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The Determinants of Home Ownership: An Application of the Human Capital Investment Theory to the Home Ownership Decision

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The Determinants of Home Ownership: An Application of the Human Capital Investment Theory to the Home Ownership Decision

Abstract

The purpose of this paper is to test family income, race, gender, educational attainment, parental home ownership, age, marital status and family size to determine the factors of home ownership. This paper differs from past research in that it applies human capital investment theory to the home ownership decision. In Section II, I explore the human capital investment theory and adapt it to the home ownership model. Section III develops the empirical model while section IV interprets the results. Section V summarizes the paper and provides concluding remarks.

The Determinants of Home Ownership: An Application of the Human Capital Investment Theory to the Home Ownership Decision

By Jaclyn K. Hood

I. INTRODUCTION

Over the past years, the vast changes in the economy and society have called for the re-evaluation of the determinants of home ownership. In essence, the impact of these determinants has fluctuated with the economic changes. Some factors, such as marital status, remain important to the home ownership decision; however its effect has weakened. Other factors have experienced a steady increase in their impact on home ownership. For example, the impact of the level of education is now just as important as the presence of children in a household. Also, first-time buyers are increasing in age as well as income levels. This is most likely reflecting the steep increases in the real cost of “affordable housing.” One factor that has remained the same is the impact of race. No matter what the level of progression of minorities in society, economically many remain below the wealth constraint for home ownership (Gyourko and Linneman, 1996).

The purpose of this paper is to test family income, race, gender, educational attainment, parental home ownership, age, marital status and family size to determine the factors of home ownership. This paper differs from past research in that it applies human capital investment theory to the home ownership decision. In Section II, I explore the human capital investment theory and adapt it to the home ownership model. Section III develops the empirical model while section IV interprets the results. Section V summarizes the paper and provides concluding remarks.

II. THEORY

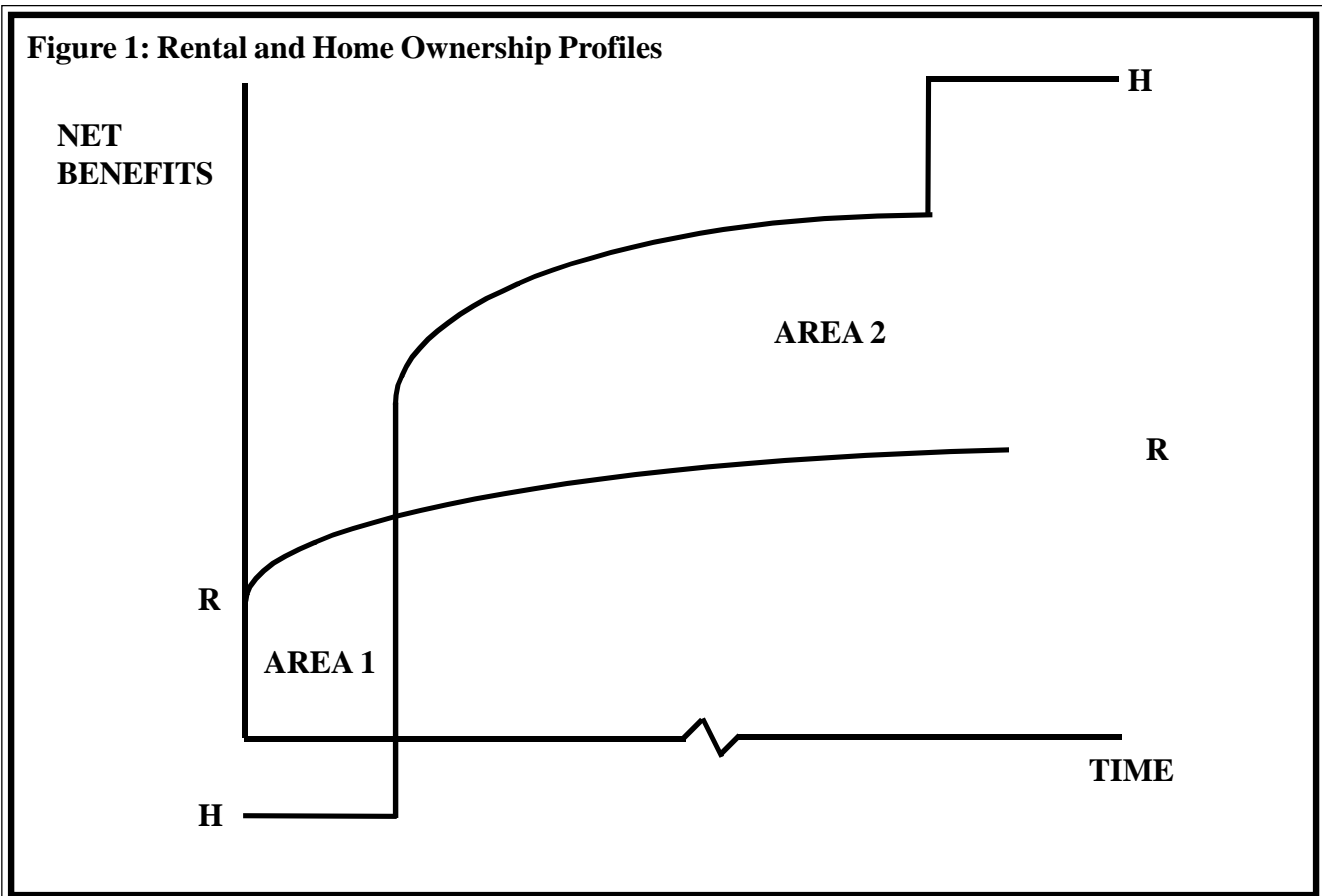
The human capital investment theory explores the idea that any activity that increases the productivity of labor may be considered as

