

# The Insurance Role of Household Labor Supply for Older Workers: Preliminary Results

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# Introduction

- Previous studies documented life-cycle patterns of employment, wages, unemployment etc. (see, e.g., Maestas and Zissimopoulos 2010)
- Employment risk high for older workers
  - Earnings loss associated with displacement increases with age (Rodriguez and Zavodny 2002; Farber 2005; Couch et al. 2009)
  - Older workers experience relatively longer post-job-loss unemployment spells (Chan and Stevens 2001)
- Welfare and policy implications of older population's high employment risk depend on the extent that older households can use public or intra-household insurance

# Introduction

- A couple household may adjust secondary earner's labor supply to cushion impact of primary worker's job loss
- Several studies document '**added worker effect**': labor supply of secondary earner increases when primary earner is subject to earnings or employment shock
  - Contemporaneous cross-spouse effects: e.g., Mincer 1962, Heckman and MaCurdy 1980, Lundberg 1985, Spletzer 1997, Cullen and Gruber 2000
  - Longer-term perspective: Stephens Jr (2002) shows husband's job displacement leads to a prolonged increase in his wife's expected earnings and likelihood of employment
  - Blundell et al. (2012) demonstrate a consumption-smoothing role for household labor supply

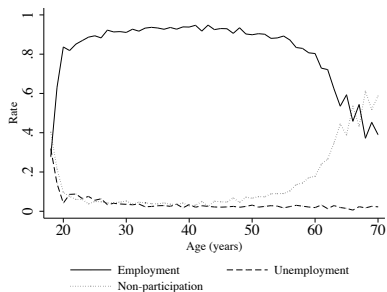
# Introduction

- Here, explore how older and younger couple households use adjustments in wife's labor supply to mitigate effects of husbands' negative employment shocks
  - Does added worker effect apply to older households?
- Policy implications: extent of intra-household insurance from labor supply for older households informs on function of e.g., DI, UI and Social Security
- Extend existing work in two further respects:
  - Distinguish between unemployment and non-participation - are demand constraints greater in older households?
  - Use monthly information husbands' and wives' labor market outcomes - examine household labor supply in the months immediately after the husband's negative employment shock

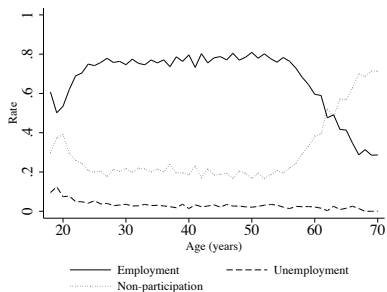
# Data & Sample

- Sample of married and cohabiting households drawn from the 2003, 2005, 2007, 2009 and 2011 waves of the Panel Study of Income Dynamics (PSID)
- Use monthly information about each spouse's labor market status
  - Households report each spouse's labor market status in each month of the previous calendar year
  - We distinguish three labor market states: employment, unemployment and non-participation
- Also extract demographic variables: age, education, state of residence
- Construct inflow sample of husbands' unemployment spells
  - Follow wife's and husband's labor market outcomes in the months and years after husband transitions from employment to unemployment
  - Employment to unemployment transitions henceforth termed "negative employment shocks"

# Data & Sample



(a) Men



(b) Women

- Note: Non-participation includes retirement

# Methodology

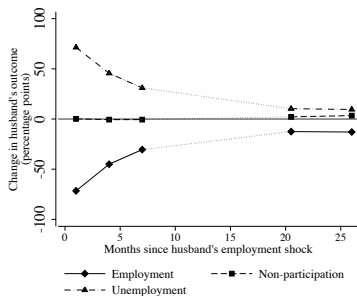
- Use a difference in difference matching estimator (Heckman et al. 1997, Heckamn et al. 1998)
  - Look at change in wives' labor market outcomes relative to month before husbands' employment shocks
  - Compare women whose husbands suffered employment shocks with similar women whose husbands remained in employment
  - Measure similarity via propensity score (probability of husband's employment shock)
- Lots of overlap in distributions of propensity scores of households with and without employment shocks
- Test for balancing passed
  - Do not reject the joint hypothesis of the equality between the treatment sample and the sample of matched controls in the means of 13 characteristics

# Results

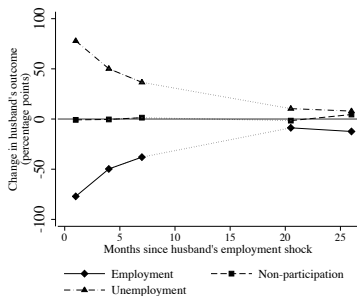
- Present results in three stages
  - ① Own effect: how are labor market outcomes of cohabiting man impacted by negative employment shock?
  - ② Cross effect: how do husbands' employment shocks impact on wives' labor market outcomes
  - ③ Explore smoothing function of adjustment in wives' employment behavior
- Distinguishing between:
  - **Younger households** (man is aged under 40 years when he becomes unemployed)
  - **Older households** (man is aged 40 years or older at the start of his unemployment spell)
- Uncover an interesting life-cycle dimension to the nature of the household response to employment shocks



# Results: Men's behavior following own negative employment shock



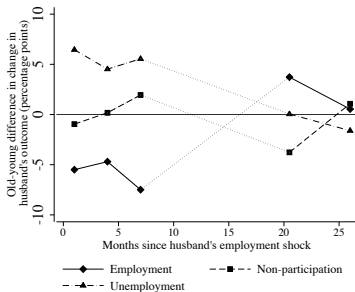
(c) Younger households.



(d) Older households.

