trips per day in Seoul now are to the different central government offices. ⁽¹⁹⁾ If these trip-destinations are moved all at once now, tremendous confusion and transportation cost increases will be incurred. It may be feasible to start moving the industrial services and financing functions, such as trucking, head-offices of some financial firms, warehouses, etc. A list of the activities or uses that can be moved out of the existing center without causing unjustifiable cost and unnecessary confusion in the ongoing interaction systems must be worked out in a time order series.

Finally, while some activities are being moved out to the nodal points as discussed above, measures to control the spontaneous private sector development activities must be applied to the corridor in general. These measures will primarily have to be controlled designed to

(18) cf. Note 1 supra.

(19) Road Traffic Study Report, The Special City of Seoul, 1967.

preserve or prepare the physical environment of the development corridor for comprehensive development. Comprehensive development can be expected when the majority of Seoul's working population will be employed in secondary industrial services.⁽²⁰⁾

The measures to control the development activities of the corridor in general would include public ownership of lands, preservation of the green alongside the axis, and a development permit system in the whole area.

Phasing the installation and utilities could also be effectively used as a means of control. If the Seoul-Inchon axis (25 km.) and the Seoul-Soowon axis (30 km) are to be the two linear-axis development corridors, effective measures for controlling access to the newly built expressways to both Inchon and Soowon must be devised. If this can be done, the existence of the limited access feature of the expressways may discourage haphazard private sector development activities which would make it impossible to stage the development of Seoul for the future.

(20) cf. Table 6 above.