

Productivity Growth and Fiscal Adjustment

Two Policy Challenges Driven by Population Aging

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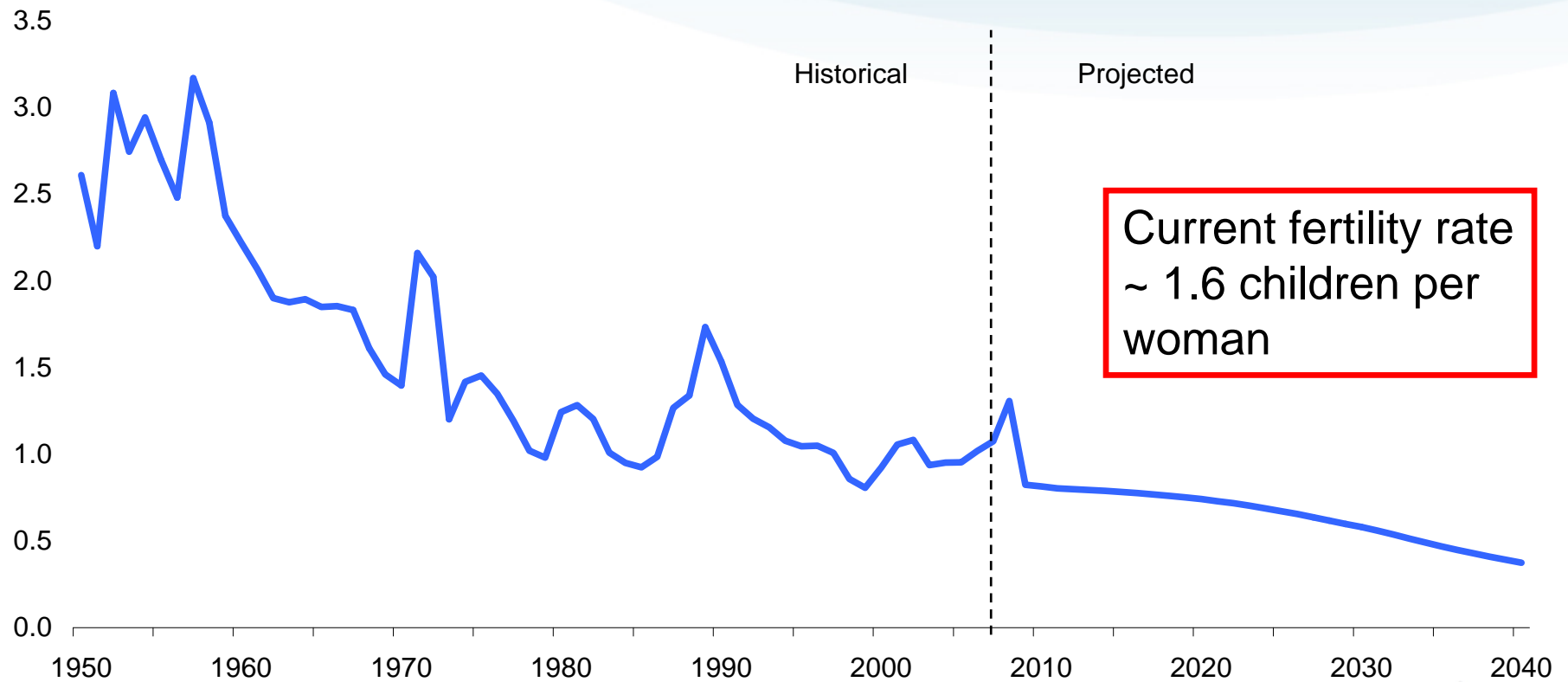
The Basic Demographics of Population Aging



A declining fertility rate has reduced the population growth rate ...

Population Growth, 1950-2040

(percent)

