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DETERMINANTS OF HOME OWNERSHIP

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ABSTRACT

This paper examines the factors affecting the probability that a household will own its home. Being married, being old, living in small communities, and having a large household all increase the likelihood of ownership. An increase in income of $1000 is assoicated with an increase in ownership rates of 1.6 percentage points. And after accounting for differences in marital status, age, household size, community size, and income, there remains a difference of 17 percentage points between white and black ownership rates.

The rise in ownership rates from 46 percent in 1940 to about 62 percent in 1970 has been the result of four factors: the steady rise in incomes, the new importance of government mortgage programs, the rise in marginal tax rates for middle income families, and the suburbanization of the large cities. Changes in the demographic composition of the population have had a negative influence on ownership rates. In the future, ownership rates may continue to rise, but the increases will probably be much smaller than during the previous thirty years.

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Two previous studies, one by Maisel (1965) for four West Coast cities and the other by Kain and Quigley (1972) for St. Louis, have examined the effect of income, race, age, marital status, and family size on the probability that a household will own its home. The present study extends their work to the nation as a whole and adds location as an additional variable. Although there are minor differences in specification among the three studies, my results show, in general, that what the earlier works found for their areas is true for the entire country. Ownership rates are highly correlated with marital status, age, and family size. An increase in income of $1,000 increases by 2 percent the likelihood that a household will own its home. And, even after adjusting for other factors, blacks own less often than whites.

I. Underlying Factors

The decision of a household to own or to rent depends on four factors: the household's income, the relative price of rental and owner occupied housing, the stability of the household's demand for housing, and the type of housing desired. Income can be measured directly. Its effect on the probability of ownership will be discussed in section VIII. The relative price of owner occupied housing depends on income tax rates and mortgage terms, which at any given time are functions of the household's income. Therefore, their effect on ownership rates cannot be measured in cross-section analysis independent of income's effect. However, they do change over time independently of income, and will be discussed in section IX.

The stability of a household's demand for housing cannot be observed directly. However, differences in this stability in part explain why different age and marital groups have different ownership rates. The more frequently a household expects to move, the less likely it is to buy. The fixed costs of buying and selling houses, in terms of both money and time, make owning inconvenient if the household expects to move within a few years.[1] The household will have this expectation if it anticipates a change in its size, income, job, marital status, or tastes in the near future. Thus, young unmarried people who expect to marry and move to different housing usually will not want to own. Also a childless married couple planning for children seldom will want to own. On the other hand, families who expect no more children and do not expect to change jobs will not move, and usually will want to own.

The final factor determining ownership rates is the household's preference for apartments or single family housing. Although the choice between single- and multi-family structures affects the tenure choice, renting and living in apartments are not equivalent. In 1970, 36 percent of renting households lived in single family houses.[2] A renter is able to choose the kind of structure he prefers to live in. An owner, however, is generally restricted to single family housing. Most of the 7 percent of owners who did live in structures with two or more units in 1970 probably owned all the units in their structures. Almost all individual units for sale in multi-family structures have been luxury apartments in the largest cities. Thus, few households wanting to live in multi-family buildings are also able to own their homes. However, single family housing can easily be rented.

Before going on, some definitions might be useful. A household consists of all the persons who occupy a dwelling unit. A family consists of two or more related members of a household. A primary individual is a household head living alone or with nonrelatives. He or she is not a family or a family member. As used in this paper, previously married persons include those widowed, divorced, or married but not living with their spouse.

III. Marital Status

The marital status of the head of a household is an important determinant of the probability that the household will own its home. Almost 71 percent of households headed by married couples own their homes, but fewer than 46 percent of households with unmarried heads do.[3] Part of this difference can be explained by other than these factors. Households with married heads had median incomes in 1971 of $11,366, compared to $6050 for households with unmarried heads. Their average size was 3.6 persons, compared to 1.9 persons; 92 percent as opposed to 83 percent of them were white; and 33 percent versus 26 percent lived outside metropolitan areas.[4] All these factors are associated with higher ownership rates.

To see the effect of marital status alone on the probability of ownership, it is necessary to account for differences among marital groups in income, location, race, household size, and age. Therefore, I ran a regression with a dependent variable equal to one if the household owned its home, and zero otherwise. The independent variables included zero-one dummies for 6 age categories, 5 marital and sex categories, 6 location categories, 3 household size

categories, nonwhites, and a continuous variable--the annual earnings in dollars. Because a constant term was included, one category in each set of variables was omitted from the regression, so the coefficients represent deviations from the omitted (reference) group. Thus, for example, married couples own their homes 15.9 percentage points more often than previously married women, other things constant. The tables below indicate the level at which the coefficients in the regression are significantly different from the other variables in their group. For instance, the Marital Status table shows that the coefficient for married couples was significantly different from all other marital groups at the 1 percent level.

The data for this regression come from the Survey of Economic Opportunity (SEO). This survey was conducted in 1967 among 30,000 households selected by a nationwide area probability sample with greater frequency from poor areas. The SEO contains extensive information on income, age, race, marital history, location, and family structure. See U.S. Bureau of the Census (1963) and Survey of Economic Opportunity Sample Design and Weighting (mimeo) for details of the sampling procedure.

