Single again? Asset and portfolio changes due to widowhood shock.[1]

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Abstract:

In this paper we examine the effect of widowhood on asset trajectories and portfolio composition. In many industrialized countries, close to half of households are headed by women single, divorced, separated or widowed and therefore their ability to make financial decisions is crucial for their economic well-being as well as their dependents'. Meanwhile, research has found that women tend to be less involved with the stock market and have lower financial sophistication, leaving them out of an important way of accumulating resources via investing and saving. At the same time their higher risk aversion may have sheltered them from some of the effects of the financial crisis. For a two-adult household, the portfolio structure is likely to reflect preferences of the main financial decision maker (usually the husband). When widowhood occurs it could be that singles re-optimize their decisions according to their own preferences. We test this by examining whether there is a change in the wealth portfolio for households (over 60) that have experienced the shock of becoming widowed. Our results indicate there to be an initially statistically significant effect of widowhood on wealth that differs across wealth components and is differential for women and men. The effect disappears once we control for health insurance, but re-appears several years after the shock suggesting a differential willingness to save for women and men.

Keywords: wealth trajectories, household portfolios, widowhood, gender, bargaining

JEL: D15, D91, J12, J14

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I. Introduction

Our paper tracks asset trajectories and asset reallocation resulting from a life shock, such as death of a spouse that typically occurs in families close to retirement age. On the one hand, the question of asset changes is of importance as the resulting one-person asset management could signal vulnerability if the survivor has previously not been tasked with financial decisions. On the other hand, the survivor can shape decisions on how much to save and in which forms according to their own preferences without having to compromise with the preferences of the spouse.

Why do we expect a potential change in the accumulation process after widowhood occurs? Let's review how assets evolve over time. Assets are a stock variable and as such reflect past decisions. The current level of assets is the result of two different factors: i) past assets accrued according to their average returns and ii) active savings.[4] Past assets are given, while the return depends on the investment strategies. A riskier portfolio should be counter-balanced with a higher return, thus riskier portfolio should be correlated with a higher return. As a portfolio reflects the couple's decisions, we expect that if the survivor has higher risk aversion than the couple's average risk attitude, the portfolio will turn to a more prudential one with a lower return. This could be the case of a widow, given that women show, on average, a lower propensity for risky investments. A riskier portfolio may result if a widower is left to manage assets on his own.

We investigate what happens to women's savings in terms of asset trajectories once they are left on their own to manage their finances and compare it to men's outcomes. Our work is motivated by the fact that in many countries, more than half of the households are headed by women (single, divorced, separated or widowed) and therefore their ability to make financial decisions and generate adequate savings is crucial for their economic well-being at and during retirement.

Our hypothesis is that the household portfolio structure is likely to reflect preferences of the main financial decision maker (usually the husband). Once widowhood occurs singles can re-optimize their investment and saving decisions according to their own preferences and keeping in mind their retirement well-being. Given different behavior and preferences of women when it comes to investing, changes in the portfolio after the shock of widowhood will be observed. Our unique dataset allows us to test this hypothesis by examining whether there is a changes in the portfolio structure of households that have experienced the shock of becoming widowed (unlike focusing on singles, which would be a self-selected sample of those that have chosen to be single).

We find that wealth changes after the shock differ across wealth types and that the gender of survivor shapes the asset trajectories possibly reflecting these differences in preferences. In terms of housing, women increase their savings, while men downsize after the shock. Changes in bargaining power (measured by the share of women's income) matter for some assets, but not for all. The higher the income of the wife before the life

[4] If active savings are negative this refers to borrowing or dissaving.

event, the higher the financial assets and the lower the debt (holds for bargaining power ()> 50%). We find evidence that unlike the case for the other assets, the housing decision is made jointly by the couple.

Our paper identified a differential willingness to save among women and men after major life events. This could have important consequences for the pension industry in terms of designing products in-line with *women investment preferences*. Research indicates that women tend to invest more conservatively and be less involved in the stock market. This leaves them out of an important way of accumulating resources via investing and saving and thus results in lower levels of wealth.

Our paper is laid out as follows. Following the Introduction in Section I, the Literature and Conceptual Framework is in Section II, then Data and Descriptives in Section III. The Empirical Strategy is in Section IV and the Empirical Analysis is in Section V. Section VI concludes.

II. Literature Background and Conceptual Framework

Portfolio decision making within the household

The decision of how much to accumulate and decumulate over life is a choice done at the family level as consumption, and thus saving and asset accumulation is a "family good". Family level decisions, though, are difficult to conceptualize. For example, does only one person make some of the decisions and the rest are made jointly? Should this be the case, to what extent do household members merge their different preferences in determining the final saving and its allocation and what is the "weight" of each household member in this decision?

When an individual alone is the decision maker, like in a single headed household, economic theory predicts that the impatience rate, the risk aversion as well as the alternative interest rates in the market will shape the accumulation pattern. More impatient and less risk-averse individuals will, in general, have a less pronounced pattern of accumulation. If households behave as single agents, singles and couples should have identical features in their savings propensity. If the household is formed by individuals with different preferences, then preferences such as impatience and risk aversion are a mix (with unknown and possibly uneven weights) of family components. Browning (2000), for example, develops a theoretical model of household saving and portfolio behavior that takes explicit account of the possible differences between husband and wife preferences for saving for the future and finds that the distribution of income within the household can have a strong effect on savings behavior. He highlights that saving decisions are the result of bargaining power within the couple and so the weights given to individual preferences depend upon the bargaining power each individual has. Mazzocco (2004) shows that risk pooling within the household can also affect savings. Among a group of heterogeneous agents it can increase the amount of savings, but an increase in prudence of one agent can reduce household prudence and hence household saving by eliminating part of the uncertainty faced by the household and allocating pooled income according to individual risk preferences and decision

power. Addoum and Kuong (2011) find that risk tolerance of the spouse with more bargaining power will be pivotal in determining the portfolio decision.

Portfolio outcomes

In terms of portfolio outcomes, the literature shows that the more the husband decides the more prevalent are risky assets. Bertocchi, Brunetti and Torricelli (2012) find this evidence for Italian households. In Sweden, Thornquist and Vardardottir (2014) using a panel sample for the entire population covering seven years highlight that, as the married woman's decision power increases,[5] the riskiness of the household portfolio decreases and the diversification of the portfolio increases.

When it comes to financial decision making, Friedberg and Webb (2006) using a measure of bargaining power that includes the last say in financial decision making, find that wealth levels reflect the life-cycle horizon of the person with more bargaining power thus when men are in charge, households with older husbands have significantly higher wealth and those with older wives have lower wealth. When wives are in charge, the results are reversed. Grabka, Marcus and Sierminska (2013) find that, when examining intra-partnership financial decision making, the difference in wealth holdings between a men and a woman within a couple is significantly smaller when the female manages the money and larger if the male partner has the last word in financial decisions with reference to Germany (Yilmazer and Lich 2013 for the US).

Love (2008) using a calibrated model shows that family shocks could have significant effect on portfolio allocation. Using the Health and Retirement Survey data, he finds that marital status transitions have an effect on stock shares. For example, when there is a transition to widowhood there is a sharp adjustment against stock shares and the effects are larger for women and individuals with children.

Thus, in line with Browning (2000) and Mazzocco (2004), asset accumulation and decumulation are the output decisions made at the intra-household level. The way partners discount future consumption is likely to be different reflecting different preferences. The pace at which the households saves will thus incorporate an average preference, weighted for the importance of each spouse. But how do assets evolve?

Asset trajectories over time

Looking at the asset accumulation identity, current asset evolve according to the following rule:

$A_t=(1+r_t)\ A_{t-1}+y_t-c_t$, which can be also re-written into:

$A_t-\ A_{t-1}\ =r_tA_{t-1}+y_t-c_t=rA_{t-1}+s_t$,where A_t, y_t , c_t are assets, income and consumption, respectively at time t; s_t is active savings out of labor or pension income; r is the interest rate; rA_{t-1} is capital income derived from asset stocks. All these variables are decided at household level.

[5] To control for the potential endogeneity of the decision power variable, the authors exploit its exogenous variation.

Let us look into the component of wealth. Wealth accumulation is made by two parts. The first is the return to previous assets, which is the average return of all assets (both real and financial). What drives a higher or lower return to assets? Asset returns depend on investment strategies, which can vary widely (Ameriks, 2003). Optimally diversifying the portfolio with a balance between risky and risk-free assets should lead to the best outcome in the long run. However, stock market participation widely differs across households. According to the standard portfolio theory, we should not observe non-participation in stocks (Haliassos & Bertaut, 1995) and in practice in most countries, a large fraction of households do not participate in the stock market (Lusardi, 2000, Vissing-Jorgensen, 2002). Van Rooij et al (2011) show that less financial literate individuals invest less in stocks by making financial literacy an important determinant of stock market participation. Thus evidence clearly deviates from theory. Stock participation is also not homogenous across countries. It peaks in the US where it is equal to 22% while in Spain is approximately halved (Bover, 2010; Sierminska & Doorley 2013). Even in the US, where stock market participation is at the highest level, the median household does not participate at all in the stock market. With portfolios far from the optimal ones, we can expect the return to vary quite a lot. In addition, as women tend to invest less in the stock market, we expect the average return for their portfolios to be lower (e.g. Jianakopolos & Bernasek, 1998).