investment in human capital. This theory involves determining the present value of cost and benefit streams associated with investment. These investments include expenditures on education, training and retraining. One characteristic of investment is that current costs are incurred with the expectation for future returns. In terms of human capital, individuals make expenditures on education and training thereby enhancing their knowledge and skills. This leads to an increase in future earnings. Similarly, an individual incurs initial costs through a home purchase in anticipation of benefits (such as equity) in the future. The primary point is that expenditures on education and training is understood as investment in human capital just as expenditures in housing can be treated as investment in housing capital.

The next section adapts human capital investment theory to the home ownership decision. It follows the human capital investment theory as depicted by Campbell R. McConnell and Stanley L. Brue in their book, *Contemporary Labor Economics*.

A. The Home Ownership Model

The model for home ownership is similar to that of human capital. First of all, there are costs associated with the housing investment model, primarily in the first year of ownership. These costs are directly related to the purchase of a house such as a downpayment, mortgage payments, an insurance policy and special fees including closing and attorney costs. A few costs, such as taxes, occur every year during the ownership lifetime. There are also benefits associated with this model. Benefits of home ownership include such aspects as space (several rooms and a yard) and more importantly, the pride of home ownership. Another thing to



consider in the home ownership model is the role of equity at the end of the ownership life. Equity is strictly associated with home ownership and not rental properties. At the end of his ownership life an individual has a major asset, namely a house, through which he may realize capital gains as well as other benefits. Essentially, all costs that are incurred through the purchase of the house may be returned through its sale.

Graphically, this model is interpreted in Figure 1. A potential benefits stream is indicated by curve RR, where a person has decided to rent over the course of his ownership life. This curve is net of costs which means both costs and benefits are depicted by RR. Curve HH represents the net benefit stream associated with a housing purchase. The first leg of the HH curve represents the costs, or negative benefits, incurred during the first year of home ownership. The middle section of the HH curve is the net benefits incurred over the ownership life while the final leg of HH is the equity received at the end of the ownership life. Area 1, designated

below the RR curve and above the HH curve during the first year, represents the initial cost accrued through home ownership. The initial cost is the total investment in the purchase of a home. The difference between curves RR and HH (Area 2) represents the additional net benefits a home owner will realize over the course of his ownership life compared to those of a renter.

B. Discounting and Net Present Value

A rational homebuyer bases the home ownership decision on a comparison of costs and benefits. Since costs and benefits accrue at different points of time, they must be compared at a common point of time. Therefore, the net present value of the present and future costs and benefits of home ownership will need to be determined. In order to do so, the concept of time preference must be considered. This explores the notion that today's dollars are worth less than those of next year or several years from now due to the interest rate associated with borrowing dollars. Thus, time

preference can be viewed as preference of present consumption over future consumption. Basically, time preference takes into account the fact that people are impatient and prefer a basket of goods in the present over the same basket in the future (prefer the costs and benefits in the present rather than those associated with the future). Consequently, an interest payment is necessary to defer present consumption to the future.

