

## A Territorial Division of Labor in the Seoul Metropolitan Area

*Min Mal-Soon*

*Over the past two decades, newly industrializing countries as well as most developing countries have experienced rapid economic growth. Such growth is typically accompanied by decentralization of population and economic activities from its primate city. Further, from spillover of agglomeration, substantial suburbanization has occurred in metropolitan areas in these countries. Finally, the largest cities of newly industrializing countries economically evolve from an industrial structure into a post-industrial one.*

*With Seoul City leading the way, Korea closely follows the above patterns. Along with its economic development, improvements in transportation and communication technologies have accelerated decentralization of population and industries, and have widened the daily urban system of this large primate city. As a result, a territorial division of labor as well as a separation of work place from home has occurred. In spite of the early stage of suburbanization, the central city of the Seoul Metropolitan Area is proceeding from a goods-processing center to an information-processing one.*

### INTRODUCTION

From the aspect of national economic structure, the year of 1977 is regarded as a turning point toward the rapid growth of heavy industries even though the government declared the year of 1972 as the starting point for heavy industries. Thereafter, there is the great change in industrial location as well as patterns of industrial structure. Apart from Seoul City, coastal industrial complexes, including the Southeastern coastal complex, have achieved a remarkable growth rate. On the other hand, the Seoul Metropolitan Area has experienced structural and spatial changes in occupation structure as well as economic one. The changes in the occupational structures reflect not only changes in the economic relations of employment and the labor forces, but also the significant transformation in social structures and social relations. Therefore, changing occupational structures reflect changes in social organization and human relations (Kuo and Chen, 1986).

As a result, the period between 1975-1980, during which the remarkable decentralization of population and economic activities from Seoul City occurred, is the transition era toward the post-industrial one. And, it is expected that there are changes in job distributions over the Seoul Metropolitan Area. In this sense, the change in employment opportunities and types of jobs created/declined over the Seoul Metropolitan Area is worth examining.

To sum up my working thesis, the spatial structure of the Seoul Metropolitan Area is transforming toward a post-industrial society. The functional specialization has been embodied by territorial division of labor. With the core becoming specialized in coordinating and integrating activities, manufacturing facilities relocate to the urban fringe. Thereafter, Seoul City will come to develop an ecological structure that will resemble that of major cities in the western world.

## RESEARCH AREA AND DATA

The research area includes Seoul City and its surrounding cities and counties, which is referred to as the Seoul Metropolitan Area. Therefore, the administrative districts correspond to Seoul City and to the six surrounding cities being developed as satellite cities of Seoul: Euijeungbu, Sungnam, Bucheon, Suwon, Anyang, and Incheon. Also included in the districts are six counties: Namyangju, Yangju, Kwangju, Siheung, Koyang and Kimpo.

A unit of analysis for Seoul City is a ward. For five adjacent cities except Incheon, a city as a whole corresponds to one unit of analysis. While each city has one unit of analysis, Incheon has 4 units of analysis based on 4 wards. Each county has one or two towns: Dongducheon for Yangju, Kuri and Mikeum for Namyangju, Kunpo and Sohwa for Siheung, Sindo and Wondang for Koyang, Kimpo for Kimpo, and Kwangju for Kwangju. Each town has urban characteristics and has population of more than 20,000. Also, its spatial functions and patterns are different from those of the rest of the county. As some towns are already qualified for the status of a city, a town is differentiated from a village in many aspects. Hence, a town is a separate unit of analysis from the rest of the county. Thus, a unit of county is composed of villages except towns.

The comparison of job distribution over the Seoul Metropolitan Area in 1980 to that in 1975 will be made. For this purpose, the data on job places of residents are more appropriate than that on job types of residents for each area. The data to be used are the 2 Percent Sample Survey of Population and Housing Census, 1980 and the 5 Percent Sample Survey of Population and Housing Census, 1975. The Korean Census, 1975, however, does not have the item of job place. Thus, this study examines the change in employment and the type of jobs created/declined over the Seoul Metropolitan Area during 1975-1980, the period of restructuring economic structures. The data used for this analysis are those of the jobs of residents in each area. The administrative district in 1975 is adjusted to that in 1980.

