

Does Household Debt Influence The Labor Supply and Benefit Claiming Decisions of Older Americans?

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Background and Question

- ▶ Americans' indebtedness increased dramatically from the late 1980s until before the Great Recession
 - ▶ Typical family owed \$70,600 in 2007, up from \$25,300 in 1989 (Federal Reserve Board 2007).
- ▶ Increased household indebtedness at older ages might:
 - ▶ Compel individuals to work longer and delay benefit claiming, or
 - ▶ Induce those who are cashed-strapped and unable to service their debt to claim earlier.
- ▶ The age at which Social Security is claimed is important because it affects monthly benefits:
 - ▶ Benefits claimed before the full retirement age (FRA) are permanently **reduced**.
 - ▶ For example, those with an FRA of 65 will receive only 75% of full benefits if they retire at age 62—the early entitlement age (EEA).
 - ▶ The Retirement Earnings Test (RET) reduces benefits \$1 for every \$2 earned above \$15,120. After 2000, there is no RET if over FRA.



Background and Question (cont)

- ▶ Previous Literature:
 - ▶ *On Social Security*: determinants of Social Security claiming behavior, characteristics of early claimants, and welfare and wealth losses due to early claiming (Burkhauser, Couch, and Phillips 1996; Coile et al., 2002; Johnson and Haaga, 2012; Panis 2002; Song and Manchester, 2007).
 - ▶ *On debt/liquidity constraints*: liquidity constraints and consumption (Carroll 2001; Zeldes 1989), liquidity constraints and labor supply (Belkar, Cockerell and Edwards 2007; Bottazzi 2004; Del Boca and Lusardi 2002; Rossi and Trucchi 2012 ; Chetty, Raj 2008).
 - ▶ No studies have analyzed how debt or liquidity constraints can affect benefit claiming and receipt.
- ▶ This paper builds on previous literature by examining the **effect of debt on labor supply and Social Security benefit claiming** using data from the Health and Retirement Study and focusing on individuals who are of Social Security eligibility age.



Data

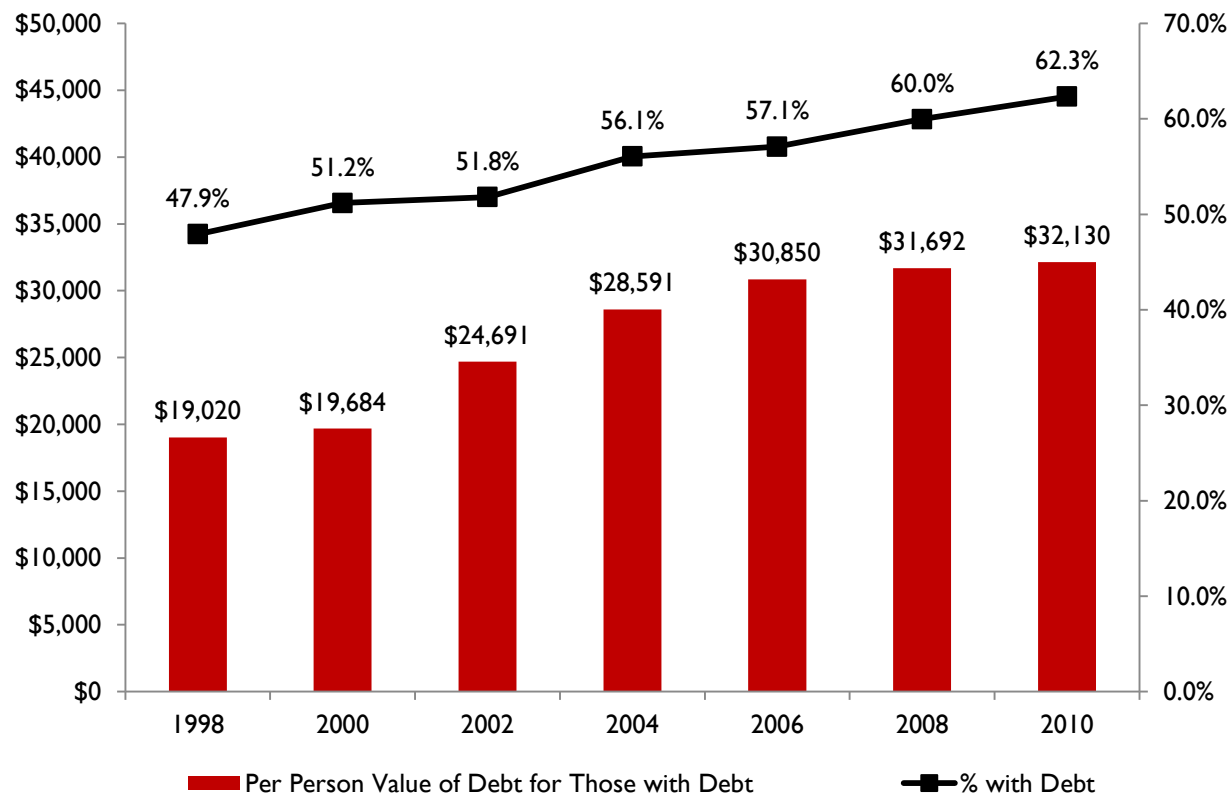
- ▶ Health and Retirement Study (1992-2010)
 - ▶ Sample: non-disabled individuals between the ages of 62 and 69
 - ▶ Credit card information available after 2008

- ▶ Measures of debt/liquidity constraints:
 - ▶ Having debt (dummy)
 - ▶ Level of debt
 - ▶ Debt to Assets ratio; Debt to Other Income Ratio
 - ▶ Categories of debt
 - Any debt
 - Mortgage debt
 - Credit card debt
 - Other debt