The second component of an increase in assets is due to active savings, income less consumption. This component depends on consumption trajectories, which, in turn, depend on how households prefer to postpone resources to the future rather than consume them in the current period.[6] After the widowhood shock occurs, the survivor will adapt the savings choices to her/his behavior depending on their preferences. Optimal consumption should be such that its marginal utility is constant over time to respect the optimality condition:

$$(1+r)/(1+\rho)\ Eu'(ct+1)=u'(ct)$$

Where r is the interest rate; ρ the subjective discount rate; u' the marginal utility; c_t consumption at time t. The more the interest rate is similar to the discount rate the smoother consumption will be over time. However, as the discount rate and marginal utility parameters might differ a lot between those of the couple and the one of the survivor, we expect that consumption and thus savings trajectories will be shaped according to the survivor's preferences after the shock occurred and the adjustment period has passed. For example, if the subjective discount rate is lower for women (they are more patient) we expect that female survivors will shift to a higher accumulation pace. Patient households exhibit a higher accumulation rate than impatient households due to their lower desire for current consumption. If women differ from men in their saving preferences, we would expect that this saving behavior will be reflected several years after widowhood occurred. If women have different tastes for procrastination and riskiness, this will also be reflected in their

[6] Consumption can also change after the widowhood shock to reflect fewer persons in the households and different tastes, i.e. a widow/er might be willing to consume fewer resources in leisure-related activities (such as restaurants or outdoor activities) after widowhood occurs.

asset trajectories.[7] Differences in risk aversion may lead to a lower return (lower r in our equations) and thus a lower accumulation pace. So the asset returns and active savings will generate the final outcome on the current asset value (see Lusardi 2000). Thus, within preferences, the variables that affect the saving propensity are the subjective discount rate, impatience as well as risk aversion.

Summing up the two factors that can drive the asset accumualtion process, these include: asset returns, potentially lower for women and the saving behavior, potentially higher for women. If asset returns are in favor of men, due to more active investment strategies, the active saving rate potentially goes in the opposite direction. The prevalence of one of these two factors is ultimately an empirical question.

Our prior is that if the woman in the couple is more inclined to save than her partner, the higher her bargaining power, the more the couple will save to according to her preferences. If she does not have high bargaining power then after the shock we would expect the portfolio to change to reflect more her preferences. Once controlling for bargaining power, the effect of widowhood could just disappear or at least be much more diluted.

Other aspects

Another factor not in the model that could explain changes in the portfolio after the spouse's death is financial planning. Couple planning, as well as financial decisions, could change when the couple dissolves. As highlighted by Ameriks, Caplin, Leahy, (2003) the propensity to plan might increase the savings rate. The authors show that households with similar demographics exhibit huge differences in the amount of wealth. The authors find that factors that are supposed to determine the saving propensity according to the life cycle theory actually have little influence (on saving propensity), while financial planning is the main ingredient of higher wealth accumulation patterns. This is contrary to Lusardi (2000) findings, where she indicates that not holding stocks (and a higher prevalence of equity holdings) generates a lower return.

III. Data and Descriptives

To examine our question of interest we use the Health and Retirement Survey (HRS), a longitudinal panel study that surveys a representative sample of more than 26,000 Americans over the age of 50 every two years since 1992. The survey collects information about income, work, assets, pension plans, health insurance, disability, physical health and cognitive functioning, and health care expenditures. The asset information is collected at the household level. Income and earnings and some other information are collected for all persons in the household. We use 10 waves of the RAND version of the data (1992-2010), which include imputations for income and wealth. Our sample consists of couple households close to retirement age- over the age of 60 that have experienced a death of the spouse (either woman or man) during the sample period. Table 1 shows the distribution of the sample by waves.

Table 1. Number of observations, by wave and year of survey

[7] See Qiao (2012) for a discussion on gender differences in tastes and saving preferences.

wave	Year	Number of couples	Number of deaths by next wave	Share of coupels affected by shock (%)
1	1992	245	29	12
2	1994	1 873	334	18
3	1996	2 070	391	19
4	1998	2 461	412	17
5	2000	2 490	375	15
6	2002	2 436	316	13
7	2004	2 333	347	15
8	2006	2 205	324	15
9	2008	1 989	357	18
10	2010	1 661		
Total		19 763	2 885	15

Thus, if t is the time when the shock occurs we distinguish the pre-shock waves (time t<0), time of shock (t, assumed to occur in-between waves) and the after shock waves (time t>0). The wave immediately following the shock is considered to be the wave when the shock occurred (time t=0). Thus, if the shock occurred shortly after the previous wave (t=-1) then the wave of the shock may in effect be almost 24 months after the actual shock. In our sample, the first shock can occur after the 1st wave and the last shock can occur after the 8th wave since we need to have observation 1 wave before the shock, the shock and 1 wave after the shock. Thus, deaths that occurred after the 9th wave are not considered in the analysis. We also excluded couples that have remarried. Our sample is an unbalanced panel with 2,528 couples.

Our net worth measure consists of financial assets, nonfinancial assets net of total liabilities. Financial assets include the value of checking, savings and T-bills; the net value of stocks, mutual funds, and investment funds; IRA and other private pension accounts and net value of all other savings. Nonfinancial assets include the value of the primary and secondary residence, Liabilities include the value of all mortgages and land contracts; other type of home loans and value of other debt. We adjust monetary values of wealth and income by the consumer price index to 2000 values.

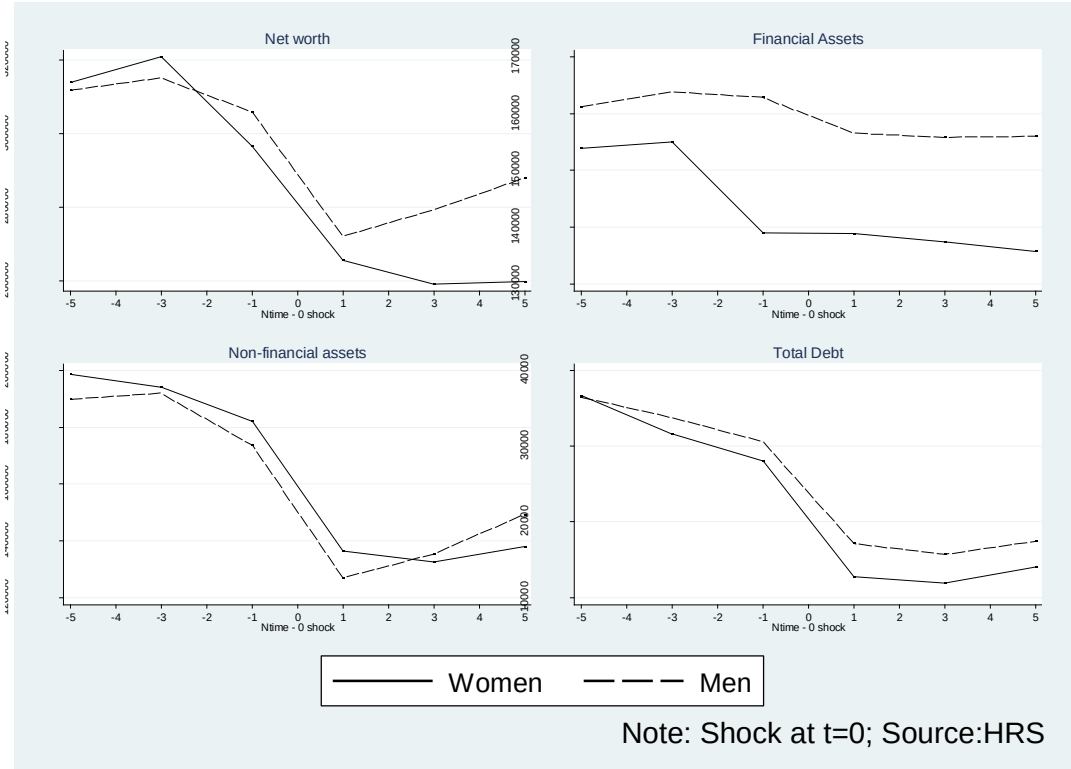
Table 2 indicates that both wealth (and income) decline prior to death of a spouse (for both women and men) measured both with a mean and median. For men overall wealth slightly increases after the shock and for women it remains stable. Financial assets for women decline. In terms of household income the decline of household size is evident with the prevalence of lower income, but households in which the woman is the survivor have lower wealth levels by 10 000-12 000 USD.

Table 2. Average and median statistics in our sample before and after the shock, by gender.

		Mean						Median					
		Net worth		Financial assets		HH Income		Net worth		Financial Assets		HH Income	
		Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
	-4	318 244	324 650	165 992	156 333	55 587	48 998	199 744	223 955	38 032	41 662	36 808	36 467
	-2	309 661	297 757	163 929	138 989	53 477	46 823	176 017	189 359	30 879	31 941	34 841	34 066
t	0	278 358	270 180	161 076	138 971	44 457	38 059	161 333	157 369	33 474	36 872	26 236	19 945
	2	282 448	261 074	161 737	140 594	39 775	32 698	139 398	140000	35 403	30 000	26 356	20 806
	4	296 300	261 064	161 664	137 125	40 434	28 085	153 992	137 635	30 545	26 264	27 128	20 331

In the figures below, we provide a snapshot of wealth levels and portfolio composition before and after the shock separately for women and men (Figure 1). Changes in wealth are occurring before and after the death of the spouse. For net worth, for example decumulation begins two waves before the actual event, but the trajectory is different for women and men. In stark contrast to men, women's net worth continues to fall after the death of the spouse. The source of this drop seems to be coming from non-financial assets and from financial assets to some extent. There is also a drop in debt levels, but the absolute levels are much lower than those for assets.

Figure 1 Wealth trajectories over time, by gender



*Note: time difference corresponds to two years (like in table 2, the distance between each wave).

