

# How Does Social Security Claiming Respond to Incentives? Considering Husbands' and Wives' Benefits Separately

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The analysis and conclusions set forth are those of the authors and do not indicate concurrence by other members of the research staff or the Board of Governors.

# Introduction

- Individuals must file for Social Security benefits and choose age between 62 and 70 to begin receipt
  - Age of claiming impacts monthly benefit
  - Full Retirement Age (FRA): reference point
  - Actuarial reduction factor and Delayed Retirement Credit (DRC) adjust benefits based on claiming age relative to FRA
- Each individual receives their own benefits, not awarded to household or family

# Motivation

- Most married women's Social Security benefits depend on work history of spouse
  - Spousal benefit
  - Survivor benefit
- Does husbands' claiming behavior reflect this dependence?
  - Husband's claim timing affects her lifetime benefit receipts

# Implications of Financial Literacy

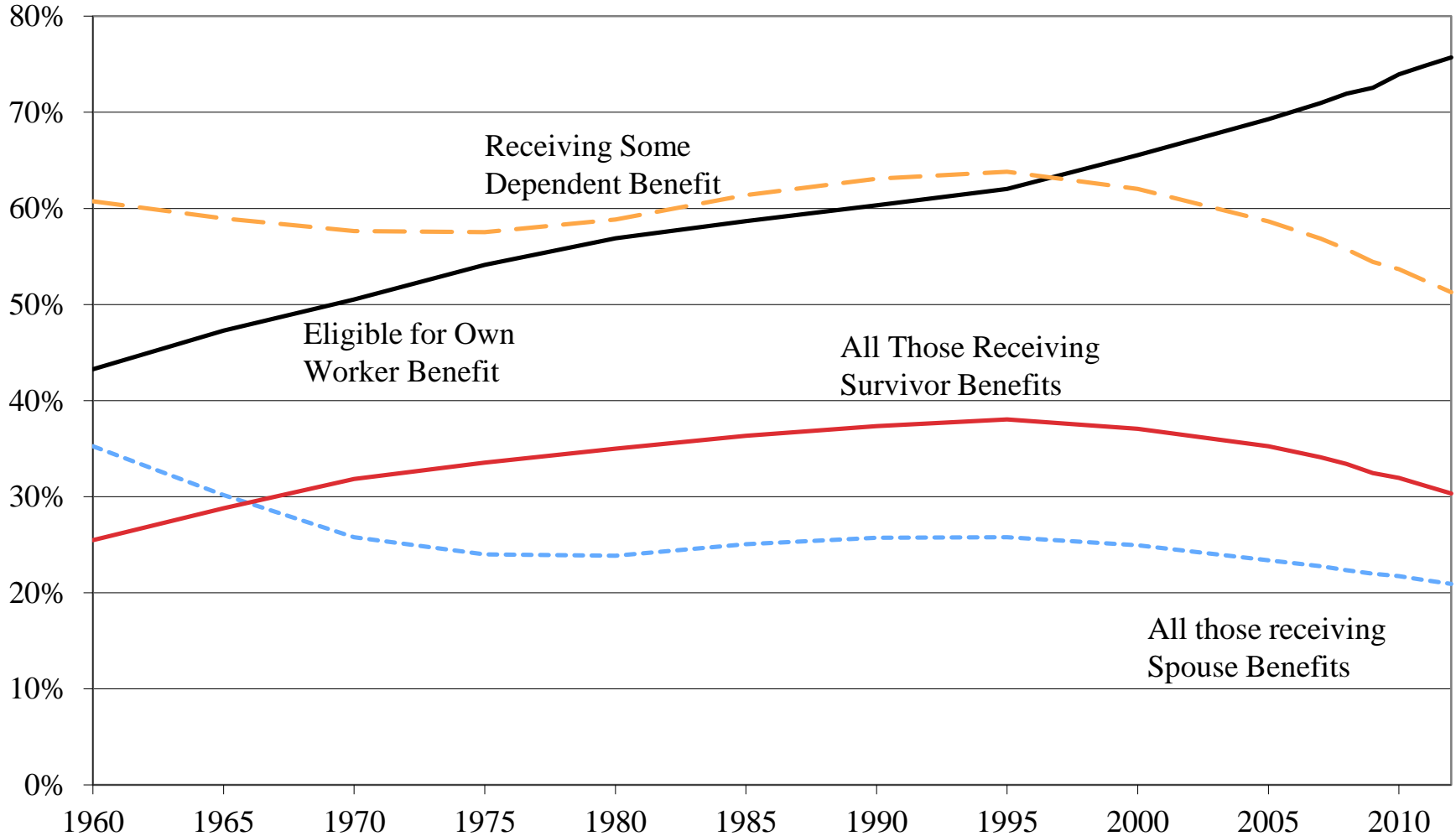
- When to begin receipt of Social Security is a complicated decision facing household
  - Maximizing future stream of payments
  - Evaluate own and spouse's mortality
  - Social Security program rules
- Some information is provided in the Social Security Statement, received in the mail
  - Can also go online to learn more

# Implications of Labor Market Trends

- Women have been working more years and at higher wages than previous cohorts
- How does this translate into SS benefits?
  - Years worked and annual wages are direct inputs to SS benefit calculation
- Almost all spouse & survivor benefits are received by women
- Most married women are still receive one of these benefit types

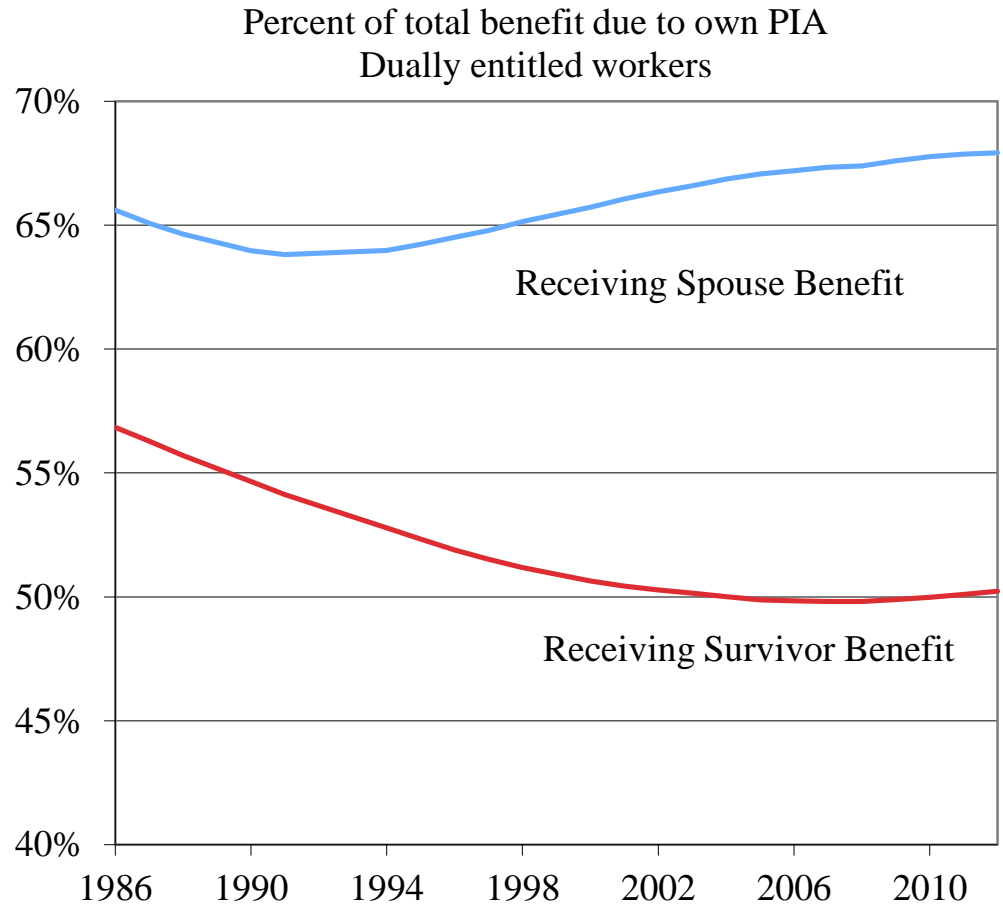
# Women & Social Security

## Current Female Recipients by Benefit Type



# Dual Beneficiaries

- Spousal beneficiaries
  - Own benefit is less than half of husband's benefit
- Survivor beneficiaries
  - Own benefit is less than husband's benefit



