

## **Chapter 1. Introduction**

### **1.1 Previous studies and purpose of the study**

Population concentration to Seoul was remarkable in 1970-80's (Kwon et al. 1998). Residential movements to Gyeonggi Do (I describe it to metropolitan area from the following) and Incheon metropolitan city including Seoul metropolitan city (I describe it to Seoul from the following) continue to from 1970's. Though the population ratio of Seoul metropolitan area held about 30% against total population in 1960's, grew to 45.3% in 1995. It was an inevitable result by concentration to Seoul of management function, employment opportunity and information. Over-centralization of population to Seoul caused various problems, and housing shortage, traffic congestion, rise of land price, environmental pollution became serious urban problems on the middle of 1980's (Kim and Kwon 1988).

Seoul metropolitan area has spread rapidly since 1960's. City function of Seoul in 1950's concentrated within the four gate mainly, but from 1960's city area spread to the north of Han River. The city area of Seoul in 1970's spread out from

Gangbuk of the north of Han River with development of a large-scale residential district of the south of Han River to Gangnam area. And Gyeongbu highway opening in 1970 raised accessibility with Seoul to Incheon city and Suwon city (Kim and Kwon 1988). By construction of subway and bridges of Han River after half of 1970's, the development of Gangnam area progressed more. Construction of infrastructure and urban function accumulation developed in Gangnam area after the half in 1980's. The "Gangnam three wards<sup>1)</sup>" including Gangnam, Seocho and Songpa ward makes the center of southern Seoul metropolitan area. As a result, Gyeonggi Do and Incheon city were included by spatial expansion of metropolitan area (Kwon 1991).

Residential movements in Seoul metropolitan area are intimate relations with change of city internal structure (Takahashi et al. 1997). Environs movement of population was actualized in Seoul metropolitan area. After 1993, population of Seoul turned in decrease. Most of transference population from Seoul pointed to Gyeonggi Do and Incheon city, as a result 67.9% of total transference population moved from Seoul to Gyeonggi Do in 1995 and 7.1% moved to Incheon city in 1995. Residential movements from Seoul to peripheral area are movements from urban center to the suburbs direction. This is a phenomenon accompanied with spatial magnification of Seoul metropolitan area. At the side of city structure, it will

be a process of reorganization of spatial structure in Seoul metropolitan area.

In late years a study of residential movements of micro level is active in geography. It utilizes detailed data of individual and household by interview survey and questionnaire investigation.

Residential movement studies of microcosm level consist of two types. One analyses single migration, and compares residential place of past with present on a migration. The other analyses a series of migrations that a household or an individual experienced. As an example of the former, Yui (1987, 1989) analyzed movement distance and movement course of high-rise building dwellers in Hiroshima city and Fukuoka city. According to Yamada (1992), the residential movement zone in Chiba spread on almost Tokyo metropolitan area and the east of Chiba. Tani (1995) elucidated that residential movements in Ichinomiya city of Aichi moved from a core of a city to the peripheral suburbs area. But movement does not happen alone. Several movement make a chain through a personal life, to most of persons. Though social and economic changes generate residential movements, the direct subject of deciding movement is an individual or a household. The decision making that is carried out by an individual or a household does is prescribed by accumulation of past experience that they have. Accordingly longitudinal analysis is more effective method to understand residential movement. The method combines

and analyses a series of movements in a personal life. The analysis shows contrast to latitudinal analysis observing movements in one specified period. It provides considerations of residential movements from a series of movements which were experienced by an individual and a households.

Tani (1997) applied the longitudinal analysis to residents' movements of Kozoji new town located in Nagoya metropolitan suburbs. Tani found that the mobility reached high level in a period from independence to marriage, and he showed that most of husbands remain in a metropolitan area for marriage. Kawaguchi (1997) showed that the acquisition of an own residence was a big aim after marriage, and it clarified that the time when purchased residence was reflected by a residential careers in the suburbs. And Kawaguchi (2000) also suggested that a difference of the residential acquisition age by birth place was not found.