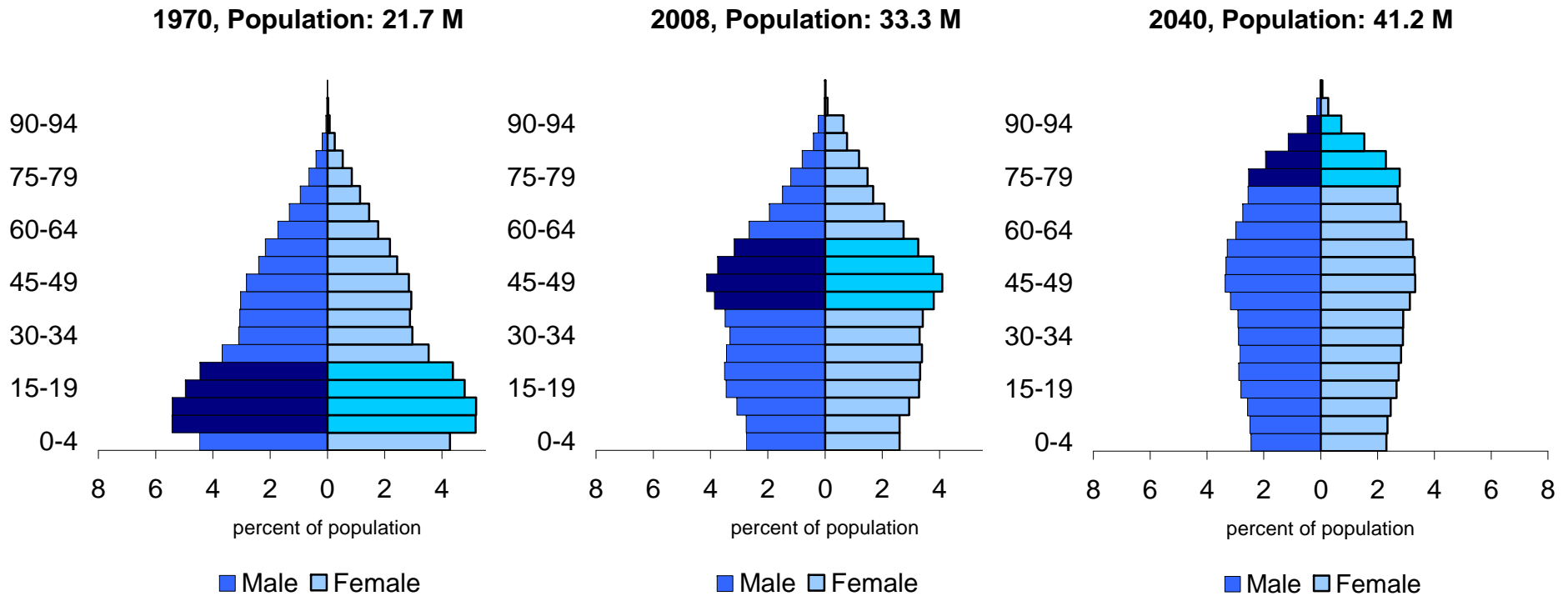


Source: Statistics Canada and Office of the Chief Actuary's 23rd Actuarial Report on the Canada Pension Plan.



... which inevitably leads to population aging.

Distribution of the Population By Sex and Age Group



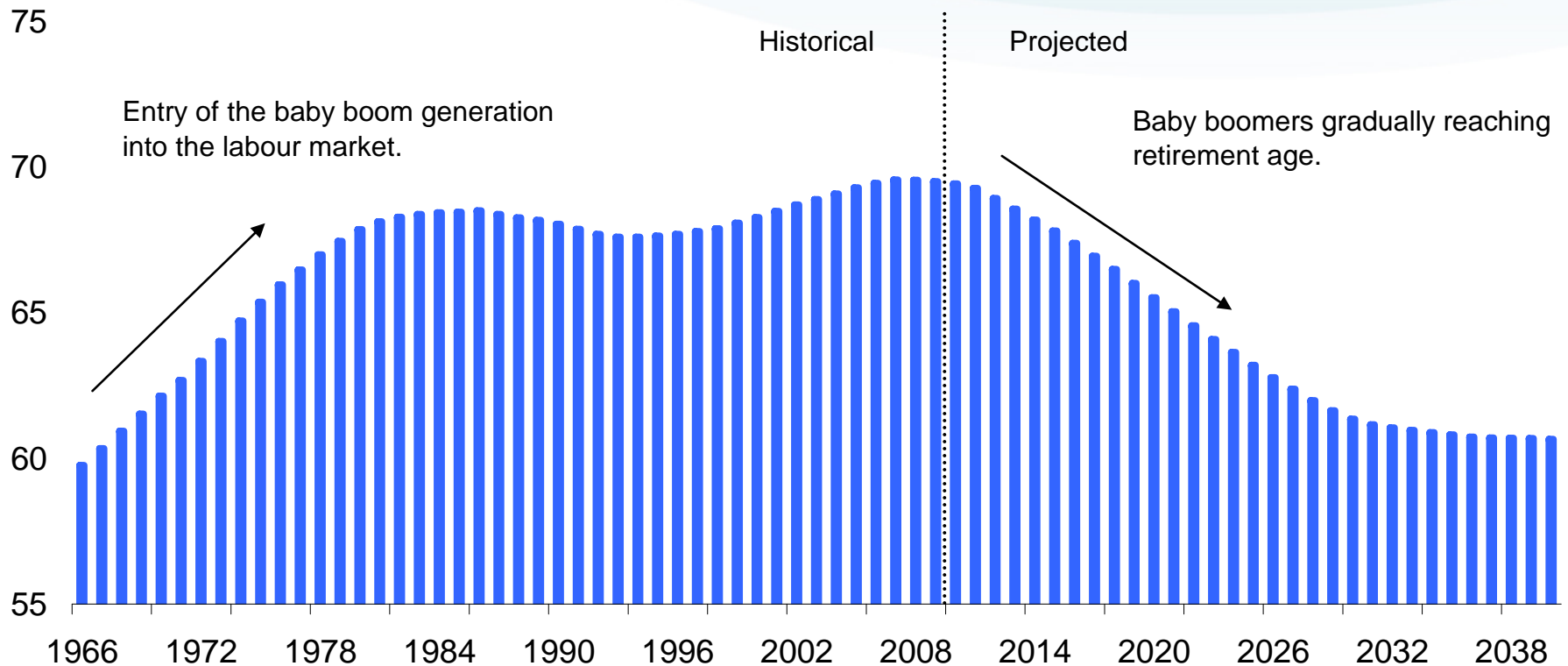
Source: Office of the Chief Actuary's 23rd Actuarial Report on the Canada Pension Plan and Statistics Canada.



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

Share of people aged 15-64 in Total Population

(percent)