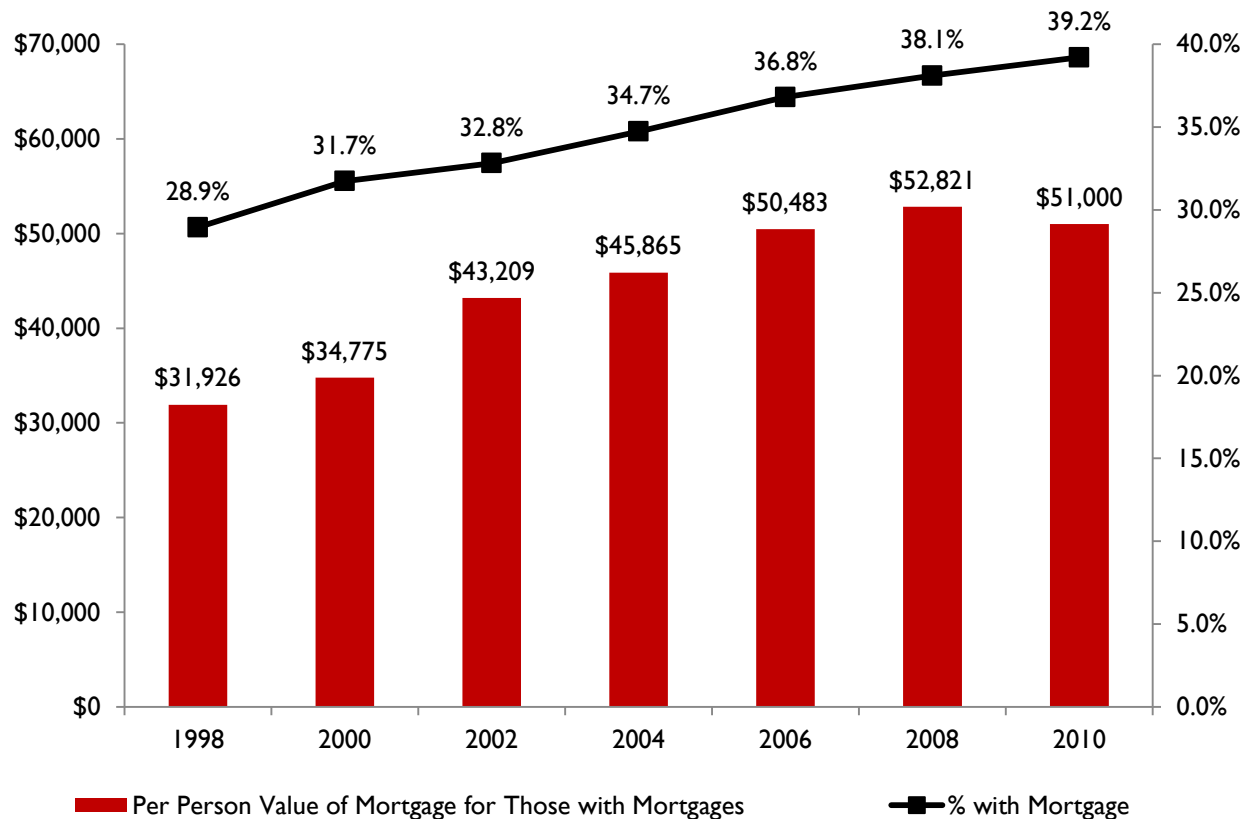
The share of older adults with debt and the value of debt has been increasing over time

► Share of Adults with **Debt** and Median Value of Debt – Ages 62 to 69



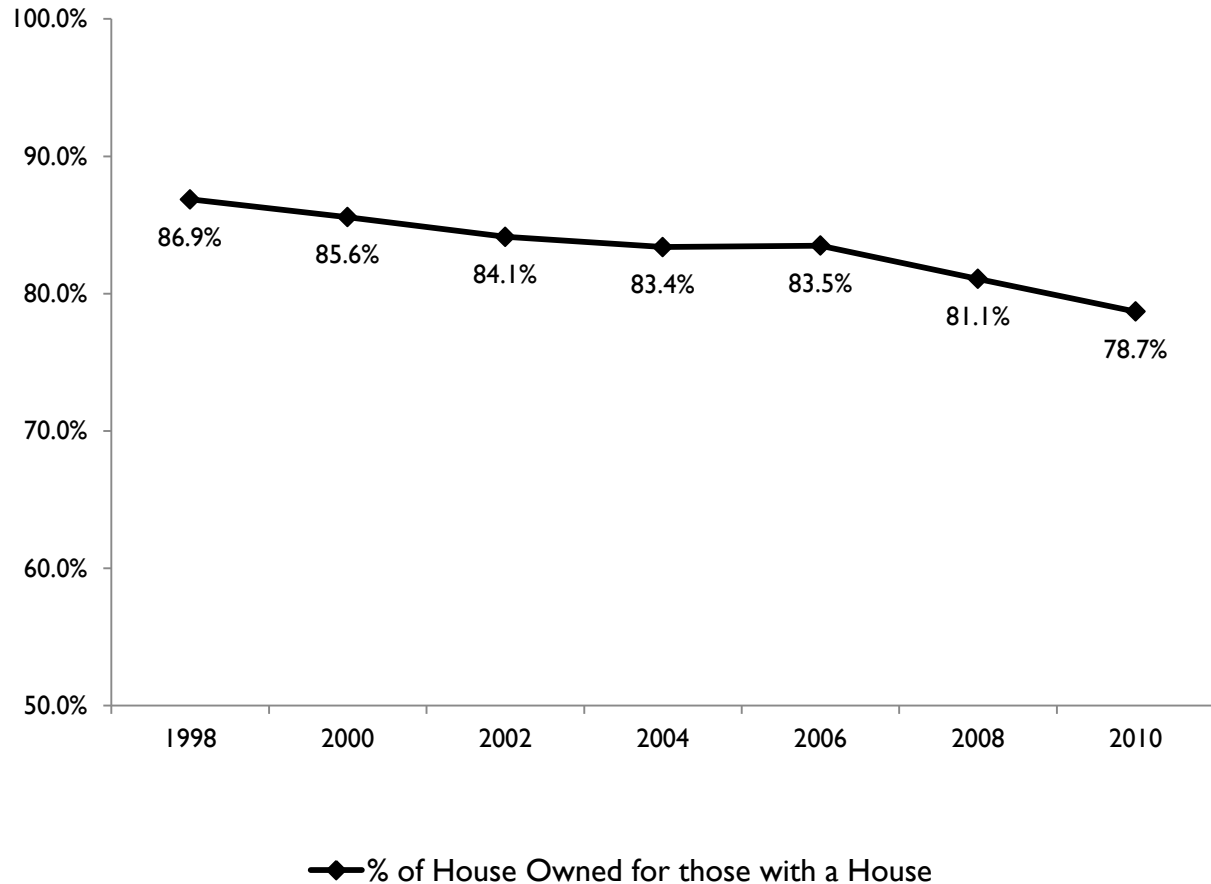
The share of older adults with mortgage debt and the value of debt has also been rising over time

- ▶ Share of Adults with **Mortgage Debt** and Median Value of Mortgage Debt – Ages 62 to 69



