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REMOVING HOUSING DEFICITS IN THE TRANSITION FROM RENTAL TO OWNERSHIP

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Abstract

A dynamic model of housing adjustment is used to analyze data from rural and small-town households in the north-central region of the U.S. The method interfaces a deterministic model with data collected from renter households who are evolving to first-time home ownership. The model shows that most new home owners remove space and dwelling deficits in their transitions from renter to owner. These results also indicate that the concepts of housing adjustment theory are viable in dynamic analysis. There is a minority of renters who do not become owners. Presumably the need has not arisen or constraints have prevented transition to home ownership.

Purpose

The primary objective of this study is to apply a dynamic model to examine aspects of the transition from renter to home owner. As a corollary, these data are cross-referenced with two secondary features that figure prominently in transition decisions. These features involve changes in the type of dwelling and changes in the number of bedrooms. The entire body of information is also plotted against a time frame to further sharpen the focus of the analysis. The sample was taken from small towns and rural areas in Illinois, Iowa, Nebraska, Minnesota, Missouri, and Wisconsin. A binary system is used to quantify the changing values as households move toward or away from established norms. These values, expressed here as deficits, represent a need or a desire to attain a given norm. A bedroom deficit, for example, represents a household need for one additional bedroom.

A tenure deficit expresses the desire and goal of attaining home ownership. While pursuing this goal, a move from one rental home to another may remove a space deficit or a deficit in the type of dwelling. Dwelling types include single and multifamily units; these run the gamut from a freestanding house in the suburbs to apartment complexes, duplexes, and converted houses. This work assumes that the changes accompanying the pursuit of home ownership involve a progression of housing needs. The household tries to meet those needs while constrained by resources, market factors, psychological predispositions of the household, the organization of the household, and discrimination. Constraints follow a progression that parallels the human life cycle. Hence, the dynamic interplay between changing needs and changing constraints determines whether households are likely to switch from rent to own and whether changes in other deficits accompany this change in status.

Background

Most of the literature on housing adjustment has been based on a static version of the model. Morris and Winter (1978), however, introduced some dynamic aspects of the theory in a flow diagram of the adjustment process. That diagram was based in part on Brown and Moore (1970). Gladhart and Roosa (1982) used a modified form of the flow diagram to study energy-related behavior. A progression of several longitudinal analyses of housing and residential mobility have led to this study (Gladhart, 1973; Carey,

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1979; Crull, 1979; Snyder-McKenna, 1982; Memken, 1984; Kim, 1987). Recently, Morris and Winter (1985) and Morris, Winter, Whiteford, and Randall (1989) have begun developing explicit models to test a dynamic, housing-adjustment model.

The model applied here is deterministic. The changes in normative deficits are seen as functions of time. These are expressed in the number of marriage years from formation of the household until the date of the interview.

This analysis examines the dynamic relationships among changes in three important aspects of housing: tenure status, type of dwelling, and number of bedrooms. These are among the strongest cultural norms in the United States (Foote et al., 1960; Morris and Winter, 1975, 1978, 1983, 1985; Dillman, Tremblay, and Dillman, 1979; Tremblay, 1981). The universality of these is underscored by the array of national, state, and local regulations instituting them. For the purposes of this study, a household where these norms are not met is considered in disequilibrium. As a result, the household continues the process of housing adjustment until the norms are achieved. Hence, the quest for equilibrium in housing norms is assumed to be an unstated, lifetime goal. Nearly all members of society adopt these long-term goals. While pursuing them, the majority also adopt interim goals which frequently entail a change in dwelling type or a change in the space requirements of the dwelling. Norms apply over the lifetime of nearly all households while interim goals depend on the changing circumstances of a particular household.

Tenure Status and Mobility

Renters are inclined to move and actually do move more frequently than do owners (Carliner, 1974; Clark and Onaka, 1983; Gladhart, 1973; Onaka, 1983; Rent and Rent, 1978; Rossi, 1955; Zimmer, 1973). Some of the difference in behavior between those two groups is probably related to the desire to become a home owner (Rossi, 1955; Morris, 1977; Morris and Winter, 1978; Rent and Rent, 1978; Clark and Onaka, 1983). The remaining difference relates to the need to remove other types of housing deficits.

