The Demography of Economic Recession
Through Labor Force Analysis

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Purpose of the study and data

- Analyze the demographic impact of economic recession:
  - Different recessions for different ages?
  - Does fertility increase/or decline during recession?
- Data source:
  - Quarterly Workforce Indicators (QWI) from the Census Bureau’s Local Employment Dynamics
  - Fertility data from Alabama Dept. of Public Health
Variables

- Economic recession variables:
  - Employment: total employment and net job flows
  - Earnings: average monthly earnings and average new hire earnings

- Demographic variables
  - Age groups: 14-24, 25-34, 35-44, 45-54, 55-64, 65+
  - Total Fertility Rate (TFR)
Methods

- Comparison years: 2007 and 2009, based on the level of recession (unemployment)

- Impact of recession on various age-groups:

- Impact on fertility:
  - Calculate percent change in TFR between the 2 years
  - Run correlations between QWI variables and fertility
Change in total employment between 2007 and 2009, Alabama (%)

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Change (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>14-24</td>
<td>-16.91</td>
</tr>
<tr>
<td>25-34</td>
<td>-7.34</td>
</tr>
<tr>
<td>35-44</td>
<td>-7.27</td>
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<tr>
<td>45-54</td>
<td>-3.91</td>
</tr>
<tr>
<td>55-64</td>
<td>2.44</td>
</tr>
<tr>
<td>65-99</td>
<td>3.03</td>
</tr>
</tbody>
</table>
Change in total employment at county level

- County with positive change in all age-groups:
  - Bullock.
- Counties with negative changes in all age-groups:
  - Autauga, Barbour, Bibb, Butler, Chambers, Chilton, Clay, Conecuh, Crenshaw, DeKalb, Fayette, Greene, Henry, Lamar, Marion, Morgan, Pickens, Shelby, Tallapoosa, and Wilson.
Change in net job flows between 2007 and 2009, Alabama (%)

- 14-24: 35.58
- 25-34: -132.28
- 35-44: -120.71
- 45-54: -272.19
- 55-64: 111.28
- 65-99: 67.02

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Change in net job flows at county level

- County with positive change in all age-groups:
  - None.

- Counties with negative changes in all age-groups:
  - Bibb, Butler, Chambers, Cherokee, Conecuh, Elmore, Franklin, Lauderdale, Lowndes, Macon, Russell, St. Clair, Sumter, and Wilcox.
Change in average monthly earnings between 2007 and 2009, Alabama (%)

- 14-24: -3.47
- 25-34: 0.58
- 35-44: 2.49
- 45-54: 2.22
- 55-64: 3.66
- 65-99: 8.43

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Change in average monthly earnings at county level

- Counties with positive change in all age-groups:
  - Conecuh, Covington, Dale, Dallas, Geneva, Greene, Macon, Pickens, Pike, Sumter, and Washington.

- Counties with negative changes in all age-groups:
  - Choctaw and Lowndes.
Change in average new hire earnings between 2007 and 2009, Alabama (%)

- 14-24: -9.44
- 25-34: -9.15
- 35-44: -6.41
- 45-54: -2.63
- 55-64: -4.34
- 65-99: -2.23
Change in average new hire earnings at county level

- County with positive change in all age-groups:
  - Dale.

- Counties with negative changes in all age-groups:
  - Chilton, Choctaw, Cullman, DeKalb, Elmore, Jefferson, Limestone, Monroe, and Russell.
Total fertility rate, Alabama: 2007 (1) & 2009 (2)

- 2007: 2.05
- 2009: 1.96
Top five counties with highest increase in total fertility rate, percent change 2007-2009

- Russell: 48.57%
- Pickens: 24.44%
- Lowndes: 23.16%
- Sumter: 20.00%
- Lee: 17.14%
Conclusion

- These results show that younger workers were disproportionately hit by the economic recession.

- Possible explanations:
  - Employers’ preference for older workers
  - Older workers’ experience with previous economic recession

- Our results also show that the fertility of Alabama is positively associated with employment opportunities.