The Scarring effects of Financial Hardship

Agar Brugiavini
(University of Venice and SHARE)

Guglielmo Weber
(University of Padua and SHARE)

VII RDB Lecture
11th December 2012
Based on the Report

**Longer-Term Consequences of the Great Recession on Income distributions**

by

Agar Brugiavini and Guglielmo Weber

We thank the Fondazione Rodolfo de Benedetti for the financial support and all the co-authors (Orazio P. Attanasio, Margherita Borella, Olympia Bover, Torben Heien and Elisabetta Trevisan)

The results presented are based on the 3\textsuperscript{rd} chapter of the Report:

**The consequences of financial hardship (and recessions) on income and welfare**
Business cycle can have important effects on labour market decisions, particularly during downturns:

- Real wage reductions
- Reduced employment opportunities
- Early retirement

Financial hardship and stress associated with adverse business cycle might also have important effects, both in the short and in the long run, on the health conditions of individuals.
✓ Does the occurrence of a **financial hardship episode** have an effect on short or long term indicators of well-being and financial success?

✓ We look at:
  ✓ *Earnings at the end of working life*
  ✓ *Permanent income*
  ✓ *Health Status*
Recessions can have long term effects also for individuals who **lose their jobs** during an economic downturn.

- Recessions amplify **labour market frictions**
- The **length** of the unemployment spells **increases**
- The **loss of human capital** leads to less qualified and less paid jobs (Barlevy, 2002)
A negative shock when young creates permanent scars not only in terms of labour market outcomes (employment, wage) but also in terms of other variables such as health status, happiness and job satisfaction (Bell and Blanchflower, 2009).

“Individuals growing up during recessions tend to believe that success in life depends more on luck than on effort, support more government redistribution, but are less confident in public institutions. Moreover, ... recessions have a long-lasting effect on individuals’ beliefs” (Giuliano and Spilimbergo, 2009)
SHARE Data

✔ **SHARE** is a multidisciplinary cross-country survey representative of 50+ population across Europe

✔ It collects information on: household composition, income, health status, social network, working activities, etc.

✔ **SHARELIFE** (3rd wave of SHARE, 2008-2009) is a retrospective survey. It provides information on the entire life histories of respondent (life conditions at age 10, working histories, health histories, housing histories, etc.)
SHARELIFE asks questions on spells of financial hardship, hunger and poor health

“(Looking back on your life), was there a distinct period of financial hardship?”

“When did this period of financial hardship start?” (range of admissible answers: 1900..2009)

“When did this period stop?” (range of admissible answers: 1900..9997, where 9997 means “still ongoing”)

We can relate the answers to periods of recession or high inflation (>20%) in the country of residence
The red areas (and red lines) indicate periods of recession (left panel) or high inflation>20% (right panel)
Percentage of individuals in financial hardship

Red lines indicate single year periods of recession.
The effects of economic downturns on wages (1)

✓ **Outcome variable:** (log of) current wage for individuals who are still working, last wage for retirees.

✓ Separate analyses for men and women and by age groups (below 65 years of age and above 65 years of age)

✓ **Variables of interest:**
  
  ✓ Entering the labour market during a recession or a period of high inflation

  ✓ Experiencing financial hardship during a recession or a period of high inflation

  ✓ Financial hardship
The effects of economic downturns on wages: below 65

<table>
<thead>
<tr>
<th></th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recent financial hardship</strong></td>
<td>-0.283*** (0.076)</td>
<td>-0.302*** (0.064)</td>
</tr>
<tr>
<td><strong>Recession at school leaving age</strong></td>
<td>-0.018 (0.057)</td>
<td>-0.045 (0.054)</td>
</tr>
<tr>
<td><strong>High inflation (&gt;20%) at school leaving age</strong></td>
<td>-0.034 (0.286)</td>
<td>-0.202 (0.256)</td>
</tr>
<tr>
<td><strong>Financial hardship during recession</strong></td>
<td>-0.030 (0.286)</td>
<td>0.040 (0.050)</td>
</tr>
<tr>
<td><strong>Financial hardship during a period of high inflation (&gt;20%)</strong></td>
<td>-0.836*** (0.229)</td>
<td>0.313 (0.254)</td>
</tr>
</tbody>
</table>

**Control for:** financial hardship episodes (existence and length), tenure, job characteristics, individual characteristics (marital status, number of children, years of education), early life conditions, individual shocks (divorce, widowhood, poor health, hunger), birth cohorts, end of yob decades and country dummies.
### The effects of economic downturns on wages: above 65

<table>
<thead>
<tr>
<th>Event</th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recent financial hardship</strong></td>
<td>-0.317* (0.174)</td>
<td>-0.122 (0.107)</td>
</tr>
<tr>
<td><strong>Recession at school leaving age</strong></td>
<td>-0.041 (0.060)</td>
<td>-0.128* (0.071)</td>
</tr>
<tr>
<td><strong>High inflation (&gt;20%) at school leaving age</strong></td>
<td>0.027 (0.094)</td>
<td>0.055 (0.109)</td>
</tr>
<tr>
<td><strong>Financial hardship during recession</strong></td>
<td>-0.086 (0.064)</td>
<td>0.005 (0.072)</td>
</tr>
<tr>
<td><strong>Financial hardship during a period of high inflation (&gt;20%)</strong></td>
<td>-0.426* (0.218)</td>
<td>0.155 (0.287)</td>
</tr>
</tbody>
</table>

