Survey of Income and Program Participation

GEOGRAPHICAL MOBILITY AND THE LIFE COURSE: MOVES ASSOCIATED WITH INDIVIDUAL LIFE EVENTS

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Preface

The traditional source of geographical mobility data, cross-sectional surveys, indicates that slightly less than 20 percent of Americans change their place of residence each year. Cross-sectional surveys such as the Current Population Survey (CPS) provide characteristics of movers only at the time of interview, i.e., after a move has been made. They do not provide information on the context in which moves were undertaken, only information subsequent to moving. The Survey of Income and Program Participation (SIPP) provides 1ongitudinal or time series data, and is designed to account for, among other things, a variety of life course transitions over time. SIPP panels, which trace individuals over 2 1/2-year periods of time, provide ideal vehicles for analyzing the joint-incidence of life events such as loss of a job, retirement, and marriage, and various forms of geographical mobility: moves between dwelling units, between labor markets, etc. The paper reviews previous research on the relationships between geographical mobility and life course phases and individual life course events undertaken with both cross-sectional and longitudinal data, and presents initial findings from an extract file of the 1984 SIPP panel.

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Introduction

Geographical mobility researchers have long recognized that the propensity of persons to move varies dramatically with passage through the life course. As children are dependent upon parents, their mobility patterns parallel those of their parents. Young adults move to take jobs, to initiate or complete schooling, to enter or leave military service, to marry or form new households, and thus represent, by far, the most mobile age group on the life course dimension. Moves by older adults are typically based upon relocations associated with job changes; changes in household composition through divorce, remarriage, or death of a spouse; or changes in housing consumption, and their frequency gradually declines with increasing age.

The general pattern of differential mobility rates associated with various phases of the life course has been found to exhibit widespread regularities (Figure 1). Such regularities are most often analyzed in terms of age, the characteristic of individuals most commonly available from survey and census data to serve as an indicator of stage in the life course (Rogers and Castro, 1982; 1984).

Interest in age-defined or stage-in-the-life-course-defined subpopulations has increased throughout the social sciences as the societal consequences of the Depression years' small birth cohorts; of the large post-World War II baby boom cohorts; and of the increasing numbers of elderly, have come to be recognized (Elder, 1974; Coleman et al., 1974; White House Conference on Aging, 1981). Modelers of population change, projections, and forecasts are interested not only in specific life course events (such as marital relationships, fertility, and mortality) but also geographical mobility as it relates to such events. Recent advances in the ability of researchers to incorporate spatial components into demographic accounting schemes have intensified

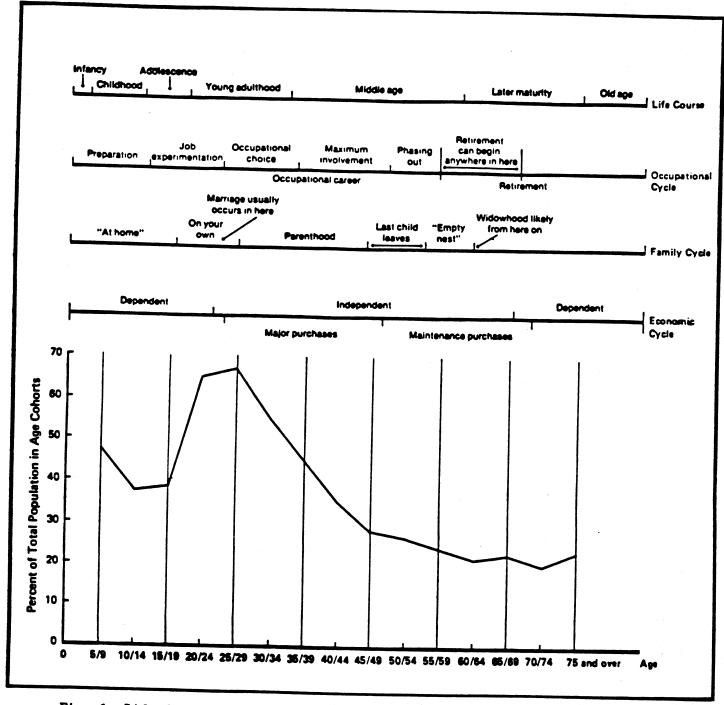


Fig. 1. Life Course Events and Phases and the Overall Rate of Geographical Mobility By Age (From R. F. Wiseman, 1979; Used by permission of the author)

interest in geographical mobility in an explicit life course framework (Rogers et al., 1984; Rogers, 1985; Rogers and Willekens, 1985).

Age-specific and life-course phase-specific (as opposed to event-specific) geographical mobility rates have been well documented for a variety of different forms of movement (residential or local mobility, long-distance migration, immigration, etc.) from traditional cross-sectional data sources for quite some time (Thomas, 1938; Shryock, 1968; Clark, 1986; Dahmann, 1986). Traditional cross-sectional data sources do not, however, enable one to specifically account for moves associated with life course events or transitions between phases of the life course, such as leaving school, entering or leaving the labor force, marriage, divorce, etc. except under unique circumstances. Though long desired, the linking of moves to individual life course events, as opposed to the more general specification to life course phases, has awaited creation of longitudinal data such as the National Longitudinal Surveys of Labor Force Participation, the Panel Study of Income Dynamics, and now the Census Bureau's Survey of Income and Program Participation (Clark and Onaka, 1983; Dahmann, 1987).

Direct specification of the relationships between geographical mobility and life course events is important for a number of reasons. First, it provides information on the levels and forms of movement associated with specific events, thus refining social science measurement schemes. This helps eliminate specification errors derived of the ascription of activities or actions to individuals when only group or rate information is available. Moves previously associated with a subpopulation at risk, e.g., a life course phase (elderly) or age group (65 years of age or older) can now be identified with unique activities, such as retirement, loss of a spouse, and the like.

Second, statistical data series currently provide abundant information on

changes in the rate of occurrence of many life course events, e.g., rates of change in marital status, or employment and unemployment rates. The proper specification of the relationships between these events and geographical mobility with longitudinal data improve our predictive capacity when data on one event or another is lacking, as is typical of most cross-sectional data series.

Understanding of the relationships between the occurrence of such events and the various forms of geographical mobility leads directly to improved explanations (and predictions) of geographical mobility patterns generally. These improvements in turn serve to enhance the accuracy of population projections in general; in understanding and projecting patterns of housing demand and consumption; in understanding changes in the residential geography of settlements; and the geographic restructuring of the labor force at all scales.

