

Determinants Of Homeownership: A Comparison Of Single Female and Single Male Headed Households

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Data from the 1976 Annual Housing Survey were analyzed to compare households headed by single females and single males. Using separate probit analysis for males and females, a model tested the relationship of socio-demographic, economic, and location variables to homeownership rates. Age of household head, household size, presence of elderly and presence of school age children influenced ownership rates for males and females. Marital status influenced ownership for females but not males. Current income was positively related while welfare income was negatively related. Permanent income had a positive influence on ownership for males. Possible reasons for differences in ownership rates are discussed.

Studies of housing demand and tenure choice have identified a group of factors which act as determinants of homeownership for traditional family and household groups. Though the research has been devoted primarily to families in various stages of the family life cycle, some recent work has attempted to identify the needs of non-husband-wife households and to understand whether their housing choices differ from those of husband-wife families (Carliner, 1974; Ladenson, 1978; Seaman, 1977; Struyk, 1976; Struyk and Marshall, 1974, 1975; Ericksen, 1977).

Understanding these nontraditional households is becoming more important because they are growing faster than the husband-wife households and projections for the future indicate their

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continued increase as a proportion of total households by the end of the decade. In fact, it was recently reported by the Joint Center for Urban Studies of MIT and Harvard University that of the increase in total households of 19.7 million which occurred between 1960 and 1975, 11.7 million were headed by other than married couples ("unattached individuals"). Of the increase in unattached individuals, 3.7 million were single or previously married men living alone or with children, 2.3 million were single or previously married women with children in the home and 5.7 million were single or previously married women living outside of families (Masnick and Bane, 1980:6). Furthermore, projections of change from 1975 to 1990 indicate a similar growth in total households (20.2 million), but a decidedly larger proportion of the expected growth occurring among unattached individuals (16.8 million).

This study was undertaken to examine two of the groups of non-husband-wife households — female headed households and single male headed households — to better understand the determinants of homeownership for these groups, using factors which have been identified as being influential for traditional households and some factors which may have particular impact upon non-traditional households.

Among the factors which have been identified in previous studies of tenure choice as being influential is income. Both current, measured income and estimated permanent income have been found to be positively related to homeownership rates (Maisel and Winnick, 1966; Maisel, 1966; Carliner, 1974; Straszheim, 1974; Fredland, 1974; Struyk, 1976). Permanent income has been linked to homeownership because of the time frame used in decision-making regarding purchase of a home. Factors involved include potential returns on the investment, the household's willingness to go into debt and ability to qualify for a mortgage loan, as well as the tendency of households to increase consumption in the early years of the income curve and to delay decreasing their consumption toward the end of the income curve.

The current income which will approximate the transitory component of income when used in conjunction with the permanent income component, is thought to be influential in the timing of the buying decision (Struyk and Marshall, 1974; Struyk, 1976; Carliner, 1974; Muth, 1970; Friedman, 1957).

Income was found to vary in its impact by age of household head (David, 1962; Carliner, 1974), size of household (Maisel, 1966; Maisel and Winnick, 1966; David, 1962), race (Carliner, 1974; Kain and Quigley, 1975; Roistacher and Goodman, 1976; Struyk and Marshall, 1974; Straszheim, 1974; Ladenson, 1978), location (Straszheim, 1974; Muth, 1969; Alonso, 1970; Kain and Quigley, 1975; King and Mieszkowski, 1973) and household type (Struyk and Marshall, 1975; Seaman, 1977).

Tenure rates have been shown to vary by race of the household head, with decreased pro-

bilities of ownership due to being black ranging from 9 percent to 26 percent when other factors were controlled (Kain and Quigley, 1975; Roistacher and Goodman, 1976; Straszheim, 1974; Carliner, 1974; Ladenson, 1978; Marantz et al., 1976). Race is not an isolated factor, however; it is related to location (Straszheim, 1974; Kain and Quigley, 1975), household type (Kain and Quigley, 1975; Carliner, 1974), age (Carliner, 1974) and income (Struyk and Marshall, 1975; Kain and Quigley, 1975).

Marital status is strongly related to homeownership, with 76 percent of married couples being homeowners in 1976, compared to only 47.8 percent of unmarried heads of household (HUD, 1978). This relationship may undergo change as the shift toward households headed by those other than married couples occurs, and as individuals move from one household type to another (changing income, assets and household size) — the ability and desire to own the dwelling may change. In fact, differences have been found regarding homeownership rates among those who are not married (Carliner, 1974); however, the determinants of the rate differentials have not been thoroughly investigated.

