

# **Savings Between Cohorts: The Role of Planning<sup>1</sup>**

Annamaria Lusardi

(Dartmouth College and NBER)

and

Jason Beeler

(Mercer Oliver Wyman)

July 16, 2006

## Abstract

We compare the saving behavior of two cohorts: the Early Baby Boomers (EBB, age 51-56 in 2004) and the HRS cohort (age 51-56 in 1992). We find that EBB have accumulated more wealth than the previous cohort but they benefited from a large increase in house prices, which lifted the wealth of many home-owners. In fact, there are many families among EBB, particularly those headed by respondents with low education, low income, and minorities, which have less wealth than the previous cohort. Lack of wealth can be traced to lack of retirement planning. Notwithstanding the many initiatives aimed at fostering planning in the 1990s, a large portion of EBB still do not plan for retirement even though most respondents are close to it. The effect of planning is remarkably similar between the two cohorts; those who do not plan accumulate much lower amounts of wealth –from 20 to 45 percent depending on the location in the wealth distribution- than those who do plan. Thus, for both the EBB and the HRS cohort, lack of planning is tantamount to lack of saving irrespective of the many changes in the economy between 1992 and 2004.

---

<sup>1</sup> We would like to thank Patricia Anderson, Mark Christman, Olivia Mitchell, Douglas Staiger, Steven Venti for suggestions and comments and David Weir for providing the preliminary weights for the 2004 HRS. Financial support from the Social Security Administration via a grant from the Michigan Retirement Research Center is gratefully acknowledged. Any errors are our responsibility.

Throughout the 1990s, employers have increasingly shifted from Defined Benefits (DB) to Defined Contributions (DC) pensions, where workers have to choose the amount of contributions and the allocation of retirement wealth. To facilitate these decisions, both employers and the government have taken initiatives to foster retirement savings and improve financial literacy via, for example, retirement seminars. At the same time, there has been an explosion in the financial industry of products and tools aimed at improving retirement planning. Have these changes had any impact on savings? We examine this question by comparing the saving behavior of two generations: the Early Baby Boomers (EBB), which are born between 1948 and 1953 and are therefore 51 to 56 years old in 2004 and an earlier cohort (HRS cohort hereafter), which was born between 1936 and 1941 and whose members are 51 to 56 years old in 1992. By examining individuals of the same age but at different points in time, we can assess how being born in different times and being exposed to different economic circumstances affects saving patterns.<sup>2</sup>

We find that most EBB accumulated more wealth than the previous generation. However, this derives mostly by the appreciation in housing equity; measures of non-housing wealth show little or no changes between cohorts. There is also a sizeable group of EBB who display less rather than more wealth than the HRS cohort. These families are disproportionately those with low educational attainment or minorities, such as Blacks. The low-often minuscule- amounts of wealth held by many families, not only among the HRS cohort but increasingly so in the EBB cohort, is worrisome as these households are only 10 to 15 years away from retirement. We find that, for both cohorts, lack of wealth can be traced to lack of retirement planning. Notwithstanding the many initiatives aimed

---

<sup>2</sup> By comparing two generations at different points in time, we cannot distinguish between “time” and “cohort” effect. We will use the term cohort/time interchangeably. For a detailed discussion of this topic, see Kapteyn, Alessie and Lusardi (2005).

at fostering planning in the 1990s, a large portion of EBB still do not plan for retirement even though most respondents are close to it. Irrespective of the changes in the housing and stock market over time, the effect of planning is remarkably similar between cohorts; those who do not plan accumulate much lower amounts of wealth than those who do plan. At the median, non-planners hold 20 percent less wealth than planners, but figures are much higher (closer to 45 percent) for households at lower levels of the wealth distribution. Thus, both in 2004 and in 1992, lack of planning is tantamount to lack of savings.

The paper is organized as follows. In the next section, we describe the data and compare demographic characteristics and income between the two cohorts. We then examine levels and composition of household wealth. Further, we show that many EBB do not plan for retirement and that wealth varies substantially across degrees of planning. Finally, we assess the effects of planning on wealth using both quantile and Instrumental Variables (IV) estimation.

### **Sample and Descriptive Statistics**

In our work, we use data from the Health and Retirement Study (HRS), a nationally representative survey of older Americans over the age of 50 (and their spouses of any age). Specifically, we examine the “Early Boomer” cohort where at least one household member was born between 1948 and 1953 (age 51-56 in 2004). This group was first surveyed in 2004. We also examine the “HRS cohort” where at least one household member was born between 1936 and 1941 (age 51-56 in 1992). This group was interviewed in the first wave of the HRS in 1992. By comparing cohorts of the same

age (51-56) but in different time periods (2004 versus 1992), we can assess how being born in a different time and having lived in different economic conditions affects financial behavior.

The EEB are particularly important to study; they are a large generation on the brink of retirement. Earlier studies about the saving behavior of the Baby Boomers have shown mixed results (compare, for example the findings of Bernheim (1993) with the Congressional Budget Office study (1993)). Similarly, studies which have examined the effects of retirement seminars during the 1990s have found contrasting estimates (for a review, see Lusardi (2004)). The advantage of our study with respect to previous work is that it utilizes a very rich and detailed source of data about savings and a host of demographic and economic characteristics that can affect wealth holdings.

To carry out the comparison between these two cohorts, we construct demographic variables that are similar across years. In addition, we use the same definition of income and wealth. Specifically, our measure of total net worth includes checking and savings account balances, certificates of deposits and T-bills, bonds, stocks, IRAs and Keoghs, net housing equity, other real estate, net value of own businesses, cars and other vehicles minus debts. Total household income is the sum of labor and capital income, government transfer program income, and other income (gifts, lottery, etc.). All values are expressed in 2004 dollars and all statistics are weighted using the preliminary weights provided by the HRS for 2004 and the final weights for 1992.<sup>3</sup> Questions about wealth in the HRS are asked to the most knowledgeable member in the household about financial matters- financial respondent hereafter.

---

<sup>3</sup> In both 1992 and 2004, the HRS sample is not representative of the population in that age group.

To construct the final samples, we delete a handful of observations with missing information about demographic variables such as age, sex, marital status, number of children, and race and ethnicity. Moreover, we delete the observations with zero income as they are likely to be the result of measurement error. The final number of observations is 2,631 for the EBB and 4,577 for the HRS cohort.

Table 1 illustrates several important changes in the demographic composition of the two cohorts. First, EBB display higher educational attainment than the HRS cohort. Not only are EBB more likely to have a college degree or more than college education but they are also less likely to be high-school drop-outs. Second, EBB are less likely to be married and more likely to have experienced a family break-up; the number of divorced increased from 14.8 percent in 1992 to 21.6 percent in 2004. Consequently, the number of families with children decreased over the time period. These changes were also noted in several other papers in this volume (Iams, Butrica and Smith; Manchester, Weaver, and Whitman; Wolfe, Haveman, Holden and Romanov). As expected, the proportion of Hispanic households increases from 1992 to 2004 (from 7.6 percent to 8.7 percent), while the proportion of Whites declined.<sup>4</sup> Because wealth varies substantially across demographic groups and it is strongly affected by education, marital status, and race, it is important to keep these changes into account when examining household wealth holdings.

*Table 1 here*

Another important change over this period concerns the distribution of total household income between the EBB and the HRS cohort (Table 2). Both the mean and

---

<sup>4</sup> Because race and ethnicity is not exclusive and Hispanics can also report being Whites, Blacks or Other Race in addition to being Hispanics, the percentages in Table 1 sum to more than 100. However, the same definition is used in both years.

median income among EBB was higher than the HRS cohort. If increases in household income are a proxy for increases in permanent income between the two cohorts, we expect wealth among EBB to have increased as a result of these changes in lifetime resources. Note, however, that EBB households below the median income report lower income than the households in the HRS cohort, perhaps as a result of the stagnation in wages for workers without a college degree during the 1990s (Autor, Katz, Kearney 2006; Autor and Katz 1999). Since the households at the bottom of the income distribution are disproportionately those with low education, unmarried, and Blacks and Hispanics, we expect these groups to have more difficulties accumulating wealth in 2004 than in 1992.

*Table 2 here*

The distribution of total net worth is displayed in Table 3A. When considering the mean and the third quartile, the EBB have accumulated more wealth than households in the HRS generation and differences are statistically significant between cohorts. However, consistent with the data on income discussed before, EBB in the lower quartile of the wealth distribution have accumulated lower amounts of wealth than the HRS cohort, although differences are not statistically significant (see also Table 4). These households are disproportionately those with low income and low education. Not only are these households more likely to display lower amount of wealth in 2004, but they are also more likely to be in debt. Note that, for both cohorts, the distribution of total net worth is very wide. Thus, there exist large differences in wealth even when looking at a narrow age group.

One major change the EBB experienced, particularly during 2002 and 2003, is a large increase in home prices. Thus, the increase in wealth among EBB may simply be the result of the appreciation in home equity. The distribution of total non-housing wealth in Table 3B shows that housing equity plays an important role in the level and composition of wealth of both generations. First, most households in both generations hold little beside housing wealth. Moreover, when we subtract housing equity, we find that, not only the households at the bottom of the wealth distribution, but even the median household in the EBB holds lower non-housing wealth than the previous generation. Thus, a large part of the increase in wealth between the two generations is in housing equity. This is also confirmed in our tests. When we compare mean wealth holdings between cohorts, we find a statistically higher total net worth in 2004 as compared to 1992. However, the difference is simply driven by housing wealth; there are no statistically significant differences in mean non-housing wealth between cohorts.