Home ownership also includes risk. Risk associated with home ownership includes various events, economic and otherwise, including unexpected depreciation of value or a catastrophic loss. Therefore, when specifically discussing the present value of home ownership, the discount rate will include a component (r) which will account for risk.

Due to the previous reasoning and the fact that a future dollar is worth less than today's dollar, the preference for present consumption requires a positive interest rate. Essentially, a dollar today can be loaned or invested at a certain interest rate and be worth more than a dollar a year from now. Algebraically, this is:

$$V_p(1 + i + r) = V_1$$

where V_p = present value
 V_1 = value 1 year from now
i = interest rate
r = risk factor

Rather than determining the future value of a present dollar, it is important in this study to determine the present value of a future dollar. This is portrayed in the discount formula:

$$V_p = V_1 / (1 + i + r)$$

However, this study is comparing the costs and benefits over several years which results in an extension of the discount formula. Thus, applied to home ownership:

$$V_p = B_0 + B_1/(1 + i + r) + B_2/(1 + i + r)^2 + B_3/(1 + i + r)^3 + \dots + B_n/(1 + i + r)^n + \text{Expected Equity in } n/(1 + i + r)^n$$

where B_0 = stream of incremental benefits
 B_1 = additional benefits received next year
n = duration of benefits stream over ownership life
i = interest rate
r = risk factor

The immediate incremental benefits (or costs) incurred, B_0 , are not discounted. However, the incremental benefits incurred the following year, B_1 , must be discounted by one year. Observe that the power of each successive denominator is equivalent to the number of years that benefit stream must be discounted to determine its present value. Therefore, the equation may be restated as:

$$V_p = \sum_{n=x}^z B_n / (1 + i + r)^n$$

This equation simply states the present value of the sum of the discounted incremental benefits over an individual's ownership life. The ownership life is indicated by the range of *n* from *x* to *z* where *x* is the year of the housing purchase and *z* is the end of the ownership life (through sale, catastrophic loss, death of individual, etc.). This range is unique to each individual and, therefore, can not be assigned a specific range.

It is important to recall that the decision to buy a home consists of both costs and benefits. In order to keep this model to one equation, costs will be treated as negative benefits (Area 1 in Figure 1) and are generally apparent in the first year of home ownership (B_0). This year will be negative, representing the initial cost incurred during the first year. In the following years, the sum will, in most cases, be positive since benefits are expected to exceed costs. By accounting for both the costs and benefits in this equation, the result of this equation is the net present value of home ownership. Recall that the rental curve, RR, is net of rent (or costs). Therefore, the stream of net benefits for RR will generally be positive, however, it will have little variation as it spans rental life. The difference between the two curves is the incremental net benefits of home ownership depicted by the area below the HH curve and above RR (Area 2 in Figure 1).

C. Decision Rule

The decision rule developed through the previous calculations is that a prospective home owner should invest in a house if the net present value of the benefits is greater than zero. That is:

$$V_p (\text{Net Benefits}) > 0$$

However, this rule is subject to a wealth constraint. An individual will not invest in a home if he does not have the wealth to do so. To a financial institution, wealth is collateral and is necessary to secure a loan or mortgage. Therefore, this decision rule is only followed if an individual has the wealth (ability to receive a loan) to invest in a home. A positive present value of net benefits leads to a housing investment if and only if an individual has the wealth to do so. After considering the wealth constraint, a positive value suggests that the present discounted value of the benefits exceeds the present discounted value of the costs. Thus, the decision to invest in a house is economically rational. Likewise, a negative value means that the costs are greater than the benefits and an investment would not be rational.

D. Generalizations

The home ownership model has considerable explanatory power. Three generalizations arise from the basic model. All else equal, the longer the stream of post-investment incremental benefits, the more likely the net present value of an investment in housing will be positive. A housing investment made for a shorter period of time will have a lower net present value because there will be fewer years of positive incremental benefits after the completion of the investment. For example, if an individual has a high mobility rate (tends to relocate often), his stream of incremental benefits may be rather short and therefore lead to a low or even a negative net present value. Next, other things constant, the lower the cost of a housing investment, the more likely an individual will find that investment profitable. For example, when mortgage rates are low, an individual is more likely to invest in housing. Finally, other things constant, the larger the benefits differential, the more likely

an individual will invest in housing. If the benefits of home ownership drastically outweigh the costs, then housing investment is more likely.

