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A Behavioral Life-Cycle Approach to Understanding the Wealth Effect

THE INFLUENCE OF WEALTH ON SPENDING DEPENDS ON THE TYPE OF WEALTH AND WHO HOLDS IT

By Diane K. Schooley and Debra Drecnik Worden

The somewhat surprising strength in consumer spending in recent years has focused renewed attention on the much-debated wealth effect, the notion that when individuals feel wealthier, they consume more. This study utilizes survey data to examine the wealth effect within the context of the behavioral life-cycle model of savings. The results indicate that the likelihood of households spending more when their assets increase in value decreases with the portion of assets held in home equity. This unexpected finding is due to homeowners responding to the perceived wealth gain from increased home values by cashing out their equity. The likelihood increases with the portion of assets held in stock outside of retirement accounts, but is not significantly related to the portion of assets held in stock overall. Moreover, households that have a full-time income earner, are homeowners, have more education, have a younger household head, or expect economic growth, are more likely to report a wealth effect. Households that utilize savings "rules of thumb" are less likely to report a wealth effect. These results can be used to improve the wealth effect specification in consumer demand models and assist firms to target consumer markets.

The relationship between personal wealth and consumer spending, a long-debated topic in academia, is receiving renewed attention from the business media. Researchers estimate that spending increases by between three and five cents for every dollar increase in wealth (Maki and Palumbo, 2001). Business economists and retail executives are interested in the impact of stock prices, and more recently of housing prices, on spending growth. During the economic boom of the late 1990s, Federal Reserve Chairman Alan Greenspan (2000) claimed that one percent of GDP growth was due to the fact that households "felt wealthier" because of excessively high stock prices.

Most wealth effect studies adopt a macroeconomic view, examining the relationship between aggregate spending and wealth, and using changes in stock value to proxy changes in wealth. However, Poterba and Samwick (1995) hypothesize that stock values may affect spending either through the wealth effect or through their role as leading indicators of income and job growth. In addition, stock price fluctuations may influence consumption by affecting consumer confidence. As they discuss, the traditional macro approach results do not clearly distinguish wealth effects from leading economic indicators or consumer confidence effects.

Utilizing survey data rather than aggregate economic data allows this study to better isolate the wealth effect, and further, to explore it within the framework of the behavioral life cycle model of savings developed by Shefrin and Thaler (1988). In particular, thismodel allows

individuals to behave as if assets are not fungible or interchangeable. Their willingness to spend depends not only on the amount of wealth, but also on the types of assets that make up their wealth.

This paper uses univariate and multivariate analyses to identify relationships between respondents' spending intentions and increases in wealth and to investigate several core concepts of the behavioral life-cycle model of savings. Household characteristics such as age and education are also investigated with respect to how spending behavior is related to changes in wealth. Sections 1 and 2 present the debate about the wealth effect and explain the life-cycle model of savings. Section 3 describes the survey data, Sections 4 and 5 present our analyses, and Section 6 presents our conclusion.

1. The Debate about the Wealth Effect

While the existence of a wealth effect—defined broadly here as the positive relationship between consumption and holdings of household assets—is generally accepted, its size and impact are often debated. Early studies using aggregate consumption and wealth data from the household sector find minimal effects of stockmarket gains on consumption. Arena (1965) attributes the weak relationship to highly skewed stock ownership. In 1962, roughly 70 percent of corporate stock was directly held by only seven percent of stockholders. Less than 20 percent of households owned any stock. Over time, the proportion of U.S. households owning stock directly or indirectly through mutual funds and retirement accounts increased, rising to 52 percent in 2001. Maki and Palumbo (2001) and Shirvani and Wilbratte (2002), utilizing more current data, find evidence supporting wealth effects, which they attribute to this broadened stock ownership. The wealth effect may also be strengthened by the increased value of stock holdings as a percentage of households' financial assets. Aizcorbe et al. (2003) report that from 1992 to 2001, stock holdings as a percentage of financial assets grew from 33.7 percent to 56 percent.