*Tables 3A and 3B here*

The distribution of total net worth in the population hides some important differences across demographic groups. This is important to consider in view of the changes in demographic characteristics reported previously (Table 1). Table 4 shows that EBB with low educational attainment and minorities, such as Blacks, display lower amounts of wealth than the HRS cohort. Only EEB households with a college degree (or higher degrees) have higher wealth than HRS cohort with the same educational attainment. Note that, for EBB with less than a college degree, the amounts are lower throughout the wealth distribution. Moreover, a sizable proportion of the EBB with low education and Blacks and Hispanics arrive at retirement with minuscule amounts of

wealth, raising concerns about their future well-being into retirement. Finally, the distribution of wealth remains wide even *within* demographic groups in both years. Thus, there are many differences in the pattern of wealth even when we consider similar households in terms of both age and economic status. Other factors rather than age, income, and macro shocks influence wealth. Later, we show that lack of wealth both in the total sample and even after accounting for demographic characteristics can be traced to lack of retirement planning.

We turn now to the composition of wealth between these two generations, which is illustrated in Table 5 and Figures 1A-1B. This is important in view of the large changes in both the stock and housing market during the 1990s, which could have influenced the wealth of EBB. Clearly one of the most important assets held by both generations is the home. Not only did home-ownership increase slightly between the two generations (differences are significant but only at the 10 percent level of significance), but home equity accounts for a third of total net worth among the EBB. When we sum together home equity and other real estate – an asset prominent among wealthier households- the amount of wealth accounted for by total real estate is close to 50 percent for EBB, while it was 43.8 percent for the HRS cohort. Thus, exposure to the housing market has increased for the EBB compared to the HRS cohort.

Two other important assets in the portfolios of both EBB and the HRS cohort are stocks and IRAs or Keoghs. Again, ownership of these assets increases slightly between the two cohorts but differences are not statistically significant. Most households do not hold large amounts of wealth in stocks and IRAs; the share of wealth accounted for by stocks is 12.6 percent among EBB and 8.3 percent among the HRS cohort. The share of

IRAs or Keoghs is similar but slightly lower in both years. Assuming that all IRAs are invested in the stock market, more than 23 percent of EBB's wealth is invested in the stock market, while a lower portion of the HRS cohort's wealth, 15.8 percent, was invested in the stock market. Thus, in addition to the housing market, exposure to the stock market has also increased for EBB compared to the HRS cohort.

*Table 5 here*

Which households are affected by changes in the housing market and the stock market? Figures 1A and 1B show that the proportion of home-ownership, real estate, stock, and IRA ownership across the wealth distribution has not changed much across the two generations. Most importantly, while a large percentage of households in the lower deciles of the wealth distribution own a home, the percentage of stock-owners is high only at the top of the wealth distribution. Thus, while the vast majority of EBB and HRS households are exposed to the fluctuations in the housing market, a much smaller group of households is exposed to the fluctuations in the stock market. This finding is compounded by the fact that households in both cohorts hold large amounts of home equity, at least in relationship to their total wealth, while most households hold small amounts of stocks and IRAs. Lusardi and Mitchell (2006b) show that, if home prices by region in 2004 were to return to their levels of 2002—an average reduction of about 13 percent—EBB would lose approximately 9 percent of total wealth. A reduction of similar magnitude in stock prices would reduce the wealth of EBB by only 2 percent (see also Gustman and Steinmeier 2002). This exercise is important because it shows that asset prices (mostly home prices) can play a major role in explaining changes in the distribution of wealth between generations. Most EBB have benefited from a remarkable

increase in home prices, which lifted their wealth with respect to the previous generation. However, it is not clear yet whether this change is long-lasting.

*Figures 1A and 1B here*

Another asset that merits consideration is business equity. While business owners account for a small fraction of the population, they account for a sizable amount of total wealth (Gentry and Hubbard 2004; Hurst and Lusardi 2006). For example, while close to 15 percent of EBB are business owners, the amount of wealth held in business equity among EBB is as large as the amount of wealth held in IRAs, even though 41.6 percent of EBB hold IRAs. Business owners are disproportionately located at the top of the wealth distribution. Using data from the HRS in 1992, Hurst and Lusardi (2006) show that as many as 82 percent of households in the top 3 percent of the wealth distribution are business owners. The percentage of business owners has decreased between cohorts and so is the share of total wealth invested in business equity. Since we rarely have all the relevant information to account for the differences between business owners and other households, in our empirical work, we exclude the business owners from our sample.

Before turning to an important determinant of total net worth in the next section, we need to mention that our analysis is limited to a narrow measure of wealth: total net worth, which includes IRAs and Keoghs but no other measures of pension and Social Security wealth. This is a limitation because, as Gustman and Steinmeier (1999) show, pension and Social Security wealth can account for as much as much half of total wealth. However, we do not have yet an accurate measure of these two components of total wealth for the EBB cohort. Moreover, as Cunningham, Engelhardt and Kumar in this volume show, current calculations of pension wealth may be affected by large errors.

## **Explaining Differences in Wealth Holdings: The Role of Planning**

The previous analysis shows that the distribution of wealth among EBB and HRS is very wide. Differences in wealth in both cohorts persist even when looking within demographic groups. While wealth holdings were lifted by the home price increase, a sizable proportion of EBB arrives close to retirement with very small amounts of wealth. However, throughout the 1990s, there has been an explosion of initiatives aimed to foster savings. As mentioned before, many employers, particularly large ones and those offering DC pensions, have started offering retirement seminars to workers. Moreover, both the government and the financial industry have been active in promoting planning and saving for retirement. Have these initiatives had any impacts on household saving behavior?

Lusardi (1999) was the first to point out that many households do not plan for retirement, even when only 5 to 10 years away from it. This finding has been confirmed in other studies using different surveys, such as the Retirement Confidence Survey and the TIAA-CREF Survey (see, among others, Yakoboski and Dikemper 1997 and Ameriks, Caplin and Leahy 2003). Most importantly, Lusardi (1999, 2002, 2003) shows that planning is a powerful determinant of wealth; those who do not plan arrive at retirement with much lower amounts of wealth than those who plan.

In addition to providing a module on planning and financial literacy, the HRS in 2004 re-introduced a question about retirement planning that was present in the 1992 wave.<sup>5</sup> Thus, it is possible to examine how planning has changed between these two generations and whether and how much planning affects household wealth among EBB. Table 6 reports the degree of planning between the two cohorts and the distribution of

---

<sup>5</sup> For a detailed discussion of the findings in the module on planning and financial literacy, see Lusardi and Mitchell (2006a).

wealth among different planning types. Several important facts emerge from these tables. First, the proportion of non-planners (those who have thought about retirement “hardly at all”) decreased among EBB compared to the HRS and the change in planning is statistically significant. However, a still large fraction of EBB, 27.5 percent, does not seem to have given any thought to retirement, even though they are only 5 to 10 years away. Second, planning is strongly correlated with wealth. Those who plan accumulate much larger amounts of wealth than non-planners. Looking at medians, planners hold double the amount of wealth than non-planners and differences are even larger at the first quartile of the wealth distribution. Note that many non-planners have accumulated very little wealth, while planners have accumulated up to 7 times the amount of wealth of non-planners. Thus, for several households, lack of planning is tantamount to lack of savings. Note, however, there is not much difference in mean net worth between planning categories. This is because there are several extremely wealthy households who have not given any thought to retirement. We will later examine the impact of these households on estimates of the effect of planning. Finally, the effect of planning is strikingly similar between the two cohorts. Thus, the relationship between planning and wealth does not seem to have been much influenced by changes in home prices, changes in stock prices, or increases in financial education during the 1990s.

*Table 6 here*

Which households are more likely to be planners? In Figures 2A-2C, we report the proportion of planner types across education, sex, race, and across year/cohort. The large majority of those with less than a high school education are non-planners. This is the case not only in the HRS cohort, but also among EBB. The proportion of non-

planners decreases as we move to higher education levels, but the share of non-planners across education groups is very similar between the two cohorts. This means that planning is strongly linked to education, although there is also a sizeable fraction of non-planners among those with college and higher degrees. Since educational attainment has increased during the 1990s, this may explain why the fraction of non-planners has decreased in the same time period. Similarly, while financial education programs have been undertaken during the 1990s, many low income and minority workers were not exposed to such programs (see Lusardi 2004). This may explain why lack of planning tends to persist among these groups over time.

Planning is also strongly correlated with race: non-planners are disproportionately concentrated among Blacks and Hispanics. However, it is encouraging to see that the proportion of non-planners among Blacks and Hispanics tend to decrease between the two cohorts. There are also differences in planning between women and men; women are more likely to be non-planners both in 1992 and 2004. Lusardi and Mitchell (2006a,b) further show that planning is strongly correlated with financial literacy; those who can do simple calculations and understand the working of inflation, interest compounding, and risk diversification are also more likely to plan.

*Figures 2A, 2B,2C here*

Do the large differences in wealth across planning type persist when we account for demographic characteristic and income? Has the effect of planning changed over time? We turn now to a multivariate analysis of the effect of planning on wealth between the two cohorts. To construct the final sample, we first delete business owners from our sample. As reported in Hurst and Lusardi (2004, 2006) and Hurst, Lusardi, Kennickell

and Torralba (2005), business owners display different motives to save than other households. For example, business owners are less likely to have pensions and state they plan to never retire completely. They also display a stronger precautionary motive and bequest motive. Moreover, there are several measurement issues in assessing correctly their income, as they have a clear incentive to under-report earnings.<sup>6</sup> Since it is difficult to account properly for all the differences among business owners and other households, we delete these households from the sample in both 1992 and 2004. While this has the advantage of curtailing the top of the wealth distribution, there still exists wide variation in household wealth holdings. Before performing the regressions, we further trim the top and the bottom 1 percent of the wealth distribution. We perform regressions for each cohort and in the pooled sample, where we combine the data between years.

Given there are such sharp differences between planners and non-planners (Table 6), we construct a simple dummy for lack of planning (*No planning*) that takes the value 1 when households report they have given hardly any thought to retirement. We include in the regressions other major determinants of wealth: age (and age squared), number of children, dummies for marital status, education, sex, race and ethnicity and whether the financial respondent is partially or fully retired. In addition, we include total household income.<sup>7</sup> Together with race and education, income serves as a proxy for permanent income, i.e., lifetime income. Given that the distribution of wealth is skewed to the right, we perform quartile regressions rather than Ordinary Least Square (OLS) regressions.