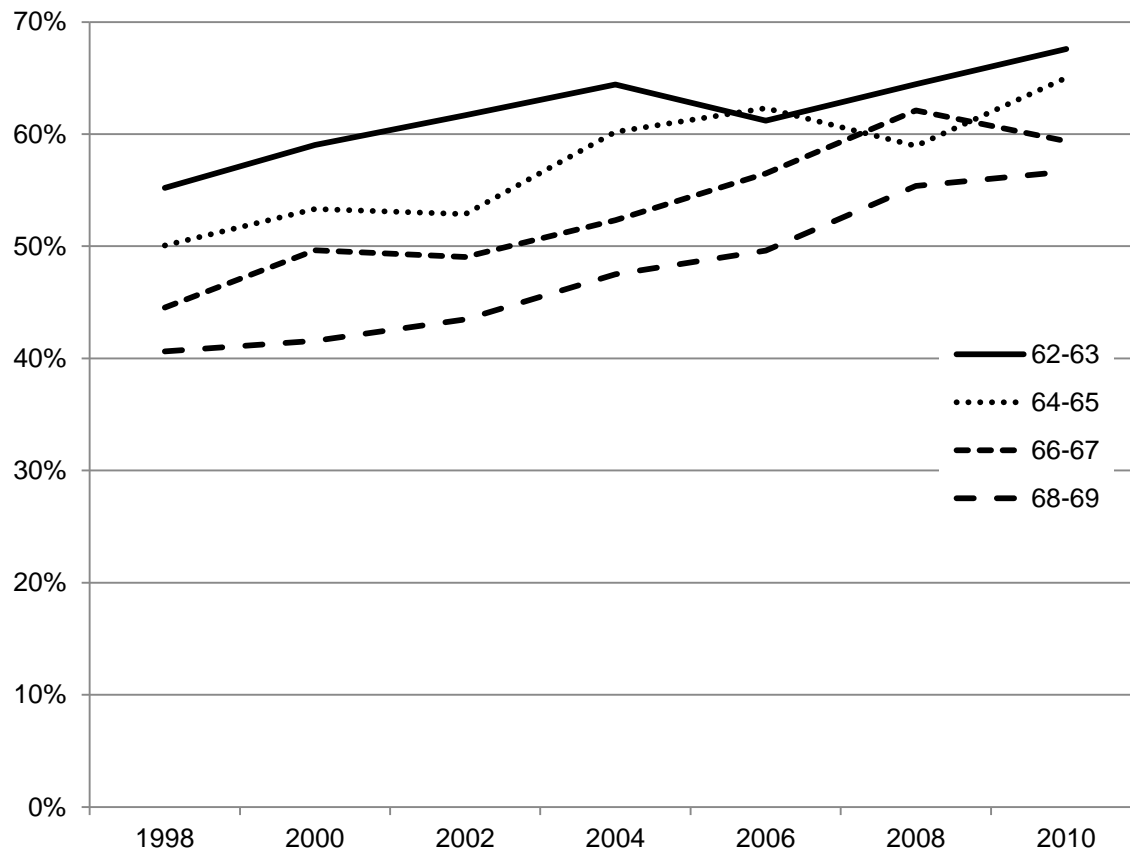
On average older adults own a smaller share of their house in 2010 than they did in 1998

▶ Percent of House Owned for those with a House – Ages 62 to 69



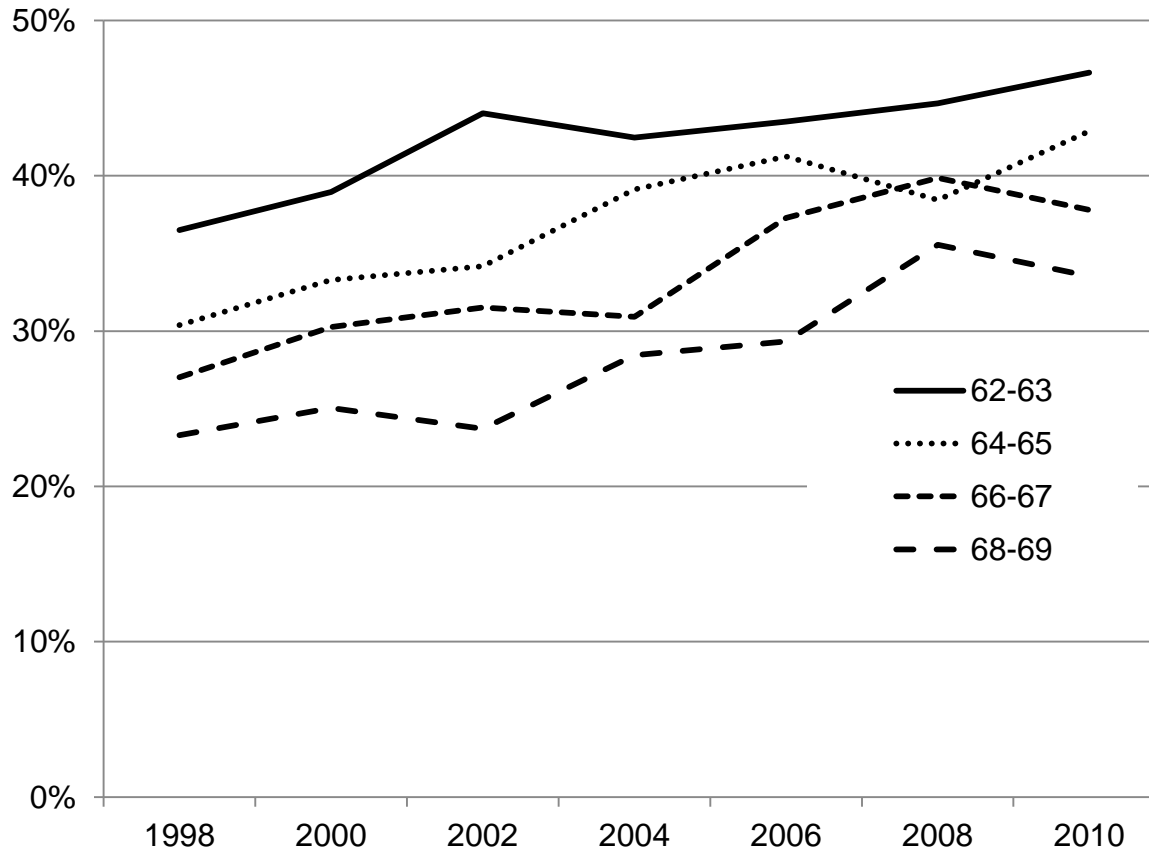
The share of older adults with debt has increased over time for all age groups