According to the classification of occupation in the Korean Census Report, 1980, occupation is divided into seven categories: 1) professional, technical and related workers, 2) administrative and managerial workers, 3) clerical and related workers, 4) sales workers, 5) service workers, 6) agricultural, animal husbandry and forestry workers, fisherman and hunters, 7) production and related workers, transport equipment operators and labourers.

The administrative district of Seoul City in 1975 consists of 12 wards: Jongro, Jung, Dongdaemun, Sungdong, Sungbuk, Dobong, Suhdaemun, Mapo, Yongsan, and Kangnam. According to the administrative district in 1980, Suhdaemun Ward is divided into Suhdaemun and Eunpyung Ward. Youngdeungpo Ward is divided into Youngdeungpo, Kuro, and Kangsuh Ward. Also, Kwanak Ward is divided into Kwanak and Dongjak Ward. Kangnam Ward is divided into Kangnam and Kangdong Ward. For the suburban area, Yangju County is divided into Yangju and Namyangju County. Mikeum Township is promoted into Mikeum Town. Wondang Township is promoted into Wondang Town. Adjusting to the administrative district in 1980, the occupational composition of residents in each zone over the SMA will be examined with the descriptive analysis.

## JOB CREATION AND DECLINE IN THE SEOUL METROPOLITAN AREA

Owing to an accumulation of industrialization, Korea became one of the newly industrializing

countries. Along with economic development, new jobs have been created and redistributed over the country. For the country as a whole, the number of jobs did not increase during 1975-1980 (See Table 1). Except for jobs related to animal husbandary/agricultural activities, however, the number of jobs in each occupational category has increased over the time period. In compensation for the decline in jobs of animal husbandary/agricultural activities, jobs related to professional/technical, administrative/managerial, clerical, and productive/laboring works are increasing rapidly. The economic structure of Korea has been restructured into an industrial one.

Table 1 Numbers of the Employees by Occupational Category 1975, 1980

Year Occ	The Whole Country		Seoul City		Kyeonggi Province	
	'75	'80	'75	'80	'75	'80
	12,682,041	12,682,004	2,124,845	2,558,507	1,480,499	1,624,744
1	417,423	580,882	132,994	198,478	39,726	60,977
2	102,327	133,608	51,095	80,986	7,572	8,807
3	844,210	1,203,176	343,766	485,007	85,140	150,483
4	1,317,122	1,531,068	428,564	541,879	149,480	188,794
5	815,791	894,678	245,638	291,474	98,211	121,211
6	6,190,008	4,768,414	42,347	22,574	661,728	468,887
7	2,890,668	3,569,686	864,389	937,949	471,891	620,353
8	104,492	542	16,102	160	20,751	52

Source : 1975 Population and Housing Census Report, vol. 2, National Bureau of Statistics, Economic Planning Board, 1977.

1980 Population and Housing Census Report, vol. 2, National Bureau of Statistics, Economic Planning Board, 1982.

Seoul Statistical Year Book, Seoul Metropolitan Government, 1987.

#### Occupational Category

- 1 : jobs related to professional/technical works
- 2 : jobs related to administrative/managerial works
- 3 : jobs related to clerical works
- 4 : jobs related to sales works
- 5 : jobs related to service works
- 6 : jobs related to agricultural/animal husbandary works
- 7 : jobs related to productive/laboring works or transportation equipment operator
- 8 : Unclassified

This trend was magnified in Seoul City. Seoul City, however, has experienced the growth of total jobs over the time period shown in Table 1. The growth rate of jobs is higher than that of Kyeonggi Province. Especially, jobs related to professional/technical and administrative/managerial activities have increased by 50 percent and 60 percent, respectively. Jobs related to agricultural/animal husbandary works in 1980 has declined to half of the number of jobs in 1975. Kyeonggi Province including the suburban area of the SMA has followed the same trend as Seoul City has.<sup>1)</sup> Moreover, clerical jobs show the highest growth of 177 percent over the time period. For the whole country, compared to the growth of jobs related to the secondary

1. Towns and villages of the SMA are not separated from the rest of towns and villages of Kyeonggi Province because the separated statistics about towns and villages of the SMA are not available.

and the tertiary sector, jobs related to the primary sector have declined over the time period.