Geographical Mobility and the Life Course Framework

The life course, per se, consists of the multitude of pathways that individuals follow through the age-differentiated events and phases of life. It is formed by both stages, e.g., youth, young adulthood, mature adulthood, and elderly, and events, or transitions, e.g., marriage or retirement. These exist on a number of dimensions, including the biological life cycle, an economic cycle, a family cycle, and an occupational cycle, among others (Anderson, 1985; Clausen, 1986; Duncan and Morgan, 1980; Elder, 1975; 1977; Glick, 1979; Lansing and Kish, 1957; Nock, 1979; 1981; Stapleton, 1980). Each of these dimensions may be seen to contain several events and stages that are common throughout most modern societies (Figure 1).

The life course perspective brings to social science research an enhanced appreciation of the roles played by maturation and aging processes in human

actions and, as well, a framework for analyzing and understanding consequences of the complex set of events that converge at various times in one's life, for example the large number of events associated with the transition from youth to early adulthood, including completion of schooling, leaving the family of origin, first employment, and new household formation. The life course approach also provides a framework for modeling the paths that individuals follow through their lifetime, and has served as a major impetus in isolating the differential effects of cohort, age, and period on human actions (Glenn, 1977; Rogers, 1982; Ryder, 1965; Mason and Feinberg, 1985).

Analysis With Non-Longitudinal Data

The general lack of appropriate time series or longitudinal data has made it difficult to specify the rate and form of moves accompanying life course events. Analysis of cross-sectional data has restricted researchers to: (1) examining geographical mobility patterns during phases of the life course, i.e., clustering of the activities of persons within relatively homogeneous groupings in terms of an array of behavioral expectations or probable occurrence of life course events; (2) drawing on event history data that include a residential history component; or (3) utilizing information derived of reasons-for-moving questions.

The first of these approaches has been utilized to explore various aspects of geographical mobility: during active employment years (Bartel, 1979; Gobers, 1978; Greenwood, 1985; Herzog and Schlottmann, 1984; Landansky, 1967; Lansing and Mueller, 1967; Leslie and Richardson, 1961), among young adults (Coupe and Morgan, 1981; Dahmann, 1982; Kendig, 1984; Sandefur and Scott, 1981; Sandefur, 1985; Simmons, 1968), among family during the child-rearing years (Chevan, 1971; Frey and Kobrin, 1982; Inman, 1978), and among elderly (Golant, 1972; Meyer and Speare, 1985; Warnes, 1986; Wiseman, 1979;

and Wiseman and Roseman, 1979).

The phase-of-life-course approach serves quite well to articulate differences in motivations, expectations, and patterns of mobility among life-course defined groups such as young, mature, and elderly adults. It has also led to a recognition of the importance of families and households as situational or contextual variables in understanding relationships between employment, earnings, and geographical mobility (Lichter, 1980; 1983; Long, 1974; Mincer, 1978). This approach does not, however, enable us to specify the joint-incidence of geographical mobility and life course events except when reason-for-moving questions are included in the same data set.

To date, event or residential history data have served as the primary source of information on the moves of individuals over time. These data continue to play an important role in conjunction with panel data by providing information on the actions of individuals prior to entering a panel. In particular, they help solve the left-tail data-censoring problem. Most of what we know about the relationships between life course events (as opposed to phases) and geographical mobility for unique (as opposed to groups of) individuals or households has been derived from the analysis of event histories. As event history analysis techniques improve this approach becomes increasingly useful, particularly when a time-dependent approach is taken, e.g., when an approach is adopted that conceptualizes current moves as based upon previous patterns of moves (Allison, 1984; Tuma and Hannan, 1984).

National data employing the reasons-for-moving approach have periodically been available since the 1940s (U.S. Bureau of the Census, 1947; 1966; 1985; Lansing and Mueller, 1967; Goodman, 1979; Long and Hansen, 1979). The primary utility of this form of data lies in their provision of interviewee-supplied rationales for undertaking or completing a move. Such data possess

several inherent weaknesses that are derived of a tendency for persons to provide socially acceptable reasons; because reasons provided by the survey instrument are too few, too directive, too suggestive, or inappropriate; or from the inability of persons to recall reasons and differentiate between major and minor ones.

In spite of these drawbacks reasons-for-moving data serve the particularly useful purpose of monitoring shifts in current rationales for moving. An excellent example of the utility of this particular attribute is provided by the recent decline in the frequency with which economic reasons were given for moves from the nation's metropolitan centers to its nonmetropolitan areas, mirroring the demise of energy— and farming—related economic booms in the nation's nonmetropolitan areas during the 1980s (Long and DeAre, 1980; U.S. Bureau of the Census, 1985). From this approach we also know that about one-quarter of local moves are typically cited as resulting from either changes in marital status or new household formation (Goodman, 1979), while the same reasons account for no more than 5 percent of long distance (interstate) moves (Long and Hansen, 1979).

Analysis With Longitudinal Data

Longitudinal data sources for social science research covering a variety of time periods and life events became available during the 1970s, though it generally remained until the 1980s for true longitudinal analyses (as opposed to multiple or over-time cross-sectional analyses) to be undertaken (Morgan, 1972; Duncan and Morgan, 1982; Dahmann, 1987). The implications to be drawn from the longitudinal analysis of other social science topics (such as household structure and movement into and out of poverty) for geographical mobility research are clear. First, processes such as those exemplified by interactions between behavioral and structural components of an action system, and

certain actions themselves, such as the joint-incidence of events previously described, are revealed for the first time. Second, some of the problems in drawing inferences from cross-sectional analyses resulting from omitted variables are solved (Duncan and Morgan, 1982; Davies and Pickles, 1985a and 1985b; Webber, 1983).

To date, most analyses of life course events and geographical mobility have focused on events associated with labor force migration and the consumption of housing and residential mobility (Rossi, 1955; Speare, Goldstein, and Frey. 1975; and Goodman, 1974). National analyses have drawn primarily on the National Longitudinal Survey of Labor Market Practices (NLS or Parnes data) and the Panel Study of Income Dynamics (PSID data). Duncan and Morgan (1980) in examining relationships among nearly three dozen life course events (including geographical mobility) for a sample of married men between 1968 and 1978 found that almost all sample members experienced at least some life events with the largest number of events clustered in the young adult years. With the exceptions of divorce and remarriage, and unemployment and involuntary job change, most life events were not related to each other in terms of joint-incidence. Geographical mobility, however, including both voluntary and involuntary moves, was rather closely associated with divorces, remarriages, voluntary job changes, increases in family income, and retirement.