- Employment effect of negative employment shock concentrated in year after shock
- Negative employment shocks have no effect on non-participation (which includes retirement)

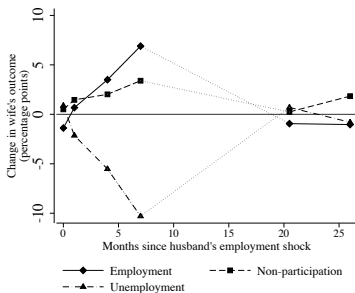
# Results: Men's behavior following own negative employment shock



(e) Difference between older and younger households.

- In line with previous findings, unemployment spells more persistent for older men

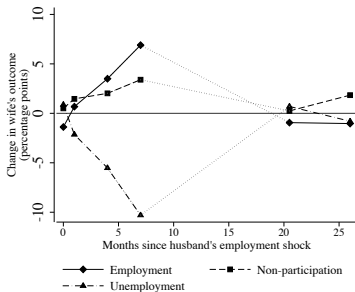
# Results: Wives' behavior following husbands' negative employment shocks



(f) Younger households.

- Younger households: husbands' negative employment shocks increase wives' employment rate and decrease wives' unemployment rate

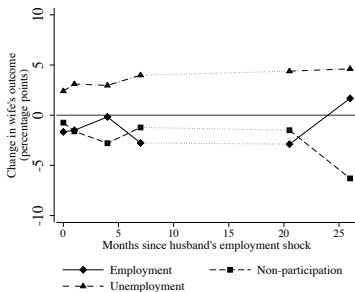
# Results: Wives' behavior following husbands' negative employment shocks



(g) Younger households.

- Younger households: 6 months after husband's negative employment shock, wife is 7 percentage points more likely to be employed than if husband has remained in employment

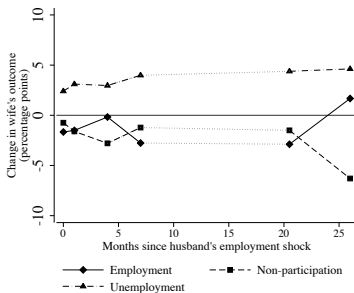
# Results: Wives' behavior following husbands' negative employment shocks



(h) Older households.

- Older households: husbands' negative employment shocks increase wives' unemployment rate and decreases wives' rate of non-participation

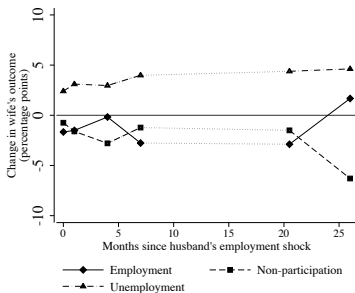
# Results: Wives' behavior following husbands' negative employment shocks



(i) Older households.

- Older households: No added worker effect

# Results: Wives' behavior following husbands' negative employment shocks



(j) Older households.

- In older households, appears that labor market rations the insurance function of adjustment in wives' labor supply

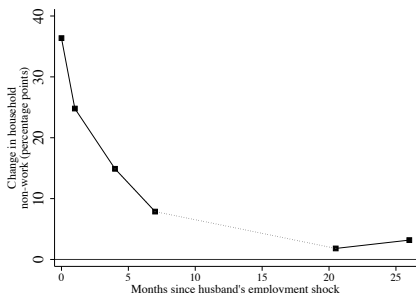
# Results: Further Exploring the Smoothing Role of Wives' Labor Supply

- Explore how likelihood of household non-work is impacted by wife's employment adjustment following husband's negative employment shock
- Wife's labor supply response particularly valuable if she increases employment when her husband is not in employment
  - Increases in the wife's employment that occur when husband has returned to employment less effective at mitigating extreme consequences of employment shocks

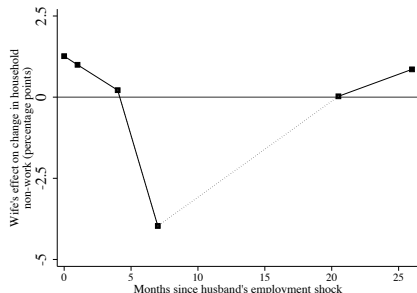


# Results: Further Exploring the Smoothing Role of Wives' Labor Supply

- Younger households



(k) Household non-work.

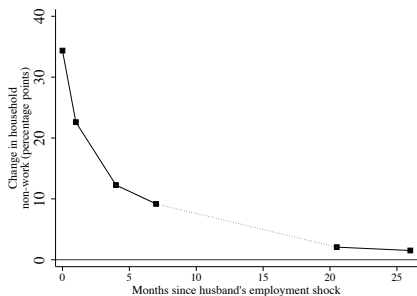


(l) Effect of wife's employment adjustment on household non-work.

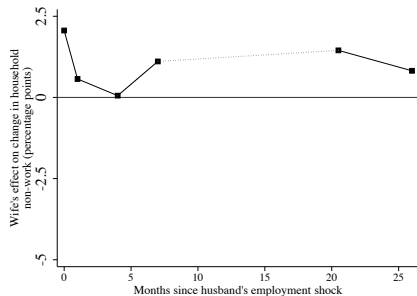
- Half of added worker effect occurs when husband is not working

# Results: Further Exploring the Smoothing Role of Wives' Labor Supply

- Older households



(m) Household non-work.



(n) Effect of wife's employment adjustment on household non-work.

- Female labor supply has no effect on household non-work

# Summary & Conclusions

- Added worker effect restricted to younger households
  - However, in younger households only half of the added worker effect occurs when husband is not in employment
- In older households, following husband entering unemployment, woman more likely unemployed and less likely a non-participant
  - Consistent with rationing of labor supply in older households
- Intra-household insurance from labor supply seems not to provide insurance against employment shocks for older households
  - Combined with high persistence in unemployment for older workers, results highlight importance of savings and social insurance programs for older households
- Comments welcome!

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