▶ Share of Adults with **Debt** by Age Groups



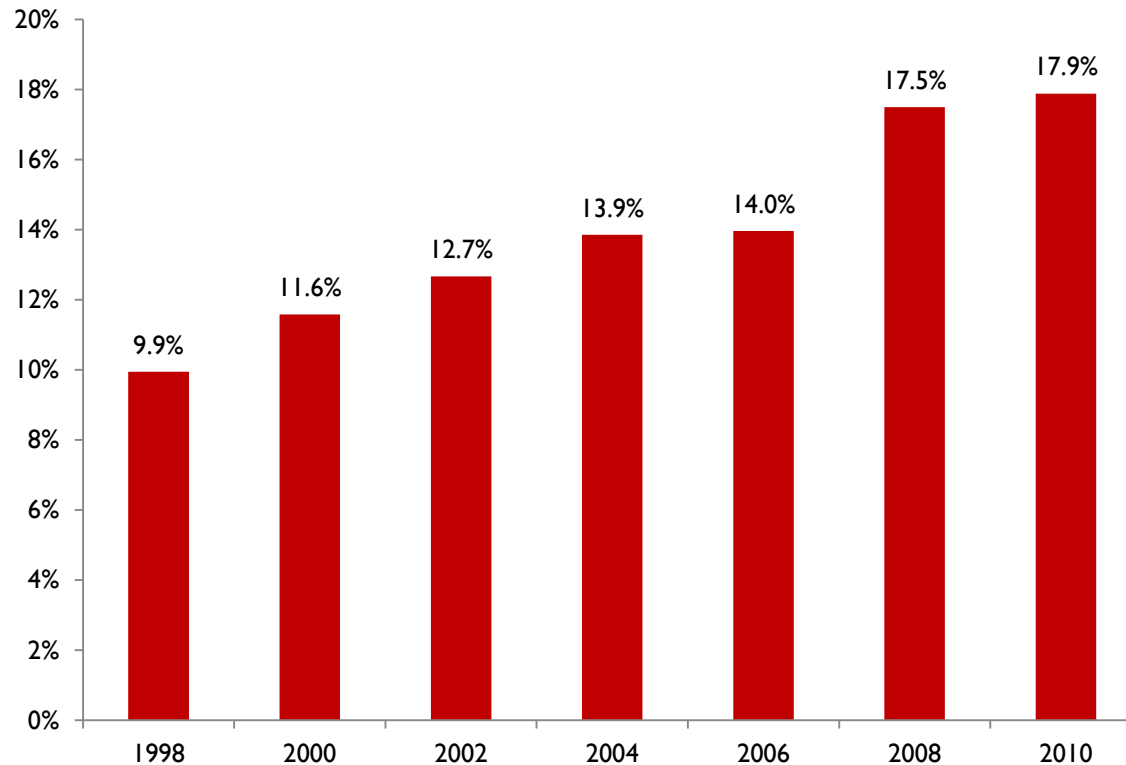
The share with mortgage debt has also risen for all age groups

▶ Share of Adults with **Mortgage Debt** by Age Groups



Older adults are increasingly leveraged

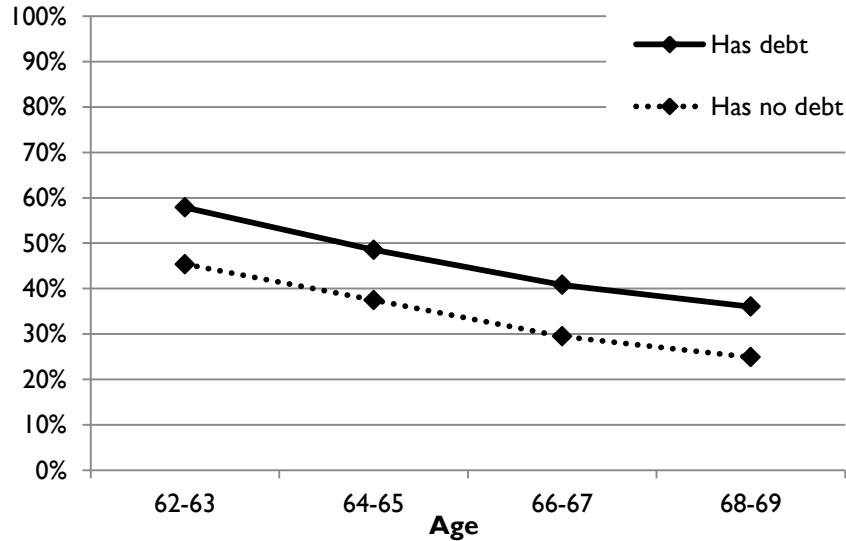
Average Leverage Ratio for Adults 62 to 69, 1998-2010



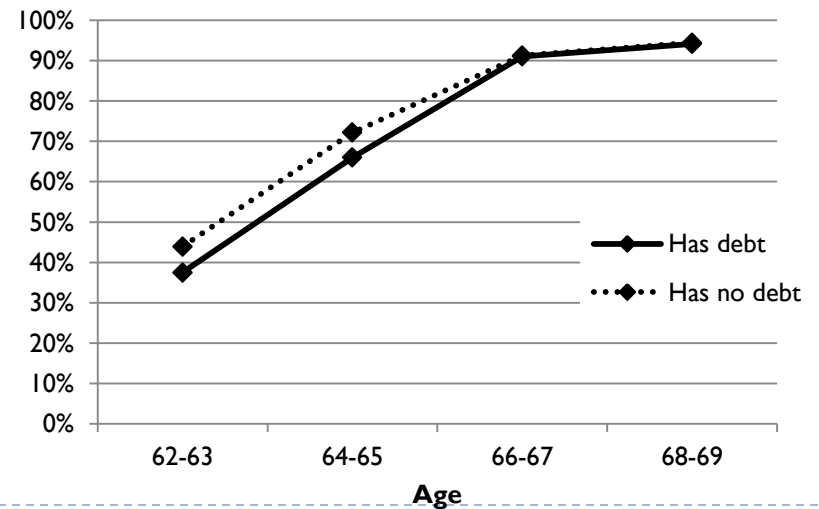
Descriptive Statistics

- ▶ The share of older adults who are working is higher and the share receiving Social Security benefits is lower for those with debt

