

# THE STUDY FOR THE IMPROVEMENT OF SETTLEMENT IN RESIDENTIAL DISTRICT( II )

- Comparison of university students by regional groups in Taegu and Andong, Korea as future housing life cycle-

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## Introduction

Rapid industrialization and urbanization in Korea since 1960s have given rise to serious problems, such as growth of city, traffic problem and housing problem, and have caused deepening regional differences in various spheres of economy, community and culture. The more regional differences grow, the more movement of population as voluntary moves to better places increase(Lee, 1998).

For the residential district plan to meet these tendencies, for all that must be ahead of analysis of resident needs, housing demand and demand aspect to live in capital(Seoul as Korean), megalopolis, new town, local small town and rural area, these are not exact understanding and is localized in megalopolis. But actually, for the reflection of regional housing demand in coming housing policy, it is essential to develop a method to apply up to town and country(An, Yoon & Bae, 1997).

Thereupon, our research team carried out precedible study in compensation for university students living in Taegu, as basic study for the improvement of settlement. In this study as next research, we will examine regional differences. Namely, Because the moving out of Kyoungpook is the most, (Bureau of statistics, 1999) Taegu is selected to research subject as megalopolis and Andong city is chosen to regional subject among the cities as regarded of strong settlement since it's regional and historic disposition are clear.

This study intends to get basic data which can help to improve the settlement and offer basic data for residential district plan having satisfactory living condition and housing environment, and to improve quality of life as comparison between the tendency of residential district preferences and valuation by the objects of University students living in megalopolis and local small town.

### Methods and analysis

This study was carried out by questionnaire. This study made use of final analysis data for entire 438 answers with exception of unreasonable answers during December 1998~June 1999, with objects of 450 university students in Andong and Taegu by random selection.

Housing life cycle of this study is divided as housing formative period, housing stable period and housing reductive period by reorganization of 5 steps to 3 steps of Kim & Hong(1990). Among these housing environment variables, environmental condition is made up of 18 items and neighborhood facility is made up of 19 items. Residential district is divided into capital, new town, megalopolis, local small town and rural area.

The result of reliability analysis of using degree for neighborhood facility is Cronbach's  $\alpha=.906$ , current contentment item is .927, and housing value item is .976 which is high degree. And analysis of data is make use of SPSSWIN program.

### Result

#### 1. Preferential inclination to residential district by regional groups

##### 1) Housing experiences of the past

Housing experiences of the past are the most in residential years and experiences at the same places where every megalopolis and local small town residents born. That of capital and new town are very few. A Satisfaction of residential district in the past of megalopolis residents is generally high as compared with local small town residents, and megalopolis resident who has experiences of the past at the rural area( $p<.001$ ) and megalopolis( $p<.01$ ) is more high.<Table 1> .

##### 2) Housing condition of present

Housing condition does not show significant difference in housing type, living

<Table 1> Housing experience of the past

Variables	District	N(%)					total
		rural area	local small town	megalopolis	capital	new town	
Birthplace N(%)	local small towns	71( 33.5)	118( 55.7)	17( 8.0)	5( 2.4)	1( 0.5)	212(100.0)
	megalopolis	43( 19.0)	17( 7.5)	157( 69.5)	9( 4.0)	0( 0.0)	226(100.0)
Residential experience N(%)	local small towns	110( 51.9)	165( 77.6)	34( 16.1)	18( 8.5)	4( 1.9)	
	megalopolis	62( 27.4)	41( 18.1)	192( 85.7)	21( 9.3)	8( 3.5)	
Residential years M/SD	local small towns	11.60/6.64	15.04/6.84	3.34/6.83	7.00/9.35	1.60/0.89	
	megalopolis	9.32/6.23	6.68/6.38	15.52/8.65	5.33/5.82	2.33/1.03	
Residential district satisfaction M/SD	local small towns	3.23/0.92	3.16/0.79	3.15/0.61	3.35/0.86	3.33/1.03	3.24
	megalopolis	3.75/0.79	3.31/0.77	3.48/0.65	3.57/1.03	3.75/0.71	3.57
	t-value	-3.744***	-1.301	-2.925***	-0.699	-0.899	

\*\* p <.01

\*\*\* p<.001

area, ownership type and residential years. But satisfaction of present district of megalopolis is higher than that of residents in local small town( $p<.01$ ), like the same aspect with satisfaction for resident district of the past <Table 2> .

