

Saving for Retirement: Household Bargaining and Household Net Worth

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Comments welcome

Abstract:

Traditional economic models treat the household as a single individual, and do not allow for separate preferences of and possible conflicts of interest between husbands and wives. Since wives are typically younger than their husbands and life expectancy for women exceeds that for men, wives may prefer to save more for retirement than do their husbands. This suggests that households in which wives have greater relative bargaining power may accumulate greater net worth as they approach retirement.

Most empirical models of net worth in the literature do not include characteristics of both spouses. We present a more complete unitary model of household net worth and find, among couples in the first wave of the Health and Retirement Survey, that the characteristics of both husband and wife are determinants of net worth. We explore the importance of bargaining in marriages of older couples by examining the empirical relationship between their net worth and factors such as relative control over current income sources, relative age, and relative education. We find some evidence that low relative education of wives is associated with low net worth.

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I. Introduction

As the population ages, the welfare of older persons, the timing of retirement, and the costs of Social Security and other elderly support programs have become increasingly important to policy makers. The decline in the household savings rate in the United States during recent decades and the projected insolvency of the Social Security system have focused attention on the wealth accumulation of older couples and their ability to maintain consumption after retirement. If the savings and pension assets of married-couple households prove to be inadequate, the costs will be borne primarily by women, who are likely to outlive their older husbands.

Most studies of life-cycle household behavior have focused on individual-based models of retirement and/or saving. Bernheim et al. (1997), for example, attempt to explain the large variations in savings and wealth among households in terms of variations in time preference rates, risk tolerance, exposure to uncertainty, relative tastes for work and leisure, and other factors that can be incorporated into an individual life-cycle model, but find little support for such explanations. Although marital status has been taken into account in some of this work, interactions between spouses' incentives and potential conflicts in their objectives have not been explored as potential explanations of variation in savings accumulation and retirement timing.¹

Husbands and wives may have different private interests in savings and wealth accumulation that must be resolved through some household decision process. Because wives tend to be younger than their husbands and also tend to have longer life expectancies, wives have a longer retirement period to finance. This suggests that wives should prefer greater net worth at retirement and/or a lower level of household consumption, given fixed household lifetime resources. If the relative bargaining power of husbands and wives varies over married couples, due either to individual characteristics or environmental factors, this may be one source of variation in wealth accumulation between households with comparable total resources.

¹ One exception is Browning (1995), who uses the wife's share of the couple's income as a regressor predicting the household saving rate. The retirement behavior of married couples has been examined by Baker (1999), Blau (1997, 1998), Gustman and Steinmeier (1998), and Hurd (1990).

In this paper, we use data from the Health and Retirement Survey to examine the relationship between household net worth and a limited set of factors that may affect the relative bargaining power of husbands and wives. We find that low relative education of wives is associated with low household wealth, but that relative age has no significant effect on wealth. When we add wife's income as a proportion of total household income, we find, as did Browning (1995), that this is associated with reduced household wealth, but speculate that current income and its components is strongly correlated with unobserved determinants of total household resources. We plan to extend this analysis by adding improved measures of permanent income, including pension wealth, and characteristics of state marital property and divorce laws as alternative indicators of relative control over household resources.

One contribution of this paper is the estimation of a more complete unitary model of the determinants of household net worth. Even in the absence of bargaining, characteristics of both spouses should affect total household resources and savings behavior. We find, as expected, that characteristics of both husband and wife are important determinants of net worth.

II. Marital Bargaining and Household Savings

Economic models of retirement and savings behavior typically examine the optimal behavior of a single individual who faces alternative streams of utility over the remainder of his or her life. In general, however, retirees are not isolated individuals; the labor supply and consumption decisions of elderly couples will be the outcome of a joint decision-making process that reflects the preferences and interests of both husband and wife. In recent years, game-theoretic models of family decision-making – including both cooperative and non-cooperative bargaining models – have been developed and have received considerable empirical support, but have had little influence on the study of retirement and savings.²

² Three surveys that document recent changes in the theoretical and empirical modeling of family behavior are Behrman (1997), Bergstrom (1996), and Lundberg and Pollak (1996).

