Longer Lives, Later Retirement?
Evidence from Around the World

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Rising LE at Age 50 in All Country Income Groups

Female Life Expectancy at Age 50, by WB Income Group, 1950-2020

*World Bank income group based on 2018 GNI/capita

Source: https://population.un.org/wpp/DataQuery/
Rising LE at Age 50 in All Country Income Groups

Male Life Expectancy at Age 50, by WB Income Group, 1950-2020

*World Bank income group based on 2018 GNI/capita

Source: https://population.un.org/wpp/DataQuery/
Rising LFP For Women in Higher Country Income Groups

Female LFP, Age 50-54

Source: https://ilostat.ilo.org/data/
Rising LFP For Women in Higher Country Income Groups

Female LFP, Age 55-59

Source: https://ilostat.ilo.org/data/
Rising LFP For Women in Higher Country Income Groups

Female LFP, Age 60-64

Source: https://ilostat.ilo.org/data/
Rising LFP For Women in Higher Country Income Groups

Female LFP, Age 65+

Source: https://ilostat.ilo.org/data/
No Trend Towards Rising LFP for Men Age 50-54

Male LFP, Age 50-54

Source: https://ilostat.ilo.org/data/
Rising LFP For Men in High-Income Countries Only

Source: https://ilostat.ilo.org/data/
Rising LFP For Men in High-Income Countries Only

Male LFP, Age 60-64

Source: https://ilostat.ilo.org/data/
Rising LFP For Men in High-Income Countries Only

Male LFP, Age 65+

Source: https://ilostat.ilo.org/data/
The Facts

• **Living longer all around the world**
  - LE at age 50 has risen by 9 years over past 70 years, 3-4 years over past 30 years
  - Increases in countries of all income levels, larger gains in higher-income countries

• **Working longer only in richer countries**
  - Women in high-income countries: +17-25% points at ages 50-64
  - Women in upper-middle-income: + 10% points at 55-64
  - Men in high-income countries: +15% points at 60-64
The Questions

• Does economic theory predict people will work longer as life expectancy increases?
• Why are people working longer in richer countries (and might trend spread to other countries)?
• What are the implications of living longer while not working longer?
How LE Increases Affect Retirement: Example

How Does Added LE Affect Years of Work and Retirement?

Work and Retirement in 1990

- Work: 16 years
- Retirement: 8 years
- Total: 74 years

Work and Retirement in 2020

- Work: 20 years
- Retirement: 8 years
- Total: 78 years

Possibility 1: Constant Retirement Age

- Work: 19 years
- Retirement: 9 years
- Total: 78 years

Possibility 2: Constant Years of Retirement

- Work: 16 years
- Retirement: 12 years
- Total: 78 years

Possibility 3: Constant Share of Retirement Years

- Work: 19 years
- Retirement: 9 years
- Total: 78 years
How LE Increases Affect Retirement: Theory

- **Horizon effect:** more resources needed to finance longer lifespan
  - *later retirement,* at least in some cases (Chang, 1991)
- **Uncertainty effect:** decrease in variability of age at death makes it optimal to save, plan for retirement
  - *earlier retirement* (Kalemli-Ozcan and Weil, 2010)
- **Income effect:** compression of morbidity
  - *later retirement and less than proportional increase in working life* (Bloom, Canning, and Moore, 2007, 2014)
- **Return to schooling:** rising LE affects both education (Ben-Porath, 1967) and retirement
  - *earlier retirement* (Hazan, 2009; Hansen and Lonstrup, 2012)
Earlier Retirement in Richer Countries in 20th Century

Fig. 2.2 Labor force participation rates of men aged sixty-five and over, 1850–1990, United States, Britain, France, and Germany

Source: Costa, 1998
Trend of Later Retirement Began in Mid-1990s (Men)

Employment Rates of Men Ages 60-64, ISS Countries, 1980-2016

Source: Borsch-Supan and Coile, 2018
Trend of Later Retirement Began in Mid-1990s (Women)

Employment Rates of Women Ages 60-64, ISS Countries, 1980-2016

Source: Borsch-Supan and Coile, 2018
What Might Explain Trends in LFP in Richer Countries?

