韓國人口學會誌, 第十四卷 第二號 (1991)
The Journal of The Population Association of Korea, Vol. 14, No. 2 (1991)

Longitudinal Perspectives of Residential Mobility in Urban Area

In - Soo Lee* · Sea Baick Lee**

<Contents>

Ⅰ. Introduction

The purpose of this study is to analyze residential mobility in an urban area. Residential mobility refers to changing residence within both a single labor market and a housing market in contrast to migration which involves moving from one labor market or housing market to another (Memken, 1984). Within the family or household level, Rossi (1955) defined residential mobility as "the process by which families adjust their housing or family life to the household needs that are generated by shift in family composition that accompany life cycle change." Chevan (1971) also elaborated on the definition of residential mobility as "the mechanism whereby the composition of the family at different stages of the family life cycle is matched to the household needs implied by that composition."

In explaining the reason of residential mobility, Bell (1958) suggested that people tend to move to realize a new life style. He found that the reason for moving expressed by a large proportion of recent movers to two Chicago suburbs showed a "familism" value orientation.

Defining the "familism" as valuing family life as a goal itself, he reported in his survey that 81 percent of the respondents moved because they believed the new place would be better for children ; 77 percent found life more enjoyable in the suburbs ; and only 21 percent moved because of job-related reasons (The respondents were asked multiple questions for the reason of movement). In his study, Bell concluded that family related issues are the most critical life cycle factors causing people to

* In - Soo Lee received a Ph.D. in Human Development & Family Studies from Iowa State University, Ames, Iowa.

** Sea Baick Lee is a professor of School of Public Health, Seoul National University.

move and introducing choices of new residence. Therefore, it appears evident that longitudinal trends of household change, residential mobility, family life cycle, and relationships among these variables are useful background for developing models of urban growth and housing markets.

Above mentioned studies reveal that residential mobility is a crucial mechanism that a family adjust their life to a new style reflecting social & natural shifts of their household composition. Clearly, Rossi (1955) and others indicated that more than half of the families cited the lack of living space as contributing to the desire for residential mobility. These studies draw a hypothesis that main activator of the residential mobility is the deficiency of living space at the household level, which is an expression of population density in terms of number of households residing within a certain amount of space. Therefore, the study of residential mobility is justified that the analysis of annual mobility rate is an indicator to the potential space deficiency of urban residents, and that calculation of the mobility rate over the family life cycle is a useful baseline for health policies.

Ⅱ. Methodology

The data used in this analysis were gathered under a U.S. National Science Foundation Grant in the year of 1986－87 as part of a project designed to study the effects of the Mexican Economy on household wellbeing. The sample for the study is a two stages cluster sample of the city of Oaxaca.

The first stage consists of a random sample of the blocks within each of the 54 fiscal sectors (units designated by the city office) of the city. The second stage was a systematic sample of the approximately 3,600 households living on the blocks selected. After eliminating households with never married heads, households with incomplete history information, households married less than a year and households whom could not be interviewed because of personal constraints, 633 households were finally interviewed.

The questions used in this analysis include comprehensive information on household event history such as ① the date of household formation by marriage ; ② the number of individuals who are living or who have lived in the household ; ③ specific information about each person in the household including date of birth, sex, marital status, education, and date of departure ; and ④ residential histories about the present dwelling and each of the previous dwelling the household occupied including the date of movement, tenure arrangements for each residence, the type of structure, and the number of bedrooms.

After the data had been cleaned, they were transformed into a longitudinal yearly record of each household's life, beginning at the date the household was formed by marriage. Therefore, the longitudinal models in this dissertation are classified as retrospective cohort analyses exclusively based on the respondents' memory. In the transformed data, each year of a household's history became a single observation. The first observation for each household begins with the date of the current marriage and subsequent observations begin with the anniver-

sary of the date of marriage. Therefore, each household contributes as many observations as the number of years the household had been in existence until the year of 1986, when the survey was performed.