The other characteristic of job creation in the SMA is the increase in the number of part-time workers. Still, they compose only 2 percent of the total employed in 1980, but they are increasing from 1 percent in 1975. Part-time workers in 1980 become evenly distributed in each occupational category while those in 1975 were concentrated in service and animal husbandry/agricultural jobs (See Table 4 and Table 5). In other words, the composition of part-time workers engaging in service and agricultural jobs has declined while that in other jobs has increased over the time period. Especially, part-time workers of clerical jobs show the highest growth rate. Even so, the number of part-time workers engaging in productive/laboring and sales jobs is larger than that of other jobs, which corresponds to the larger number of full-time workers in these jobs. Nevertheless, the growth rate of jobs has not kept pace with that of the labor forces in the SMA. Thus, over the time period, Korea has experienced an increasing unemployment rate (see Table 2). Except for the villages in Kyeonggi Province, each zone marks a higher unemployment rate than the national level. In contrast to an increasing trend of unemployment rate, Seoul City keeps a nearly stagnant rate. This fact is attributed to creation of new jobs in Seoul City. Jobs related to professional/technical and administrative/managerial works have grown rapidly. Even though the whole villages of Kyeonggi Province show the lowest unemployment rate, the growth rate marks the highest one. It can be interpreted that improvement and mechanization of agriculture in villages results in the decline in jobs related to agricultural activities. In spite of the decline in jobs of the villages, the villages of the suburban area in the SMA have created and received a lot of manufacturing jobs that relocated from the central city.

Table 2 Numbers of Economically Active People and the Unemployees, 1975, 1980

Year Zone	'75		'80	
	Economically Active People	Unemployed No. Rate	Economically Active People	Unemployed No. Rate
Whole Country	13,350,604	668,563 5.0	13,595,132	913,128 6.7
Seoul City	2,359,426	234,581 9.9	2,664,514	267,552 10.3
Kyeonggi Province	1,563,696	83,197 5.3	1,803,446	178,702 9.9
All Cities	588,922	56,828 9.6	848,544	115,119 13.6
All Towns	175,617	8,883 5.1	325,750	29,873 9.2
All Villages	799,757	17,486 2.2	629,152	33,750 5.4

Source: The 5 Percent Sample Survey of Korean Population and Housing Census, Seoul: The Economic Planning Board, 1975.  
The 2 Percent Sample Survey of Korean Population and Housing Census, Seoul: The Economic Planning Board, 1980.

The occupational composition of residents for each zone of the SMA in 1980 shown in Table 4. was compared with that in 1975 shown in Table 5. Overall, the share of workers engaging in agricultural/animal husbandry jobs and productive/laboring jobs in 1980 decreases to half of the share of those in 1975. It implies that decentralization of these activities proceeds from the SMA to other regions over the time period. Decentralization of population and economic activities is not confined to within the SMA, but extends to the rest of the country. Hence, the SMA becomes increasingly specialized in the tertiary sector, with a great increase in professional/technical and clerical jobs.

Table 3, which shows the location quotient of each occupation for each zone in 1980, provides support that each zone becomes more specialized. As a product of territorial division of labor,

Seoul City exhibits specialization in administrative/managerial and clerical jobs. The urban areas in Kyeonggi Province specialize in productive/laboring jobs. Conceptually, expansion from the central city to the periphery can be expected through the evolution of metropolitan manufacturing change (Park and Wheeler, 1983). During 1960-1980, the share of manufacturing employment of the most central position of Seoul City decreased from 17.5 percent to 5.7 percent. The city of Seoul as a whole decreased from 80 percent to 54.5 percent in its share of manufacturing employment in the SMA (Choe and Song, 1984).