Rental occupancy fails to measure up to the cultural norm of owner occupancy (Morris and Winter, 1978). Renters are inclined to move, especially when it will achieve home ownership. Michelson (1977) and Kendig (1984) state that the desire to attain home ownership is a long-range goal and that many interim moves are made for other short-range reasons. Therefore, our analysis of the move to first-time home ownership will focus on the attainment of the long-range goal while examining some of the interim goals and changes.

More than one third of all moves result in a change from one rental unit to another. (Goodman, 1976). About a fifth of all moves are from renting to first-time buying (Kendig, 1984). In the Annual Housing Survey, about a quarter of renters became home owners when they moved (Chi, 1984). Zimmer (1973) reports that there is a much higher ownership rate after the most recent move. A majority of renters become owners after a move. An even larger majority of home owners remain home owners after a move.

A portion of all households never become home owners. The percentage varies with a number of household characteristics but two assumptions can be made: rental housing has met these households' needs and no additional need has arisen, or constraining factors have inhibited the transition.

In general, the typical life-cycle sequence is rent-own or rent-own-rent. We have excluded the sequence of own-rent from this study because of the smallness of the sample. Our study will focus closely on the transition from renting to first-time home ownership.

Rooms, Bedrooms, and Mobility

Residential crowding has been defined in terms of:

(1) persons-per-room (USBC, 1983; Chevan, 1971)

(2) persons-per-sleeping room (Wilner et al., 1962)

(3) the discrepancy between the number of actual and required rooms (Duncan and Newman, 1976; Newman and Duncan, 1979; Goodman, 1976)

(4) the discrepancy between number of actual and needed bedrooms (Gladhart, 1973; Morris, 1977; Morris and Winter, 1978; Carey, 1979)

(5) square meters per person (Clark et al., 1984).

Gladhart (1973) indicates that crowding in bedrooms occurs by default because dwellings vary greatly in the number of bedrooms but are similar in the number of other rooms. Duncan and Newman (1976) and Goodman (1976) calculated the number of bedrooms needed according to household composition and then added two to obtain a norm for rooms needed in a household.

Gladhart (1973) and Morris (1977) developed a bedroom-need index which they used to calculate a bedroom deficit. The deficit is the difference between the number of bedrooms needed and the actual number of bedrooms. The number of bedrooms needed was based on cultural norms for sharing according to age and the sexual composition of the household.

A bedroom deficit, as a quantifier, is similar to the difference between needed rooms and actual rooms used by Duncan and Newman (1976), Greenfield and Lewis (1969), and Beyer (1949). Goodman (1976) reports that about 40 percent of local moves result in the addition of one or more rooms in the new dwelling. Several studies, including Morris et al., (1976), have shown that crowding is a contributing cause of residential mobility.

Our study concentrates on two aspects: (1) how moves coincide with the elimination of bedroom and dwelling deficits and (2) the change from rental occupancy to ownership. Renters complain much more than owners about space shortages and factors relating to the comfort of their home and its capacity to entertain (Foote et al., 1960; Tremblay et al., 1977; Newman and Duncan, 1979; Rossi and Shlay, 1982). That finding supports the connection between the length of rental occupancy and space deficits.

Building Type and Mobility

Little research has been done on changes in dwelling type as compared with changes in occupancy status. Smaller, multifamily dwellings are more often available for rental occupancy than are larger single-family dwellings. Studies show that the length of stay in a rental unit, the household size, and the number of rooms or bedrooms are likely to play a role in transitions from one type of dwelling to another.

The overwhelming majority of owners live in single-family dwellings. Renters, however, are more evenly divided between single and multifamily dwellings (Hanushek and Quigley, 1978; Morris and Winter, 1978). For those reasons and others, the mobility rate and propensity to move are higher for residents of multifamily dwellings (Morris, 1977; Newman and Duncan, 1979; Lam, 1985).

