Projecting future needs
- long term public expenditure projections of for EU Member States

Mandeep Bains*

*The views expressed in this presentation are those of the author and do not necessarily reflect those of the European Commission or its policy.
1. The projections exercise - institutional context and background.
2. The common demographic projection.
3. Ageing and expenditure on health and long-term care.
4. The main projections and the results.
5. Sensitivity of results.
1. The projections exercise
To measure the *budgetary* implications:

- pensions;
- health and long-term care;
- other age-related expenditures; and
- revenues ...

but also the *economic* implications of ageing populations ...
Aim of the projections exercise

- long-term public expenditure projections;
- comparable estimates; and
- for all Member States.
Scope of the projections

- health and long-term care expenditure separately;
- 2000-2050; and
- public expenditure only.
2. The common demographic projection
The assumptions for the demographic projection

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2050</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fertility rate</strong></td>
<td>1.5</td>
<td>1.7</td>
</tr>
<tr>
<td><strong>Life expectancy</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>male</em></td>
<td>75</td>
<td>80</td>
</tr>
<tr>
<td><em>female</em></td>
<td>81</td>
<td>85</td>
</tr>
<tr>
<td><strong>Migration (millions)</strong></td>
<td>660</td>
<td>630</td>
</tr>
</tbody>
</table>

*Eurostat baseline scenario*
So what is the outlook?

Total population falls from 375 million in 2000 to 364 million in 2050.

This fall in the population starts after 2020.

Number of persons of working age (15 to 64) from 246 million in 2015 to 203 million in 2050.
Number of elderly persons (aged 65+) increases by 42 million in the coming decades.

Number of very old (aged 80+) will triple from 14 million to 38 million.
Very elderly population:

Elderly population:

Working age population:

Very elderly population:

Millions:

Years:

So what is the outlook?

But, big differences between countries:

Large falls in population Italy (17%), Spain (11%) and Germany (8%) by 2050.

Population growth in others: France (5%), the UK (4%), Luxembourg (29%) and Ireland (26%) by 2050.
BUT, there is considerable uncertainty over very long-term projections.
3. Ageing and expenditure on health and long-term care.
Public expenditure on health per head

Average expenditure per head expressed as a share of GDP per capita (%)


United Kingdom
France
Germany
Austria
Belgium
Denmark
Spain
Sweden
Netherlands
Italy
Finland
United Kingdom

time (years)
Public expenditure on health per head

Average expenditure per head expressed as a share of GDP per capita (%)

Age groups

Belgium MALE

Sweden MALE

Belgium FEMALE

Sweden FEMALE
Public expenditure on long-term care per head

Average expenditure per head expressed as a share of GDP per capita (%)

Age groups
Public expenditure on long-term care per head
Ageing and aggregate expenditure

This pattern of expenditure across ages combined directly with the future population structure initially fuelled concerns about huge possible increases in expenditure.

However, the situation is more complex.
Ageing and aggregate expenditure

For health expenditure:

- the profiles can reasonably be expected to change over time; notably
- while people are living longer, they are also enjoying longer “healthy lives”; and
- empirical research reveals that ageing has not been a significant driver of health expenditure.
For **long-term care** expenditure there are additional sources of uncertainty:

- trends in disability;
- future changes in social models for care; and
- the share of institutional care versus care in the home.
So “naïve” projections made matching these expenditure profiles to future demographic projections would carry both significant *upside* and *downside* risks.
4. The main projections and the results
How were the projections run?

Using current age- and sex-specific expenditure estimates matched to future demographic projections

... despite their shortcomings!!
Two simple cost assumptions were used:

1. that expenditure per head grows at the same rate as GDP per capita each year; and

2. that expenditure per head grows at the same rate as GDP per worker (i.e. productivity)…