Table 3 Location Quotients of Occupational Category by Each Zone in the Seoul Metropolitan Area, 1980

	Seoul City	Kyeonggi Province		
		Cities	Towns	Villages
Professional/Technical	1.60	1.00	0.80	0.40
Administrative/Managerial	3.00	1.00	1.00	0.00
Clerical	2.11	1.56	0.44	0.44
Sales	1.75	1.25	1.33	0.42
Service	1.57	1.29	1.29	0.57
Agricultural/ Animal Husbandary	0.02	0.11	0.50	1.68
Productive/Laboring	1.32	1.86	1.46	0.71

Source : 1975 Population and Housing Census Report, vol. 2, National Bureau of Statistics, Economic Planning Board, 1977.

1980 Population and Housing Census Report, vol. 2, National Bureau of Statistics, Economic Planning Board, 1982.

The LQ value of each occupation for each region is calculated in the following manner :

$$LQ = \frac{E_i/E_R}{E_i/E_N}$$

where  $LQ_{iR}$  is the Location Quotient of occupation  $i$  for each region  $R$ .

$E_i$  is the number of the employed in occupation  $i$  for region  $R$ .

$E_R$  is the total number of the employed for region  $R$ .

$E_i$  is the number of the employed in occupation  $i$  for the whole country.

$E_N$  is the total number of the employed for the whole country.

Over the time period, the periphery of the SMA has experienced a drastic change in the occupational composition of residents. The change is particular to the share of workers engaging in productive/laboring jobs. Most wards have experienced the declining share of productive/laboring workers. Especially, the wards of Kuro, Youngdeungpo, and Kangdong have experienced a drastic decline of productive/laboring jobs in occupational composition. In 1980, all three wards have only half of their shares in 1975 (see Table 4. and Table 5.). In contrast to the declining share of workers in productive/laboring jobs of the periphery, most areas in the suburban area have experienced the increase in the share of workers having jobs related to productive/laboring jobs. This empirical data support that industrial suburbanization has proceeded further from the core, and that the suburban area becomes more specialized in manufacturing activities.

For the core, the occupational composition in Jongro Ward has been changed more drastically than other wards over the time period. The share of workers in professional/technical and service jobs drastically declines while that of clerical and sale jobs increases rapidly. It reflects that, in the processes of suburbanization, the highly educated people have moved from the core, and that the proportion of residents with low skills has increased. Also, Jung Ward gains

Table 4 Occupational Composition of the Employees in Each Area and Part-Time Workers of the SMA, 1975