<Table 2> Residential condition of the present

Variables	Level	N(%)		Variables	Level	N(%)	
		local small town	megalopolis			local small town	megalopolis
Housing Type	detached house	82( 43.4)	99( 44.8)	Ownership Type	one's own house	193( 92.3)	201( 88.9)
	low level APT	31( 16.4)	25( 11.3)		rent house	16( 7.7)	25( 11.1)
	tower APT	41( 21.7)	69( 31.2)	Residential Years	10 years below	83( 42.1)	59( 26.3)
	row house	16( 8.5)	14( 6.3)		11~20 years	90( 45.7)	81( 36.2)
	multi-family house	17( 9.0)	12( 5.4)		over 21 years	24( 12.2)	84( 37.5)
office-hotel	2( 1.1)	2( 0.9)	M/S.D	13.01/7.89	16.77/7.11		
Living Area	industrial	19( 9.1)	13( 5.9)	District Satisfaction	M/S.D	3.07/0.86	3.31/0.85
	commercial	30( 14.4)	27( 12.2)		t-value	-3.029**	
	residential	136( 65.4)	177( 80.1)				
	green-belt	23( 11.1)	4( 1.8)				

\*\* p <.01

### 3) Future housing preferences

As a result of comparison in the future housing preferences by regional groups, at the housing formative period, it is significant differences at each of two regional groups. In the preferential district, residents in local small town prefer local small town, new town orderly and residents in megalopolis prefer megalopolis, capital orderly(p<.001). In the living area, residential area is preferential to every two district but residents in local small town have preferential to commercial area relatively(p<.01).

At the housing stable period, residents in local small town prefer local small towns and residents in megalopolis prefer megalopolis and capital in the preferential district(p<.001). In the living area, residential area is preferential to every two district, but residents in local small town prefer commercial area and green belt area relatively(p<.001). In the housing type, there is preferential to detached house and row house by residents of local small town, detached house and tower apartment over 6th floor by residents in megalopolis(p<.001).

At the housing reductive period, there are differences of relative preferences to rural area and megalopolis by residents of megalopolis and to local small town by residents of medium and small city and that showed significant differences in preferential district(p<.001).

## 2. Estimation of housing values for the housing environment by regional groups

Housing environment is viewed by division into neighborhood facility and environmental condition. And estimation of housing values will be analyzed with investigation of degree of value, satisfaction and consideration.

### 1) Value estimation for the neighborhood facility by regional groups

(1) Using degree and satisfaction of present neighborhood facility by regional groups.

<Table 3> Housing preferences of the future by regional groups

N(%)