Lee (1979) applied longitudinal analysis in Korea. According to Lee, short distance movement from city center to outer zone is residential movements in Seoul main, he pointed out that movement to new housing development area was secondary movement after movement to outer zone. Lee (1984) studied residential movements pattern in Seoul outer zone. Lee found that in period of early household formation period households migrate to vicinity of Seoul and area along main routes. And it is also found that in entering to school period of the eldest child they

move to Seoul. According to Lee and Kim (1990), short distance migrations dominate in Seoul. Households move from a city center to circumference in the early period of life stage. They carry out relatively long migration in outer parts of Seoul metropolitan area in the later stage. Short distance movements around an past residential place increase in the final stage. The studies of movement careers in Seoul metropolitan area clarified that households moved mainly from a city central area to new housing development area of outer zone.

The study of residential movements by longitudinal analysis It was clear that residential movements pattern was different by a life stage. And it was shown that residential movements in a metropolitan area had the intimate relation to expansion of a metropolitan area. It is possible understanding that structure of metropolitan area by considering residential movements by longitudinal analysis.

Yeates and Garner (1971), Bourne (1981) and Carter (1995) watched residential area structure of a urban from a side of form.

Lee (1984) and Han and Kim (1987) shows that migration between the particular area would be caused by common factors. In other words distribution of various functions within a city and various environment of the area are one factors of causing residential movements. Accordingly analysis to relate residential movements with character of an area is possible fully.

According to Lee (1982), as the study that analyzed spread of a metropolitan area and relation with residential movements, it pointed out spread of space in metropolitan area was accompanied with spread of city area and diffusion of residential area. Kishimoto (1975) reported population increase of advanced economic growth was Tokyo peripheral area, movement from Tokyo ward district by commuter to peripheral area is main. Gamo (1979) suggested that the migration generating from the west of Tokyo, spread to relatively wide areas. In contrast, migrations generate from east of Tokyo drew sector pattern. These studies showed that spatial expansion of a metropolitan area closely related to change of urban structure, and residential movement includes sector pattern.

But the residential groups which have different attributes appear by the place in an same metropolitan area. Especially it is expected, that a new town as this study area has different characteristic to the other area.

Lee (1979) analyzed attributes of residence, purpose of in-migration, and cognition to housing. It confirmed that residential areas of Seoul differentiated by the socioeconomic characteristics, population structure and price of land. Lee (1989) also suggested that real estate speculation concentrated upon an developed area for residences in Seoul after 1960's, and specific class concentrated on the development area, and relatively homogeneous class group is formed there. Harris (1984)

analyzed relation with housing possession and social economic class, too. Herbert (1986) analyzed residential separation by the public lease policy. Saunders (1984) pointed out role of a landowner and politics and system to give influence to housing market. Sul (1992) analyzed spatial division of residential area. It suggested that regional difference of residence supply develops regional specialization of residence in a city by the social group. Kim (1990) also reported that residential preference of inhabitants include regional differences in Busan city.

These studies showed that urban residential area was divided definitely by socioeconomic level. This point of view is effective when analyzes relation of Expansion of metropolitan area and residential movements.

In a study of residential separation, existence of class to consider a residence to be an investment in addition to residential space was pointed out. That is to say a point of view to consider a residence is property done deal in a market becomes necessary. There is the study that considered relation with housing market and residential movements. Everaers and Dieleman (1992) pointed out that the change of housing price of housing market is influence to residential movements and residential possession form. Smith and Clark (1982) analyzed it residential price and floor space and residential structure was importance by residential research action in Los Angeles. Morrow-Jones (1988) and Hamnett (1991) identified that a change of

residential possession form differed from by the economic situation. Bourne (1981) points out a residence which is occupies part of means to create wealth. Go and Yum (1986) suggested that Seoul residents moved to new residences which could be bought for low price and expected to price-rising, in Seoul neighborhood area.

But, Ha (1987) emphasized that the residential occupation forms and their changes were closely related to political and cultural factors. And it suggested danger of explanation depending on national economy and individual income level. Some studies discovered that more importance of housing institutions than personal preference for residential movement since 1980's (Coupe and Morgan 1981). In particular, analysis which is combined residential movements to housing institution is available in countries where complicated housing system exists like the Korea.