Utilizing a micro approach, Starr-McCluer (2002) analyzes individual household data and offers evidence of a modest wealth effect that is more substantial for households with larger stock holdings. As a result of her findings, she suggests, as do Poterba and Samwick (1995), that the saving/spending behavior of wealthier households should be investigated more closely in future studies.

While most wealth effect models employ value of stock market holdings to proxy wealth, households maintain wealth in numerous forms, including real estate and various types of savings vehicles. Researchers have developed a real estate effect to explain why spending may not always appear to react strongly to changes in stock values. Case et al. (2001) provide strong evidence for a housing market effect, but their evidence for a stock market effect is weak. Pichette (2004) finds an average marginal propensity to consume (MPC) from housing wealth of 5.7 cents per dollar. Benjamin et al. (2004) provide evidence that the MPC from real estate wealth is eight cents per dollar, while that for financial wealth is only two cents per dollar.

2. Life-Cycle Models of Savings

The distinction between a stock market effect and a housing market effect can be explained theoretically through a life-cycle model of savings. According to the behavioral life-cycle model, the relative strength of these wealth effects depends upon individuals' perceptions about the relative accessibility of housing wealth versus stock equity wealth.

The conventional life-cycle model of savings assumes that consumption is based upon the present value of wealth, regardless of the form. In this view, wealth is fungible; the MPC does not depend upon whether the wealth is held in liquid checking or money market accounts or illiquid real estate and equity investments.

Contrary to the traditional life-cycle model, studies show that individuals' behaviors tend to follow a relatively new behavioral life-cycle model. Shefrin and Thaler (1988) developed the behavioral life-cycle model of savings, which holds the concepts of mental accounting and self-control at its core. Rather than viewing wealth as fungible, individuals tend to frame their wealth using some sort of mental accounting to develop a hierarchy of spending based upon the type of the wealth. Individuals spend more accessible, and thus more tempting, sources of wealth first. Current assets (cash, checking accounts, money market accounts) are first in the hierarchy, followed by current wealth (savings account, mutual funds, stocks and bonds), then home equity, and, finally, retirement savings accounts.

Levin (1998) provides empirical support for the behavioral life-cycle model, including evidence that individuals do not view assets as fungible. The amount of money spent on particular goods depends upon how resources are split among various assets. Poterba and Samwick (1995) suggest that MPC varies with the source of wealth because of financial transaction costs, such as penalties for early withdrawals from retirement savings accounts. Other explanations include perceived differences in liquidity and the multiple roles served by some assets, e.g., housing serves to provide a stream of consumption services as well being an investment.

Venti and Wise (1990) suggest that individuals can force themselves to save more and spend less if they invest in assets that are less accessible, such as retirement accounts. Thaler (1990) adds that individuals can also impose self-control through internally enforced savings rules of thumb. For example, an individual or household may save a set portion of income each month. Or, they may save any extraordinary income such as a pay bonus.

The possibility that the relationship between wealth and consumption may not be concurrent complicates the investigation. Shirvani and Wilbratte (2002) suggest that future research should examine the possibility that household spending may react to changes in expected, rather than current wealth. Also, the immediate effect of changes in wealth on spending may be tempered by skepticism. Bulmash (2001) develops a behavioral model of the wealth effect that proposes that individuals utilize an adaptive process and exhibit wealth smoothing behavior by gradually changing spending as they become convinced that wealth changes are permanent. Poterba and Samwick (1995) echo the possibility that consumption responds gradually to changes in stock market wealth.

The evidence discussed above is mixed with regard to the size and the source of the wealth effect. Following Starr-McCluer's promising micro approach and her suggestion to examine wealthier households, this study utilizes household survey data to investigate the wealth effect within the framework of the behavioral life-cycle model.

3. Survey Data

All variables used in this study are derived from the 2001 Federal Reserve Board Survey of Consumer Finances (SCF). The purpose of the SCF is to provide a comprehensive view of the financial behavior of a cross-section of U.S. households. Detailed information is gathered on all assets and liabilities of the household, as well as demographic characteristics such as home

ownership, age, employment, and income. Attitudes about the economy, saving, and spending are also measured.