Table 2 presents adjusted ownership rates for the marital-sex categories following a method set forth in Bowen and Finegan (1969). These rates are linear functions of the coefficients of the ownership regression of Table 1. They are the ownership rates that each marital-sex category would have had if it had had the average distribution of the entire sample with respect to the other independent variables.

TABLE 1

Ownership Regression

Dependent Variable						
Ownership	Constant	Age	Size	Type	Location	Color	Income
	.358	-.345 (18-24)	R (1-2)	.159 (MC)	.048 Rural	R White	.162
		-.177 (25-34)	.083 (3-4)	-.026 (PMM)	-.023 Urban	-.171 Nonwhite	
		R (35-44)	.094 (5+)	-.048 (NMM)	R M<500K		
		.080 (45-54)		R (PMW)	-.053 500K<M<12 L		
		.132 (55-64)		-.034 (NMW)	-.084 11 largest		
		.215 (65+)			-.232 NY		

Age	25-34	35-44	45-54	55-64	65+
18-24	*	*	*	*	*
25-34		*	*	*	*
35-44			*	*	*
45-54				*	*
55-64					*

Location	Urban	M<500K	500<M<12 L	11 L	NY
Rural	*	*	*	*	*
Urban (non-metropolitan)		**	**	*	X
M<500K			*	*	*
500K<M<12 L				*	*
11 largest					*

Size	3-4	5+
1-2	*	*
3-4		X

Color	Nonwhite
White	*
Income	*

Marital Status	PMM	NMM	PMW	NMW
MC	*	*	*	*
PMM		X	**	X
NMM			*	X
PMW				**

R = reference group
* = statistically significant at the 1% level
** = statistically significant at the 5% level
*** = statistically significant at the 10% level
X = not statistically significant

MC = married couple
PMM = previously married men
NMM = never married men
PMW = previously married women
NMW = never married women

TABLE 2

Ownership Rates by Marital Status

	Percent of all households	Unadjusted ownership rate	Adjusted ownership rate
Married Spouse Present	69.4	70.7	69.2
Unmarried	30.6	45.7	
Previously married male head (PMM)	5.1		50.7
Never married male head (NMM)	3.6		48.5
Previously married female head (PMW)	18.0		53.3
Never married female head (NMW)	3.9		49.9

Sources: 1970 Census of Housing, HC(2)-1, Table A-8; and C.P.R., Series P-20, No. 233, Table 17.

As mentioned above, the results of the ownership regression indicate that the ownership rate of married couples is significantly higher than the rates of all the unmarried categories, at the 1 percent level. Though the difference in adjusted rates is smaller than before adjusting for other factors, married couples still own 16 percentage points more often than the next highest group, previously married women. Perhaps maintaining a single family house and commuting from the suburbs is less attractive to households with unmarried heads. A mother who must work to support herself and her children will be less likely to want to live in a large house far from her job than a wife whose husband earns the money in the family. And though many older unmarried men and women may prefer the peace and quiet of the suburbs, they may not choose to live in houses far too big for them and too difficult to clean and garden.

Among the unmarried, previously married women have ownership rates significantly higher than each of the other three groups at the 5 percent level, but the other groups are not significantly different from each other. Perhaps these women are more likely than previously married men to own their homes because they are more likely to gain possession of the family home in the event of divorce, and more likely to keep it instead of moving into an apartment in the event of widowhood. And they may own more often than the never married because, of course, the latter do not have homes bought during marriage.

IV. Age

Adjusted ownership rates more than triple from the youngest age group to the oldest. Unadjusted for differences between age groups in other characteristics, the range is even greater. When young people first set up households, little in their situations encourages ownership. Often, both husband and wife work and therefore prefer living in apartments close to their jobs. They are fairly likely to change jobs, even to change cities. Because they have no children they do not need the space of a suburban home. Probably the couple have comparatively low incomes and so they cannot easily afford suburban living. Finally, they have not usually accumulated any savings nor established credit ratings, and therefore they could not buy a house even if they preferred owning to renting.

As the couple grows older, all these conditions are likely to change. Their family will first grow, then become stable in size. The wife will usually stop working in order to care for the children and to

manage the larger house. The husband's income will start to level off, and his job security will increase. And the family will be able to afford the downpayment on the single family house which they now want to buy.

When married families reach middle age, the probability that they will own continues to increase, but at a much slower rate. A few additional families, who perhaps married late or moved to a new community, do switch from renting to owning. But most married couples have the same preference for owning at 40 that they do at 60. Even when their children leave home they often feel little need to move to smaller, rental quarters. Usually they are still in good health, have stable, well-paying jobs, and feel little pressure to move away from home and neighborhood.

Among the previously married, the older a person is the more likely that he or she was married long enough to buy a home. A young woman divorced after a few years of marriage will not own a home as often as an older woman widowed after thirty years. Even among the never married, the older people are more likely to have inherited or bought houses than the younger ones.

As Table 3 shows, adjusted ownership rates rise continously. These rates rise from 23 percent for households with the head under 25 to 84 percent for families with the head 65 or over. Tests of hypotheses that each category's coefficient is different from any other category's coefficient are all significant at the 1 percent level.