AREA	PROC/TEC	ADM/MAN	CLERI	SALES	SER	AGR/ANI	PROD/LAB
CORE							
JONGRO	22.6	3.1	10.7	16.6	18.2	0.5	27.9
JUNG	17.1	5.3	7.8	15.7	19.8	0.3	26.3
YONGSAN	10.4	3.4	23.3	15.0	17.1	0.3	29.1
SUHDAEMUN	15.0	2.7	20.5	18.1	12.5	0.5	29.4
PERIPHERY							
SUNGDOG	6.9	1.1	14.1	11.9	8.1	0.5	57.0
DONGDAEMUN	8.8	1.7	13.4	13.7	7.5	0.7	53.9
DOBONG	9.6	2.0	19.9	13.7	13.5	0.4	40.6
SUNGBUK	9.7	1.0	21.2	12.6	7.1	1.9	46.4
EUNPYUNG	9.3	0.9	21.6	13.5	8.6	2.4	43.0
MAPO	7.3	1.2	19.4	13.6	9.2	0.7	48.3
KANGSUH	6.7	1.0	16.9	7.2	7.1	1.9	58.8
KURO	2.9	0.3	5.7	3.9	2.2	0.2	82.3
YOUNGDEUNGPO	3.4	0.7	4.7	5.7	3.4	0.1	81.5
DONGJAK	8.7	1.5	18.2	12.1	9.8	0.9	47.1
KWANAK	9.7	2.4	15.6	18.6	11.5	0.2	40.4
KANGNAM	11.5	0.6	24.7	9.2	5.0	27.5	20.9
KANGDONG	5.3	0.4	10.0	6.0	2.9	5.1	70.0
SUBURBS							
JUNG-INCHEON	13.4	1.1	10.4	14.9	20.6	1.6	37.4
DONG	10.2	0.7	8.6	16.8	8.5	0.9	53.9
NAM	8.9	1.3	8.8	12.9	9.2	10.4	47.7
BUK	3.6	0.2	2.9	3.4	3.5	3.8	79.4
SUWON	8.2	0.6	8.9	10.4	6.2	7.3	49.6
SUNGNAM	7.1	0.5	6.7	12.5	5.0	8.1	52.3
EUIJUNGBU	7.6	0.6	7.7	13.0	10.5	6.9	45.4
ANYANG	4.8	0.7	8.2	7.3	6.4	4.0	62.8
BUCHEON	5.5	0.8	7.5	8.1	5.3	7.5	57.8
YANGJU	3.0	0.0	1.9	6.6	3.7	60.7	0.7
DONGDUCHEON	6.6	0.0	4.3	16.5	37.6	11.2	22.4
NAMYANGJU	2.8	0.7	2.6	5.6	3.6	62.1	22.3
KURI	2.4	0.5	7.8	10.6	6.2	17.3	53.1
MIKEUM	4.8	0.0	13.2	4.0	5.0	27.4	45.6
SIHEUNG	2.4	0.2	3.8	3.3	3.2	30.6	56.1
KUNPO	4.8	0.2	4.6	9.2	4.6	6.7	74.1
SOHWA	7.6	0.1	15.3	11.3	6.2	14.5	42.7
KOYANG	2.7	0.1	2.5	6.7	13.7	62.1	10.2
SINDO	7.9	1.8	23.8	10.2	8.8	9.4	36.2
WONDONG	1.5	0.1	3.0	0.9	2.8	31.5	59.8
KWANGJU	1.1	0.0	1.2	1.2	1.3	44.3	50.2
KWANGJU TOWN	4.7	0.4	4.9	4.9	8.7	3.6	72.5
KIMPO	6.3	0.0	5.3	5.5	4.0	63.7	12.8
KIMPO TOWN	5.8	0.0	4.8	9.3	3.3	12.6	64.0
SMA TOTAL	3.8	0.9	10.6	10.3	7.6	6.6	55.9
PART-TIME WORKER	108 (7.2)	1 (0)	14 (0.9)	178 (11.8)	635 (42.0)	381 (25.2)	192 (12.7)

Source: The 5 Percent Sample Survey of Korean Population and Housing Census, Seoul: The Economic Planning Board, 1975.

Table 5 Occupational Composition of the Employees in Each Area and Part-Time Workers of the SMA, 1980