III. RESEARCH DESIGN

The factors in home ownership fall into two categories: constraints and net benefits. Constraints in the home ownership decision include race, gender and educational attainment. The determinants of net benefits include age, marital status and family size. Some determinants, such as net family income and parental home ownership, affect both benefits and costs.

Net Family Income. The net family income has both a direct and indirect influence on the home ownership decision. It is related directly in that as the net income rises within a family, the taste for home ownership also rises. A higher income has more potential to cover the initial costs incurred by home ownership. Income is indirectly related because as income rises, the costs of home ownership decreases. Given that costs are constant, as income increases, the costs become an increasingly smaller proportion of the income. This creates greater value of investment in a non-taxed asset for investors in higher income brackets (Haurin, Hederschott and Ling, 1987).

Race. Race is also a factor in home ownership. However, Joseph Gyourko and Peter Linneman found that discrimination is not the cause of the impact of race on the investment decision. Rather, the cause is more likely associated with the increasing cost of housing (due to large downpayments, fees and zoning) and the inability of black households to meet the wealth constraint. This is related to the lack of intergenerational wealth transfers from their parents, transfers to which white households with similar characteristics may have access. Basically, suburban land use policies have raised the cost of home ownership and “disproportionately punished members of the middle class whose parents cannot transfer wealth for downpayments” (Gyourko and Linneman, 1995).

Gender. The gender of the head of the household is also important in home ownership. Males often have higher incomes which are more certain. Certainty of income is important with

gender because males will, most likely, never leave the workforce for such expected events as child bearing and rearing. Following the same lines as the age factor, males have the opportunity to gain more experience in the workforce (by working continuously over their work life) and even more with a particular company. Therefore, males are more likely to at least maintain a certain level of income. Since males have these higher, more certain incomes, they are more likely to secure a loan or mortgage. Thus, males are more willing to commit to home ownership.

Education. The level of educational attainment also will determine the home ownership decision. An individual with a high level of educational attainment will often have a good job with a generous salary. A higher income provides an individual with the funds to cover the initial costs incurred through home buying. Also, an individual with more education often saves more of his income which creates the capital and wealth to secure a loan. Therefore, he has a greater ability to be approved for a mortgage. Because of this link between education, income and savings, an individual's educational attainment will influence his home ownership decision.

Parental Home Ownership. Whether or not the parents of an individual owned a house is important to the home ownership decision. First of all, children often look to their parents as financial examples. Parental tenure choice may condition the child's home ownership decision (DiSalvo and Ermisch, 1997). Second, parents who own homes often have a certain level of wealth which creates intergenerational transfers for their children- assets and wealth to pass down to future generations. Individuals with lower levels of educational attainment and stagnant or declining real incomes often become home owners due to better access to intergenerational transfers from their parents (Gyourko and Linneman, 1995). Also, children of home owners are aware of the costs and benefits associated with home ownership and, thus, are more able to accurately assess the net benefits of home ownership. Therefore, if the parents own a home then their children also are more likely to own a home.

Age. Age is also a major determinant of home ownership for several reasons. First, older households have higher incomes. These households have spent more years in the workforce and their incomes have most likely risen with their level of experience. Older households are more financially prepared to cover the cost of a housing investment. Older households also have more certainty of income. As a household gains increasingly more experience in the workforce or with a particular company, it is more likely that it will, at least, maintain a certain level of outcome. In other words, as a household's level of experience increases, it is less likely to lose its income altogether in the near future. Thus, older households are more likely to commit to home ownership. Also, older households have more wealth. This means that an investment in housing is more easily diversified and a smaller proportion of the wealth of older households contributes toward the housing investment. This leads to a preference for home ownership. Finally, older households are also less mobile - they tend to relocate less often than younger households. Therefore, their annual-equivalent transaction costs are lower which makes home ownership more attractive (Haurin, Hederschott and Ling, 1987). It is important to realize that there is an offsetting effect. As an individual grows older, his prospective ownership life is shorter. This creates a shorter stream of benefits that potentially could be negative. However, older households may have the wealth to cover the initial cost of home ownership and obtain their desired level of net benefits.