Many of the important issues in the behavior of elderly couples involve decisions in which there may be a conflict between the needs and objectives of married men and those of their wives. For example, the causes of extensive poverty among elderly widows cannot be analyzed without considering the consumption/savings decisions of married couples. Wives are typically younger than their husbands, and life expectancy for women exceeds that for men. Consequently, wives may prefer to save more for retirement than do their husbands. Recent discussions concerning individual control over Social Security assets and the fate of the spouse benefit bring into sharp relief the possible conflict of interest between elderly wives and husbands. An appropriate framework for analyses of these and other issues must allow for the independent preferences of husbands and wives and for the dissolution of a marriage through death or divorce.³

Lundberg (1999) suggests that bargaining models may help to explain some empirical puzzles, such as the failure of consumption profiles to correspond to the individual life-cycle model. If the husband loses bargaining power when he retires from a career job, then a discrete shift in the household's consumption/savings path may result. Banks, Blundell, and Tanner (1998) find that the drop in observed consumption after retirement cannot be fully explained by standard life-cycle factors. Bernheim, Skinner, and Weinberg (1997) also find a drop in consumption at retirement that is not consistent with life-cycle consumption smoothing. Lundberg, Startz, and Stillman (2000) find that the retirement consumption drop is characteristic only of married-couple and not single-person households in the Panel Study of Income Dynamics, providing support for an explanation based on shifts in relative bargaining power.

A growing empirical literature based on the bargaining (or collective) framework provides evidence that the share of household income controlled by the wife affects household behavior, including expenditures on various goods, individual labor supplies, and health outcomes for children. Individual control of income may also affect saving behavior and

³ Hurd (1999) extends the standard unitary model to allow for mortality risk and the welfare of the surviving spouse.

retirement timing if there is spousal disagreement over desired wealth at retirement. In general, bargaining models suggest that a variety of household and extra-household characteristics that are not usually included in savings and retirement models may affect relative bargaining power, and thus behavior.

We begin with a simple multi-period unitary model in which the lifetime utility of the couple is

$$V(\bullet) = \int U(C_t)e^{-rt} a_t dt + \int M(w_t)e^{-rt} p_{mt} dt + \int F(w_t)e^{-rt} p_{ft} dt + \int B(w_t)e^{-rt} m_t dt$$

where $U(\bullet)$ is the utility from consumption by the couple, ρ is the subjective discount rate of the couple, a_t is the probability that both spouses will be alive at time t , $M(\bullet)$ is the widower's utility of wealth, p_{mt} is the probability that the husband becomes a widower at time t (i.e. that the wife dies and the husband is still alive), $F(\bullet)$ is the widow's utility of wealth, p_{ft} is the probability that the wife becomes a widow at time t , $B(\bullet)$ is the utility from bequests, and m_t is the probability that the surviving spouse dies at time t . Hurd (1999) uses this model to analyze the effect of mortality risk on the decisions of a couple who maximize this common objective function subject to a pooled resource constraint.

An alternative to the unitary model allows the couple to “bargain” over the consumption path. Several household bargaining models have been proposed in the literature, including both cooperative (Manser and Brown 1980, McElroy and Horney 1981, Lundberg and Pollak 1993) and non-cooperative models (see Lundberg and Pollak 1994 for a survey), as well as general collective models (Chiappori 1988, 1992) which do not impose a bargaining scheme, but assume a Pareto efficient outcome.

In a collective model, the husband and wife have separate utility functions:

$$V^M(\bullet) = v^M(C_t, M, F, B)$$

$$V^F(\bullet) = v^F(C_t, M, F, B)$$

in which the weights that they place on joint consumption, the value of wealth received by self and spouse at widowhood, and bequests may differ. Both the collective approach and collective bargaining models impose a Pareto-optimal joint solution in which the couple maximizes a weighted sum of their individual utilities:

$$m(X)V^M + (1 - m(X))V^F$$

where the “sharing rule” $m(X)$ depends upon variables that affect the relative bargaining power of husband and wife, such as each spouse’s control over household resources and the value of the best alternative to agreement, which may be outside the marriage. These factors may depend, in turn, upon both permanent and transitory individual characteristics (education and health), and upon policy and institutional variables such as the tax code and marital property laws. Changes in X will alter the household’s consumption and savings decisions. For instance, if the wife’s relative wage rises, her relative bargaining power may rise, and thus her share of utility may increase in equilibrium.

