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Older Women's Labor Market Attachment, Retirement Planning, and Household Debt

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Abstract

The goal of this paper is to ascertain whether older women's current and anticipated future labor force patterns has changed over time, and if so, to evaluate the factors associated with longer work lives and plans to continue work at older ages. Using data from both the Health and Retirement Study (HRS) and the National Financial Capability Study (NFCS), we show that older women's current and intended future labor force attachment patterns are changing over time. Specifically, compared to our HRS baseline surveyed in 1992, more recent cohorts of women in their 50's and 60s's are more likely to be working. When we explore the reasons for delayed retirement among older women, factors include education, more marital disruption, and fewer children than prior cohorts. But household finances also play a key role, in that older women today have more debt than previously and are more financially fragile than in the past. Data from the NFCS show that factors associated with retirement planning include having more education and greater financial literacy. Those who report excessive amounts of debt and are financially fragile are the least financial literate, had more dependent children, and experienced income shocks. Thus shocks do play a role in older women's debt status, but it is not enough to have resources: people also need the capacity to manage those resources, if they are to stay out of debt as they head into retirement.

Keywords: Debt; financial fragility; retirement; work longer; debt management

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Economic research has shown convincingly that young and middle aged women's attachment to the paid labor force has risen substantially over time in America.¹ To examine whether this pattern might also characterize older women, this paper examines several cohorts of older women in the Health and Retirement Study (HRS) to document the size of possible future changes, and to pinpoint which groups might be most likely to extend their work lives. In addition, we investigate what role debt might play in older women's continued work. For this we examine the 2012 National Financial Capability Study (NFCS) which provides detailed information on how older women appear to be managing their debt and their retirement planning efforts. Our focus throughout is on descriptive analysis rather than proving causal links between retirement and debt.

Data from the HRS show that recent cohorts of older women are more likely to be working at both ages 51-56 and 57-61 than the earliest cohort of the same age, first surveyed in 1992. Effects differ significantly over time. The group of Early Boomers is about 12 percentage points (pp) more likely to be working, versus only 7 pp more likely, compared to the War Babies (controlling on race/ethnicity). Thus, there is a rising probability of working among the older age group of women across cohorts. Recent cohorts are also significantly more likely to plan to work at age 65, compared to the first cohort surveyed in 1992, and the effect rises over time. That is, Early Boomers say they are about 4.5-5 pp more likely to work at age 65, where the Middle Boomers (seen in their early 50's) were 8 pp more likely to say they would be working at 65

¹ See for instance Goldin (2006; 2014) and the citations included therein.

compared to the first wave of HRS women interviewed. The rising prevalence of both current work and planned future work characteristic of more recent cohorts is slightly attenuated when additional controls are included, like education, marital disruption, health, and the ratio of debt to assets. Nevertheless the direction of the changes across cohorts is still positive and statistically significant.

We also explore the extent to which more recent HRS cohorts are nearing retirement with more debt than before, and we confirm that this is indeed true. Moreover, having more debt is positively associated with older women being more likely to work currently, as well as to plan to continue to work in the future. Total debt (\$2015) also rises for each cohort, by more than double. Older women are also much more likely to have mortgage debt in excess of half their residential value in recent waves, rising from 18 pp to over 30 pp. And the percentage that has less than \$25,000 in savings for recent cohorts is roughly double that of the earlier cohorts.

We also draw on data from the 2012 NFCS to explore the factors associated with retirement planning, debt and debt management, and an indicator of financial fragility. As shown in previous work, planning for retirement is associated with better retirement security (Lusardi and Mitchell 2007a, 2011a, 2014). Moreover, many people are found to pay high interest and fees on the debt they carry and debt is part of household balance sheets throughout the lifetime and even close to retirement (Lusardi and Tufano, 2015; Lusardi and Mitchell, 2013). Correlates of retirement planning include having higher income, more education, and greater financial literacy, for both age groups we evaluate (age 51-56 and 57-61). Factors associated with over-indebtedness and financial fragility include lower financial literacy, having more financially dependent children and experiencing unexpected large income declines. Accordingly, shocks do play a role in the accumulation of debt close to retirement. Nevertheless, it is not enough to have

resources: people also need the capacity to manage those resources, if they are to stay out of debt and find retirement security at older ages.

Prior Studies

Many prior studies have explored American women's labor supply patterns over time (c.f., Goldin, 2006; Attanasio, Low, and Sanchez-Marcos, 2008; Michaud and Rohwedder, 2015). Yet there has been relatively little work focusing on cohort changes in older women's participation patterns and debt, as well as financial literacy. In this section we review relevant literature on these issues.

Several authors have evaluated the links between debt management and financial literacy, and they have concluded that the least financially literate incurred high fees and used high-cost borrowing. The least financially knowledgeable also report that their debt loads were excessive and they were often unable to judge their debt positions (Lusardi and Tufano, 2015 and the references therein). This group was also more likely to borrow from their 401(k) and pension accounts (Lu, Mitchell, and Utkus, 2010; Utkus and Young, 2011) and use high-cost methods of borrowing, such as payday loans (Lusardi and de Bassa Scheresberg, 2013).

There has been some research linking the quality of financial decision making and age, and the findings offer little reason for complacency. For instance one influential study (Agarwal et al., 2009) found that the quality of financial decision-making fell at an older age in 10 financial areas including credit card balance transfers; home equity loans and lines of credit; auto loans; credit card interest rates; mortgages; small-business credit cards; credit card late-payment fees; credit card over-the-limit fees; and credit card cash-advance fees. Older persons pay higher financial service fees and interest.

In the wake of the financial crisis, these age-linked patterns are now translating into an awareness that older Americans are nearing retirement with increasingly concerning levels of debt.² For instance debt held by borrowers age 50-80 rose roughly 60% between 2003 and 2015, while aggregate debt balances held by younger borrowers declined modestly (Brown et al., 2016). Much of this rise consisted of home mortgages, held by over half (55%) of the American population age 55–64, and about the same fraction (50%) had credit card debt (Bucks et al., 2009). Moreover, among people age 65–74, two-thirds held some form of debt, almost half had mortgages or other loans on their primary residences, over one-third held credit card debt, and a quarter had installment loans. In recent years, on average, older borrowers held substantially more debt than did borrowers of the same age in the 1990s: for instance Lusardi and Mitchell (2013) showed that the percentage of people age 56–61 having debt swelled to 71% in 2008, up from 64% in 1992. Additionally, the value of their debt rose sharply over time. Median household debt in 1992 was about \$6,200, but by 2002 it had more than tripled. By 2008, it was \$28,300—nearly quadruple the 1992 level.

Accompanying this trend has been an increase in the proportion of older Americans filing for bankruptcy over time: people age 65+ are the fastest-growing group in terms of bankruptcy filings, which stood at 2% in 1991 and rose to over three times that rate by 2007 (Pottow, 2012). Credit card interest and fees were the most-cited reason for bankruptcy filings by older people, with two-thirds of them providing this reason.³

² For a few recent examples, see AARP (2013), Cho (2012), Copeland (2013), Pham (2011), Securian (2013), Lusardi and Mitchell (2013), and the references therein.