Given that there are strong age effects in wealth accumulation, we check the trajectories of wealth components by age. Figure 2 and 3 include for comparative purposes the overall wealth trajectories and those for three age groups (60-69, 70-79, 80+). Decumulation patterns for men vary by age and for women they are

a lot more clustered. For men, we see a decline in non-financial assets and differences by cohort for financial assets. We also see an increase in wealth.

Figure 2 Net worth and financial assets before and after the shock for women and men by age group.

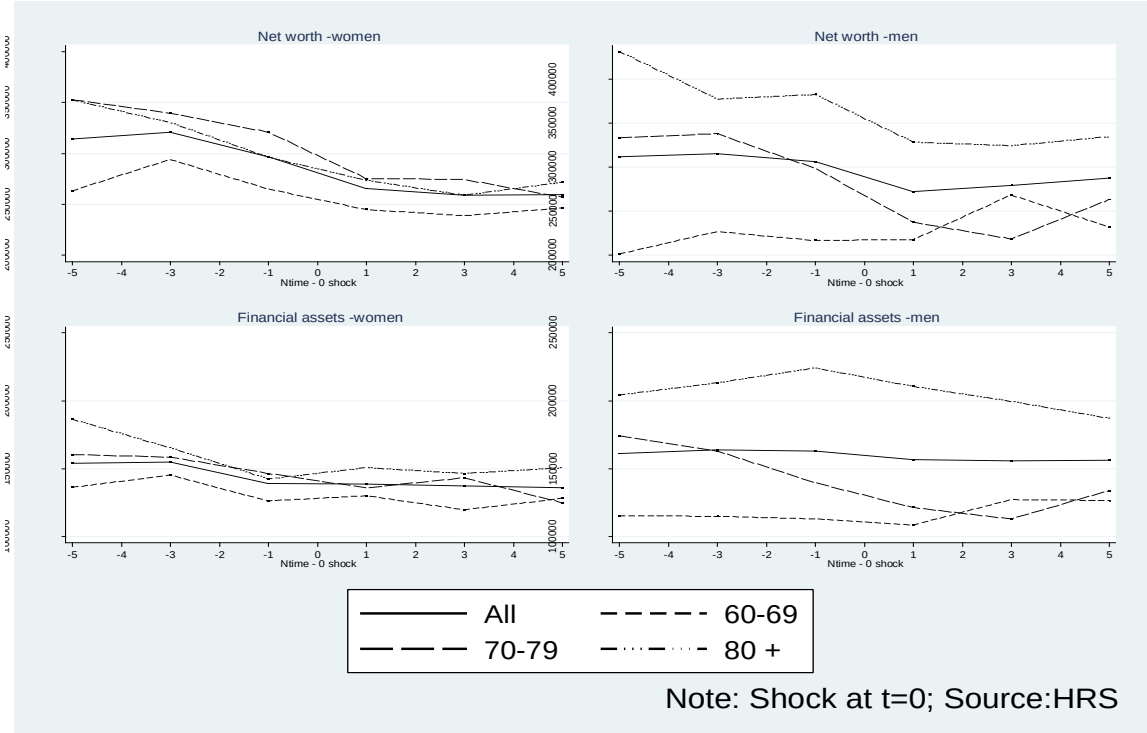


Figure 3 Non financial assets and debt before and after the shock for women and men by age group.

The decline in total net worth is driven by a decline in non-financial assets, via decreasing home ownership (although increasing trend in home value). At the same time there is a decline in ownership of investment real estate and a decreasing trend in value. (See Figure A.1 and A.2 in the Appendix.)

In the empirical section of the paper, we focus on whether widowhood affects smoothly all components of wealth or whether households react first by changing their financial wealth and later their housing wealth. Finally, we will want to understand whether gender shapes asset patterns differently.

IV. Empirical Strategy

Asset trajectories and widowhood

n our empirical model, we want to test whether asset trajectories are affected by widowhood and whether once we control for preferences this effect disappears or remains robust. We also check whether the effect varies by gender. For this we use a fixed effect strategy to control for the individual specific effect, which is

allowed by the panel dimension of our dataset and estimate the following equation for net worth and each component of wealth for each household.

(1)

where X is age, age squared, presence of children, log of household income, level of education (high school and below, high school, some college, college and above) labor market status, health status, health insurance, etc.. Error term, u_{it} include an idiosyncratic error term, ε_{it}, and fixed effect (μ_i). Unless otherwise specified our variables refer to the survivor in the couple. We also include a dummy variable for every four year time range (two consecutive waves) to control for any macroeconomic changes over time. We also include various interaction terms. The complete list of our variables is in Table A.1.

Our main variable of interest is the widow dummy, which indicates the transition to widowhood (equal to one starting from when widowhood occurs onwards). Thus, β captures the average effect the shock of becoming widowed has on wealth. To check whether the response is gendered we include a female interaction term for widowhood. Among our regressors, we give a special focus to bargaining power, calculated as the ratio of the wives' income to total household income[8]. If bargaining were the pivotal variable determining the portfolio and accumulation decision, then the widowhood transition should have no additional effect. If widowhood is still persistent in determining wealth transitions after widowhood, then the shock is an important cause of changes in asset trajectories, indicating that bargaining does not sufficiently explain how decisions of a couple change to become the decision of one person.[9]

In order to capture preferences in portfolio choice, we also control for whether a person had been the financial decision maker.[10] The idea being that if someone became the financial decision maker after the spouses' death the portfolio would better reflect their preferences and we would expect to see more of an effect in their portfolio.

In the United States, a substantial financial burden for the elderly could be medical expenditures, thus we also include indicators of whether the respondent (survivor) and spouse have health insurance prior and after the event. Most elderly (over 65) are covered by Medicare, but it has sizable gaps in coverage,[11] thus, some people have supplemental insurance. Regardless of this, a sizable portion of the population is left vulnerable to substantial expenditures that could occur in the months before death and could affect the financial well-being

[8] If the wife is the survivor then bargain=1 after death and if the husband is the surviving spouse bargain =0. Bargaining power may be decreasing (increasing) before death based on the contribution of spouses to household income.
[9] We would have also liked to control for risk, but unfortunately it is not available for all waves. Neelakantan & Chang (2010), show that even when risk preferences are included as controls, a large wealth gap remains unexplained.
[10] The financial decision-maker is the person making most of the financial decisions in the household.
[11] It does not cover extended hospital stays, most long-term needs and until 2006 prescription drugs.

of the surviving spouse.[12] We include controls for long-term insurance, government insurance (Medicare), health insurance and also whether the spouse had life insurance prior to death. The latter could also prove important for the analysis, as if the person who died subscribed to life insurance, the survivor would benefit from that income after the spouse's death.

The descriptive statistics for our two groups: women and men in the Appendix Table 2a and Table 2b indicate that men survivors are slightly older than women survivors in the sample and are more likely to be working. Women survivors are more likely to have made the switch to being the financial decision maker compared to men survivors and they are more likely to have long-term health insurance. Men's deceased spouses are more likely to have had health insurance compared to women's deceased spouses.

Persistence of shock

In our empirical strategy, we also want to detect if the widowhood shock persists over time, rather than being absorbed just after death. To do so, we add a set of dummy variables for each year after the shock occurred, as follows (we avoid for simplicity the subscript):

$$wealth = \alpha + \sum_t \beta_t time - \sin ce - wid_t + \theta b \arg ain + \mu X + \varepsilon \qquad (2)$$

In this specification, we also include interaction terms in order to check whether there are any gender specific effects.

V. Empirical Results

In the empirical results, we first observe the changes in wealth due to the shock and over time since death. We then focus on the sub-components of the wealth portfolio and discuss the role of bargaining power. Finally, we check whether there are any racial specific effects and perform various robustness checks.

Net worth trajectories

In the first instance, we examine whether we observe a decline in the overall level of wealth due to the death of a spouse. In Table 3 there are four different specifications of our model. In column (1) we present our basic model (eq(1)), in column (2) we add bargaining power to the basic specification, in column (3) we add insurance coverage of the survivor and the deceased, in column (4) we estimate eq(2) by generating one dummy variable for each wave subsequent to the shock to capture the persistence of a shock and how preferences of the survivor, rather than couple preferences shape asset trajectories over time. We also add a dummy for one wave before shock (and its interaction with female), so as to take into account a possible effect before death capturing illness related decumulation behavior.

[12] McGarry and Schoeni (2005) estimate that medical out-of pocket expenditures per dying individuals over the last year of life average $5,684, which is significantly higher than for similar people that do not die that year and almost twice as high as in the year before death.

Let us now turn to the main variable of interest: the widowhood shock. In the first two specifications, where insurance variables are not included, the widowhood shock negatively shapes assets for women and men survivors (See Appendix Table A.2 for variable definitions). However, this negative impact is less pronounced for widows (albeit significantly only in one specification, column 2). The picture changes when insurance coverage is added to the model (column 3). Long term insurance and government insurance, of both the deceased and the survivor do matter significantly in balancing the negative shock of the partner's death, which is no longer significant. The widowhood shock is thus no longer affecting the asset trajectories once the insurance coverage is taken into account.

When we examine the persistence of the widowhood shock over time (Table 3 column (4)), we do not find there to be a significant negative effect for men in the short-run. The effect for women becomes prominent in the second wave after the shock (3rd year) and remains significant for the most part suggesting that the shock of becoming a widow has a significantly different (larger) effect on overall wealth trajectories for women. On the other side, the wave before the shock is not significantly affecting the asset trajectory, revealing that there is no anticipation effect. We will investigate in which asset accumulation is affected the most after we examine the rest of our controls below. The evidence proves the existence of different attitudes towards savings of women and men, as highlighted in Section II. If women did not differ from men in their preferences for asset accumulation, we would not expect a differential adjustment in saving patterns for widowers and widows after the shock, as is the case here. Women prefer to accumulate more than men when they manage their finances on their own.