Housing life cycle Variables		Formative			Stable			Reductive		
		local small town	megalopolis	total	local small town	megalopolis	total	local small town	megalopolis	total
District	rural area	12( 5.9)	12( 5.5)	24( 5.7)	9( 4.4)	12( 5.4)	21( 4.9)	69( 34.5)	80( 36.2)	149( 35.4)
	local small town	66( 32.5)	16( 7.3)	82( 19.4)	71( 34.8)	16( 7.2)	87( 20.4)	101( 50.5)	33( 14.9)	134( 31.8)
	megalopolis	49( 24.1)	94( 42.9)	143( 33.9)	45( 22.1)	86( 38.6)	131( 30.7)	10( 5.0)	59( 26.7)	69( 16.4)
	capital	32( 15.8)	56( 25.6)	88( 20.9)	38( 18.6)	68( 30.5)	106( 24.8)	5( 2.5)	13( 5.9)	18( 4.3)
	new town	44( 21.7)	41( 18.7)	85( 20.1)	41( 20.1)	41( 18.4)	82( 19.2)	15( 7.5)	36( 16.3)	51( 12.1)
	total	203(100.0)	219(100.0)	422(100.0)	204(100.0)	223(100.0)	427(100.0)	200(100.0)	221(100.0)	421(100.0)
	Notes	x <sup>2</sup> =50.766*** df=4			x <sup>2</sup> =55.786*** df=4			x <sup>2</sup> =81.474*** df=4		
Living area	industrial	12( 5.7)	2( 0.9)	14( 3.2)	5( 2.4)	0( 0.0)	5( 5.0)	3( 1.4)	0( 0.0)	3( 0.7)
	commercial	44( 21.0)	33( 14.7)	77( 17.7)	36( 17.1)	22( 9.7)	58( 13.3)	1( 0.5)	1( 0.4)	2( 0.5)
	residential	130( 61.9)	164( 73.2)	294( 67.7)	133( 63.3)	181( 80.1)	314( 72.0)	47( 22.4)	45( 19.0)	92( 21.1)
	green-belt	24( 11.4)	25( 11.2)	49( 11.3)	36( 17.1)	23( 10.2)	59( 13.5)	159( 75.7)	30( 79.6)	339( 77.8)
	Total	210(100.0)	224(100.0)	434(100.0)	210(100.0)	226(100.0)	436(100.0)	210(100.0)	226(100.0)	436(100.0)
	Notes	x <sup>2</sup> =12.228** df=3			x <sup>2</sup> =18.018*** df=3			x <sup>2</sup> =3.762 df=3		
Housing Type	low level APT	23( 11.2)	27( 12.0)	50( 11.6)	16( 7.7)	12( 5.3)	28( 6.5)	6( 2.9)	9( 4.0)	15( 3.5)
	tower APT	47( 22.9)	70( 31.1)	117( 27.2)	24( 11.6)	57( 25.3)	81( 18.8)	4( 1.9)	14( 6.3)	18( 4.2)
	row house	19( 9.3)	13( 5.8)	32( 7.4)	25( 12.1)	6( 2.7)	31( 7.2)	11( 5.3)	5( 2.2)	16( 3.7)
	detached house	89( 43.4)	97( 43.1)	186( 43.3)	130( 62.8)	141( 62.7)	271( 62.7)	177( 85.9)	184( 82.5)	361( 84.1)
	multi-family house	11( 5.4)	4( 1.8)	15( 3.5)	7( 3.4)	7( 3.1)	14( 3.2)	5( 2.4)	5( 2.2)	10( 2.3)
	office-hotel	16( 7.8)	14( 6.2)	30( 7.0)	2( 1.0)	2( 0.9)	4( 0.9)	1( 0.5)	1( 0.4)	2( 0.5)
	public house	0( 0.0)	0( 0.0)	0( 0.0)	3( 1.4)	0( 0.0)	3( 0.7)	2( 1.0)	5( 2.2)	7( 1.6)
	Total	205(100.0)	225(100.0)	430(100.0)	207(100.0)	225(100.0)	432(100.0)	206(100.0)	223(100.0)	429(100.0)
	Notes	x <sup>2</sup> = 8.799 df=5			x <sup>2</sup> =28.407*** df=6			x <sup>2</sup> =9.168 df=6		

\*\*p < .01 \*\*\* p < .001

As the result of factor analysis for 19 items which is Rikert(5 point) for the comparison of using degree about present neighborhood facility by regional groups, it is classified to the first factor[leisure factor], the second factor[marketing facility factor], the third factor[business facility factor], the fourth factor[cultural facility factor], the fifth factor[welfare facility factor], and the sixth factor[living facility factor], and total amount of description is 59.9% generally < Table 4 > .

<Table 4> Using degree and satisfaction of the present neighborhood facility by regional groups M(S.D.)