Barrs (1975) and Morris et al., (1976) used positive and negative deficits to describe dwelling needs. The positive deficit occurs when residents of single-family dwellings feel a multifamily dwelling best suits their needs. The negative deficit occurs when multifamily residents feel a single-family dwelling suits them best. Hence, the negative deficit reflects dissatisfaction and is expressed in a desire to move and the expectation of moving. Residents of apartments who would prefer a single-family dwelling are more inclined to move than are residents of apartments who prefer apartments. The relationship between renters who would prefer to rent compared with renters who would prefer to own is even higher.

Factors that may influence a move to a single-family dwelling are household size, age of household head, and family changes such as the birth of a child. Long (1972) indicates that conventional households with young children frequently move from an apartment to a single-family dwelling after the birth of a child. In this instance the motivation is likely to relate to the size of a dwelling as well as the type.

Single-family dwellings are preferred by households with three or more members (Quigley, 1976). Clark and Onaka (1985) found that younger households tend to occupy multifamily dwellings, while older households divide evenly between single and multifamily dwellings. When age of the head of household is studied under controlled conditions, the data show the larger the household size, the greater the tendency to move to

a single-family dwelling (Clark et al., 1984). Moving to a single-family dwelling is more likely for households headed by persons under 50 years of age than for those over 50.

Methodology

Data

The data used in this analysis were gathered for Journal Paper No. J-13374 of the Iowa Agriculture and Home Economics Experiment Station in Ames. It is a contribution to the North Central Regional Project NC-178 "Economic, Social, Psychological, and Health Consequences of the Housing Decisions of Rural Families." This research is supported by the U.S. Department of Agriculture through the experiment stations of Illinois, Iowa, Minnesota, Missouri, Nebraska, and Wisconsin and is based in part on Kim (1987). A complete, detailed description of the data collection procedures can be found in Cook, Morris, and Winter (1988). As noted, a multistage, area sample was drawn from rural areas and towns under 20,000 population in the above states with probabilities proportional to the number of occupied housing units according to the 1980 Census of Housing. Interviews were completed with 506 households.

For this analysis, only cases where the head of household had been married for one year or more were included. When there was no female spouse at the time the interview was made, the information from marriage until the female spouse left the household was used. With respondents who had divorced and remarried, only the history for the current marriage was collected.

After deleting households with heads who had never married, 39 cases; households with an incomplete history, 19 cases; and households married less than one year, 10 cases; 438 of the households or over 85 percent of the original sample remained. Households that owned a home from the first day of marriage, 113 in all, were also excluded. This left a sample of 325 households that began marriage as renters.

Data were gathered in the form of family and residential histories for each household dating from household formation at marriage to the time of the interview. The family-history data consisted of information about each individual who ever lived in the household. These data included month and year of birth; sex; month and year entered the household; relationship to the respondent; marital status; and, if applicable, month and year of marriage; and month and year left the household.

The residential history data consisted of information about the present dwelling and each of the previous dwellings in which the household lived. This included month and year moved in; county; state; the population of town; length of occupancy; dwelling type; and the number of bedrooms.

Other aspects of family and residential history can be derived from that information. Months in the present residence, for example, was calculated by subtracting month and year of last move from the calendar date. Bedroom deficit was calculated by cross-referencing information from the family history and the residential history.

Missing data were recoded according to careful examination of the questionnaires using standard procedures (Kim, 1987). Households with undocumented events that could not be resolved from clues in the questionnaires were deleted.

Data were transformed into a longitudinal reference for each year of each household's life, beginning at the month and year of marriage. These yearly records are referred to as annual segments. The starting time of observation is the month and year of the most recent marriage.

Each annual segment of a history is treated as a single observation. The beginning of an annual segment is designated T and the segment itself is the interval from T to T+1. The first segment for each household begins with the month and year of marriage or household formation. The documentation of events is fixed within a segment interval rather than on the exact date of the event. The period of observation begins with marriage or formation of the household and ends during the segment year when the change from rent to own occurs or on the date the interview was completed. Though included in the data, observations were censored when they did not meet these criteria.