Speare and Kobrin (1983), with a sample of Rhode Island adults, found that residential moves were accompanied by marriage within the same year 54 percent of the time, a rate they felt to be somewhat lower than the true estimate because at least 10 percent of the couples in their sample were known to be living together prior to marriage. Marital status changes were positively associated with increased rates of movement both in the same year and for several years thereafter. Speare earlier (1970) reported that 81

percent of those who were married also moved during the same one-year period, and that those who married or had children later than others had lower mobility rates both before and after marriage or after having children. One other examination of the effects of children on mobility noted that the birth of children decreased geographical mobility, while children leaving home, particularly the last child to leave, increased mobility, controlling for other factors (Pickles and Davies, 1985).

In exploring the relationships between geographical and job mobility, Bartel (1979) found that between one-third and one-half of all moves (between counties and metropolitan areas) were caused by the decision to change jobs, and that wage gains were larger among younger persons being transferred than among individuals who made quit-related and layoff-related moves. Other researchers have produced similar findings, and additionally found that earnings by spouses were depressed by geographical relocations (DaVanzo, 1976; Graves and Linneman, 1979; Polachek and Horvath, 1977; Mincer, 1978).

The SIPP 5-Wave Extract Data Set

The Survey of Income and Program Participation (SIPP) was initiated by the Bureau of the Census with the 1984 panel. The survey's primary purpose is to provide improved national data on the economic situation of individuals and households and on participation in income transfer and public assistance programs. Individuals in the SIPP are interviewed every four months for the 2 1/2-year life of a panel, with new panels initiated annually. The 1984 panel initially consisted of 20,000 households, with its first wave of interviews taking place between October 1983 and January 1984. The final interviews took place between April 1986 and July 1986 (Frankel, 1985; Nelson, McMillen and Kasprzyk, 1985).

The 1984 panel was divided into four groups and each group was interview-

ed in turn over a four-month period. The reference period covered for collecting information was the previous four months. Because each of the groups was interviewed during a different month, each has a slightly different reference period. For example the reference period for the first group's initial interview was June through September 1983; for the second group, July through October 1983; and so on.

The empirical findings presented here are drawn from a 5-interview-wave extract file that links information on persons 15 years of age and over for the three quarters (three rotation groups) of the sample who were interviewed in each of those waves. Throughout this analysis the data have been treated without weights because neither the usefulness nor the validity of the current experimental longitudinal weights have been established. The file has not specifically been edited for longitudinal consistency.

Information on geographical mobility was obtained as part of the survey process—rather than through a set of specific questions, such as the survey's Migration History Module, which is administered in the eighth wave of interviews (see Appendix). If persons moved, interviewers were responsible for tracking and continuing to collect information on the households (and persons) at their new location as one aspect of maintaining the initial sample (Jean and McArthur, 1984; 1987). At the first interview each sample person's "address identification" number was "11." When a sample person moved, interviewers assigned them a new number indicating the wave in which the move was recorded. All sample household members who moved to the same new address were given the same new "address identification" number. To identify movers for this paper, we matched "address identification" numbers at each wave after the first with wave identification numbers. With numbers other than "11," moves were identified, and then recorded by wave.

Although the time period covered by the extract file is 20 months, our data tabulations cover a 16-month period, from the Fall of 1983 to the Fall of 1984. This is because our history of movement begins at the current residence as of the first interview, i.e., information about moves that may have taken place during the reference period covered by the first interview was not elicited. The migration history covered by the paper begins at the time of the first interview and continues for the following 16 months, i.e., through the fifth wave of interviews. Month and day of movement that took place after the first interview were recorded as part of the survey operation's control system. However, if more than one move took place during a four-month reference period, the SIPP only recorded the last move.

Geographical Mobility and Survey Attrition

Sample maintenance is a primary concern in a survey that follows a specific set of individuals over time. In spite of great efforts to follow individuals when they move, geographical mobility is a major cause of attrition from the SIPP sample (Short and McArthur, 1986; McArthur and Short, 1985; Speare and Kobrin, 1980). Through the fifth interview of the SIPP 1984 panel, persons who moved to an unknown address, and therefore were unlocatable, were responsible for 13 percent of all attrition from the samplesecond only to refusals as a cause of attrition. In all, about 2 percent of the total sample was lost to moving to an unknown address (the total attrition rate over the period was 17 percent).

Approximately 20 percent of all persons 15 years and over in the SIPP sample moved during the 16 months covered by this file (Table 1). Of these movers approximately 9 percent were missing at least one intervening interview and an additional 23 percent left the sample entirely. By comparison, 3 percent of nonmovers were missing some interviews and 15 percent were missing

TABLE 1. Comparison of Interview Completion by Mover/Nonmover Status Across Five Interviews

	To	Total		Movers		overs
	Number	Percent	Number	Percent	Number	Percent
Total	25,138	100.0 100.0	5,069	20.2 100.0	20,069	79.8 100.0
With Five Interviews Missing at Least the Fifth Interview	19,878 4,222	79.1 16.8	3,485 1,148	68.8 22.6	16,393 3,074	81.7 15.3
With Fifth Interview Missing at Least One	1,038	4.1	436	8.6	602	3.0

TABLE 3. Geographical Mobility by 5 Year Age Groups for SIPP and CPS: Persons 15 and Over

		CPS			
Age	Total	Nonmover	Mover	Mover Distribu'n	Mover 1
Total	19,878	82.5	17.5	100.0	16.8
15 to 19 years	2,045	79.8	20.2	11.9	15.9
20 to 24 years	2,121	58.4	41.6	25.4	34.1
25 to 29 years	2,121	68.4	31.6	19.3	30.0
30 to 34 years	2,111	76.3	23.7	14.4	21.2
35 to 39 years	1,824	84.9	15.1	7.9	15.4
40 to 44 years	1,471	88.4	11.6	4.9	10.3
45 to 49 years	1,365	89.8	10.2	4.0	9.8
50 to 54 years	1,280	93.3	6.7	2.5	7.7
55 to 64 years	2,523	93.5	6.5	4.7	6.4
65 years and over	3,017	94.3	5.7	5.0	4.6

^{1/} The Current Population Survey rates by age are presented for comparison to column 3. The rates are based upon a sample size of 228,232 persons. They cover the period from March 1983 to March 1984.

at least the 5th interview (Jean and McArthur, 1987).