The empirical estimates are provided in Tables 7A and 7B. Even after accounting for many demographic characteristics and income, the coefficient estimate of lack of

---

<sup>6</sup> For a detailed discussion of this issue, see Hurst, Lusardi, Kennickell and Torralba (2005).

<sup>7</sup> To limit the effect of outliers, we take the log of income. This empirical specification is similar to the specification used in most studies on savings (see Lusardi 2002, 2003).

planning is always negative and statistically significant at each of the three quartiles of the wealth distribution in each cohort and in the pooled sample. The estimates are not only sizeable but they are very similar between cohorts (in the pooled sample, the interaction term between no planning and the 2004 year dummy is mostly not statistically significant). Irrespective of the changes throughout the 1990s, lack of planning continues to have the same effect: it sharply reduces wealth. Looking at medians, non-planners accumulate from \$17,000 to \$20,000 less wealth than those who do some (a little or a lot) planning. This corresponds to approximately 20 percent less wealth. This is consistent with estimates from previous studies (Lusardi 1999, 2003; Ameriks, Caplin and Leahy 2003) that also show that lack of planning has an effect on wealth even after accounting for many determinants of wealth. It is also consistent with estimates from the 2004 HRS using a different measure of planning (Lusardi and Mitchell, 2006a).

*Tables 7A and 7B here*

Other variables have the expected sign. For example, wealth holdings increase with education. While in 1992, high school graduates accumulate more wealth than those with lower educational attainment, in 2004 the increase in wealth is concentrated among those with college or higher degrees. Blacks and Hispanics accumulate less wealth than Whites, but the effect is particularly pronounced among Blacks. Family break-ups, such as divorce and separation, are also a detriment to wealth accumulation. The effect of divorce in both the median and third quartile estimates is much larger among the EBB than the previous generation. Having more children also leads to lower wealth holdings.

The effect of planning persists when we examine a different measure of wealth. In Table 8, we consider median regressions of total non-housing wealth.<sup>8</sup> Lack of planning continues to be statistically significant and negative both across years and in the pooled sample. Thus, planning affects other components of wealth beyond housing equity. This result is to be expected as the effect of planning is similar between cohorts while housing equity increased substantially before 2004.

*Table 8 here*

### **Interpreting the Effect of Planning**

The previous estimates show that the effect of planning on wealth is sizeable. How do we interpret the effect of lack of planning on wealth? To better understand this effect, in Table 9, we first report the median and OLS estimates of lack of planning on net worth. For brevity, only the estimates in the pooled sample are reported. Note that the OLS estimates of lack of planning are barely significant. This shows that the choice of estimation technique is critical to assess the effect of planning and, most importantly, that at high levels of wealth, planning may cease to matter.

*Table 9 here*

To understand this finding further, in Figure 3A and 3B we report the effects of non-planning at each percentile of the wealth distribution. The figures report the estimates and the 95 percent confidence intervals. Note that up to the 80<sup>th</sup> percentile of the wealth distribution, the estimates are negative (lack of planning leads to lower wealth) and the confidence intervals are narrow enough to make the estimates statistically

---

<sup>8</sup> For brevity, we only report median rather than other quantile estimates, but planning has an effect across the wealth distribution. For a discussion of the role of housing wealth on retirement savings, see Venti and Wise (1990, 1991).

significant. While estimates become more negative as we move to higher values of wealth, as a proportion of wealth, lack of planning is particularly dire at the bottom of the wealth distribution. For example, for those households in the HRS cohort in the third decile of wealth, lack of planning is associated with a 30 percent reduction in wealth, while lack of planning in the sixth decile is associated with 13 percent lower wealth. Estimates are even higher among the EBB. Lack of planning in the third decile is linked to 45 percent less wealth holdings, while lack of planning in the sixth decile is linked to 25 percent less wealth.

The effect of lack of planning reverses as we move close to the top of the wealth distribution. Among EBB, as we move past the third quartile of wealth, the effect of lack of planning first becomes insignificant and then positive rather than negative. The same is true for the HRS cohort, even though the effect happens at higher percentiles of the wealth distribution. This was already evident in Table 6; the distribution of wealth among non-planners is very wide and includes several wealthy households. Given that these households can become influential observations in the OLS estimates, one has to be very careful in assessing the empirical estimates of lack of planning on wealth.

*Figures 3A and 3B here*

Our next goal is to show that planning has a causal influence on wealth. In other words, if someone were to begin planning tomorrow, he/she would end up with larger net worth because of it. However, since planning is potentially a decision variable, wealth could also influence planning through reverse causality. Therefore, a different estimation technique than simply OLS is necessary to establish the causal relationship. One reason reverse causality is a concern is that wealthy individuals may plan more because they

have more to gain from planning, driving the significance of the coefficient in the OLS and quantile regressions. However, it is also possible that extremely wealthy individuals plan less because they do not need to plan in order to build wealth, biasing the coefficient in the previous regressions toward zero.

There is another important reason why the effects of planning on wealth are difficult to interpret. One worry, for example, is that there is an unobserved third factor, such as discipline, impatience, or cognitive ability, that is responsible for the observed correlation between planning and wealth. The IV strategy explained below will take care of this concern too.

Previous research has accounted for reverse causality by using *instruments for planning* (Lusardi 2003; Ameriks, Caplin and Leahy 2003). Here, we develop a test to examine directly whether reverse causality exists by using an *instrument for wealth*. The instrument must first provide an exogenous change in wealth, one outside the control of the individual and uncorrelated with his or her preferences. If this exogenous change in wealth is uncorrelated with planning after accounting for all controls, then it allows us to test for reverse causality.

To assess the economic importance of reverse causality, we first run a regression where the dependent variable is now lack of planning and the regressors include net worth and all of the demographic variables considered before, including income. The estimates in Table 10 show only a mild evidence of reverse causality. The effect of wealth is negative –higher wealth tends to decrease lack of planning–but the estimates are not always statistically significant (they are only significant at the 10 percent level in 2004). Most importantly, the estimates are economically small in both 1992 and 2004 and

in the pooled sample; an increase in wealth of \$10,000 decreases the probability of not-planning by 0.54 percentage points in 1992, 0.45 percentage points in 2004, and 0.43 percentage points in the pooled sample . Given that the estimates of wealth may be affected by influential observations, we also used a cubic transformation of wealth, but results are similar.<sup>9</sup>

*Table 10 here*

We now perform IV estimation as net worth is clearly an endogenous variable. The instrument we use for net worth is recent changes in housing prices by region. This measure should be strongly correlated with wealth because, as reported before (Table 5), housing is a large component of total net worth for both cohorts. Because we exploit variation by region and not at the individual level, these price changes are not likely to be correlated with the individual propensity to plan except through the channel of net worth.

As mentioned before, the EBB enjoyed a sharp increase in home prices both before and during 2004. However, there is wide variation in home prices across regions in the US. For example, while the Pacific region experienced an increase of 10.3 percent in 2003, the southeast region experienced an increase of 3.6 percent in 2003. The HRS cohort had the opposite experience; during 1990 and 1991 the housing market experienced a bust, which was particularly pronounced in specific regions of the United States, such as New England. We use the change in home prices in the previous year (i.e., the changes between 2004 and 2003 for EBB and the change between 1992 and 1991 for the HRS cohort) across regions as an instrument for wealth.<sup>10</sup>

---

<sup>9</sup> We cannot take the log of wealth as many households have negative wealth particularly in 2004. For a similar wealth transformation, see Haliassos and Bertaut (1995).

<sup>10</sup> Hurst and Lusardi (2004) have used similar instruments for wealth to be able to assess the effect of wealth on business start-ups.

As the first stage regressions reported in Table 11 show, changes in regional prices are strong predictors of wealth; a 1 percent increase in home prices increases wealth by more than \$16,000 among EBB, while a 1 percent decrease in prices during the early 1990s increased wealth by close to \$5,000, perhaps a result of the fact that home prices had decreased sharply before that period and, consequently, had already depressed the value of wealth.<sup>11</sup> In the pooled sample, the increase in wealth following a change in home prices is also positive. The IV estimates reported in Table 12 show that the effect of wealth-instrumented by changes in home prices- on lack of planning is either not statistically significant or positive. In addition, in both 1992 and 2004, the positive IV estimates are significantly different than the negative OLS point estimates; for both cohorts, exogenous increases in wealth tend to *reduce* the propensity to plan.<sup>12</sup>

*Tables 11 and 12 here*

If this is the case and if lack of planning is positively influenced by wealth, the OLS estimates are biased and represent an under-estimate of the effect of planning. This is what Lusardi (2003) finds in her IV estimates on the 1992 HRS data. The IV estimates of lack of planning on wealth are much larger than the OLS estimates. This is also consistent with the estimates of Ameriks, Caplin and Leahy (2003), who uses a different data set and use propensity to plan for a vacation and mathematical abilities as instruments for planning.

---

<sup>11</sup> We have also considered other time periods. For example, we consider price changes in the previous two years and we consider price changes in a 10-year period. In both case, we find that price changes are good predictor of wealth. We report the estimates of the 1-year price change only because they are the strongest predictor of wealth. IV estimates in the other two cases are similar.

<sup>12</sup> Given the importance of housing equity in the measure of total net worth, these estimates may simply show that planning has an effect on housing wealth. Unfortunately, we could not find instruments that predict non-housing wealth and we have to restrict the IV estimation to only one measure of household wealth.