³ Other data sources confirm these findings. People age 55+ hold widespread credit card debt and pay a great deal in fees for late payments and exceeding the credit limits, and this at a time when they should be at the peak of their wealth accumulation process (Lusardi, 2011; Lusardi and Tufano, 2015). Data from the 2012 National Financial Capability Study highlighted that 60% of pre-retirees had at least one source of long-term debt, and 26% had at least two. Nearly 40% of pre-retirees used credit cards expensively, and the same percentage felt heavily indebted (Lusardi and de Bassa Scheresberg, 2014). Other surveys

Another key factor spurring the increase in debt over time was also the much higher prices paid by recent cohorts for housing, and their resulting larger residential mortgages. Begley and Chan (2015) explored the relationship between unanticipated changes in housing wealth and retirement behavior by examining how the variation in the timing of housing price influenced work effort. They showed that women experiencing large negative housing price shocks were 25% less likely to retire, relative to those experiencing positive shocks. Moreover, homeowners having mortgages were less likely to retire (if not yet retired) or more likely to reverse retirement (if already retired). Farnham and Sevak (2016) found that people responded to rising home prices by revising down their expected retirement ages. Specifically, they estimated that a 10% real increase in home value reduced expected retirement ages by about 4 months. One might anticipate that the mechanism worked in reverse when housing prices fell during the financial crisis and thereafter.

The trend is beginning to attract increasing attention from the media, with recent articles exhorting people to cut their debt as they near retirement (e.g., Derousseau, 2016). Additionally the high and rising levels of household debt are increasingly troubling older persons as well (FINRA, 2006, 2007), leading people to retire later and work during retirement (United States Government Accountability Office, 2015). For instance just 9% of workers in 2016 who described their debt as a major problem said they were very confident of having enough money to live comfortably throughout retirement. Yet retirement saving efforts are still lagging, according to the 2016 Retirement Confidence Survey (RCS) (Blakely, VanDerhei, and Copeland,

suggest similar conclusions. The 2013 Survey of Consumer Finances showed that family net worth—the difference between families' gross assets and their liabilities—generally increases with age, with a plateau or modest decreases for the oldest age groups relative to the near-retirement age groups (Bricker et al., 2014). The median net wealth of near retirees (households headed by someone between the ages of 55 and 64) was lower in 2013 than in 1989 (Rosnick and Baker, 2014).

2016). Instead, people who admitted they were undersaving indicated that they would likely cope with the shortfall by either saving more or working longer.⁴

In what follows we contribute to the literature by examining cohort changes in older women's work plans and debt burdens using the HRS, as well as the links between financial literacy and debt stresses in the NFCS. Our results point to the need for boosting older women's retirement security and the important role of managing debt in later life.

Cohort Trends in Continued Work and the Role of Debt in the HRS

In this section we analyze distinct cohorts of older women observed in the HRS, a nationally-representative survey of respondents over the age of 50. Specifically, we focus on four birth cohorts of women first surveyed when age 51-56, and three cohorts of women surveyed when age 57-61, so to evaluate them close to and on the cusp of retirement. For these women we utilize extensive information gathered by the HRS about their labor market status and future plans, and their sociodemographic characteristics, including marital and family histories. In so doing, we evaluate whether there are statistically significant differences across the cohorts after controlling for a parsimonious set of demographic characteristics, which are arguably exogenous. We also evaluate whether additional factors such as education, marital dissolution, health, and children are correlated with anticipated future work. Finally, we evaluate the extent to which the older women's cohorts differ with regard to how much debt they hold as they entered their 50's. This permits us to evaluate whether rising levels of debt might be significantly associated with continued work at older ages.

⁴ This is somewhat worrisome since some retirees indicate that they could not work longer because they were forced to leave the workforce earlier than planned (for reasons such as health problems or disability) (Banerjee, 2014).

For the cohort analysis, we examine four groups of women initially surveyed when they were age 51-56, and three different groups surveyed between ages 57-61. This is facilitated by the structure of the HRS (see Figure 1) which periodically enrolls refresher cohorts over time. For the age 51-56 group, we include those first surveyed in 1992 (the HRS baseline group, born 1936-1941), the 1998 War Babies (WBB) group (born 1942-1947), the 2004 Early Baby Boomers (EBB) cohort (born 1948-1953), and the 2010 Middle Baby Boomer (MBB) group (born 1954-1959). The three 57-61 age cohorts of women were surveyed in 1992 for the baseline HRS cohort, in 2004 for the WBB; and in 2010 for the EBB.

Figure 1 here

Our empirical modeling in each case involves multivariate analysis of each respective outcome variable (y) on a vector of cohort dummies, where the HRS baseline is the reference category. Hence the estimated coefficients on the cohort dummies refer to the differential behavior of subsequent cohorts versus the HRS baseline 1992 cohort. In all cases we also control on the respondent's age, race (White vs other), and ethnicity (Hispanic vs other). These factors are, of course, most likely to be exogenous to past work patterns. In extended analysis we add additional controls for the woman's years of education, whether she had experienced marital disruption (divorce or widowhood), whether she was in fair or poor health, her number of children, and ratios of her household debt to assets. These permit us to ascertain whether factors that could be attributed to cohort differences might instead be associated with changes in socio-economic and demographic factors, including changes in financial markets and the increased opportunities to borrow and take on debt. The entire sample includes slightly over 6,700 women age 51-56, and around 4,200 women age 57-61.

Our first set of results examines whether women reported working for pay at the time of their interview, along with their expectations of the chances that they would be working at age 65. Table 1 and Figure 2 reports coefficient estimates of the linear probability analysis. Panel A provides results for current and future work expectations of the women age 51-56 when surveyed, while Panel B looks at the same outcomes for the older segment, age 57-61.

Table 1 and Figure 2 here

Focusing first on the variable indicating whether the respondent worked at the time of the survey, it is clear that more recent cohorts were all more likely to be working in their 50's, compared to the first HRS baseline group. Moreover the differences are substantial, amounting to around 7-9 percentage points (on a base of 71%). Yet for the women age 51-56, the cohort dummies are similar in magnitude, indicating that all of the more recent cohorts were more attached to the labor market than the HRS baseline, but not differentially from each other. A different pattern obtains for the older women age 57-61 when surveyed. That is, Panel B shows that both the War Babies and Early Boomers were more likely to be working compared to the HRS baseline, by 6-12 percentage points, and the Early Boomers were almost two times as likely to be working than their baseline counterparts. Thus, the chance of working is rising across the cohorts, and the probability of working is rising more for women age 57-61.

Turning to future work plans, Table 1 shows that both of the Boomer cohorts are significantly more likely to say they plan to work at age 65, compared to the original HRS cohort. Here too, plans to work at age 65 rise over time. That is, the Early Boomers are about 4.5-5 pp more likely to work at age 65, where the Middle Boomers are 8 pp more likely to work than the benchmark original HRS cohort. In other words, recent cohorts plan to work more at older ages, and their probability of working at age 65 is rising more for women age 57-61.

Table 2 adds to our core vector of regressors some additional controls for educational attainment, marital disruption, number of children, fair/poor health, and debt to asset ratios (the ratio of mortgages and other loans on the primary residence over the value of the primary residence and other debt over liquid assets). While we are interested primarily in the estimated cohort effects, the additional variables are useful in evaluating whether their inclusion changes the estimated cohort effects.

Table 2 here

Comparing Panels A in Tables 1 and 2, we see that the magnitudes of the cohort effects are attenuated somewhat when additional controls are added. Therefore some of what might be attributed to cohort differences can be associated with more recent waves of older women having more education, higher rates of marital disruption, and fewer children. Additionally, the impact of having higher mortgage debt contributed to higher work rates for these women over time (about which we will say more below). Turning to older women's self-reported chances of working at age 65 (Panel B of Tables 1 and 2), we again see a rising trend in plans to remain at work for Boomers. Thus the Early Boomers anticipate between a 4.5-5 percentage point higher chance of working at age 65 than the HRS baseline (on a base of about 26%), a point estimate that is fairly robust to including the extended controls. An even larger estimate characterizes the MBB women, who indicate a 7 percentage point higher chance of working for pay at age 65 in both models, compared to the HRS reference group. In other words, our conclusion that older women are becoming increasingly likely to delay retirement over time is robust to the inclusion of additional controls.