Movers who left the sample differed significantly from movers who were retained in a number of ways. Table 2 contains characteristics for the sample total (in column 1, restricted to persons 15 years and over, interviewed in the first wave of interviewing and eligible for all five interviews), for persons interviewed in each of the five interviews (column 2), and for nonmovers (column 3) and movers (column 4). Columns 5 and 6 provide counts of persons who left the sample before the fifth interviewing wave. Column 5 is for all persons missing the 5th interview, for any reason, who also were recorded as movers. Column 6 contains only those persons who moved to an unknown address and for that reason were not retained in sample.

Chi-square tests comparing movers who remained in sample to those who left (columns 4 and 5), reveal significant differences in the distributions of some characteristics. The two groups have somewhat different distributions of these characteristics: racial, ethnic, marital status, educational attainment, employment status, household monthly income, asset ownership, and home ownership and residential location patterns. Finding different characteristics between those who were lost and those who were retained by the sample raises some cause for concern. However, attrition through the fifth interview is fairly low so distributions of characteristics of those remaining in sample should still be representative of the general population.

Characteristics of Movers and Nonmovers

Through the remainder of this paper, the characteristics of movers and nonmovers are derived of data for persons interviewed in each of the five waves of interviews, approximately 79 percent of the restricted sample as described above. Approximately 17 percent of this group moved at least once, a rate fairly consistent with statistics derived from the Current Population

TABLE 2. Characteristics of Persons 15 Years and Over by Mover Status and by Duration in the SIPP 1984 Panel

			Interview Five W		Movers Missing at Least 5th Interview		
Characteristics as of Wave 1	Universe	Total	Non- Movers	Movers	Movers who leave SIPP	Unknown Address	
	(1)	(2)	(3)	(4)	(5)	(6)	
Total Number	25,138	19,878	16,403	3,475	1,096	564	
RegionalOffice:							
Boston	7.2	7.4	7.6	6.7	4.8	4.3	
New York	6.9	5.9				15.4	
Philadelphia	10.4	10.8				6.9	
Detroit	8.4	8.5	8.6			2.7	
Chicago	7.8	8.4				4.6	
Kansas City	8.4	9.1	9.1			2.3	
Seattle	8.6	8.9	8.6			6.2	
Charlotte	8.9	9.2	9.1	9.7	6.4	6.4	
Atlanta	11.2	10.6	10.8	9.6	19.0	16.1	
Dallas	9.7	9.1	8.6	11.4	16.7	16.5	
Denver	5.7	5.8	5.5	7.5	6.6	8.0	
Los Angeles	6.8	6.2	6.1	7.1	10.5	10.6	
Residence char:						•	
Not an SMSA	25.5	26.8	27.1	25.4	16.2	14.4	
SMSA: LT 100,000	1.3	1.3	1.2	2.0	1.7	0.0	
SMSA:100-249 thou.	9.4	9.6	9.6	9.6	7.2	6.0	
SMSA: 250-499 thou.	9.2	9.5	9.5	9.6	7.4	6.7	
SMSA:500-999 thou.	13.4	13.3	13.1	14.5	15.1	17.2	
SMSA:1-2.9 mill.	24.1	23.3	22.9	25.3	32.6	31.6	
SMSA:3-14.9 mill.	17.2	16.1	16.7	13.7	19.7	24.1	
Living quarters:							
House or apartment	94.0	93.9	94.5	91.2	93.7	94.0	
Mobile Home	5.3	5.5	4.9			1.1	
Other	0.6	0.6	0.6			0.2	
Living quarters:							
Owned/Being bought	69.7	71.6	77.6	40.1	32.3	26.8	
Rented for cash	28.1	25.9				71.3	
Occ'd w/o cash pmt.	2.2	2.4			2.2	2.0	
Race:							
White	86.8	87.6	87.0	88.8	79.0	75.0	
Black	10.4	9.8	10.3	8.8	15.8	19.9	
Am. Ind/Esk/AlNative.	0.4	0.4	0.4	0.4	1.0	1.2	
Asian/Pac.Isl.	2.4	2.2	2.3	2.0	4.2	3.9	

TABLE 2 CONTINUED

Characteristics			Interviewed in Five Waves		Movers Missing at Least 5th Interview		
	Universe	Total	Non- Movers	Movers	Movers who leave SIPP	Address	
	(1)	(2)	(3)	(4)	(5)	(6)	
Number of Persons							
in Household:							
1	11.6	11.5	11.4	11.8	12.7	14.7	
2	29.0	28.8	29.2	26.9	25.5	27.1	
3	20.3	20.1	19.7	22.4	22.2	20.6	
4	20.0	20.8	21.1	19.7	17.1	15.4	
5	10.7	10.6	10.6	11.1	9.6	9.4	
6	4.4	4.3	4.5	3.2	6.6	6.9	
7	2.1	1.9	1.8	2.2	3.6	3.4	
8 or more persons	2.0	1.9	1.8	2.8	2.8	2.5	
Sex:		•					
Male	46.9	46.1	46.1	45.9	51.1	54.1	
Female	53.1	53.9	53.9	54.1	48.9	45.9	
Age:							
15 - 29 years	33.1	31.6	26.3	56.6	61.0	66.3	
30 - 44 years	26.5	27.2	27.2	27.2	24.4	24.1	
45 - 64 years	25.2	26.0	29.1	11.2	10.9	8.3	
65 years and over	15.1	15.2	17.3	5.0	3.7	1.2	
Ethnicity:							
Spanish Origin	5.6	5.3	5.2	5.8	13.6	16.8	
Not Spanish Origin	94.4	94.7	94.8	94.2	86.4	83.2	
Relationship:							
Reference Person	35.2	35.9	37.1	30.4	27.0	27.0	
Primary Ind.	13.0	12.7	12.2	15.2	13.9	20.0	
Spouse	28.5	29.7	31.1	23.0	18.1	13.8	
Child	16.8	16.3	15.5	20.1	22.7	17.9	
Other Relative	3.5	3.0	2.6			9.2	
Non-rel w/rels.	0.4	0.3				2.7	
Non-rel. no rels.	2.5	2.0	1.2	6.0	7.6	9.4	
Marital Status:							
Mar'd, spouse pres.	58.1	59.9	62.6	47.6	40.1	32.3	
Mar'd, spouse absnt.	0.6	0.5	0.5	0.8	1.2	1.1	
Widowed	7.3	7.4	8.2			2.5	
Divorced	6.6	6.4				13.1	
Separated	2.3	2.0	1.7	3.5		8.2	
Never Married	25.0	23.7	21.2	2 35.2	2 38.5	42.9	
Educational attainmt:	*************************************						
LE 8	11.7	12.8	13.8	7.6	10.2	11.2	
9-11	18.5	17.9				29.9	
12	32.7	32.9	32.8	32.9	32.0	28.2	
GE 13	36.2	36.5	34.9	42.9	33.6	30.9	