… but the results over the long-term were quite similar.
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td><strong>B</strong></td>
<td>6.1% 2.1 - 2.4</td>
<td>5.3% 1.3 - 1.5</td>
<td>0.8% 0.8</td>
<td>0.3% 0.6</td>
</tr>
<tr>
<td><strong>DK</strong></td>
<td>8.0% 2.7 - 3.5</td>
<td>5.1% 0.7 - 1.1</td>
<td>3.0% 2.1 - 2.5</td>
<td>2.3% 2.4</td>
</tr>
<tr>
<td><strong>D (1)</strong></td>
<td>5.7% 1.4 - 2.1</td>
<td>4.8% 1.6 - 1.7</td>
<td>1.5% 1.5</td>
<td>1.3% 1.7</td>
</tr>
<tr>
<td><strong>EL (1)</strong></td>
<td>4.8% 1.6 - 1.7</td>
<td>5.0% 1.5 - 1.7</td>
<td>2.5% 2.5</td>
<td>2.0% 2.0</td>
</tr>
<tr>
<td><strong>F</strong></td>
<td>6.9% 1.7 - 2.5</td>
<td>6.2% 1.2 - 1.9</td>
<td>0.7% 0.5</td>
<td>0.3% 0.6</td>
</tr>
<tr>
<td><strong>IRL (2)</strong></td>
<td>6.6% 2.5</td>
<td>5.9% 2.3</td>
<td>0.7% 0.2</td>
<td>0.4% 0.4</td>
</tr>
<tr>
<td><strong>I</strong></td>
<td>5.5% 1.9 - 2.1</td>
<td>4.9% 1.5 - 1.7</td>
<td>0.6% 0.4</td>
<td>0.2% 0.2</td>
</tr>
<tr>
<td><strong>NL</strong></td>
<td>7.2% 3.2 - 3.8</td>
<td>4.7% 1.0 - 1.3</td>
<td>2.5% 2.2</td>
<td>2.3% 2.3</td>
</tr>
<tr>
<td><strong>A</strong></td>
<td>5.8% 2.8 - 3.1</td>
<td>5.1% 1.7 - 2.0</td>
<td>0.7% 1.0</td>
<td>0.7% 1.1</td>
</tr>
<tr>
<td><strong>P (1)</strong></td>
<td>5.4% 0.8 - 1.3</td>
<td>5.1% 0.8 - 1.3</td>
<td>1.6% 1.7</td>
<td>1.3% 1.3</td>
</tr>
<tr>
<td><strong>FIN</strong></td>
<td>6.2% 2.8 - 3.9</td>
<td>4.6% 1.2 - 1.8</td>
<td>1.6% 1.7</td>
<td>1.3% 1.7</td>
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<tr>
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<td>8.8% 3.0 - 3.3</td>
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<td>2.8% 2.0</td>
<td>2.5% 2.5</td>
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<tr>
<td><strong>UK</strong></td>
<td>6.3% 1.8 - 2.5</td>
<td>4.6% 1.0 - 1.4</td>
<td>1.7% 0.8</td>
<td>1.3% 1.0</td>
</tr>
<tr>
<td><strong>EU (weighted average) (3)</strong></td>
<td>6.6% 2.2 - 2.7</td>
<td>5.3% 1.3 - 1.7</td>
<td>1.3% 0.9</td>
<td>1.0</td>
</tr>
</tbody>
</table>

**Notes:**
1. Data for *D* and *EL* refers to the years 1995-2050.
2. Data for *IRL* refers to the years 1992-2050.
3. Weighted average for the EU.
Results of projections ...

- increases in total public expenditure on care in the range of 1.7 to 3.9 per cent of GDP;
- largest increases for Member States with high spending on long-term care; and
- increases for long-term care of around 70% and of 30-40 % for health care.
increases in the range of 0.7 to 2.3 percentage points of GDP; and

three Member States, (Germany, Ireland and Austria) see increases of around or above 2 percentage points of GDP.
increases in the range of 0.2 to 2.5 percentage points of GDP;

two distinct groups of Member States - countries with a tradition of formal care have high projected increases;

but, other countries may not escape high actual increases in the future.
5. Sensitivity of results.
### Sensitivity to alternative demographic assumptions

<table>
<thead>
<tr>
<th></th>
<th>Baseline scenario</th>
<th>High life expectancy scenario</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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*Eurostat*
For health care:
- the additional pressure is not very great - between 0.1 and 0.6 pp of GDP by 2050.

For long-term care:
- for high-spending countries, the increase could be up to 1.2 pp by 2050; but
- much lower for low-spending countries.
### Sensitivity to alternative cost assumptions

<table>
<thead>
<tr>
<th></th>
<th>Increases in expenditure by 2050</th>
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<tbody>
<tr>
<td></td>
<td><strong>Health care</strong></td>
</tr>
<tr>
<td>Low cost growth variant</td>
<td>+0.1 to +0.9</td>
</tr>
<tr>
<td>Baseline</td>
<td>+0.8 to +1.7</td>
</tr>
<tr>
<td>High cost growth variant</td>
<td>+1.6 to +2.7</td>
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</table>
Using past cost trends to project future expenditures - Belgium
Using estimates of health expenditure related to proximity of death
A scenario of improving health for long-term care projections
The *baseline projections* show that:

- the impact of ageing on public expenditure could be significant;
- for most countries increases in health expenditure are not large in relative terms, unlike increases in long-term care;
but, there are upside and downside risks ...

↑ the impact of other cost drivers;

↓ alternative models of the relationship between age and expenditure;

and the sensitivity analyses show that these risks are significant.
For a copy of the report

http://europa.eu.int/comm/economy_finance/epc/epc_ageing_en.htm