Retirement Policy in a Post-Covid World

K. Arapakis    E. French

UCL, Cambridge

May 27, 2022
Funding future retirements

- In an unfunded pension system
  
  \[
  \text{# of retirees} \times \text{benefits per retiree} = \]
  
  \[
  \text{# of workers} \times \text{contributions per worker}
  \]
Funding future retirements

- In an unfunded pension system
  
  \[ \text{# of retirees} \times \text{benefits per retiree} = \text{# of workers} \times \text{contributions per worker} \]

- Focus trends driving \# of retirees and workers during 1980-2020 for five countries: US, UK, Japan, Korea, Singapore
How can we fund retirement in the future?

- Key issues
  - rapidly rising life expectancies + slowly rising employment rates
    ⇒ more retirees
  - Low fertility
    ⇒ fewer workers
How can we fund retirement in the future?

- Key issues
  - rapidly rising life expectancies + slowly rising employment rates
    ⇒ more retirees
  - Low fertility
    ⇒ fewer workers

- How can we fund retirement in the future?
  - Impact of retirement policy reforms (in the UK and Europe) on labor supply
Historical Trends and Covid-19
Figure: Age 65 Life expectancy for women between 1976 and 2020.
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>14.1</td>
<td>15.1</td>
<td>16.0</td>
<td>17.7</td>
<td>18.2</td>
<td></td>
</tr>
<tr>
<td>UK</td>
<td>12.6</td>
<td>14.0</td>
<td>15.8</td>
<td>18.2</td>
<td>18.8</td>
<td></td>
</tr>
<tr>
<td>KOR</td>
<td>10.6</td>
<td>12.6</td>
<td>14.3</td>
<td>16.8</td>
<td>19.1</td>
<td></td>
</tr>
<tr>
<td>JPN</td>
<td>14.6</td>
<td>16.2</td>
<td>17.5</td>
<td>18.7</td>
<td>19.8</td>
<td></td>
</tr>
<tr>
<td>SIN</td>
<td>12.6</td>
<td>14.5</td>
<td>15.6</td>
<td>18.0</td>
<td>19.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>18.3</td>
<td>18.9</td>
<td>19.0</td>
<td>20.3</td>
<td>20.8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>16.6</td>
<td>17.9</td>
<td>19.0</td>
<td>20.8</td>
<td>21.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>15.6</td>
<td>16.7</td>
<td>18.2</td>
<td>21.2</td>
<td>23.4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>17.7</td>
<td>20.0</td>
<td>22.4</td>
<td>23.8</td>
<td>24.6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>15.4</td>
<td>16.9</td>
<td>18.1</td>
<td>21.4</td>
<td>23.0</td>
<td></td>
</tr>
</tbody>
</table>

**Table:** Age 65 Life expectancy for men and women.
<table>
<thead>
<tr>
<th></th>
<th>Life Expectancy at age 65 (men)</th>
<th></th>
<th>Life Expectancy at age 65 (women)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Year</td>
<td></td>
<td>Year</td>
</tr>
<tr>
<td>US</td>
<td>14.1</td>
<td>15.1</td>
<td>16.0</td>
</tr>
<tr>
<td>UK</td>
<td>12.6</td>
<td>14.0</td>
<td>15.8</td>
</tr>
<tr>
<td>KOR</td>
<td>10.6</td>
<td>12.6</td>
<td>14.3</td>
</tr>
<tr>
<td>JPN</td>
<td>14.6</td>
<td>16.2</td>
<td>17.5</td>
</tr>
<tr>
<td>SIN</td>
<td>12.6</td>
<td>14.5</td>
<td>15.6</td>
</tr>
</tbody>
</table>

**Table:** Age 65 Life expectancy for men and women.
Figure: Age 55 to 64 employment rates between 1980 and 2020.
Fiscal Sustainability

- Over the last 40 years
  - Age 65 life expectancies rose ≈ 5 years, more in East Asia
  - Age 55-64 employment rose ≈ 10 percentage points (retirement delayed 1 year)
  - More years of retirement to fund
  - Covid-19 did not help
    => 2021 Social Security actuaries: Social Security trust fund will be exhausted 1 year earlier
**Figure:** Public debt to GDP ratio between 2000 and 2020.