Age of the household head has been found to influence tenure; in one study it had the strongest and most consistent relationship to homeownership of any of the determinants studied (David, 1962). In separate studies, Maisel (1966) and Carliner (1974) found that homeownership rates increase as age of head increases, with the oldest group having rates which were more than three times those of the youngest group.

Homeownership rates increase with increasing family size, which may be due to the fact that larger families or households are more likely to contain children, and therefore the greater likelihood of owning may be due to the influence of the presence of children in the household (Maisel, 1966; Carliner, 1974). This trend is typically modified by income factors, with low-income households exhibiting an inverse relationship and non-traditional households failing to display a consistent relationship between income and

homeownership or expenditures for housing with regard to presence of children.

Location may influence homeownership rates because the availability of owner-occupied housing and discriminatory practices regarding race and sex vary from one part of the metropolitan area to another and from one region to another. The decision to buy a home may be influenced by location of the workplace and factors related to time-distance involved in the journey-to-work in addition to the constraints of access and supply. Journey-to-work considerations were found to be different for women than for men in a study by Ericksen (1977), with women expressing the need to reduce the time involved. This may act as a deterrent to their owning a home in that it may restrict their locational choices.

The inconsistent relationship among non-husband-wife households between their determinants of homeownership and their probability of owning call for separate examinations of the various types of single adult headed households to better understand the interaction of homeownership determinants for these groups which are making up an increasing proportion of the households demanding housing. Therefore, this study was undertaken to examine the probability of homeownership for the female headed households and the single male headed households in separate equations, using the same set of factors as potential determinants for the two groups.

Method of Analysis

Households headed by single females and males were analyzed separately to determine the influence of the variables upon each group to better understand these segments of the population. The data were taken from the national sample of the 1976 Annual Housing Survey which was conducted by the U.S Department of Commerce, Bureau of the Census, in conjunction with the U.S. Department of Housing and Urban Development. Household records were available for 6653 households headed by females and 2415

households headed by males without wife present.

A model was developed that related homeownership probability to a set of socio-demographic, economic and location variables which have proven their influence upon tenure in previous studies of families and households (above) and which may have particular impact upon the homeownership rates of the non-husband-wife households. The previous studies generally used the alternative household types as dummy independent variables within one overall equation, while this study examines the groups in separate equations.

Tenure choice (own/rent) was investigated by means of probit analysis, a technique developed especially for the dichotomous dependent variable in which values are assigned based upon whether the event occurs or does not (1 if the household owns, 0 if it rents). Thus, the 1,0 values which represent the certainty of the event's occurring or not occurring may be seen as estimating the probability that a specific choice will be made based upon a set of influencing variables. The question then becomes what is the probability that a household owned their home given

TABLE 1. — Probability of Homeownership: Socio-Demographic Factors

Variables	Female Heads		Male Heads	
Divorced	-.120*	(.049)	-.035	(.092)
Never Married	-.295***	(.065)	-.024	(.093)
Widowed	.415***	(.055)	.047	(.109)
Race	-.123	(.084)	.241	(.133)
Age	.135***	(.009)	.158***	(.013)
Education	-.026	(.094)	-.260**	(.088)
Number of persons	.107***	(.015)	.081**	(.028)
Elderly	.133*	(.065)	.348**	(.105)
Preschool children	-.055	(.057)	.204	(.158)
School-age children	.173***	(.048)	.352***	(.092)
N	6653		2415	

Probit coefficients significant at *.05, **.01, ***.001 levels. Number in parentheses is the standard error of the coefficient.

certain values of the independent variables which are assumed to be determinants of ownership choice.

The households were examined in terms of marital status, race, age and educational attainment of the head, presence of an elderly person, preschool children and school-age children. Other variables included the economic characteristics of current income, estimated permanent income, employment status, second income, welfare income and previous tenure. The remaining variables were factors of location: residence in the South, residence in the central city and journey-to-work time. (See Appendix for further discussion of the variables.)

Results

Socio-demographic factors

Of the socio-demographic variables tested in the model, four proved to be significant determinants of tenure for both female and single male heads of household. Age of household head increased the probability of ownership for both groups in similar proportions of 13.5 percent for females and 15.8 percent for males. Closely related impacts were also found for the two groups regarding the influence of household size upon homeownership rates, with the increases in likelihood of ownership being 10.7 percent for females and 8.1 percent for males.