In this study, there are two approaches in the analysis of the mobility. The first approach is an analysis of the mobility rate per five-year periods by different marriage cohorts. This approach provides a variation of the mobility

Table 1. Geographic Mobility by Marriage Cohort and Years Married

Years married		Marriage cohort					
		1941−50	1951−60	1961−70	1971−80	1981−85	Overall
1−5	M.R*	16.67	21.70	22.66	24.06	28.18	23.23
	(No.)**	(210)	(470)	(640)	(985)	(330)	(2,635)
6−10	M.R.	7.14	10.64	8.28	10.78		9.76
	(No.)	(210)	(470)	(640)	(872)		(2,192)
11−15	M.R.	6.67	9.57	7.97	8.27		8.32
	(No.)	(210)	(470)	(640)	(387)		(1,707)
16−20	M.R.	6.19	8.30	4.54			6.25
	(No.)	(210)	(470)	(551)			(1,231)
21−25	M.R.	8.09	4.04	2.50			5.45
	(No.)	(210)	(470)	(238)			(918)
26−30	M.R.	6.67	4.62				5.06
	(No.)	(210)	(390)				(600)
31−35	M.R.	6.19	3.04				4.67
	(No.)	(210)	(197)				(407)
36−40	M.R.	3.67					3.67
	(No.)	(163)					(163)

* M.R. denotes mobility rate, expressed by the number of movements per 100 marriage years within the five year period.

** No. denotes the number of yearly segments.

rate over different marriage groups. The second approach is a multiple regression analysis of number of movements on explanatory variables. This approach provides ideas of causal relationships among various variables and show us in what functions the families move toward their ideal form of family life.

Ⅲ. Results

1. Mobility Rate

The event of mobility over the family life cycle among the Oaxaca households is shown in Table 1. In this table, the mobility rate, R, denotes the number of movements per 100 yearly segments and the sample size, n, denotes the number of yearly observations created by multiplying the number of households by the observation period, five. For example, the mobility rate of 21.70 within the first five year period for the cohort of 1951−60 represents a total events of 102 among 470 yearly observations of the 94 households. Over all the marriage cohorts, the number of movements per 100 households is the highest within the first five year period after marriage (23.23).

This result supports the link between birth rate and residential mobility because birth rate increases rapidly in the earlier years of marriage, and housing needs also change rapidly in this period as space requirements grow and the family becomes very sensitive to the environment of dwelling unit (Rossi, 1955).

In addition, the mobility rate at the first five year period for the cohorts after 1960 is significantly higher than other cohorts ($P<.05$). This phenomenon is consistent with the high birth rate of the same cohort at the same period of family life cycle in Mexico (International Statistics Institute, 1981) indicating that residential movement is closely tied with birth rate, which is critical element of household size.

Table 2. Probit Analysis of Structure Type on Explanatory Variables

Independent variables	Coefficient	t-ratio
Age of female head at marriage	.22	1.11
Years after marriage	.93	12.62*
Education of female head	.78	13.30*
Marital status	1.88	7.78*
Household size	-.20	-1.52
Number of previous movements	-.19	-2.38*
Intercept	t-ratio	
3.28	11.61	
Chi-square = 5626.34	D.F. = 9056	P = .59

* $P<.05$.

2. Multiple Regression Analysis

In the multiple regression analysis, the relationship between residential mobility and housing issues has been investigated. In the analysis, the independent variable is the structure type of housing, which is coded into numeric values ranging from 1 to 6. The highest value of the structure type is 6, the single-detached dwelling unit, which is the ultimate ideal form of housing of American family lives (Memken, 1984). The lowest value is 1, multiple house-

Table 3. Long Term Trend of Structure Type

Years after marriage	Structure percent type*	Marriage cohort				
		1941−1950	1951−1960	1961−1970	1971−1980	1981−1985
1	1	20.7	16.2	13.5	8.5	9.1
	2	3.4	10.3	6.7	10.0	9.1
	3	27.6	20.6	28.1	26.2	25.5
	4	0.0	2.9	4.5	3.8	3.6
	5	3.4	4.4	4.5	7.7	1.8
	6	44.8	45.6	42.7	43.8	50.9
	(N)	(25)	(68)	(89)	(132)	(55)
5	1	25.7	15.3	9.7	5.3	11.1
	2	5.7	8.2	12.4	8.8	8.3
	3	25.7	29.4	27.4	20.5	25.0
	4	2.9	1.2	2.7	2.9	2.8
	5	2.9	2.4	2.7	5.3	0.0
	6	37.1	43.5	45.1	57.3	52.8
	(N)	(31)	(85)	(112)	(175)	(36)
10	1	17.5	10.1	12.4	7.1	
	2	12.5	10.1	9.9	6.3	
	3	20.0	30.3	16.5	14.3	
	4	5.0	1.1	1.7	2.4	
	5	2.5	1.1	.8	3.2	
	6	42.5	47.2	58.7	66.7	
	(N)	(35)	(88)	(119)	(130)	

* 1−5 = Non single-detached dwelling unit(i.e., apartment, duplex),
6 = Single detached dwelling unit.