Ryu (1997) adopted the viewpoint of Bourne (1981), and illustrated that socially high grade households made much of accessibility to housing information and investment factor in order to select residential area, by the empirical study in Bundang and Ilsan new town neighborhood of Seoul. Jung (2002) suggested importance of factors to form property, for the residential migrations of Bundang new town residents. A study of Bundang new town by Lee (1995) listed in narrowness of residence, deterioration of residence and property formation, as factors of residential movement. And, Han and Kim (1987) found that 35 years old



or more householders condition speculation value of a residence upon residential search. Kim (1990) elucidated, that reasons for migration of Busan inhabitants consisted of comfortable environment, traffic conditions, good education environment, speculation value, and accessibility to service facilities. Jeong (1984) pointed out that inhabitants of Seoul regarded Seocho and Gangnam ward as desirable residential area because of their speculation value. Korean people regard real estate investment as major factor to prescribing residential movement. But studies in terms of relating residential movements to property formation activities has not accumulated yet. It is impossible to understand mechanism of residential movements in Seoul metropolitan area without the viewpoints of real estate investments in order to form properties.

The above-mentioned studies analyzed a series of migration carriers of a household and individual, and clarified relationship among residential movement and expansion of a metropolitan area. But, lack of data prevented detailed analysis to relate migration with changes of residential properties. Therefore the study that related expansion of a metropolis with residential movements, or division of residential areas in a metropolis did not develop.

Generally residential price and household income give influence to residential possession form. Although it has been suggested that property increase and real

estate investment occupy important position in factors of residential movements, residential movement study that paid attention to the property formation, has not been carried out. Even in Japan, Europe and United States, studies from the viewpoint shows a little accumulation.

It is necessary for the first to elucidate spatial expansion of residential movements in Seoul metropolitan area by longitudinal movement careers analysis. Furthermore, considerations from the viewpoints of longitudinal approach provide objectivity for property formation process.

This paper discusses relationships between spatial expansion of residences and residential migration, in Seoul metropolitan area, by analysis of Bundang new town (abbreviated as Bundang new town in following) inhabitants' property formation of residents. This paper analyses all migration carriers from household formation to present, of all sample households.

## **1.2 Methodology**

Firstly, the Chapter 1.4 describes a particular housing lease institution of Korea which is expected to cause frequent residential movements. The Chapter 2 positions Bundang new town into the Seoul metropolitan area. The Chapter 2.1

analyzes various attributes of residences in the Seoul metropolitan area, and relates regional characteristic of a residences with expansion of the Seoul metropolitan area. The Chapter 2.2 analyses household and residential characteristics of Bundang new town households. And the Chapter 2.3 suggests property characteristics of them. The Chapter 2.4 classifies sample households into four types which are based on the property formation pattern with residential movement. The Chapter 3 and 4 describes residential movements after the household formation of Bundang new town residents. While they analyses migration by divided periods as 1980s and after 1990. Furthermore, they analyses property formation processes of households, by attention to a change of residential possession and increase of property. The Chapter 5 finds combination with the residential movement patterns and the property formation processes. And it constructs models which illustrates relationships between spatial residential expansion and residential migrations.

Analysis materials have been gotten by interview for the households living in Bundang new town. Investigation items are as follows; household attributes including household members, professions, and income, housing attributes including possession type, floor space, price of purchase or tenement, price of sale, and capital supply for residence, and migration carriers from household formation to present. The investigation carried out in February and March, 2002, and an effective

answer was provided from 81 households.

### 1.3 Study area

Residential price of large and middle-sized apartment jumped around the Gangnam three wards in 1980s, because of lack of housing supply by population concentration and real estate speculation. The government planned new town construction as a part of policy to promote two million residents construction plan promoted from 1988 still more<sup>2)</sup>. According to it, Bundang, Ilsan, Pyeongchon, and Sanbon New town where were located on area 10-30 km from Seoul central area, were built in 1989, and Jungdong New town was built t in 1990 years (Figure 1 and 2).