TABLE 2 CONTINUED

Characteristics			Intervie Five W		Movers Missing at Least 5th Interview		
	Universe	Total	Non- Movers	Movers	Movers who leave SIPP	Unknown Address	
	(1)	(2)	(3)	(4)	(5)	(6)	
Employment status: With job:							
Worked all weeks	54.6	55.5	53.7	63.0	56.0	52.8	
Missed 1+ weeks	1.2	1.2				1.4	
Time on layoff	0.3	0.2	0.2			0.9	
Job part of time:	0.5	0.2	0.2	0.2	1.0	0.9	
No layoff no looking	1.3	1.3	1.2	1.7	1.1	0.7	
Did look or layoff	1.3	1.3	1.1				
No job:						3.4	
All mo looked/layoff	4.6	4.1	3.6			15.6	
Some looked/layoff	0.6	0.5	0.5			2.1	
No looking/layoff	36.2	36.2	38.7	24.8	24.1	23.0	
Hours Wk'd/Week:							
Not applicable	37.1	36.7	38.9			33.7	
1 to 19	5.7	5.9	5.9			3.2	
20 to 34	8.9	8.7	8.3			10.8	
35 to 40	33.3	33.5	32.3			34.9	
41 or more	15.0	15.2	14.6	18.3	17.6	17.4	
Hhld.Mo.Income:							
LE 1199	28.0	27.2	26.6	30.0	39.4	47.1	
1200 to 2999	43.4	43.8	43.3	46.2	42.9	41.8	
GE 3000	28.5	29.0	30.1	23.8	17.7	11.3	
Person Mo.Income:							
LE 1199	68.6	67.7	67.3	69.7	76.0	80.2	
1200 to 2999	25.7	26.4	26.5	26.0	20.9	17.7	
GE 3000	5.8	5.9	6.2	4.4	3.0	2.1	
Asset Summary: Savings Acct:							
Yes	56.5	58.1	59.6	50.9	34.8	26.1	
No	43.5	41.9	40.4			73.9	
All other:							
Yes	41.1	42.4	45.0	30.2	21.2	14.7	
No	58.9	57.6	55.0			85.3	
Household receives Cash or Noncash							
Benefits:							
Yes	17.8	17.6	16.8	21.7	26.7	32.6	
No	82.2	82.4	83.2			67.4	

Survey (Dahmann, 1986). Approximately 15 percent of the moves were between states; the remaining were to a new address within the same state. Among those who moved, 77 percent moved only during one of the interview reference periods; 19 percent moved during two periods; and 4 percent moved during three or four periods.

Based upon previous research we hypothesized that movers would differ from nonmovers in a number of ways. Table 2 shows distributions of the characteristics of persons (recorded as of the first interview) who moved and those who remained at the same address (columns 3 and 4). Most importantly, movers tended to be younger than nonmovers. They also tended to have higher levels of educational attainment; they tended not to be the head of the household or spouse of the household head; they were less likely to have assets, such as a savings account, money market account or rental property; they were more often never-married; they had been employed during some portion of the period; but they were also more likely to receive means-tested benefits than were nonmovers.

The residential settings of movers also differed from those of nonmovers in several significant ways. Movers tended to dwell in rental properties, whereas nonmovers were more likely to own (or be purchasing) their home. Movers were also slightly more likely to live in the nation's largest metropolitan areas than were nonmovers. A regional effect associated with population change also was evident—persons residing in the vicinity of areas experiencing substantial growth during this period, such as Denver, Dallas, and Seattle, were more likely to be movers than were persons living near Boston, New York or Philadelphia.

Life Events and Geographical Mobility

The close relationship between age and geographical mobility has been

clearly demonstrated by virtually every social science data collection instrument recording the movement of individuals. SIPP provides the same documentation, here demonstrated in Table 3, which shows mobility data for 5-year age groups. Among the youngest age group shown, persons 15 to 19 years old at the time of the first interview, about 2 in 10 moved at some time during the 16 months that were tracked in the first five interviews of the SIPP. In the next age group, persons 20 to 24 years old, about 4 out of 10 persons moved; and among 25 to 29 year olds the mobility dropped to about 3 out of 10 persons. The proportions moving in other age groups declined with increasing age.

The migration rates by age from the SIPP compare quite closely with those recorded in the Current Population Survey (the rates shown in column 5 of Table 3 are for the 12 months from March 1983 to March 1984). Migration rates for two age groups appear to be significantly higher in the SIPP than in the CPS: young adults (persons 15 to 24 years) and elderly (75 years and over).

Reassured that the SIPP is recording rates of movement by age and stage in life that are comparable with other survey instruments, we now turn to the relationships between movement and individual life events. The specific life course events examined are change in marital status, completion of significant levels of education, employment status changes, changes in receipt of means-tested benefits, and changes in tenure of living arrangements.

Marital Status Change and Geographical Mobility

Several aspects of the relationship between marital status and geographical mobility are examined. Table 4 shows the relationship between geographical mobility and both specific marital statuses (such as married, never married, etc.) and whether a change in marital status occurred during the

TABLE 4. Geographical Mobility and Marital Status

			Inter	state
Marital Status	Total	Nonmover	Mover	Mover
Total	19,878	16,403	3,475	506
Marital Status Change	19,070	10,403	3,475	300
Total	1,104	471	633	77
Ended in Marriage	563	_		51
Ended in Divorce/Separation	363	178	185	19
Ended in Widowhood	138	115	23	6
Ended in widownood	130	115	23	U
Marital Status Constant				
Total	18,774	15,932	2,842	429
Never Married	4,393		972	132
Married	11,531		1,460	25 0
Divorced/Separated	1,417		300	32
Widowed	1,433		110	15
Percent Total	100.00	82.52	17.48	2.55
Marital Status Change				
Total	100.00	42.66	57.34	6.97
Marriage	100.00		71.40	9.06
Divorce/Separation	100.00		50.96	5.23
Widowhood	100.00	-	16.67	4.35
Marital Status Constant				
Total	100.00	84.86	15.14	2.29
Never Married	100.00			
Married	100.00		12.66	
Divorced/Separated	100.00		21.17	2.26
Widowed	100.00		7.68	1.05

5-interview period. If a change in marital status was recorded during the period, only the final status is shown in the table. Thus, persons whose final marital status was "ended in marriage" could previously have been "never married," or "previously married and divorced." From this table it is clear that regardless of the final marital status, if persons experienced a change in marital status, they were more likely to have moved than if no change was recorded (57 versus 15 percent). Changes such as marriage are particularly likely to be linked with a move: about 71 percent of persons who married during the 16 months experienced a change in residence, compared with 51 percent of those who became separated or divorced and only about 17 percent of those who were widowed.