- **Explanations for earlier retirement (1900-1990s)**
  - Rising income
  - Changes in production technology (Graebner, 1980; Moen, 1988)
  - Growth of public pensions (Costa, 1998; Fetter and Lockwood, 2018; Gelber et al., 2017)

- **Explanations for later retirement (1990s-present)**
  - Rising education
  - Improving health
  - Cohort effects for women (Goldin and Katz, 2018); also affect husbands (Schirle, 2008)
  - Pension reforms

- **Consider some evidence from NBER International Social Security (ISS) project**
Trends in Health & Education (No U-Shape)

Figure 4: Mortality at Age 60, Men and Women, 1980-2014

Figure 6: Share of Men and Women 55 to 64 with a College Education, 1980-2014

Source: Coile, Milligan, and Wise, 2020
## Pension Reforms: Frequent, Strengthen Work Incentives

### Table 1: Pension Reform Implementation, by Type and Country

<table>
<thead>
<tr>
<th>Type of Reform</th>
<th>Belgium</th>
<th>Canada</th>
<th>Denmark</th>
<th>France</th>
<th>Germany</th>
<th>Italy</th>
<th>Japan</th>
<th>Netherlands</th>
<th>Spain</th>
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<th>UK</th>
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<th>Total # Countries</th>
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Source: Borsch-Supan and Coile, 2018
Rising Pension Eligibility Ages

Figure 4: Social Security Early Eligibility Age, by Sex, 1980-2016

Figure 5: Social Security Statutory Eligibility Age, by Sex, 1980-2016

Source: Borsch-Supan and Coile, 2018
Higher EEA Leads to Later Retirement (UK Case Study)

Employment rates at specific ages (e.g., age 60)

UK women: Each time state pension age rises by one year, the employment rate jumps by 10% points at the affected age

Similar evidence from Italy and Japan

Source: Coile, Milligan, and Wise, 2020 (UK Chapter)
Average Implicit Tax is Falling Over Time (Men)

ITAX by Year for Men, Unweighted Country Average, 1980-2014

Source: Borsch-Supan and Coile, 2018
Average Implicit Tax is Falling Over Time (Women)

ITAX by Year for Women, Unweighted Country Average, 1980-2015

Source: Borsch-Supan and Coile, 2018
Trends in Implicit Tax and Employment (U-Shape)

Average Employment Rate and ITAX, Men Ages 60-64, 1980-2015

Source: Borsch-Supan and Coile, 2018
Will Working Longer Trend Spread?

• Big contributors to recent increase in LFP at older ages in high- & upper-middle-income countries:
  • cohort changes in women’s LFP
  • pension reforms

• Might we expect these same factors to affect LFP in other countries?
No Surge in Female LFP in Poorer Countries

Female Labor Force Participation, Ages 25-54, by WB Income Group

Source: https://ilostat.ilo.org/data/
While Pension Reforms May Be Needed in Many Countries...

Figure 2: Global grades

Source: Melbourne Mercer Global Pension Index, 2019; grades based on pension adequacy, sustainability, and integrity.
...They Will Not Affect a Majority of the Workforce

Figure 18: Average coverage rates by region

Living Longer But Not Working Longer

• Extra years of LE = extra years of retirement in lower/lower-middle-income countries

• Options for financing old-age consumption
  • Self: labor earnings, savings
  • Family: multi-generational households, transfers
  • Employer: pensions
  • Government: public pensions, safety net programs

• Which source will finance extra retirement years?
  • Family? Strained by lower fertility rates
  • Employer? Only if strong formal sector & tradition
  • Government? Share of GDP on pensions <3% in all regions except Europe/OECD, but many competing priorities
Thank you!
References