Contrary, to our expectation the fact that one has become a financial decision maker after the death of the spouse does not have a significant effect in any of our specifications. It does have a negative coefficient suggesting that perhaps there would be some adjustment period on wealth levels due to the new responsibilities of wealth management.

Whether the couple has children increases the accumulation pattern, but not significantly and no difference is observed between women and men. The effect of age is strongly nonlinear and in line with the life cycle predictions, highlighting a concave pattern of wealth over the life cycle. The effect of income is strong and positive. If the surviving spouse is working this has a negative effect on wealth compared to the situation if one is out of the labor force and retired. In order to understand whether the trajectories after widowhood are common across wealth types we look at each component of wealth, separately.

Trajectories of wealth components

We complete the analysis by splitting wealth into sub-components: financial assets, non-financial assets and total debt and then looking into non-financial assets more carefully, by examining homeownership, the value of the home (principal residence) and the value of investment real estate. We use the full specification from Table 3 column (3) and column (4) for our wealth components and identify, which wealth component is the strongest driving force in the trajectory changes observed for net worth (in Table 3). Table 4 shows the full

specification and the immediate widowhood shock, while Table 5 allows for a long lasting effect of the shock on wealth components.

First, let's look at our main variable of interest the widowhood shock for the main subcomponents: financial assets, non-financial assets and debt. Here, similarly to what we saw in Table 3, column (3), the immediate negative effect is also not significant and possibly smaller for women. In the second specification in Table 5, where we use a series of dummies for each wave after widowhood occurs we find that the effect is not persistent for men, but it is persistent and positive for women for financial assets and debt. For debt, only in the two waves immediately after the shock the impact is not significant, plausibly indicating that women need time to adjust.

We do not observe a decline in the level of non-financial assets after the shock. This evidence is likely to highlight that housing wealth is more difficult to deal with given the illiquidity and indivisibility characteristics. Moreover, housing wealth subsumes two components, owning and the housing value, and each of them could play a different role. For this reason in the following analysis, we also investigate, the probability of house owning, in order to check whether households do sell their dwellings rather than downsize. Let us thus turn to the most important component of wealth, which is the primary residence and homeownership. The probability of being a home owner declines with widowhood by about 5 percentage points in the immediate specification (Table 4). It is also significant in the second specification, in the second wave following the shock suggesting people need to adjust. Thus we observe home sales after the observed shock. The gender of the survivor does not add a different angle to the decline in homeownership. What about home values? Are people downsizing as well? Here, we find an immediate significant negative effect for men and a significant positive effect for women when it comes to home values. The second specification indicates a strong positive and persistent effect only for women. Women seem more attached to the house where they live and less inclined to downsize. Having children neutralizes the negative effect of the shock on the probability of owning housing wealth, irrespective of the gender of the survivor.

Health insurance is also significant, but in the case of financial assets only the deceased insurance matters (Medicare). This finding would be in line with research, which indicates that medical expenditures are particularly high immediately before a person dies and having insurance can help alleviate this. Debt levels increase with government and supplemental insurance.

Similarly, as in the case of net worth, becoming a financial decision maker does not have an effect on the levels of wealth components, suggesting that portfolio decisions are more or less a joint outcome. This only matters for non-financial assets, but not the main home, nor investment real estate.

Bargaining power

Worth noting is the role of bargaining power in our regression. As mentioned before, income bargaining power is constructed as the ratio of the female partner's income over total household income.[13] Our results point to a significant and strongly nonlinear effect on the shape of wealth. The effect of bargaining power becomes positive only for level of bargaining power larger the 0.5, indicating that female spouses are more inclined to accumulate total wealth (Table 3) and financial wealth (but not housing wealth) (Table 4), but this holds only for "sufficiently" powerful wives.

Bargaining power does not seem to be relevant for housing decisions suggesting two things: on the one hand, the decision to purchase a home is made jointly among couple. On the other hand, the value of the house where one lives is a very complex decision to analyze, as housing wealth mixes both the utility derived from housing services, which enter the utility function as households get utility from living in their dwelling, as well as the investment component in housing equity.

Any differential race effect?

Given that we are using a fixed effect estimation strategy, which does not allow specific effects excluding multiple interaction terms, we repeat our analysis for the main specification for net worth by race to identify whether there are any race-specific effects. The results can be found in Table A3-A.5 for whites, blacks and Hispanics, respectively. We do not find any race specific effects for blacks and Hispanics, and the results are in line with the results in Table 3 for the immediate and persistent effect with the negative wealth shock being stronger for men than for women. We do observe that the immediate effect (although not significant) among the Hispanics is more negative for women, while for white and black women widowhood is less of a shock than for men.

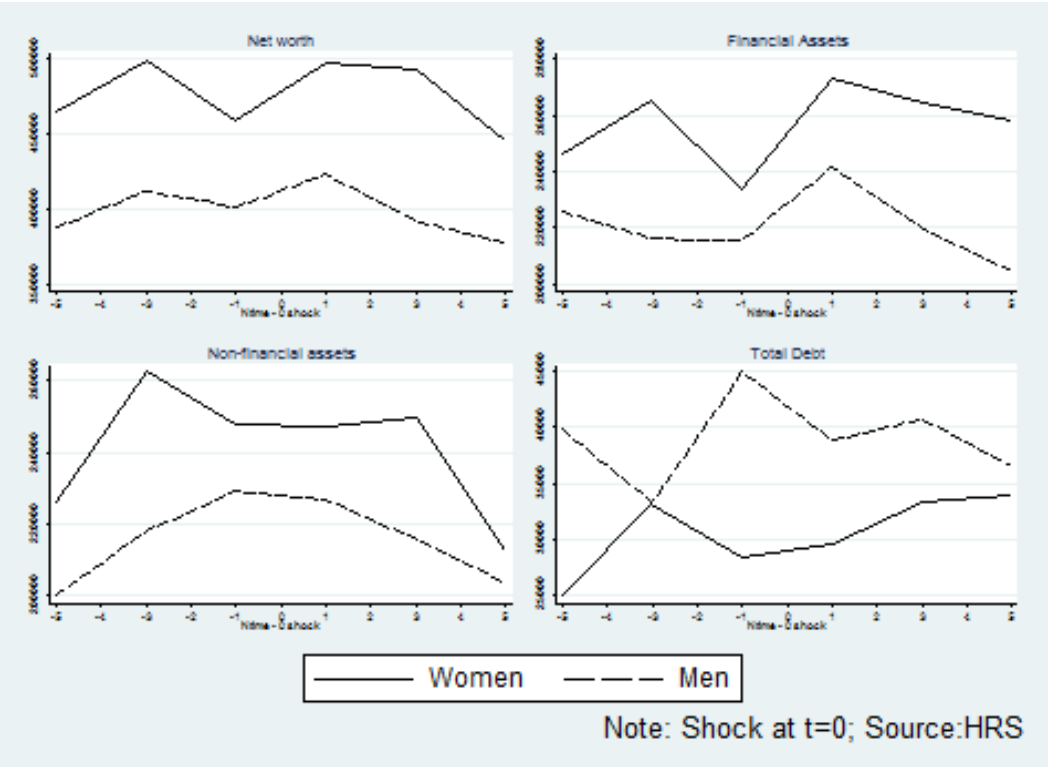
VI. Robustness Checks

As a check, we take our pool of couples over 60 not experiencing widowhood and randomly assign a widowhood shock at wave *`w'* drawing 1000 draws from a uniform distribution. Next, we plot asset trajectories for these randomly assigned widows and perform the same fixed effect strategy, as in the main analysis of the previous section for net worth and its components.

The figure below indicates that the asset trajectories of randomly assigned widows do not exhibit the same paths of accumulation and decumulation as those of true widows suggesting that the event of becoming a widow/er is an exogenous event, which brings about specific behavior, which is nevertheless different for men and women.

Figure. Asset trajectories for couples over 60 with randomly assigned widowhood.

[13] Thus it is equal to 1 if the woman is the survivor and it is equal to 0 if the man is the survivor after widowhood occurs in the household.



The results of the regression are in Table A.6 & Table A.7. The widowhood shock is not significant in any of the specifications except for debt.

VII. Summary

In this paper, we track asset trajectories and asset reshuffling that occurs after a couple experiences a life shock, resulting from a death of a spouse close to retirement age. On the one hand, we expect these newly formed households to experience some type of vulnerability due to the fact that they are left on their own to manage the household finances (if they have never done this before). On the other hand, the survivor can shape decisions on how much to save and in which forms according to their own preferences without having to compromise with the preferences of the spouse.

Given that more than half of households at this age are headed by women, we argue that the ability to manage and generate adequate savings is crucial to their economic well-being and so we focus on the differences between women and men and how they deal with the shock.

Our hypothesis is that the household portfolio structure is likely to reflect preferences of the main financial decision maker (usually the husband). Once widowhood occurs singles can re-optimize their investment and saving decisions according to their own preferences and keeping in mind their retirement well-being. Given different behavior and preferences of women when it comes to investing, changes in the portfolio after the shock of widowhood will be observed.

We test this hypothesis by examining whether there is a change in the portfolio structure for households that have experienced the shock of becoming widowed.

We find that wealth changes after the shock differ across wealth types and that the gender of survivor shapes the asset trajectories possibly reflecting differences in preferences. In terms of housing, women increase their savings, while men downsize after the shock. Changes in bargaining power matter for some assets, but not for all. The higher is the income of the wife, the higher the financial assets and the lower the debt.