Tuma and Hannan (1979) suggest three approaches to the censoring problem: delete censored cases; treat censored observations as if an event occurred at the time of the last observation; or assume the same model can apply to the cases of censored and noncensored observations. In this analysis, the third approach was used. Households that did not purchase a first home contributed the number of years they had been in existence by the date of the interview.

The formulation of data and the mode of analysis follows procedures suggested by Allison (1982). Similar procedures were used by Carey (1979), Gladhart (1973), Morris (1977), Hofferth (1983), Memken (1984), and others. Calculating the annual segments was relatively simple. A household that rented for seven years and then bought a house, for example, contributed seven annual segments to the data. There were 3,083 total annual segments from the 325 households. The average number of segments per household is 9.5. The range was from 1 to 65 segments per household. Of the households, 84 percent, became first-time home owners during the period of observation. For these first-time home owners there was a total of 2,347 annual segments and an average of 8.6 segments per household. The remaining 16 percent are censored observations and do not accurately represent households that never become home owners. Many of them are young and do not yet have the capability to own. The percentage of households who never make the move throughout the life of the household is substantially less than the 16 percent found in these data.

As noted, censored observations are included in the body of data. These are observations from households that had not attained ownership status by the interview date. In this analysis, 52 of 325 households, or 16 percent, are censored. There were 736 uncensored annual segments from this group. The number of segments per household ranged from 1 to 65 and averaged 14.2. Half of the censored data occurred during the first five years of a marriage.

The variables. Events that occurred during an annual segment, between T and T+1, are accorded to that segment. There are three events that could occur: a change to home ownership, a move to a different type of dwelling, or a change in the number of bedrooms.

The rent-own event. The change from rent to own is the primary variable within an annual segment. This is an event variable. Since each household can only change from renter to first-time owner once, it can only be assigned a value of one or zero. It is assigned a one if it occurs, zero if it does not. In this study the total number of annual segments with the value of one cannot exceed the total number of households. Since 52 households were coded zero because of censoring, there are only 273 segments among the total 3,083 annual segments, or almost nine percent, that have the value one for the variable event.

Dwelling type and bedrooms. The change from rent to own frequently involves secondary variables. These variables are a change in the type of dwelling or a change in the number of bedrooms and can occur independent of each other. They may also occur without a change from rent to own. These are assigned a one if the change occurred, zero if it did not. Should a change result in fewer bedrooms this is coded as minus one.

Cultural deficits. There are three deficit variables used in the analysis: occupancy status, number of bedrooms, and dwelling type. These are cultural deficits in the terms used by Morris and Winter (1978) and Morris et al., (1976). All households in this study began marriage with a occupancy deficit. They were renters, not owners. Households that never make the rent-to-own transition may not view rental occupancy as a deficit though some may move to acquire more bedrooms or for a change in dwelling type. A valid estimate of the number of households that never own, although small, cannot be determined from these data.

The bedroom deficit variable can have a positive or negative score (Gladhart, 1973; Morris, 1977; Morris and Winter, 1978; Carey, 1979). In this analysis the bedroom deficit is converted to a class variable. It is assigned a value of one if the household had a negative bedroom deficit score and zero otherwise.

Dwelling norms apply only to single-family dwellings. A household that does not occupy a single-family dwelling is considered to have a deficit. A dwelling deficit is assigned a value of zero for single-family dwelling and one for all other dwelling types.

Time. In addition to the three events and the deficits, time is a variable. Time is expressed as the number of annual segments preceding an event.

Findings

Cross-tabulation is the basis for analyzing various types of changes in this study. Since all households in this study began with an occupancy deficit, the change from rent to own was primary. In addition, moves that produced a change in a bedroom deficit or in a dwelling deficit were studied.

Frequency of Deficits.