Although the increase in ownership rates is continuous, it is far from constant. As Figure 1 shows, at first the rise in the

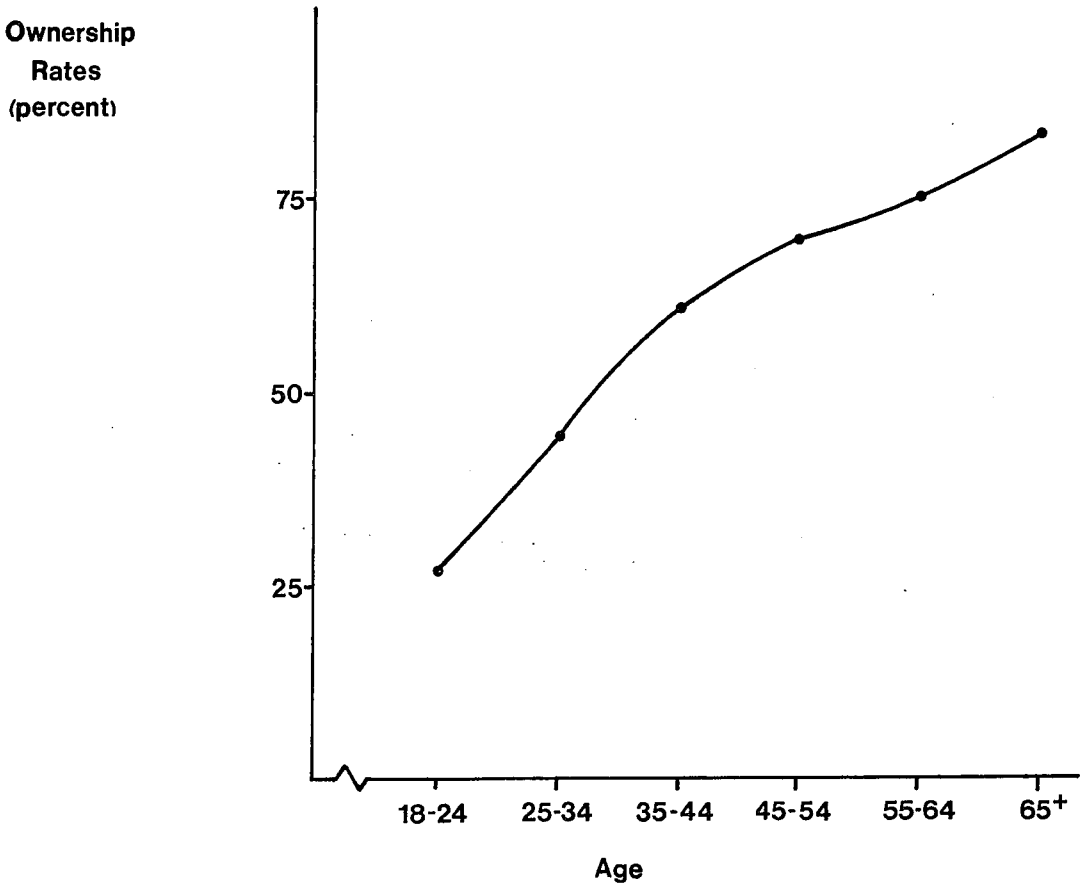
TABLE 3

Ownership Rates by Age

Age	Percent of Population	Adjusted Ownership Rate
18-24	7.3	27.4
25-34	18.4	44.2
35-44	18.2	61.9
45-54	19.4	69.9
55-64	17.0	75.1
65+	19.6	83.4

Figure 1

Ownership Rates By Age



probability of a household's owning is very steep, more than doubling from the first to the second age group. The increase in percentage points is almost as great from the second to the third category; but after age 40 the rise in ownership rates begins to level off. Only in the oldest age group does the rate of increase once more rise.

V. Color

In 1970, 65 percent of all white households owned their homes, compared to only 42 percent of all black households.[5] How much of this difference can be attributed to completely demographic differences such as age and location? How much is due to differences between the races in income and marital status? And how much is attributable to discrimination against blacks?[6]

To answer these questions, I multiplied the coefficients from the ownership regressions by the percentage of whites and by the percentage of blacks in each category, and then calculated the difference. This yields the effect on ownership rates of the differing composition of white and black households. Black household heads are somewhat younger than white heads. If the former had the same distribution by age as the latter, their ownership rate would have been 1.8 percentage points higher in 1972.

Small differences also exist in locational patterns between white and black households. After the migrations of the past three decades, whites are more rural, 26 percent versus 16 percent of blacks.[7] On the other hand, a higher percentage of blacks live in middle-sized metropolitan areas and in New York while a higher percentage of whites live in the eleven largest areas after New York. In spite of the wide differences in ownership rates among communities of different sizes,

however, the different distribution of white and black households accounts for only 1 percentage point difference in ownership rates.

Much has been made of the large percentage of black households with female heads. In 1972, 38 percent of all black households were, in fact, headed by women, compared to 21 percent of all white households.[8] An additional 12 percent of black households were headed by unmarried men versus 9 percent for whites. Only 50 percent of black households but 70 percent of white households were headed by married couples. This large difference in marital status accounts for a difference in ownership rates of 3.5 percent.