Because wives tend to be younger and to have longer life expectancies than their husbands, wives should prefer a greater net worth in periods near retirement.⁴ A wife may not prefer a higher rate of savings in every period; her optimal saving rate may be lower than his in some periods if, for example, she prefers greater expenditure on some children’s goods relative to her husband. However, we hypothesize that, in periods near retirement, the net worth of households in which the wife has greater bargaining power will be greater than the net worth of households that possess the same total lifetime resources but in which the wife has less power.

Browning (1995) uses Canadian data to investigate the relationship between the intrahousehold distribution of income and household saving. The distribution of earnings and other income in the household is problematic as a measure of relative bargaining power, as it

⁴ Hurd and McGarry (1995) find, however, that men and women may have biased beliefs about their survival probabilities, and this may affect their preferred wealth profile. They find that HRS male respondents are quite accurate in their self-assessed probability of living to age 75, but overestimate their chances of making it to age 85, while women underestimate their probability of living to age 75, but give accurate predictions of their probabilities of living to age 85.

reflects household decisions about time allocation that are made jointly with savings and consumption decisions. Browning finds that the household saving rate is lower when the wife's share of family income is high and this relationship disappears when household income is controlled for. This is the opposite of the effect that a bargaining perspective would predict, but may be due to the endogeneity of income, or to the age composition of the sample. Browning's sample includes husbands aged 30 to 59, so many of the couples are years from retirement, and an unambiguous relationship between savings and bargaining power may not have developed.

In this paper, we examine the relationship between the savings behavior of couples in the Health and Retirement Survey (HRS), and characteristics of husbands and wives that affect total household resources and the desired consumption path. The HRS provides longitudinal data on a recent cohort of older people, and provides particularly good information about their assets. We estimate a standard net worth model, an expanded unitary model, and an alternative model consistent with the collective framework. We do not impose a particular bargaining structure, but use a simple reduced form collective model that will allow us to test whether our measures of bargaining power affect household net worth.

III. Data and Empirical Strategy

The Health and Retirement Survey (HRS) is a national longitudinal survey of older Americans, with oversampling of blacks, Hispanics, and Florida residents. The baseline survey (wave 1), done in 1992, was a face-to-face interview of a sample of the 1931-41 birth cohort and their spouses or partners. Over 12,600 persons in 7,600 households were included in this initial survey. Follow-up telephone surveys are done every 2 years, with additional cohorts added in 1998. For estimates in this draft, we rely only on data from wave 1 of the survey.

We use a sample of married and cohabiting opposite-sex couples in which the man is aged 45 to 70 and the woman is aged 40 to 65.⁵ These age limitations result in our excluding 225

⁵ For ease of discussion, we will refer to the male as the husband and the female as the wife, although not all couples in the sample are married.

couples in which the spouse was substantially younger or older than the age-eligible respondent, but approximately preserves the mean age of men and women in the sample. Individuals chosen for inclusion in the HRS were aged 51 to 61 in 1992, or were married to or cohabiting with a chosen respondent in this age range.

The HRS data provide detailed wealth information, including housing, other real estate, motor vehicles, businesses, financial instruments, and other assets. Detailed information on liabilities, including mortgages, home equity loans, business loans, and other debt, such as revolving account balances, allows calculation of the couple's net worth.⁶ We have measures of the couple's income in 1991 and its composition. Earned income and pension income is attributed to the person who receives that income, allowing us to construct the wife's share (in earnings and pensions) of the couple's total income. We also use educational attainment of husband and wife, as well as of their parents when it is reported.

The HRS data also provide the labor market status, race, and self-reported ordinal health status (five categories) of each spouse, and the couple's geographic region of residence. Table 1 gives means for variables used in our analyses.

First we estimate a unitary model that is more complete than standard models of household net worth in the literature. Characteristics of both spouses should affect net worth, even in the absence of bargaining. We then augment this model by incorporating variables suggested by the household bargaining framework.