Source: Social Security Administration, Annual Statistical Supplement, various years

# Monthly Benefit Example

*Wife Not Eligible for Her Own Benefit*

*Wife Same Age*

*Household Benefits = Husband's Worker + Spouse + Survivor*

Husband's Claim Age	Husband's Monthly Benefit	Spouse Benefit	Maximum Survivor Benefit
62	\$800	\$375	\$825
65	\$1000	\$500	\$1000
68	\$1195	\$500	\$1195



# Research Questions

- What are costs of not maximizing expected lifetime household benefits, who bears cost?
- Does Social Security claiming behavior respond to Social Security financial incentives?
  - If expected lifetime benefits increase when benefit receipt delayed, do men wait?
- Does the response apply equally to incentives from all types of Social Security benefits?

# Summary of Findings

1. Wives bear the cost resulting from their husbands' choice of claiming age.
2. Claiming behavior of men responds little to changes in household lifetime benefits
3. Claiming decision of men responds most strongly to own benefit incentives
4. Some evidence that those in better health are more responsive to own incentives
5. Importance of joint leisure may be muting response to incentives

# Outline

- Background
- Data
- Costs of not Maximizing Social Security Benefits
- Regression Analysis
- Extensions and Robustness checks
- Looking to the Future

# What Do We Know About Claiming?

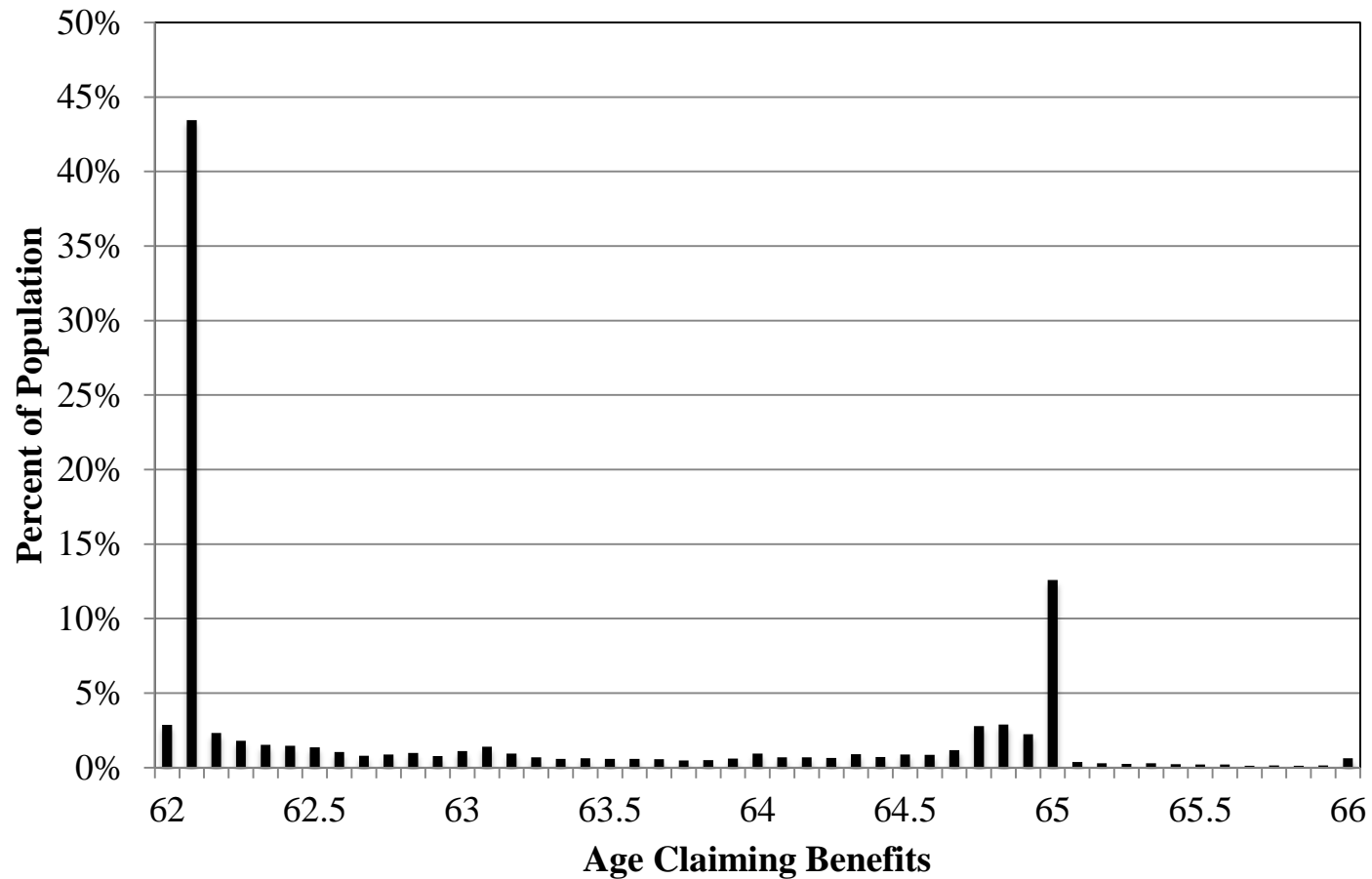
- Claiming appears to be consistent with weak response to financial incentives (Coile et al, 2002)
- Claiming is weakly related to expected longevity (Hurd et al, 2004; Delavande et al, 2006)
- Those with more education claim later (Sass et al, 2007)
- Role of information (Mastrobuoni, 2009)
- Behavioral explanation (Behaghel & Blau, 2012)

# Data

- Synthetic Survey of Income and Program Participation (SSB)
  - Subset of variables from 1990s SIPP panels
  - Merged with:
    - Summary Earnings Records and Details Earnings Records from the IRS
    - Master Beneficiary Record from the Social Security Administration (through 2002)
  - Imputation due to missing values
- Key Variables
  - Birth date, earnings history, marital history, link to spouse, benefit type & claiming date

# Empirical Claiming Distribution

- Most men claim at either 62 or 65



# Monthly Benefit Calculation

- Progressive formula applied to lifetime average earnings measure (AIME) to create Primary Insurance Amount (PIA)
- If claim benefits before or after FRA, then monthly benefits receive actuarial adjustment
- Wife cannot claim spouse benefits until husband claims his own worker benefits
- PIA ratio =  $\frac{\textit{Wife's PIA}}{\textit{Husband's PIA}}$

# Lifetime Benefit Calculation

- Social Security Wealth ( $SSW_a$ )