A distinguishing factor of the SCF is its sample design. In order to obtain more detail on the financial behavior of those households holding a disproportionate share of the wealth, the SCF combines two sampling techniques (Aizcorbe et al, 2003). Approximately two-thirds of the respondents included in the final public dataset are randomly selected households from across the United States; the remaining one-third are wealthy households selected from a list derived from tax return data. While this sampling design prohibits the use of the sample as representative of the U.S. population, inferences can be made about the relationships among variables within households.[1]

Survey respondents were asked to indicate the strength of their agreement or disagreement to the following statement,*"When the things that I own increase in value, I am more likely to spend money."* Agreement with this statement signifies a wealth effect. While respondents indicate their intentions, rather than actual spending, it is not unreasonable to assume that their responses are based upon past spending behavior and thus serve as good predictors of future behavior.

According to the National Bureau of Economic Research (NBER), the ten-year economic expansion ended in March of 2001. The stock market yielded double-digit negative returns for 2000, and again for 2001. The 2001 SCF data were gathered during a period of economic decline and falling stock prices, on the heels of a long period of economic boom and soaring stock prices. Thus, the respondents to the 2001 SCF had experienced both economic boom and bust; they knew that some wealth is fleeting and that stock market gains could disappear. Nearly 28 percent of the respondents "strongly agreed" or "agreed" with the statement that their spending would increase with the value of their assets. In other words, they reported a wealth effect.

Descriptive statistics for the sample are provided in Table 1.[2] Because of the sampling design, these households are wealthier than the average U.S. household. Over 70 percent of the households are homeowners and have at least one full-time income (FTInc). Median household net worth is $206,000. Stock ownership is high, with 45 percent of the respondents owning stock outside of their retirement accounts (Own NonRet Stock), either as individual shares or as a part of a mutual fund. Stock ownership increases to 63 percent when stock held in retirement accounts is included in the measure (Own Stock). The median age of the household head is 49 years.

More than half of the respondents claim a consistent savings rule for their household income (SaveRule). Examples include setting money aside each month or spending the income of one family member, while saving all other income. Forty-eight percent of the households report no regular savings plan or profess not to save at all.

[1] The SCF also differs in its treatment of non-responses. The method of multiple imputation replaces each missing value with a set of values that represent a distribution of possibilities. This method attempts to simulate the distribution of missing data and provide a more realistic measure of the variability around the unknown data than simpler methods of estimating missing values. Models are used to impute five alternative values for each missing value. The final database consists of five complete observations for each respondent, which are combined for the analysis (Rubin, 1987 and Kennickell, 1991).

[2] The original sample of 4,449 households was reduced to 4,442 for the univariate analysis and 4,317 for the multivariate analysis. Seven observations were discarded due to errors in the data. Those households with zero assets were excluded from the multivariate analysis because some explanatory variables were derived as a percent of assets and division by zero is undefined.

The mean value of the household's equity in a principal residence as a percent of assets (HomeEq) is about 19 percent, with a median of ten percent.[3] Considering stock owned outside of retirement accounts (NRetSEq), the mean amount relative to assets is nine percent, with a median of zero percent. When all forms of stock ownership are included (SEq), the mean increases to about 15 percent of assets, with a median of about five percent.

4. Univariate Analysis of the Wealth Effect

The relationships between the wealth effect variable and household characteristic indicator variables are first examined on a univariate basis. As shown in Figure 1, in all but one case, the distribution of the reported wealth effect is significantly related to the household characteristic.

The literature suggests that the wealth effect may be driven by rising home values, so one would expect a higher percentage of homeowners than non- homeowners to report the wealth effect. However, univariate analysis indicates that whether the respondent is a homeowner does not significantly impact the likelihood that the wealth effect is reported. The following multivariate analysis will explore this unexpected result further.

The literature also suggests that the wealth effect is driven by the stock market. The proportion of the sample reporting a wealth effect is significantly higher for households that own stock outside of their retirement accounts than those who do not (30 percent vs. 25 percent). The difference decreases (29 percent vs. 26 percent), but remains significant for those households that own any stock, regardless of the purpose of the investment. Because stock held in retirement accounts cannot be prematurely liquidated without tax penalties, these results support the behavioral lifecycle model of savings assumptions of mental accounting and self-control. The likelihood of respondents spending more when they feel wealthier depends upon the stock's accessibility.