Valid measures of the relative bargaining power of husbands and wives are not easy to construct. In general, we expect bargaining power to depend upon the control that husband and wife have over household income and other resources, and on their expected well-being outside the marriage. Relative income would seem to be the most straightforward indicator of control over household resources, but relative earnings will reflect relative wage rates, which affect time

⁶ Our current net worth measure does not include the present value of future Social Security and pension benefits or the value of 401-K and similar plans. These values can be calculated using restricted use data from Social Security records and employer pension plan details, and will be used in future work. Couples

use and savings through the prices of husband's and wife's time. We use relative current income as one measure of bargaining power to compare our results with Browning's, but recognize that this measure is likely to be endogenous with respect to savings behavior. Non-labor income or assets are often used to construct alternative indicators of relative control of resources, but problems of measurement and possible endogeneity arise in this case as well.⁷ A more long-term measure of potential income would be preferable, and we include relative years of education as a proxy for relative potential earnings of husband and wife.

Bergstrom and Bagnoli (1993) argue that women tend to marry older men because of differences in the economic roles of men and women. The labor market success of a man, which determines his desirability as a mate, is revealed at an older age than the marriage-relevant characteristics of a woman, which do not depend on market activity. The relative age of the wife has been found to be positively related to her share of household expenditures by Browning et al. (1994), and we include this as an additional measure of relative control over household decisions. However, wife's age may also act as a proxy for her remarriage prospects, which are likely to deteriorate with age more rapidly than those of her husband and thus decrease her relative bargaining power. We also experiment with characteristics of the family of origin (parents' education) as alternative indicators of separate resources.

IV. Results

Table 2 presents results of a "standard" model of net worth, which includes only characteristics of the husband. While there is no true standard model in the literature, few include the characteristics of both husband and wife.⁸ This model shows that relationships between logged household net worth and husband's health, education, and race have the expected signs.

with negative or zero net worth (195 cases) were assigned \$5 in specifications using the log of net worth. The results were not sensitive to the exclusion of these low asset cases.

⁷ See the discussion in Lundberg and Pollak (1996).

⁸ Smith (1995) and Lusardi (1999) present multivariate models of the net worth of HRS households that include the education, health, and other characteristics of only the primary respondent.

We use a set of 3-year age category dummy variables in order to allow household net worth to vary with age in a general way. There are significant differences in net worth across geographic regions. Those in the south have significantly less and those in the west significantly more wealth than those in the northeast, which is the omitted region. These differences may be related to differences in real estate values and perceived future costs of living. We also included the couple's current income in a model that we do not present here. Current income depends upon the labor market status of husband and wife, and is jointly determined with retirement timing and savings. However, the inclusion of income did not substantively alter coefficients on other covariates. A longer-run measure of total resources, such as an estimate of life-time earnings constructed from Social Security records, would be a preferred determinant of net worth.

Table 2 reports the results of two standard net worth models, one that includes the husband's current work status and one that does not.⁹ Households in which the husband has retired have higher wealth than those in which he is still working, although the difference is not quite significant. However, the timing of retirement, and therefore work status, will be jointly determined with net worth.¹⁰ The effects of the husband's characteristics on net worth change very little when work status is included.

Table 3 reports results from a specification that is consistent with a "unitary" model of household net worth, in which the household acts as a single decision unit. In the absence of bargaining over savings decisions within households, a unitary model is the appropriate framework. This model includes characteristics of both husband and wife, and both sets of variables are highly significant. Net worth varies directly with health status of both husband and wife (good health is the omitted category).¹¹ Wife's education has a strong positive effect on household net worth (less than 12 years is the excluded category). Her education may affect net worth through her own earnings, her productivity in household production, or through a positive

⁹ The six working status categories are not mutually exclusive. The majority of the sample answered "yes" to only one of the categories, while a few placed themselves in none, two, or three of the categories.

¹⁰ We hope to consider the simultaneous determination of net worth and retirement timing in future work.

effect of her education on her husband's earnings.¹² The effect of the husband's own education is reduced when his wife's education is added to the model. Households with non-white husbands have lower net worth than similar white households.¹³

Sets of age-category dummy variables are included for both spouses, with the 55-57 age range the excluded category for both. The estimated age pattern, with confidence intervals, is shown in Figure 1. Age, for both men and women, is concavely related to increments in net worth, with effects increasing at younger ages and beginning to decline after some peak age.¹⁴ This is consistent with a slow-down in net worth accumulation as couples begin to transition into drawing on net worth for consumption.