For both the presence of an elderly person and the presence of school age children, the significant increase in homeownership probability for male heads was approximately double that for female heads. The presence of an elderly person increased the likelihood of ownership by 13.3 percent for females and 34.8 percent for males, while school age children in the household increased the probability of ownership by 17.3 percent for females and 35.2 percent for males.

The marital status variables were all significant determinants of homeownership for females, with divorced and never married **decreasing** the like-

lihood of owning a home by 12.0 percent and 29.5 percent, respectively, while widowed **increased** the homeownership rate by 41.5 percent. None of the marital status variables was significant for male heads. Conversely, educational level was a significant determinant for male heads only — decreasing the probability of ownership by 26.0 percent.

Neither race nor presence of preschool children was significantly related to homeownership for females or males.

TABLE 2. — Probability of Homeownership: Economic Factors

Variables	Female Heads		Male Heads	
Current income	.029***	(.004)	.037***	(.004)
Permanent income	.075	(.060)	.146**	(.049)
Second income	-.019	(.042)	.119	(.075)
Head employed	-.040	(.128)	.156	(.140)
Welfare income	-.660***	(.050)	-.659***	(.124)
Previous homeowner	-.442***	(.104)	-.257	(.136)

Probit coefficients significant at *.05, **.01, ***.001 levels. Number in parentheses is the standard error of the coefficient.

Economic Factors

Economic variables were mixed in their impact upon homeownership rates for the two groups of household heads. The two variables which were significant for both groups were current income and welfare income. Current income was positively related to ownership, with each increase of \$1000 in current income increasing the probability of homeownership by 2.9 percent for female heads and 3.7 percent for male heads. In contrast, welfare income had a strong negative impact upon homeownership, with the decrease in probability being essentially the same — 66.0 percent for females and 65.9 percent for males.

Both groups had one economic variable which was significant for that group alone. For male heads it was the estimated permanent income, and the effect of that variable was an increase in

the likelihood of homeownership of 14.6 percent for each increase of \$1000 in permanent income. The variable which was significant for females only was previous homeownership which acted to decrease the probability of present ownership by 44.2 percent.

The two economic factors which were not significant determinants for either of the groups were second income and employment status of the head.

TABLE 3. — Probability of Homeownership: Location Factors

Variables	Female Heads		Male Heads	
	Coefficient	Standard Error	Coefficient	Standard Error
South	.113**	(.038)	.008	(.067)
Central city	-.447***	(.041)	-.531***	(.072)
Journey-to-work Time	-.012	(.016)	.005	(.017)

Probit coefficients significant at *.05, **.01, ***.001 levels. Number in parentheses is the standard error of the coefficient.

Location Factors

Of the three location variables, one was found to be significantly related to homeownership for both females and males, one was significant for females only and the remaining factor was not significant for either group. Residence in the central city was a determinant for both groups, with the decrease in homeownership probability being 44.7 percent for females and 53.1 percent for males. Residence in the South increased the likelihood of homeownership for females by 11.3 percent, while not being significant for males. On the other hand, the journey-to-work variables did not prove significantly related to homeownership rates for either female or male heads.

Discussion

Marital status was found to be an important influence upon the probability of homeownership for female heads of household, while not being so for single male heads. The divorced and never

married variables reduced the likelihood, whereas the widowed variable increased the homeownership rate.

No information was available as to the timing of the marital dissolution, thus it cannot be determined whether ownership of the home began before or after the divorce or death of the spouse. In the case of the divorced female head of household who purchased the house while being part of a married couple, she may have had to sell the home because of reduced financial circumstances. This reduction in assets and income may not have been so great for those widowed female heads who became homeowners while still married. This same difference in financial standing may also be influential for those who became (or did not become) homeowners after the marriage ended — widows having greater likelihood of ownership because of more potential for assets or lower probability of mortgage discrimination.

The decrease in homeownership likelihood, which was due to the never married variable for female heads, may be due to a lack of opportunity to be a homeowner as part of a higher ownership group (married couple), lower preference for homeownership, greater difficulty getting mortgage credit and greater potential for discrimination, lower income-to-needs ratio, and greater likelihood of multiple difficulties.

It appears that when holding age, marital status, household size, income and location constant, race was no longer a significant determinant of homeownership for either female heads or single male heads of household. It may be that much of the effect of race in previous studies was due to household type and other differences between black and white households, and that allowing these factors to influence female headed and single male headed households as separate groups shows more clearly the influence of the other factors upon these non-husband-wife households. It may also be that previously found discriminatory effects are moderating.