Overall we find that there is an effect of widowhood on wealth immediately after its happening, but it is diluted and even disappears once other factors are controlled for health insurance in particular. Couples with health insurance are financially less vulnerable in the face of spouse loss, after which the wealth level is unchanged.

Years after widowhood we observe that saving rate increases for women while is stable for men, revealing that female preferences differ more than the couple's ones when it comes to financial decisions. If the woman is the survivor, she will start a higher accumulation pattern over time after becoming a widow.

On the policy standpoint, the results of our paper could have important consequences for the pension industry in terms of designing products in-line with *women investment preferences,* as well as identifying the differential willingness to save among women and men after major life events. Savings products could be better tailored as to capture different propensity for save within the couple. Moreover, a role for (possibly backed by the public institutions) financial advice and fostering financial knowledge becomes essential in order to increase financial inclusion and reduce potential vulnerability to investments which do not necessarily reflect the preferences of each couple members[14].

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[14] See Borella and Rossi 2013.

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Table 3 The effect of widowhood on wealth Patterns. Fixed Effect. Dependent Variable: total net wealth

	(1)	(2)	(3)	(4)	(5)
widow	-29944.74**	-54678.40***	-19310.77		
femalewid	15687.51	35784.77*	31097.37		
macrowave1	25396.69	26121.13	10173.70	22006.28	24188.32
childyes	47396.41	42243.85	39986.00	47040.70	48163.48
childwid	5892.98	11111.37	8718.61	-24257.01	-24087.78
childfw	4196.36	-91.62	38.77	36813.12	29765.27
age	57627.52***	61690.83***	38840.64***	38416.82***	38665.25***
agesq	-369.64***	-394.29***	-255.90***	-238.46***	-236.46***
agefem	-16359.67	-18154.76*	-12086.95	-12183.05	-11238.71
agesqfem	80.10	91.26	54.16	50.75	53.58
_lny	56845.76***	55935.78***	54842.46***	54848.45***	54767.31***
rworking	-26974.26***	-25242.78**	-18744.55*	-18204.30*	-18026.61*
runemployed	-31168.55	-32748.57	-20288.38	-17207.94	-13192.86
rgoodhealth	9229.07	8838.97	8886.37	8742.74	8762.86
rbetter	-3435.49	-3920.26	-3614.52	-3801.68	-3923.92
rworse	-4346.76	-3806.84	-2499.72	-2294.60	-2231.34
bar_inc		-135552.31***	-186529.85***	-146989.67***	-143114.82***
bar_inc2		113031.19**	173685.12***	102157.10*	96348.01*
fswitch			-33872.67	-42056.26	-41969.10
lifeins			3781.40	2851.39	2296.22
ltins_d			19606.29*	19818.02*	19568.42*
ltins_r			23400.95**	22782.09**	22741.00**
govins_d			45753.18***	49474.48***	49609.71***
govins_r			21708.93**	20041.25*	19561.56*
hins_d			-2380.52	1155.76	1518.40
hins_r			39.61	-436.32	-390.09
othins_d			15553.86*	17695.76**	18036.68**
othins_r			8765.40	8197.06	8014.27
_Intimepos_1				15717.09	12184.57
_Intimepos_3				-20944.93	-25724.96
_Intimepos_5				-17701.86	-23467.60
_Intimepos_7				-15799.46	-22596.29
_Intimepos_9				-17485.97	-25154.05
_Intimepo~11				-54979.61	-63550.34*
_IntiXfema_1				36431.56	31899.16
_IntiXfema_3				75631.47***	61609.45**
_IntiXfema_5				67984.00**	51167.26
_IntiXfema_7				62283.12*	42663.72
_IntiXfema_9				46916.76	24488.03
_IntiXfem~11				106888.02**	81803.81*
_Intimeneg~1					-7333.47
_IntiXfe~l_1					-18805.11

_cons	-1985676***	-2057553***	-1330207***	-1389726***	-1471775***
r2	0.05	0.05	0.06	0.06	0.06
bic	484195.39	480444.78	480427.53	480547.70	480553.80
N	17873.00	17740.00	17740.00	17740.00	17740.00

Note: we also added dummy variables (one dummy for every four year time range, two consecutive waves).

Table 4. The effect of widowhood on wealth components. Fixed Effect. Dependent Variable: Financial Assets, Non-Financial Assets, House Owning, total debt, Principal Residence, investment residence (Specification 1)

	Financial Asset	Non Financial Asset	Total Debt	Home Ownership	Principal Residence	Investment Real Estate
widow	-9137.75	-9439.61	3106.83	-0.05**	-14129.44*	5534.19
femalewid	20577.18	16278.64	-114.50	0.03	17484.94*	-2185.22
fswitch	57154.79	-71709.69*	13040.16	0.14	-32728.93	-11752.15
lifeins	4709.83	590.44	-701.77	-0.00	-1724.40	1737.67
ltins_d	11748.00	14250.11**	3754.69**	0.01	4920.50	6151.42*
ltins_r	2504.86	21567.89***	3077.13**	0.03**	9690.96**	12527.89***
govins_d	21279.04***	32980.09***	6486.73***	0.04***	12080.90***	21885.97***
govins_r	10865.14	17732.59***	6274.47***	-0.01	-1918.61	21199.71***
hins_d	6167.90	-11206.14**	-5938.95***	-0.00	2084.22	-13933.34***
hins_r	5475.97	-5703.15	-3542.34***	0.02*	5012.69*	-10877.55***
othins_d	9466.06	11108.98**	5599.13***	-0.02	731.65	12023.86***
othins_r	6771.83	7395.78**	2946.93***	0.00	-245.50	7054.73***
childyes	10973.80	37681.01**	8225.19*	0.09**	14887.87	23133.62**
childwid	4859.85	2909.55	1740.15	0.02	3426.18	-319.88
childfw	-10405.58	4682.71	-2355.21	0.02	5214.57	109.85
bar_inc	-189394.89***	-342.53	10448.67*	0.15***	-15026.01	16789.99
bar_inc2	180452.19***	-6667.78	-10700.85*	-0.17***	3481.78	-11521.36
age	5905.30	52021.25***	12673.79***	0.09***	11961.63***	34420.39***
agesq	-46.12	-272.23***	-68.05***	-0.00***	-76.48***	-179.66***
agefem	-10095.78	-5173.00	-3160.66**	0.01	4684.22	-8083.13***
agesqfem	56.04	15.29	16.03*	-0.00	-39.37	41.70**
_lny	49846.53***	7744.20***	1062.49*	0.01*	5900.33***	1376.27
rworking	-25633.46***	8932.40*	2736.87*	-0.01	5662.95	2228.12
runemployed	-5007.04	-22889.29	-6841.82	-0.03	9596.75	-38609.20**
rgoodhealth	6089.29	4156.97	1408.24*	0.00	4417.52*	1069.56
rbetter	-6318.90	4675.79	1342.94	-0.01	147.42	3516.58*
rworse	-392.29	-2055.26	123.41	-0.02**	-13.55	-2486.51*
_cons	-264385.01	-2162176.21***	-497559.56***	-2.98***	-472261.15***	-1385447.75***
r2	0.04	0.33	0.48	0.14	0.02	0.60
N	19526.00	17471.00	17471.00	17471.00	19526.00	17471.00

Note: we also added dummy variables (one dummy for every four year time range, two consecutive waves).

Table 5. The effect of widowhood on wealth components. Fixed Effect. Dependent Variable: Financial Assets, Non-Financial Assets, House Owning, total debt, Principal Residence, investment residence (Specification 2)