AREA	PROC/TEC	ADM/MAN	CLERI	SALES	SER	AGR/ANI	PROD/LAB
CORE							
JONGRO	8.7	2.1	17.0	24.2	21.4	0.4	26.3
JUNG	6.8	2.6	12.8	30.7	21.3	0.3	25.5
YONGSAN	9.3	4.2	17.9	26.8	13.6	0.2	28.0
SUHDAEMUN	10.4	3.0	20.3	21.6	11.1	0.7	32.4
PERIPHERY							
SUNG DONG	6.8	2.1	16.8	22.2	9.0	0.4	42.9
DONGDAEMUN	7.1	3.1	17.2	25.7	11.0	0.7	35.2
DOBONG	7.5	2.7	16.8	23.1	12.0	0.4	37.5
SUNGBUK	7.6	2.3	18.6	21.5	9.7	1.0	38.4
EUNPYUNG	12.3	4.5	25.0	21.8	9.4	1.1	25.3
MAPO	8.1	4.1	17.9	22.1	11.4	1.6	34.4
KANGSUH	7.3	1.9	22.0	20.6	8.8	1.6	36.5
KURO	6.1	3.1	16.8	17.1	8.2	0.5	47.5
YOUNGDEUNGPO	8.1	3.8	17.4	20.4	11.4	0.3	38.6
DONGJAK	6.9	2.2	22.7	20.8	9.6	0.3	37.6
KWANAK	8.9	1.9	20.6	21.7	9.6	0.4	36.9
KANGNAM	15.8	9.4	25.7	19.1	13.7	1.9	14.4
KANGDONG	8.4	3.3	19.6	21.5	9.3	1.7	36.2
SUBURBS							
JUNG-INCHEON	7.8	1.6	14.5	16.9	19.7	2.1	36.3
DONG	2.9	0.6	10.8	14.8	9.4	1.7	59.6
NAM	8.5	1.3	15.8	14.1	8.2	5.3	45.9
BUK	4.0	0.5	11.7	13.6	7.4	3.6	57.8
SUWON	9.6	1.0	15.3	18.1	9.2	4.7	42.0
SUNGNAM	4.6	1.5	9.4	16.5	8.1	4.2	55.7
EUIJUNGBU	7.8	1.1	11.3	15.7	16.8	3.7	41.3
ANYANG	5.0	2.3	17.5	15.2	12.9	1.8	45.2
BUCHEON	4.6	3.2	18.4	11.8	9.8	3.6	48.5
YANGJU	4.4	0.0	3.8	6.2	4.6	49.1	31.8
DONGDUCHEON	5.5	0.2	7.1	20.1	17.3	16.2	33.5
NAMYANGJU	2.0	1.1	5.9	7.3	3.8	51.6	28.3
KURI	1.2	0.9	7.9	18.0	6.4	15.4	50.3
MIKEUM	5.6	0.0	10.8	11.3	4.7	17.8	49.8
SIHEUNG	0.7	0.1	7.0	12.3	8.2	36.8	34.7
KUNPO	3.6	0.6	10.1	5.3	4.1	1.2	75.1
SOHWA	6.1	1.2	20.6	15.3	6.3	4.1	46.5
KOYANG	4.3	0.4	8.0	7.1	3.9	47.1	29.1
SINDO	15.8	1.3	6.6	14.9	5.3	11.6	44.6
WONDONG	0.9	0.0	9.3	9.3	14.0	38.3	28.0
KWANGJU	3.0	0.3	4.6	6.2	4.8	53.3	27.7
KWANGJU TOWN	1.4	1.4	6.4	10.6	2.1	43.6	34.3
KIMPO	5.0	0.2	3.7	5.9	3.0	63.5	18.7
KIMPO TOWN	2.9	0.0	23.2	15.9	7.2	17.4	33.3
SMA TOTAL	6.9	2.6	20.0	19.7	10.4	4.4	38.0
PART-	123	13	131	223	188	126	192
TIME WORKER	(12.3)	(1.3)	(13.2)	(22.4)	(18.9)	(12.7)	(19.3)

Source: The 5 Percent Sample Survey of Korean Population and Housing Census, Seoul: The Economic Planning Board, 1980.

the share of workers in clerical, sales, and service sectors in compensation for the great loss in the share of workers engaging in professional/technical and productive/laboring jobs. The great loss in the latter jobs results in the relocation of manufacturing activities into the peripheral and suburban area. There is little change in the share of workers having administrative/managerial and agricultural/animal husbandary jobs.

It can be interpreted that a low mobility of low income people hinders them from moving along with relocation of manufacturing activities. As a result, low-educated people in these wards transfer their jobs to those which remain in the core and do not require high-skilled labor forces. It is expected that those jobs are not highly paid. Yongsan and Suhdaemun Ward have experienced the great gain in the share of workers engaging in sales jobs, and loss in those engaging in clerical work. Even though the share of workers having professional/technical and administrative/managerial jobs increases over the time period, a high proportion of workers in these wards are more likely to engage in low-paid, low-skilled jobs. Likewise, in the processes of suburbanization, the core shows a great decline of residents engaging in high-skilled jobs. This phenomenon can be attributed to the fact that residential areas have been deteriorated by the expansion of business activities in the core. As a result, high-educated people want to move into the distanced area with good environments. Owing to a high mobility, high-educated people can be footloose in choosing their residence.