Table 5 depicts the joint-incidence of marital status change and geographical mobility by age. Not only did a majority of persons who had a marital status change move (57 percent), but this percentage climbs to 84 percent for persons 15 to 19 years old, and to 86 percent of those 20 to 24 years old. As with earlier findings, the proportions of persons with a move declines for ages over 25 (the small increase between the 35-to-39 and 40-to-44 year age groups is not significant). The incidence of marriage during early adulthood is so prevalent that it occurred with nearly one-quarter (24.3 percent) of all moves made by persons in the 20-to-24 year age group.

Changes in marital and geographical mobility status by interview wave are presented in Table 6 to investigate the temporal linkage between the two events. Movement occurred most frequently during the wave in which a change in marital status was also recorded. For example, 33 percent of persons whose marital status changed between the first and second wave of interviews also moved during that period, compared with no more than 19 percent during any other wave. It is interesting to note, however, that overall, persons

TABLE 5. Geographical Mobility and Marital Status by Age

Age	Total	With M.S. Mover	Change Nonmover	No M.S. Mover	Change Nonmover	Percentage of Movers that had a M.S. Change	Percentage of Persons with M.S. Change that moved
Total	19,878	3.2	2.4	14.3	80.1	18.3	57.3
15 to 19 years	2,045	3.4	0.7	16.8	79.1	16.9	83.3
20 to 24 years	2,121	10.1	1.7	31.5	56.7	24.3	85.7
25 to 29 years	2,121	4.9	2.3	26.7	66.1	15.5	68.4
30 to 34 years	2,111	4.5	3.1	19.1	73.2	19.2	59.3
35 to 39 years	1,824	2.7	3.3	12.4	81.6	17.8	45.0
40 to 44 years	1,471	2.4	2.5	9.2	85.9	20.6	48.6
45 to 64 years	5,168	0.9	2.1	6.6	90.4	12.3	31.0
65 years and over	3,017	0.5	3.4	5.2	90.9	9.3	13.4

TABLE 6. Geographical Mobility and Marital Status Change by Interview Wave

			Po	ercent wit	th Move i	1:
		Total	Wave 2	Wave 3	Wave 4	Wave 5
Persons	with Marital					
Status	Change in:					
Wave	2	268	32.8	19.4	19.0	11.9
Wave	3	337	15.1	46.0	20.5	13.9
Wave	4	378	15.9	15.3	42.1	14.0
Wave	5	325	16.6	17.5	15.1	38.2
Persons	with no Marital					
Status	Change in:					
Wave	2	19,610	4.4	6.3	6.1	4.7
Wave	3	19,541	4.6	5.8	6.1	4.7
Wave	4	19,500	4.6	6.3	5.6	4.7
Wave	5	19,553	4.6	6.3	6.2	4.3

who experienced a change in marital status sometime during the 16 months were also more likely to have a change in residence—before, at the same time, or after—the marital status change occurred than were persons whose marital status was constant throughout the 16 months. This generally higher rate of movement is probably derived of the fact that most persons experiencing a marital status change were also young and in the high mobility years.

Educational Attainment and Geographical Mobility

Table 7 presents the relationship between completion of significant levels of education during the 5-interview period and geographical mobility controlling for age. Completion of high school and 4 years of college were both associated with higher levels of movement: 22 percent of high school completers and 41 percent of college completers moved compared with about 18 percent of all persons during the period. Geographical mobility rates were particularly high for those who completed college: 56 percent of this group changed their place of residence during the period, demonstrating an immediate impact of college completion on increased mobility over the short term.

Employment Status Changes and Geographical Mobility

As table 8 shows, persons experiencing employment status changes also are geographically more mobile than persons experiencing no change. Table 9 brings age into consideration. Like mobility, changing employment status is related to one's stage in the life course: young adults change employment status most often, after which the proportion of persons experiencing employment status changes decreases. Peak years of moving and employment status change occurred among 15-to-29 year olds: in this age group, 31 percent moved and 42 percent changed their employment status. And among young adults whose employment status changed, about one-third also moved during the period.

TABLE 7. Geographical Mobility and Completion of High School and College

	Total	Percent Who Moved
Total	19,878	17.5
15 to 29 years	6,287	31.3
30 years and over	13,591	11.1
Completed High School	610	22.3
15 to 29 years	379	26.9
30 years and over	231	14.7
Completed 4 Years of College	244	41.0
15 to 29 years	152	55.9
30 years and over	92	16.3

TABLE 8. Geographical Mobility and Employment Status

Employment Status	Total	Nonmover	Mover	Interstate Mover
		Hommover	110101	HOVE
Total	19,878	16,403	3,475	5 06
Employment Status Change	13,070	10,403	3,7/3	300
Total	4,893	3,653	1,240	261
With Job All Month	2,557	1,862	695	156
With Job Part Month	341	240	101	25
No Job During Month	1,995	1,551	444	80
Employment Status Constant				
Total	14,985	12,750	2,235	245
With Job All Month	9,013		1,648	157
No Job During Month	5,972	5,385	587	88
Percent Total	100.00	82.52	17.48	2.55
Employment Status Change				
Total	100.00	74.66	25.34	5.33
With Job All Month	100.00	72.82	27.18	6.10
With Job Part Month	100.00	70.38	29.62	7.33
No Job During Month	100.00	77.74	22.26	4.01
Employment Status Constant				
Total	100.00	85.09	14.91	1.63
With Job All Month	100.00	81.72	18.28	
No Job During Month	100.00	90.17	9.83	1.47

Recipiency of Means-Tested Benefits and Geographical Mobility

We looked at the relationship between residential mobility and changes in recipiency status for persons who reported receiving selected means-tested benefits at the time of the first interview. Means-tested benefits include such programs as Food Stamps, Aid to Families with Dependent Children (AFDC), and Women, Infants and Children (WIC) payments. For each of these programs, qualification for recipiency is dependent upon income (thus means-tested). Table 2 showed that persons who moved during the 16 months were more likely than persons who did not to have been recipients of means-tested benefits.