Marital Status. The marital status of an individual will also affect home ownership. Married couples are often interested in "settling down" and are therefore less mobile than unmarried individuals. Less mobility leads to lower annual-equivalent transaction costs in a housing purchase and likelihood of home ownership. Married couples also often pool their income and wealth. By pooling their income and wealth, they may be able to cross the wealth constraint that prevented home ownership as single individuals. Finally, married couples often forecast a future with children and will want to provide a stable environment to raise them. With more people in a household, the level of net benefits

of home ownership increases. Hence, married couples are looking to make long term investment decisions with their money. With the equity and net benefits that home ownership provides, it is a smart investment decision. Therefore, if an individual is married, he has a greater probability of owning a home. Past studies have found that, with rising incomes, the impact of marital status is declining. Even so, it is still a strong influence in the home ownership decision (Gyourko and Linneman, 1995).

Family Size. The last factor in the home ownership decision is the size of a family. Past studies have found that the presence of a child in a household has a significant positive effect on home ownership (Haurin, Hendershott and Kim, 1992). Gyourko and Linneman found a 20% increase in the probability for households with children compared to those without children. An increasing number of children yields a greater need for home ownership. In fact, buying a home may be less costly (with mortgage payments and tax benefits) than renting the space that would accommodate larger families. On the other hand, large families may be subject to financial constraints that may prevent home ownership. With more children in the family, the day-to-day expenses (food, day care, illnesses, etc.) increase drastically and may not allow for a sizeable commitment of income and wealth. However, this study will follow the theory preferred in past studies which predicts a higher probability of ownership for households with children.

IV. EMPIRICAL MODEL

This section presents the estimate of a single-equation logistic model of the probability of home ownership in 1996. Since this study seeks to relate the fraction of home owners to its determinants, a logistic model allows the dependent variable to remain within the range $[0, 1]$ where 1 denotes home ownership while 0 is non-home ownership. (Ramanathan, 1998). The model will predict a probability of home ownership.

The data used for this study is obtained from the National Longitudinal Survey of Youth (NLSY) focusing on the 1996 panel, the most recent survey year. This database is appropriate because it

includes data describing a respondent's demographic characteristics, earning experiences, wealth and housing choices. From the possible 12,675 respondents, 4050 had dropped out of the survey by 1996. Of the remaining cases, 2741 were rejected due to missing data leaving a healthy sample size of 5884.

The dependent variable will be represented by a dummy variable distinguishing between homeowners (1) and non-home owners (0) in 1996. The following independent variables are summarized in Table 1.

Net family income (FAMINCOM) will be represented by the actual net income of the respondent in 1996. Based on the theory in the previous section, I expect the coefficient to be positive. As the net family income of an individual increases, it is more likely that he will own a house.

Race (WHITE) will be depicted as a dummy variable. A white (1) individual is expected to have a higher probability of owning a house than a black or Hispanic individual (0) due to access to intergenerational transfers. Therefore, I expect the coefficient of this variable to be positive.

The gender (MALE) of a respondent will be designated by a dummy variable where a male is 1 and a female is 0. Since the theory in this study suggests higher ownership probabilities for males, this variable's coefficient should be positive.

The educational attainment (EDUCATN) of an individual is the highest grade completed by that individual, ranging from no education to doctorate levels. As the level of education increases for an individual, so will his probability of home ownership. Hence, I expect a positive coefficient for this variable.

Parental home ownership status is not available through the NLSY. Thus, I use the educational attainment of a respondent's father (PARENT) as a proxy for the parent's wealth and income status. (Haurin, Hendershott and Kim, 1992). Considering the theory from the previous section, as the highest grade completed by the father increases, the child is more likely to own a home. This variable should have a positive coefficient.

Age (AGE) will be represented by the actual age of the respondent. I expect this coefficient to be

Table 1: Variable Descriptions

Variable	Definition	Expected Value	Home Owner Mean	Non-Home Owner Mean
FAMINCOM	Net income of respondent's family as of 1996	+	84019.83	35060.76
WHITE	1 = White 0 = Other	+	0.64	0.35
MALE	1 = Male 0 = Female	+	0.54	0.45
EDUCATN	Highest grade completed by respondent as of 1996	+	13.51	12.53
PARENT	Educational attainment of respondent's father as of 1996	+	11.28	10.48
AGE	Age of respondent in 1996	+	34.79	34.37
MARITAL	1 = Married, widowed or separated 0 = Single or divorced (as of 1996)	+	0.78	0.30
FAMSIZE	Number of people in the respondent's family in 1996	+	3.53	3.06

positive. As an individual grows older, his home ownership probability increases. However, during 1996, the respondents in this survey only ranged in age from 31 to 39. Hence, the effect of a wide variety of ages can not be tested.