To summarize: Planning is an important determinant of wealth and an important reason for why many families arrive close to retirement with little or no wealth. Both the quantile estimates and the IV exercise show that planning has a powerful effect on wealth. The IV estimation shows that reverse causality is not driving the significant relationship between wealth and lack of planning. In fact, reverse causality tends to result in an under-estimation of the effect of planning. Thus, the effect of planning is even stronger than the OLS and quantile estimates report. Moreover and most importantly, the effect of planning has remained unchanged between years. Thus, while the increase in home prices has lifted the wealth of many EBB, lack of planning has the same effect between cohorts: it sharply reduces wealth.

## **Conclusion**

As EBB transition to retirement, a number of questions arise concerning their well-being into the future. In comparison to the HRS cohort in 1992, many EBB have accumulated larger amounts of wealth in 2004. However, this is not true for the whole cohort; many EBB families whose respondent is Black or has low education have accumulated less wealth than the previous generation. Moreover, with respect to the HRS cohort, a larger proportion of EBB wealth is exposed to fluctuations in asset prices, particularly housing prices. Thus, a decline in the housing market may generate substantial losses. Given that most EBB are home-owners and the housing market has experienced very rapid increases in the last few years, the behavior of this market should be watched carefully.

While several initiatives have been undertaken during the 1990s to foster retirement planning, a large fraction of EBB have still not given much thought to retirement even though they are only a few years away from it. Lack of planning is a crucial determinant of household wealth; those who do not plan accumulate much smaller amounts of wealth than those who do some planning. Estimates of the effect of planning are hard to assess because there is a small but influential group of the population that does not plan but holds high amounts of wealth. Nonetheless, for both EBB and the HRS cohort, lack of planning is tantamount to lack of savings. The effect of lack of planning is strikingly similar between cohorts. This is potentially due to the fact that non-planners are disproportionately those with low education, low income, and Blacks or Hispanics. Those households were not only largely unaffected by changes in the stock market, but they have been also left untouched by financial education programs instituted during the 1990s. Public policies that aim to stimulate savings should consider incentives and programs that stimulate retirement planning. To be effective, these programs should better target those groups least likely to plan.

In sum: EBB have higher amounts of wealth than the HRS cohort but this is hardly the result of an increase in retirement planning. Close to 30 percent of respondents in both cohorts have not given any thoughts to retirement, even though they are not far away from it. Lack of planning leads to low- often minuscule- amounts of savings. The effect of planning is remarkably similar between cohorts. Thus, non-planners have not been much affected by the changes in the economy between 1992 and 2004, including the financial education initiatives undertaken during the 1990s.

## References

- Ameriks, John, Andrew Caplin and John Leahy. 2003. "Wealth Accumulation and the Propensity to Plan." *Quarterly Journal of Economics* 68: 1007-1047.
- Autor, David, Lawrence Katz and Melissa Kearney. 2006. "The Polarization of the US Labor Market," forthcoming *American Economic Review*, 65.
- Autor, David and Lawrence Katz. 1999. "Changes in the Wage Structure and Earnings Inequality." In *Handbook of Labor Economics*. Eds. Orley Ashenfelter and David Card. Amsterdam: North-Holland: 1463-1555.
- Bernheim, Douglas. 1993. "Is the Baby Boom Generation Preparing Adequately for Retirement?" Summary Report, Merryll Lynch, Princeton, NJ.
- Congressional Budget Office. 1993. "Baby Boomers in Retirement: An Early Perspective." Washington, D.C.
- Cunningham Chris, Gary Engelhardt, and Anil Kumar. 2006. "Measuring Pension Wealth." This volume.
- Gentry, William M., and Glenn Hubbard. 2004. "Entrepreneurship and Household Saving." In *Advances in Economics Analysis and Policy*, 4: Article 8.
- Gustman, Alan and Thomas Steinmeier. 1999. "Effects of Pensions on Saving: Analysis with Data from the Health and Retirement Study." *Carnegie-Rochester Conference Series* 50: 271-236.
- Gustman, Alan, and Thomas Steinmeier. 2002. "Retirement and the Stock Market Bubble." NBER Working Paper No. 9404. December.
- Haliassos, Michael and Carol Bertaut. 1995. "Why Do So Few Hold Stocks?" *Economic Journal* 105: 1110-1129.
- Hurst, Erik and Annamaria Lusardi. 2006. "Do Household Savings Encourage Entrepreneurship? Household Wealthy, Parental Wealth and the Transition In and Out of Entrepreneurship." Working Paper, Dartmouth College and University of Chicago Graduate School of Business.
- Hurst, Erik and Annamaria Lusardi. 2004. "Liquidity Constraints, Household Wealth and Entrepreneurship," *Journal of Political Economy* 112: 319-347.
- Hurst, Erik, Annamaria Lusardi, Arthur Kennickell and Francisco Torralba. 2005. "Precautionary Savings and the Importance of Business Owners." Working Paper n. 11731. NBER.
- Kapteyn, Arie, Rob Alessie and Annamaria Lusardi. 2005. "Explaining the Wealth of Different Cohorts: Productivity Growth and Social Security," *European Economic Review* 49: 1361-1381.
- Iams, Howard, Barbara Butrica and Karen Smith. 2006. "It's All Relative. Understanding the Retirement Prospects of Baby Boomers." This volume.
- Lusardi, Annamaria. 1999. "Information, Expectations, and Savings for Retirement". In *Behavioral Dimensions of Retirement Economics*. Ed. Henry Aaron. Washington, D.C.: Brookings Institution Press and Russell Sage Foundation.
- Lusardi, Annamaria. 2002. "Preparing for Retirement: The Importance of Planning

- Costs". *National Tax Association Proceedings 2002*: 148-154.
- Lusardi, Annamaria. 2003. "Planning and Saving for Retirement". Working paper. Dartmouth College.
- Lusardi, Annamaria. 2004. "Savings and the Effectiveness of Financial Education". In *Pension Design and Structure: New Lessons from Behavioral Finance*. Eds Olivia Mitchell and Stephen Utkus. Oxford: Oxford University Press.
- Lusardi, Annamaria and Olivia S. Mitchell. 2006a. "Financial Literacy and Planning: Implications for Retirement Wellbeing." Working Paper, Pension Research Council, The Wharton School.
- Lusardi, Annamaria and Olivia S. Mitchell. 2006b. "Baby Boomer Retirement Security: The Role of Planning, Financial Literacy and Housing Wealth." Prepared for the Carnegie-Rochester Conference on Public Policy, April 2006.
- Manchester, Joyce, David Weaver and Kevin Whitman. 2006. "Changes in Economic Well-Being and Health Status." This volume.
- Office of Federal Housing Enterprise Oversight. 2005. House Price Index. <http://www.ofheo.gov/HPIRegion.asp>
- Venti, Steven and David Wise. 2001. "Choice, Chance, and Wealth Dispersion at Retirement". In *Aging Issues in the United States and Japan*. Eds. S. Ogura, T. Tachibanaki and D. Wise. Chicago: University of Chicago Press.
- Venti, Steven and David Wise. 1991. "Aging and the Income Value of Housing Wealth." *Journal of Public Economics* 44: 371-395.
- Venti, Steven and David Wise. 1990. "But They Don't Want to Reduce Housing Equity." In *Issues in the Economics of Aging*. Ed. David Wise. Chicago: University of Chicago Press.
- Wolfe Barbara, Robert Haveman, Karen Holden and Andrei Romanov. 2006. "The Sufficiency of Retirement Savings: A Comparison of Two Cohorts of Retired Workers at the Time of Retirement." This volume.
- Yakoboski, Paul and Jennifer Dickemper. 1997. "Increased Saving but Little Planning. Results of the 1997 Retirement Confidence Survey". *EBRI Issue Brief* 191. Washington, D.C.

**Table 1: Demographic Characteristics of the HRS Cohort and the EBB.**

<b>Cohort</b>	<b>1992 HRS Cohort</b>	<b>2004 EBB</b>
<b>Age</b>		
Average Age	53.7	53.7
<b>Education (%)</b>		
Less Than High School	18.6	9.2
High School Graduate	38.5	28.4
Some College	21.1	29.0
College Graduate	11.4	18.2
More Than College	10.4	15.2
<b>Race/Ethnicity (%)</b>		
White	85.9	80.8
Black	10.2	11.7
Hispanic	7.6	8.7
Other	2.9	7.5
<b>Marital Status (%)</b>		
Married	71.4	62.8
Divorced	14.8	21.6
Separated	3.4	3.3
Widowed	5.5	4.9
Never Married	4.3	7.2
<b>Children (% in sample)</b>		
No Children	8.8	17.2
Have Children	91.2	82.8
<b>Sex (% in sample)</b>		
Male	55.7	54.4
Female	44.3	45.6

Note: Number of observations is 4,577 for the 1992 HRS cohort and 2,631 for the 2004 EBB. At least respondent or spouse is 51-56 years old. All figures are weighted using household weights.

**Table 2: Distribution of Total Household Income in the 1992 and 2004 HRS (2004 \$).**

<i>Percentile</i>	<b>Income 1992 \$</b>	<b>Income 2004 \$</b>
5 <sup>th</sup>	9,129	6,984
10 <sup>th</sup>	15,484	12,000
25 <sup>th</sup>	31,957	30,000
<b>50<sup>th</sup></b>	<b>59,242</b>	<b>62,000</b>
75 <sup>th</sup>	93,272	100,480
90 <sup>th</sup>	137,737	175,000
95 <sup>th</sup>	175,032	238,000
<b>Mean</b>	<b>73,592</b>	<b>85,931</b>
SD	76,610	109,144
N. of obs.	4,577	2,631

Note: At least respondent or spouse is 51-56 years old. All figures are weighted using household weights.