The next several results are intuitively appealing. A wealth effect is reported by 30 percent of households having at least one full-time income, significantly higher than the 22 percent of those not having a full-time income. If labor income is uncertain, or only part-time, or nonexistent, increases in wealth may be held as precautionary balances rather than spent. Because the income for households earning at least one full-time income is more certain than for households with only part-time income or who are retired, those households may be more likely to indicate a wealth effect.

Of those households who have a consistent savings rule for household income, 26 percent claim to exhibit a wealth effect, significantly lower than the 29 percent of the households who do not have a savings rule or do not save at all. Savings rules represent a form of self-control, one of the behavioral life-cycle model's key assumptions. The result is congruent with the model.

[3] This measure of principal residence includes single- family homes, townhouses, condominiums, mobile homes and sites, other permanent dwellings, and any part of farms not used in business. Equity equals the home value minus the amount owed on first and second mortgages and on home equity lines of credit.

Expectations for the economy impact consumer spending, as expected. The proportion of respondents who report the wealth effect is significantly higher for those who expect growth in the economy in the near future than those who do not (31 percent vs. 26 percent) Households are more likely to spend increases in wealth if they believe that the increases are permanent (Bulmash, 2001); increases are viewed as being more sustainable during periods of economic growth, when the job market is strong and incomes are rising.

In considering the highest level of education achieved by the household head, those with the most education are significantly more likely to report the wealth effect than those with less education. While 33 percent of those respondents with a graduate degree claim that they will spend more when the things they own increase in value, only 25 percent of those respondents with a high school diploma or less report this. This result may be explained by the fact that those respondents with graduate degrees may have occupations with more job security, and are much more likely to own assets that can increase in value, i.e., a significantly greater proportion are homeowners and own stock, relative to those with less education. Further, compared to respondents with less education, those with graduate degrees are significantly more likely to be married or living with a partner, and so have at least one full time income in the household.[4]

Univariate analysis reveals some interesting relationships between core assumptions of the behavioral life-cycle model and household characteristics and between household consumption and asset value. The multivariate analysis examines the impact of each of these behavioral life-cycle concepts and household characteristics, holding the other factors constant.

5. Multivariate Analysis of the Wealth Effect

A logistic regression is used to estimate the probability that respondents will indicate they are likely to spend more when their assets increase in value. The model assumes that the respondent's choice to report the wealth effect is characterized by a logistic distribution, and the maximum likelihood estimates of the regression coefficients yield an estimated probability derived from the cumulative logistic distribution function.

The odds ratio is the probability that an event occurs divided by the probability that it does not occur. In the logit model, the log of the odds is linear:

$$\log [\Pr \text{WealthEffect} / (1 - \Pr \text{WealthEffect})] = \alpha + \Sigma \beta_k x_k$$

The explanatory variables that are hypothesized to influence the probability that the respondent will exhibit the wealth effect are denoted by x_k, and the regression coefficients from the model are denoted by β_k. The estimate of the odds ratio (derived from taking the exponential of the maximum likelihood estimates, β_k) indicate the impact that a unit change in x_k has on the probability of an event, holding all other factors constant. An odds ratio of 1.00

[4] The relationship between the respondent's gender and the wealth effect could not be examined because of the method used in the SCF to code household head gender. For couples, the head is taken to be the male in a mixed-sex couple, or the older individual in a same-sex couple. Of the couples in the data, 99 percent are coded as male-headed households.

indicates equal odds, meaning the explanatory variable has no significant impact on the event probability.[5]

The first estimated model includes as an explanatory variable the percent of total assets held in equity capital (stock) outside of retirement accounts, rather than equity held in any form. The results are presented in Table 2 and are interpreted as follows.

For the indicator variables, the odds ratio estimate denotes the marginal effect on the probability that the household will exhibit the wealth effect when the variable is turned on, takes the value 1 relative to the value 0. For the continuous variables that measure the percent of assets held in real estate equity or stock, the odds ratio estimate indicates the marginal impact on the probability that the household will exhibit the wealth effect given a ten percentage point change in the variable.