The number of living children may capture both the negative effect of the cost of children on long-term accumulation of assets, as well as the positive effect of children on net worth through bequest motives. We find the net effect of children to be negative and significant, suggesting that the cost of children outweighs the bequest motive on average.

The complete unitary model represents a substantial improvement over the models in Table 2 in explaining variation in net worth in this sample, with an increase in R-square from .25 to .31. This result suggests that expanding the focus of studies that investigate saving and net worth beyond the single-agent standard to include the characteristics of both spouses will result in better predictions of behavior.

Table 4 presents estimates from collective models. These introduce some relative characteristics of husbands and wives as measures of relative bargaining power. Model 1 adds the age difference between husband and wife (his years less her years) and a set of dummy

¹¹ The causal direction of positive associations of health with income and net worth has not been resolved in the literature, and we will not attempt to sort it out here.

¹² Lundberg and Rose (1999) find evidence of such an effect.

¹³ Models with wife's race included yielded results in which the sum of husband and wife like-race coefficients approximately equals the coefficient reported here for husband's race, indicating that his race is a good measure of the total effect of race for the household. This is not surprising as there are very few mixed-race couples in the data (about 200 in the sample of 4700). A dummy variable for mixed race couples was experimented with but had no significant effect.

¹⁴ Men aged 73-75 appear to deviate from the concave pattern, but the standard error is large, and we cannot reject that the true value of this coefficient is equal to that for 70-72 year-olds.

variables representing categories of differences in their educational attainment.¹⁵ The effect of a difference in education is significant in only one case: when the husband has eight or more years of education more than his wife, the couple has lower net worth, even after controlling for levels of education. This effect is strongly significant, and is robust to various specifications. This implies that when the wife has very low education relative to her husband, which may imply she has less power over household decisions, household net worth is lower. Since we have controlled for husband's and wife's educational attainment categories with a set of dummy variables, the effect of the education difference provides some evidence in favor of a collective household framework as a basis for long-term savings behavior in multi-person households.

The age difference does not appear to have a significant effect on net worth. We also examined spousal differences in father's education and in mother's education as well as the wife's parents' education difference (her mother's years less her father's years) and did not find any of these to be significantly associated with household net worth (results are not shown).

Model 2 also includes the wife's share of current income, and the estimated effect is significantly negative. However, current income may not be a good measure of long-term control over resources and thus of control over household decisions. In addition, current household income is endogenous with respect to household wealth. Given the problematic nature of this variable, we exclude it from Models 1 and 3, but the construction of a better measure of permanent income and the wife's share of that income is a high priority.¹⁶ We also note that relative years of education may be a better measure of long-run income control than the share of current income.

Model 3 is like Model 1 except that the age difference is excluded. We have a weaker *a priori* belief regarding the effect of the age difference on the wife's relative power over household decisions than is the case for the difference in education. Excluding the age difference

¹⁵ In constructing these variables, we assigned a number of years for degrees which would require more than 17 years of schooling on average, as the HRS variable for years of education is truncated at 17.

¹⁶ We plan to use Social Security earnings records from HRS restricted data to construct measures of permanent income.

does affect the magnitude and significance of some of the age-category dummy variables, but does not affect the size or significance of the education difference variables.

V. Conclusion

We find in our “unitary” model that characteristics of both spouses are important predictors of net worth for married couple households. Models of net worth which exclude the characteristics of the wife, or of one spouse generally, ignore significant determinants of the total resources and savings behavior of households.

The characteristics of husbands and wives will also affect net worth if they have different savings objectives, perhaps due to different life expectancies, and these characteristics affect the spouses’ relative bargaining power. If this is the case, then policies that influence the balance of decision-making power in households have been overlooked as a potential means of increasing private household saving for retirement, and perhaps age at retirement. The results of our “collective” model, which includes indicators of the relative control over resources of husbands and wives, include only limited evidence that the wife’s long-run relative power over household decisions is positively associated with household net worth. Households in which the husband has substantially more education than his wife have significantly lower net worth, as a bargaining model would predict. Spousal differences in age are found to have no significant effect on net worth when the ages of both husband and wife are controlled for, and the wife’s share of current income is negatively correlated with net worth. More conclusive tests of the influence of household bargaining on net worth may be possible with better measures of total household resources, and exogenous measures of relative bargaining power, such as variations in divorce and property laws.

