DISCUSSION OF:
“WHERE HAVE ALL THE WORKERS GONE?”

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Harvard University

Federal Reserve Bank of Boston
October 14, 2016
OVERVIEW OF COMMENTS

1. Mechanical composition versus within age-sex changes.

2. Labor supply decision.

3. Prime-age workers.
   - Heterogeneity within group important.
   - Role of disability.
   - Role of family structure.

4. Well-being.
AGE-SEX DEMOGRAPHIC COMPOSITION

Labor force participation rate (%)  

<table>
<thead>
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<td>Value</td>
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<td>65.0</td>
<td>64.0</td>
<td>63.0</td>
<td>62.0</td>
<td>61.0</td>
<td>60.0</td>
<td>59.0</td>
<td>58.0</td>
<td>57.0</td>
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</table>
AGE-SEX DEMOGRAPHIC COMPOSITION

Actual
Using 2007
age-sex LFPR

Labor force participation rate (%)

AGE-SEX DEMOGRAPHIC COMPOSITION

Labor force participation rate (%)

- 2007
- 2008
- 2009
- 2010
- 2011
- 2012
- 2013
- 2014
- 2015
- 2016

Using 2007 age-sex LFPR
Using 1997-07 trend in age-sex LFPR
Trend except women 55-64
Actual
Female cohort effects

Figure 8: Labor Force Participation Rate for Women, by Age and Birth Year

- Data from ASEC, 1962-2016. Figure shows the labor force participation rate of five cohorts of women based on ten-year-of-birth intervals over the lifecycle from age 16 to age 79. The age displayed along the horizontal axis refers to the age of the middle birth year of the cohort.

- 55-64 year old trend from 1997 to 2007 is 1941 versus 1951 cohort. Should not extrapolate to 1961 cohort.
Age-sex demographic composition

<table>
<thead>
<tr>
<th>Year</th>
<th>Actual 2007</th>
<th>Using 2007 age-sex LFPR</th>
<th>Using 1997-07 trend in age-sex LFPR</th>
<th>Trend except women 55-64</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>66.0</td>
<td>66.0</td>
<td>66.0</td>
<td>66.0</td>
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<tr>
<td>2008</td>
<td>65.5</td>
<td>65.5</td>
<td>65.5</td>
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<tr>
<td>2009</td>
<td>65.0</td>
<td>65.0</td>
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<tr>
<td>2010</td>
<td>64.5</td>
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<tr>
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<td>2012</td>
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<tr>
<td>2013</td>
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<tr>
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<td>62.5</td>
<td>62.5</td>
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<tr>
<td>2015</td>
<td>62.0</td>
<td>62.0</td>
<td>62.0</td>
<td>62.0</td>
</tr>
<tr>
<td>2016</td>
<td>61.5</td>
<td>61.5</td>
<td>61.5</td>
<td>61.5</td>
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</tbody>
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**AGE-SEX DEMOGRAPHIC COMPOSITION**

Labor force participation rate (%)

- 2007
- 2008
- 2009
- 2010
- 2011
- 2012
- 2013
- 2014
- 2015
- 2016

And except women 16-24

Using 1997-07 trend in age-sex LFPR

Using 2007 age-sex LFPR

Trend except women 55-64

Actual
**Economics: Static FOC for Participation**

With no search costs, indivisible labor $\ell \in \{0, 1\}$, separable period utility $u(c) - \phi \mathbb{1}\{\ell = 1\}$, no skill or asset accumulation, work if:

$$\frac{\phi}{u'(c)} + b \leq (1 - \tau)w,$$

$$w = M^{-1}MPL.$$

- LFPR defined by individual who satisfies with equality.
- $\phi$: Work painful (disability?) or leisure valuable (video games?).
- $u'(c)$: Wealth effect (benign?).
- $b$: Transfers (SSDI?).
- $(1 - \tau)$: Labor income taxes.
- $M$: Firm markup (lower labor bargaining power or minimum wage?).
- $MPL$: Marginal product of labor (SBTC? disability?).
What are they doing and will they return?