The point estimate of the odds ratio for net worth is 1.00, indicating that a change in net worth has no effect on the probability that the household will exhibit the wealth effect.[6] Thus, when other household characteristics are held constant, the level of total wealth, as measured by net worth, is not a driving factor in determining who will spend more when their assets increase in value.

The significant negative relationship between the age of the household head and the wealth effect is as expected. The younger the household head, the higher the probability that households will spend more when their assets increase in value. The odds ratio indicates that for each year younger the age, the probability that the household exhibits the wealth effect increases by one percentage point. The confidence interval estimate indicates a one to two percent increase in probability. This result could be simply due to a lack of experience with equity markets, or perhaps this is evidence of a cohort effect that exhibits a generational attitude toward spending. Also, these younger households have more time to accumulate assets. An interesting question is whether the households in this cohort will become less likely to exhibit the wealth effect as they age and gain more experience, or whether this is an attitude they will carry with them.

The probability that the household exhibits the wealth effect is significantly impacted by the highest level of education achieved by the head of household, even when other factors such as home and stock ownership are held constant. The odds ratio estimate indicates that, compared to respondents with a college degree, those with a graduate degree are 27 percent more likely to exhibit the wealth effect. One possible explanation is that those with graduate degrees may have professional occupations with more job security than those with less education. More stable incomes better enable them to spend more when the things they own increase in value.

Contrary to the univariate results, when other characteristics are held constant, homeownership does have a significantly positive impact on whether the respondent will report the wealth effect. The odds ratio estimate indicates that homeowners are 29 percent more likely to increase their spending when their assets increase in value. Given the assertion that

[5] The confidence interval estimate of the odds ratio – derived from the parameter estimates and their covariance matrix – indicates whether the explanatory variable has a significant impact at the 95 percent level of confidence. If the value 1.00 is within the interval, then the estimated coefficient is not significantly different from zero and the explanatory variable has no statistically significant impact on the event probability.

[6] The logistic regression results are little different when total household income is included in the analysis instead of household net worth. The income variable has no impact on the likelihood of the wealth effect, and all other odds ratio estimates are relatively unchanged.

changes in home values drive consumer spending, homeowners are expected to be more likely to report a wealth effect than non-homeowners. In a rising market, homeowners can convert higher real-estate values into cash by refinancing existing mortgages for a higher amount to "cash-out" the equity, or they can take out a home equity line of credit. In a falling market, the results suggest that there will be a negative effect.

The next variables examine the amount of real-estate equity respondents have in their portfolios. The percent of assets held in principal residence home equity has a significant negative impact on the probability that the household will exhibit the wealth effect. For each ten percentage point increase in home equity relative to assets, the household is six percent less likely to report the wealth effect. This result can be explained by the "cashing-out" of home equity, made more accessible through lines of credit. As compared to those homeowners who do not report the wealth effect, a significantly larger proportion of homeowners who do report it have outstanding mortgage debt or a home equity line of credit, and they indicate that the purpose of their mortgage or line of credit is to "cash-out" their home equity. The majority of these homeowners borrowed against their equity for home improvement, investment purposes, and to pay expenses. Thus, those respondents who exhibit the wealth effect have less home equity.[7]

The percent of assets held in nonresidential real estate has no significant impact on the probability that the household exhibits the wealth effect. This result, taken together with the negative impact of the equity in principal residence as a percent of total assets on the wealth effect, supports the notion of mental accounting. Individuals possibly view nonresidential real estate as long-term investment, whereas the primary residence is a combination of investment and consumption goods and is, thereby, more accessible.

For a ten percentage point increase in the percent of assets held in stock outside of retirement accounts, the odds that the household exhibits the wealth effect increases by five percentage points, with a confidence interval estimate of between one and ten percent.[8] Households with at least one full-time income are 21 percent more likely to exhibit the wealth effect than households without a full-time income. Finally, as expected, respondents who believe that the economy is going to grow in the near future are 29 percent more likely to exhibit wealth effect spending than respondents who do not. Consumers are much more likely to spend increases in wealth if they have more certain income and confidence in the economy. However, households who have a consistent savings rule for income are 28 percent less likely to spend as their wealth increases.