- Covid: fiscal sustainability problem exacerbated
  - Unemployment and other benefits led to higher national debts
Delaying retirement
Government Pensions and Retirement

Four key reasons pensions affect retirement behaviour:

1. Availability of benefits at **Early Retirement Age** (ERA)/earliest age benefits are available.
Four key reasons pensions affect retirement behaviour:

1. Availability of benefits at Early Retirement Age (ERA)/earliest age benefits are available.

2. Non-actuarially fair adjustment of benefits when retiring after ERA

3. Once receiving benefits they often face an earnings test (where individuals have benefits taxed away if they work and draw benefits at the same time)
Government Pensions and Retirement

Four key reasons pensions affect retirement behaviour:

1. Availability of benefits at **Early Retirement Age (ERA)**/earliest age benefits are available.
2. Non-actuarially fair adjustment of benefits when retiring after ERA
3. Once receiving benefits they often face an earnings test (where individuals have benefits taxed away if they work and draw benefits at the same time)
4. Integration with disability/unemployment benefits
Figure: Implicit Taxes on Work and Nonwork. Source: Gruber and Wise (1999).
Introduction - Delaying Retirement

• Drawing evidence from the UK and Europe we review how reforms affected labor supply / delayed retirement
Introduction - Delaying Retirement

- Drawing evidence from the UK and Europe we review how reforms affected labor supply / delayed retirement

- We consider four types of reforms:
  1. Shifting ERA forward
  2. Eliminating earnings test
  3. Tightening eligibility criteria for benefits
  4. Moving to National Defined Contribution Schemes
Shifting the Early Retirement Age (ERA)

- People often stop working when eligible for benefits
- Austrian data. ERA varies by gender

**Figure:** Pre-Reform (2000) Pension Claims & Employment. Source: Manoli and Weber (2016)
Austria changed the ERA by birth cohort
Men goes from 60 to 62, women goes from 55 to 57

Fig. 5A. Men’s Claiming Ages & Exit Ages by Cohort

Source: Manoli and Weber ‘13
• Austria changed the ERA by birth cohort
• Men goes from 60 to 62, women goes from 55 to 57

Fig. 5A. Men’s Claiming Ages & Exit Ages by Cohort

Source: Manoli and Weber ‘13
- Austria changed the ERA by birth cohort
- Men goes from 60 to 62, women goes from 55 to 57

Fig. 5A. Men’s Claiming Ages & Exit Ages by Cohort

Source: Manoli and Weber ‘13
In the last 30 Years, Lots of Countries have Shifted their ERA

- A partial list:
  - UK
  - Norway
  - Denmark
  - Italy
  - Switzerland
  - Australia

- Evidence suggests raising ERA 1 year increases labor supply \( \approx 0.1 \) years
Eliminating earnings tests

- Earnings test is a tax on benefits among beneficiaries - Reduces incentive to work

- Disney and Smith (2002) looks at the effects of removing the UK earnings test
- They find that work hours increased by around 4 hours per week for men; smaller effect for women.
- Lots of other countries have removed their earnings test also (e.g., US), again finding labor supply responses
Eliminating earnings tests

- Earnings test is a tax on benefits among beneficiaries - Reduces incentive to work

- Disney and Smith (2002) looks at the effects of removing the UK earnings test

- They find that work hours increased by around 4 hours per week for men; smaller effect for women.

- Lots of other countries have removed their earnings test also (e.g., US), again finding labor supply responses
Tightening eligibility criteria for benefits

- Multiple countries have tightened eligibility for disability and unemployment benefits

- French et al. (2022) exploit a radical change in eligibility for the **Old Age Unemployment Benefit** in Poland—eligibility for benefit depends on age and termination of employment caused by employer

- In August 2004 age eligibility threshold increased from 55 to 60
Tightening eligibility criteria for benefits

Figure: Employment rates the the groups with and without pre-retirement option.
Shifting to Notional Defined Contribution Schemes

- Multiple countries have recently shifted from Defined Benefit (DB) to Notional Defined Contribution (NDC) Systems
  - DB: retirement benefits a function of “best earnings years”
  - NDC: retirement benefits a function of all earnings years

- French et al. (2022) study a switch from a DB to a NDC system in Poland
  - Over 50 on 1/1/1999: remain in DB system
  - Under 50 on 1/1/1999: in NDC system
2000-2002: high-growth regions

Switching to NDC

Staying in DB

Change in Empl./Pop. = -0.015 at cut-off (0.003)
Discussion - Conclusions

- Incentives matter:
  - Reducing the implicit tax on work and address the problem of retirement funding
  - But potentially at the risk of increased inequality
Introduction - Effects of Covid-19

- Focus on the period 1980-2020 for five countries: US, UK, Japan, Korea, Singapore
  - Life expectancies by gender at birth and age 65
  - Employment rates by age group: 15-24, 25-54, 55-64

Covid-19 had small impact relative to longer term trends, but exacerbated the fiscal sustainability problem.
- Reduced government revenue
- Increased government debt due to unemployment benefits and other spending
Introduction - Effects of Covid-19

- Focus on the period 1980-2020 for five countries: US, UK, Japan, Korea, Singapore
  - Life expectancies by gender at birth and age 65
  - Employment rates by age group: 15-24, 25-54, 55-64

- Covid-19 had small impact relative to longer term trends, but exacerbated the fiscal sustainability problem.
  - Reduced government revenue
  - Increased government debt due to unemployment benefits and other spending