Variable	Financial Asset	Non Finan cial asset	Total Debt	Home Ownership	Principal residence	Invest Residence
Fswitch	54345.72	-76589.59*	12082.081	.15010303	-37236.181	-12734.446
lifeins	5442.0041	-136.69314	-692.04812	-.00527299	-2502.8015	1932.6439
ltins_d	11667.325	14429.482**	3661.4489**	.00904337	5125.1154	6132.6027*
ltins_r	2337.6143	21444.893***	3163.8387**	.02770981**	9407.8653**	12693.032***
govins_d	20672.337***	36277.282***	6202.8101***	.0420854***	13823.789***	23366.343***
govins_r	10798.786	16398.514***	6333.569***	-.0081809	-2769.9347	20748.504***
hins_d	6655.7996	-9114.3609*	-6118.8583***	-.00062652	3421.3443	-13573.029***
hins_r	5625.1937	-6113.0949	-3466.5845***	.0152145*	4626.4373	-10939.766***
othins_d	9780.1751	12300.108***	5447.8422***	-.01474615	1609.9933	12061.951***
othins_r	6561.6959	7133.3407**	2967.5982***	.00335775	-505.7658	7012.1621***
childyes	14442.381	39421.961**	8200.7652*	.10051378**	17534.78	22306.475**
childwid	-10342.45	1459.6656	-2716.8018	.03664254	5100.2005	-6094.407
childfw	18143.024	1103.1279	4588.292	-.05323161	-4760.2982	10217.774
bar_inc	-176520.8***	23112.729	15314.741**	.13182464**	-4793.8105	27878.543**
bar_inc2	146805.27***	-37044.586	-18674.314**	-.13330383*	-12145.208	-23159.175*
age	4603.5105	51369.272***	12401.81***	.08900481***	12146.38***	33645.933***
agesq	-33.035787	-270.57387***	-66.262236***	-.00058177***	-76.152466***	-179.30041***
agefem	-10102.049	-5056.4411	-2710.4156*	.01071988	4072.6197	-7363.103**
agesqfem	43.84195	21.014091	10.350727	-.00008241	-31.185402	38.359534*
_lny	49638.183***	8057.558***	1023.8894*	.00832488*	6071.7***	1478.4213
rworking	-25068.634***	8652.3875*	2685.062*	-.00563544	5730.7616	1912.2678
runemployed	-3990.8406	-22034.927	-7005.4199	-.03365968	10240.344	-38853.993***
rgoodhealth	6196.0801	3915.0592	1383.3974	.00089254	4280.7598*	1016.3492
rbetter	-6577.3711	4826.6509	1363.9912	-.00721219	178.81799	3649.0308*
rworse	-319.02073	-1976.1802	52.748154	-.01539547**	81.878828	-2455.6539*
_Intimepos_1	-4603.4848	3438.326	7317.0922	-.07149065	-11905.103	18030.907
_Intimepos_3	-22155.229	3218.1587	2608.8687	-.04855948*	-10228.382	13144.223**
_Intimepos_5	-26843.197	10078.765	2587.37	-.02818927	-5740.0032	16622.627***
_Intimepos_7	-27078.374	9430.5319	814.97599	-.07552804**	-6712.8538	17195.212**
_Intimepos_9	-27775.231	12487.487	1864.3835	-.07477411*	-4362.2678	16693.85*
_Intimepo~11	-66715.413**	12489.727	2500.8815	-.0635933	-6988.6433	20688.052**
_IntiXfema_1	26102.88	24673.459	-894.10695	.08406269	31736.022*	-12508.578
_IntiXfema_3	58470.889***	16963.484	4362.2414	.01268196	20749.052*	-4553.8167
_IntiXfema_5	59743.397**	11714.864	8073.7309*	-.02064228	15227.712	-4515.6912
_IntiXfema_7	66360.302**	2876.134	11175.261**	.00974193	8002.453	-5382.67
_IntiXfema_9	57845.887*	-7319.2556	9998.1642*	.00449723	-1332.2613	-5407.7586
_IntiXfem~11	108430.96***	7516.5838	12702.695**	.00774557	11326.682	-4073.3447
_cons	-181711.49	-2159170.4***	-488718.18***	-3.0795322***	-490427.59***	-1358328.9***

Note: we also added dummy variables (one dummy for every four year time range, two consecutive waves).

Appendix Note

Inheritance and Wills

In the United States, only a few states are common property states in which an even 50-50 ownership of assets is considered in the event of divorce or death. In most other states, property belongs to you after your spouse dies only if your name was on the title or it was given to you via a will or you can prove that you bought it together. In practice, the surviving spouse usually cannot be left without anything and receives 1/3 to half of the property, which suggests that theoretically a drop in wealth could be observed following a death shock. A drop of wealth could also be observed, because wealth belonging to a deceased spouse could be put in an estate after which the actual split of assets would be determined. Death is also accompanied by large expenses, which could affect wealth levels. There are no state or federal taxes for bequests made to the spouse. About 2/3 of people aged 60 and over write wills (and most often will writing is related to life events). The characteristics of will writers are examined in Goettin and Martin 2001. The beneficiaries of those with wills and without wills did not differ much—suggesting that wills follow more or less the marital regime laws possibly with the spouse receiving most often the estate. [in any case we control for children] Intestate succession laws control who inherits property if no will exists. Many kinds of assets are not passed on by will: life insurance proceeds, real estate, bank accounts, and other assets held in joint tenancy, tenancy by the entirety, or community property with right of survivorship, property held in a living trust, funds in an IRA, 401(k), or retirement plan for which a beneficiary was named funds in a payable-on-death (POD) bank account, and stocks or other securities held in a transfer-on-death (TOD) account.

Appendix Figures and Tables

Figure A.1 Main residence and homeownership before and after the shock by gender and age.

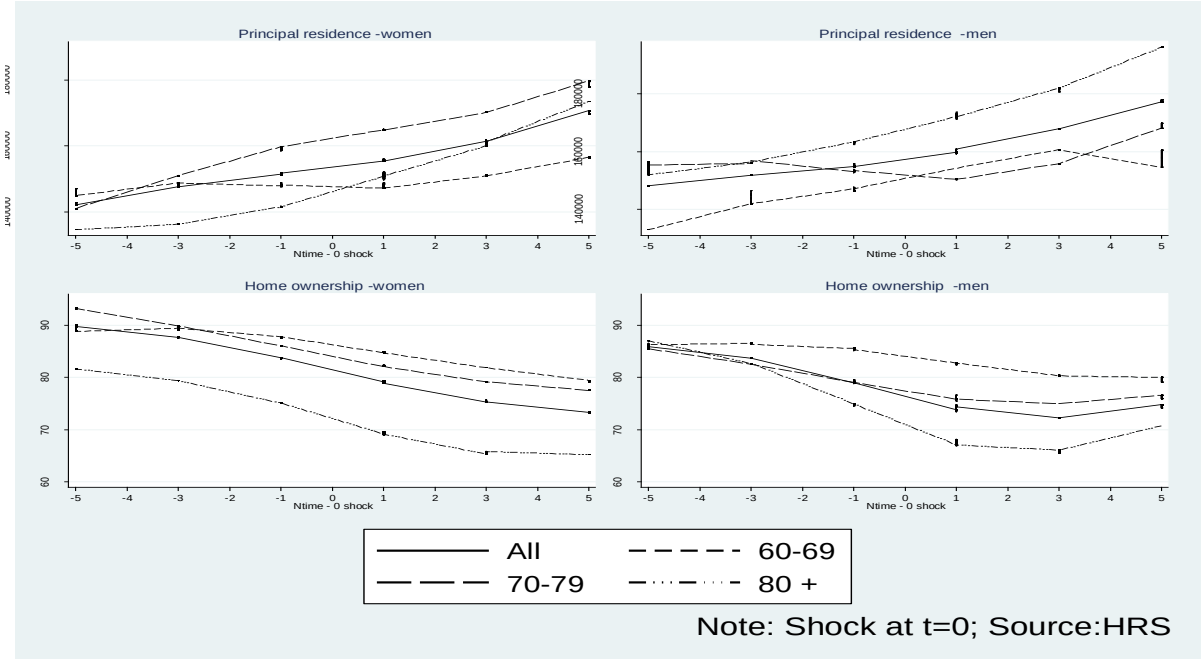

Figure A.2 Investment real estate and ownership before and after the shock by gender and age.

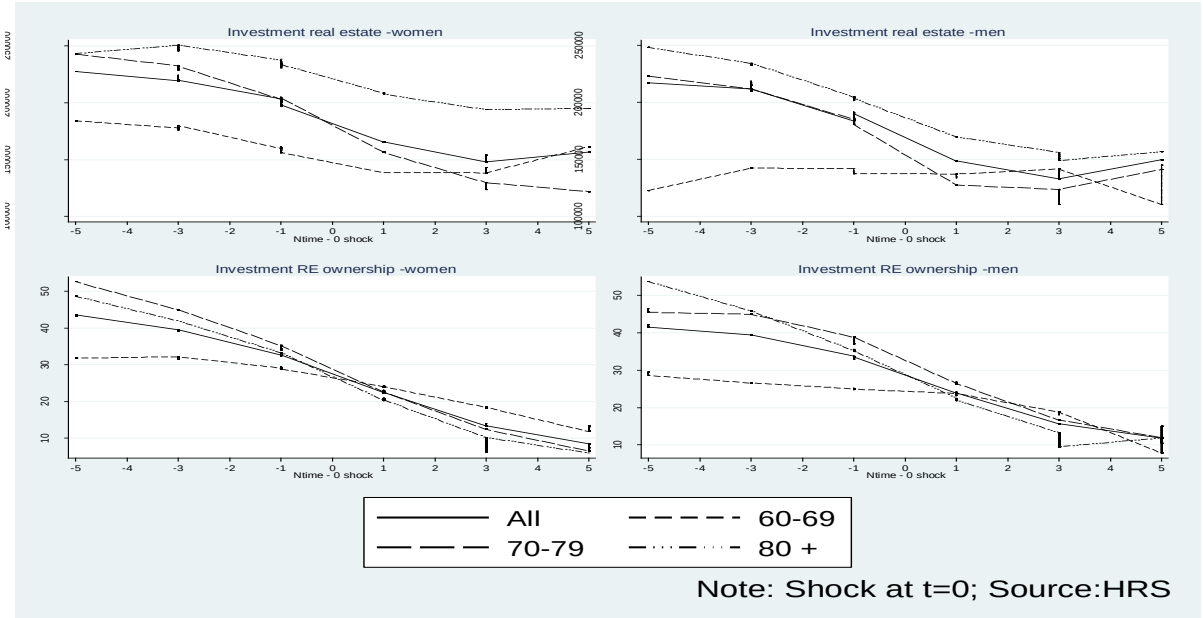

Table A.1. Variable labels and definitions.

widow	Shock occurred to respondent
female	Female widowhood: Widow*female
fswitch	Whether survivor became the financial decision maker after the shock
rlths	Education: Less than high school
rsomecollege	Education: Some college
rcollabove	Education: Above college
lifeins	Respondent covered by life insurance (_r). Deceased covered by life insurance (_d)
ltins_d	Deceased had Long term insurance
ltins_r	Respondent has long term insurance
govins_d	Governement Insurance (of the deceased)
govins_r	Government insurance (of the respondent)
hins_d	Health insurance (of the deceased)
hins_r	Health insurance (of the respondents)
othins_d	Other insurance (of the deceased)
othins_r	Other insurance (of respondent)
childyes	Couple has children
childwid	Children*widowhood
childfw	Children*widowhood*female
Age	Age
Agesq	Age squared
Age*female	Age*female
Age squared*female	Interaction of age squared and female
_lny	Log of household income
working	Dummy =1 if R works
unemployed	Dummy=1 if r is unemployed
rgoodhealth	Good health (R)
rbetter	Better health (R)
rworse	Worse health (R)
bar_inc	Bargaining power equal to ratio of wives income to total household income
Intimepos_X	Time period after shock; X=number of year*2
IntimeXfem_X	Female *[Time period after shock; X=number of year*2]
Intimeneg_X	Time period before shock; X=number of year*2
IntimeXfemal_X	Female *[Time period before shock; X=number of year*2]

Note: R stands for Respondent (the survivor)

Table A.2a Descriptive statistics for men and women (men).