Table 2 also shows us that, for both age groups, women's expectations of working at age 65 are strongly and positively affected by additional education (by 1 percentage point on a base

of 26%), marital disruption (almost 10% on the same base), and health (11-14 percentage points on the same base). See Figure 3.

Figure 3 here

What Role for Debt?

The last two rows of Table 2 speak to the question of how debt is associated with older women's work patterns, a topic of substantial current interest (Lusardi and Mitchell, 2013). Our findings indicate that mortgage debt, in particular, is associated with a higher probability of women working for pay and expecting to be working at age 65. For instance, a one standard deviation in the ratio of mortgage debt to home value (0.54, from Table 2) is associated with a 2 percentage point rise in women's anticipated probability of working at age 65, equivalent to a 7% change. This is in line with Fortin (1995) who suggested that liquidity constraints related to home down payments prompt many women to work more. The effect we discern here is complimentary, suggesting that older women may defer retirement due to the need to help repay their mortgage debt.

To further examine the role of debt, we note that previous research has reported that people are reaching retirement age today holding more debt than in the past.⁵ Accordingly, we devote some additional attention to various measures of older women's financial fragility across cohorts in Table 3.

Table 3 here

Again using data from the HRS survey, we find that Baby Boomer cohorts are more likely to have debt later in life for both age groups (51-56 and 57-61) compared to the baseline HRS cohort (Panel 1). Moreover, recent cohorts have higher levels of total debt late in life

⁵ See for instance Lusardi and Mitchell (2013); AARP (2013); Bucks et al. (2009); Butrica and Karamcheva (2013); Copeland (2013), and Pottow (2012).

(Panel 2). It is also striking that cohort mean and medial debt levels have been steadily rising over time. For example, while the median (p50) debt of the HRS baseline was a little more than \$15,000 for women age 51-56, this level almost tripled for the Middle Baby Boomers (\$43,200; all values are in \$2015). Increases in debt are even more striking for the older group of women age 57-61: the EBB cohort had almost eight times as much debt as the baseline HRS cohort (\$31,320 versus \$4,175).

One reason for such a large expansion in debt is that households have taken on larger mortgages in recent years. This is the pattern we observe for both of the age groups we examine (Panel 3 of Table 3). Mortgages along with loans related to the primary residence not only grew in absolute value, but they also rose as a percentage of the value of the primary residence. These ratios more than doubled for the older respondents: while the older HRS baseline cohort (age 57-61) neared retirement with a ratio of mortgages and loans on the value of the primary residence of 0.11; that ratio grew to 0.28 for the Early Boomers. Moreover, older women are more likely to be in households where the ratio of mortgage debt to residential value has doubled, from 18% to 32%, comparing the Middle Boomers to the HRS baseline cohort. This implies that many older women will need to manage mortgage debt well into their older years, consistent with the findings reported by Lusardi and Mitchell (2013). In other words, during retirement Boomer cohorts will have to use their income and assets to repay debt, in contrast to the earlier cohort.

And even more striking is the fact that higher proportions of older women are in financially fragile circumstances compared to two decades ago. Only 18% of the younger HRS cohorts had less than \$25,000 in saving, whereas one-third of the MBB group reported having so little saving (Panel 4). We conclude that higher debt levels in later life could well be contributing to rising labor force attachment among older women.

Financial Frailty at Older Ages: Findings from the NFCS

To explore further how older women are managing their debt and retirement planning, we draw on the most recent publicly available data (2012) from the NFCS. This is a large survey of over 25,000 respondents providing unique information on how families manage their financial resources and debt, along with self-assessed measures of debt burden and financial distress. It is also informative on the potential determinants of over indebtedness, such as income shocks and low levels of financial literacy.

Consistent with the HRS analysis above, we again focus on two separate age groups of women in the NFCS: those age 51-56, and age 57-61. There are over 1,800 observations for the first age group, and around 1,300 women for the second. The empirical analysis evaluates whether older women tried to figure out how much they need to save for retirement, their perceived level of indebtedness, and their financial fragility, which relies on respondent answers to whether they could come up with \$2,000 in 30 days if an unexpected need arose.⁶

To this end, Table 4 displays descriptive statistics for women age 51-56 in Panel A, and for women 57-61 in Panel B. Here we see that the sample is mostly married, white, working, and has at least some college education. The older women indicated they were more likely to plan for retirement (or to have planned, if they had retired), but fewer than half (47%) had tried to figure out how much they needed to put aside for retirement, versus 43% of women age 51-56.

⁶ The precise wordings of the questions are: (1) Retirement planning: *Have you ever tried to figure out how much you need to save for retirement?* Or, if already retired: *Before you retired, did you try to figure out how much you needed to save for retirement?* Possible answers: yes, no, don't know, prefer not to say. (2) Debt: *How strongly do you agree or disagree with the following statement: I have too much debt right now. Please give your answer from a scale from 1 to 7, where 1= strongly disagree, 7= strongly agree and 4= neither agree nor disagree.* Possible answers: 1-7; don't know, prefer not to say. (3) Financial fragility: *How confident are you that you could come up with \$2000 if an unexpected need arose within the next month?* Possible answers: I am certain I could come up with the full \$2,000, I could probably come up with \$2,000, I could probably not come up with \$2,000, I am certain I could not come up with \$2,000, don't know, prefer not to say.

Moreover, many of them indicate they are carrying too much debt (44% of those age 51-56 and 38% of the age 57-61), and that they are financially fragile (41% of the younger and 36% of the older group). This is consistent with the HRS evidence showing high levels of debt on the verge of retirement.

Table 4 here

Other indicators of financial distress are reported in Table 5. Results show that few women are able to cover easily their expenses in a typical month, or have set aside emergency or rainy day funds that would cover expenses for three months. NFCS data confirms that mortgage debt and other debts turn out to be problematic for a relatively large subset of women. Nineteen percent of the female homeowners in the younger age group and 16 percent in the older age group report being underwater, owing more on their homes than they thought they could sell them for. As far as non-mortgage debt is concerned, many women said they did not pay off credit card balances in full (if they had them), and they engaged in many costly credit card behaviors such as paying only the minimum due, using the card for cash advances, being charged fees for late payment or exceeding the limits. These findings underscore the point that many older women are exposed to illiquidity and/or problems in debt management. Turning to other indicators, many older women reported having unpaid medical bills, and having engaged in high-cost borrowing using alternative financial services, such as rent-to-own stores, pawn shops, payday loans, auto title loans, and tax refund loans.

Table 5 here

The NFCS also included a set of questions to assess respondents' levels of financial literacy. Five questions were asked to test fundamental concepts regarding numeracy and the capacity to do calculations related to interest rates, knowledge of inflation, risk diversification,

understanding of interest payments on a mortgage, and understanding of basic asset pricing (Lusardi, 2011). Table 6 reports the proportion of correct and incorrect answers and the “do not know” responses to each of these questions. Overall, we find that financial literacy is rather low. A large fraction of women does not know simple financial concepts, and many indicate that they do not know the answer to the questions. The proportion of “do not know” responses was particularly high on the risk diversification question; as many as 49% of women age 51-56 and 47% of women age 57-61 indicated that they did not know whether a single company stock is riskier than a stock mutual fund. There is also a high proportion of “do not know” responses for the question on asset pricing. These two questions will help us differentiate among different degrees of financial literacy among older women.