The frequency of deficits within annual segments as shown in Table 1 is indicated in the following categories: bedroom deficit only, dwelling deficit only, and both bedroom and dwelling deficits. Forty percent of the households experienced a bedroom deficit without a dwelling deficit for some time before purchasing a home. This is shown in column 4 of Table 1. In other words, they lived in a rented, single-family dwelling that was too small. These deficits existed for an average of about five years. Sixty percent of the households lived in multifamily dwellings for an average of four years.

Table 1. The Prevalence of bedroom and dwelling deficits.

	Number of segs. with the deficit	Number of HHs. with the deficit	Average Segs. with the def. per HH	Prop. of HH with the deficit
Bedroom deficit	681	130	5.2	.400
Dwelling deficit	783	196	4.0	.603
Both deficits	178	67	2.7	.206
All with bedroom deficit (a+c)	859	197	4.4	.606
All with dwelling deficit (b+c)	961	263	3.7	.809

About one fifth of the households experienced both bedroom and dwelling deficits at the same time for an average of about three years or 33 months. Since all households had a tenure deficit, those 21 percent experienced all three deficits. Combining the data, 81 percent experienced a dwelling deficit and 61 percent a bedroom deficit before becoming a first-time home owner.

Time was divided into three periods: the first five years of marriage, the second five years, and more than ten years. The frequency of deficits over these time periods is shown in Table 2. The number of successive households decreases because households are no longer counted once they become home owners.

All households in Table 2 have an occupancy status. The proportion of households with a coexisting bedroom deficit increases by nearly a fourth. When those who have both bedroom and dwelling deficits are combined, the total proportion with a bedroom deficit shows a very small increase. Considered, there is still an increase in bedroom deficit over time, but it is somewhat slower than that of bedroom deficit alone.

Table 2. The prevalence of bedroom and dwelling deficits over three portions of the time since marriage.

	Number of segs. with the deficit	Number of HHs. with the deficit	Average segs. with the def. per HH	Prop. of HH with the deficit
For the first 5-year period (N=325)				
Bedroom deficit	681	94	7.2	.289
Dwelling deficit	507	181	2.8	.557
Both deficits	102	55	1.9	.169
All with bedroom deficitt	783	149	5.3	.458
All with dwelling deficit	609	236	2.6	.726
For second 5-year period (N=164)				
Bedroom deficit	162	62	2.6	.378
Dwelling deficit	131	51	2.6	.311
Both deficits	51	24	2.1	.146
All with bedroom deficit	213	86	2.5	.524
All with dwelling deficit	182	75	2.4	.457
After 10-years of marriage (N=85)				
Bedroom deficit	324	40	8.1	.471
Dwelling deficit	145	19	7.6	.224
Both deficits	25	7	3.6	.082
All with bedroom deficit	349	47	7.4	.553
All with dwelling deficit	170	26	6.5	.306

The proportion of households with a dwelling deficit decreases over the three time periods by a fourth. When those with both a bedroom and a dwelling deficit are considered, the proportions with a dwelling deficit decrease by almost one half. The decline in total proportions is faster for households with all three deficits than for those with only two. The probability of households experiencing both bedroom and dwelling deficits in a rental unit is reduced by one half over the three time periods.

Dwelling deficits are more common than bedroom deficits during a household's first five years. The two are about the same during the second time period. Bedroom deficits are more common after ten years than dwelling deficits.

The pattern that emerges during rental tenure is one of a strong decrease in dwelling deficits while bedroom deficits increase. This indicates that some renters are able to resolve dwelling deficits by either renting or purchasing a single-family dwelling. Meanwhile, bedroom deficits are produced as additional children are born. These new deficits can only be removed by adding rooms, moving to a larger dwelling, or decreasing family size.

Changes In Dwelling Deficits

Each move provides an opportunity to resolve household deficits. Table 3 shows how households resolve dwelling deficits through a move. Averages and frequencies were cross-tabulated by the number of moves and ownership status. About one third of the moves result in home ownership. Two thirds are interim moves with no change in ownership status.

