Productivity Growth and Fiscal Adjustment

Two Policy Challenges Driven by Population Aging

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The Basic Demographics of Population Aging
A declining fertility rate has reduced the population growth rate...

Population Growth, 1950-2040

Current fertility rate ~ 1.6 children per woman

... which inevitably leads to population aging.

Distribution of the Population By Sex and Age Group


2008, Population: 33.3 M

2040, Population: 41.2 M

Aging will dramatically reduce the working-age share of the population ...

Share of people aged 15-64 in Total Population

(Percent)

Entry of the baby boom generation into the labour market.

Baby boomers gradually reaching retirement age.

... and will also cause a shift toward groups with lower LF participation rates ...
... resulting in a reduction in the aggregate labour-force participation rate.

Aggregate LF Participation Rate

Historical  Projected

75
70
65
60
55

Source: Statistics Canada and Finance Canada calculations.
The Challenge of Productivity Growth
GDP/POP = (GDP/E) \times (E/LF) \times (LF/POP)

Past 40 years

Next 40 years
Decomposing past and future growth:

Decomposition of per capita Real GDP Growth

Historical

- GDP/POP
- GDP/E
- E/LF
- LF/POP

Projected

1971-2008

2009-2040

Detail: Productivity is usually measured as GDP per hour whereas here it is measured more simply as GDP per worker.

Source: Finance Canada calculations consistent with January 2009 average private sector forecast
Policies to promote productivity growth?

1. A beneficial overall economic environment.

2. “Extra” policies are centered around:
   - quality of labour
   - quantity and quality of capital
   - innovation and technical knowledge
   - competition, role of FDI

3. The costs of productivity policies:
   - direct fiscal costs
   - winners and losers
Canada ranks highly in terms of the share of population with post-secondary education:

Percentage of 25-64 population in 2007 with:

**Post-secondary education**
- Canada
- Japan
- U.S.
- U.K.
- France
- Germany
- Italy

**University education**
- U.S.
- Canada
- Japan
- U.K.
- France
- Germany
- Italy

Source: OECD Education at a Glance (2009)
Canada is less intensive in the use of machinery and equipment (which often embodies new technologies):

Capital-to-output ratio in Canada as a percentage of U.S. level (2003)

Source: Baldwin et al. (2008)
Canada leads the funding of higher education R&D but lags in terms of business expenditure on R&D.

Higher education R&D as a percentage of GDP (2006*)

- Canada
- U.K.
- Japan
- Germany
- France
- U.S.
- Italy

Business sector R&D as a percentage of GDP (2006*)

- Japan
- U.S.
- Germany
- France
- U.K.
- Canada
- Italy


Note: * Data for 2006, or latest available year
The Challenge of Fiscal Adjustment
Part 1 of the demographic “fiscal squeeze”

Over the next 40 years there will be:

- reduced growth in real per capita GDP
  (for any given rate of productivity growth)

- reduced growth in per capita tax base
  (growth will be cut roughly in half from past 40 years!)
Part 2 of the demographic “fiscal squeeze”

1. Need for more public spending:
   - Health-Care Spending
   - Elderly Benefits

2. Offsetting effects expected to be small:
   - Education, children’s benefits and some social services
Not surprisingly, per capita health-care expenditures rise rapidly in later years of life ...

Per Capita Provincial-Territorial **Public** Health Spending by Age Group, 2007

(Thousands of dollars)

Source: CIHI.
... but “other factors” (than aging) will also contribute to rising health-care costs.

Increase in Public Health Spending

(3 percent of GDP)

Source: OECD cost pressure scenario and author's calculations.

FYI: Total public spending on health care increased from 5.4 to 7.5 percent of GDP between 1975 and 2008.
Rising elderly benefits will also put upward pressure on government spending as the population ages.

Increase in Elderly Benefits (~ OAS + GIS)
(percent of GDP)

Taken together, health and elderly benefits will add roughly 3.5 percentage points of GDP to public spending between 2020 and 2040!

Source: Chief Actuary (scenario: benefits rates indexed at inflation plus 60% of the assumed real wage growth) and author's calculations.
Federal-Provincial Transfers

1. Most future growth will be in provincial spending areas...

2. ... but there will be no “automatic” re-allocation of tax revenues toward the provinces.

3. ➔ increasing demands for fed-prov transfers.
Difficult Fiscal Choices

1. Restrain spending growth
   - especially on non-age-related items?

2. Increase tax rates (or the “tax burden”)

3. Defer the problem
   ➔ increase borrowing (debt)
Can these costs be absorbed **purely** through debt?

Spending and Revenue Paths From 2020 to 2040
(percentage points of GDP)

~ 35 p.p. Increase in FPT Debt-to-GDP Ratio

Health Spending and Elderly Benefits (3.5 p.p.)

Source: OECD, CIHI, and author's calculations.
For Canadian governments, this would mean a return to the high-debt situation of the mid 1990s.

Some **genuine** fiscal adjustment will be needed!
Final Remarks

1. The coming demographic forces will drive two policy agendas in Canada:
   
   1. The need for enhanced productivity growth
   2. The need to make difficult fiscal adjustments

2. Productivity growth: ➔ find cost-effective policies.

3. Fiscal adjustment: ➔ identify our fiscal priorities.

That’s our job for the near future!