In the second estimated equation, also presented in Table 2, the variable measuring the percent of assets held in stock outside of retirement accounts (NRetSEq) is replaced by the percent of assets held in stock in any form (SEq). While the odds ratio estimates for most of the other variables included in the model barely change, this new variable does not have a significant impact on the households' behavior. Together, the results of the first and second

[7] The analysis was also performed using the market value of the residential real-estate relative to assets rather than the equity held by the household. While the significance of the other factors in the analysis is not affected by the substitution, this measure has an insignificant impact on the probability that the household reports the wealth effect. The market value of the home and other real-estate does not reflect the "cashing-out" of equity that the household may have taken as the property market value increased.

8Including a variable to capture the race of the household head confounded the results. According to the coding of the SCF, nonwhites include Black/African-American, Hispanic/Latino, Asian, American Indian/Alaska Native, Native Hawaiian and other than white. These nonwhites make up 19 percent of the sample. While more likely to report the wealth effect than whites, this result is believed to be related to the significant difference in stock ownership between the two groups. Only 35 percent of nonwhites hold stock in any form and only 18 percent hold stock outside of retirement accounts.

equations support the notion that investors do not view stock wealth as fungible. The impact of increases in stock wealth on spending depends upon how readily the stock can be liquidated. Stock held outside of a retirement portfolio is much more accessible and tempting than stock held within a retirement portfolio

6. Conclusion

Recognizing factors that influence consumer spending and the nature of their impact is vital to business profitability. Household wealth is undoubtedly a strong factor in determining consumer spending, a relationship described by the wealth effect. Examining the wealth effect within the context of the behavioral life-cycle model provides insight into the mixed results provided by previous studies.

This study suggests that relatively younger consumers, those with more education, homeowners, full-time income earners, and those expecting economic growth tend to spend more when their wealth increases. Business economists and retail executives can use these findings to better predict consumer spending through, for example, improved demand forecasts.

This analysis provides more finely tuned demographic predictors than are typically used in demand forecasting models. For example, the evidence that stock held within retirement accounts is viewed by households as being less accessible than stock held in general can be used to better predict how changes in stock market values may affect consumer spending. Increases in the value of stock held outside of retirement accounts aremore likely to generate higher consumer spending than increases in overall stock value.

The SCF data employed in this study is unique in its over-inclusion of wealthier households—those who are much more likely to experience increasing wealth during a booming stock market. Results presented in this article can help businesses, particularly those who cater to higher-income consumers, understand how spending behavior responds to changing household wealth. This is especially important during periods of rapidly shifting stock and real estate values. Consumers do not react homogeneously to changes in wealth, nor do they view all changes in wealth as being alike.

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TABLE 1

SAMPLE DESCRIPTIVE STATISTICS

Indicator Variables

Variable	Definition	Proportion
Wealth Effect	= 1 is respondent claims: "when the things I own increase in value, I am more likely to spend money": 0 otherwise	0.28
Homeowner	= 1 if household owns home; 0 otherwise	0.71
FTInc	= 1 if at least one member of the household has a full-time income; 0 otherwise	0.72
Education		
High School	= 1 if household head has 12 years or less of education; 0 otherwise	0.54
College	= 1 if highest education of household head is a college degree or certificate; 0 otherwise	0.27
Grad Degree	= 1 if household head has a graduate degree; 0 otherwise	0.19
Own NonRetire Stock	= 1 if household owns stock outside of retirement accounts; 0 otherwise	0.45
Own Stock	= 1 if household owns stock in any form; 0 otherwise	0.63
SaveRule	= 1 if respondent has a consistent savings rule for household income; 0 otherwise	0.52
EGrow	= 1 if respondent expects economy to grow over next 5 years; 0 otherwise	0.28