Of the 3,083 total annual segments, 844 involve a move. This is over 27 percent. About 30 percent of those are associated with a change in dwelling type. About 70 percent are moves between the same type of dwelling. Changes in dwelling were more common among those who switch to ownership, about 40 percent, than among those who continue renting, about 30 percent. Hence, a dwelling deficit may be more directly resolved by purchasing a home than by switching between rental dwellings.

Moves that resulted in a change in dwelling type are shown in Table 4. Of these, nearly 30 percent switched from single to multifamily dwellings. About 70 percent switched from multifamily to single-family. Among those who switched from rent to own, about 80 percent involved changes from multi- to single-family dwellings. That percentage is substantially greater than the 65 percent who continued to rent. About 20 percent moved from a rented, single-family dwelling after purchasing a multifamily dwelling. These are primarily households who bought duplexes or small apartment buildings where they live as resident landlords. This group falls outside the realm of assumptions upon which this research is based. They probably made changes in their housing primarily for business reasons rather than housing needs.

Table 3. Change in dwelling type by change in ownership among segments where a move occurred.

	Continued renting		Switched to ownership		Total	
	N	%	N	%	N	%
Did not change dwelling	404	70.7	169	61.9	573	67.9
Changed dwelling type	167	29.3	104	38.1	271	32.1
Total	571	100.0	273	100.0	844	100.0

The distribution of changes in dwelling type over the three periods is shown in Table 5. About 40 percent of households who became first-time home owners lived in a multifamily dwelling when they purchased a home. The portion of those living in a multifamily dwelling when the household buys a house ranges from a high of our 50 percent during the first five years of marriage to about 30 percent during the second five years. After ten years of marriage the ratio drops to about 15 percent. Half of those who became first-time home owners during the first five years of marriage lived in multifamily dwellings at the time. One third of first-time home buyers during the second five yearsofmarriage were residents of multifamily dwellings. The same was true for about 20 percent of home owners after ten years of marriage.

Table 4. Type of change in dwelling type through moves with and without changing to home ownership.

	Continued renting		Switched to ownership		Total	
	N	%	N	%	N	%
Multifamily to single	109	65.3	85	81.7	194	71.6
Single to multifamily	58	34.7	19	18.3	77	28.4
Total	167	100.0	104	100.0	271	100.0

Some households who purchased dwellings bought multifamily dwellings. This is reflected on Table 5 where the number of households who lived in a multifamily dwelling at the time of purchase are nearly the same. The difference corresponds to the number of households who rented a multifamily dwelling and then purchased a different type multifamily dwelling.

About 85 percent of rental residents of multifamily dwellings purchase a single-family dwelling the first time they buy. The proportion of first-time home owners of single-family dwellings who have moved directly from rental of a multifamily dwelling is evenly distributed over the three time periods with over 80 percent in each period. The two thirds who are shown to have changed from renting a multifamily dwelling to owning a single-family dwelling during the first five years are due primarily to censored cases.

Table 5. Probability of changes in type of dwelling from a multifamily dwelling to a single-family dwelling through a move to become a first-time home owner over the three periods.

Time period	No. of renters who bought	No. who lived in multifamily at purchase	Proportion living in multifamily at purchase 2/1	No. who lived in multifamily who bought a single-family dwelling	Proportion of households living in multifamily who bought 4/2
1st-5th year	135	68	.504	56	.823
6th-10th year	72	23	.319	21	.913
After 10th	66	10	.152	8	.800
Total	273	101	.400	85	.842

Changes In Number Of Bedrooms And Bedroom Deficits.

The number of bedrooms in a household frequently changes through a move. Table 6 enumerates these changes and how they relate to both the primary and secondary variables.

Changes from a single to a multifamily dwelling is associated with a decrease in the number of bedrooms about 80 percent of the time. Over 90 percent of the time the number of bedrooms is increased after a change from multi- to a single-family dwelling. If a household needs more bedrooms, it will be likely to gain them by switching to a single-family dwelling.