Table 6 here

Multivariate Regression Analysis

Next we present multivariate linear probability analyses of indicators of financial planning, debt and financial fragility. For the first dependent variable, we use the NFCS question about whether respondents ever tried to figure out how much they need to save for retirement. This is an important question in light of prior research showing that planners accumulate far more retirement wealth than non-planners (Lusardi, 1999; Lusardi and Beeler, 2007; Lusardi and Mitchell, 2007a, b; 2011a, b). As for the analysis using HRS data, we first control for a parsimonious list of regressors, namely age and ethnicity. Subsequently we add controls for marital status, education, income (using dummies), and number of children. In addition, the richness of the NFCS allows us to control for whether respondents experienced a large and unexpected drop in income the previous year, and also the respondent’s level of financial literacy

(defined as the number of correct answers to the five financial literacy questions). Results appear in Table 7.

Table 7 here

Panels A and B, for the simpler and extended models respectively, confirm that higher education and income are strongly positively correlated with women having tried to figure out how much to save for retirement, among both age groups. Their number of dependent children is negatively associated with the probability of having tried to plan for women age 51-56 but not the older group, suggesting some potential for a ‘catch-up’ after children leave home. Interestingly, financial literacy is also an important determinant of financial planning: being able to answer one additional financial literacy question correctly is associated with a 4-6 pp higher probability of figuring out how much to put aside for retirement. This is a reasonably large result, in view of the fact that only 43-47% of the respondents indicated they had tried to plan for retirement (Table 4). This finding is consistent with data from an earlier wave of the NFCS (Lusardi and Mitchell, 2011b) where we use a very similar empirical specification, but we use all respondents and all age groups, and other surveys as well that use different measures of planning (Lusardi and Mitchell, 2014). This finding is also consistent with data from a special module we designed for the HRS on retirement planning and financial literacy; in that work we showed that financial literacy is an important predictor of retirement planning for older women as well (Lusardi and Mitchell, 2008).

Next we turn to respondents’ answers to the NFCS question about their degree of agreement with the statement: “I have too much debt right now.” We use this variable to proxy for peoples’ concerns about their debt, since debt levels (as reported in the HRS) are not

available in the NFCS. Results are reported in Table 8 for both age groups and using both the simple and extended models.

Table 8 here

Once again, we find that women report having too much debt are also those with more dependent children, with the effect among the older age group twice as large as for those age 51-56. Shocks also matter: those having had a large unexpected income drop in the prior year were 75-80 pp more likely to state that they were over- indebted. Those with higher income (income greater than \$100,000 for women age 51-56 and income greater than \$150,000 for women age 57-61) are less likely to have too much debt. Also marital status (being single or widowhood) is associated with much debt, but the effect is significant only for women age 57-61. And once again, the more financially literate were less likely to report they had excessive debt by a statistically significant 10-12 pp, confirming findings in other surveys and other age groups (Lusardi and Tufano, 2015). In other words, shocks do contribute to debt concerns for women on the verge of retirement, but people who have the capacity to manage their resources are more likely to stay out of debt as they head into retirement.

The financial fragility measure available in the NFCS is a proxy for low savings. While the HRS reports whether women have less than \$25,000 in savings, the NFCS asks if they could come up with \$2,000 within a month (multiplying that figure by 12 would bring \$24,000). Findings in Table 9 show that, for both age groups, having more dependent children and having experienced an income shock are positively and significantly associated with the probability of being financially fragile. Interestingly, having experience marital disruption has no significant association with financial fragility. Those with higher income are less likely to be financially

fragile. Moreover, those who are more financially literate are associated with a lower probability of being financially fragile.

Table 9 here

Conclusions

Our goal in this paper has been to ascertain whether older women's current and anticipated future labor force patterns have changed over time, and if so, to evaluate the factors associated with longer work lives and plans to continue work at older ages. We have also sought to evaluate debt and debt management as a factor spurring older women's continued work.

The analysis has yielded several findings. First, we show that older women's current and intended future labor force attachment patterns are changing over time. Specifically, compared to our HRS baseline surveyed in 1992, more recent cohorts of women in their 50's and 60s's are more likely to be working. The cohort increment is about 8 percentage points (on a base of 71%). Second, when we compare differences in older women's self-reported expected chances of working at older ages, again we find evidence that women anticipate working longer. That is, Early Boomers believe they have a 4-5 percentage points higher chance of working than the HRS cohort (on a base of about 26%), and the Middle Boomers are even more likely to be working for pay at age 65 compared to the HRS reference group. These patterns confirm that continued work and delayed retirement is becoming more prevalent for older women over time.

When we explore the reasons for delayed retirement among older women, factors include education, more marital disruption, and fewer children than prior cohorts. But household finances also appears to be playing a key role, in that older women today have more debt than previously, and are more financially fragile than in the past. In large part this can be attributed to

having taken on larger residential mortgages due to the run-up in housing prices over time and lower down payments as well.

In the NFCS we find that women who were more financially literate were more likely to plan for retirement, were less likely to have excessive debt and were less likely to be financially fragile. Having more children and unexpected large income shocks also played an important role. Overall, these findings speak to the important role of managing finances later in life, including debt.

While our work to date has been mainly descriptive rather than causal, we are well aware that planning, saving, and retirement decisions are all made in a life cycle context. Accordingly our future research will explore ways to identify how financial literacy and planning can help drive decision making at older ages which can be conducive to retirement security.

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Table 1. Factors Associated with Older Women's Current and Anticipated Future Work: Core Models (HRS)

	A. Women age 51-56		B. Women age 57-61	
	Currently Working for Pay	Prob. Work at 65 (%)	Currently Working for Pay	Prob. Work at 65 (%)
WB	0.085 *** (0.017)	0.064 (1.533)	0.065 *** (0.022)	1.705 (1.848)
EBB	0.087 *** (0.016)	4.625 *** (1.406)	0.118 *** (0.020)	5.147 *** (1.671)
MBB	0.076 *** (0.016)	7.910 *** (1.371)		
Age	-0.005 (0.004)	-0.545 (0.356)	-0.027 *** (0.007)	-0.981 * (0.571)
White	0.072 *** (0.016)	5.046 *** (1.200)	0.119 *** (0.023)	6.724 *** (1.649)
Hispanic	-0.124 *** (0.024)	-2.180 (1.896)	-0.198 *** (0.035)	-7.636 *** (2.231)
N	6,677	5,152	4,160	2,976
R-square	0.014	0.015	0.028	0.016
Mean of dep var	0.709	26.289	0.607	25.737
St.dev of dep var	0.454	32.484	0.488	33.338

Note: * p<0.10, ** p<0.05, *** p<0.01

Coefficient estimates from linear probability analysis, standard errors in parentheses. Explanatory variables include age, race, and ethnicity along with missing value dummies where relevant. The 51-56 age cohorts of women were surveyed in 1992 (the HRS baseline group, born 1936-1941), the 1998 War Babies (WBB) group (born 1942-1947), the 2004 Early Baby Boomers (EBB) cohort (born 1948-1953), and the 2010 Middle Baby Boomer (MBB) group (born 1954-1959). The three 57-61 age cohorts of women were surveyed in 1992 for the baseline HRS cohort, in 2004 for the WBB; and in 2010 for the EBB. Question about the probability of working at 65 asked only of those working at the survey date.