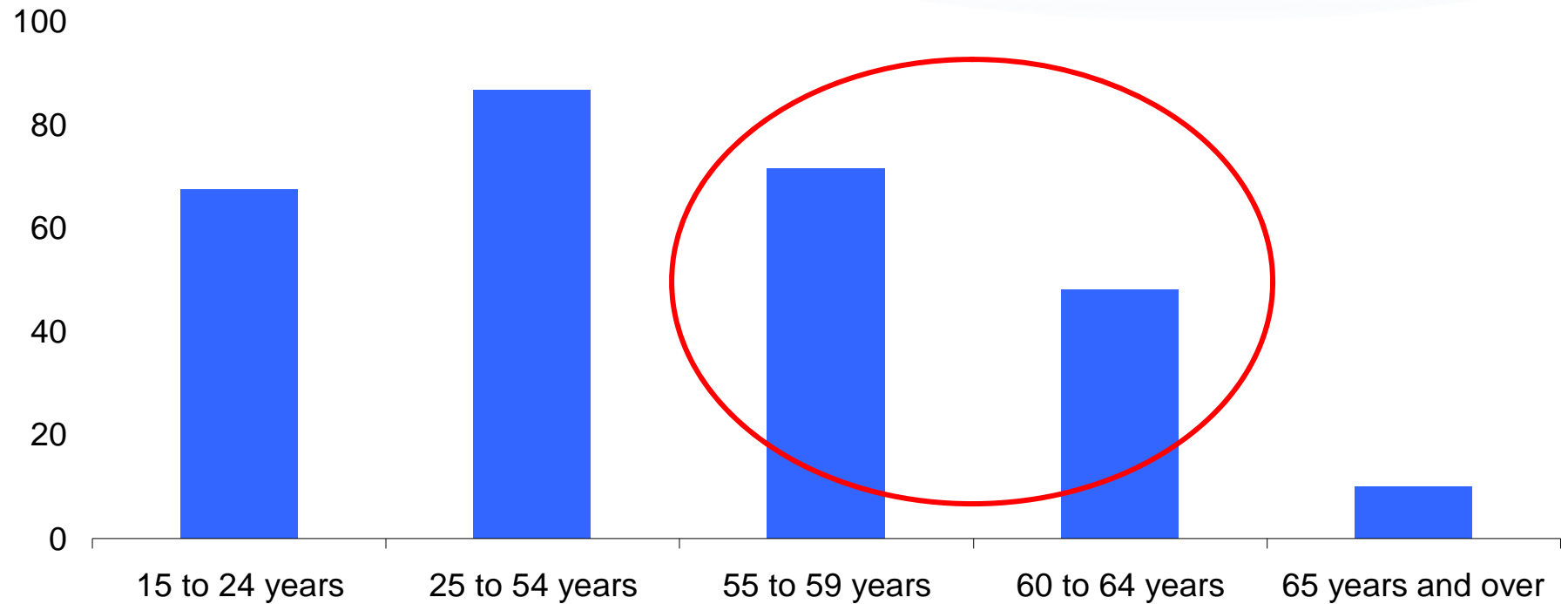
Source: Office of the Chief Actuary's 23rd Actuarial Report on the Canada Pension Plan.



... and will also cause a shift toward groups with lower LF participation rates ...

LF Participation Rate by Age Group, 2008

(percent)



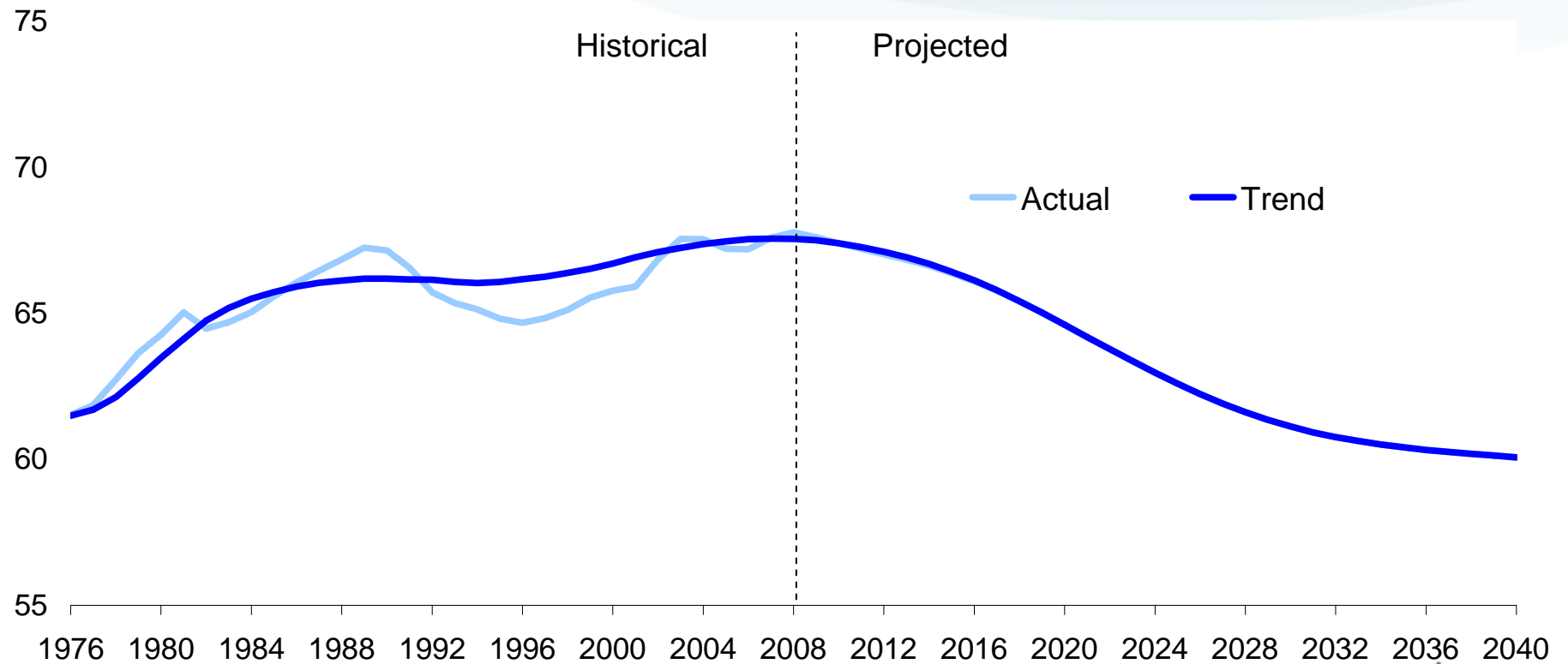
Source: Statistics Canada.



... resulting in a reduction in the aggregate labour-force participation rate.