A household is twice as likely to increase the number of bedrooms when a move does not change the ownership status of the household. As indicated, about three fourths of households increase the number of bedrooms when they buy their first home. Hence, a household is more likely to gain bedrooms by purchasing a dwelling.

Table 6. Changes in bedroom deficits and the number of bedrooms through dwelling changes from a single to a multifamily dwelling and from a multi- to a single-family dwelling, and a move associated with or without first-time home ownership.

	Total segments	Segments with bdrm deficit at T		Segments with bedrm deficit at T + 1		Segments with increased no. of bdrms		Segments with decreased no. of bdrms	
	N	N	2/1	N	3/1	N	4/1	N	5/1
Change from single to multifamily dwelling	77	14	.182	27	.351	7	.091	39	.506
Change from multi- to single-family dwelling	194	57	.294	22	.113	130	.670	9	.046
No change in home ownership	571	55	.271	155	.271	214	.375	123	.215
Change tenure to home ownership	273	66	.242	34	.125	143	.491	45	.165
All moves	844	221	.262	189	.224	357	.423	168	.199

A move from a multifamily dwelling to a purchased, single-family dwelling frequently increases the number of bedrooms of a household. Conversely, a change from a single to a multifamily dwelling with no change in ownership is less likely to increase the number of bedrooms in a household. Households are more likely to increase than decrease the number of bedrooms when they move.

It is unusual to find instances in which households moved without resolving bedroom deficits. Bedroom deficits are affected by a change in the number of bedrooms which usually involves a move or a change in household composition. Though households are more likely to increase the number of bedrooms through moves without first-time home ownership, the number of segments with a bedroom deficit may not appear if the household composition changes as well. The same holds true for households that have a change in bedroom deficits through a change in household composition without moving. Hence, a lack of change in the numbers following a move does not necessarily mean there were no changes. These relations are presented in Table 7.

Of the 155 segments with no change, 73 resolve bedroom deficits at time T+1 after a move, while 82 do not. About 20 percent gain a bedroom deficit during the year when a move occurred.

Table 7. Events and changes associated with segments with or without bedroom deficits at time T when a move without home ownership occurred (N=571).

	Number of segs with a bdrm deft. at time T before a move occurred				Number of segs w/o a bedrm deft. at time T before a move occurred			
	No		Yes		No		Yes	
	N	N/155	N	N/155	N	N/416	N	N/416
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. Bdrm deft. at time T			155	1.000	416	1.000		
2. Bdrm deft. at time T+1	73	.471	82	.529	343	.825	73	.175
3. Leave occurred T, T+1	135	.871	20	.129	383	.921	33	.079
4. Birth occurred T, T+1	121	.781	34	.219	298	.716	188	.284
5. Entry occurred T, T+1	148	.955	7	.045	386	.928	395	.072
6. Decrease in HH size	136	.877	19	.123	393	.945	23	.055
7. Increase in HH size	119	.768	36	.232	288	.692	128	.308
8. Decrease in no. bdrms	143	.923	12	.077	305	.733	111	.267
9. Increase in no. bdrms	70	.452	85	.548	287	.699	129	.310

Segments with a bedroom deficit at time T are more likely to be associated with a change in household composition. Segments without a bedroom deficit at time T are more likely to be associated with an increase in household size.

A move may increase the number of bedrooms. A change to home ownership is especially likely to increase the number of bedrooms and thereby resolve deficits. Bedroom deficits remained when a move did not include a change from rent to own. Some households with bedroom deficits resolved them through a reduction in household composition. Others increased the size of the household or lost a bedroom through a move and thus created bedroom deficits.

A move from a single-family dwelling to a multifamily dwelling decreased the number of bedrooms and consequently increased bedroom deficits. Conversely, a move from a multifamily dwelling to a single-family dwelling decreased bedroom deficits. A move associated with a change in dwelling type better reflects the shifting values between the number of bedrooms and bedroom deficits than does a change to home ownership.