(Table 3. continued)

Years after marriage	Structure percent type	Marriage cohort				
		1941－1950	1951－1960	1961－1970	1971－1980	1981－1985
15	1	11.6	17.6	11.2	11.4	
	2	4.7	6.6	2.4	5.7	
	3	27.9	23.1	12.8	2.9	
	4	4.7	2.2	1.6	0.0	
	5	2.3	1.1	2.4	2.9	
	6	48.8	49.5	69.6	77.1	
	(N)	(38)	(90)	(123)	(35)	
20	1	11.6	13.0	10.8		
	2	2.3	5.4	1.2		
	3	23.3	16.3	7.2		
	4	4.7	2.2	1.2		
	5	2.3	1.1	2.4		
	6	55.8	62.0	77.1		
	(N)	(39)	(91)	(82)		
30	1	6.7	9.1			
	2	2.2	3.5			
	3	17.8	10.9			
	4	2.2	1.8			
	5	2.2	0.0			
	6	68.9	74.5			
	(N)	(41)	(55)			
40	1	13.1				
	2	4.3				
	3	17.4				
	4	0.0				
	5	0.0				
	6	65.2				
	(N)	(18)				

holds residing unit, which is most against the ideal form of housing. Therefore, for example, high positive relation coefficient of the structure type and number of previous movements means that more often a family moves, it obtain its ideal form of housing in the future.

The multiple regression analysis of structure type on the explanatory variables is shown in Table 2. In this analysis, years after marriage, education of female head, and marital status of female head have significant positive relationships with the structure type. On the other hand, the number of previous movements has significant negative relationship with the structure type. Results are :

(1) As time passes since marriage, it is more likely that household members will live in a single-detached dwelling unit.

(2) Families with more educated heads are more likely to live in a single-detached dwelling unit.

(3) Households of married heads are more likely to live in single-detached dwelling units than are those of the divorced or widowed head.

(4) The more frequently the household has moved, the less likely the household members live in a single-detached dwelling unit.

The negative relationship between number of movements and structure type is explained by the discrepancy of long term trends of residential mobility (Table 1) and percentage distribution of structure type over the family life cycle (Table 3). In the long run, the proportion of single-detached dwelling units increased for all the marriage cohorts from nearly 45 percent in the first year of marriage, to more than 65 percent in later stages of family life cycle (more than 20 years after marriage). But the mobility rate is remarkably high in the first five year period but extremely low at the later stage of family life cycle (Table 1). Therefore, it is logical that more extensive movements take place in the early stage but the percentage of the single-detached dwelling unit increases at the later stage of life cycle and consequently, this opposite phenomenon draws a negative relationship between number of movements and structure type in the probit analysis over the entire family life cycle.

Ⅳ. Conclusion

In this study, a retrospective longitudinal analysis of the residential mobility by marriage cohorts since 1940s has been performed across the family life cycle. A surprising finding is that over all the marriage cohort, the rate of mobility reaches the highest point of more than 23 percent within the first five year period after marriage. This result proposes an association between the highest fertility (Rossi, 1955) and space desire that birth rate increases rapidly in the earlier years of marriage and the family becomes very sensitive to the social and physical environment of dwelling unit.

This phenomenon draws a conclusion that the young couples in the beginning stage of the family life cycle are most likely to change their places toward more spacious and private dwelling units.

Another finding is that there is a rapid decrease of mobility rate for the cohorts after 1960 in the early stage of family life. In contrast, the mobility rate for the cohort of

1951－60 decreases less rapidly from the first to the second five-year period. This result draws another conclusion that couples formed since 1960 change their residence more frequently than previously formed couples at the first five-year period of their life cycle. In addition, this phenomenon may propose an implication that the year of 1960 is a breakpoint of longitudinal trend in demography. Overall, this study clearly shows that there is a rythmical transition of the mobility by different marriage cohorts and diferent stages of family life cycle.