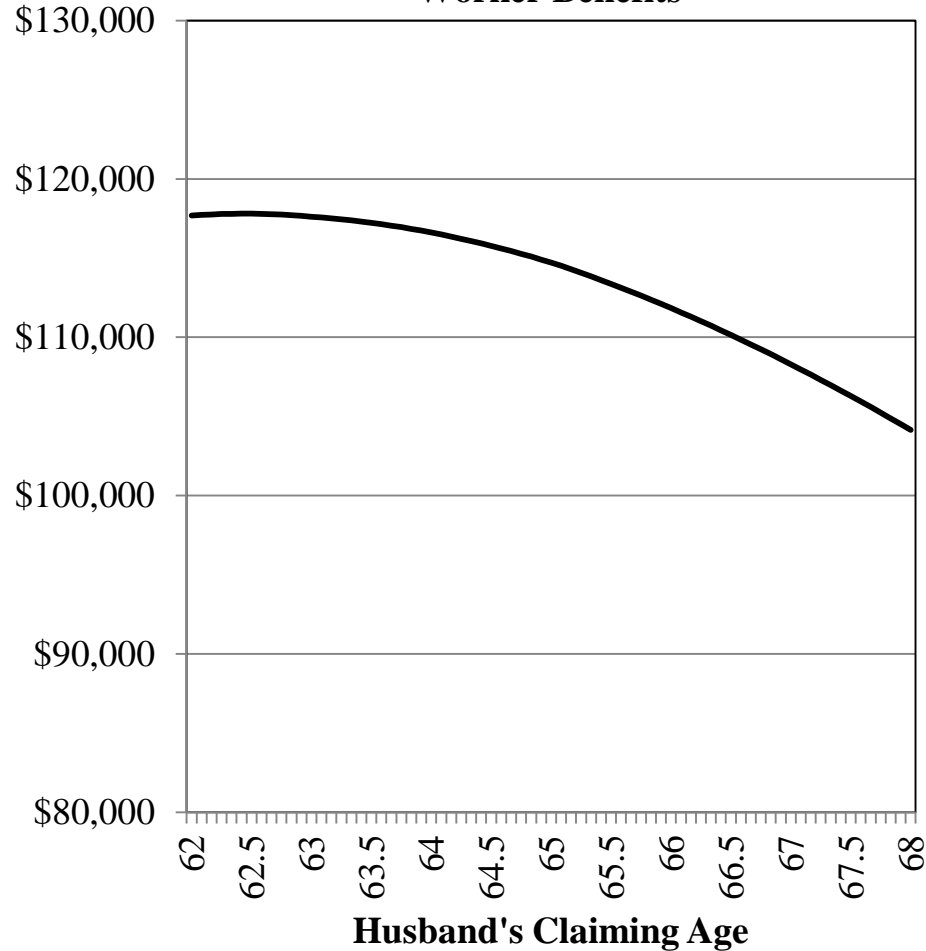
$$= \sum_{t=62}^T \delta^t \{Adj_{ha} * Ben_{hi} * h_t + Adj_{wa} * Ben_{wi} * w_t\}$$

- $h_t$  and  $w_t$  are survival probabilities at  $t$
- $Ben_{hi}$  is the husband's PIA
- $Ben_{wi}$  is a combination of her retired worker benefits, spouse and survivor benefits
- Assume wife claims as early as possible
- Mortality prospects are adjusted by race and education (Brown et al, 2006)