Bundang new town is located in about 10 km distance from Gangnam and about 25 km from the center of Seoul metropolitan area. Construction plan of Bundang new town was announced on April 27, 1989, and began to construct at Bundang dong and peripheral 15 dongs in Seongnam city, Gyeonggi Do<sup>3)</sup>. While moving began in model site<sup>4)</sup> of Bundang dong and Seohyeon dong and Sunae dong in Jungwon ward, Seongnam city in September, 1991, the construction is continuing currently. Bundang new town keeps 376,900 households and 107,309

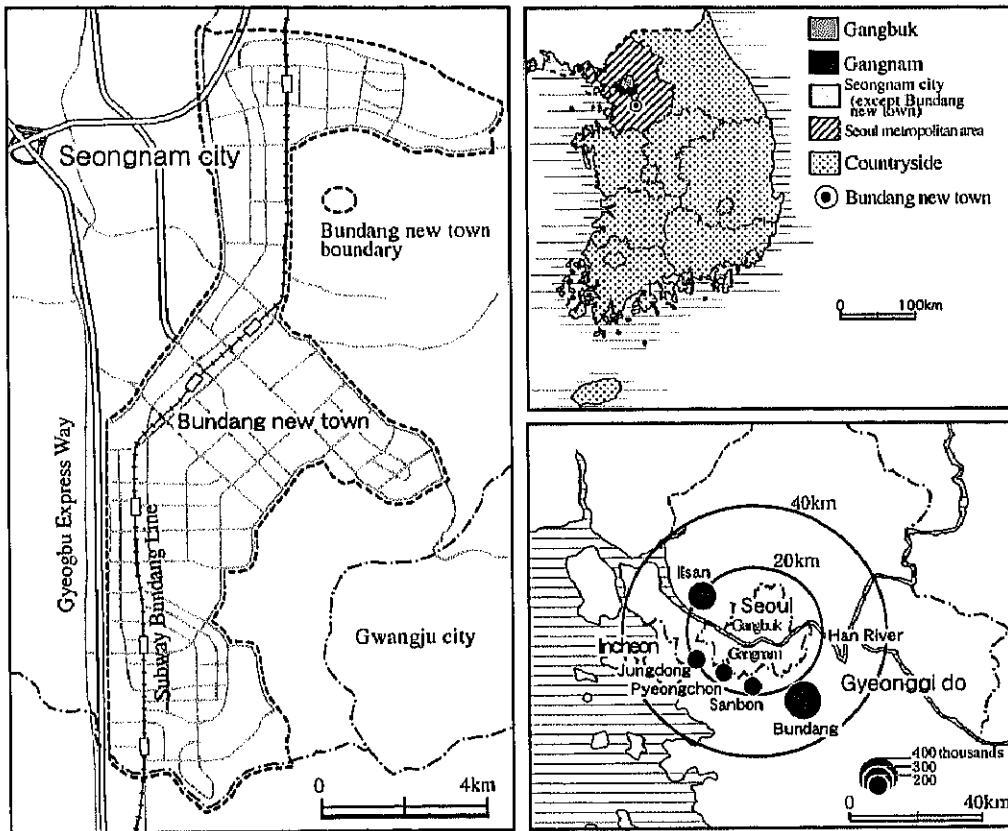
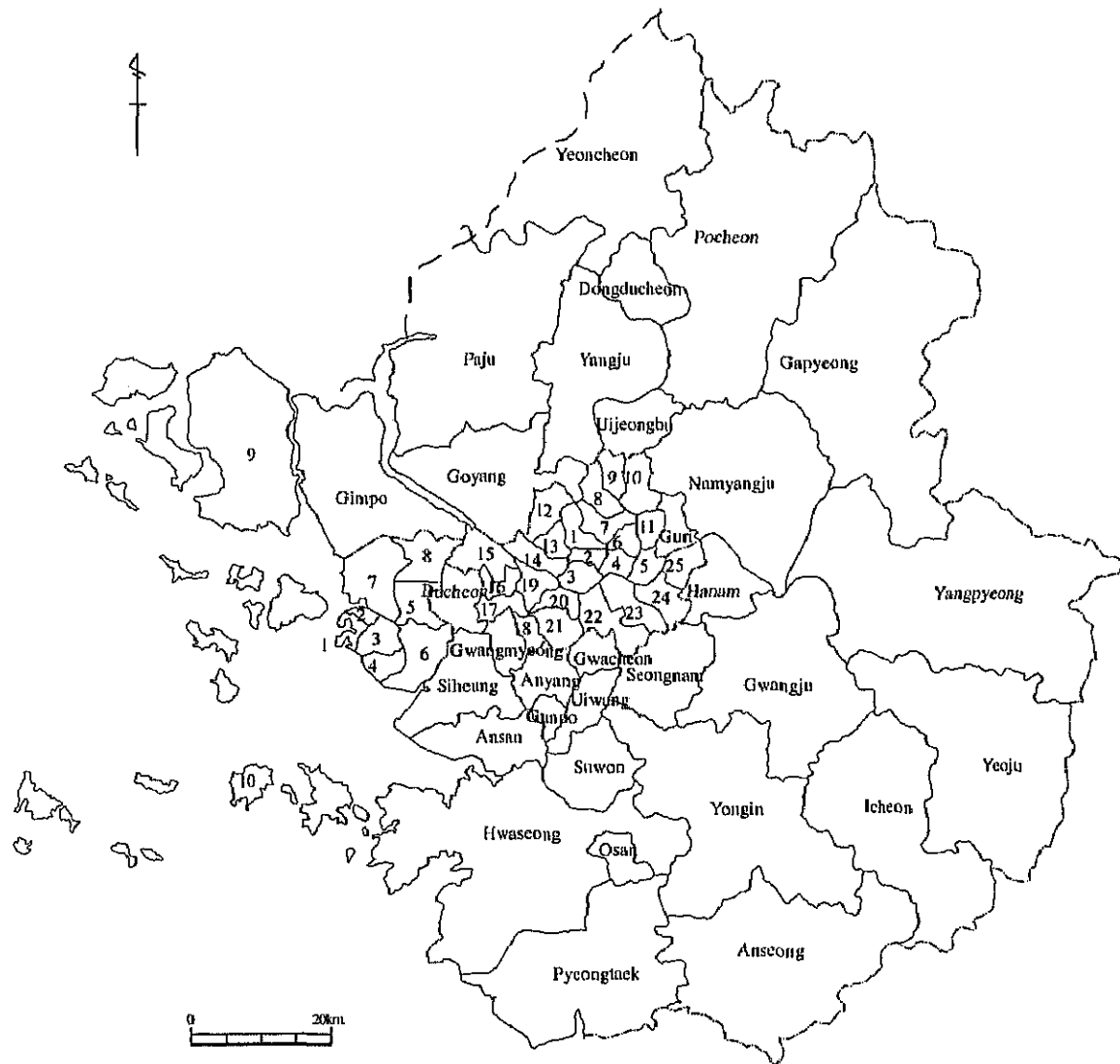