% of Working Adults, by Age and Having Debt



% of Adults Who Receive Social Security Benefits, by Age and Having Debt



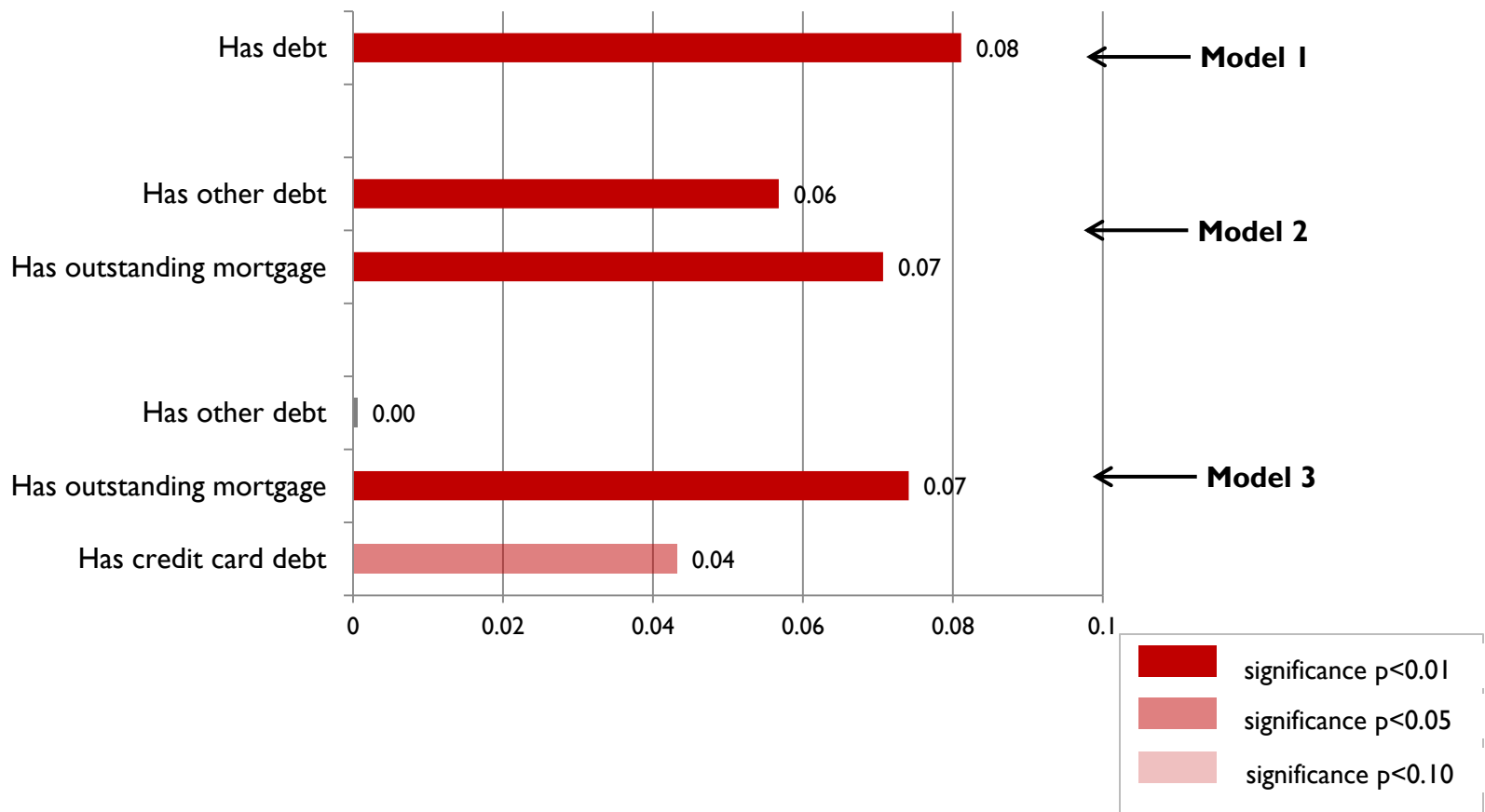
Empirical Strategy

- ▶ Bivariate latent variable models
 - ▶ $y_i^* = X_i\beta + Lc_i\gamma + u_i$
 - ▶ $y_i = 1[y_i^* > 0]$
 - ▶ Outcome variables: 1) work; 2) receive Social Security benefits
- ▶ Survival analysis : *discrete time duration model*
 - ▶ Duration until initial Social Security claiming
 - ▶ Duration until full retirement from the labor force
- ▶ Individual specific effects – random effects probit
 - ▶ $\Pr[y_{it} = 1 | \mathbf{x}_{it}, \beta, \alpha_i] = \Phi(\alpha_i + \mathbf{x}'_{it}\beta)$
- ▶ Correcting for endogeneity
 - ▶ $y_i^* = X_i\beta + Lc_i\gamma + u_i$
 - ▶ $Lc_i^* = X_i\delta + Z_i\theta + \epsilon_i$
- ▶ Other controls: age, demographics, health, spouse's labor supply and benefit receipt, other household income, assets, time dummies.



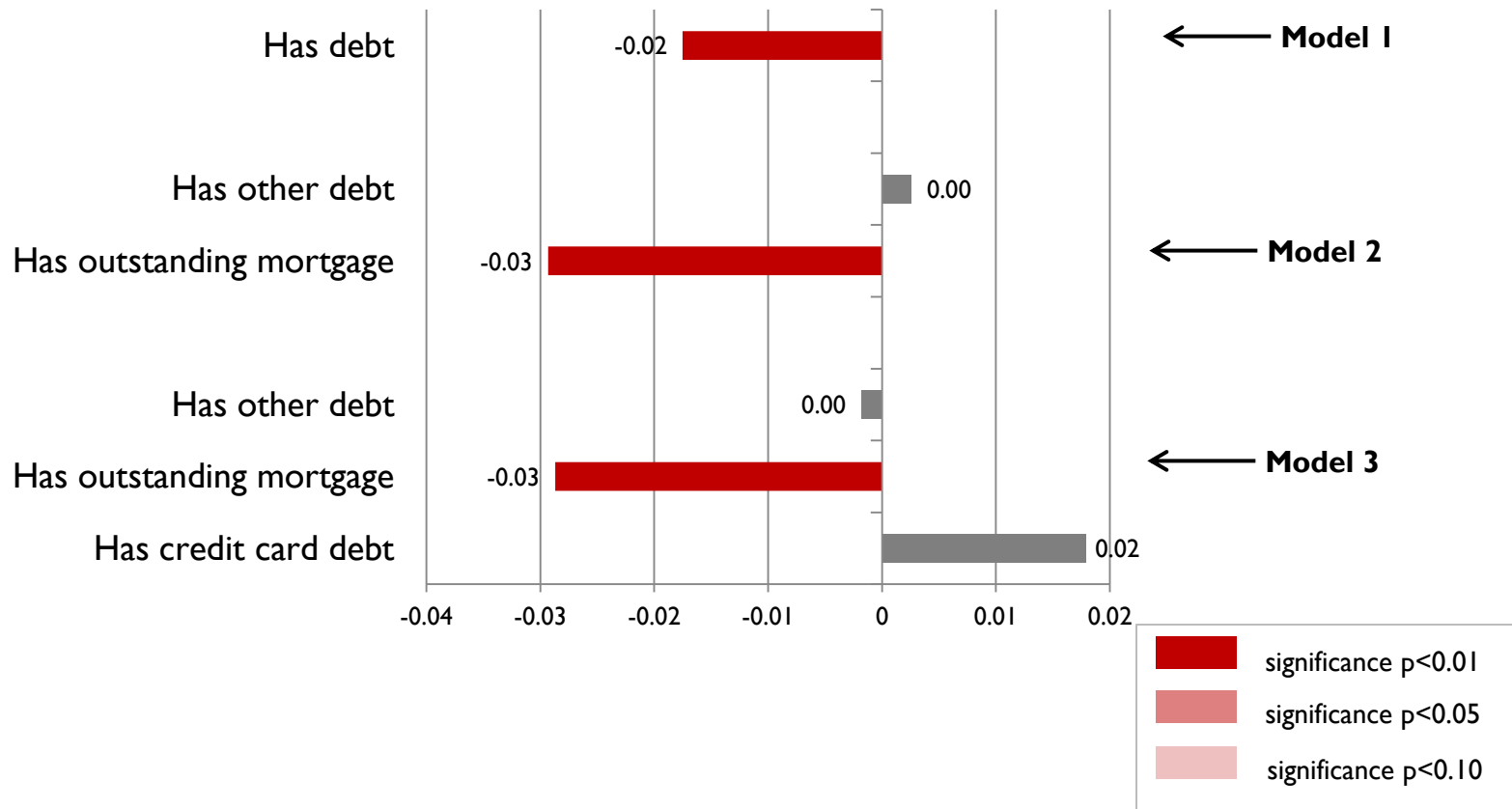
Results: Having debt positively influences the likelihood of working