Conclusions

Substantive

The deficit analysis showed interesting relationships among changes in the primary and secondary variables whether or not a move was associated with first-time home ownership. About one third of moves were related to first-time home ownership. Households were more likely to experience deficits in dwelling type than bedroom deficits but for a shorter period. Over the three study periods, dwelling deficits were more common among renters than bedroom deficits for the first five years. Both dwelling and bedroom deficits occurred at about the same rates during the second five year period. After ten years of marriage, dwelling deficits were less common than bedroom deficits.

One fifth of moves made by renters were related to a change from a multifamily dwelling to a single-family dwelling. A change to first-time home ownership was more likely to be associated with a move from a multifamily dwelling to a single-family dwelling. Of the renters, 40 percent lived in multifamily dwellings prior to purchasing their first home. Almost 85 percent of residents renting a multifamily dwelling removed both dwelling and tenure deficits through a change to home ownership.

A move generally resulted in an increase in the number of bedrooms. In particular, a change to home ownership increased the number of bedrooms and decreased bedroom deficits. A move without ownership did not.

There were exceptions. A minority of renting households resolved bedroom deficits in different ways. A reduction in the size of the household or an increase in the number of bedrooms were noted. Others experienced an increase in bedroom deficits as new household members arrived.

A move from a single-family dwelling to a multifamily dwelling decreased the number of bedrooms and increased bedroom deficits. A move with a change from a multifamily dwelling to a single-family dwelling increased the number of bedrooms and decreased bedroom deficits. Changes in the number of bedrooms and bedroom deficits were more accurately reflected in moves associated with a change in dwelling type than through attainment of home ownership.

Theoretical

Event-history data, when formulated into a longitudinal reference, may be used to examine some of the dynamics in the transition to first-time home ownership. The primary objective of this research is on attainment of home ownership. This approach deemphasizes the many interim moves that households make during the period when they are unable to become owners.

In an ideal world nearly all households would begin living in an owned dwelling. The majority would prefer a single-family dwelling with sufficient bedrooms plus room to expand. For most, however, various constraints intervene and the ideal becomes the goal. The most common approach for attaining this goal is via rental dwellings.

About a quarter of all couples initiated their household as home owners. Of those who began as renters, more than 80 percent became home owners during the time covered by the study. Somewhat less than one third of households who became home owners during this time were those who moved from a rented multifamily dwelling to an owned single-family dwelling. Of all moves, whether to ownership or not, about a fifth are from multifamily dwellings to single-family dwellings. Many renters made interim moves from apartments to rented single-family dwellings prior to purchasing a dwelling.

Some households purchase a duplex or an apartment building and become resident landlords. Of all the moves studied, a few involved moves from single-family dwellings to multifamily dwellings. These moves fit the profile of elderly households or households with a reduction in size or economic resources. Of all the moves that involved changes in type of dwelling, however, about a fourth were from single-family to multifamily dwellings.

Changes in dwelling type may occur because of the need for more space as well as the desire for a different type of dwelling. The change from multifamily to single-family dwellings typically involves a reduction in the number of bedrooms. The opposite is true in moves to single-family dwellings from other types. Nevertheless, moving is likely to result in an increase in the number of bedrooms, and a move to ownership makes it even more likely.

First-time home ownership most frequently entailed purchase of a single-family dwelling. First-time home owners often increase the number of bedrooms when they purchase a home. These findings support the housing-adjustment theory which views residential mobility as an adjustment process striving to meet housing norms. Further, it shows that a single move is likely to resolve more than one type of deficit.

These results underscore trends that should influence government housing policy. Policy makers need to understand why households move and what changes households make through moves. These data support the position that three motivators influence decisions in a move. These are: the desire to achieve home ownership, to reside in a single-family dwelling, and to obtain a sufficient number of bedrooms.

Among housing norms, home ownership is one of the strongest. The overwhelming majority of households that evolve from rent to own attest to this. The very small proportion that deviate from this norm confirm it as well. Recognition that various constraining factors inhibit households from meeting their housing needs, should encourage the development of policies to remove such constraints.

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