Pension Systems, Long-term Care and Demographic Scenarios: Future Challenges for the Welfare State

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Agenda

• The impact of longevity risks

• Pension systems may induce perverse effects (such as an “implicit tax” on work)

• Long Term Care will be the new challenge for ageing societies
Current Life Expectancy in the World, 2016

Longevity is still increasing (longevity at birth)
A puzzle in female life expectancy

Female life expectancy, 1960-2010

Avendano & Kawachi, Ann Rev Pub Health, 2014
Financing Social Security/Public Pensions: PAYG systems - the intergenerational contract

<table>
<thead>
<tr>
<th></th>
<th>Generation 1</th>
<th></th>
<th>Generation 2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>income</td>
<td>0</td>
<td>income</td>
<td>0</td>
</tr>
<tr>
<td>this year</td>
<td>this year</td>
<td>next year</td>
<td>the year after</td>
<td>2</td>
</tr>
</tbody>
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Implications of longevity for public finances

• Reduced contributions from the working population vis-à-vis increased pension spending

• For the same number of years in work, will collect more pension benefits (actuarial principle fails)

• Paradox: working life gets shorter
Impact of welfare policies late in life

Key question is how does ‘policy’ impact on late-life outcomes?

- Many policy changes have long shadows or create extensive transition effects, e.g. pensions, health behaviours

- SHARE allows for quasi-experimental ‘ex-post’ evaluations are common
Pension Reforms: Pattern of Labour Force Participation (Men 55-64)
Pension Reforms: Pattern of Employment Rates
(Men 55-64)
Pension Reforms: Pattern of Employment Rates (Women 55-64)
Internationally comparable data on ageing
Increasing supply of comparable data on ageing

- **SHARE**: Survey of Health, Ageing & Retirement in Europe; 2004
- **HRS**: Health and Retirement Study; 1992-2010
- **ELSA**: English Longitudinal Study of Ageing; 2002-2012
- **MHAS**: Mexican Health and Ageing Study; 2002-2017
- **KLOSA**: Korean Longitudinal Study of Ageing; 2006-2018
- **JSTAR**: Japanese Study of Ageing and Retirement; 2009-2018
- **CHARLS**: Chinese Health and Retirement Study; 2009/11-2019
- **TILDA**: The Irish Longitudinal Study on Ageing; 2010-2019
- **LASI**: Longitudinal Ageing Study in India; 2012/14-2019
- **NICOLA**: Northern Ireland, 2014/15
- **ELSI-B**: Brazilian Longitudinal Study of Ageing, 2014/15
- **HAGIS**: Health and Ageing in Scotland, 2016-2019
Multidimensional measures of ageing studies (HRS, SHARE, ELSA etc....)

Demographics and family

- Incomes, Welfare, Wealth & Debts
- Employment, Pensions
- Consumption, Housing
- Expectations
- Admin data links

Psychological and social wellbeing

- Physical Health
- Cognitive function
- Health behaviours
- Mental Health
- ...and lots more...
- Blood samples and DNA
- Physical examination and performance tests

Physical Health

Psychosocial factors

Social and civic participation

Psychological and social wellbeing

Demographics and family

Multidimensional measures of ageing studies (HRS, SHARE, ELSA etc....)
Employed versus Retired individuals in some European Countries (SHARE)

Age group 60-64

<table>
<thead>
<tr>
<th>Country</th>
<th>Percentage Employed</th>
<th>Percentage Retired</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Sweden</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Netherlands</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Spain</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Italy</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>France</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Denmark</td>
<td>4</td>
<td>1</td>
</tr>
</tbody>
</table>
Trajectories of # years worked post 50, by country and cohort

1. Unconditional

Average number of years worked after age 50 vs. Average age of cohort for Male, Italy, Male, England, Female, Italy, and Female, England.
Trajectories of # years worked post 50, by country and cohort

2. Conditional on working at age 50

Average number of years worked after age 50

Average age of cohort
Labour Supply and Health
Distribution of activities for “healthy” individuals (SHARE)
Social security and retirement around the world

Fig. 4  Unused capacity versus tax force

Source: Gruber and Wise (eds), 2004, Social Security and Retirement around the world: Micro estimation’,
... and financial hardship (SHARE)
Healthy ageing is not just being free from illnesses (1961), but also preserving functional abilities which guarantee a given level of well-being (WHO, 2016).
Expected years of living with disability or disease burden, 2016
50-70 year olds, adjusted for age, sex, education, smoking, drinking, BMI, state/country

Source: Avendano, Glymour, Banks, Mackenbach; Am J Public Health, 2009
• Expect an increase of the demand for LTC at a time when public spending is retrenching.

• The insurance market covers only part of these risks, which are supported mainly by the State

• The equilibrium between financial sustainability and increasing demand may require extensive “informal care” by family members.
ADL and IADL (limitations in activities of daily living)

SHARE: Percentage of 50+ population which reports at least one ADL or IADL limitation as a measure of the potential demand for LTC services
Disease and disadvantage in the US and England:

**Diabetes**
- Low inc: England 7.3%, US 17.4%
- Middle inc: England 6.7%, US 11.8%
- High inc: England 4.4%, US 8.2%

**Hypertension**
- Low inc: England 36.7%, US 46.3%
- Middle inc: England 34.6%, US 43.6%
- High inc: England 30.3%, US 37.1%

Source: Banks et al; JAMA 2006
Disease and disadvantage in the US and England:

### Diabetes
- **Low inc**: 7.3%
- **Middle inc**: 8.2%
- **High inc**: 8.2%

### Hypertension
- **Low inc**: 36.7%
- **Middle inc**: 37.1%
- **High inc**: 37.1%

Source: Banks et al; JAMA 2006
Data on informal care

• We can use SHARE to study the amount of care that can be provided within the family and the effect of policies.

• SHARE+SHARELIFE: *Inter vivos* transfers (money and services) potentially on four generations.

\[\text{Parent(1)} \rightarrow \text{Resp.} \rightarrow \text{Children} \rightarrow \text{Grandchildren} \]

\[\text{Parent(2)} \leftarrow \text{Resp.} \leftarrow \text{Children} \leftarrow \text{Grandchildren}\]
Who gives LTC?

Conditional on having at least one ADL limitation (SHARE)
«Raw» coverage of public LTC, 2010

Coverage of LTC given % of eligibility from SHARE

- Prevalence of individuals potentially benefiting from LTC at the current rules and given the specific morbidity in each country
Standardized coverage of public LTC, 2010

- Prevalence of individuals potentially benefiting from LTC at the current rules, given the EU-average morbidity
Conclusions

• Longevity has increased (jolly good!) – but this puts pressure on public spending

• Pension systems may induce perverse effects (such as an “implicit tax” on work)

• Long Term Care will be the new challenge for ageing societies. At the moment it is strongly fragmented