Among wards in the periphery, Youngdeungpo Ward has experienced a drastic change. The share of workers having productive/laboring jobs in 1980 reduces to 47 percent of that in 1975 (compare Table 4. and Table 5.). In compensation for this loss, the share of workers having professional/technical, administrative/managerial, clerical, sales and service jobs drastically increases over the period. This change is mostly due to the development of exclusive apartment complexes for the upper and the middle classes in Yeoeuido District of this ward. Except for this district, Youndeungpo Ward is a more business-oriented rather than a residential-oriented ward.

Also, Kangnam Ward exhibits a great change in the occupational composition of residents. Before the development of residential areas for the upper and the middle classes, the major occupation is cultivation of flowers, fruits, and vegetables for residents of Seoul city. The socioeconomic status of residents was far behind those of residents in other wards. Workers having agricultural jobs in 1975 occupied 27.5 percent of the total workers, which decrease to 1.9 percent in 1980. The share of professional/technical, administrative/managerial, sales, and service jobs increases rapidly. Therefore, Kangnam Ward has been transformed from an agricultural-oriented urban fringe into a good residential area for the upper and the middle classes. The movement of the upper and the middle classes from other wards leads to an enhancement of the socioeconomic status of this ward.

Kangdong was a part of the Kangnam Ward in 1975 and one of the least developed areas in the central city at that time. More than two-thirds of workers engaged in productive/laboring jobs. Owing to the development of large-scale apartment complexes since the mid 1970's, the share of workers engaging in productive/laboring jobs in 1980 decreased by half of the share in 1975. Instead, the share of professional/technical, administrative/managerial, sales, and service jobs increased rapidly. Likewise, the drastic change in the occupational composition of workers in the periphery is due to the inflow of the upper and the middle classes from the core in the processes of suburbanization.

All cities in the suburban area, except for Dong Ward in Incheon, have lost the share of workers engaging in productive/laboring jobs over the time period. In particular, workers engaging in productive/laboring jobs in Buk Ward of Incheon have declined from 80 percent

in 1975 to 58 percent in 1980. Like other wards in the periphery, the share of professional/technical, administrative/managerial, clerical, and sales jobs increased. This observation tells that, with the recent inflow of the middle class engaging in highly skilled jobs into cities of the suburban area, the heavily productive/laboring-oriented composition has been changed into a more diversified one. Also, it suggests that these cities come to have more self-supportive industrial structures.

Most counties and towns show an increasing share of workers in productive/laboring jobs. Since 1970, the suburban area has marked a higher growth rate in manufacturing activities than the periphery. Due to the control of manufacturing activities in the central city, many plants have been relocated into the far-suburban area. This means that industrial suburbanization proceeds further to rural areas in the suburban area, and that manufacturing activities have dispersed with a greater number of suburban areas. Also, industrial suburbanization proceeds further from the core than residential suburbanization. As a whole, the suburban area has created a lot of employment opportunities mainly composed of manufacturing activities over the time period. Such an increase in jobs attracts migrants from the central city as well as other regions. During this time period, the annual population growth rate of Seoul City is 3.9 percent while that of the suburban area is 14.2 percent.

On the other hand, the changes in the occupational composition of the suburban area results in the decrease in the share of worker engaging in the informal sector in the suburban area. For Kwangju Town, the share of workers engaging in the productive/laboring jobs was 73 percent of the total workers in 1975. Such a high proportion is attributed to a large proportion of workers engaging in the informal sector such as laboring jobs. On the other hand, the share of workers engaging in agricultural/animal husbandary jobs was only 4 percent. The empirical data reflect that a large share of workers are migrants who relocated from squatter settlements in the core or who moved from other regions. Over the time period, the share of workers having agricultural/animal husbandary jobs increased to 44 percent of the total workers in 1980. At the same time, the share of workers engaging in productive/laboring jobs decreased to 34 percent.