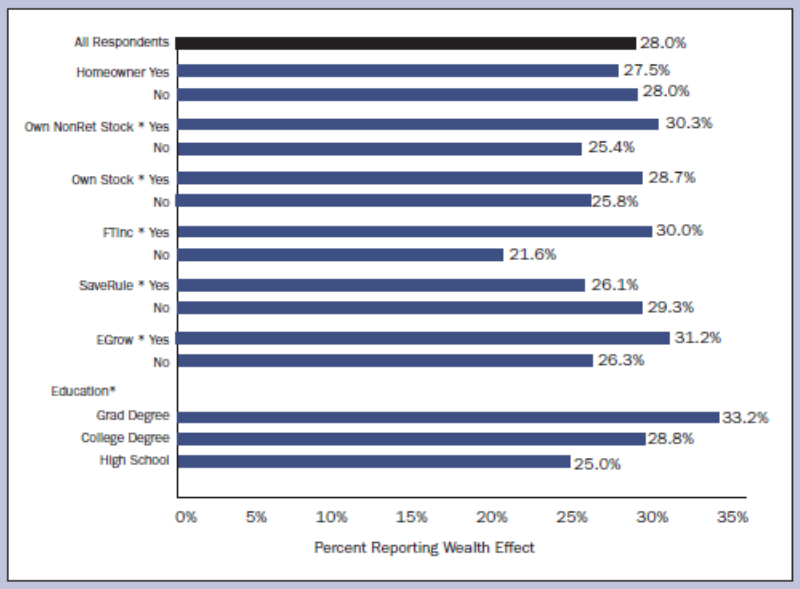
Continuous Variables

Variable	Definition	Mean	Median
Net Worth	Household net worth: the value of all real and financial assets owned, including business equity, less the value of all mortgage and consumer debt outstanding; in $000s	$7,081.4	$206.0
Age	Age of Household Head	51 yrs	49 yrs
HomeEq	Equity in Principal Residence as a percent of total assets	187%	10.2%
NResEq	Equity in Nonresidential Real Estate as a percent of total assets	2.6%	0.0%
NRetSEq	Percent of total assets held in stock outside of retirement accounts	8.9%	0.0%
SEq	Percent of total assets held in stock in any form	15.2%	4.6%

n=4,442

FIGURE 1

WEALTH EFFECT BY HOUSEHOLD CHARACTERISTIC



n = 4,442

* The percent of households reporting the wealth effect is statistically different across the household characteristic at the five percent level of significance.

TABLE 2

RESULTS OF LOGISTIC REGRESSION ON WEALTH EFFECT MODEL

	Odds Ratio Estimates (Eq. 1)			Odds Ratio Estimates (Eq. 2)		
Explanatory Variable	**Point Estimate**	**95% Confidence Interval Estimate**	**p-value**	**Point Estimate**	**95% Confidence Interval Estimate**	**p-value**
Intercept	0.69	0.47-100	0.051	0.70	0.48-1.02	0.064
NetWorth	1.00	1.00-1.00	0.689	1.00	1.00-1.00	0.866
Age	0.99*	0.98-099	0.000	0.99*	0.98-0.99	0.000
Education						
High School	0.85	0.72-1.01	0.063	0.84*	0.71-1.00	0.044
Grad Degree	1.27*	1.04-1.54	0.017	1.28*	1.05-1.56	0.013
HomeOwn	1.29*	1.05-1.57	0.013	1.31*	1.07-1.60	0.008
HomeEq (per 10%)	0.94*	0.90-0.98	0.003	0.94*	0.90-0.97	0.001
NResEq (per 10%)	1.01	0.94-1.08	0.885	1.00	0.93-1.07	0.974
NRetSEq (per 10%)	1.05*	1.01-1.10	0.026			
SEq (per 10%)				1.02	0.98-1.06	0.286
SaveRule	0.72*	0.63-0.83	0.000	0.72*	0.63-0.83	0.000
EGrow	1.29*	1.11-1.50	0.000	1.29*	1.11-1.50	0.000

n=4,317
* Odds Ratio Estimate differs from 1.00 at a five percent significance level.
The p-value is the observed level of significance for the maximum likelihood estimate of the regression coefficients, (beta k)
In both equations, the chi-square statistics for the likelihood ratio tests in each of the 5 imputations are significant at less than the 1 percent level.