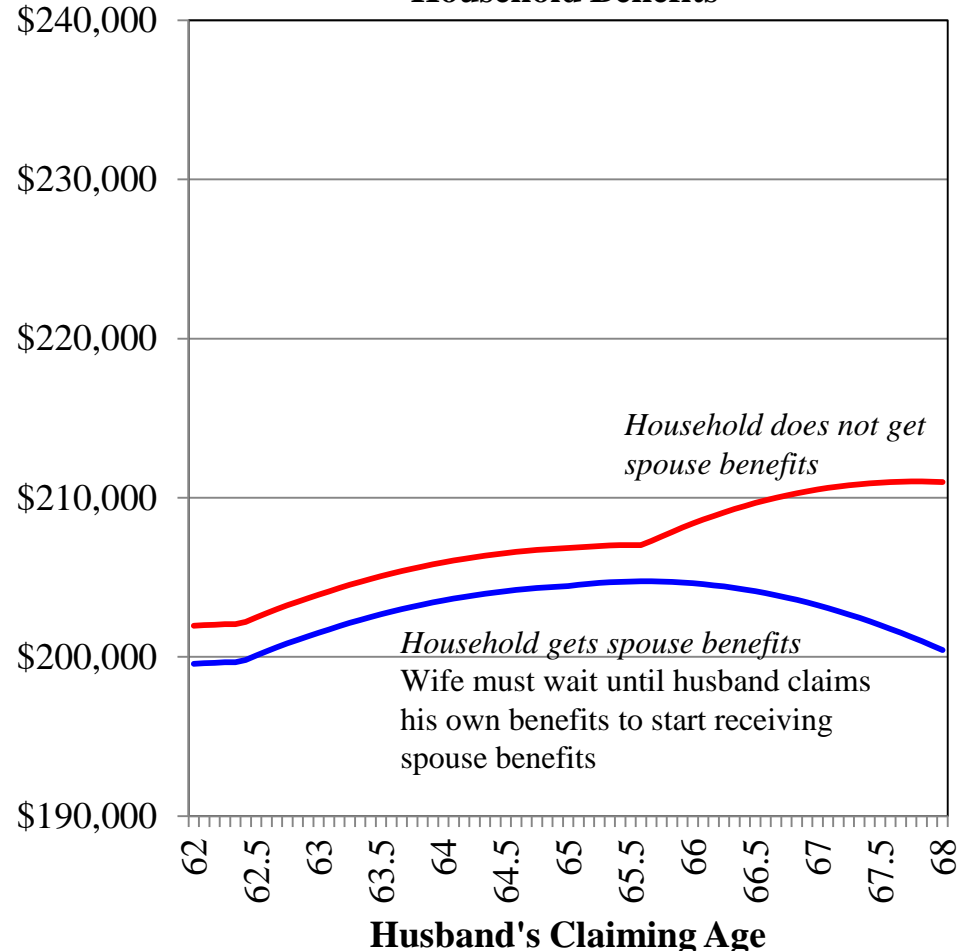


# Household Social Security Wealth

### Worker Benefits



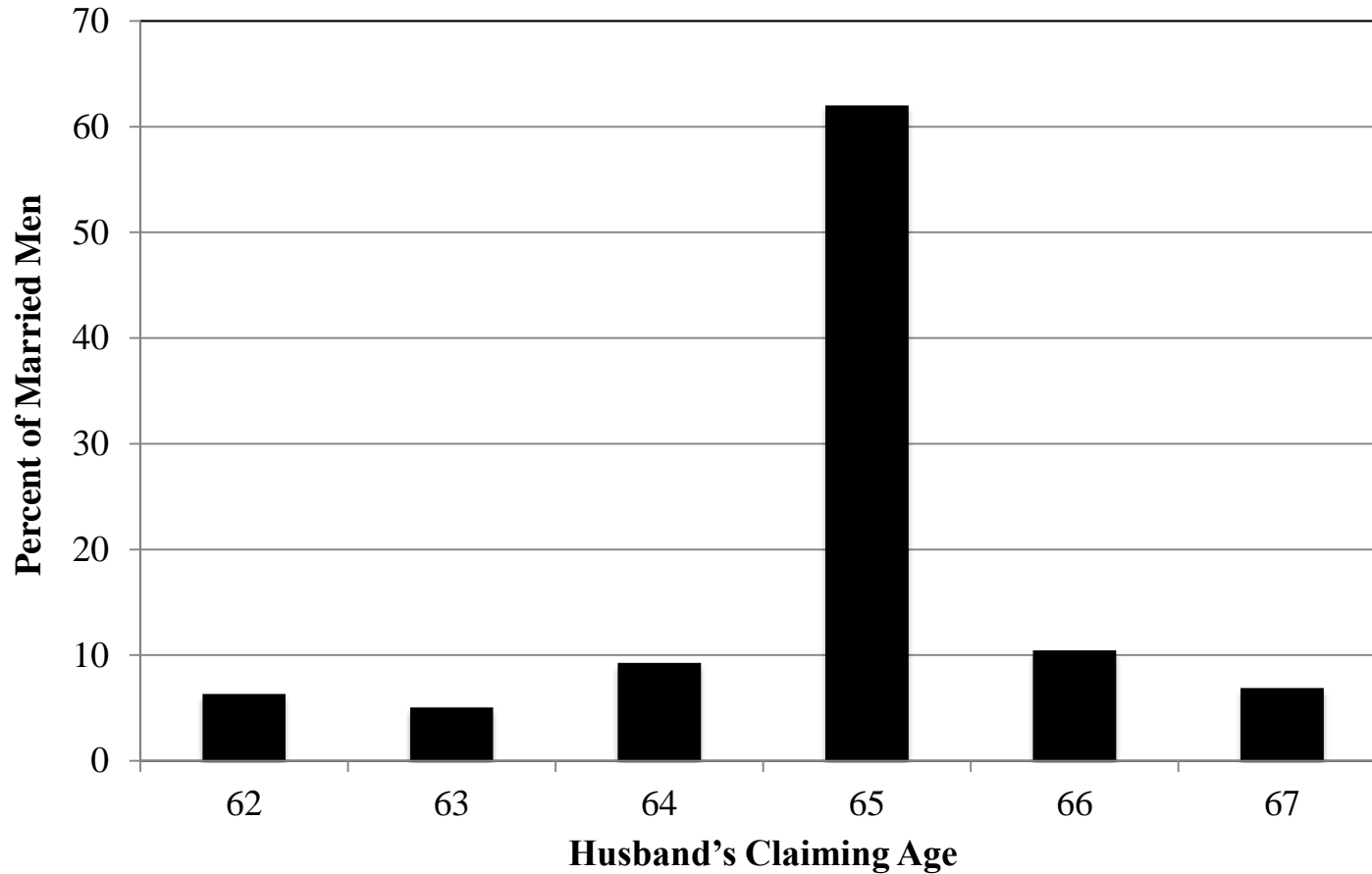
### Household Benefits



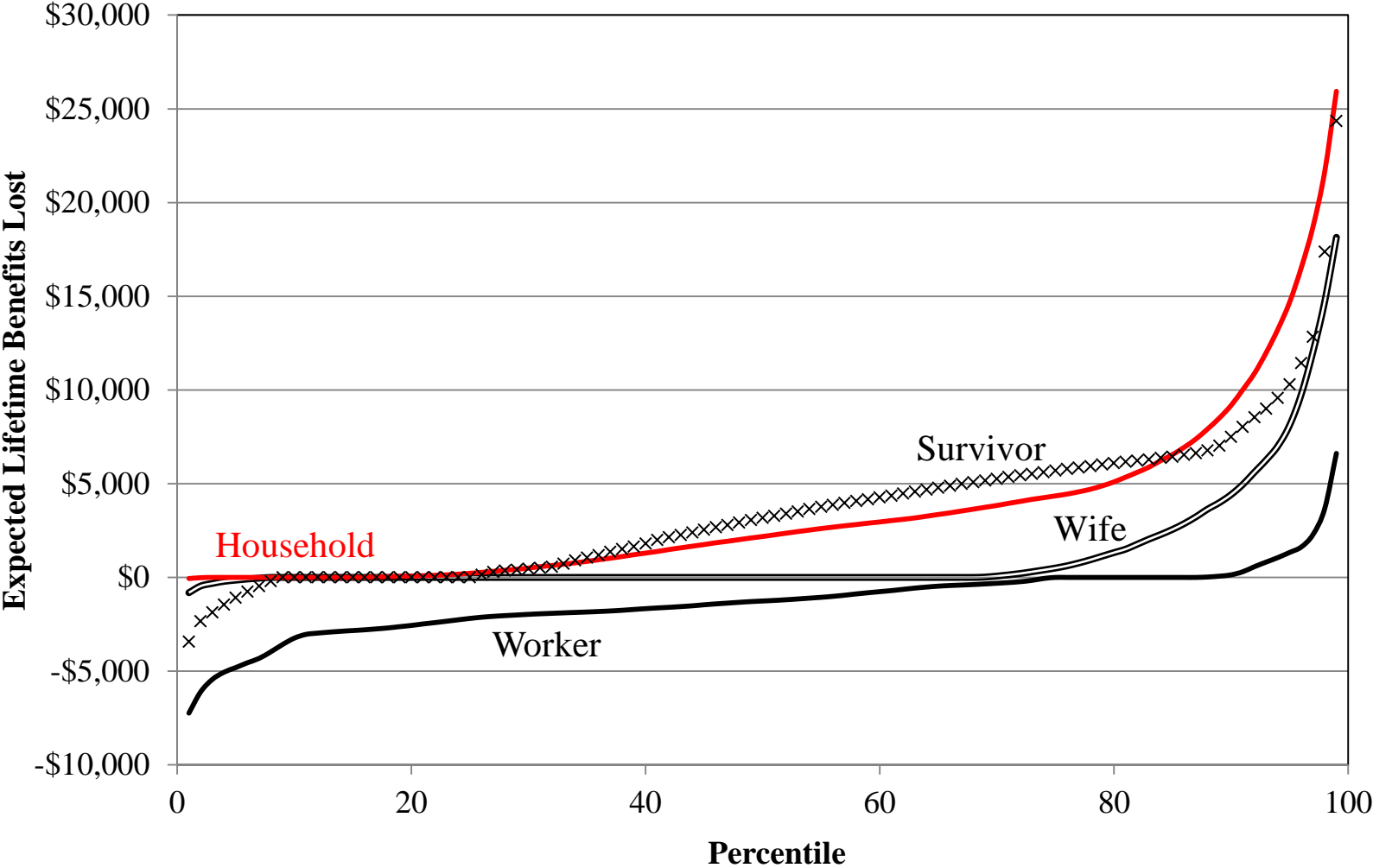
Notes: Wife 3 Years Younger than Husband  
 Normal retirement age = 65  
 Delayed Retirement Credit = 6.5%