Finally, differences in average income between whites and blacks explain a larger portion of differences in ownership than any of the other factors. In 1971, median household income for whites was $10,619 but for blacks, only $6,767.[9] According to the results of the ownership regression, this implies a difference in ownership rates of 5.1 percentage points.

To adjust for all these differences between whites and blacks simultaneously, I included a dummy variable for nonwhites in the ownership regression. As shown in Table 1, the coefficient for this dummy was -0.17, significant at the 1 percent level. This difference is probably due to discrimination in two markets, housing and credit. If blacks are excluded from suburbs and restricted to high density urban neighborhoods, they will be forced to live in multi-family structures. and thus forced to rent. In cities where single family housing is available to blacks, banks may have more stringent requirements for them than for white borrowers. A black household with equal income, age, family size, and marital status to a white household may have more difficulty obtaining a mortgage or may receive worse terms than the white counterpart.

VI. Location

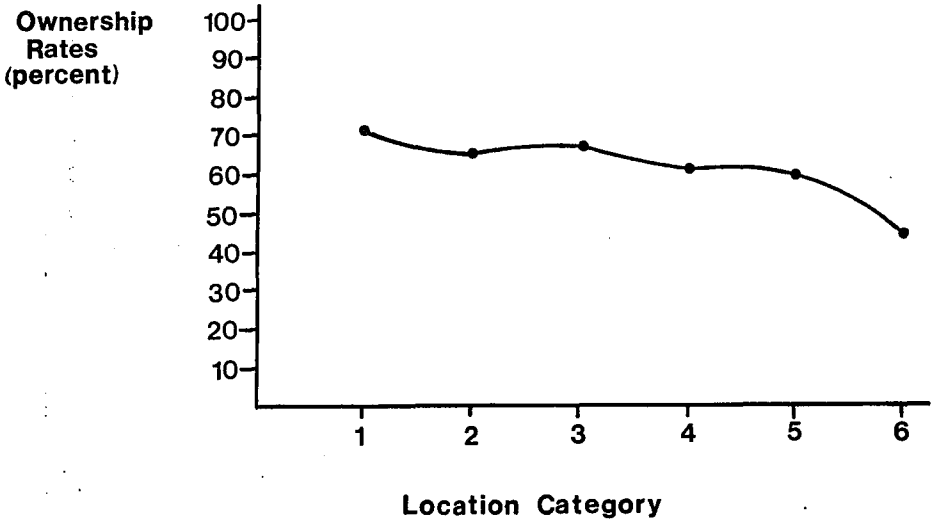
The population of a community is negatively correlated with ownership rates. The larger the community, the more time residents must spend going from their homes to jobs and stores. Land prices should reflect these transportation costs. As land prices rise--and implicit transportation costs rise--some households will be willing to trade off land and privacy for travel time and will choose to live in multi-family housing instead of single family housing. Thus, high density is the result of great size. And since individual units in multi-family structures are rarely for sale, there is more ownership in small communities than in large ones, other things equal.

To measure the effect of size of community on ownership rates, I included dummy variables for six categories in the ownership regressions: (1) rural areas, (2) nonmetropolitan urban areas, (3) metropolitan areas of less than 500,000, (4) metropolitan areas of more than 500,000 but less than the 12 largest ones, (5) the 11 largest metropolitan areas after New York, and (6) the New York Standard Consolidated Area.[10]

Area.[10]

Figure 2

Ownership Rates By Location



The location coefficients from the ownership regression are shown graphically in Figure 2. Except for nonmetropolitan urban areas, ownership rates adjusted for age and marital status of head, family size, color, and income decrease with size. Occasionally adjacent location groups have rates close to one another, but ownership rates for most adjacent groups, and for all other groups, are significantly different from all other groups at the 1 percent level.

VII. Household Size

The probability of owning increases with household size primarily because larger households almost always include children. Table 4 shows the percentage of households of different sizes that have one or more children of the head. Other things equal, childless households will more often prefer apartments to single family houses than households with children. Quiet streets, large backyards, and all white neighborhoods in the suburbs are usually considered more desirable for children, especially school age children, than for adults. While for their own convenience, adults might prefer to live close to jobs and recreation downtown, they usually move farther out for the benefit of their children. Living in apartments, they are forced to rent. But given the choice of renting or owning a single family home, they usually buy.

TABLE 4

Ownership Rates and Presence of Children Under 18, by Household Size

Size	Percent with Children	Adjusted Ownership Rate
1 person	0	59.5
2 persons	5	
3-4 persons	76	67.8
5+ persons	95	68.9

Source: C.P.R. Series P-20, No. 246, Table 10.

Table 4 indicates that once marital status, income, and the other factors discussed in other sections are taken into account, there are significant differences in ownership rates between families with less than three members and those with three or more. Differences between one and two person households are very small, as are differences between households with three or four and those with five or more members. These differences match the percentages of families with children. By definition, no one-person households contain children, and relatively few two person households do. However, the percentage of three or four person households with children is not much less than the percentage in larger households.