Kwangju County also increased its share of workers engaging in agricultural/animal husbandary jobs. It can be inferred that, with development of Kangdong and Kangnam Ward as good residential areas, the agricultural activities in these two wards have been relocated into an adjacent Kwangju County. As a result, workers engaging in the informal sector transfer their jobs to agricultural activities. Hence, Kwangju County as a whole emphasizes agricultural activities of vegetables, fruits, and dairy farming. Kwangju County, however, increases its share of jobs related to the tertiary sector by attracting educational institutions even though the growth rate of each subsector in the tertiary sector have fluctuated somewhat.

In general, the suburban area shows a small share of workers engaging in professional/technical and administrative/managerial jobs. They occupy less than 10 percent and less than 2 percent of occupational composition, respectively. Only Sindo Town exhibits more than 10 percent of its workers engaging in professional/technical jobs in 1980. Since the town has been developed as a good residential suburban area by attracting the middle class, the occupational composition in this town becomes similar to that of other peripheral wards. Also, Wondang Town experienced a significant decline in its share of workers engaging in productive/laboring jobs. Instead, as the town has been transformed into a residential area, the share of workers engaging in service jobs increases like other residential wards of the periphery.

The same phenomenon happens in Siheung County. In terms of industrial structure, the whole suburban area becomes more diversified, reflecting a wider range of activities. Such a

change has already happened in suburban areas in developed countries (Erikson, 1983).

In conclusion, a territorial division of labor through functional specialization has occurred in the SMA. As the capital region, the SMA becomes more specialized in the coordinating and integrating activities over the whole country. At the same time, manufacturing jobs have moved into other regions. Especially the integrating and coordinating activities are increasingly concentrated in Seoul City.

On the other hand, the suburban area has been transformed from an agrarian society to an industrial society by attracting manufacturing jobs. Counties in the suburban area become the important recipient for creating and relocating manufacturing activities from the central city. Along with creation of new jobs in the suburban area, the share of residents engaging in the informal sector declines. The increase in manufacturing jobs creates the multiplier effect of creating jobs in other sectors. The industrial suburbanization proceeds further than the residential suburbanization. In this expansion process, Seoul City gradually evolves toward an information-processing economy.

## CONCLUSION

An advancement of a society brings about the diversity and heterogeneity of social functions. The social relations are maintained by functional specialization. In terms of spatial processes, territorial division of labor has been embodied through functional specialization. Thus, the core becomes specialized in coordinating and integrating economic activities. In spite of relocation of plants into suburban areas, headquarters of companies are concentrated into the core for the purpose of an easy access to the flow of new information and knowledge.

At the same time, as productive activities move into the urban fringe, the suburban area occupies a great share of manufacturing activities over the metropolitan area. Thereafter, the suburban area is gradually transformed from an agrarian society to an industrial one. Further, along with an improvement of transportation networks, manufacturing activities have been relocated into other regions. Like Sao Paulo, and Taipei, the Seoul Metropolitan Area exhibits manufacturing activities to be relocated into intermediate/small cities and towns. These cities and towns are easily connected with the central city of metropolitan areas.

On the other hand, an expansion of daily urban system, along with an improvement of transportation and communication technologies, induces people to be footloose in choosing their residences. Due to a high mobility of high educated people, they move into good residential areas avoiding congestion and isolating themselves from the poor in the core. And, they commute their jobs in the core. Due to the early stage of suburbanization in the SMA, the periphery has been developed as the residential areas for the middle-aged upper and middle classes in the SMA. In other words, the periphery has experienced the decline in the proportion of residents engaging in productive/laboring works in compensation for the increase in the proportion of residents engaging in managerial/administrative, professional/technical, clerical jobs. Over the time period, the socioeconomic status of residents in the periphery has improved greatly.

Along with an advancement of suburbanization, the upper and the middle class will choose their residences further away from the central city. Therefore, from the spatial processes by functional specialization, the Seoul Metropolitan Area is transforming toward a post-industrial era.

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