— PIA ratio = 0      — PIA ratio = 0.5

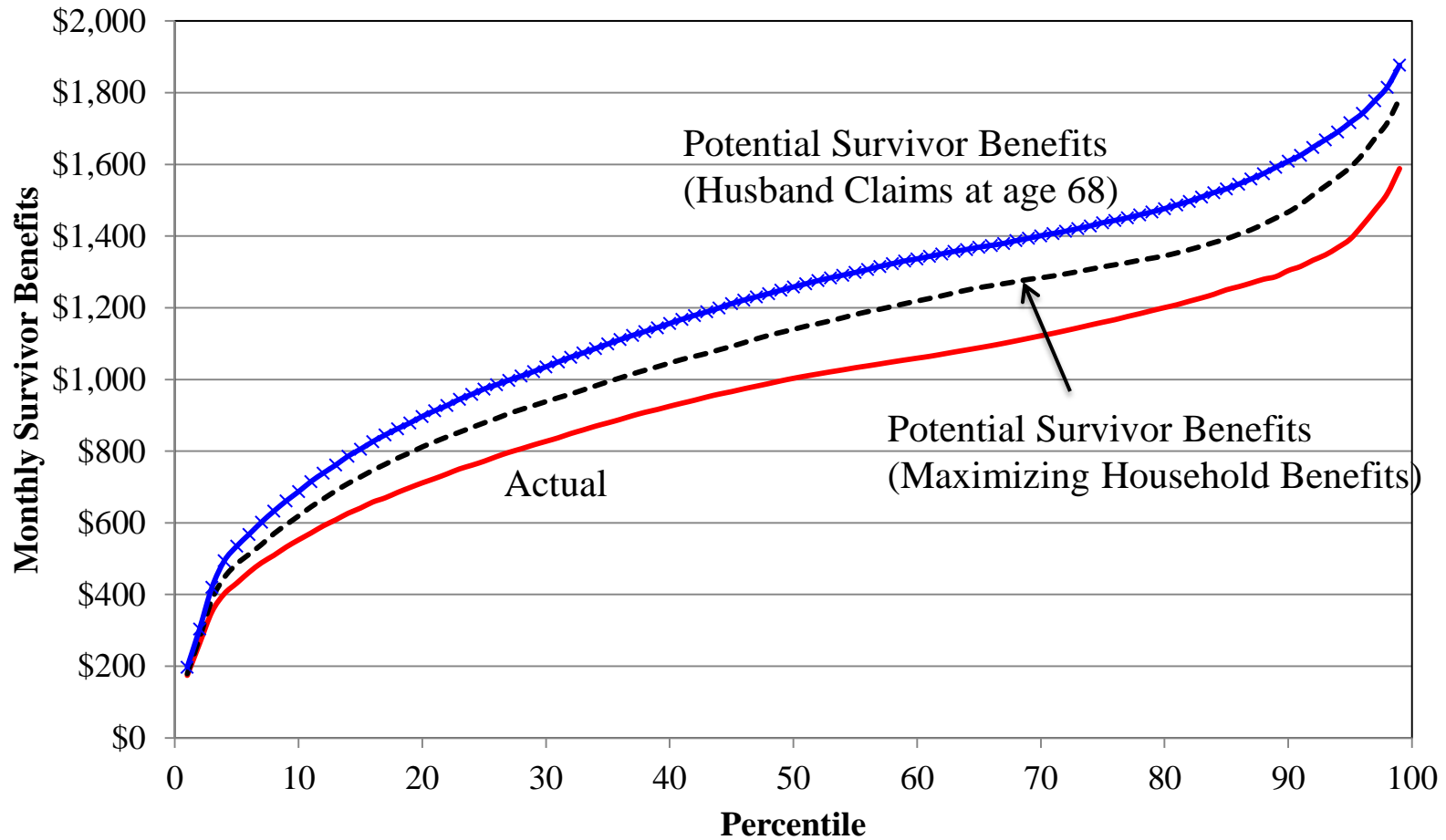
# Distribution of SSW Maximizing Claiming Age



# “Money Left on Table” Benefits Lost Not Maximizing SSW



# Implications for Widows



# Empirical Approach

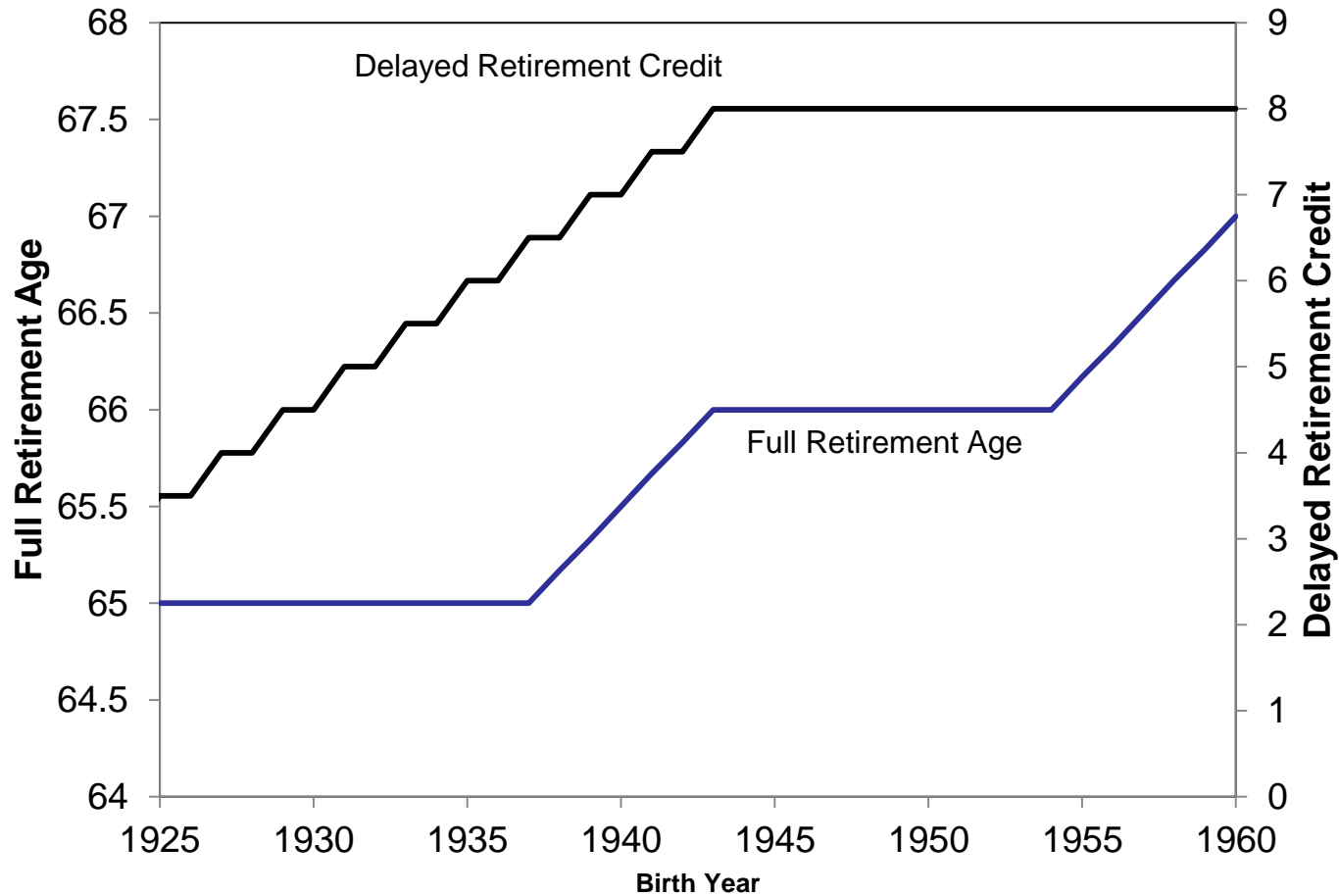
$$Pr(Claim_{it}) = \alpha + \beta Accrual_{it} + \gamma X_{it} + g(Z_{it}) + \varepsilon_{it}$$

- $Accrual_{it} = SSW_{it+1} - SSW_{it}$ 
  - Measures the gain to delaying claiming by one year
- $X_{it}$  are control variables which impact claiming decision separate from financial incentives
- $Z_{it}$  are variables that enter the control function
- Observations at the person-age level
- Variables changing over time are the financial incentives, age and year

