The German pension system: Reforms and reform backlashes

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Conference on Pension Reforms in Europe, Louvain-la-Neuve, 07 November 2018
1. Where does Germany stand in Europe and the world? Demographics, labor force participation, adequacy

2. Basic system set-up: the pillars and their reforms

3. First pillar (PAYG) reforms: the role of automatic stabilizers and the current great backlash

4. Reforms in occupational and private pension pillars: the role of information, transparency and default/automatic enrolment
Old-Age Dependency

Population 65+/population 20-64

40:100

80:100
Demography

BabyBoom, BustBust transition

Past low fertility and longevity

High current fertility
Pensioner per Worker

2005: 0.30
2007: 0.33
2011: 0.39
2018: 1:3
2025: 1:2
2035: 0.50
2059: 0.55
Demography is not all:

More generous, less efficient

Early retirement

More efficient, less generous

Lack of adequacy old-age poverty

Financial sustainability vs social adequacy

Source: OECD

\[ R^2 = 0.49 \]
Old age labor force participation (Men 55-64)
Old-age poverty (OECD definition)

Source: OECD PAG 2017: Percentage with incomes less than 50% of median household disposable income
Net replacement rate for the median earner

Source: OECD pensions at a glance 2017

Main challenge: reform backlash
For about 3%:

**Pillar 0: Means-tested base pension: € 416 + housing**

For the „normal“ worker (about 85%):

**Pillar 1: Public PAYG system**
- Mandatory except civil servants and self-employed
- DB with adjustment for demography, point system
  
  € 1.396

**Pillar 2: Occupational FF, DB**
- Voluntary on ER side, then mandatory for EE

**Pillar 3: Indiv. accounts FF, DC**
- Voluntary, heavily subsidized „Riester pensions“
Switzerland: Redistribution through pensions rather than taxes
USA: Redistribution through progressive pensions
PAYG: Micro level

Pension benefits at time $t$ for an individual $i$ claiming benefits at age $R$: 

$$p_{t,i,R} = s_i \cdot q_t \cdot \omega_R$$

$s_i$ = earnings points linking the pension benefit to this individual’s earnings:

$$s_i = \sum_{i=0}^{R-1} \frac{w_i h_i}{wh}$$

$q_t$ = basic pension value for one earnings point at time $t$

defines replacement rate $r_t = \bar{s} \cdot q_t / w_t$

$\omega_R$ = adjustment factor linking pension benefit to claiming age $R$:

$$\omega_R = 1 + (R - \bar{R})\omega \quad \omega = 3.6\%/6\% \text{ before/after } \bar{R}$$
Actuarial adjustment factors at earliest age of claiming benefits

<table>
<thead>
<tr>
<th>Country</th>
<th>Current legislation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>4.2</td>
</tr>
<tr>
<td>Germany</td>
<td>3.6</td>
</tr>
<tr>
<td>France</td>
<td>5.0</td>
</tr>
<tr>
<td>Italy</td>
<td>2.3-2.9</td>
</tr>
<tr>
<td>Spain</td>
<td>6.0-7.5</td>
</tr>
<tr>
<td>Greece</td>
<td>6.0</td>
</tr>
<tr>
<td>Sweden</td>
<td>4.1-4.7</td>
</tr>
<tr>
<td>Finland</td>
<td>4.8</td>
</tr>
<tr>
<td>US</td>
<td>6.67</td>
</tr>
</tbody>
</table>

The table shows the adjustment factors for statutory early retirement. Many countries have additional pathways not included here. Source: OECD (2013) and Queisser and Whitehouse (2006).
1. **Reforms to prevent poverty**

   *Means-tested base pension* 2001

2. **Reforms for the „normal“ worker**

   **a. Pay-as-you-go pillar**
   - Retirement age: 2007
   - Life expectancy
   - Replacement rate
   - System: 2004
   - Dependency
   - NDC

   **b. Fully-funded pillars**
   - Mandatory (occupational, state)
   - Voluntary (individual): 2001
   - „Nudging“
1. Determination of either the replacement rate in a DB system or the contribution rate in a DC system:

- **DB system:** Fixed replacement rate $r_0$ such that $p_t = r_0 \cdot w_t = q_0 \cdot \bar{s}$
  $$\tau_t = r_0 \cdot NP_t / NW_t.$$  

- **DC system:** Fixed contribution rate $\tau_0$ for a cohort of workers.
  $$r_t = \tau_0 \cdot NW_t / NP_t$$