Factor	Using degree			Satisfaction		
	local small town	megalopolis	t-value	local small town	megalopolis	t-value
Factor 1 : Leisure	3.02(0.62)	2.96(0.61)	1.092	3.20(0.57)	3.21(0.55)	-0.230
Factor 2 : Marketing facility	3.81(0.60)	4.00(0.55)	-3.527***	2.90(0.67)	2.85(0.64)	0.836
Factor 3 : Business facility	2.84(0.69)	2.92(0.63)	0.301	3.17(0.62)	3.23(0.61)	-0.906
Factor 4 : Cultural facility	2.42(0.89)	2.75(0.93)	0.454***	2.98(0.84)	3.18(0.65)	-2.783**
Factor 5 : Welfare facility	2.25(0.95)	2.18(0.94)	0.880	3.08(0.77)	3.34(0.87)	-3.331**
Factor 6 : Living facility	3.03(0.63)	3.13(0.67)	0.464	3.30(0.62)	3.36(0.55)	-1.174
Total	2.90	2.99		3.11	3.20	

\*\* p<.01 \*\*\* p<.001

At every two regions, using degree of neighborhood is lower than average. And average of the second factor as [marketing facility factor] is the highest at every local small town and megalopolis, and megalopolis is higher than local small town in using degree(p < .001). Also, using degree of the fifth factor[welfare facility factor] is the lowest two district(p < .001).

The satisfaction of present neighborhood facility show somewhat higher than average totally. That of the sixth factor[living facility factor] is the highest commonly and the second factor[marketing facility factor) is the lowest. As comparison between these results and that of neighborhood facility, it is guessed as factor which has much dissatisfaction factor by lower satisfaction in the case of the second factor which has much using degree. At the t-test by regional groups, satisfaction of megalopolis is higher than local small town in the [cultural facility] and [welfare facility factor].

**(2) Consideration for the future neighborhood facility by regional groups**

As the result of factor analysis with the 19 items for the comparison of consideration about future neighborhood facility by regional groups, the first is [living-business facility factor], the second factor is [leisure-cultural facility factor], the third factor is [marketing facility factor] and the fourth factor is [welfare facility factor]. They are four category and amount of description is 60.0%.

In the consequence of consideration for future neighborhood facility by regional groups about these four category<Table 5>, consideration of local small town about the first factor [living-business factor], the second factor [leisure-cultural factor] and the fourth factor [welfare facility factor] are higher than that of megalopolis at the housing formative period. At the housing stable period, it is higher consideration in local small town about the first factor [living-business facility factor] and the fourth factor [welfare facility factor] than that of megalopolis. At the housing reductive period, it is significant higher consideration in local small town about the first factor [living-business facility factor] than that of megalopolis.

<Table 5> Consideration for the future neighborhood facility by regional groups

Factor	Formative		Stable		Reductive	
	local small town	megalopolis	local small town	megalopolis	local small town	megalopolis
Factor 1 : Living-business facility	3.23(0.73)	3.05(0.63)	3.24(0.73)	3.08(0.64)	2.98(0.81)	2.81(0.67)
	t = 2.731**		t=2.481*		t=2.394*	
Factor 2 : Leisure-cultural facility	3.66(0.60)	3.53(0.58)	3.69(0.63)	3.57(0.63)	3.43(0.69)	3.34(0.70)
	t=2.327*		t=1.908		t=1.342	
Factor 3 : Marketing facility	3.73(0.64)	3.83(0.51)	3.76(0.58)	3.78(0.52)	3.58(0.63)	3.60(0.62)
	t=-1.759		t=-0.451		t=-0.419	
Factor 4 : Welfare facility	3.46(0.66)	3.27(0.69)	3.57(0.66)	3.39(0.67)	3.88(0.66)	3.87(0.63)
	t=2.888**		t=2.810**		t=-0.110	

\* p <.05 \*\* p <.01

**2) Value estimation for the environmental condition by regional groups**

**(1) Satisfaction of present environmental condition by regional groups**

As the result of factor analysis for the 18 items which is Rikert(5 points) about present environmental condition, it is classified by 5 factors with [social environment factor], [natural environmental factor], [human environmental factor], [comfortable environmental factor] and [economic environmental factor], and whose amount of description is 60.0%.