VIII. Income

From the point of view of the policymaker, the effect of income on ownership rates is probably more interesting than the other determinants discussed so far. The government has no control over the age, sex, or marital characteristics of the population. It seems to have no control over--or at least no real desire to control--the factors affecting racial differences in ownership rates.[11] The government does have some direct control, however, over incomes, especially over incomes of groups in the population whose housing is often considered inadequate and whose ownership rates are judged to be too low.[12] Thus, it is especially interesting to know just how responsive the ownership rates of different groups are to changes in income.

There are several reasons why rich households own more often than poor ones. First, because the imputed rent from owner occupied homes is exempt from income taxation, owners receive an additional return on

this form of property equal to their marginal tax rate times the imputed rent. As incomes rise, marginal tax rates rise, and the advantage of investment in owner occupied housing over other forms of investment also rises.

Second, most units small enough and inexpensive enough for poor people to afford, at least in cities, have been in multi-family structures. Many of these structures were originally built for individual families, only later to be carved up for the poor. As upper or middle class single family units deteriorate, families who could afford housing of that size do not want housing of that quality. Zoning and building code restrictions on minimum sizes for single family housing have also forced the poor to live in apartments, hence to rent. Individual units in multi-family structures are seldom for sale.

Third, poor people may have difficulty in saving enough to meet the downpayment requirements for purchase. They may be able to meet the current expenses of owning a home, but still be unable to raise the capital. Likewise, if they have no reserves for an emergency, they may be less willing than richer households to assume the risks which homeownership entails. Many poor families may choose to rent rather than own so that if the furnace breaks down, the landlord--and not they--must buy a new one.

Finally, even if poor households did prefer single family houses, could raise the downpayment, and were willing to assume the risks of ownership, mortgage lenders might not be willing to lend to them. Not only banks, but also the FHA, have minimum limits on the credit worthiness of the borrower, judged partly by his income, the condition of the home he wishes to buy, and even the neighborhood he chooses

to live in. While these restrictions may make business sense, they prevent poor people from buying houses they can afford, houses of low quality in deteriorated neighborhoods.

In order to allow the measured effect of income on the probability of ownership to vary for different age and marital groups, separate regressions were run for married families, unmarried families, and individuals. Separate regressions for married and unmarried families were also run for households with heads over and under 35. The coefficients on the other independent variables for these eight subgroups differed slightly in size from those of the entire sample, but the general patterns were in all cases the same. Therefore, these results are not shown, except for the income coefficients presented in Table 5.

TABLE 5

Increase in Probability of Owning per $1000 Increase in 1966 Income

	Married Families	Unmarried Families	Individuals
Young	3.29	3.20	*
Old	1.31	2.70	0.8
All	1.49	2.75	0.81

* Too small a sample.

The income term in all these ownership regressions was thousands of 1966 dollars of family income. Thus, the coefficient can be interpreted as the expected change in the probability of owning resulting from each $1000 change in income. For the entire sample, this change is 1.62 percentage points per each $1000. The income coefficient for young married families is more than twice as large, while the coefficient for older married families is slightly lower.

Older owners whose incomes have decreased since they bought their homes will be slow to readjust their consumption of housing by moving to smaller quarters. Young renters whose incomes have recently increased, on the other hand, will be quick to move up. They will not have strong ties to their apartments but will eagerly change their living arrangements as soon as they can afford to do so. Thus, differences between richer and poorer among the young will be kept sharp, while differences among the old will grow fuzzy.

When older families do bring their housing consumption into line with their reduced incomes, however, their responsiveness to income differences is much closer to that of younger married families. The income coefficient from a regression of older married families who did not move in the five years prior to the survey data was 1.2. The coefficient from a regression of similar families who did move was 2.3 percentage points per $1000, almost twice as large. The difference in coefficients between young married movers and nonmovers, on the other hand, was not so great. The former coefficient was 2.8, while the latter was 3.3.

These arguments do not seem to apply to unmarried families. Most of these households are headed by previously married women. The change in probability of ownership is high for unmarried families with heads above and below 35 years. Perhaps the departure of the spouse from the household, through death or divorce, forces faster readjustment to lower incomes than the departure of children who have become adults. However, the extremely low sensitivity of individuals' ownership rates to income seems to contradict this.

All these estimates of income elasticities have been based on one year's measured income. Since owning is a long-run commitment to a

specific form of consumption, one might expect that elasticities using permanent income might be considerably higher than the ones presented above using measured income. To examine this possibility, I ran ownership regressions on data from the Panel Study of Income Dynamics, conducted by the University of Michigan Survey Research Center. This study included income data for four years, plus all the other variables used in the ownership regressions above.

Two definitions of income were used in these regressions, the current year's measured income and a weighted average of the last four years' income. The weights were set at .4, .3, .2, and .1, with the most recent year receiving the heaviest weight. The coefficient on measured income was 1.18 points per $1000 with a standard error of .11; and the coefficient on permanent income was 1.37 with standard error of .11. The coefficients on the other independent variables were also very close to those estimated from the SEO data. Thus, although using measured income might result in some downward bias in the estimate of income elasticity of ownership, this bias does not appear to be large.