**Table 3A: Distribution of Total Net Worth in the 1992 and 2004 HRS (2004 \$).**

<i>Percentile</i>	<b>Total Net Worth 1992 (\$)</b>	<b>Total Net Worth 2004 (\$)</b>
5 <sup>th</sup>	0	-3,500
10 <sup>th</sup>	1,346	200
25 <sup>th</sup>	40,769	36,500
<b>50<sup>th</sup></b>	<b>136,256</b>	<b>153,200</b>
75 <sup>th</sup>	315,058	403,000
90 <sup>th</sup>	700,128	891,700
95 <sup>th</sup>	1,218,493	1,332,000
<b>Mean</b>	<b>327,715</b>	<b>391,959</b>
SD	738,164	969,128
N of obs.	4,577	2,631

Note: At least respondent or spouse is 51-56 years old. All figures are weighted using household weights.

**Table 3B: Distribution of Total Non-Housing Net Worth in the 1992 and 2004 HRS (2004 \$).**

<i>Percentile</i>	<b>Non-Housing Net Worth 1992 (\$)</b>	<b>Non-Housing Net Worth 2004 (\$)</b>
5 <sup>th</sup>	-1481	-7,800
10 <sup>th</sup>	0	0
25 <sup>th</sup>	9,425	8,090
<b>50<sup>th</sup></b>	<b>54,799</b>	<b>53,000</b>
75 <sup>th</sup>	188,496	224,400
90 <sup>th</sup>	527,789	609,000
95 <sup>th</sup>	962,676	1,000,870
<b>Mean</b>	<b>239,145</b>	<b>264,526</b>
SD	687,774	849,317
N of obs.	4,577	2,631

Note: At least respondent or spouse is 51-56 years old. All figures are weighted using household weights.

**Table 4: Distribution of Total Net Worth Across Demographics in the 1992 and 2004 HRS (2004 \$).**

	<b>1992</b> 25 <sup>th</sup> %	<b>Median</b>	75 <sup>th</sup> %	<b>2004</b> 25 <sup>th</sup> %	<b>Median</b>	75 <sup>th</sup> %
<b>Education</b>						
< HS	1,346	<b>41,065</b>	118,214	200	<b>22,500</b>	80,000
HS Grad	39,719	<b>121,176</b>	256,489	15,500	<b>92,035</b>	243,000
Some Coll.	67,051	<b>166,954</b>	352,084	36,500	<b>133,000</b>	326,000
Coll. Grad	117,137	<b>257,163</b>	556,467	140,000	<b>302,000</b>	690,000
> College	149,451	<b>291,361</b>	706,860	171,000	<b>365,800</b>	847,500
<b>Race</b>						
White	60,588	<b>166,550</b>	368,241	64,000	<b>199,000</b>	464,000
Black	337	<b>36,487</b>	115,117	3	<b>25,000</b>	118,500
Hispanic	2,693	<b>46,047</b>	126,562	5,000	<b>55,800</b>	200,000
<b>Marital Status</b>						
Married	72,840	<b>173,686</b>	376,319	85,300	<b>223,000</b>	498,000
Not Married	2,558	<b>51,836</b>	172,339	3,000	<b>53,500</b>	200,000
<b>Sex</b>						
Male	58,568	<b>166,954</b>	368,943	55,960	<b>196,000</b>	490,000
Female	20,869	<b>102,326</b>	250,431	19,800	<b>104,600</b>	297,500

Note: At least respondent or spouse is 51-56 years old. Number of observations is 4,577 for the 1992 HRS cohort and 2,631 for the 2004 EBB. All figures are weighted using household weights.

**Table 5: Asset Ownership and Percentage of Wealth Accounted for by Each Asset**

	<b>N of obs</b>	<b>Checking Account (%)</b>	<b>Stock Owner (%)</b>	<b>IRA Owner (%)</b>	<b>Home Owner (%)</b>	<b>Real Estate (%)</b>	<b>Business Owner (%)</b>
<b>Asset Ownership</b>							
1992	4,577	82.8	30.6	40.6	78.6	24.8	19.0
2004	2,631	86.9	31.0	41.6	80.3	17.5	14.8
t-stat of diff (p value)		4.79 (0.00)	0.42 (0.67)	0.90 (0.37)	1.73 (0.08)	-7.52 (0.00)	-4.70 (0.00)
<b>Proportion of Total Net Worth</b>							
1992	4577	5.6	8.3	7.5	27.0	16.8	16.7
2004	2631	5.1	12.6	10.6	32.5	14.1	10.3

Note: This table reports the ownership of assets for both the 1992 HRS cohort and the 2004 EBB (top panel). It also reports the proportion of total net worth accounted for by the assets listed in the first row (bottom panel). All figures are weighted using household weights.

**Table 6A: Planning and Total Net Worth in the 1992 HRS (2004 \$)**

<i>Group</i>	% of Sample	25 <sup>th</sup> Percentile(\$)	<b>Median</b> (\$)	75 <sup>th</sup> Percentile(\$)	Mean (\$)
<b>Planning in 1992</b>					
Hardly at All	32.0	10,098	<b>76,906</b>	200,613	224,311
A Little	14.3	37,699	<b>126,562</b>	290,149	343,145
Some	24.8	72,032	<b>173,753</b>	367,298	340,681
A Lot	28.9	71,393	<b>173,686</b>	356,796	353,523

**Table 6B: Planning and Total Net Worth in the 2004 HRS (2004 \$)**

<i>Group</i>	% of Sample	25 <sup>th</sup> Percentile (\$)	<b>Median</b> (\$)	75 <sup>th</sup> Percentile (\$)	Mean (\$)
<b>Planning in 1992</b>					
Hardly at All	27.5	9,100	<b>80,000</b>	271,000	315,644
A Little	17.0	63,500	<b>173,400</b>	392,000	364,464
Some	27.9	53,000	<b>189,000</b>	447,200	366,074
A Lot	27.6	54,000	<b>201,700</b>	470,900	513,211

Note: Percentages of respondent in each planning group are conditional on being asked the planning question. At least respondent or spouse is 51-56 years old. All figures are weighted using household weights.

**Table 7A. Quantile Regressions of Net Worth on Planning in 1992 and 2004 (2004 \$)**

	25 <sup>th</sup> % 1992	25 <sup>th</sup> % 2004	Median 1992	Median 2004	75 <sup>th</sup> % 1992	75 <sup>th</sup> % 2004
No Planning	-12.495 (3.563)***	-14.390 (4.022)***	-17.233 (4.391)***	-20.025 (8.818)**	-42.059 (7.450)***	-47.362 (21.751)**
High School Graduate	13.241 (4.297)***	-5.132 (6.220)	21.493 (5.151)***	2.733 (13.753)	31.133 (8.563)***	9.228 (31.611)
Some College	19.963 (5.101)***	-4.127 (6.403)	38.655 (6.150)***	20.278 (14.134)	73.552 (10.406)***	44.360 (32.831)
College Graduate	46.990 (6.344)***	51.527 (7.382)***	83.054 (7.691)***	113.995 (16.195)***	188.936 (13.229)***	237.035 (38.294)***
More than College	70.954 (6.847)***	62.327 (7.966)***	121.807 (8.318)***	169.988 (17.136)***	252.906 (14.153)***	441.711 (40.818)***
Hispanic	-10.389 (5.125)**	-13.237 (6.040)**	-13.289 (6.290)**	-18.879 (13.226)	-25.028 (10.651)**	-45.239 (30.783)
Black	-23.053 (4.058)***	-22.463 (4.656)***	-33.550 (4.875)***	-33.360 (10.032)***	-74.087 (8.062)***	-71.828 (24.231)***
Divorced	-31.876 (4.821)***	-28.229 (4.727)***	-41.669 (5.820)***	-53.389 (10.372)***	-47.224 (9.912)***	-91.769 (25.910)***
Separated	-19.096 (8.528)**	-28.862 (9.091)***	-31.846 (9.942)***	-43.898 (18.951)**	-7.757 (16.231)	-80.357 (44.329)*
Widowed	-13.250 (6.799)*	-18.524 (8.414)**	-25.976 (8.313)***	-21.952 (18.043)	10.445 (14.764)	57.775 (48.528)
Never Married	-33.322 (8.055)***	-26.127 (7.075)***	-44.268 (9.714)***	-52.984 (15.418)***	-41.714 (16.204)**	-105.520 (39.251)***
Female	1.985 (3.384)	-9.671 (3.748)***	12.805 (4.171)***	-10.073 (8.174)	23.687 (7.184)***	-13.595 (19.895)
Log of Income	31.160 (1.891)***	30.540 (1.449)***	45.063 (2.577)***	46.719 (3.854)***	61.048 (5.283)***	61.415 (13.278)***
Adjusted R-Squared	0.12	0.11	0.15	0.15	0.17	0.17

*Note:* This table reports quantile regressions of total net worth on planning and other determinants of wealth. Net worth is divided by 1,000. Even though the estimates are not reported, regressions include dummies for retirement status (fully and partially retired), number of children, age and age squared. The total number of observations is 3,727 in 1992 and 2,156 in 2004. Business owners and the top and bottom 1% of the wealth distribution are excluded. Standard errors in parentheses. \* Significant at 10% \*\* Significant at 5% \*\*\* Significant at 1%.