Bivariate Probit: Marginal Effects of Probability of Working



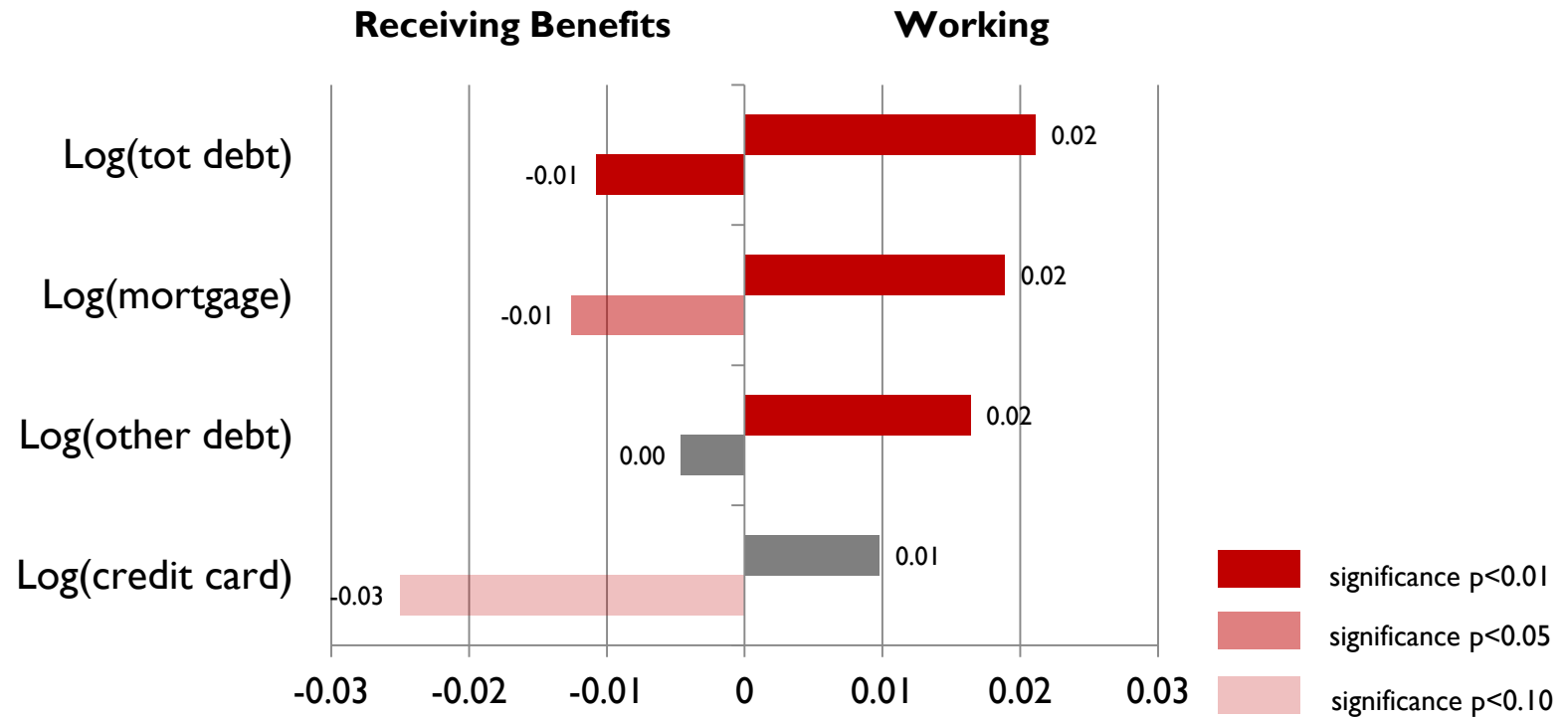
Results: Having debt negatively influences the likelihood of benefit receipt