Men	**Obs**	**Mean**	**Std. Dev.**	**Min**	**Max**
age	5906	76.32712	8.46832	61	102
agesq	5906	5897.53	1304.756	3721	10404
bar_inc	5771	.1418733	.1948107	0	1
_lny	5883	10.24156	.8355392	3.89182	14.53072
rworking	5906	.117169	.3216488	0	1
runemployed	5906	.0008466	.0290865	0	1
rlths	5906	.4102608	.4919226	0	1
rsomecolle	5906	.1401964	.3472201	0	1
rcollabove	5906	.1586522	.3653824	0	1
rgoodhealth	5906	.6862513	.4640549	0	1
rbetter	5906	.0778869	.2680162	0	1
rworse	5906	.2575347	.4373133	0	1
fswitch	5906	.3848629	.4866041	0	1
lifeins	5906	.0829665	.2758549	0	1
ltins_d	5906	.0543515	.2267292	0	1
ltins_r	5906	.0936336	.291343	0	1
govins_d	5906	.4375212	.496123	0	1
govins_r	5906	.8840163	.3202325	0	1
hins_d	5906	.2108026	.407913	0	1
hins_r	5906	.3364375	.4725306	0	1
othins_d	5906	.181341	.3853331	0	1
othins_r	5906	.2908906	.4542116	0	1
any_wid	5906	.1493397	.3564531	0	1
Women	**Obs**	**Mean**	**Std. Dev.**	**Min**	**Max**
age	13857	75.30028	8.101449	61	109
agesq	13857	5735.761	1237.322	3721	11881
bar_inc	13857	.6424529	.3806119	0	1
_lny	13801	10.09185	.7952865	1.609438	15.5093
rworking	13857	.0754853	.2641824	0	1
runemployed	13857	.0018763	.0432773	0	1
rlths	13851	.3202657	.4665954	0	1
rsomecolle	13851	.188434	.3910725	0	1
rcollabove	13851	.1107501	.3138338	0	1
rgoodhealth	13857	.6911308	.4620437	0	1
rbetter	13857	.0819081	.2742345	0	1
rworse	13857	.2838277	.4508705	0	1
fswitch	13857	.5508407	.4974265	0	1
lifeins	13857	.0945371	.292585	0	1
ltins_d	13857	.0523923	.2228249	0	1
ltins_r	13857	.1236198	.3291592	0	1
govins_d	13857	.4563037	.4981049	0	1
govins_r	13857	.8845349	.3195939	0	1
hins_d	13857	.1687956	.3745848	0	1
hins_r	13857	.3312405	.4706764	0	1
othins_d	13857	.1646099	.3708415	0	1
othins_r	13857	.2984773	.4576065	0	1
any_wid	13857	.1445479	.3516571	0	1

Table A.3. Asset trajectories: whites

Variable	est_nw1_00	est_nw1_11	est_nw1_1	
widow	-31563.636*	-60191.285***	-21907.346	
femalewid	21564.158	35579.338	28636.536	(omitted)
childyes	85222.142*	76625.666*	71392.146*	
childwid	1687.0874	7077.4369	6755.8492	
childfw	1954.0083	-2329.9993	-2521.0351	81716.444*
age	63742.389***	68057.823***	40535.958***	-37615.366
agesq	-423.19278***	-448.14194***	-281.35877***	46705.267
agefem	-22391.834*	-23818.463*	-17187.917	40247.326***
agesqfem	112.74144	120.66715	79.966349	-263.45189***
_lny	65562.018***	64015.363***	62453.914***	-17507.719
rworking	-28179.563**	-26212.049**	-17451.663	76.449569
runemployed	-31620.265	-33525.94	-15048.719	62374.376***
rgoodhealth	9862.9354	9562.619	9470.0975	-16697.362
rbetter	-4051.7441	-4914.6488	-4743.4522	-12132.972
rworse	-3366.0544	-2621.1804	-1181.654	9282.8631
bar_inc		-166723.5***	-223483.25***	-4757.9214
bar_inc2		151123.76***	219843.1***	-865.541
fswitch			-54231.034	-174762.34***
lifeins			1370.4905	131525.48*
ltins_d			22513.729*	-72902.353
ltins_r			22414.636*	724.58659
govins_d			47732.88***	22742.938*
govins_r			31215.932**	21425.058*
hins_d			-2931.9141	52745.828***
hins_r			185.84304	29167.809**
othins_d			17504.274*	998.69795
othins_r			8522.9219	-140.38311
_Intimepos_1				19984.712*
_Intimepos_3				7989.7893
_Intimepos_5				25413.586
_Intimepos_7				-21135.682
_Intimepos_9				-20156.854
_Intimepo~11				-16302.228
_IntiXfema_1				-160374.55*
_IntiXfema_3				-209872.35
_IntiXfema_5				30003.855
_IntiXfema_7				81847.145**
_IntiXfema_9				73313.347*
_IntiXfem~11				68584.051*
_cons	-2021789***	-2104407.2***	-1195904.5***	191809.11*
N	14441	14339	14339	-1254974.1***

Note: we also added dummy variables (one dummy for every four year time range, two consecutive waves).

Table A.4. Asset trajectories. Blacks

Variable	est_nw1_00	est_nw1_11	est_nw1_1	est_nw1_7
widow	-20421.205	-18554.025	-14598.611	
femalewid	-5203.984	35450.28	33366.001	
childyes	10565.709	9135.2772	3816.9091	2390.7934
childwid	25182.559	32231.814	36797.954	19929.639
childfw	10670.396	3041.1132	3875.2981	34259.372
age	31172.277**	29808.2**	25679.034*	21508.267
agesq	-178.10077*	-164.65351*	-140.86132	-115.53011
agefem	3965.3141	4322.0463	8677.6719	9475.3999
agesqfem	-31.041732	-36.341172	-62.115463	-47.898638
_lny	28113.107***	27179.671***	28012.583***	28776.209***
rworking	-19318.238	-17658.603	-22249.269	-25549.365*
runemployed	-32608.476	-31270.431	-43640.179	-41776.307
rgoodhealth	8542.7129	8394.2113	9842.5371	9300.6899
rbetter	4952.9042	3362.6598	648.87676	-2409.9284
rworse	-11686.906	-11277.661	-11124.098	-10234.889
bar_inc		82582.48	49888.149	81309.518
bar_inc2		-119021.77*	-82464.291	-120068.02*
fswitch			-17622.401	-66865.727
lifeins			-7464.9473	-6058.9397
ltins_d			-32850.436*	-33429.27*
ltins_r			21244.86	22597.57
govins_d			18118.304	24965.249*
govins_r			-15342.164	-14331.693
hins_d			-18924.816	-15089.388
hins_r			3079.978	2371.2485
othins_d			16925.204	18884.203
othins_r			10616.363	9753.9231
_Intimepos_1				19534.399
_Intimepos_3				3406.2633
_Intimepos_5				9459.0423
_Intimepos_7				-948.20596
_Intimepos_9				86318.855*
_Intimepo~11				24571.207
_IntiXfema_1				-1457.5131
_IntiXfema_3				27914.225
_IntiXfema_5				22643.167
_IntiXfema_7				16793.377
_IntiXfema_9				-74400.419
_IntiXfem~11				-24192.521
_cons	-1576559***	-1544602.5***	-1485002.7***	-1408328.5***
N	2019	2001	2001	2001

Note: we also added dummy variables (one dummy for every four year time range, two consecutive waves).

Table A.5. Asset trajectories. Hispanics

Variable	Net weorth	est_nw1_11	est_nw1_1	est_nw1_7
widow	-4955.3426	-17126.049	-6085.5214	
femalewid	-29011.69	-2158.4061	-711.59661	
childyes	-14801.933	-15227.236	-5748.1622	-14512.904
childwid	-6817.638	-379.8111	-5869.6599	49146.981
childfw	26461.32	20332.151	22001.981	-106937.89
age	13725.623	25328.255	17955.382	21964.181
agesq	-69.859235	-146.53239	-100.61849	-110.02708
agefem	12410.013	2388.7432	2296.7169	-430.5446
agesqfem	-65.40899	2.3356816	2.7217685	12.633853
_lny	9188.2038	8870.9672	6650.474	6670.8997
rworking	-31090.587*	-29927.589*	-27888.99	-27448.345
runemployed	-136477.29*	-140101.75*	-136697.92*	-143307.92*
rgoodhealth	9393.4986	8517.153	7030.0061	4977.4456
rbetter	-1772.3694	-1940.8565	-883.63627	706.30529
rworse	6416.8672	6610.3144	6687.1644	4335.6845
bar_inc		-45810.312	-78335.695	-106688.75
bar_inc2		16573.666	51627.764	77720.054
fswitch			22739.712	29477.785
lifeins			11018.284	3818.8526
ltins_d			14680.73	8514.2732
ltins_r			4647.6548	8470.1017
govins_d			22923.682	13157.633
govins_r			23599.577	25335.021
hins_d			28671.377	25862.81
hins_r			11795.117	7834.8401
othins_d			-21130.364	-21545.84
othins_r			18599.494	18806.212
_Intimepos_1				-79702.083
_Intimepos_3				-45108.328
_Intimepos_5				-32515.329
_Intimepos_7				-18439.895
_Intimepos_9				-35294.014
_Intimepo~11				-66886.904
_IntiXfema_1				148907.33
_IntiXfema_3				15210.366
_IntiXfema_5				32154.816
_IntiXfema_7				-1355.6541
_IntiXfema_9				-11374.356
_IntiXfem~11				49642.715
_cons	-1001684.1**	-1150009.8**	-891932.91*	-1013680.8*
N	1013	1004	1004	1004

Note: we also added dummy variables (one dummy for every four year time range, two consecutive waves).