Table 10 compares change in recipiency status for those persons recorded as recipients of means-tested benefits in the first interview. Like table 6, changes are shown by the interviewing wave in which they were recorded. Table 10 shows change in recipiency controlled by whether the person was recorded to have had a change in residence. Except for moves occurring in the fifth interviewing wave, change in recipiency was higher in the same wave as a move was recorded. However, moves in any one wave did not seem to be related to recipiency change in other waves.

Tenure of Living Arrangements and Geographical Mobility

Larger proportions of persons who rent their dwelling move than do homeowners (Table 11). During the 16-month period documented by these data, 57 percent of those who were renters at the outset had moved compared with 40 percent of those who were initially homeowners. Regardless of their final tenure status, almost all persons with a change in tenure also moved: almost 90 percent of all persons with a change in tenure moved. The 10 percent of persons whose tenure status changed without moving probably includes a large number of persons whose dwellings underwent conversion to condominiums. Among persons who did not change their residential tenure, that is persons

TABLE 9. Geographical Mobility and Employment Status by Age

Age	Total	Mover	Employment Status Change	Mover $1/$ ES Change
Total	10 070	2 475	4,893	1,240
15 to 29 years	19,878 6,287	3,475 1,968	2,623	841
30 to 44 years	5,406	945	1,117	274
45 to 64 years	5,168	389	893	102
65 years and over	3,017	173	260	23
Percent Total	100.00	17.48	24.62	25.34
15 to 29 years	100.00	31.30	41.72	32.06
30 to 44 years	100.00	17.48	20.66	24.53
45 to 64 years	100.00	7.53	17.28	11.42
65 years and over	100.00	5.73	8.62	8.85

 $[\]underline{1}/\mathrm{Percent}$ of persons who experienced an employment status change also moved during the 16 months.

TABLE 10. Geographical Mobility and Public Benefits Recipiency Status by Interview Wave among Persons Receiving Benefits in Wave 1 Interview

		Percent v	with Recip		
Geographical Mobility	Total	Wave 2	Wave 3	Wave 4	Wave 5
Persons who moved in:					
Wave 2	225	41.3	32.0	24.6	20.0
Wave 3	303	18.5	39.9	24.8	20.5
Wave 4	252	14.3	23.4	41.3	29.0
Wave 5	236	16.5	26.3	22.0	23.7
Persons with no move in:					
Wave 2	3,278	12.3	19.5	18.5	12.1
Wave 3	3,200	13.8	18.4	18.4	11.8
Wave 4	3,251	14.2	20.1	17.2	11.3
Wave 5	3,267	14.0	19.9	18.7	11.8

TABLE 11. Geographical Mobility and Tenure of Living Arrangements

Tenure of Living Arrangements	Total	Nonmover	Mover	Interstate Mover
				1.0101
Total	19,878	16,403	3,475	506
Change in Tenure Total	1,468	140		223
Rent to Own	736	62	674	
Own to Rent or Other	732	78	654	144
No Change in Tenure Total	18,410	16,263	2,147	283
0wn	13,510			133
Rent or Other	4,900	3,487		150
Total	100.00	82.52	17.48	2.55
Change in Tenure Total	100.00	9.54	90.46	15.19
Rent to Own	100.00	8.42		
Own to Rent or Other	100.00	10.66		
No Change in Tenure Total	100.00	88.34	11.66	1.54
0wn	100.00	94.57		
Rent or Other	100.00	71.16	-	3.06

who were homeowners or renters throughout the five waves of interviews, the geographical stability of homeowners was well demonstrated: 95 percent remained in the same dwelling unit compared with 71 percent of renters.

Conclusions and Directions for Future Research

The empirical results presented in this paper linking specific life course events with geographical mobility were expository. Hopefully they demonstrate some of the vast potential of the longitudinal data products derived of the Survey of Income and Program Participation. There are other life events and characteristics of individuals that we have not examined which should be highly interesting, such as changes in income levels, the events surrounding retirement, and changes in household relationship and household size. The set of relationships examined does, however, demonstrate the utility of longitudinal data for specifying linkages between individual life events and geographical mobility, and thus improves our ability to understand and predict changes in geographical mobility behavior. The SIPP data set is also rich in other individual and situational variables that will help specify the contexts in which such changes occur.

The issues of timing of the occurrence of life events and geographical mobility, their relationships to each other in some causal manner, and the proper measurement of those relationships have only been dealt with briefly. In general we used the 16-month period as a window on activities and recorded changes in life course events and residential status in terms of "joint-incidence" if both occurred during the period. With two life events—marital status change and change in the recipiency of means—tested benefits—finer time periods of 4 months were examined. In these two cases, about 40 percent of all moves occurring during the entire 16-month period (for those experiencing both one of these two life events and a move) occurred during the same

4-month period.

Another interesting avenue for further research will open when data from a set of questions on migration history become available in 1988 (see questions from the migration history module in the Appendix). These questions were asked during the eighth interview of the 1984 panel and include: date when persons began to live at their current residence; where persons resided prior to the current residence; the period of time when persons lived at that prior residence; and an it is the most recommendation to entering the passed place. Respondents were allowed up to six reasons for moving to their current residence and were also asked to designate the main one. Questions were also asked about the source of payment for the latest move, where the respondent's family was living when the respondent was born, and where the respondent's mother and father were born. from these questions will greatly enhance the usefulness of SIPP for migration research. When linked to the special subject matter of the SIPP-detailed information about employment status and sources and level of income--these SIPP data will be particularly useful in furthering our understanding of the labor force determinants of geographical mobility. We invite others to join us in continuing to explore this unique social science data set and to refine measurement techniques relating individual rife events to geographical mobility.