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Table 1
Means of Key Variables

| Variable | N | Mean | (Std Dev) |
|--|----------|-------------|------------------|
| His age | 4717 | 56.718 | (5.209) |
| Her age | 4717 | 52.821 | (5.085) |
| His health, scale 1-5, 5=poor | 4717 | 2.576 | (1.182) |
| Her health, scale 1-5, 5=poor | 4717 | 2.459 | (1.150) |
| His educ in years | 4717 | 12.064 | (3.496) |
| Her educ in years | 4717 | 12.128 | (2.887) |
| Couple's total annual income (thousands) | 4717 | 52.162 | (48.108) |
| Wife's share of couple's income | 4686 | 0.237 | (0.246) |
| Household total net worth (thousands) | 4717 | 219.085 | (389.767) |
| Husband working | 4717 | 0.691 | (0.462) |
| Husband unemployed | 4717 | 0.032 | (0.176) |
| Husband temporarily off work | 4717 | 0.015 | (0.121) |
| Husband disabled | 4717 | 0.095 | (0.293) |
| Husband retired | 4717 | 0.218 | (0.413) |
| Husband – other work status | 4717 | 0.008 | (0.089) |

Table 2
“Standard” Model of (Log) Household Net Worth

| | Without work status | | With work status | |
|-------------------------------|----------------------------|---------|-------------------------|---------|
| Intercept | 4.239*** | (0.077) | 4.278*** | (0.119) |
| Husband working | | | 0.022 | (0.094) |
| unemployed | | | -0.579*** | (0.136) |
| temporarily laid off | | | -0.278 | (0.173) |
| disabled | | | -0.503*** | (0.104) |
| retired | | | 0.331*** | (0.086) |
| other work status | | | 0.072 | (0.219) |
| Husband's health excellent | 0.319*** | (0.056) | 0.294*** | (0.055) |
| very good | 0.195*** | (0.052) | 0.177*** | (0.051) |
| fair | -0.162*** | (0.064) | -0.085 | (0.065) |
| poor | -0.638*** | (0.08) | -0.353*** | (0.091) |
| Husband completed high school | 0.617*** | (0.052) | 0.569*** | (0.052) |
| has some college | 0.623*** | (0.064) | 0.595*** | (0.063) |
| has Associate's degree | 0.664*** | (0.115) | 0.618*** | (0.114) |
| has BA, BS | 1.076*** | (0.072) | 1.036*** | (0.072) |
| has Master's degree | 1.131*** | (0.098) | 1.042*** | (0.097) |
| has MBA | 1.14*** | (0.236) | 1.09*** | (0.233) |
| has law, MD degree | 1.814*** | (0.148) | 1.776*** | (0.147) |
| has PhD | 1.42*** | (0.168) | 1.38*** | (0.166) |
| Husband aged 45-48 | -0.51*** | (0.158) | -0.491*** | (0.157) |
| 49-51 | -0.345*** | (0.066) | -0.316*** | (0.065) |
| 52-54 | -0.217*** | (0.059) | -0.192*** | (0.059) |
| 58-60 | 0.149** | (0.061) | 0.137** | (0.061) |
| 61-63 | 0.241*** | (0.071) | 0.126* | (0.073) |
| 64-66 | 0.224** | (0.093) | 0.03 | (0.097) |
| 67-69 | 0.144 | (0.127) | -0.065 | (0.13) |
| 70-72 | -0.264 | (0.175) | -0.525*** | (0.177) |
| 73-75 | 0.258 | (0.235) | 0.019 | (0.236) |
| Midwest | -0.099 | (0.061) | -0.136** | (0.061) |
| South | -0.243*** | (0.056) | -0.272*** | (0.056) |
| West | 0.144** | (0.069) | 0.113* | (0.069) |
| Husband's race: black | -0.756*** | (0.06) | -0.746*** | (0.06) |
| Asian | -0.514*** | (0.19) | -0.484*** | (0.188) |
| Hispanic/Latino | -0.786*** | (0.074) | -0.737*** | (0.073) |
| other non-white | -0.918*** | (0.212) | -0.872*** | (0.21) |
| R ² | .252 | | .269 | |

Standard errors in parentheses.