Table A.6 ROBUSTNESS CHECKS of our main specifications with a random assignment of widowhood for couples over 60.

RANDOM	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	nw1_	nw1_	fa	fa	nfa1_	nfa1_	td	td
widow	9165.07		-13350.25		-513.40		-14777.60***	
femalewid	-7186.61		972.02		10810.49		10894.44	
ltins_d	82571.34***	81436.73***	67940.28***	67524.00***	22184.65	20810.85	4323.37	4692.13
ltins_r	-769.96	-696.86	-35553.09	-37096.28	35578.63**	37762.78**	964.13	1353.88
lifeins	8764.27	-2769.34	13705.00	5331.12	-12223.88	-9885.23	215.92	1339.46
govins_d	26347.17	27043.35	8487.78	9587.91	23824.08**	23691.80**	-267.36	112.40
govins_r	10108.93	11009.79	2381.02	1274.10	10345.74	11828.83	4634.07	4364.95
hins_d	20605.13	18371.05	714.72	-232.82	19270.11*	18477.23*	2935.99	3348.59
hins_r	-17026.21	-14142.14	-3287.00	-2618.43	-19647.06*	-17819.18*	-9219.18***	-8995.86***
childyes	-15686.54	4585.80	-55174.21	-41508.63	68666.87	62531.23	23785.80	20876.63
childwid	-29187.94	-128475.33	-19074.34	-69059.45	5191.01	26961.53	7887.41	23175.60
childfw	48282.44	118059.25	35538.46	11093.70	-1754.70	8647.23	-12472.34*	-17089.04
bar_inc	45492.06	45002.15	-27848.94	-29347.83	46067.66	44793.97	-20708.31	-21280.13
bar_inc2	-41417.19	-40571.08	35052.07	34418.77	-46515.69	-42946.74	23870.95	24944.04
age	60233.86**	57184.48**	599.24	1253.82	71282.85***	69660.75***	14956.65***	16169.11***
agesq	-405.82**	-357.61**	4.71	19.17	-451.61***	-439.25***	-89.82***	-99.87***
agefem	-36477.85	-34448.66	-16134.61	-15408.54	-9952.06	-10528.21	2663.91	1394.54
agesqfem	237.87	194.76	106.48	92.18	51.46	39.25	-23.47	-14.44
_lny	36419.56***	36288.59***	33105.83***	32430.26***	1228.19	1417.36	1586.30	1435.57
rworking	-43902.74*	-45105.67*	-30430.47*	-31552.05*	51.50	421.40	6007.98*	5814.42
runemployed	-182470.82	-185861.63	-114626.18	-113804.75	-125419.59*	-129163.68*	-50387.98**	-51309.13**
rgoodhealth	25670.37	27111.08	5876.18	6771.29	12893.44	13541.44	-5174.97*	-5317.62*
rbetter	12780.63	12777.14	25697.00	25481.40	-9930.80	-10157.94	-2011.34	-2095.29
rworse	6260.72	7159.51	8145.20	8483.72	-1319.10	-828.75	1929.52	1878.26
_Intimepos_1		99269.20		28510.79		-24357.18		-29691.77*
_Intimepos_3		-18907.38		-29288.22		-3962.67		-11155.44*
_Intimepos_5		6368.96		-13531.41		2820.38		-12263.09*
_Intimepos_7		-41900.58		-62370.75		-2058.18		-15606.60*
_Intimepos_9		-44808.90		-73445.26		4134.46		-17519.97*
_Intimepo~11		-61001.93		-77090.89		-1328.97		-10783.19
_IntiXfema_1		-54797.62		33953.46		10472.43		15098.18
_IntiXfema_3		30547.07		21511.29		19028.13		8013.73
_IntiXfema_5		-11104.72		-16417.94		20475.25		11688.13
_IntiXfema_7		33647.39		9421.44		38283.53		9252.25
_IntiXfema_9		109969.77		70784.72		58622.54		16583.43
_IntiXfem~11		76171.79		25548.83		67297.13		14306.98
_cons	-1613006.65*	-1629581.88*	97089.48	-11401.30	-2494281.95***	-2399646.94***	-657547.77***	-669793.85***
r2	0.06	0.07	0.04	0.05	0.17	0.18	0.17	0.18

bic	62149.31	62258.53	66452.53	66560.42	58649.93	58759.26	53275.56	53378.56
N	2290.00	2290.00	2477.00	2477.00	2269.00	2269.00	2269.00	2269.00

Note: we also added dummy variables (one dummy for every four year time range, two consecutive waves).

Table A7. ROBUSTNESS CHECKS of our main specifications with a random assignment of widowhood for couples over 60.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
RANDOM	pr	pr	ir	ir	td	td	ownhouse	ownhouse
widow	14576.35		-9708.55		-14777.60***		-0.03	
femalewid	-8944.76		17470.64		10894.44		-0.00	
ltins_d	8195.88	6832.61	9482.61	10510.75	4323.37	4692.13	0.01	0.01
ltins_r	15708.89	16948.33	19047.76**	19637.55**	964.13	1353.88	0.01	0.01
lifeins	-4247.26	-7656.46	-1804.19	2799.77	215.92	1339.46	-0.03	-0.03
govins_d	8292.38	8254.93	12046.04**	11745.94*	-267.36	112.40	0.03*	0.03*
govins_r	3902.71	5361.58	5238.81	5291.90	4634.07	4364.95	0.01	0.01
hins_d	20294.92**	19579.91**	-4298.53	-4142.12	2935.99	3348.59	0.03	0.03
hins_r	-2026.59	-518.17	-17066.96***	-17047.95***	-9219.18***	-8995.86***	-0.00	0.00
childyes	22135.09	21133.02	44423.89	42337.48	23785.80	20876.63	0.20*	0.20*
childwid	-10486.86	-21613.86	6536.97	20312.08	7887.41	23175.60	0.04	-0.03
childfw	3574.01	-34038.98	-1051.58	93651.60	-12472.34*	-17089.04	-0.04	-0.07
bar_inc	2817.81	2398.11	59083.10*	59399.52*	-20708.31	-21280.13	0.00	-0.00
bar_inc2	-1123.21	639.92	-60677.66	-59902.95	23870.95	24944.04	0.03	0.03
age	33056.08***	31287.91***	34415.44***	34526.84***	14956.65***	16169.11***	0.08***	0.08***
agesq	-227.20***	-213.42***	-208.20***	-211.13***	-89.82***	-99.87***	-0.00***	-0.0***
agefem	-20274.49*	-20515.98*	12708.54	11886.62	2663.91	1394.54	0.05*	0.05*
agesqfem	133.73*	121.80	-100.28	-94.38	-23.47	-14.44	-0.00*	-0.00**
_lny	-886.13	-700.62	1928.29	2103.71	1586.30	1435.57	0.01	0.01
rworking	-8047.30	-7660.64	4911.62	4861.70	6007.98*	5814.42	0.03	0.02
runemployed	-94383.08*	-95492.52*	-32894.85	-34006.18	-50387.98**	-51309.13**	-0.20*	-0.20*
rgoodhealth	10814.80	11330.86	1674.18	2083.27	-5174.97*	-5317.62*	0.01	0.01
rbetter	-8389.70	-8961.02	-1938.01	-1725.09	-2011.34	-2095.29	0.00	0.00
rworse	3065.16	3837.23	-3422.54	-3637.77	1929.52	1878.26	0.02	0.02
_Intimepos_1		26050.24		-24967.67		-29691.77*		0.03
_Intimepos_3		7831.76		-6600.60		-11155.44*		-0.04
_Intimepos_5		15496.74		-7151.83		-12263.09*		-0.04
_Intimepos_7		16167.13		-11893.72		-15606.60*		-0.04
_Intimepos_9		19051.60		-8064.79		-17519.97*		-0.05
_Intimepo~11		-367.67		8647.35		-10783.19		-0.04
_IntiXfema_1		38083.13		-78299.48		15098.18		0.04

_IntiXfema_3		-1055.00		16155.77		8013.73		0.01
_IntiXfema_5		-2994.62		17721.76		11688.13		0.03
_IntiXfema_7		8997.89		22340.64		9252.25		0.02
_IntiXfema_9		32093.43		17032.79		16583.43		0.03
_IntiXfem~11		52082.15		2600.95		14306.98		0.03
_cons	-697289.4**	-613364.59*	-1626951.4***	-1608001.7***	-657547.7***	-669793.8***	-3.04***	-2.99***
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r2	0.09	0.10	0.23	0.23	0.17	0.18	0.10	0.10
bic	62893.75	62994.81	56099.09	56209.56	53275.56	53378.56	-1643.30	-1529.7
N	2477.00	2477.00	2269.00	2269.00	2269.00	2269.00	2269.00	2269.00

Note: we also added dummy variables (one dummy for every four year time range, two consecutive waves).