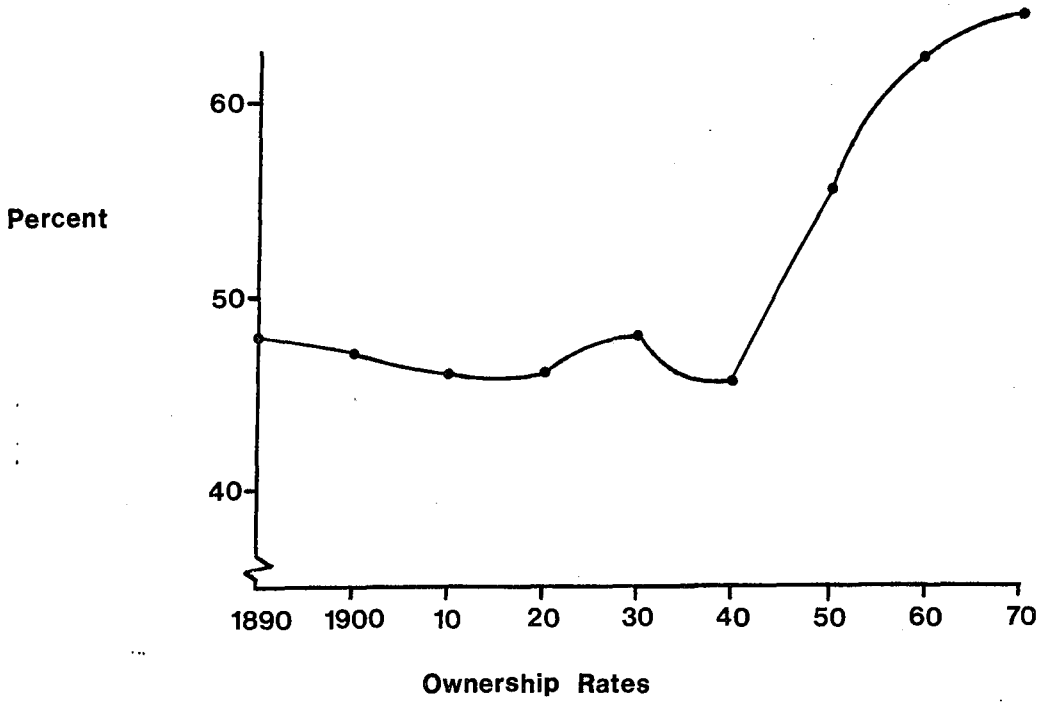
IX. Changes in Ownership Rates over Time

During the last eight years, changes in ownership rates have been determined by different factors during different periods. From 1890 until 1940, changes in income and location usually offset each other, and the percentage of homeowners fluctuated within narrow limits. Since 1940, however, income and price changes have reinforced one another, and ownership rates have risen dramatically. Some further increases may be expected, but the rate seems to be reaching a maximum. In any event, the rate of increase in the ownership rate has slowed in the last decade.

As Figure 3 shows, the ownership rate among all households fell from 47.8 percent in 1890 to a low of 45.6 percent in 1920, then rose during the prosperity of the next decade to its earliest high, only to fall again to 45.7 percent in 1940. When rates for farm and nonfarm are shown separately, the former show a steady decline while the latter generally rise. Since 1940, the rise in ownership has been sharp and uninterrupted, for both farm and nonfarm housing.

Figure 3

Ownership Rates, 1890-1970



This dramatic rise must be attributed to four factors: the steady rise in incomes, the new importance of government mortgage programs, the rise in marginal tax rates for middle income families, and the suburbanization

of the large cities. Changes in demographic factors have had a negative impact on general ownership rates. Shifts in the distribution of households by size, marital status, color, and location between 1940 and 1970 have all tended toward groups with below average ownership rates. Only shifts in age have been toward groups with higher rates. If the relationship between these five variables and ownership had remained unchanged between 1940 and 1970, shifts in the distribution of households would have produced a decline in ownership rates of 3.4 percentage points.

The rise in incomes, however, more than offset this. Between 1941 and 1970, median household income climbed from $3850 to $7430 in 1967 dollars, an increase of $3570.[13] The ownership regression indicated that such an increase would result in an increase in ownership rates of 5.8 percentage points.

The three remaining factors responsible for the large increase in ownership rates cannot easily be quantified, but are significant nonetheless. First, government mortgage programs have lowered the income necessary to buy a house and have reduced the price of owning relative to renting. Before these programs were established in the mid-1930s. conventional mortgage terms usually permitted a loan lasting 5 years, at interest rates several points above prime rates.[14] Since FHA and VA lending became important, not only for their own lending but also for the example they set for commercial lenders, terms have become much easier. As was discussed in the previous chapter, high downpayments inhibit buying by families who might be able to afford monthly mortgage payments. Lack of money for the downpayment has been a far greater obstacle to home ownership than high interest or short mortgage life.[15]

Therefore, the reduction of downpayment to 10 percent--or even to nothing--enormously increased the number of households who could buy.