<table>
<thead>
<tr>
<th></th>
<th>Male 35-54 pop. share (%)</th>
<th>NE hazard (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Want Job</td>
<td>1.2</td>
<td>1.4</td>
</tr>
<tr>
<td>School</td>
<td>0.4</td>
<td>0.6</td>
</tr>
<tr>
<td>Other</td>
<td>0.9</td>
<td>1.1</td>
</tr>
<tr>
<td>House</td>
<td>0.8</td>
<td>1.2</td>
</tr>
<tr>
<td>Retired</td>
<td>1.2</td>
<td>1.5</td>
</tr>
<tr>
<td>Disabled</td>
<td>5.3</td>
<td>5.8</td>
</tr>
<tr>
<td>Total NILF</td>
<td>9.8</td>
<td>11.7</td>
</tr>
</tbody>
</table>

- Modest scope for tighter labor market to raise reemployment rates.
- Retired and disabled 44% of increase. Mostly permanent.
**What are they doing and will they return?**

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<tr>
<td><strong>2007</strong></td>
<td>2016</td>
</tr>
<tr>
<td>Want Job</td>
<td>1.6</td>
</tr>
<tr>
<td>Other</td>
<td>1.0</td>
</tr>
<tr>
<td>House</td>
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- Modest scope for tighter labor market to raise reemployment rates.
- School 35% of increase.
**Role of Disability**

\[
\phi_{age=a, health=h, time=t} + b_{h,t} \leq (1 - \tau_{h,t}) M_{t}^{-1} MPL_{a,h,t}.
\]

- Distribution of \( h \,|\, a \): higher participation among 60+ suggests improving health.
- \( \phi_{a,h,t} \): Harder to work with disability? Seems unlikely: ADA, etc.
- \( MPL_{a,h,t} \): Productivity of disabled? Shift to services, non-manual work should have facilitated participation of moderately disabled.
- \( b_{h,t} \): DI benefits more generous (Autor and Duggan).
- Maestas, Mullen, Strand (2013), French, Song (2014), Autor, Maestas, Mullen, Strand (2013) quasi experimental evidence using administrator/judge assignment: at most about 1/4 to 1/2 of SSDI recipients would otherwise work.
Krueger evidence on health status

- 43% of prime-age men NILF report health as fair or poor.
- 34% say yes to at least one of six disabilities asked by CPS.
  - Useful to further restrict age – different for 45 year old than 30 year old.

- Prime-age male NILF (disabled) spend 1/2 (71%) of day in some pain. Pain rating higher for NILF.
- 44% of prime-age male NILF take some pain medication.
- Self-reporting: 93% of disabled NILF receiving income support say they would not otherwise work.
**Role of disability**

\[
\phi_{\text{age}=a, \text{health}=h, \text{time}=t} = u'(c_{a,h,t}) + b_{h,t} \leq (1 - \tau_{h,t}) M_t^{-1} MPL_{a,h,t}.
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Married with children have highest LF attachment and smallest decrease.

Unmarried men have lowest LF attachment.
Family structure by age-sex category

Shift toward family structures with lower male labor force attachment.
NOT IN LABOR FORCE BY FAMILY STRUCTURE

Women 35-44

Women 45-54

- Increase in out of labor force in past 20 years not concentrated among women with children.
**Well-being ("How does it feel?")**

Cantril ladder by spousal employment

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<tbody>
<tr>
<td>Respondent:</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Employed</td>
<td>6.55</td>
<td>7.25</td>
<td>7.21</td>
<td>7.03</td>
<td>6.77</td>
<td>7.56</td>
<td>6.93</td>
<td>7.24</td>
</tr>
<tr>
<td>Not in LF</td>
<td>5.73</td>
<td>6.68</td>
<td>6.22</td>
<td>6.08</td>
<td>6.17</td>
<td>7.50</td>
<td>6.51</td>
<td>7.03</td>
</tr>
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Cantril ladder 0-10 with 10 the best possible life and 0 the worst.

- Without spouse less satisfied with life.
- Conditional on spouse present, decline in well-being among NILF smaller if spouse working than not. Income effects?
CONCLUSIONS

1. Age-sex explains a lot.

2. Disability important, but may matter along many dimensions.

3. Family structure important.

Appendix slides
**What are they doing and will they return?**

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**HAZARD INTO EMPLOYMENT, 35-54 YEAR-OLD MEN**

- NILF, want job similar to long-term unemployed.
- NILF, disabled rarely reenter employment.
HAZARD INTO EMPLOYMENT, 35-54 YEAR-OLD WOMEN

NILF, want job similar to long-term unemployed.

NILF, disabled rarely reenter employment.
Family structure by age-sex category

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Women 45-54

Percent of age-sex category


No spouse or children under 18
No spouse, children under 18
Spouse, no children under 18
Spouse, children under 18

Shift toward family structures with lower male labor force attachment.
NOT IN LABOR FORCE BY FAMILY STRUCTURE

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Men 45-54

Percent of category out of labor force


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No spouse, children under 18
Spouse, no children under 18
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Solid lines: cohabitants
Dashed lines: progeny
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