The marital status (MARITAL) of an individual also will be a dummy variable. Theory suggests that married individuals (1) are more likely to own a home than single individuals (0). For simplicity, divorcees are designated as single individuals and widows and separated individuals are placed in the married category. Of course this assumes that existing home ownership is deprived of both individuals in divorce settlements and widows retain the home even after the death of a spouse. In times of separation, it is assumed that an individual still owns the home (still has the deed) even though he or his spouse may not be living there. These assumptions are generally true, therefore this categorization is adequate in measuring the effects

of marriage on home ownership. Hence, the coefficient of marital status should be positive.

The final variable is family size (FAMSIZE). The variable will consist of the number of people in the respondent's family, ranging from zero to 13. As the family size increases, the probability of home ownership should increase as well. Thus, I expect a positive coefficient for this variable.

The theory of the previous section and the definition of the variables results in the following model:

$$\ln [P/(1-P)] = \alpha + B_1 \text{FAMINCOM} + B_2 \text{WHITE} + B_3 \text{MALE} + B_4 \text{EDUCATN} + B_5 \text{PARENT} + B_6 \text{AGE} + B_7 \text{MARITAL} + B_8 \text{FAMSIZE} + \mu$$

where P is the dependent variable, the probability of home ownership.

V. RESULTS

Overall, the model performed adequately. The results are displayed in Table 2 where Model A is the original model as described in the previous section. All the variables have the expected sign except PARENT. This variable measured the father’s educational attainment and was used to proxy parental home ownership. Theoretically, this variable should have been positive; the higher the education level of the father, the more likely the child will own a home. However, its negative coefficient and high level of significance suggests otherwise. The model suggests that the probability of an individual owning a home decreases if his parents owned a home. Perhaps the father’s level of educational attainment was not a sufficient proxy for parental home ownership.

Also, all variables are highly significant, the majority at the .0001 level, excluding FAMSIZE. According to theory, as the size of a family grows larger, the probability that the head of the household owns a home increases. Because of its lack of

significance, FAMSIZE suggests that the theory is not correct. After close examination of the data I discovered that as the size of a family exceeds four, fewer families actually own their home. With this in mind, I considered the opposing family size theory briefly mentioned in the theory section. This stated that the probability of home ownership increases with family size up to a certain point (four people in this study) then decreases as family size increases after this point. This is mainly due to the fact that as the number of people in a family increases, the costs within that family increase as well. Thus, even with a high value of net benefits, larger families are subject to a wealth constraint that does not allow them to invest in a home. Therefore, I created an interaction effect (FAMSIZ5) between FAMSIZE and a dummy variable DUMMY_{FS} to test the difference in family size. The DUMMY_{FS} variable is 1 for families of five or more people and 0 for families smaller than five people. From this interaction, FAMSIZ5 represents the effect of families of five or more people on the home

Table 2: Results--Dependent Variable--Home Ownership

Variable	Expected Value	Model A	Model B
FAMINCOM	+	2.52 x 10 ⁻⁶ ***	2.53 x 10 ⁻⁶ ***
WHITE	+	0.8917***	0.8901***
MALE	+	0.2558**	0.2405***
EDUCATN	+	0.1068***	0.1074***
PARENT	+	-0.0363***	-0.0369***
AGE	+	0.0764***	0.0763***
MARITAL	+	1.8151***	1.17165***
FAMSIZE	+	-0.0243	0.1027
FAMSIZ5	~	~	-0.1048***
N	~	5884	5884

*significant to the .10 level **significant to the .05 level *** significant to the .01 level

The Determinants of Home Ownership

ownership decision. Including this variable, Model B is:

$$\ln [P/(1-P)] = \alpha + B_1 \text{FAMINCOM} + B_2 \text{WHITE} + B_3 \text{MALE} + B_4 \text{EDUCATN} + B_5 \text{PARENT} + B_6 \text{AGE} + B_7 \text{MARITAL} + B_8 \text{FAMSIZE} + B_9 \text{FAMSIZ5} + \mu$$

where $\text{FAMSIZ5} = (\text{FAMSIZE} \times \text{DUMMY}_{\text{FS}})$

When an individual has a family smaller than five people, the FAMSIZ5 variable drops out of the model (because DUMMY_{FS} is 0 when $\text{FAMSIZE} < 5$). Thus, FAMSIZE is the sole effect of small families in the home ownership decision. However, when the size of a family is five or more, $B_8 \text{FAMSIZE} + B_9 \text{FAMSIZ5}$ is the additive effect of large families on the probability of home ownership.