(References)

Brummel, A. C. (1979). A Model of Intraurban Mobility. *Economic Geography*, 55(4), 338-352

Burgess, S. (1982). Determinants of Home Ownership : A Comparison of Single Female and Single Male Headed Households. *Housing and Society*, 9(2), 87－94

Chevan, A. (1971). Family Growth, Household Density, and Moving. *Demography*, 80, 451－458

Chi, Peter S. K. (1984). Determinants of Changes in Housing Tenure Status in the United States. *Housing and Society*, 11(3), 121－135

Greenfield, R. J. & Lew, J. F. (1969). An Alternative to a Density Function Definition of Overcrowding. *Land Economics*, 45, 282－285

Harris, C. M. (1976). The Measurement of Quality in Housing and Its Relationship to Housing Satisfaction. *Housing Educator Journal*, 3(1), 7－13

International Statistical Institute. (1981). *Scientific Reports*. Voorburg, Netherlands : Grosvonog Gardens

Jorgensen, S. and Adams, R. (1988). Predicting Mexican-American Family Planning Intentions : An Implication and Test of a Social Psychological Model. *Journal of Marriage and the Family*, 50(1), 107－119

Kim, J. C. (1987). *Becoming a First-time Home Owner : An Analysis of Household Life History Data*. Ph. D. dissertation Iowa State University, Ames, Iowa

Lam, J. (1985). Type of Structure, Satisfaction, and Propensity to Move. *Housing and Society*, 12(1), 32－43

Memken, J. A. (1984). *A Longitudinal Model of Residential Mobility*. Ph. D. dissertation. Iowa State University, Ames, Iowa

Morris, E. W. and Winter M. (1978). *Housing, Family, and Society*. New York : John Wiley and Sons

Morris, E. W. and Winter, M. (1985). *A Note on the Microsociology of Housing*. Iowa State University Agricultural Experiment Station Paper, J－11486, Ames, Iowa

Morris, E. W., Winter, M., and Murphy, A. D. (1988). *Housing Adjustment, Satisfaction and Quality/Quantity Considerations in Housing : The Case of Oaxaca de Juarez*. Proceedings of the 1988 Annual Conference of the Environmental Design Research Association, Pomona, CA

Morris, E. W., Winter, M., Murphy. A. D., Rees, M. W., French, K., and Selby, H. (1990). Crisis and Sector in Oaxaca, Mexico : A Comparison of Households 1977－1987. In M. E. Smith(ed.), *Perspectives on the Informal Economy*. New York : University Press of America

Morrison, P. A. (1967). Duration of Residence and Prospective Migration : The Evaluation of a Stochastic Model. *Demography*, 4(2), 53 −63

Murphy, A. (1987). Studying Housing Areas in a Developing Nation : Lessons from Oaxaca City, Mexico. *Housing and Society*, 14(2), 143 −160

Newman, S. (1975). Objective and Subjective Determinants of Prospective Residential Mobility. *Social Indicators Research*, 2(1), 53−63

Okraku, I. O. (1971). The Family Life-Cycle and Residential Mobility in Puerto Rico. *Sociology and Social Research*, 55(3), 324−340

Perch, K., Lindamood, S., and Hanna, S. (1983). Housing Satisfaction of the Physically Disabled. *Housing and Society*, 5, 72−82

Rossi, P. (1955). *Why Family Move*. Glencoe, Ill : Free Press

U.S. Department of Housing, Bureau of Census. (1985). *Census of Population and Housing*. Washington, D.C. : U.S. Government Printing Office

Whiteford, P. C. and Morris, E. W. (1986). Age, Tenure, and Housing Satisfaction : A Comparison Between the Elderly and the Non -Elderly. *Housing and Society*, 13(2), 160-172

(國文要約)

都市地域住民의 居住移動에 관한 硏究

李 仁 秀 · 李 時 伯

本 硏究는 大都市의 人口移動率의 長期的 趨勢를 分析하기 위하여 試圖되었다.

本 硏究에서는 멕시코의 中小都市인 오하카(Oaxaca)에서 區域別로 抽出된 633家口를 對象으로, 그들의 居住地 移動狀況 및 이에 影響을 미치는 人口·社會學的 要因에 관한 設問을 實施하였다.

硏究結果, 家族의 居住地 移動率은 結婚後 5年 이내가 年間 23.23 퍼센트로서 가장 높았는데, 이것은 結婚初期에 出産과 관련한 住居空間 要求의 급격한 增加가 主된 原因인 것으로 解釋되었다. 또한 年代別로는 1960年代에 특히 많은 住居地 移動이 있었는데, 이는 이 時期의 汎 世界的인 아기풍년(Baby Boom)에 따른 급격한 子女數의 增加와 관련된 居住空間의 需要擴大로 因한 現象으로 解釋되었다.