# Identification (Sources of Variation)

- Control function (Coile and Gruber, 2007 and Leibman et al, 2009) approach to retirement
  - Flexible function of earnings to control for heterogeneity in retirement and claiming correlated with earnings history
  - Most variation in household incentives results from individuals being “eligible” for different types of benefits (spouse or survivor).
- Two types of benefit changes in Social Security
  - Increase in delayed retirement credit (DRC)
  - Increase in full retirement age (FRA)

# Changes to FRA and DRC



Source: [http://www.socialsecurity.gov/OACT/ProgData/ar\\_drc.html](http://www.socialsecurity.gov/OACT/ProgData/ar_drc.html)

# Results - Base Model

## Model Specification

	(1)	(2)	(3)
Accrual- Household	<b>-0.0022***</b> (0.0007)		<b>0.0004</b> (0.0010)
Accrual- Worker		<b>-0.0337***</b> (0.0022)	<b>-0.0339***</b> (0.0019)
Accrual -Wife		<b>0.0003</b> (0.0013)	
Accrual - Survivor		<b>0.0012</b> (0.0008)	
# Observations		27,042	
# Individuals		13,753	

(\*\*\*) Significant at 1% level    (\*\*) Significant at 5% level    (\*) Significant at 10% level  
ACC in \$1000s of dollars

Note: Control variables in each model are age dummies, education, interactions of quartics of AIME and potential earnings, own and spouse earnings starting at age 30, experience and its square, years since retirement (if retired), presence of work limiting disability, presence of DB/DC pension, net household wealth up to its cubic, and log(SSW), log(Worker Benefits), log(Spouse Benefits) and log(Survivor benefits) up to cubics.



# Potential Explanation I: Health

- Those who are in poor health would claim early for two reasons.
  - (1) They want to exit labor force ASAP and want claim benefits as soon as eligible
  - (2) Experience actuarial unfairness w.r.t. SS benefits. They *should* claim early to max benefits
- Those in poorer health could be expected to be less responsive to calculated financial incentives
- I use whether an individual survives until at least age 75 as a proxy for health.

# Results - Health

## Model Specification

	Those living until 75			
	(1)	(2)	(3)	(4)
Accrual - Household	<b>-0.0020</b>		<b>-0.00001</b>	
*Death after age 75	<b>-0.0036</b>		<b>-.0024*</b>	
Accrual - Worker		<b>-0.0206***</b>	<b>-0.0205</b>	<b>-0.0244***</b>
*Death after age 75		<b>-0.0011</b>	<b>0.0002</b>	
Accrual - Spouse		<b>0.0011</b>		<b>0.0014</b>
*Death after age 75		<b>-0.0027</b>		
Accrual - Survivor		<b>-0.0005</b>		<b>-0.0015</b>
*Death after age 75		<b>-0.0014</b>		
Death after age 75	<b>0.0100</b>	<b>0.0045</b>	<b>0.0057</b>	n/a
Spouse's death after age 75	<b>0.0043</b>	<b>-0.0010</b>	<b>-0.0009</b>	<b>0.0025</b>
# Observations		30,159		10,511
# Individuals		14,644		3,867

(\*\*\*) Significant at 1% level

(\*\*) Significant at 5% level

(\*) Significant at 10% level

# Potential Explanation II: Information

- Likely differences in knowledge about Social Security, those with information may drive full response. Overall estimates combine those that understand benefits and those that don't.
- If it were purely an informational story, we would expect those with more education to be more responsive.
- More educated could respond less to incentives if Social Security is a smaller part of income
  - Mastrobuoni (2009)
  - Chan and Stevens (2008)

# Results - Education

	(1)	(2)	(3)	(4)
Sample	Full	Full	Full	College Graduates
Accrual – Household	<b>-0.0025</b>		<b>-0.0015</b>	
*College	<b>0.0024**</b>		<b>0.0025*</b>	
Accrual – Worker		<b>-0.0374***</b>	<b>-0.0372***</b>	<b>-0.0138***</b>
*College		<b>0.0062***</b>	<b>0.0050***</b>	
Accrual – Wife		<b>-0.0017</b>		<b>0.0017</b>
*College		<b>0.0048**</b>		
Accrual – Survivor		<b>0.0008</b>		<b>0.0004</b>
*College		<b>0.0013</b>		
College	<b>-0.3525***</b>	<b>-0.3406***</b>	<b>-0.3424***</b>	n/a
# Observations		27,042		11,630
# Individuals		13,753		3,858

(\*\*\*) Significant at 1% level

(\*\*) Significant at 5% level

(\*) Significant at 10% level

# Potential Explanation III: Joint Leisure

- The retirement literature has found husbands are more responsive to wives' labor force status and her incentives to continue working
- Those using an alternate rule may be less responsive to their own incentives
- Look at the impact of wives' retirement status
- Consider three states:
  - Wives with no SS benefits of own
  - Wives with stronger work history, not in LF
  - Wives with stronger work history, in LF

# Results - Joint Leisure

	(1)	(2)	(3)
Accrual – Household	<b>-0.0030</b>		<b>0.0008</b>
*Wife Strong LF, Exited LF	<b>0.0045**</b>		<b>-0.0022</b>
*Wife Strong LF, Still Working	<b>0.0015</b>		<b>0.0014</b>
Accrual – Worker		<b>-0.0279***</b>	<b>-0.0283***</b>
*Wife Strong LF, Exited LF		<b>0.0193***</b>	<b>0.0197***</b>
*Wife Strong LF, Still Working		<b>-0.0004</b>	<b>-0.0004</b>
Accrual – Wife Benefits		<b>-0.0012</b>	
*Wife Strong LF, Exited LF		<b>-0.0007</b>	
*Wife Strong LF, Still Working		<b>0.0017</b>	
Accrual – Survivor		<b>0.0025</b>	
*Wife Strong LF, Exited LF		<b>-0.0014</b>	
*Wife Strong LF, Still Working		<b>0.0007</b>	
Wife Strong LF, Exited LF	<b>-0.0259</b>	<b>-0.0163</b>	<b>-0.0185</b>
Wife Strong LF, Still Working	<b>-0.0117</b>	<b>-0.0162</b>	<b>-0.0176</b>
# Observations		22,770	
# Individuals		11,274	

# Conclusions

- Wives bear the majority of costs associated with not optimizing SSW
- Married men respond to different types of benefits differently.
- Weak evidence that health impacts response to incentives.
- Education correlated with claiming delay, but less responsive to incentives.
- Joint leisure muting response to financial incentives

# Policy implications

1. Obvious policy prescription is disconnect husband's choice from wife's outcome
2. How big of an issue will this dependence be in the future? (see next slides)