Table 2: Factors Associated with Older Women's Current and Anticipated Future Work: Extended Models (HRS)

	A. Women age 51-56		B. Women age 57-61	
	Currently Working for Pay	Prob. Work at 65 (%)	Currently Working for Pay	Prob. Work at 65 (%)
WB	0.070 *** (0.017)	-0.434 (1.515)	0.017 (0.024)	1.635 (1.851)
EBB	0.053 *** (0.017)	3.612 ** (1.420)	0.047 ** (0.023)	4.708 *** (1.692)
MBB	0.038 ** (0.018)	7.666 *** (1.414)		
Age	-0.001 (0.004)	-0.608 * (0.349)	-0.027 *** (0.007)	-1.008 * (0.561)
White	0.008 (0.016)	3.662 *** (1.206)	0.037 (0.025)	4.400 *** (1.650)
Hispanic	0.026 (0.024)	2.926 (1.979)	-0.003 (0.038)	-0.388 (2.468)
Years of Education	0.025 *** (0.003)	0.975 *** (0.232)	0.032 *** (0.004)	0.885 *** (0.308)
Marital Disruption	0.086 *** (0.015)	9.652 *** (1.306)	0.068 *** (0.022)	8.498 *** (1.688)
Fair/Poor Health Self-reported	-0.301 *** (0.019)	-10.971 *** (1.387)	-0.282 *** (0.024)	-14.035 *** (1.774)
Number of Children	-0.009 ** (0.004)	-0.430 (0.322)	-0.005 (0.005)	-0.140 (0.395)
All 1ry Res Loans/1ry Res. Valu	0.063 *** (0.022)	2.638 ** (1.038)	0.089 ** (0.035)	2.283 ** (0.983)
Other debt/liquid assets	0.001 * (0.000)	0.014 * (0.008)	-0.001 (0.001)	0.058 (0.058)
N	6,677	5,152	4,160	2,976
R-square	0.112	0.062	0.108	0.065
Mean of dep var	0.709	26.289	0.607	25.737
St.dev of dep var	0.454	32.484	0.488	33.338

Note: * p<0.10, ** p<0.05, *** p<0.01

Coefficient estimates from linear probability analysis, standard errors in parentheses. Missing value dummies included as appropriate. See also Notes to Table 1.

Table 3. Differences in Older Women's Debt by Type, by Cohort and Age Group (HRS)

		p50	Mean	N			p50	Mean	N
<i>1. Have debt (0/1)</i>					<i>3. All 1ry Res Loans/1ry Res. Value >0.5</i>				
Age group 51-56	HRS	0	0.42	2,806	Age group 51-56	HRS	0	0.18	2,788
	WB	0	0.41	847		WB	0	0.24	839
	EBB	0	0.44	1,207		EBB	0	0.26	1,195
	MBB	1	0.51	1,872		MBB	0	0.32	1,860
Age group 57-61	HRS	0	0.37	2,056	Age group 57-61	HRS	0	0.11	2,052
	WB	0	0.39	699		WB	0	0.22	690
	EBB	0	0.44	1,424		EBB	0	0.28	1,414
<i>2. Total debt (\$2015)</i>					<i>4. Have less than \$25,000 in savings</i>				
Age group 51-56	HRS	15,030	59,003	2,806	Age group 51-56	HRS	0	0.18	2,806
	WB	27,360	62,990	847		WB	0	0.20	847
	EBB	37,386	91,398	1,207		EBB	0	0.23	1,207
	MBB	43,200	98,210	1,872		MBB	0	0.33	1,872
Age group 57-61	HRS	4,175	32,976	2,056	Age group 57-61	HRS	0	0.16	2,056
	WB	23,560	68,066	699		WB	0	0.18	699
	EBB	31,320	96,701	1,424		EBB	0	0.26	1,424

Note: Total debt includes the value of mortgages and other loans on the household's primary residence, other mortgages, and other debt (including credit card debt, medical debt, etc.). All dollar values in \$2015.

Table 4. Descriptive Statistics for Variables in the National Financial Capability Study (NFCS)**A. Women age 51-56 (N=1844)**

Variables	Mean	Median	Min	Max	SD
Age	53.47	53	51	56	1.73
Married	.62	1	0	1	.48
Single	.11	0	0	1	.32
Separated or divorced	.21	0	0	1	.41
Widow	.05	0	0	1	.22
White	.75	1	0	1	.43
Black	.12	0	0	1	.32
Hispanic	.07	0	0	1	.25
Asian	.02	0	0	1	.15
Other	.04	0	0	1	.19
Education < high school	.07	0	0	1	.25
High school	.31	0	0	1	.46
Some college	.30	0	0	1	.46
College+	.31	0	0	1	.46
N dependent children	.58	0	0	4	.92
Income < \$15K	.12	0	0	1	.32
Income \$15-25K	.12	0	0	1	.32
Income \$25-35K	.09	0	0	1	.30
Income \$35-50K	.15	0	0	1	.36
Income \$50-75K	.18	0	0	1	.38
Income \$75-100K	.13	0	0	1	.33
Income \$100-150K	.13	0	0	1	.33
Income >\$150K	.08	0	0	1	.27
Working	.55	1	0	1	.50
Financial literacy (N correct answers)	2.88	3	0	5	1.40
Income shock	.32	0	0	1	.47
Retirement planning	.43	0	0	1	.50
Having too much debt	.44	0	0	1	.50
Financial fragility	.41	0	0	1	.49

B. Women age 57-61 (N=1332)

Variables	Mean	Median	Min	Max	SD
Age	58.93	59	57	61	1.40
Married	.59	1	0	1	.49
Single	.13	0	0	1	.33
Separated or divorced	.20	0	0	1	.40
Widow	.08	0	0	1	.27
White	.75	1	0	1	.43
Black	.15	0	0	1	.35
Hispanic	.04	0	0	1	.21
Asian	.02	0	0	1	.15
Other	.03	0	0	1	.17
Education < high school	.05	0	0	1	.23
High school	.32	0	0	1	.46
Some college	.29	0	0	1	.45
College or more	.33	0	0	1	.47
N dependent children	.34	0	0	4	.75
Income < \$15K	.11	0	0	1	.31
Income \$15-25K	.13	0	0	1	.33
Income \$25-35K	.14	0	0	1	.35
Income \$35-50K	.14	0	0	1	.35
Income \$50-75K	.19	0	0	1	.39
Income \$75-100K	.10	0	0	1	.30
Income \$100-150K	.10	0	0	1	.30
Income >\$150K	.09	0	0	1	.29
Working	.46	0	0	1	.50
Financial literacy (N correct answers)	2.96	3	0	5	1.38
Income shock	.29	0	0	1	.45
Retirement planning	.47	0	0	1	.50
Having too much debt	.38	0	0	1	.48
Financial fragility	.36	0	0	1	.48

Note: The sample includes all age-eligible women age 51-56 and 57-61 in the 2012 NFCS. Financial literacy refers to the number of correct answers to the 5 financial literacy questions. Income shock refers to a dummy variable for those who experience a large drop in income in the previous 12 months that they did not expect. Financial planning is coded as 1 for those who tried to figure out how much they need to save for retirement. Having too much debt refers to respondents who chose values 5, 6, or 7 (on a scale from 1 to 7) when asked to evaluate if they have too much debt. Financial fragility is coded as 1 for those who probably or certainly could not come up with \$2,000 within the next month. Data unweighted.