*, **, *** = statistically significant at 10%, 5%, and 1% respectively.

Table 3
Unitary Model of (Log) Household Net Worth

| | | |
|-------------------------------|-----------|---------|
| Intercept | 4.328*** | (0.102) |
| Number of living children | -0.065*** | (0.009) |
| Husband's health excellent | 0.246*** | (0.054) |
| very good | 0.144*** | (0.05) |
| fair | -0.111* | (0.062) |
| poor | -0.449*** | (0.078) |
| Wife's health excellent | 0.305*** | (0.054) |
| very good | 0.24*** | (0.05) |
| fair | -0.251*** | (0.064) |
| poor | -0.551*** | (0.088) |
| Husband completed high school | 0.402*** | (0.052) |
| has some college | 0.343*** | (0.065) |
| has Associate's degree | 0.44*** | (0.112) |
| has BA, BS | 0.647*** | (0.075) |
| has Master's degree | 0.565*** | (0.103) |
| has MBA | 0.667*** | (0.23) |
| has law, MD degree | 1.303*** | (0.15) |
| has PhD | 0.829*** | (0.169) |
| Wife completed high school | 0.329*** | (0.054) |
| has some college | 0.515*** | (0.067) |
| has Associate's degree | 0.584*** | (0.11) |
| has BA, BS | 0.539*** | (0.087) |
| has Master's degree | 0.788*** | (0.11) |
| has MBA | 1.129*** | (0.375) |
| has law, MD degree (n=6) | -0.128 | (0.53) |
| has PhD | 1.363*** | (0.297) |
| Husband aged 45-48 | -0.516*** | (0.153) |
| 49-51 | -0.192*** | (0.068) |
| 52-54 | -0.135** | (0.06) |
| 58-60 | 0.097 | (0.061) |
| 61-63 | 0.131* | (0.075) |
| 64-66 | 0.118 | (0.094) |
| 67-69 | 0.057 | (0.126) |
| 70-72 | -0.348** | (0.17) |
| 73-75 | 0.228 | (0.23) |
| Wife aged 40-42 | -0.716*** | (0.12) |
| 43-45 | -0.453*** | (0.096) |
| 46-48 | -0.377*** | (0.08) |
| 49-51 | -0.163*** | (0.067) |
| 52-54 | -0.069 | (0.061) |
| 58-60 | 0.106* | (0.064) |
| 61-63 | 0.093 | (0.139) |
| 64-66 | 0.031 | (0.221) |
| 67-70 | -0.075 | (0.345) |
| Husband's race: black | -0.631*** | (0.059) |
| Asian | -0.414** | (0.183) |
| Hispanic/Latino | -0.499 | (0.074) |
| other non-white | -0.753 | (0.204) |
| R ² | | .313 |

Standard errors in parentheses.

*, **, *** = statistically significant at 10%, 5%, and 1% respectively.

Region is included in model but not shown in table (effects similar to those in Table 2).