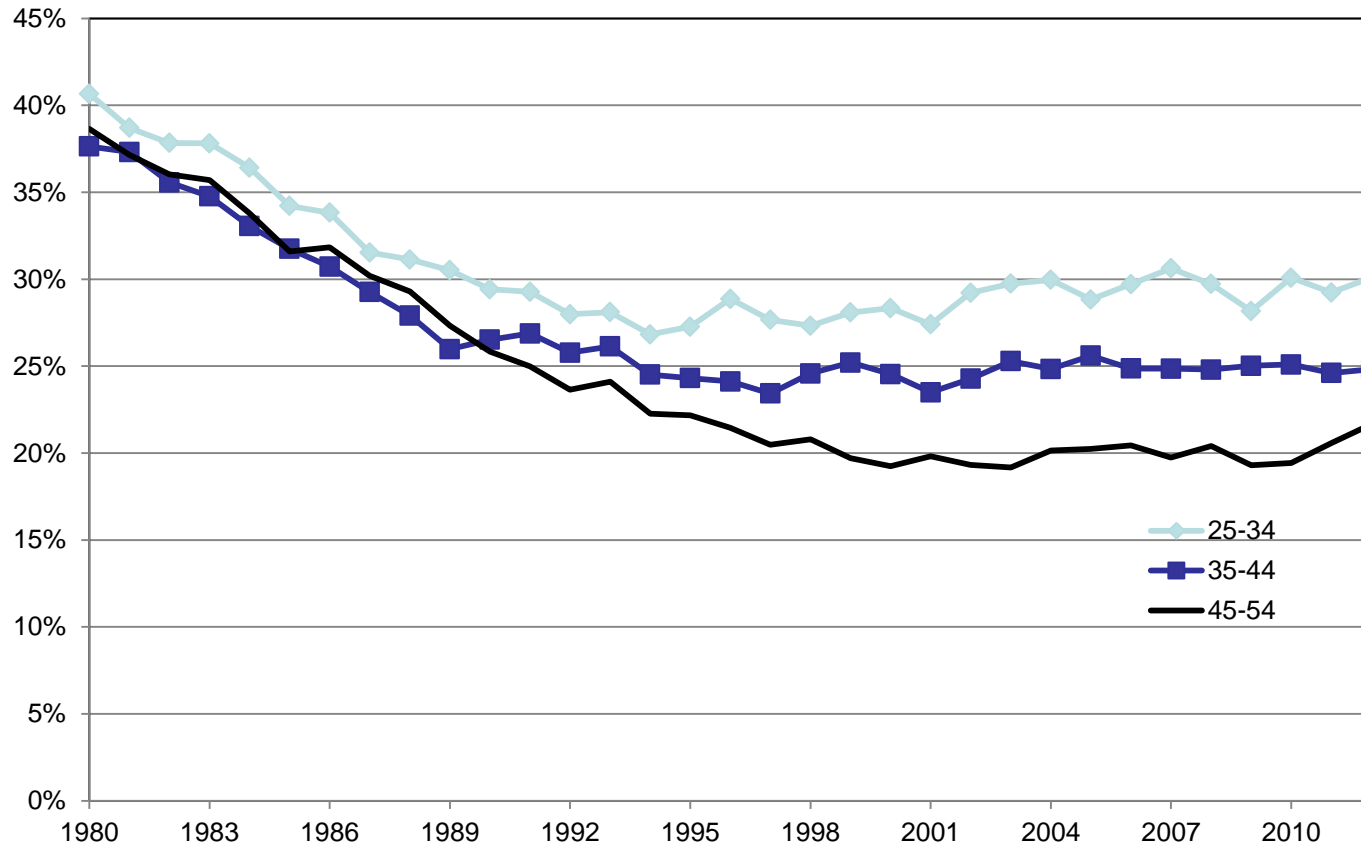


# Impact of Rule Changes

- Delayed claiming (increasing penalties for early claiming and increasing rewards for delayed claiming)
  - We have already seen a delay in retirement due to changes in the rules
  - Those most ‘at risk’ likely still affected
  - Behaghel & Blau, 2012

# Labor Force Trends

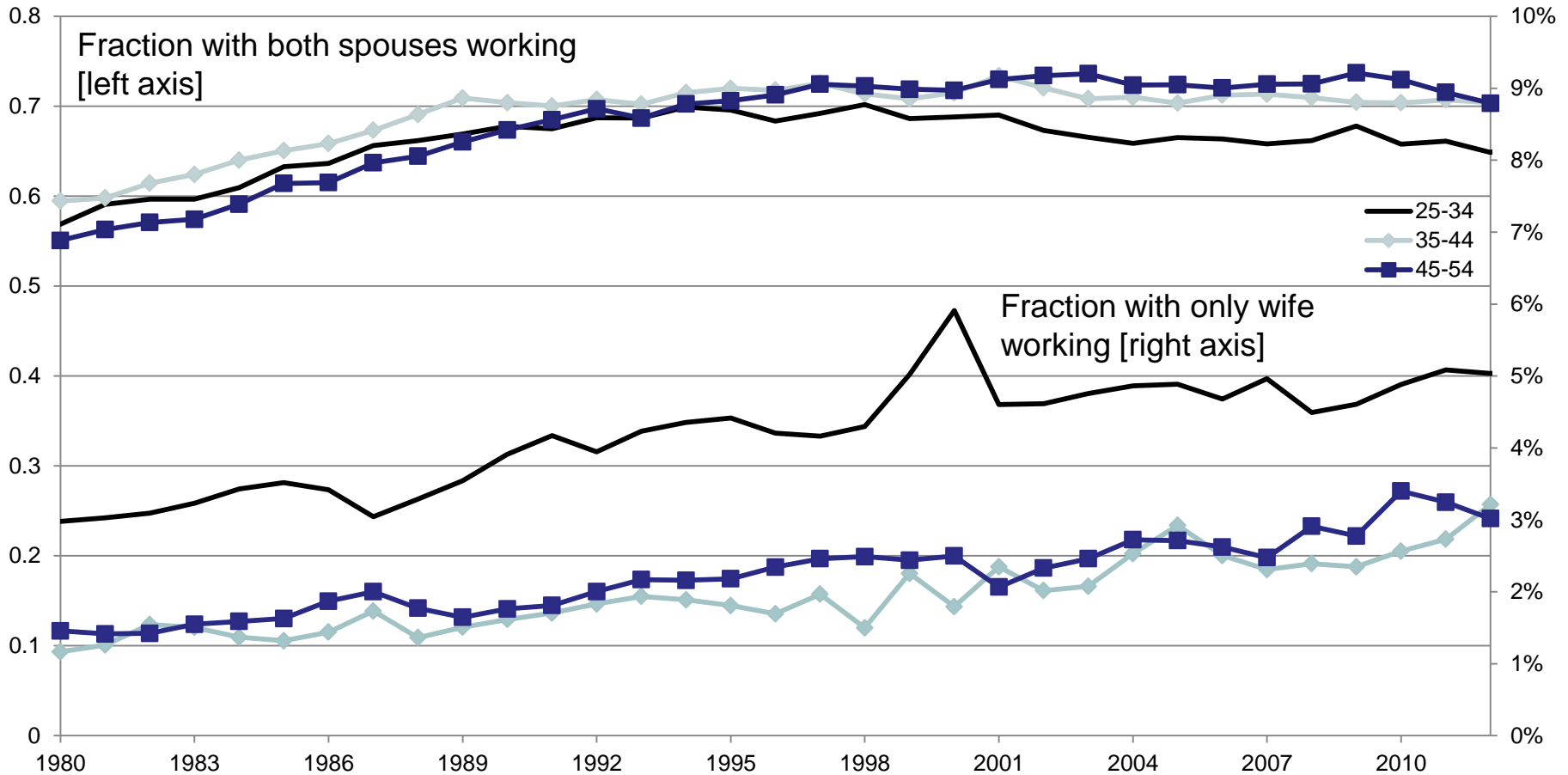
- Fraction of married couples where only the husband is working