**Table 7B. Quantile Regressions of Net Worth on Planning in the Pooled Sample (2004 \$)**

	25 <sup>th</sup> %	Median	75 <sup>th</sup> %
No Planning	-11.034 (3.168)***	-11.334 (5.959)*	-30.007 (10.772)***
Year 2004	3.006 (2.836)	13.864 (5.358)***	37.596 (9.680)***
No Plan*Year 2004	-2.689 (5.108)	-16.019 (9.578)*	-20.723 (16.943)
High School Graduate	3.737 (3.722)	10.749 (7.082)	23.326 (11.644)**
Some College	4.879 (4.171)	23.152 (7.903)***	58.355 (13.313)***
College Graduate	50.173 (5.072)***	104.611 (9.543)***	240.050 (16.590)***
More than College	66.139 (5.588)***	144.543 (10.270)***	384.486 (17.962)***
Hispanic	-10.526 (4.320)**	-16.305 (7.975)**	-40.647 (13.421)***
Black	-24.279 (3.475)***	-36.609 (6.397)***	-76.166 (11.062)***
Divorced	-29.716 (3.791)***	-46.909 (6.954)***	-78.468 (12.459)***
Separated	-21.814 (6.858)***	-33.786 (12.223)***	-56.986 (19.582)***
Widowed	-14.713 (5.918)**	-16.569 (10.908)	20.426 (20.844)
Never Married	-27.867 (5.943)***	-48.068 (11.058)***	-85.901 (19.394)***
Female	-4.104 (2.860)	-3.584 (5.256)	5.403 (9.225)
Log of Income	31.750 (1.245)***	45.898 (2.779)***	56.276 (6.740)***
Adj. R-Squared	0.11	0.15	0.17

*Note:* This table reports quantile regressions of total net worth on planning and other determinants of wealth. Net worth is divided by 1,000. Regressions include dummies for retirement status (fully and partially retired), number of children, age and age squared. The total number of observations is 3,727 in 1992 and 2,156 in 2004. Business owners and the top and bottom 1% of the wealth distribution are excluded. Standard errors in parentheses. \* Significant at 10%  
 \*\* Significant at 5% \*\*\* Significant at 1%.

**Table 8. Median Regression of Non-Housing Wealth on Planning in 1992 and 2004 (2004 \$)**

	1992	2004	Pooled Sample
No Planning	-9.904 (3.046)***	-9.709 (3.809)**	-4.320 (2.437)*
Year 2004			9.903 (2.197)***
No Plan*Year 2004			-7.546 (3.912)*
High School Grad	7.509 (3.584)**	1.854 (5.992)	3.635 (2.886)
Some College	19.197 (4.278)***	8.400 (6.142)	9.731 (3.218)***
College Grad	48.015 (5.365)***	67.826 (7.068)***	33.534 (3.894)***
More than College	89.882 (5.812)***	82.480 (7.432)***	49.242 (4.194)***
Hispanic	-9.920 (4.372)**	-8.107 (5.796)	-6.417 (3.253)**
Black	-14.874 (3.389)***	-17.721 (4.356)***	-18.132 (2.621)***
Divorced	-16.765 (4.037)***	-15.748 (4.462)***	-30.747 (2.840)***
Separated	-9.045 (6.978)	-9.473 (8.460)	-23.136 (4.975)***
Widowed	-5.448 (5.763)	5.742 (7.863)	-16.756 (4.468)***
Never Married	-14.331 (6.765)**	-11.639 (6.817)*	-29.668 (4.539)***
Female	2.538 (2.887)	-9.862 (3.552)***	-1.163 (2.156)
Log of Income	18.632 (1.799)***	17.388 (1.685)***	17.959 (1.138)***
<b>Adj. R- Squared</b>	<b>0.10</b>	<b>0.09</b>	<b>0.13</b>

*Note:* This table reports median regressions of non-housing net worth on planning and other determinants of wealth. Non-housing wealth is divided by 1,000. Regressions include dummies for retirement status (fully and partially retired), number of children, age and age squared. The total number of observations is 3,727 in 1992 and 2,156 in 2004. Business owners and the top and bottom 1% of the wealth distribution are excluded. Standard errors in parentheses. \* Significant at 10% \*\* Significant at 5% \*\*\* Significant at 1%.

**Table 9. OLS and Median Regressions of Net Worth on Planning in the Pooled Sample (2004 \$)**

	OLS	Median
No Planning	-5.054 (16.362)	-11.334 (5.959)*
Year 2004	61.832 (11.080)***	13.864 (5.358)***
No Plan*Year 2004	-29.273 (20.472)	-16.019 (9.578)*
High School Graduate	-4.144 (14.964)	10.749 (7.082)
Some College	15.388 (16.011)	23.152 (7.903)***
College Graduate	144.198 (18.618)***	104.611 (9.543)***
More than College	223.429 (19.633)***	144.543 (10.270)***
Hispanic	-50.212 (17.283)***	-16.305 (7.975)**
Black	-79.631 (14.095)***	-36.609 (6.397)***
Divorced	-53.933 (12.251)***	-46.909 (6.954)***
Separated	-27.735 (24.611)	-33.786 (12.223)***
Widowed	69.078 (20.017)***	-16.569 (10.908)
Never Married	-51.683 (19.922)***	-48.068 (11.058)***
Female	-18.607 (9.680)*	-3.584 (5.256)
Log of Income	87.532 (5.042)***	45.898 (2.779)***
<b>Adjusted R-Squared</b>	<b>0.20</b>	<b>0.15</b>

*Note:* This table reports OLS and median regressions of total net worth on planning and other determinants of wealth in the pooled sample. Net worth is divided by 1,000. Regressions include dummies for retirement status (fully and partially retired), number of children, age and age squared. The total number of observations is 5,883. Business owners and the top and bottom 1% of the wealth distribution in each year are excluded. Standard errors in parentheses. \* Significant at 10% \*\* Significant at 5% \*\*\* Significant at 1%.

**Table 10. OLS Regression of Planning on Total Net Worth (2004 \$)**

	1992	2004	Pooled Sample
Net Worth	-0.00054 (.000027)**	-0.00045 (.000024)*	-0.00043 (.000016)***
Year 2004			-0.016 (0.012)
High School Grad	-0.080 (0.020)***	-0.117 (0.036)***	-0.107 (0.019)***
Some College	-0.114 (0.024)***	-0.119 (0.036)***	-0.123 (0.020)***
College Grad	-0.117 (0.029)***	-0.167 (0.041)***	-0.158 (0.023)***
More than College	-0.103 (0.032)***	-0.134 (0.043)***	-0.127 (0.025)***
Hispanic	0.094 (0.026)***	0.023 (0.037)	0.058 (0.022)***
Black	0.036 (0.023)	0.022 (0.029)	0.027 (0.018)
Divorced	-0.010 (0.021)	0.051 (0.024)**	0.037 (0.015)**
Separated	0.070 (0.039)*	0.053 (0.051)	0.069 (0.031)**
Widowed	0.035 (0.031)	0.056 (0.043)	0.056 (0.025)**
Never Married	0.044 (0.036)	0.067 (0.039)*	0.064 (0.025)**
Female	0.087 (0.016)***	0.004 (0.020)	0.038 (0.012)***
Log of Income	-0.075 (0.010)***	-0.009 (0.010)	-0.026 (0.006)***
R-Squared	0.11	0.06	0.07

*Note:* This table reports OLS regressions of not planning on total net worth. Net worth is divided by 1,000. Regressions include dummies for retirement status (fully and partially retired), number of children, age and age squared. The total number of observations is 3,727 in 1992, 2,156 in 2004 and 5,883 in the pooled sample. Business owners and the top and bottom 1% of the wealth distribution in each year are excluded. Standard errors in parentheses. \* Significant at 10% \*\* Significant at 5% \*\*\* Significant at 1%.

**Table 11. First Stage Regressions of IV Estimation of Total Net Worth on Housing Price Increases**

	1992	2004	Pooled Sample
Percentage Increase	-4.988 (2.121)**	16.757 (3.239)***	10.911 (1.885)***
Year 2004			1.023 (13.363)
High School Graduate	13.335 (12.481)	-10.745 (30.827)	-0.105 (14.806)
Some College	49.170 (14.651)***	1.236 (31.173)	14.734 (15.770)
College Graduate	96.897 (17.986)***	168.292 (35.201)***	150.764 (18.320)***
More than College	164.724 (19.304)***	242.018 (37.028)***	226.037 (19.454)***
Hispanic	-40.042 (16.332)**	-68.629 (31.973)**	-55.268 (17.069)***
Black	-75.006 (14.207)***	-84.326 (25.246)***	-81.589 (14.096)***
Divorced	-51.387 (13.185)***	-63.436 (21.029)***	-59.194 (12.149)***
Separated	-41.291 (23.928)*	-34.927 (45.006)	-32.472 (24.560)
Widowed	-24.493 (18.949)	124.459 (37.443)***	64.629 (20.031)***
Never Married	-60.063 (22.460)***	-64.316 (33.540)*	-61.223 (19.738)***
Female	29.290 (9.745)***	-39.638 (17.105)**	-14.117 (9.579)
Log of Income	83.800 (5.997)***	84.658 (8.322)***	86.004 (4.989)***
R-Squared	0.19	0.22	0.21

*Note:* This table reports OLS regressions of total net worth on the percentage increase in housing prices by region in the previous year. Net worth is divided by 1,000. Regressions include dummies for retirement status (fully and partially retired), number of children, age and age squared. The total number of observations is 3,727 in 1992, 2,156 in 2004, and 5,883 in the pooled sample. Business owners and the top and bottom 1% of the wealth distribution in each year are excluded. Standard errors in parentheses. \* Significant at 10% \*\* Significant at 5% \*\*\* Significant at 1%.