Appendix: SIPP 1984 Panel Migration History Module Questions and Response Categories

	Section 5 — TOPICAL	MOD	ULES (Continued)
	Part C - MIGR/	TION	HISTORY
7.	(New I have some questions about pieces where has lived in the past, and where was bern.) In what menth and year did move into this	1120	Month xi Den't know
•	house/apartment/mobile home?	3370	Year x1 Don't know
	month and year Moved.)		x1 Always lived here/born here ~ SKIP to Check item T15
8a.	In what state or foreign country did lest live before moving here?		Name
	(hickude transfers due to service in the Armed Forces. Exclude vacations or temporary travels where no usual residence was mentioned.) (Enter code from Flashcard Y)	A1240	Code
b.	During what period of time did last live in (place in Sa)?	TUN.	FROM Month x1 Den't know
		8130	1 9 Year x1 Don't know
		1112	TO Menth zi Den't know
		1111	1 9 Year x1 Don't know
			xs Lived there since birth x1 Don't know
	(SHOW FLASHCARD Z)		
9a.	What sategories on this card best describe the ressons for 's (most recent) move to this eurrent residence?		
	(Enter codes for ell reasons mentioned.)	1141	6160
CHEC		8162	I ☐ Yes 2 ☐ No — SKIP to Check Item T14
9 b.	Of the reseens just mentioned, which ens is the MAIN reseen for 's (most recent) move? (Enter code from Item 9a.)	ПH	Code
CHEC		8184	1 ☐ Yee 2 ☐ No — SKIP to Check Item T16
10a.	Did er semeene in's household pay for alt of that move, or did a relative, an employer, er semeene else not living in the household help pay? (If paid by other than a HH member, ask who primarily paid.)	0160	1 Paid all by self or other HH member — SKIP to Check Item T16 2 Relative 3 Employer 4 Someone else
ь.	What proportion of the moving expenses were paid by this (other person/employer)?	8100	1 ☐ All of the costs 2 ☐ Half or more but not all 3 ☐ Less than half SKIP to Check Item T16
CHEC	Is "Always lived here" box marked in Item 77	0102	1 Yes — Enter state code for current residence into item 11a
CHEC		9164	t ☐ Yes — Enter code from Item Se into Item 11s 2☐ Ne
	ASK OR VERIFY -	Ì	Neme
118.	In what state or foreign country was's mother living when was ben'?	ш	Place of birth code
	(Enter code from Fleehcard Y)		z1 Den't know
þ.	ASK OR VERIFY —		Name
-	mother born? (Enter code from Fleehcard Y)		Piece of birth code
	ASK OR VERIFY —	 	
c.	In what state or foreign country was's father born?	-	Name Name
	(Enter code from Flashcard Y)	11076	x1 Don't know

	Section 5 - TOPICAL	1100	111 20 10 1
	Part C - MIGRATIO		
CHE		0172	
	le 's place of birth code equal to 62-99?		I ☐ Yes 22 ☐ No - SKIP to Item 14
2.	to a citizen of the United States?	8174	Yes, neturalized citizen Yes, born abroad of American perent or parents — SKIP to item 14 □ No
3.	In what year did come to the United States to stay?	3170	1 9
	(New I have a few questions about 's places of residence.)		
4.	Aside from's current residence, dees regularly live at another residence for 30 or more days during the year? (Include time spent away at school, or at a vacation or second home whether owned or rented. The days need not be consecutive but must be at the same address.)	3178	ı ☐ Yes 2 ☐ No — SKIP to part D, page 52
5.	In what state or foreign country is the other residence located?		Nen
	(Enter code from Fleehcard Y)	3190	Code xe Same state as current residence
6.	Which residence does consider to be's usual residence?	9192	1 ☐ Current recidence 2 ☐ Other residence (listed in item 15)
7.	New many days during a year dees spend at the other residence?	9184	1 ☐ 270 days or more 2 ☐ 180 to 269 days 3 ☐ 90 to 179 days 4 ☐ 30 to 89 days
	6 0 to per	t D, pog	o 52
NOT	ES		

CARD Y

STATE AND FOREIGN COUNTRY CODES

CODE	STATE	CODE	COUNTRY
01 02 03 04 05 06	Alabama Alaska Arizona Arkansas California Colorado	6 0 6 1	Puerto Rico Outlying areas of the United States (Includes Guam, U.S. Virgin Islands, American Samoa, North Mariana Islands, and Trust Territory of the Pacific Islands)
07	Connecticut	62	Austria
08	Delaware	63	Canada
09	District of Columbia	64	China (Includes Mainland, Hong
10	Florida		Kong, Macao, and Taiwan)
11	Georgia	65	Cuba
12	Hawaii	66	Czechoslovakia
13	Idaho	67	Dominican Republic
14	Illinois	68	Germany (Includes East and West Germany)
15	Indiana	69	Greece
16	lowa	70	Hungary
17	Kansas	71	India
18	Kentucky	72	Ireland (Excludes Northern Ireland)
19	Louisiana	73	Italy
20	Maine	74	Jamaica
21	Maryland	75	Japan
22	Massachusetts	76	Korea (Includes North and South Korea)
23	Michigan	77	Mexico
24	Minnesota	78	Norway
25	Mississippi	79	Philippines
26	Missouri	80	Poland
27	Montana	81	Portugal
28	Nebraska	82	Sweden
29	Nevada	83	United Kingdom (Includes England, Scotland,
30	New Hampshire		Wales, and Northern Ireland)
31	New Jersey	84	U.S.S.R.
32	New Mexico	85	Vietnam
33	New York	86	Other Europe
34	North Carolina	87	Other Asia
35	North Dakota	88	Central America
36	Ohio	89	South America
37	Oklahoma	90	Middle East
38	Oregon	91	Africa
39	Pennsylvania		
40	Rhode Island	99	Other (Specify)_
41	South Carolina		
42	South Dakota		
43	Tennessee		

44 45

46 47

48

49

50

51

Texas

Vermont Virginia

Washington

Wisconsin Wyoming

West Virginia

Utah

CARD Z

REASONS FOR MOVING

Employment and school enrollment

- 01 Job transfer
- **02** New job
- **03** Looking for work
- 04 Armed Forces related move
- 05 School attendance, graduation
- 06 Retirement
- 07 Relocate to be closer to work
- **08** Other employment or school reasons

Family and health

- 09 To accompany other family members
- 10 To be closer to relatives or friends
- 11 Change in marital status
- 12 Change in family size
- 13 Health reasons
- 14 Other personal reasons

Housing

- 15 Larger house or apartment
- 16 Smaller house or apartment
- 17 To purchase residence
- 18 Lower rent/housing costs
- 19 Better home
- 20 Better neighborhood
- 21 Closer/better schools
- 22 Displaced or home destroyed
- 23 Other housing reasons

Other

- 24 Change of climate
- 25 Lower cost of living
- 26 Wanted to move to U.S.
- 27 Other reason not specified above

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