Source: Annual Social and Economic Supplement, Current Population Survey

# Labor Force Trends

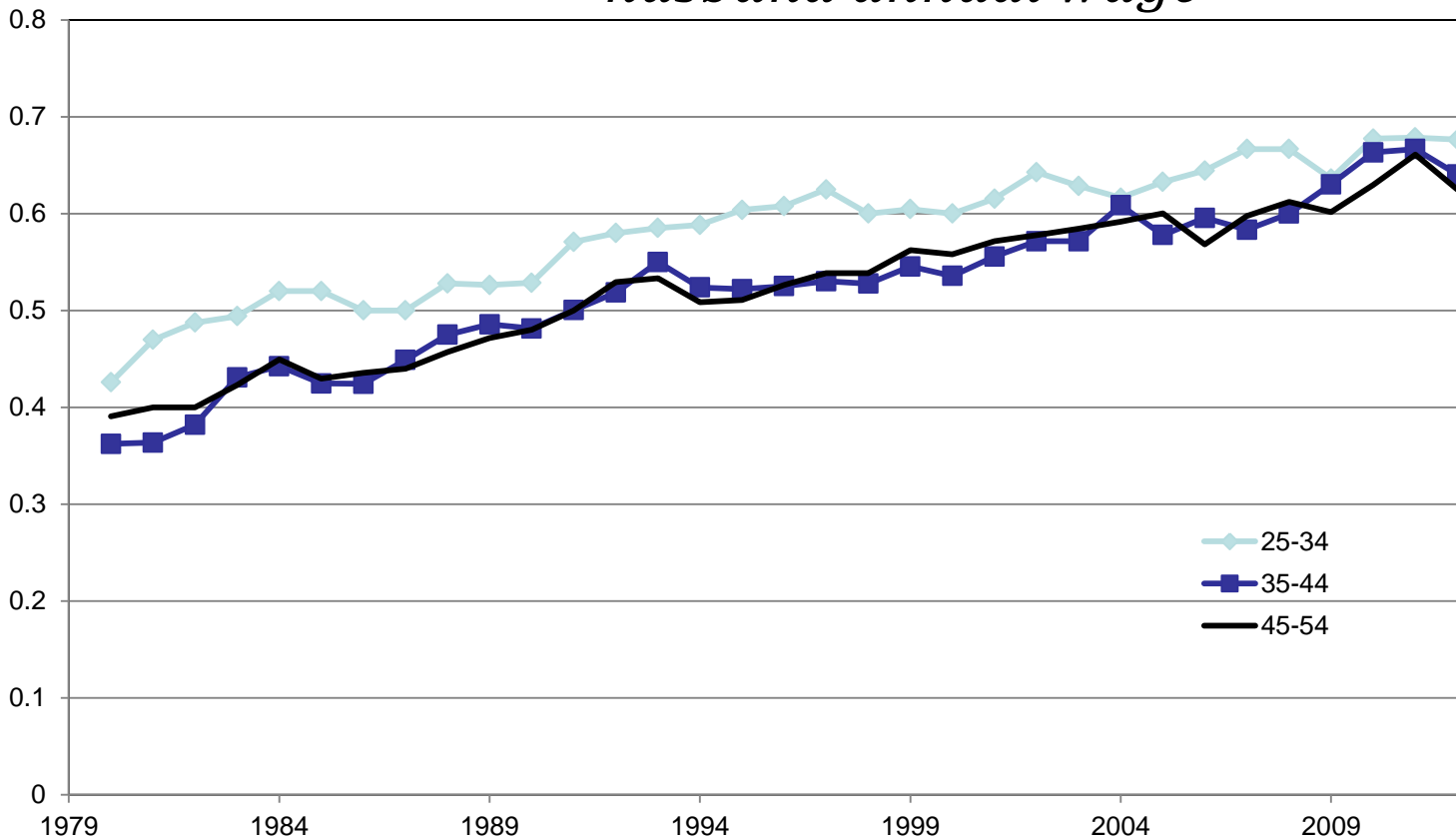
- Couples where the wife is working



Source: Annual Social and Economic Supplement, Current Population Survey

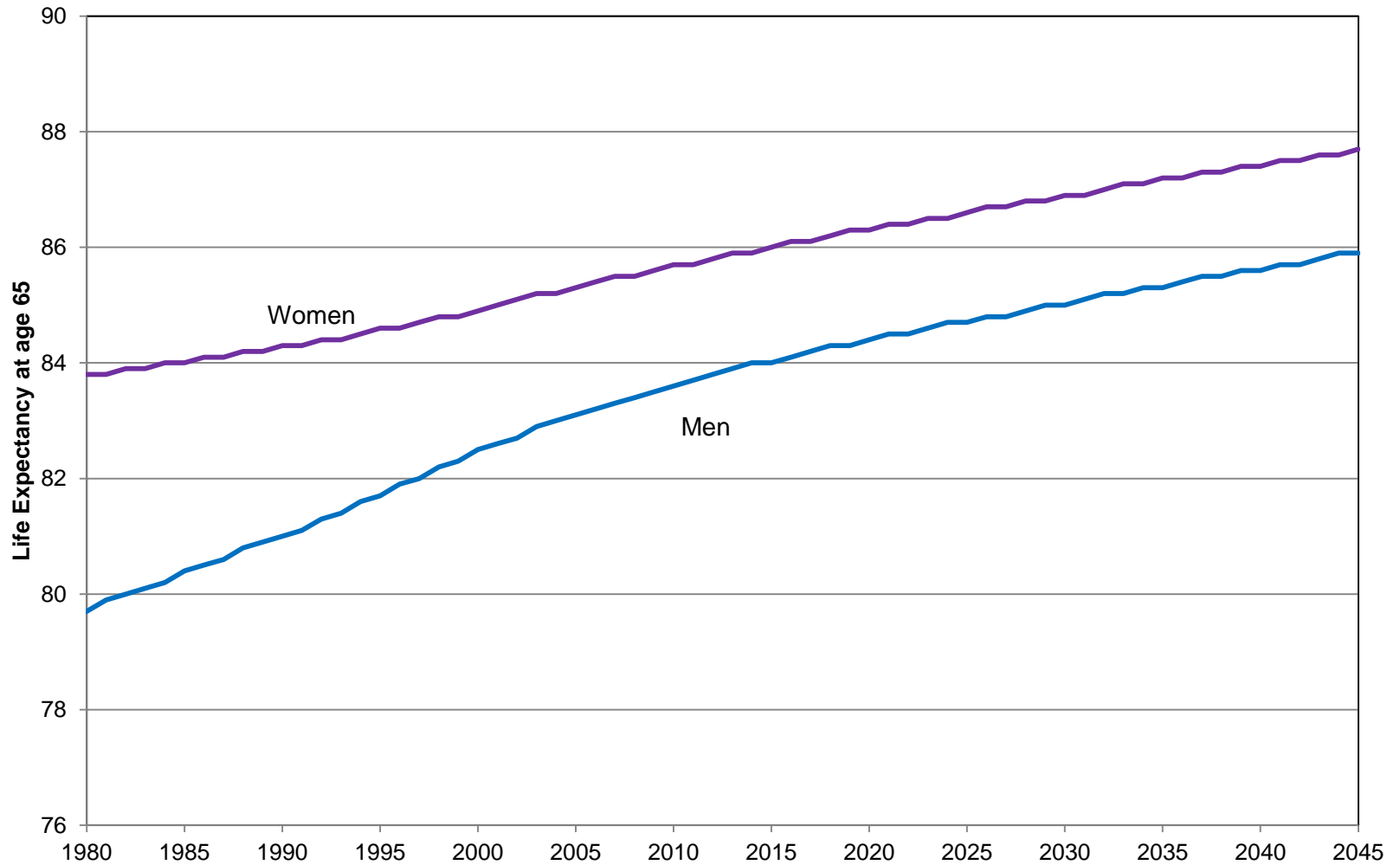
# Labor Force Trends

- Median wage ratio between working wife and husband {median( $\frac{\text{wife annual wage}}{\text{husband annual wage}}$ )}



Source: Annual Social and Economic Supplement, Current Population Survey

# Life Expectancy at age 65



Source: Social Security Office of the Chief Actuary

Thank you!

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