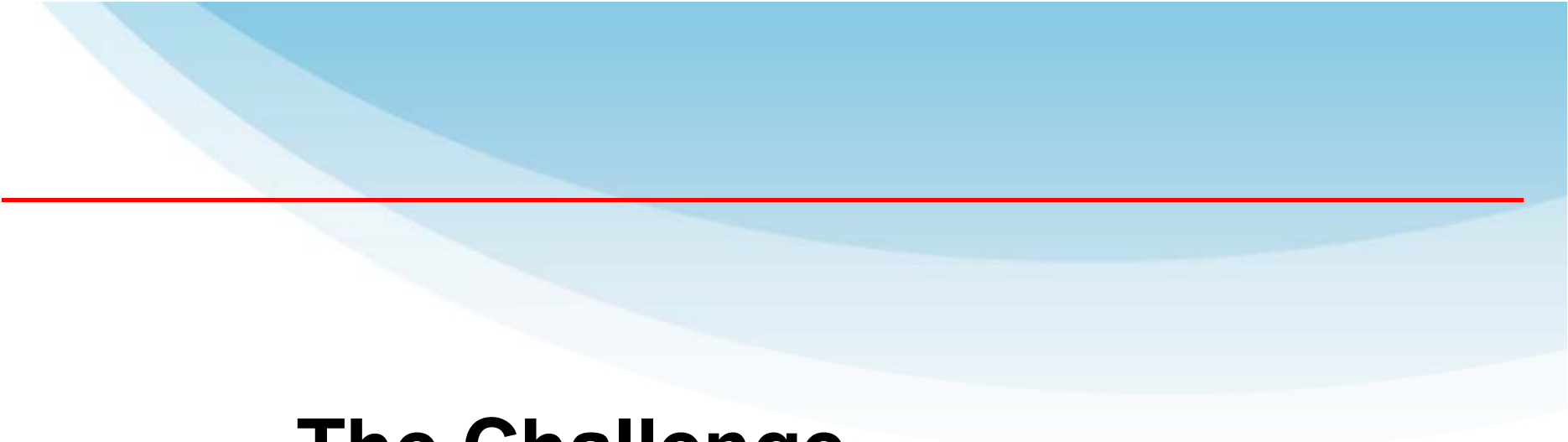
Aggregate LF Participation Rate

(percent)



Source: Statistics Canada and Finance Canada calculations.





The Challenge of Productivity Growth



$$\text{GDP/POP} = (\text{GDP/E}) \times (\text{E/LF}) \times (\text{LF/POP})$$

Past 40 years

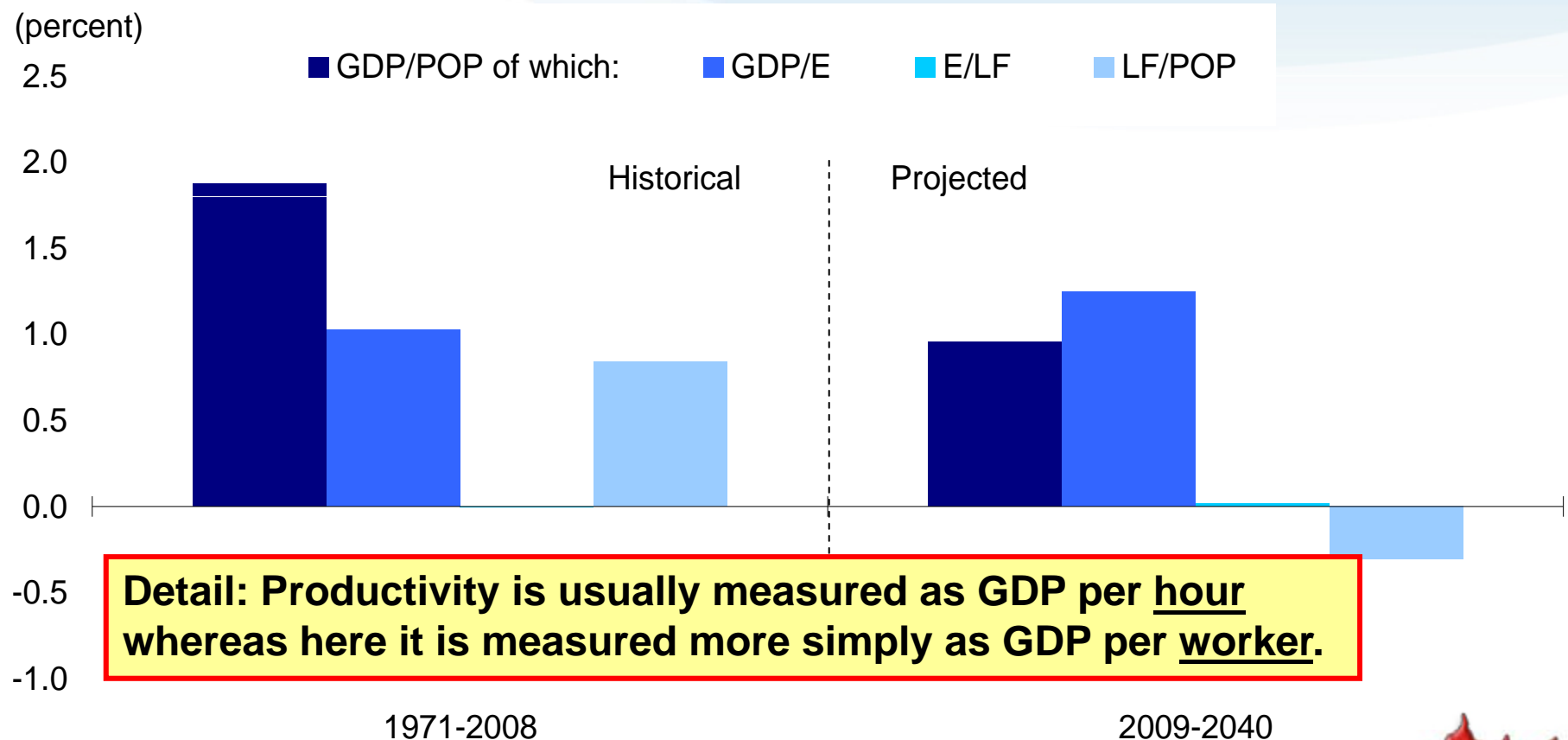


Next 40 years



Decomposing past and future growth:

Decomposition of per capita Real GDP Growth



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:

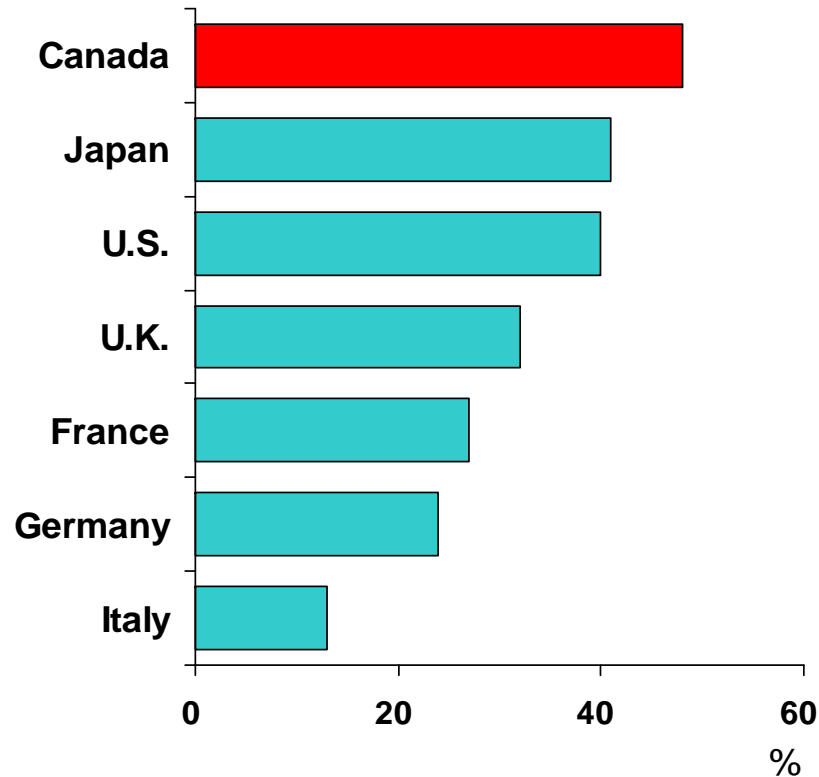
- direct fiscal costs
- winners and losers



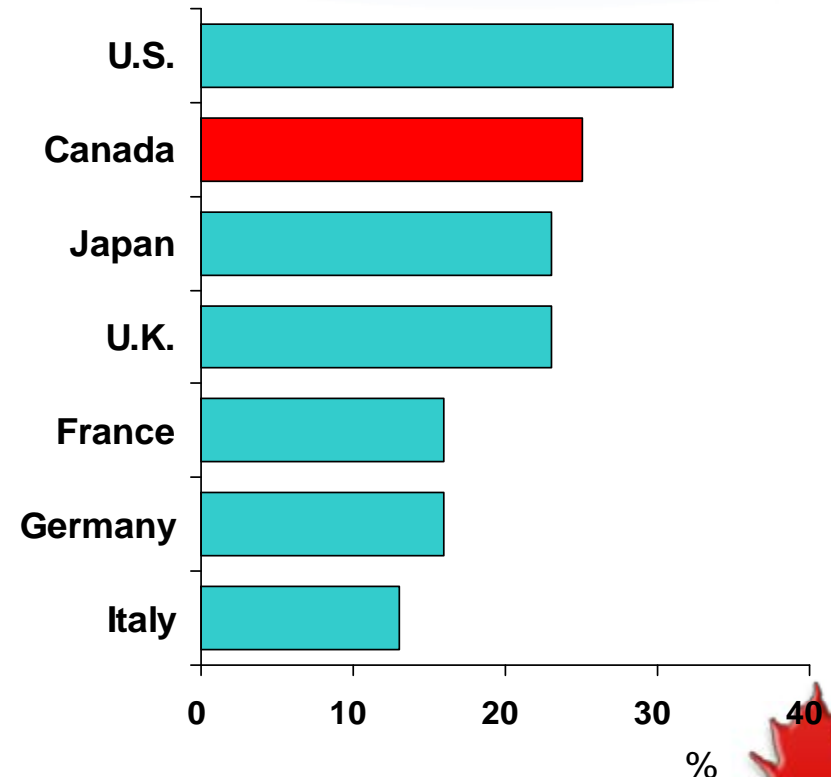
Canada ranks highly in terms of the share of population with post-secondary education:

Percentage of 25-64 population in 2007 with:

Post-secondary education



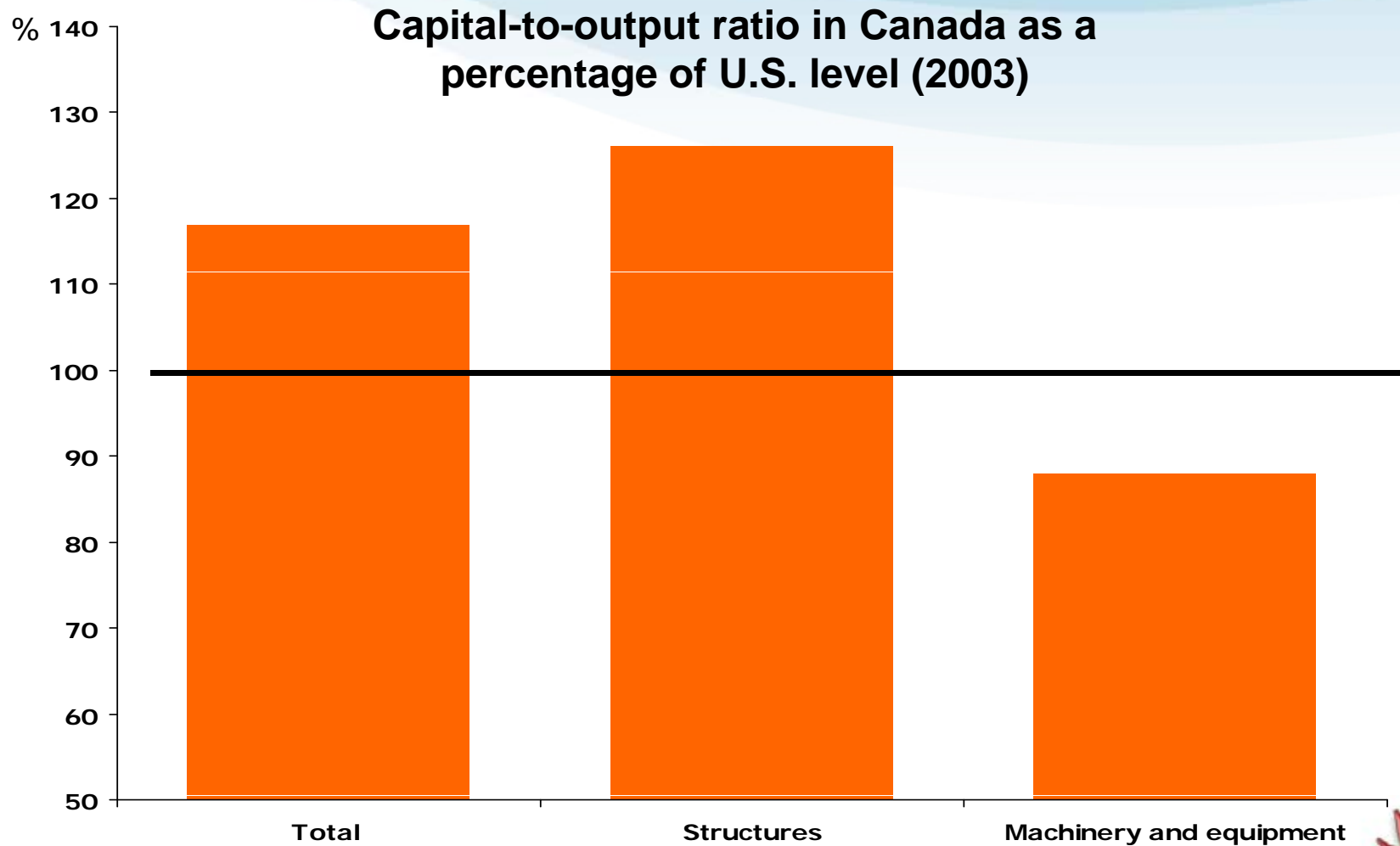
University education



Source: OECD Education at a Glance (2009)



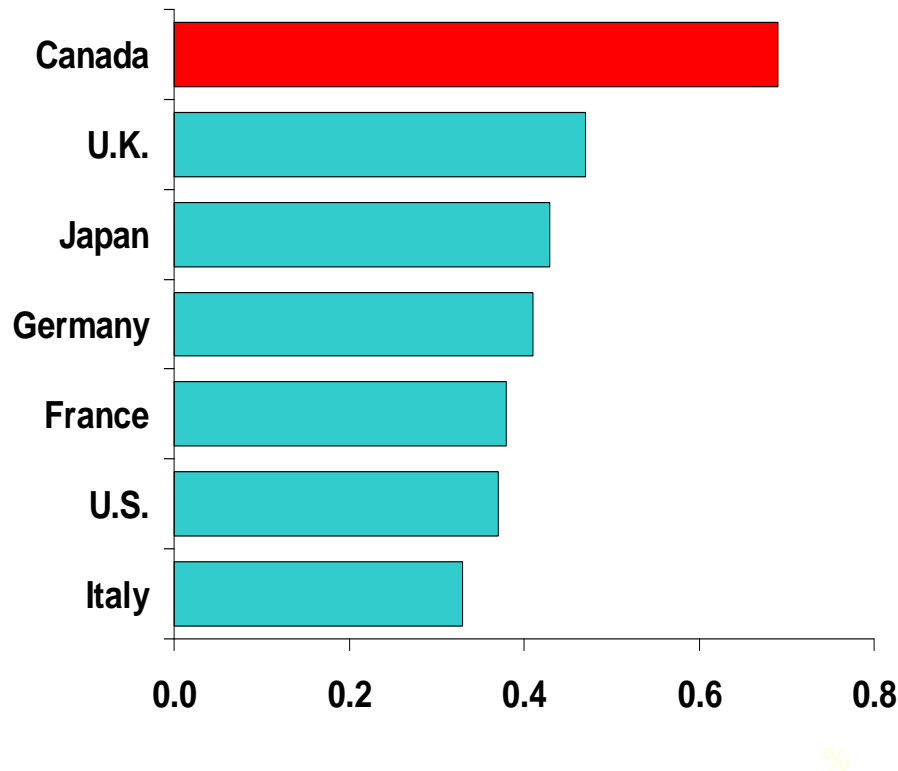
Canada is less intensive in the use of machinery and equipment (which often embodies new technologies):