Age of the household head proved to be important in its impact upon homeownership for these

groups of household heads, with the increase being stronger for males. Many factors related to ability to get and preference for homeownership vary with age and the cumulative effect over the life cycle (especially the working years) is a decided one. Because of fewer restrictions upon males historically, the entire effect of factors related to age may be stronger for them than for female heads.

The negative influence of educational level upon probability of owning a home for male heads may reflect the much greater educational attainment of young male heads of household, with the greater influence of life style considerations such as preference and greater mobility rates overriding the higher expectations of other highly educated peers. Education does not appear to be important for female heads of household; however, it may become more important in years ahead as women have expanded opportunities for schooling and occupational flexibility.

The expected increase in likelihood of homeownership due to household size for both female and male heads was found. The greater increase for females may be due to the greater likelihood of children being present in their households, accounting for the increase in the size of the household. The presence of preschool children was not significantly related to homeownership; however, school age children's being part of the household increased the probability of ownership for both groups. The impact was about twice as powerful for males as for females. For those males with children in the household, the preference for homeownership may be stronger or else constraining factors of cost and ability to secure a mortgage may be less important than for females. Tenure appears to be less related to having children who are below school age, with such environmental factors as neighborhood and schools being less important when children are younger.

Current income increased the homeownership likelihood for both female and male heads of household as expected; however, the impact was greater for males by almost one percentage point per \$1000 increase than for females. The effect of

the current income variable when used in conjunction with the permanent income variable is that of the transitory component of income, which is expected to increase assets rather than consumption. Because homeownership may be viewed as an investment, a current income increase may influence the timing of the purchase of a home.

The lower increase in likelihood of homeownership for female heads relative to male heads may be due to a lower preference for investment by females, greater use of the transitory increase for consumption (of goods or services other than owner-occupied housing) instead of investment, smaller income-to-needs ratio forcing expenditure on non-housing essentials, or sex discrimination which would work against a transitory income increase being used to invest in housing.

Permanent income was influential for male heads only, which may be indicative of the greater accuracy of the estimate for males than for females of the group means or the greater number and impact of noneconomic constraints on female heads of household. The greater increase due to the permanent income variable for males than that due to current income may indicate a stronger relationship between homeownership and permanent income.

The lack of significant influence of the second income and employment status variables for both groups may indicate that when income, age and location are controlled, the relationship to tenure choice is no longer viable. It appears that welfare income is equally detrimental to homeownership probability for both female and male household heads.

Previous homeownership decreased the rate of ownership of the present dwelling for females, while not influencing it significantly for males. The decrease in probability of homeownership due to being a previous homeowner may be the result of changes in household living arrangements, household composition, and other circumstances which might reduce the household

head's ability to remain as a homeowner or to become one.

For female heads, the positive relationship between homeownership and location in the South may be largely due to the greater proportion of owner-occupied dwellings in the South than in the United States as a whole. Condominiums were included in the homeowner category and are increasing rapidly in some southern states. Females who would not opt for homeownership of a single family dwelling might do so for ownership of a condominium, thus increasing their likelihood of ownership. Another possibility is that sex discrimination in credit and housing is no greater in the South than in other regions of the country or that the females who are homeowners got their housing with the help of a male cosigner.

Living in the central city has a larger decreasing effect upon homeownership for females than for males, with the difference possibly resulting from a difference in preference for homeownership or from a greater income-to-needs ratio for the female heads.

The journey-to-work time was not significant for either group of households, which may mean that commuting time and cost are not important to single adult household heads in their tenure choice or that the specification of the variable did not get at the influence which is there.

Separation of the single adult headed households into groups of females and males revealed that the determinants of homeownership vary for the two groups and between these groups and husband-wife households. Further research into non-husband-wife households with respect to tenure and other housing decisions is needed to enhance our understanding of these groups which are increasing in proportion.

Appendix

The marital status variables were in the dummy form, with the missing variable being separated status. Presence of an elderly person, a preschool child (children) and a school age child (children) were also entered as dummy variables. Permanent income was estimated by using the mean income of all

those single adult household heads and primary individuals who are in the same sex, race, and education categories. Economic variables of employment status, second income, welfare income and previous homeowner were also all entered as dummies, revealing only the presence of those characteristics and not how much income was coming from the specific types of income.