Bivariate Probit: Marginal Effects of Probability of Benefit Receipt

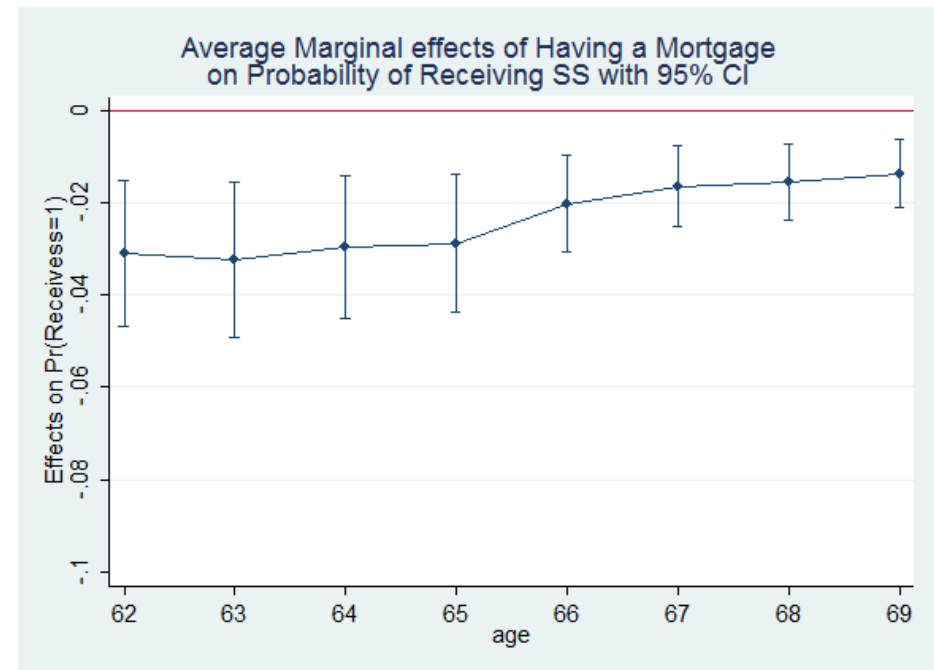
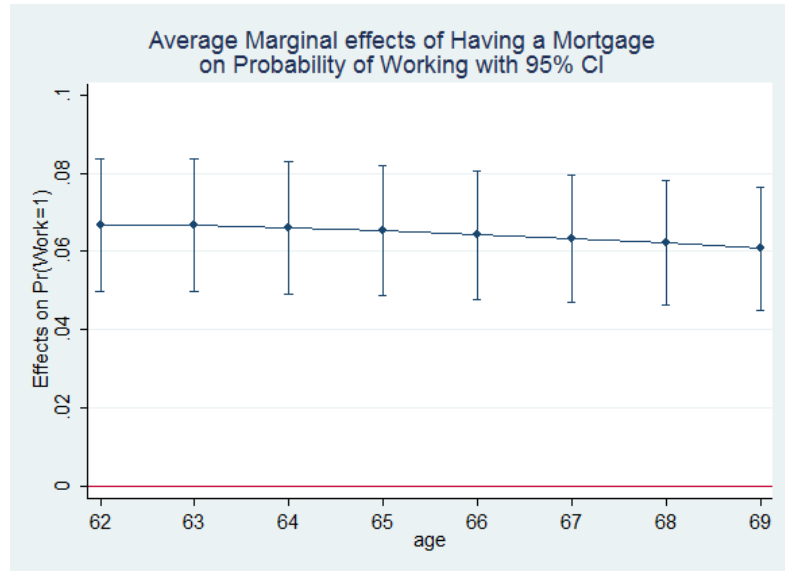


Results: Higher debt reduces the likelihood of receiving benefits and increases the likelihood of working

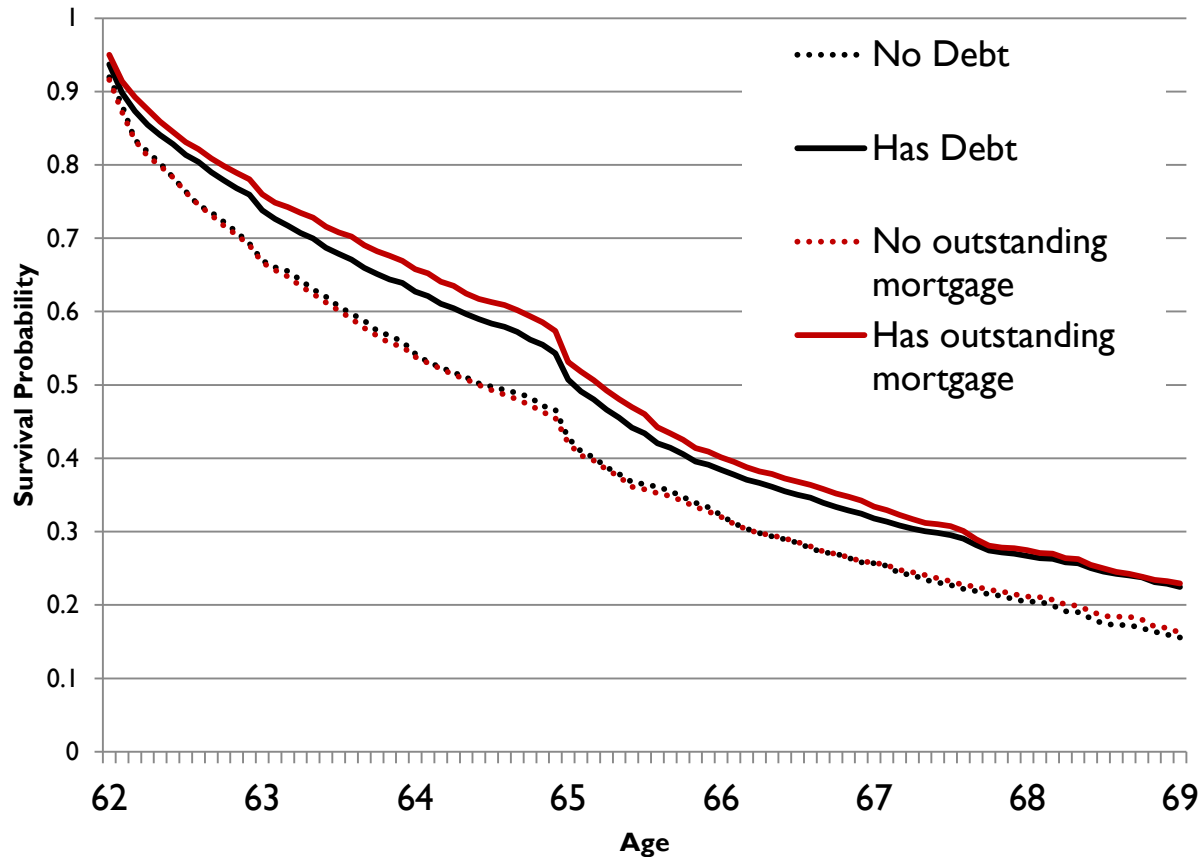
Bivariate Probit: Marginal Effects on Probability of:



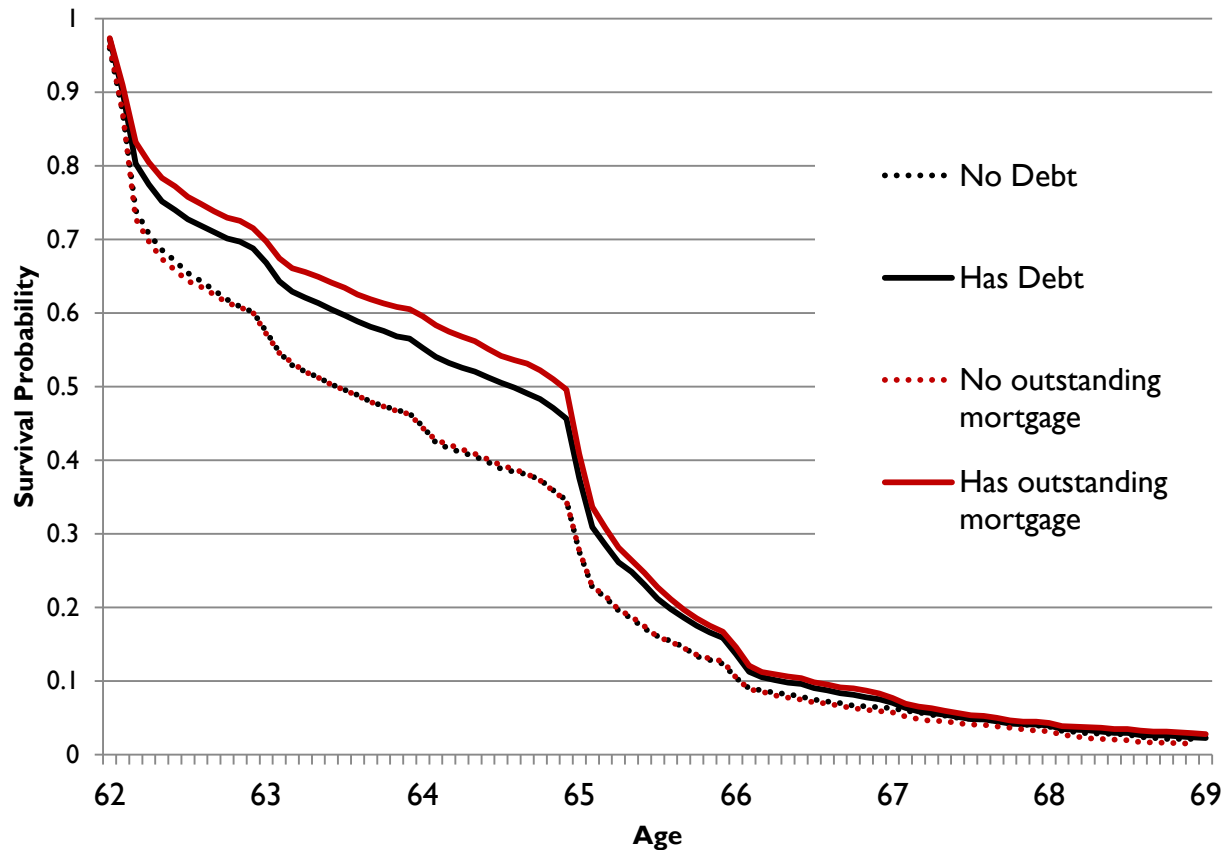
Results: The effect of having a mortgage on benefit claiming weakens after FRA



Duration Analysis Results: Older adults with debt, especially mortgages, are more likely to delay retirement than those without debt (not controlling for other factors)

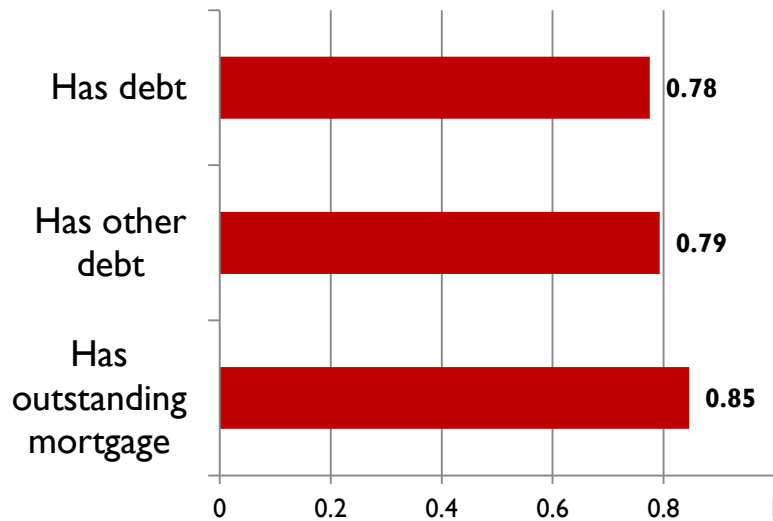


Duration Analysis Results: Those with debt are also less likely to delay claiming benefits than those without debt (not controlling for other factors)

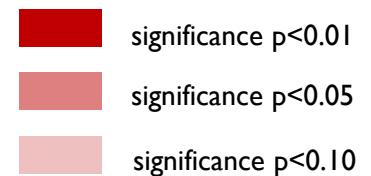
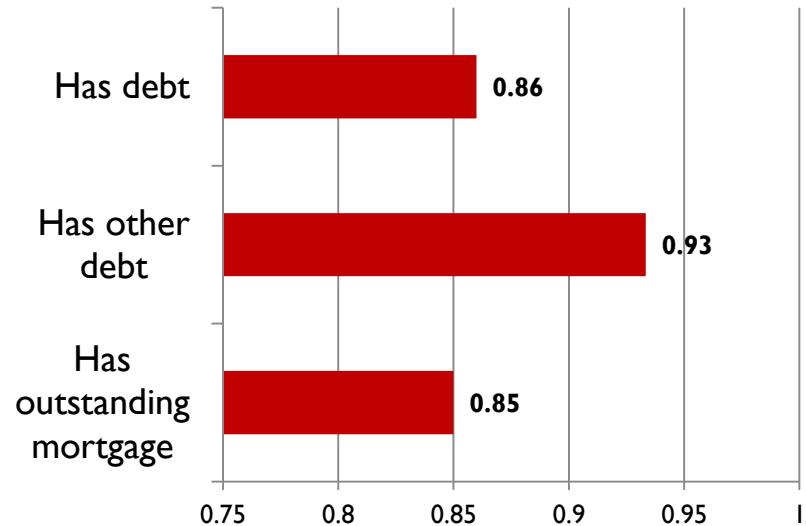


Duration Analysis Results: Controlling for other factors, having debt reduces the odds of retiring by 22 percent and benefit claiming by 14 percent

Full Retirement



Initial Benefit Claiming



Discussion and Conclusion

▶ Conclusion:

- ▶ The incidence as well as the absolute and relative value of debt among older households has been increasing over time
- ▶ Controlling for other factors, having debt is associated with higher propensity to work and lower likelihood of receiving Social Security benefits
- ▶ Older adults with outstanding mortgages, as well as other debt, are more likely to postpone claiming benefits and delay fully retiring from the labor force

▶ Robustness checks:

- ▶ Estimation on the subsample of homeowners reveals similar results
- ▶ No significant differences between men and women, single and partnered, wealth terciles
- ▶ Random effects models show similar, yet stronger in magnitude results
- ▶ No strong evidence for endogeneity of the housing debt measures

- ▶ Extensions, future work: How does indebtedness impact the work and labor supply decisions in the event of a sudden shock (such as job loss, widowhood, health event)?
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