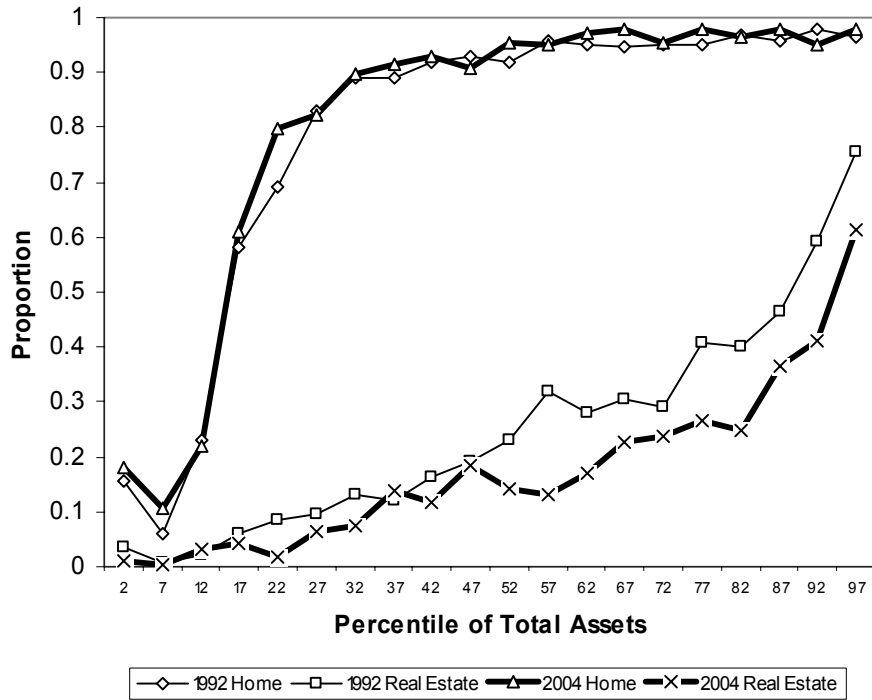
**Table 12. Instrumental Variables Estimation of Not Planning on Net Worth**

	1992	2004	Pooled Sample
OLS	-.000054 (.000027)**	-.000045 (.000024)*	-.000043 (.000016)***
IV	.00287 (.00142)**	.000387 (.00024)	.000135 (.000225)
Hausman Test (P-Value)	13.283 (0.0003)***	2.951 (0.085)*	0.279 (0.597)

*Note:* This table reports IV regressions of not planning on total net worth. Net worth is divided by 1,000. The total number of observations is 3,727 in 1992, 2,156 in 2004 and 5,883 in the pooled sample. Business owners and the top and bottom 1% of the wealth distribution in each year are excluded. Standard errors in parenthesis with p-value in parentheses for Hausman test. \* Significant at 10% \*\* Significant at 5% \*\*\* Significant at 1%.