Table 5. Indicators of Financial Distress in the NFCS**A. Women age 51-56**

Variables	N	Mean	Median	Min	Max	SD
Making ends meet	1844	.37	0	0	1	.48
Rainy day savings	1844	.36	0	0	1	.48
Underwater with home value	886	.19	0	0	1	.39
Credit card fees	1303	.40	0	0	1	.49
Loan on retirement accounts	908	.09	0	0	1	.28
Withdrawal from retirement accounts	908	.05	0	0	1	.22
Unpaid medical bills	1844	.29	0	0	1	.45
High-cost borrowing	1800	.24	0	0	1	.49

B. Women age 57-61

Variables	N	Mean	Median	Min	Max	SD
Making ends meet	1332	.42	0	0	1	.49
Rainy day savings	1332	.44	0	0	1	.50
Underwater with home value	606	.16	0	0	1	.37
Credit card fees	1004	.35	0	0	1	.48
Loan on retirement accounts	713	.07	0	0	1	.26
Withdrawal from retirement accounts	713	.05	0	0	1	.22
Unpaid medical bills	1332	.23	0	0	1	.42
High-cost borrowing	1309	.20	0	0	1	.40

Note: The sample includes all age-eligible women age 51-56 and 57-61 in the 2012 NFCS. Making ends meet refers to the ability to balance monthly income and expenses. Statistics related to underwater with home value and credit card fees are conditional on holding the asset or debt. Statistics related to loan on retirement accounts and hardship withdrawal from retirement accounts are conditional to having a retirement account. High-cost methods of borrowing refer to auto title loans, payday loans, pawn shops, rent-to-own stores, and tax refund loans. Data unweighted.

Table 6. Financial Literacy in the NFCS**A. Women age 51-56**

Questions	Correct	Incorrect	Don't know	N
Interest rate question	74%	15%	10%	1844
Inflation question	66%	12%	20%	1844
Risk diversification question	45%	5%	49%	1844
Mortgage question	77%	9%	13%	1844
Basic asset pricing question	26%	29%	44%	1844

B. Women age 57-61

Questions	Correct	Incorrect	Don't know	N
Interest rate question	74%	15%	10%	1332
Inflation question	69%	13%	16%	1332
Risk diversification question	47%	5%	47%	1332
Mortgage question	80%	6%	13%	1332
Basic asset pricing question	26%	29%	43%	1332

Note: The sample includes all age-eligible women age 51-56 and 57-61 in the 2012 NFCS. Data unweighted.

Table 7. Determinants of Having Tried to Figure Out How Much to Save for Retirement (NFCS)

A. Women age 51-56

Variables	(1) Retirement planning	(2) Retirement planning
Age	0.015** (0.007)	0.010 (0.006)
Black	-0.084** (0.036)	-0.030 (0.034)
Hispanic	-0.039 (0.046)	-0.011 (0.042)
Asian	0.158** (0.076)	-0.012 (0.069)
Other	-0.122** (0.061)	-0.112** (0.055)
Single		0.064* (0.036)
Separated or divorced		0.013 (0.029)
Widow		0.023 (0.051)
N. dependent children		-0.033*** (0.012)
High school		0.007 (0.046)
Some college		0.129*** (0.047)
College+		0.163*** (0.049)
\$15-25K		0.097** (0.043)
\$25-35K		0.114** (0.046)
\$35-50K		0.156*** (0.043)
\$50-75K		0.266*** (0.044)
\$75-100K		0.289*** (0.048)
\$100-150K		0.389*** (0.050)
\$150K+		0.453*** (0.057)
Income shock		-0.008 (0.023)
N correct answers finlit questions		0.060*** (0.009)
Constant	-0.367 (0.357)	-0.550* (0.331)
Observations	1,844	1,844
R-squared	0.011	0.198

B. Women age 57-61

Variables	(1) Retirement planning	(2) Retirement planning
Age	0.026*** (0.010)	0.031*** (0.009)
Black	-0.064* (0.039)	-0.010 (0.038)
Hispanic	-0.094 (0.066)	-0.049 (0.062)
Asian	0.023 (0.088)	-0.105 (0.082)
Other	-0.018 (0.082)	0.006 (0.077)
Single		-0.046 (0.043)
Separated or divorced		-0.066* (0.036)
Widow		-0.034 (0.051)
N dependent children		-0.008 (0.017)
High school		0.083 (0.060)
Some college		0.144** (0.062)
College+		0.241*** (0.065)
\$15-25K		0.020 (0.053)
\$25-35K		0.145*** (0.053)
\$35-50K		0.163*** (0.054)
\$50-75K		0.185*** (0.053)
\$75-100K		0.191*** (0.062)
\$100-150K		0.315*** (0.064)
\$150K+		0.407*** (0.066)
Income shock		0.039 (0.028)
N correct answers finlit questions		0.042*** (0.010)
Constant	-1.068* (0.575)	-1.772*** (0.544)
Observations	1,332	1,332
R-squared	0.009	0.166

Note: Coefficient estimates from linear probability analysis, standard errors in parentheses. Outcome coded as 1 for those who tried to figure out how much they need to save for retirement. Explanatory variables include age, race/ethnicity, marital status, number of financially dependent children, education, income, having experienced an income shock, and an indicator of financial literacy. Baseline categories: White, married, less than high school education, and income lower than \$15,000. Data unweighted. *** p<0.01, ** p<0.05, * p<0.1

Table 8. Determinants of Having Too Much Debt (NFCS)
A. Women age 51-56

Variables	(1) Having too much debt	(2) Having too much debt
Age	-0.069** (0.030)	-0.038 (0.029)
Black	0.644*** (0.162)	0.492*** (0.164)
Hispanic	-0.176 (0.205)	-0.245 (0.201)
Asian	-0.610* (0.338)	-0.378 (0.333)
Other	0.245 (0.269)	0.147 (0.264)
Single		-0.238 (0.175)
Separated or divorced		-0.172 (0.141)
Widow		-0.038 (0.243)
N dependent children		0.156*** (0.056)
High school		-0.202 (0.224)
Some college		-0.130 (0.229)
College or more		-0.111 (0.240)
\$15-25K		-0.031 (0.209)
\$25-35K		-0.217 (0.221)
\$35-50K		-0.337 (0.206)
\$50-75K		-0.208 (0.211)
\$75-100K		-0.362 (0.229)
\$100-150K		-0.640*** (0.240)
\$150K+		-1.203*** (0.271)
Income shock		0.750*** (0.110)
N correct answers finlit questions		-0.098** (0.041)
Constant	7.799*** (1.584)	6.656*** (1.579)
Observations	1,813	1,813
R-squared	0.015	0.079

B. Women age 57-61

Variables	(1) Having too much debt	(2) Having too much debt
Age	-0.076* (0.044)	-0.062 (0.043)
Black	0.407** (0.176)	0.116 (0.180)
Hispanic	0.084 (0.301)	-0.127 (0.292)
Asian	-0.016 (0.403)	0.141 (0.391)
Other	0.104 (0.376)	0.031 (0.364)
Single		0.452** (0.204)
Separated or divorced		0.280 (0.172)
Widow		0.687*** (0.239)
N dependent children		0.355*** (0.080)
High school		-0.336 (0.287)
Some college		-0.465 (0.295)
College+		-0.538* (0.308)
\$15-25K		0.126 (0.252)
\$25-35K		-0.034 (0.252)
\$35-50K		-0.147 (0.257)
\$50-75K		-0.142 (0.253)
\$75-100K		-0.301 (0.293)
\$100-150K		-0.021 (0.302)
\$150K+		-0.796** (0.313)
Income shock		0.832*** (0.134)
N correct answers finlit questions		-0.115** (0.050)
Constant	8.182*** (2.608)	7.809*** (2.561)
Observations	1,312	1,312
R-squared	0.006	0.099