Total satisfaction of environmental condition, as these factors, is a little higher

than average at two regional groups and almost similar to satisfy of neighborhood facility <Table 6> .

It is remarkable differences between [social environmental factor] and [natural environmental factor] by regional groups. Namely, the satisfaction of [social environmental factor] of residents in megalopolis is higher( $p < .001$ ) than that of residents in local small towns. The other side, the satisfaction of [natural environmental factor] of residents in local small towns is higher than that of residents in megalopolis( $p < .01$ ).

<Table 6> Satisfaction of present environmental condition by regional groups M(S.D)

Factor \ District	social environment	natural environment	human environment	comfortable environment	economic environment	Total
local small town	3.16(0.63)	3.04(0.65)	3.23(0.67)	3.37(0.89)	2.99(0.72)	3.16
megalopolis	3.47(0.67)	2.83(0.67)	3.29(0.62)	3.34(0.85)	3.06(0.63)	3.20
t-value	-4.998***	3.308**	-0.994	0.347	-1.088	

\*\* p <.01

\*\*\* p <.001

## (2) Consideration for future environmental condition by regional groups

We carried out factor analysis for consideration 18 items of environmental condition at the selection of future district by regional groups. In the consequence of this, they are classified to four factor. The first factor is [natural environment], the second factor is [social environmental factor], the third factor is [human environmental factor] and the fourth factor is [economic environmental factor], and total amount of description is 66.9%.

As the result of t-test about these four factors by regional groups <Table 7> , there are significant differences between [social environmental factor] and [economic environmental factor] at the housing formative period, so consideration degree of megalopolis is higher than that of local small town( $p < .05$ ). There are significant differences in [social environmental factor]( $p < .05$ ) and [natural environmental factor]( $p < .01$ ) at the housing stable period. And residents of megalopolis is more considerable than local small town for the [natural environmental future] at the housing reductive period( $p < .01$ ).

<Table 7> Consideration for future environmental condition by regional groups M(SD)

Factor	Formative		Stable		Reductive	
	local small town	megalopolis	local small town	megalopolis	local small town	megalopolis
Factor 1 : natural environment	3.95(0.60)	4.03(0.51)	4.01(0.59)	4.15(0.51)	4.43(0.59)	4.58(0.48)
	t = -1.561		t=-2.630		t=-3.045	
Factor 2 : social environment	4.07(0.55)	4.19(0.49)	4.05(0.60)	4.18(0.53)	4.13(0.62)	4.18(0.57)
	t=-2.314		t=-2.401		t=-0.856	
Factor 3 : human environment	3.64(0.62)	3.62(0.58)	3.74(0.67)	3.86(0.54)	3.79(0.73)	3.82(0.69)
	t=0.362		t=-1.939		t=-0.412	
Factor 4 : economic environment	3.69(0.70)	3.81(0.60)	3.77(0.74)	3.88(0.71)	3.37(0.84)	3.39(0.77)
	t=-1.986		t=-1.612		t=-0.244	

\* p <.05

\*\* p <.01

## Discussion

The purpose of this study is to get basic data by comparison of housing values, preferential district in future, present residential condition and experience of the past with the object of 438 by university students living in megalopolis and local small town.

Results are as follows.

**The first**, there are many cases of corresponding among present residential district and years, residential experiences in past, and birth place by the regional groups. In satisfaction of past residential district, megalopolis residents are more satisfactory than local small town with significant differences in satisfaction of housing experiences at rural area and megalopolis. In the satisfaction of present residential district, satisfaction of residents in megalopolis is higher than that of local small town significantly.

**The second**, as result of future preferential district investigation, residents of local small town prefer local small city, new city → medium and small city → medium and small city orderly according to the housing life cycle. Residents of megalopolis prefer megalopolis, capital → megalopolis, capital → rural area, megalopolis, new town orderly.