**Figure 1A: Ownership of Homes and Other Real Estate in 1992 and 2004 Across the Distribution of Assets**

## Home and Real Estate Ownerhsip



**Figure 1B. Ownership of Stocks and IRAs in 1992 and 2004  
Across the Distribution of Assets**

### Stock and IRA Ownership

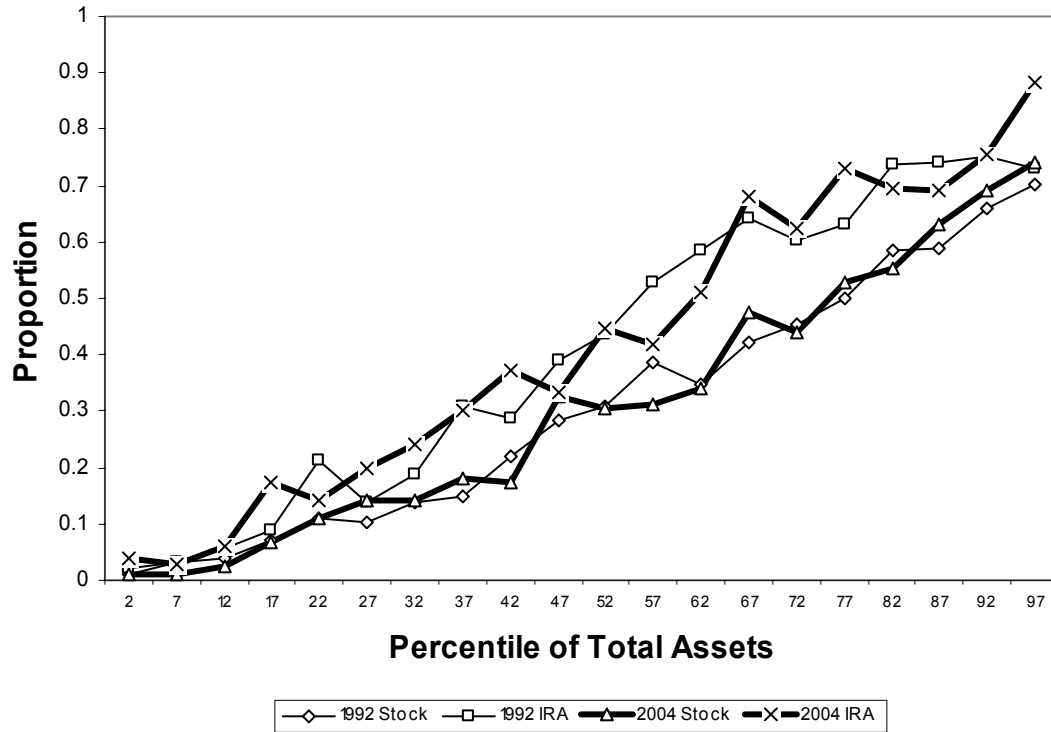


Figure 2A. Planning by Education in 1992 and 2004

### Planning by Education

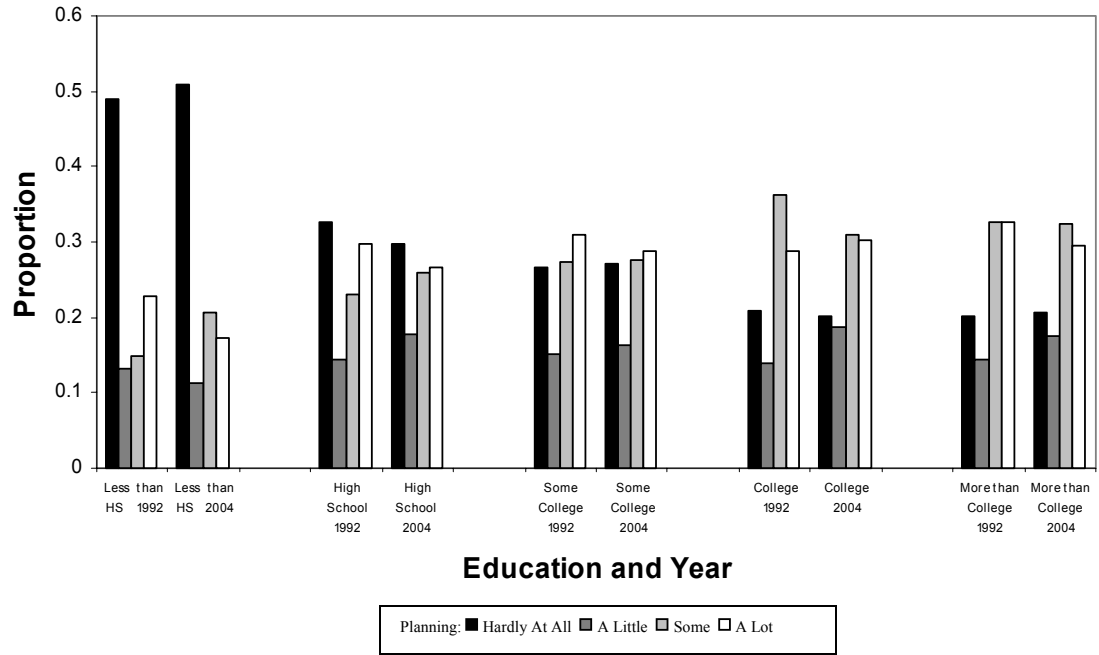


Figure 2B: Planning by Sex in 1992 and 2004

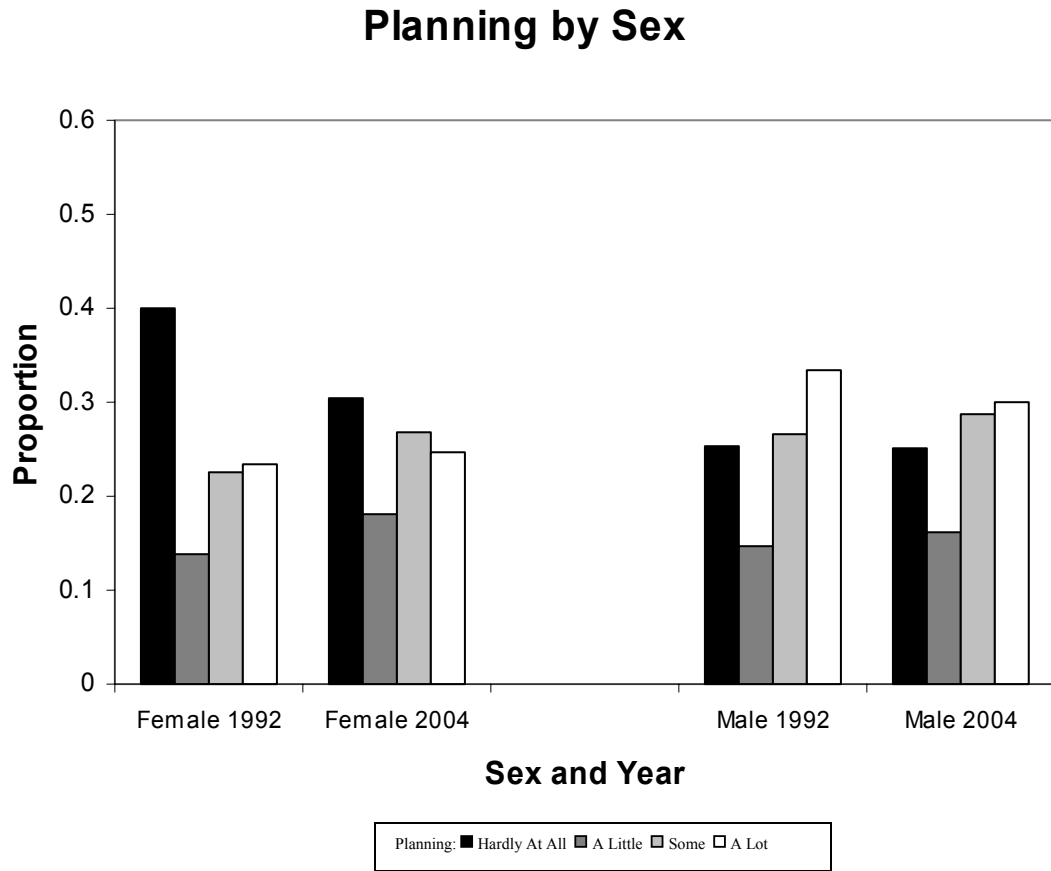
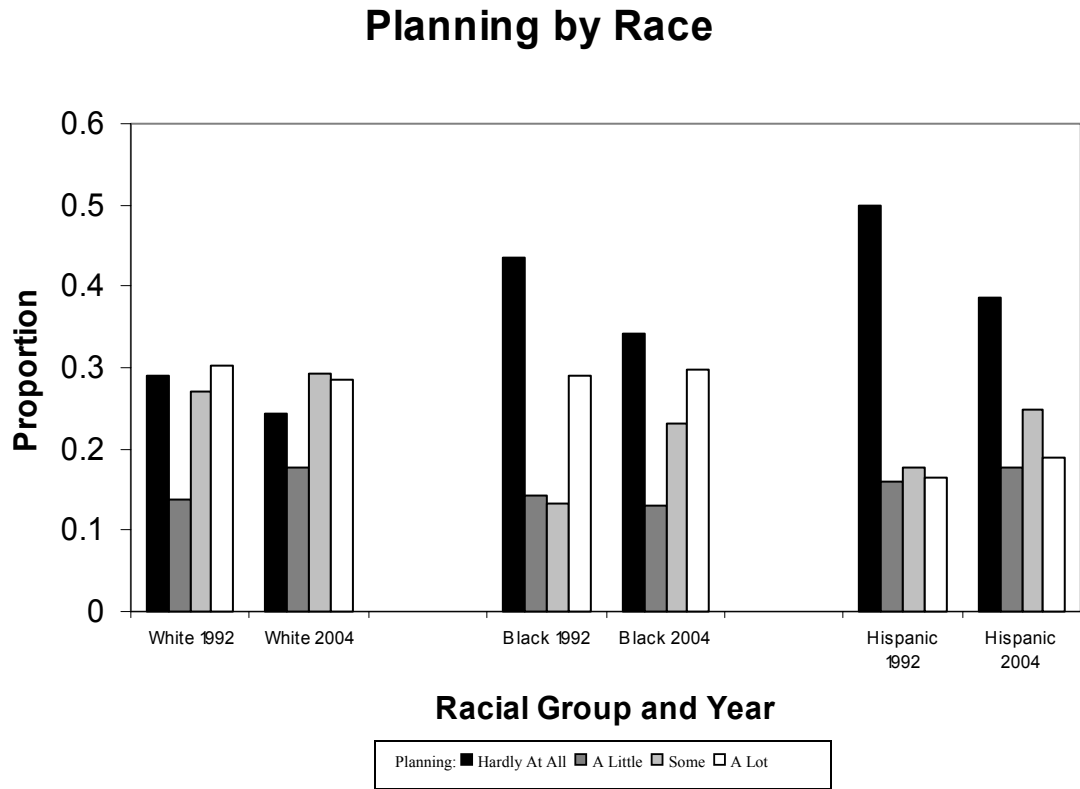
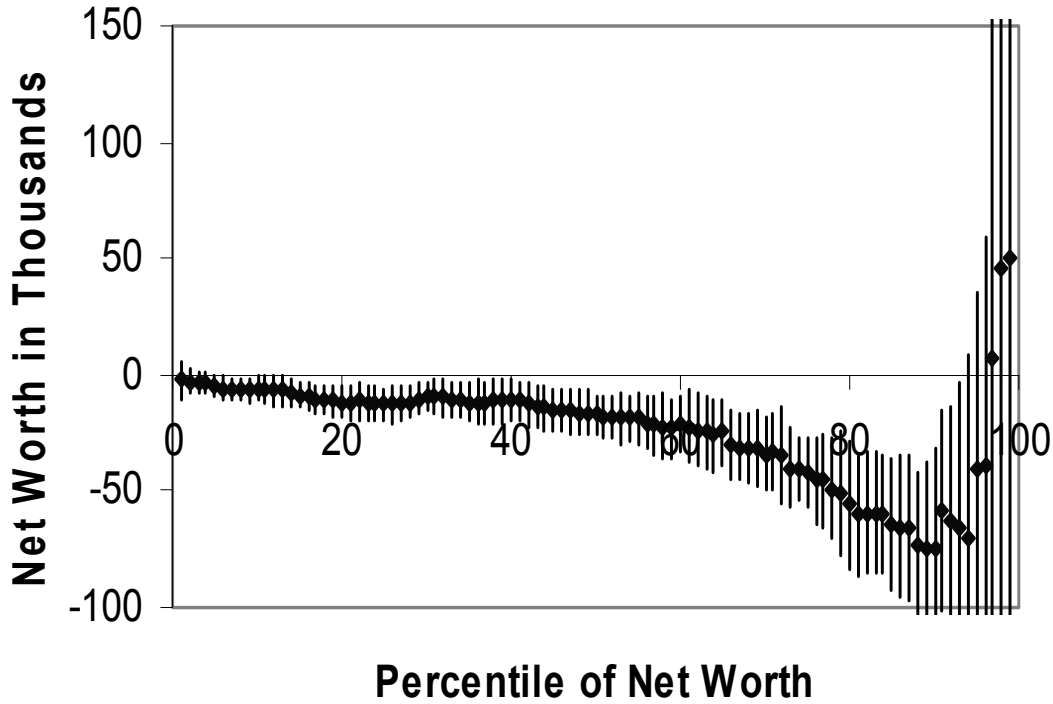


Figure 2C. Planning by Race in 1992 and 2004



**Figure 3A. Estimates of the Effect of Not Planning on Net Worth at Each Percentile of the Wealth Distribution in 1992**

## Effect of No Planning on Wealth

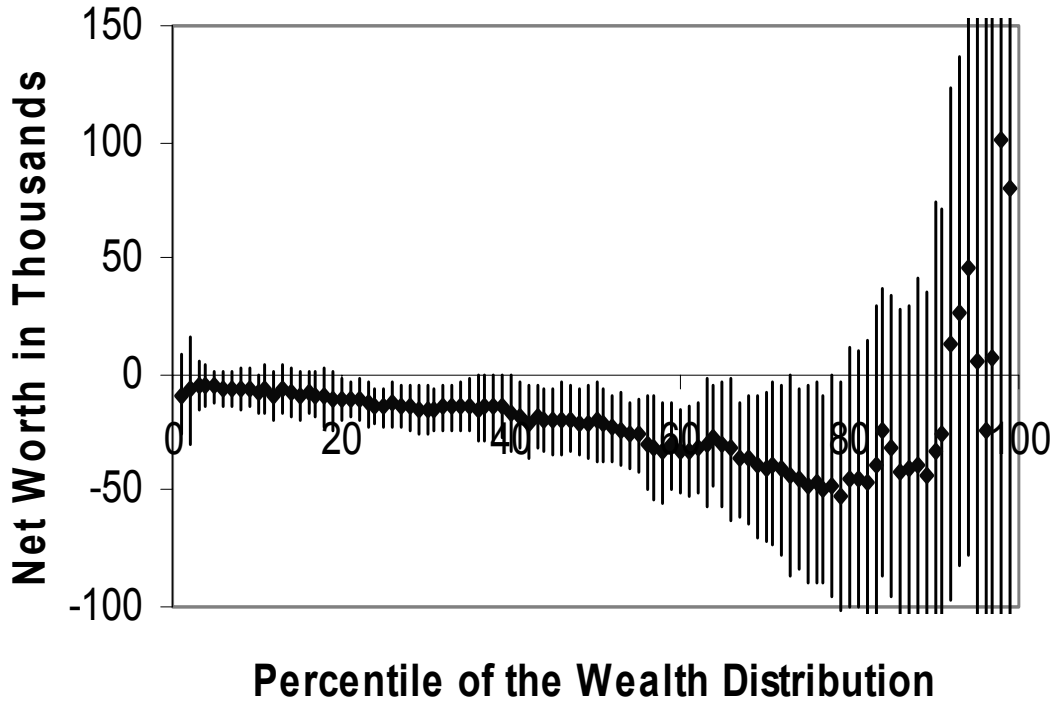


**Percentage of Net Worth Accounted for by Not Planning at Each Decile of the Wealth Distribution in 1992**

Decile	Estimate	Net Worth	Percentage
10 <sup>th</sup> %	-5.90	0	NA
20 <sup>th</sup> %	-11.94	6.92	172.57
30 <sup>th</sup> %	-9.27	31	29.90
40 <sup>th</sup> %	-10.77	60	17.95
50 <sup>th</sup> %	-17.23	104	16.57
60 <sup>th</sup> %	-20.92	161	13.00
70 <sup>th</sup> %	-33.81	229.4	14.74
80 <sup>th</sup> %	-55.61	357.61	15.55
90 <sup>th</sup> %	-74.08	611.6	12.11

**Figure 3B. Estimate of the Effect of Not Planning on Net Worth at Each Percentile of the Wealth Distribution in 2004**

## Effect of No Planning on Wealth



**Percentage of Net Worth Accounted for by Not Planning at Each Decile of the Wealth Distribution in 2004**

Decile	Estimate	Net Worth	Percentage
10 <sup>th</sup> %	-8.21	0	NA
20 <sup>th</sup> %	-10.78	10.77	100.04
30 <sup>th</sup> %	-15.83	35.01	45.22
40 <sup>th</sup> %	-16.08	60.59	26.54
50 <sup>th</sup> %	-20.03	92.90	21.56
60 <sup>th</sup> %	-32.88	131.95	24.92
70 <sup>th</sup> %	-40.17	181.44	22.14
80 <sup>th</sup> %	-44.68	258.18	17.30
90 <sup>th</sup> %	-33.12	420.08	7.88