Figure 1. Study area and areal classification, 2002



- Seoul    1. Jongno 2. Jung 3. Yongsan 4. Seongdong 5. Gwangjin 6. Dongdaemun 7. Seongbuk  
 8. Gangbuk 9. Dobong 10. Nowon 11. Jungnang 12. Eunpyeong 13. Seodaemun 14. Mapo  
 15. Gangseo 16. Yangcheon 17.ro 18. Geumcheon 19. Yeongdeungpo 20. Dongjak  
 21. Gwanak 22. Seocho 23. Gangnam 24. Songpa 25. Gangdong
- Incheon    1. Chung 2. Tong 3. Nam 4. Yonsu 5. Pupyong 6. Namdong 7. So 8. Kyeyang  
 9. Kanghwa 10. Ongjin

Figure 2. Cities and counties of the Seoul metropolitan area, 2002

population in 2000. A ratio of the apartment residence household reaches 89.7% in Bundang ward where Bundang new town is located, and owner-occupation rate of a residence reaches 57.6% simultaneously.

Pankyong interchange of Gyeongbu express way is located in the west of Bundang new town, and outer loop highway is also inaugurated. Furthermore, existing roads are expanded, and Bundang urban express way was got ready, too. Subway Bundang line connects Bundang new town to Chamsil dong where takes role of traffic node of Gangnam district. It takes about 50-60 minutes from Bundang new town to the city center where Seoul city hall is located in.

This paper adopts the following regional division for the sake of analysis. Seoul divides into Gangbuk and Gangnam by Han River. Gyeonggi Do and Incheon city are defined as metropolitan area. Although Seongnam city old built-up area (abbreviated as Seongnam city in following), where belongs to the metropolitan area, as well as Bundang new town, this paper distinguished it from the other metropolitan area. This paper regard also Bundang new town as independent region. The other regions are classified as countryside.

#### **1.4 Housing institutions in Korea**

Lease contract institution of a residence in Korea involves diversity. And the institution consist of *cheonse*, *cheonwolse*, *wolse*, and *sagulse* (Table 1). In the *cheonse* system, a tenant pays all deposits to an owner when he moves into a new residence. When the tenant leave the residence, the owner must pay off all the deposit for the tenant. Term of a contract of *Cheonse* is two years in principle, and a rent is not paid. The amount of deposits of *cheonse* costs from 40 to 70% of the residential price. Though the upper limit of the deposit price increase in contract update is regulated in less than 5% a year by law, it is not kept much, and market makes deposit price of the *cheonse* (Shin 1995). The *cheonse* was a profitable system to residence owners under the high deposit interest rate. But after the economic crisis of 1998, the *cheonwolse* increases recently instead of the *cheonse*, because of rapid fall of interest rate<sup>5)</sup>.

A tenant can just allot the deposit to the residential purchase fund so that all of the deposit returns to him. Or the tenant saves a rent in living period, and he can turn money to savings. On the other hand the owner can use the deposit for investment and residential purchase fund. He can purchase more residence by the deposit, adding his savings or a home loan. Owing to the system, both tenant and owner can obtain residence easily.

In the *wolse*, a tenant pays rent to an owner by a month, however he does not



Table 1. Residential institutions in Korea

Type	Period	Payment in entrance	Payment during residence	Return of deposit
<i>Cheonse</i>	2 years	deposit	none	all
<i>Cheonwalse</i>	2 years	a part of deposit	rent*	all
<i>Walse</i>	not defined	none	rent**	none
<i>Sagwalse</i>	not defined	lump payment a rent of fixed period share	deducted from the lump payment	none

\* The rent of the *cheonwalse* are defined as 2% of margin between the *cheonse* deposit and paid amount.

\*\* The rent of the *walse* defined as 2% of the *cheonse* deposit. The *sagwalse* is same.

have to pay deposit or a recompense in beginning. The rent of the *wolse* is an equivalent of about 2% of deposit for the residence price generally (Ryu 1988). The *cheonwolse* is a middle system of the *cheonse* and the *wolse*. In the *cheonwolse*, a tenant pays a part of deposit to an owner, and pays 2% of the remainder every month. Households which can not pay all of deposit at a time use the *cheonwolse* system. The owner pays back the deposit which the tenant has paid at the beginning, however rents are not returned to the tenant. When the tenant delayed payment of rent, the deposit compensates for the lack of the rent. In the *sagwolse*, a tenant pays a rent for several months at a beginning of habitation. Also under the system, the owner does not pay back the rents.

Generally, household which belongs to early life stage, accumulates not enough fund. Therefore household choose *cheonwolse* or *wolse* residence in the stage of household formation. When fund is accumulated, they move into *cheonwolse* or *cheonse* residence. The shift to the *cheonwolse* makes the households possible to cut expenses for rents. Furthermore they can expect return of the deposits. When they will be able to accumulate fund more, they move into *cheonse* residences and will be able to purchase their own residences finally. It is efficient method for households to use the housing institutions, especially the *cheonse*, in order to form property.