The Minimum Wage and Incentives for Full-Time Work Under the Retirement Earnings Test

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Introduction

- The retirement earnings test determines how work affects the time pattern of payments to beneficiaries
- For earnings above a threshold, benefits are clawed back
- Returned in future years
- Widely viewed as a tax on earnings
Introduction

- Long-standing interest in how the test affects labor supply
- Test was abolished in 2000 for those older than Full Retirement Age (FRA)
- Generated a series of studies that found substantial labor supply impacts
Introduction

- Little empirical work for those under the FRA, who are still subject to the test
- No policy variation that differentially affects those who claim early
- We present new evidence for male beneficiaries
- Exploit variation across states and years in annual hours at which test just binds due to variation in minimum wages
Background

- 3 key parameters determine the impact of the earnings test on work decisions
  - The threshold amount, $T$
    - Currently $17,040$
  - The benefit-reduction rate (50%)
  - Age (applies to beneficiaries under the Full Retirement Age)
    - For our analysis, 62-64 year old beneficiaries
Background

- Previous studies measure bindingness of test by extent to which earnings are equal to or just below threshold
- “Bunching”
- The greater the bunching, the more the test binds
- Statistical techniques used to measure precise impact of test
Background

- Studies that use real changes in the threshold to identify impacts provide credible evidence.
- But those changes have only been time-series in nature for those who claim early...
Figure 1. The Real Minimum Wage and Earnings Test Threshold for 1983-2016
Background

- There are no “control” groups, and “treatment” not differential
- Our contribution is to use changes in the minimum wage to make new measure of bindingness that varies within the group of early claimers by state and year
Basic Mechanism

- Earnings test threshold $T$ can be decomposed as $T = wh^*$
- $w$ is the hourly wage
- $h^*$ is the number of hours at which benefit-reduction rate moves from 0 to 0.5
  - The hours at which the convex kink occurs in the budget set in the standard static labor supply framework
- Re-arrange to yield threshold hours: $h^* = T/w$
Basic Mechanism

- Threshold hours, $h^* = T/w$, vary because of
  - Annual changes in threshold amount $T$
  - Variation in hourly wages (across individuals and time)

- One reason hourly wages vary is the minimum wage
  - Directly affects those at or below the minimum
  - Affects those above the minimum if significant spillovers
  - Estimates vary, but some evidence of spillovers
Basic Mechanism

- For a minimum-wage worker, threshold hours are $h^{\text{min}} = T/w^{\text{min}}$
- If the minimum wage is binding, then the minimum wage bounds threshold hours
  - Minimum wage workers have to work the largest number of hours (among all workers) in order to hit the earnings-test threshold
  - Workers with higher hourly wages have to work even fewer hours
- To examine impact of test on hours and employment, we model $h=f(h^{\text{min}})$
- Use linear regression to estimate the relationship between hours and employment and threshold hours
<table>
<thead>
<tr>
<th>State</th>
<th>2015 Threshold</th>
<th>Minimum Wage</th>
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<th>2018 Threshold</th>
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<tbody>
<tr>
<td>DC</td>
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<td>1,655</td>
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<td>$13.25</td>
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<td>VA</td>
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## Illustration

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Four Necessary Conditions

- Substantial variation in the minimum wage
- Substantial variation in threshold hours
- Substantial bunching at threshold
- Substantial bunching close to the minimum wage
Data

- **CPS (1982-2016)**
  - Out-going Rotation Groups and March Annual Supplement
  - Advantage: large samples
  - Disadvantage: month of birth and claiming not provided
  - Because of timing of surveys, we present results just for 64 year olds

- **HRS (1992-2014)**
  - Advantage: month of birth and claiming
  - Disadvantage: small samples
Figure 2. The Real Minimum Wage and Minimum Annual Hours Required to Achieve Earnings Test Threshold for 1983-2016
Basic Mechanism

Figure 3a. Fraction of Male Beneficiaries Age 64 in the CPS by the Ratio of Annual Earnings to the Earnings Test Threshold Amount
Basic Mechanism

Figure 6a. Fraction of Male Beneficiaries Ages 62-64 in the HRS by the Ratio of The Hourly Wage to the Minimum Wage
Summary of Basic Regression Results

- A 260-hour change in minimum hours raises the likelihood of working by 14.3 pp.
  - A large effect: base employment rate among beneficiaries is 28.5 pp.

- A 260-hour change in minimum hours raises annual hours by 455 hours, again this is a large effect.

- We find economically very small estimates for non-beneficiaries, who are not subject to the earnings test.

- However, estimates are imprecise enough that in many cases we cannot draw firm conclusions about the true effects.
Asymmetries from Hours’ Constraints

- Standard static labor supply model assumes individuals can smoothly choose hours.
- Distribution of hours is not smooth: spike at full-time, full-year hours (i.e., 2080 hours).
- 84% of 62-64 year old working men in HRS report some limitation in their ability to adjust their hours.
- We allow impact of earnings test to vary depending on whether threshold hours are above or below full-time, full-year hours (2,080 hours).
Asymmetries from Hours’ Constraints

- We find significant asymmetries
- A 260-hour change in threshold hours
  - Raises likelihood of work by 19.3 pp. if threshold hours above full-time, full-year hours
  - Lowers likelihood of work by 24.9 pp. if threshold hours below full-time, full-year hours
- A 260-hour change in threshold hours
  - Raises annual hours by 231 hours if threshold hours above full-time, full-year hours
  - Lowers annual hours by 418 hours if threshold hours below full-time, full-year hours
Conclusion

- Our preliminary findings substantial impacts of earnings test on hours and employment of early claimers
- Evidence for significant asymmetric effects around full-time, full-year employment
- Equilibrium impacts
- Additional evidence from SSA administrative data