**Control for:** financial hardship episodes (existence and length), tenure, job characteristics, individual characteristics (marital status, number of children, years of education), early life conditions, individual shocks (divorce, widowhood, poor health, hunger), birth cohorts, end of yob decades and country dummies.
The effects of economic downturns on wages: results

✓ Older women have lower end of career wages if they enter the labour market during a recession.
✓ Men have lower wages if they experience financial hardship during a period of high inflation (>20%)
✓ On average the negative effect of financial hardship fade away after 6 to 8 years.
  ✓ Women wages recover sooner (after 3 years for older women 6 for younger women)
  ✓ For men the effect is persistent and negative (particularly when associated to inflation), particularly for the younger one (below 65).
How long does the effect of financial hardship last? Below 65 years of age

**Men**

Below 65 years of age

**Women**

Below 65 years of age
How long does the effect of financial hardship last? Above 65

**Men**
Over 65 years of age

**Women**
Over 65 years of age
The effects of economic downturns on permanent income

✓ **Outcome variable**: Log of permanent income. *Permanent income* is the sum of discounted earnings, pensions and asset discounted at age 50 (at household level)

✓ Separate analyses for singles and couples.

✓ **Variables of interest**:  
  ✓ Entering the labour market during a recession or a period of high inflation  
  ✓ Experiencing financial hardship during a recession or a period of high inflation
The effects of economic downturns on permanent income: results

<table>
<thead>
<tr>
<th></th>
<th>Singles</th>
<th>Couples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recent financial hardship</strong></td>
<td>-0.100* (0.053)</td>
<td>-0.171*** (0.044)</td>
</tr>
<tr>
<td><strong>Recession at school leaving age</strong></td>
<td>-0.028 (0.032)</td>
<td>-0.079*** (0.022)</td>
</tr>
<tr>
<td><strong>High inflation (&gt;20%) at school leaving age</strong></td>
<td>0.085 (0.052)</td>
<td>-0.048 (0.039)</td>
</tr>
<tr>
<td><strong>Financial hardship during recession</strong></td>
<td>-0.040 (0.052)</td>
<td>-0.029 (0.025)</td>
</tr>
<tr>
<td><strong>Financial hardship during a period of high inflation (&gt;20%)</strong></td>
<td>0.083 (0.124)</td>
<td>-0.018 (0.079)</td>
</tr>
</tbody>
</table>

Control for: financial hardship episodes (existence and length), individual characteristics (marital status, number of children, years of education), polynomial in age, early life conditions, individual shocks (divorce, widowhood, poor health, hunger), dummy for being over 65 years of age and country dummies. For couples characteristics of both partners are considered.
Couples have lower permanent income if either partner entered the labour market during a recession.

On average the negative effects of financial hardship fade away after 8 years.

Couples recover faster than singles (6 years versus 10 years).
How long does the effect of financial hardship last? Singles
How long does the effect of financial hardship last? Couples
Outcome variable: Objective health index.

Health index: “disability weights” have been applied to each diagnosed condition (see Juerges, 2007). Ranges between 0 and 1, where 0 is the worst possible health status and 1 is the best.

Variables of interest:

- Entering the labour market during a recession or a period of high inflation
- Experiencing financial hardship during a recession or a period of high inflation
## Objective Health Index

<table>
<thead>
<tr>
<th></th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recent financial hardship</strong></td>
<td>-0.005 (0.006)</td>
<td>-0.011** (0.004)</td>
</tr>
<tr>
<td><strong>Recession at school leaving age</strong></td>
<td>-0.004 (0.004)</td>
<td>-0.002 (0.003)</td>
</tr>
<tr>
<td><strong>High inflation (&gt;20%) at school leaving age</strong></td>
<td>-0.010 (0.006)</td>
<td>0.010* (0.005)</td>
</tr>
<tr>
<td><strong>Financial hardship during recession</strong></td>
<td>-0.016*** (0.004)</td>
<td>-0.006* (0.004)</td>
</tr>
<tr>
<td><strong>Financial hardship during high inflation (&gt;20%)</strong></td>
<td>0.013 (0.008)</td>
<td>0.018** (0.008)</td>
</tr>
<tr>
<td><strong>Hunger</strong></td>
<td>-0.023*** (0.004)</td>
<td>-0.020*** (0.004)</td>
</tr>
</tbody>
</table>

✓ **Control for:** financial hardship episodes (existence and length), tenure, job characteristics, individual characteristics (marital status, number of children, years of education), early life conditions, individual shocks (divorce, widowhood), birth cohorts, retirement decades and country dummies.
How long does the effect of financial hardship last? Men

Health Index - Men
How long does the effect of financial hardship last? Women

Health Index - Women

Distance from end of f_hardship

0 3 6 9 12 15 18 21 24 27 30 33 36 39
Health: results

✓ For both men and women, **experiencing financial hardship during a recession has a negative effect on health**

✓ The negative effect of financial hardship on health is **stronger for women** than for men

✓ On average the negative effect of financial hardship is **persistent.** When looking at self-reported health it fades away after 12-15 years (colouring?!?!?)
Conclusions

✓ Financial hardship has negative effects on wages for about 8 years in general – but for men negative effects persist if the episode coincides with a period of high inflation.

✓ Entering the labour market during a recession has a scarring effect on permanent income for couples.

✓ Financial hardship has a significant effect on an objective health index and it is persistent. The association with a recessionary period is particularly important for men.