Note: Coefficient estimates from linear probability analysis, standard errors in parentheses. The dependent variable ranges from 1 to 7, where 1 means I strongly disagree and 7 I strongly agree with the statement “I have too much debt right now.” Explanatory variables include age, race/ethnicity, marital status, number of financially dependent children, education, income, having experienced an income shock, and an indicator of financial literacy. Baseline categories: White, married, less than high school education, and income lower than \$15,000. Data unweighted. *** p<0.01, **

p<0.05, * p<0.1

Table 9. Determinants of Not Being Able to Come Up with \$2,000 (NFCS)**A. Women age 51-56**

Variables	(1) Financial fragility	(2) Financial fragility
Age	-0.017** (0.007)	-0.009 (0.006)
Black	0.197*** (0.036)	0.100*** (0.031)
Hispanic	0.059 (0.046)	0.008 (0.039)
Asian	-0.197*** (0.074)	-0.032 (0.063)
Other	0.058 (0.060)	0.005 (0.051)
Single		-0.024 (0.033)
Separated or divorced		0.023 (0.027)
Widow		-0.067 (0.047)
N dependent children		0.035*** (0.011)
High school		0.061 (0.042)
Some college		-0.004 (0.043)
College+		-0.001 (0.045)
\$15-25K		-0.070* (0.040)
\$25-35K		-0.142*** (0.042)
\$35-50K		-0.306*** (0.039)
\$50-75K		-0.395*** (0.040)
\$75-100K		-0.469*** (0.044)
\$100-150K		-0.609*** (0.046)
\$150K+		-0.634*** (0.052)
Income shock		0.193*** (0.021)
N correct answers finlit questions		-0.028*** (0.008)
Constant	1.289*** (0.351)	1.184*** (0.303)
Observations	1,844	1,844
R-squared	0.026	0.316

B. Women age 57-61

Variables	(1) Financial fragility	(2) Financial fragility
Age	0.009 (0.009)	0.001 (0.008)
Black	0.189*** (0.037)	0.118*** (0.034)
Hispanic	0.199*** (0.063)	0.168*** (0.055)
Asian	-0.024 (0.084)	0.100 (0.073)
Other	0.120 (0.079)	0.075 (0.068)
Single		-0.022 (0.039)
Separated or divorced		0.006 (0.032)
Widow		0.061 (0.045)
N dependent children		0.035** (0.015)
High school		-0.125** (0.054)
Some college		-0.125** (0.055)
College+		-0.160*** (0.058)
\$15-25K		-0.129*** (0.048)
\$25-35K		-0.229*** (0.047)
\$35-50K		-0.376*** (0.048)
\$50-75K		-0.438*** (0.048)
\$75-100K		-0.499*** (0.055)
\$100-150K		-0.581*** (0.057)
\$150K+		-0.581*** (0.059)
Income shock		0.159*** (0.025)
N correct answers finlit questions		-0.034*** (0.009)
Constant	-0.196 (0.550)	0.791 (0.485)
Observations	1,332	1,332
R-squared	0.026	0.287

Note: Coefficient estimates from linear probability analysis, standard errors in parentheses. Outcome coded as 1 for those certain or probably could not come up with \$2,000. Explanatory variables include age, race/ethnicity, marital status, number of financially dependent children, education, income, having experienced an income shock, and an indicator of financial literacy. Baseline categories: White, married, less than high school education, and income lower than \$15,000. Data unweighted. *** p<0.01, ** p<0.05, * p<0.1