Government mortgage programs have also changed the price of owning relative to renting, by lowering the monthly payments through longer, fully amortized mortgages and lower interest rates. Monthly mortgage payments for a housing unit of given value are very sensitive to interest levels and mortgage life. As a result of government programs, these terms have substantially improved for both owner occupiers and for owners of rental property. However, the improvement in terms available to the former has been greater than to the latter, and thus the price of owning relative to renting has declined.[16]

Also important in decreasing the relative price of owning has been the greater return demanded by investors in rental properties. After the enthusiasm of the twenties, the disasters of the Depression of the thirties, and the inflation and rent controls of the forties, potential landlords concluded that rental housing was much riskier than they had thought earlier. In the fifties and early sixties, therefore, they demanded higher returns before they would invest than they had in decades before the Depression.[17] Thus, the number of new rental units was very small, though how much of this was due to decreased supply and how much to decreased demand is not clear.[18]

Another factor decreasing the relative price of home ownership has been the increase in marginal tax rates for middle income families and the exclusion of imputed rent from taxable income. Before World War II, only the rich paid significant income taxes. Since 1940, however, middle income families have also been taxed at rates high enough to make them eager for deductions and exemptions. Income tax laws provide these by allowing owners deductions for property taxes and mortgage interest

payments, but not including imputed rent in taxable income. Net income from most investments other than owner occupied housing is taxable, but the rent that owners in effect pay to themselves is not.[19]

Aaron (1970) estimated that homeowners in 1966 paid $7 billion to $9 billion less in income taxes than they would have if imputed rent had been taxable. And Goode (1967) calculated that in 1965 the exclusion resulted in an average saving to homeowners equal to 12 percent of their housing expenses. Neither author estimated the price elasticity of ownership, but unless it is extremely low, the post-1940 tax incentives to owning have been important in the rise of ownership rates.

The final factor increasing ownership rates has been suburbanization. The decrease in the density of housing in large metropolitan areas and the dispersion of employment and commercial activity away from the center of large cities has been the result of the rise in ownership, but it has also been a cause. Ownership first rose because incomes rose and because of government programs and tax rules discussed above. Since individual units were seldom for sale in multi-family structures, families that wished to buy generally had to live in single family houses, which almost all of them preferred in any event. Single family housing meant living in a low density community, often outside the limits of the central city. In this way the rise in ownership rates contributed to suburbanization.

Once families began moving to the suburbs, governments at all levels began building better roads to decrease the cost in travel time of living far away from city centers. Merchants moved to shopping centers, and factories and offices moved to industrial parks, decreasing

the advantage of living close to the center. These developments changed the trade-offs between the advantages of home ownership and the advantages of living close to downtown in a rented apartment. Moving to the suburbs did not force households to own, since they could easily rent single family homes or rent suburban apartments. It did, however, allow people to live near jobs and stores and still own. In this way, suburbanization contributed to the rise in ownership rates.

This effect of suburbanization should not be exaggerated, however. It applies only in large urban areas, since in smaller ones and in rural areas, there is little advantage to living in high density rental apartments close to downtown. The increase in ownership rates in large cities has been large, but so has the increase in the other areas. Unadjusted rates for rural households increased from 53 percent in 1940 to 76 percent in 1970, while the rate in the New York area rose from 24 percent to 42 percent.[20] In the next 11 largest SMSAs, the rate went from 39 percent to 50 percent. Of course it is possible that without suburbanization and with the population growth of the last thirty years, the forces inhibiting home ownership in the large cities would have been much greater. In any event, the increase in rates since 1940 has occurred throughout the country.

X. Conclusion

In summary, over the last thirty years ownership rates have risen from 46 percent to 64 percent. Assuming relationships unchanged, shifts in the distribution of households by age, marital status, race, size, and location have produced a decrease of 3.4 percentage points. The rise in income since 1940 has resulted in an increase of 5.8 points. The remaining 12 points must be attributed to lower downpayments, to an

improvement in interest and mortgage length greater for owner occupiers than for owners of rental units, to higher marginal tax rates covering far more households, and to the decreased attractiveness of living close to downtown.

What changes in ownership rates are likely for the future? The demographic composition of households will continue to shift toward these groups with low headship rates. Using projections of the Census Bureau for households by age and marital status from 1970 to 1985, and again assuming relationships unchanged, shifts in composition will tend to decrease ownership rates by 2.7 percentage points in the next fifteen years.[21] Shifts by color should not be important, but as headship rates of unmarried people continue to rise faster than married headship rates, family size should decline. If the birth rate remains at its current low level, the decline will be even greater. The effect on ownership rates will be a decrease of about one point.[22] Finally, continued migration from rural to metropolitan areas should further decrease ownership rates. If the percent of the population that is rural falls from its present 21 percent to 10 percent, with percentages in cities of different sizes increasing equally, the effect would be a decline in ownership rates of 1.3 points. The total effect of changes in these five demographic factors would be five percentage points.

The effect of rising household income on ownership should continue to be substantial during the next fifteen years. Assuming income growth of 3 percent a year, ownership rates should rise by 6.3 percent

The remaining factors that contributed to the large rise in ownership rates over the past thirty years will probably not be so important during the next fifteen. The effects of easier mortgage lending and of

higher tax rates covering more households have already been fully worked out. Although exact credit terms and marginal tax rates may vary somewhat, the long-run changes will not be large. Only significant new programs have any chance of changing ownership rates dramatically.