Table 4
Collective Models of (Log) Household Net Worth

| | Model 1 | | Model 2 | | Model 3 | |
|---------------------------------|-----------|---------|-----------|---------|-----------|---------|
| He has 8+ years more educ | -0.459** | (0.202) | -0.503*** | (0.201) | -0.458** | (0.202) |
| He has 5-7 years more educ | -0.026 | (0.095) | -0.036 | (0.095) | -0.025 | (0.095) |
| She has 5-7 years more educ | -0.033 | (0.091) | -0.029 | (0.092) | -0.033 | (0.091) |
| She has 8+ years more educ | -0.027 | (0.167) | -0.016 | (0.168) | -0.029 | (0.167) |
| Age difference (his -her years) | 0.006 | (0.017) | 0.006 | (0.017) | | |
| Wife's share of current income | | | -0.424*** | (0.08) | | |
| Husband completed high school | 0.408*** | (0.055) | 0.415*** | (0.055) | 0.407*** | (0.055) |
| has some college | 0.357*** | (0.068) | 0.361*** | (0.068) | 0.356*** | (0.068) |
| has Associate's degree | 0.455*** | (0.114) | 0.468*** | (0.114) | 0.455*** | (0.114) |
| has BA, BS | 0.663*** | (0.082) | 0.665*** | (0.082) | 0.663*** | (0.082) |
| has Master's degree | 0.591*** | (0.113) | 0.58*** | (0.113) | 0.59*** | (0.113) |
| has MBA | 0.691*** | (0.236) | 0.675*** | (0.238) | 0.688*** | (0.236) |
| has law, MD degree | 1.362*** | (0.164) | 1.295*** | (0.164) | 1.363*** | (0.164) |
| has PhD | 0.929*** | (0.188) | 0.897*** | (0.187) | 0.927*** | (0.188) |
| Wife completed high school | 0.319*** | (0.055) | 0.333*** | (0.055) | 0.318*** | (0.055) |
| has some college | 0.497*** | (0.07) | 0.526*** | (0.07) | 0.497*** | (0.07) |
| has Associate's degree | 0.566*** | (0.113) | 0.612*** | (0.113) | 0.566*** | (0.113) |
| has BA, BS | 0.512*** | (0.093) | 0.557*** | (0.093) | 0.512*** | (0.093) |
| has Master's degree | 0.759*** | (0.12) | 0.841*** | (0.121) | 0.76*** | (0.12) |
| has MBA | 1.1*** | (0.376) | 1.173*** | (0.375) | 1.1*** | (0.376) |
| has law, MD degree (n=6) | -0.178 | (0.534) | -0.055 | (0.532) | -0.18 | (0.534) |
| has PhD | 1.323*** | (0.305) | 1.458*** | (0.311) | 1.322*** | (0.305) |
| Husband aged 45-48 | -0.454** | (0.22) | -0.446** | (0.22) | -0.513*** | (0.153) |
| 49-51 | -0.158 | (0.113) | -0.153 | (0.112) | -0.192*** | (0.068) |
| 52-54 | -0.117 | (0.077) | -0.117 | (0.077) | -0.135** | (0.06) |
| 58-60 | 0.08 | (0.077) | 0.092 | (0.077) | 0.097 | (0.061) |
| 61-63 | 0.098 | (0.119) | 0.107 | (0.118) | 0.133* | (0.075) |
| 64-66 | 0.071 | (0.169) | 0.07 | (0.168) | 0.124 | (0.094) |
| 67-69 | -0.013 | (0.229) | -0.007 | (0.228) | 0.059 | (0.126) |
| 70-72 | -0.414 | (0.294) | -0.4 | (0.293) | -0.323* | (0.171) |
| 73-75 | 0.117 | (0.367) | 0.135 | (0.365) | 0.225 | (0.23) |
| Wife aged 40-42 | -0.806*** | (0.266) | -0.778*** | (0.265) | -0.716*** | (0.12) |
| 43-45 | -0.524*** | (0.213) | -0.496** | (0.213) | -0.452*** | (0.096) |
| 46-48 | -0.427*** | (0.16) | -0.411*** | (0.159) | -0.375*** | (0.08) |
| 49-51 | -0.196* | (0.114) | -0.183 | (0.113) | -0.161** | (0.067) |
| 52-54 | -0.086 | (0.076) | -0.076 | (0.076) | -0.069 | (0.061) |
| 58-60 | 0.127 | (0.08) | 0.126 | (0.08) | 0.109* | (0.064) |
| 61-63 | 0.137 | (0.169) | 0.162 | (0.169) | 0.101 | (0.139) |
| 64-66 | 0.087 | (0.265) | 0.038 | (0.266) | 0.032 | (0.221) |
| 67-70 | 0.033 | (0.408) | -0.004 | (0.406) | -0.049 | (0.346) |
| R ² | .314 | | .317 | | .314 | |

Standard errors in parentheses.

*, **, *** = statistically significant at 10%, 5%, and 1% respectively.

Models also include a constant term and control variables for region of residence, number of living children, husband and wife's health status, and husband's race.

**Figure 1: Effect of Age on Log Net Worth
(From Unitary Model Estimates)**