Figure 1. Longitudinal Data Design of HRS

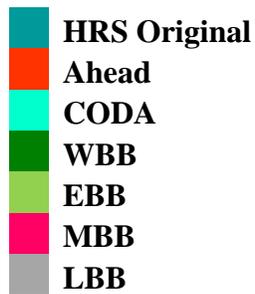
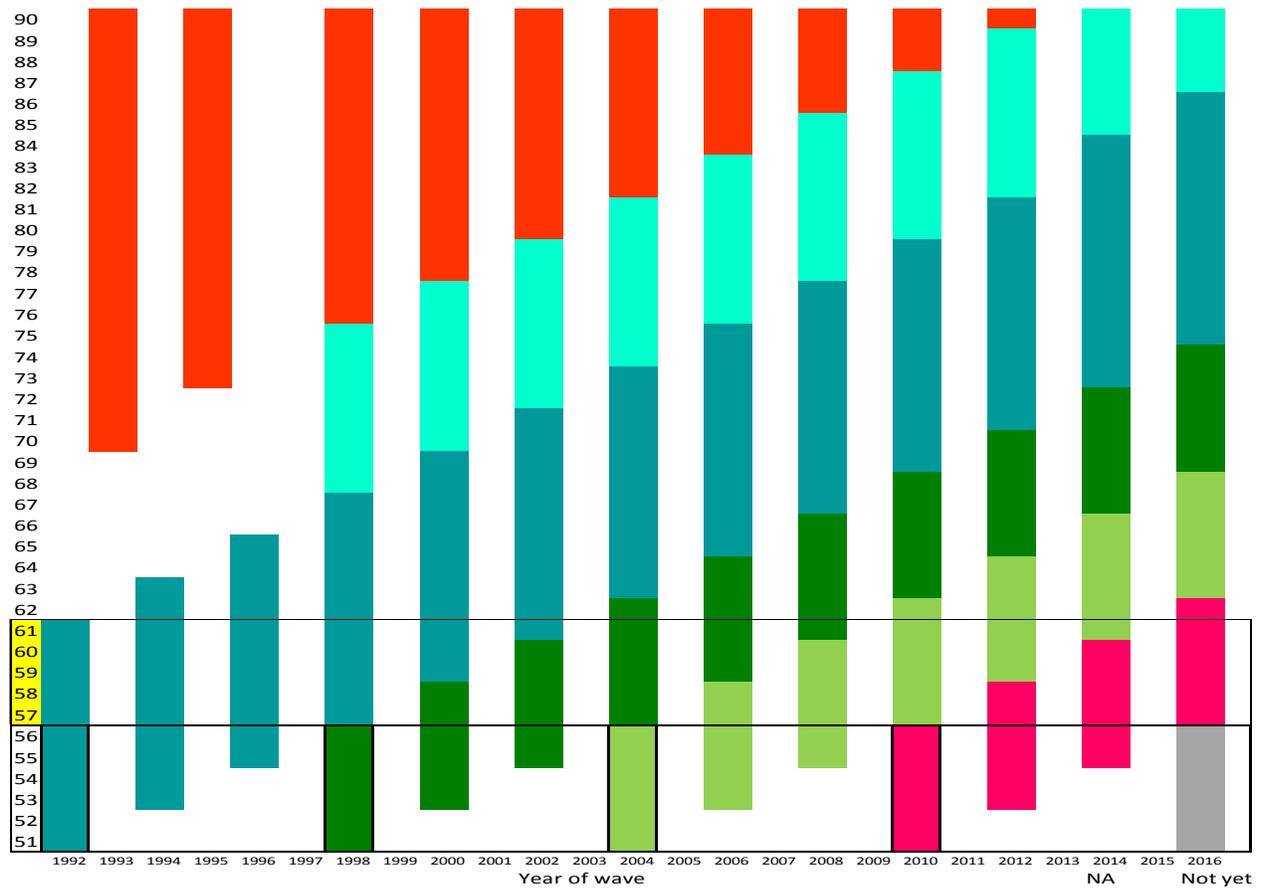
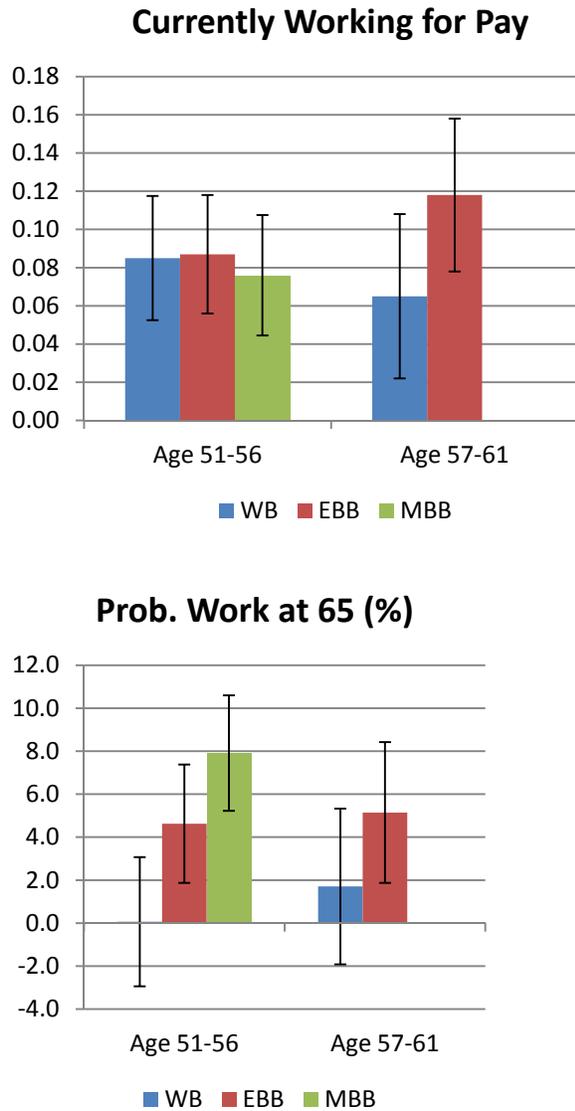
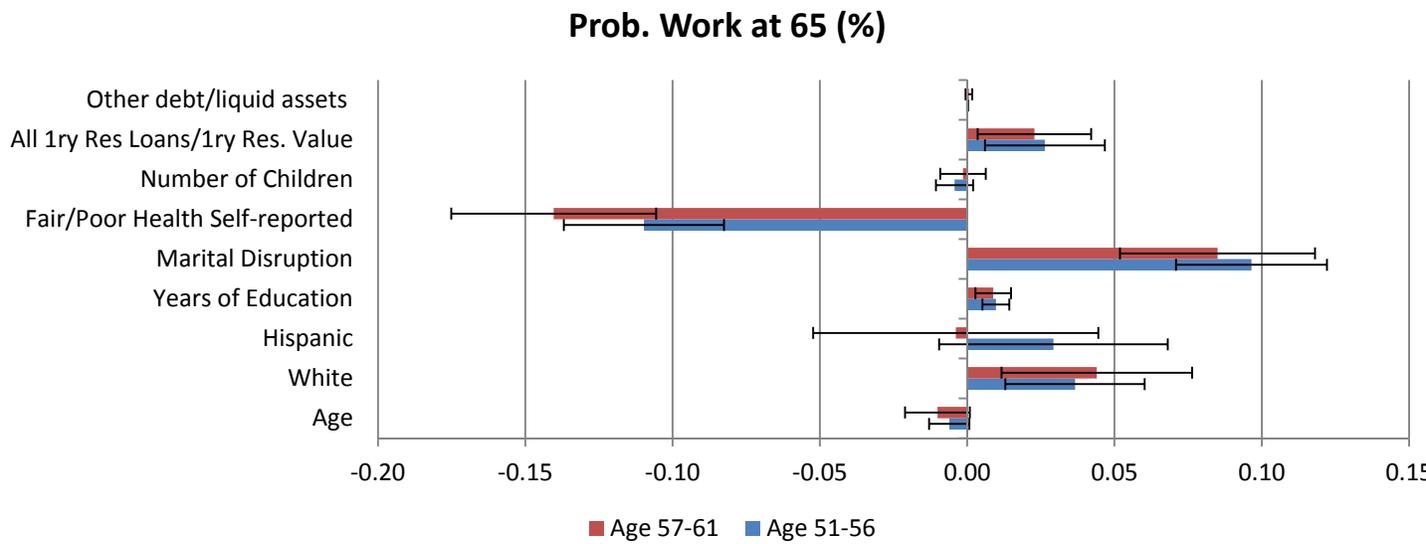
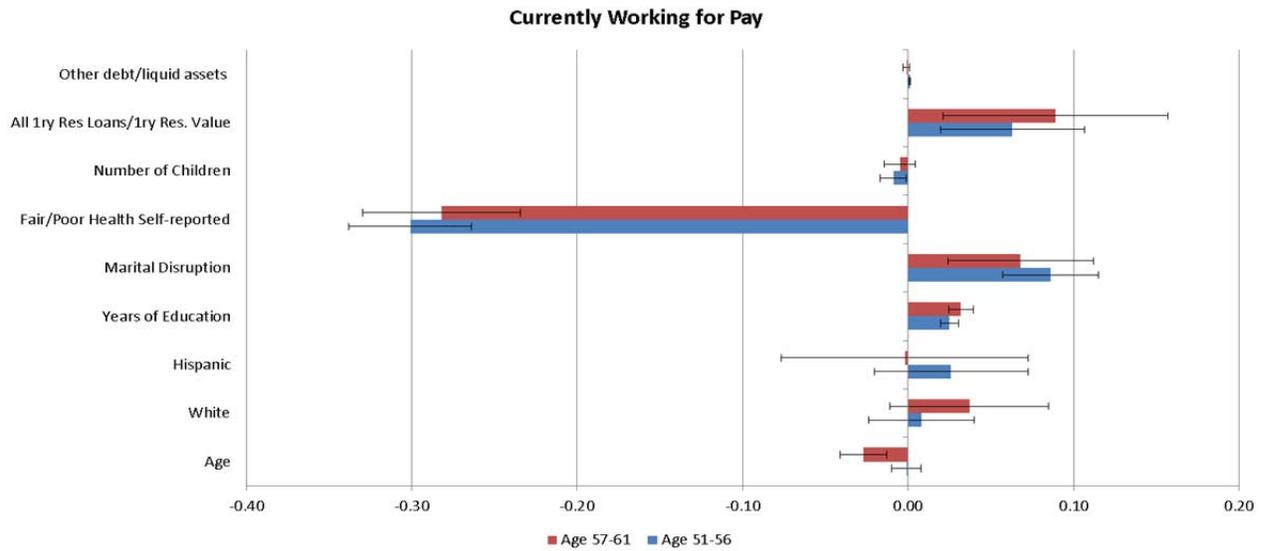


Figure 2. Older Women's Cohort Differences in Current and Planned Future Work for Pay by Age Group (HRS)



Source: See Table 1.

Figure 3: Factors Influencing Older Women’s Current and Planned Future Work for Pay: Cohort Differences by Age Group (HRS)



Source: See Table 2.