The Section 235 Homeownership Program, which insures mortgages of low income families and pays part of the interest charges, might increase ownership among the poor if it were generously funded and carefully administered. If this program were expanded to include middle income families as well, ownership might in fact increase considerably. However, during the first few years of operation, this program has been accused of giving excessive profits to housing contractors and of having too high a rate of foreclosures. It seems very unlikely that this program will continue in the future even at its past level of operation.

The effect of continued suburbanization is also not likely to be large. While in the largest cities, especially older eastern ones, there are still many families who might own if there were no advantage to living in high density rental apartments, more often income or race are more important in keeping them renters. Among higher income families, it is quite possible that condominiums and cooperatives may loosen the connection between living close to downtown and renting. Especially if this development is further stimulated by the government, it may have considerable effect on ownership rates in large metropolitan areas.

The foregoing analysis suggests that ownership rates may continue to increase, but at a much slower rate than in the past thirty years. Changes in demographic factors will be offset by increases in income, while the importance of other factors is difficult to assess. Martin (1966) tried to predict the level and percentage of the total of single

family and multi-family housing starts in the Los Angeles metropolitan area by using 1960 cross-sectional relationships and predictions of population growth, and failed quite badly. He anticipated that 35 percent of new housing starts during 1960-65 would be apartments, but the actual percentage was around 65 percent. He attributes the failure of his model to a change in the nature of apartments and subsequent increase in demand for the more attractive dwellings. Furthermore, he did not have adequate information about new households migrating to the area.

Though the question Martin attempted to answer is not the same as mine, his example points out the difficulty of predicting future changes from existing cross-sectional relationships. It is hard to predict that apartments will begin to have swimming pools, that condominiums will become vastly more popular, or that government subsidies to low income families will be much more generous. My prediction that ownership rates will continue to rise but more slowly than in the recent past, should therefore be viewed with caution.

FOOTNOTES

[1]Shelton (1968) estimated that owning is cheaper than renting for households who do not move for four years or more.

[2]1970 Census of Housing, General Housing Characteristics, U.S. Summary, HC(1)-A1, Table 3.

[3]Ibid., HC(2)-1, Table A-8.

[4]Current Population Reports, Series P-20, No. 246 and Series P-60, No. 85, Table 27.

[5]1970 Census of Housing, HC(2)-1, Table A-8.

[6]If all discrimination, direct and indirect, ended tomorrow, some blacks might prefer to stay in their existing communities even though physically better and less expensive housing existed elsewhere. This, in fact, may be a cause of lower ownership rates among Italians or Poles who choose to live in apartments in central city ethnic communities rather than in houses in the suburbs. However, blacks have also formed ethnic communities in the suburbs, so they might not have to choose between owning and living together. In any event, discrimination presently far outweighs taste as a cause of lower black ownership rates.

[7]1970 Census of Housing, HC(1)-A1, Tables 10, 15, and 18.

[8]C.P.R., Series P-20, No. 246, Table 8.

[9]C.P.R., Series P-60, No. 85, Table 24.

[10]The 11 largest after New York include Baltimore, Chicago, Cleveland, Detroit, Houston, Los Angeles, Philadelphia, Pittsburgh, St. Louis, San Francisco, and Washington. New York and Chicago are Consolidated Areas. The others are Standard Metropolitan Statistical Areas.

[11]In 1960 the difference between unadjusted white and nonwhite ownership rates was 26.1 points. In 1970 the difference between white and black rates was 23.5 points. See 1960 Census of Housing, Vol. II, Part 1, Tables 7 and 13, and 1970 Census of Housing, Advance Reports, HC(V1)-1, Table 2.

[12]The Section 235 Homeownership Program of the 1968 Housing Act was an attempt to change the relative price of owning versus renting, as faced by poor people.

[13]Historical Statistics of the United States, p. 166, and CPR, Series P-60, No. 80, p. 27. Incomes are in 1967 dollars because the cross-section regressions are in those terms.

[14]Ring and North (1967), p. 154.

[15]In a survey of 1500 families, Gelfand (1966) found that raising the loan/value ratio had a far greater effect on the percentage of households that could afford to buy than lowering interest rates or lengthening mortgage life.

[16]Haar (1960), in arguing for greater federal encouragement of rental housing, claims that the change in terms has been very important in explaining the rise in ownership. Grebler (1956), p. 27, is less sure, though he does not deny some effect. He points out that there have also been FHA rental programs.

[17]Grebler (1955) documents the very low rate of return between 1930 and 1950 on rental housing. However, Winnick (1958) thinks that these risks were overestimated during the fifties, and hopes that investors would reevaluate them in light of postwar experience and likely future demand.

[18]In 1960 only 22 percent of new units were in structures with two or more units, compared to 42 percent in 1969. New single family houses are almost always for sale, other units are usually for rent. See Statistical Abstract, 1970, p. 679.

[19]Rates of return to the other investments, such as municipal bonds, are discounted to account for the tax free status. However, since investors and owner occupiers compete for the same houses, this does not apply to imputed rents.

[20]1940 Census of Housing, Vol. I, Part 1, Tables 5 and 26, and 1970 Census of Housing, Vol. I, Part 1, Tables 10 and 15.

[21]CPR, Series P-25, No. 388, Table 13.

[22]Ibid., Table H.

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