When regressed in Model B, this FAMSIZ5 proved to be negative and highly significant. This acts according to the new theory that large families have a negative effect on the probability of home ownership. Thus, the family size theory used in Model B accounts for the insignificance of FAMSIZ in Model A. Even though Model B performs better

with the adjusted variables, it has an error rate of 26%, as does Model A.

Since I used a logistic model in this study, the results determined in the regression are not slopes of a line as in the standard OLS model and, therefore, can not be interpreted in the same manner. Instead, the results will be interpreted by creating model individuals and assigning a value for each variable used to determine the probability of the dependent variable. In this study, the mean values of each determinant are used except in the case of dummy variables, where a specific value is assigned (1 or 0). By using simulations, the effect of a change in one variable is reflected through a change in the probability of home ownership. Table 2 provides variable statistics that aid the interpretation of the results. By substituting the respective coefficients and means for each variable, the effects of each variable can be interpreted.

In this model, the marital status of an individual tends to have the greatest impact on the probability of home ownership. Therefore, the following simulations look at the differences in probability of home ownership between married and single individuals with otherwise identical characteristics. The simulation values used for the

Table 3: Simulation Results
N = 5884

Variable	Coefficient (b _j)	Mean	Simulation 1
FAMINCOM	2.53 x 10 ⁻⁶	65444.51	65444.51
WHITE	0.8901	0.58	1
MALE	0.2405	0.50	1
EDUCATN	0.1074	13.33	16
PARENT	-0.0369	11.00	11
AGE	0.0763	34.61	34.61
MARITAL	1.7165	0.61	1
FAMSIZE	0.1027	3.22	3.22
FAMSIZ5	-0.1048	5.608	0

first model individual are displayed in Table 3 while the values for the other model individuals vary accordingly. A married, white male with a college degree and has the age, family income, family size and father's education equal to the sample mean has a 32 percent greater probability of owning a house than his single counterpart. A black male with the same characteristics has a 41 percent probability of owning a home if he is married rather than single. A single, black female with a college degree and no children and age, family income and father's education equal to the sample mean experiences a 40 percent increase in the probability of home ownership just by getting married. Because of these results, I conclude that marital status is very important in determining home ownership.

VI. CONCLUSION

This paper examined the determinants of home ownership. The results of this paper are consistent with the findings of previous studies. All variables, excluding family size and parental home ownership, proved to be significant and positive. The insignificance of the family size led to the consideration of an alternate theory concerning its impact on home ownership. This theory stated that the probability of home ownership increases as family size increases up to a certain level at which the probability decreases as family size continues to increase. Basically, in this study, a family size of fewer than five people has a positive effect on the dependent variable while a larger family decreases the probability of owning a home.

However, the results of this study, namely the 26% error rate, leave plenty of room for future research. First of all, this model may be lacking important variables. Perhaps a location variable (urban or rural) or a cost of housing measure could decrease the error rate. Because of the cost of urban living, many city dwellers may be lifetime renters because they are unable to meet the initial cost of home ownership. However, those who live in rural areas may be able to afford a home at a fairly young age because of the low cost of ownership. Second, it would be beneficial to find another proxy for parental home ownership- or perhaps the measure itself. The significant, negative coefficient did not

act according to theory. Perhaps the father's level of educational attainment was not the appropriate proxy for this measure. Also, constraints are very important to this model. It would be interesting to look at various wealth constraints and their effects on the model. Finally, since this study looked at the microeconomic aspect of home ownership, it would be interesting to employ these results in a macroeconomic aspect of housing. The effect of the determinants of home ownership on the housing markets and the wider economy may be a starting point.

As far as policy implications are concerned, I can only suggest housing loan programs that cater to these variables. More specifically, loans that assist minority as well as large families would be beneficial. From past literature and as proven by this paper, it is apparent that minority families may need assistance due to the lack of intergenerational transfers. Because of rising initial costs of home ownership, minority families may have a difficult time meeting the wealth constraint without the assistance of intergenerational transfers or a housing loan. From this paper, it also is evident that large families would benefit from home ownership assistance. As families become larger and larger, many are unable to meet the wealth constraint of home ownership due to increasing family costs. However, because of the size of the family, these families often have a high level of net benefits for home ownership. Therefore, with loan assistance, these families would be able to meet the wealth constraint for home ownership and obtain their expected level of net benefits of ownership.

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