Economic and Fiscal Impacts of population Ageing in Canada

Presentation to the CEA-CDESG Panel
Calgary
June 9, 2012

Mostafa Askari
Assistant Parliamentary Budget Officer,
Economic and Fiscal Analysis
The Demographic Transition

Source: Office of the PBO; Statistics Canada
1. Potential, or trend, GDP is projected from the supply side of the economy using the following identity:

\[ Y = L \times \frac{Y}{L} \]

where: \( Y \) is real GDP, \( L \) is total labour input and \((Y/L)\) is labour productivity

2. Labour input is a function of the size of the working age population (LFPOP), the aggregate employment rate (LFER) and average weekly hours worked by those employed (AHW)

\[ L = \text{LFPOP} \times \text{LFER} \times \text{AHW} \times 52 \]

3. Labour productivity growth imbeds technological change and capital deepening
Working Age Population Growth, 1977 to 2085
Employment Rate by Age

(Per cent)

Females

Males

15 20 25 30 35 40 45 50 55 60 65 70+
Aggregate Employment Rate, 1976 to 2085
Average Weekly Hours Worked, 1976 to 2085

Trend
Actual
Projection
Average Annual Real GDP Growth

(Per cent)

<table>
<thead>
<tr>
<th>Period</th>
<th>Total hours worked</th>
<th>Labour productivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1962-1976</td>
<td>5.0</td>
<td></td>
</tr>
<tr>
<td>1977-2010</td>
<td>2.6</td>
<td></td>
</tr>
<tr>
<td>2011-2086</td>
<td>1.8</td>
<td></td>
</tr>
</tbody>
</table>

- Total hours worked
- Labour productivity

Provincial-Territorial Government Health Expenditures by Age Group, 1998 and 2008

(Dollars per capita)
Provincial-Territorial Health Spending
(Per cent of GDP)
Federal Elderly Benefits

(Per cent of GDP)

Inflation-only indexation
Baseline

2010-11
Consolidated Federal and Provincial-Territorial Program Spending

(Per cent of GDP)
Projection of long-term operating balance and debt-to-GDP ratio
Fiscal Gap Estimates

(Per cent GDP)

Consolidated Provincial-Territorial Federal

2.4 2.9 -0.4 -1 0 1 2 3 4

2.4 2.9 -0.4