- **Hybrid DB/DC system:**
  $$p_t / p_{t-1} = w_t / w_{t-1} \cdot (DR_{t-1}/DR_t)^\alpha,$$
  with $DR_t = NP_t / NW_t$ dependency ratio and $0 \leq \alpha \leq 1$

2. PAYG budget equation
  $$\tau_t \cdot w_t \cdot NW_t = p_t \cdot NP_t$$
Bis 2030: Rentenversicherungsbericht 2015.
Ab 2030: Max-Planck-Institut für Sozialrecht und Sozialpolitik (2016)
Reform backlash: „Haltelinie“

Contribution rate (left) vs. Replacement rate (right)

- Contribution rate (left) decreases from 20% in 2012 to around 21% in 2022, then stabilizes around 23%.
- Replacement rate (right) starts at 48% in 2022 and increases slightly over the years, reaching just above 49% in 2060.
Tax costs of the “Haltelinien”

Federal budget 2018: € \textbf{333.5} bn, of this already now € \textbf{90} bn for pensions

Börsch-Supan et al. May 2018
Statutory eligibility age
3:2:1 adjustment to life expectancy

3:2:1 rule: for 3 years higher/lower life expectancy increase/decrease eligibility age by 2 years and add 1 year to retirement

Main challenge: reform backlash: „Rente mit 63“
Stabilizing the replacement rate

- Referenzszenario
- Koppelung an LE
- Anpassung Definition Standardrentner
- Koppelung an LE + Anp. Standardrentner

Börsch-Supan et al.
May 2018
1. Prevent poverty

Means-tested base pension

2. Reforms for the „normal“ worker

a. Pay-as-you-go pillar

<table>
<thead>
<tr>
<th>Retirement age</th>
<th>Replacement rate</th>
</tr>
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<tbody>
<tr>
<td>Life expectancy</td>
<td>System dependency</td>
</tr>
</tbody>
</table>

NDC

b. Fully-funded pillars

<table>
<thead>
<tr>
<th>Mandatory (occupational, state)</th>
<th>Voluntary (individual)</th>
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<tr>
<td>„Nudging“</td>
<td></td>
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Flags of countries: UK, France, Italy, Spain, Switzerland, Australia, Sweden, Germany.
Subsidy as percent of total (!) contribution

Note: Direct subsidy/the tax advantage as a percentage of savings in form of the new supplementary pensions. 
Source: Deutsche Bundesbank (2002).
Households with:

- **Riester pension**
- **Occupational pension**
- **Other individual accounts**

Source: Börsch-Supan et al 2015
**Are you eligible for a government subsidy?**

<table>
<thead>
<tr>
<th>Income quintile</th>
<th>Law (percentage)</th>
<th>Own assessment (percentage)</th>
<th>Diff (percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>27.54</td>
<td>62.15</td>
<td>34.61</td>
</tr>
<tr>
<td>2</td>
<td>28.38</td>
<td>50.76</td>
<td>22.38</td>
</tr>
<tr>
<td>3</td>
<td>29.73</td>
<td>47.78</td>
<td>18.05</td>
</tr>
<tr>
<td>4</td>
<td>22.4</td>
<td>41.47</td>
<td>19.43</td>
</tr>
<tr>
<td>5</td>
<td>21.35</td>
<td>41.89</td>
<td>20.54</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>26.27</strong></td>
<td><strong>50.58</strong></td>
<td><strong>24.31</strong></td>
</tr>
</tbody>
</table>

Source: Coppola and Lamla 2013
Huge variation in administrative costs

Administrative costs (basis points, rate of return reduction)

Number of contract

Börsch-Supan/Gasche
MEA-DP 2013
D. Pension funds’ asset allocation for selected investment categories, 2013

- Equities
- Bills and bonds
- Cash and deposits
- Other

% of total

USA, AUS, BEL, CAN, GBR, ITA, JPN, ESP, ISR, GRC, DEU, SVK, CZE, KOR
Germany’s ageing challenges are large
- Old-age dependency almost as large as Mediterranean countries/Japan
- Additional funding too late for the baby boomers

Many good reform ideas in “Agenda 2010”
- Political challenges of the sustainability vs. adequacy debate
- Sustainability factor: Index benefits to dependency ratio
- Basic pension, limits to dampen anxiety
- [Automatic] adjustment of retirement age to life expectancy

But serious backlash: New eligibility age 63, new “Haltelinien”

Voluntary second and third pillar took up but still serious problems
- Wide-spread lack of information: employees and employers
- Markets failed to weed out costly pension plans