References

- Alonso, William. 1970. "Equilibrium of the Household," Alfred N. Page and Warren R. Seyfried (Editors.) *Urban Analysis: Readings in Housing and Urban Economics*. Glenview, Illinois: Scott, Foresman and Company.
- Carliner, Geoffrey. 1974. "Determinants of Home Ownership." *Land Economics* 50: 110-119.
- Darby, Michael R. 1974. "The Permanent Income Theory of Consumption — A Restatement." *Quarterly Journal of Economics* 88: 228-250.
- David, Martin. 1962. *Family Composition and Consumption*. Amsterdam: North-Holland Publishing Company.
- De Leeuw, Frank. 1971. "The Demand for Housing: A Review of Cross-Section Evidence." *Review of Economics and Statistics* 53: 1-10.
- Ericksen, Julia A. 1977. "An Analysis of the Journey to Work for Women." *Social Problems* 24(4):228-235.
- Fredland, Daniel R. 1974. *Residential Mobility and Home Purchase*. Lexington, Massachusetts: D. C. Heath and Company.
- Friedman, Milton. 1957. *A Theory of the Consumption Function*. Princeton: Princeton University Press.
- Kain, John F. 1973. "The Journey-to-Work as a Determinant of Residential Location." Jon Pynoos, Robert Schafer and Chester Hartman (Editors.) *Housing Urban America*. Chicago: Aldine Publishing Company.
- _____ and John M. Quigley. 1972. "Housing Market Discrimination, Homeownership and Savings Behavior." *American Economic Review* 62: 263-277.

- King, A. Thomas and Peter Mieszkowski. 1973. "Racial Discrimination, Segregation and the Price of Housing." *Journal of Political Economy* May/June, pp. 590-606.
- Ladenson, Mark L. 1978. "Race and Sex Discrimination in Housing: The Evidence from Probabilities of Homeownership." *Southern Economic Journal* 45: 559-574.
- Maisel, Sherman J. 1966. "Rates of Ownership, Mobility and Purchase." In *Essays in Urban Land Economics*. Los Angeles: Real Estate Research Program.
- _____ and James B. Burnham and John S. Austin. 1971. "The Demand for Housing: A Comment." *The Review of Economics and Statistics* 53: 410-413.
- _____ and Louis Winnick. 1966. "Family Housing Expenditures: Elusive Laws and Intrusive Variances." In William L. S. Wheaton, Grace Milgram and Margy Ellen Meyerson, *Urban Housing*. New York: The Free Press.
- Marantz, Janet K., Karl E. Case, II and Herman B. Leonard. 1976. *Discrimination in Rural Housing*. Lexington, Mass.: D. C. Heath and Company.
- Masnick, George and Mary Jo Bane. 1980. *The Nation's Families: 1960-1990*. Cambridge, Mass.: Joint Center for Urban Studies of MIT and Harvard University.
- Muth, Richard F. 1970. "Permanent Income, Instrumental Variables, and the Income Elasticity of Housing Demand." Working paper 12, Economic Development Administration. St. Louis; Institute for Urban and Regional Studies, Washington University.
- Roistacher, Elizabeth A., and John L. Goodman, Jr. 1976. "Race and Home Ownership: Is Discrimination Disappearing?" *Economic Inquiry* 14: 59-70.
- Seaman, Jeffrey R. 1977. "A Household Life Cycle and Housing Characteristics." Unpublished master's thesis. Ithaca, New York, Cornell University.
- Straszheim, Mahlon R. 1975. *An Econometric Analysis of the Urban Housing Market*. New York: National Bureau of Economic Research.
- _____. 1973. "Estimation of the Demand for Urban Housing Services from Household Interview Data." *The Review of Economics and Statistics* 55: 1-8.
- Struyk, Raymond J. 1976. *Urban Homeownership*. Lexington, Mass.: D. C. Heath and Company.
- _____ and Sue Marshall. 1974. "The Determinants of Household Home Ownership," *Urban Studies* 2: 289-299.
- _____ and Sue Marshall. 1975. "Income and Urban Home Ownership." *The Review of Economics and Statistics* 57: 19-25.
- U. S. Department of Commerce, U. S. Bureau of the Census, 1978. Current Housing Reports, Series H-150-76. Annual Housing Survey: 1976, Part C. *Financial Characteristics of the Housing Inventory for the United States and Regions*.
- U. S. Department of Housing and Urban Development, Office of Policy Development and Research. 1978. *How Well Are We Housed? 2. Female-Headed Households*.
- _____. 1975. *Women and Housing: A Report of Sex Discrimination in Five American Cities*.
- U. S. Department of Labor, Employment Standards Administration, Women's Bureau. 1977. "Women With Low Incomes."