From this result, we can see the strong settlement because all of the groups prefer present residential area persistently. Furthermore, at the housing formative period, two groups prefer another district but present residential district. Especially, Residents in megalopolis prefer various residential district according to the housing life cycle, therefore settlement of residents in local small town is more strong. Namely residents of megalopolis prefer big city or capital-oriented as compared with residents of local small city. The result of total migration in 1999 showed that migration from Taegu to metropolitan area(Seoul, Incheon, Kyungki as Korean) is increased with 20% as compared with 1998, and Kyungpook increased with 15.1%. These tendency will be continued, so that more effort will be needed for improvement of settlement in megalopolis residents.

In the future preferential housing type, residents in local small town prefer detached house, row house → detached house, row house → detached house orderly as housing life cycle, and megalopolis residents prefer detached house, tower apartment over 6th floor → detached house, tower apartment → detached house. Namely, two groups prefer detached house lastingly and as housing life cycle progress, it is increased more and more. Also, in the housing formative period and housing stable period, there are differences in two groups. Row house in local small town and tower apartment over 6th floor in metropolis are preferred. It need sufficient consideration in housing supply.

**The third**, as the result of viewing about neighborhood facility, the using degree of neighborhood facility of two groups is lower than average, and satisfaction is higher than average and that is similar to each other. As it is more item of using degree, satisfaction has low tendency. Therefore we have to grasp the

improvement device with practical investigation about more using degree facility.

Consideration for neighborhood facility of future residential district shows more consideration in local small town residents who has low using degree and satisfaction as compared with megalopolis. And, as housing life cycle is progressed, marketing facility factor → marketing facility factor → welfare facility factor is more considered. Namely, at the housing reductive period, consideration for welfare facility has high value at two groups, and should be needed in neighborhood facility plan to reflect the demand of residents by grasping present condition about welfare facility.

**The fourth**, as the result of viewing in satisfaction with environmental condition, it shows difference by regional groups. The satisfaction of megalopolis is high as compared with local small towns about [social environmental factor], but that of local small town is higher in [comfortable environmental factor]. Therefore, the publicity of merit as regional groups will improve a image of district.

In Consideration for environmental condition of future residential district, residents of megalopolis is more considerable than residents of local small town. Especially, the more housing life cycle progress, the more consideration of [natural environmental factor] increased. Therefore, housing plan for the elder must reflect [natural environmental factor].

In this study, because objects are students, practical items as marriage, economic side, income, job and rambling of work place which can induce practical residential mobility are excluded. In the continuing study, it is essential to practical and systematic study by age enlargement of objects.

#### References

Kim, Dae-Nyun · Hong, Hyung-Ock(1990). The theoretical approach for modelling of housing life cycle. *Korean Housing Research Journal*. 1(1). pp.37~48.

Kim, Jae-Kyung · An, Ok-Hee(1996). A study on the korean existing low of neighborhood facilities. *The Journal of Saemaul and Regional Development*(19). pp.141~154.

Kim, Hae-Young(1991). A study on the residential mobility propensity of households with preschool children. *graduate school chung-ang university*.

An, Ok-Hee · Yoon, Jae-Woong · Bae, Jung-In(1997). *Comprehension of housing study*. Seoul, Korea: Gi-Moon-Dang.

Yoon, Bak-cha · Yu, Wann · Kim Hye-Jung(1993). Motives for moving and patterns of residential mobility in the city of seoul. *Journal of the architecture institute of Korea*. 9(1). pp.21~30

Lee, Young-Ju · Lee, Young-Ho(1998). A study on moving motives and choice motives of housing in Pusan. *Journal of the architecture institute of Korea*. 14(12). pp.31~38.

Lee, Hee-Yeon(1998). *Population geography*. Seoul, Korea: Byup-Mun-Sa.

Bureau of statistics(1999). *Migration in the first quarter of 1991*. Korea: Bureau of statistics.