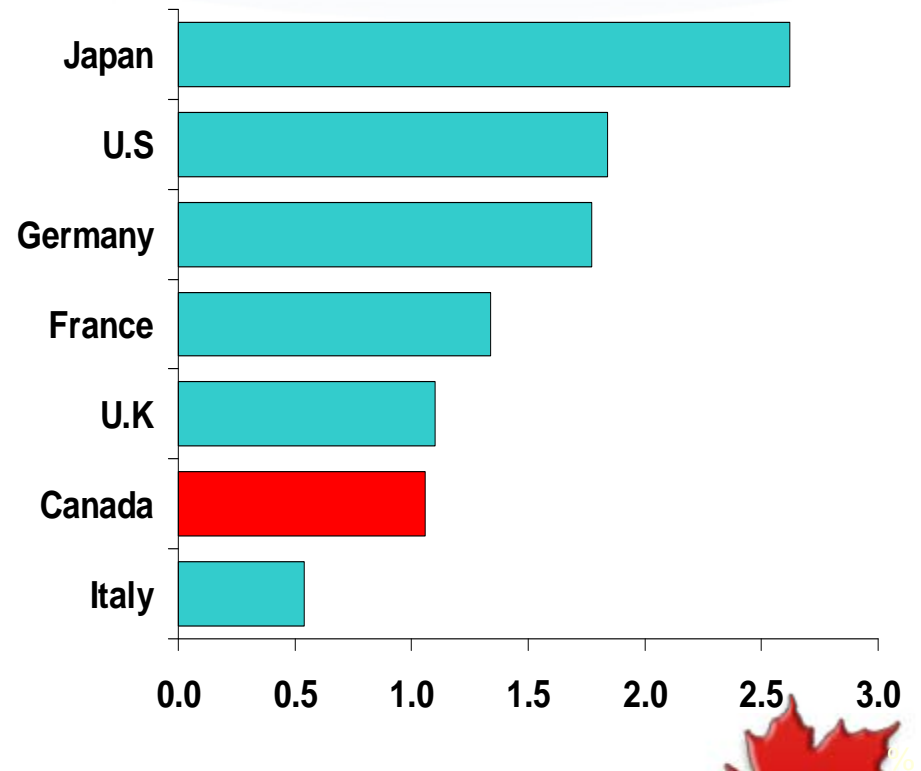
Source: Baldwin et al. (2008)

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*)



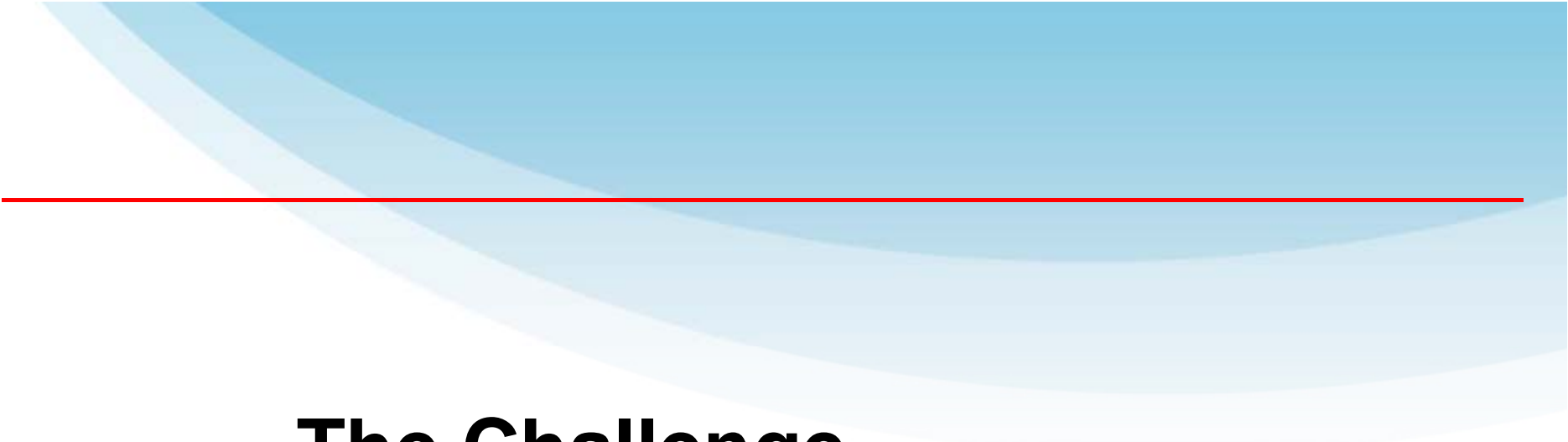
Business sector R&D as a percentage of GDP (2006*)



Source: OECD Science, Technology and Industry Outlook (2008)

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:

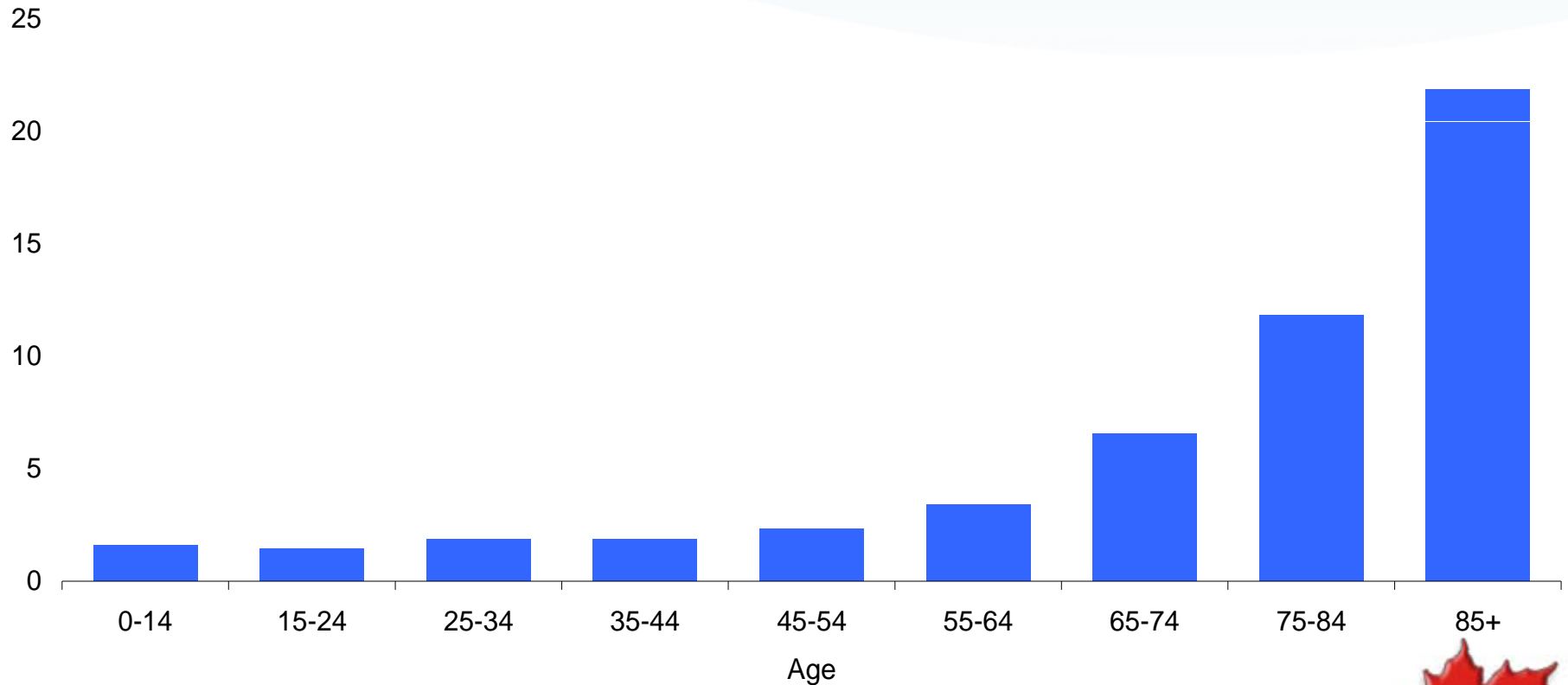
- Education, children’s benefits and some social services



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)



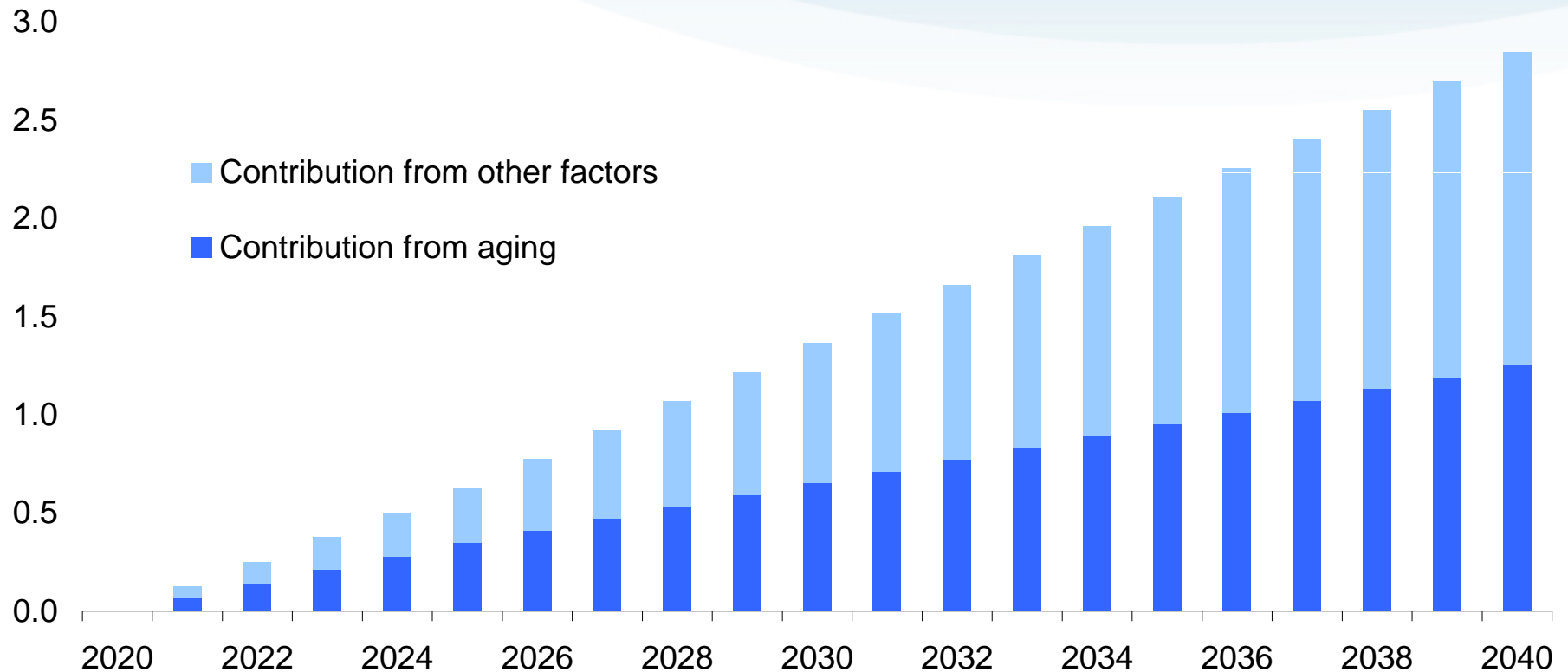
Source: CIHI.



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

Increase in **Public** Health Spending

(percent of GDP)



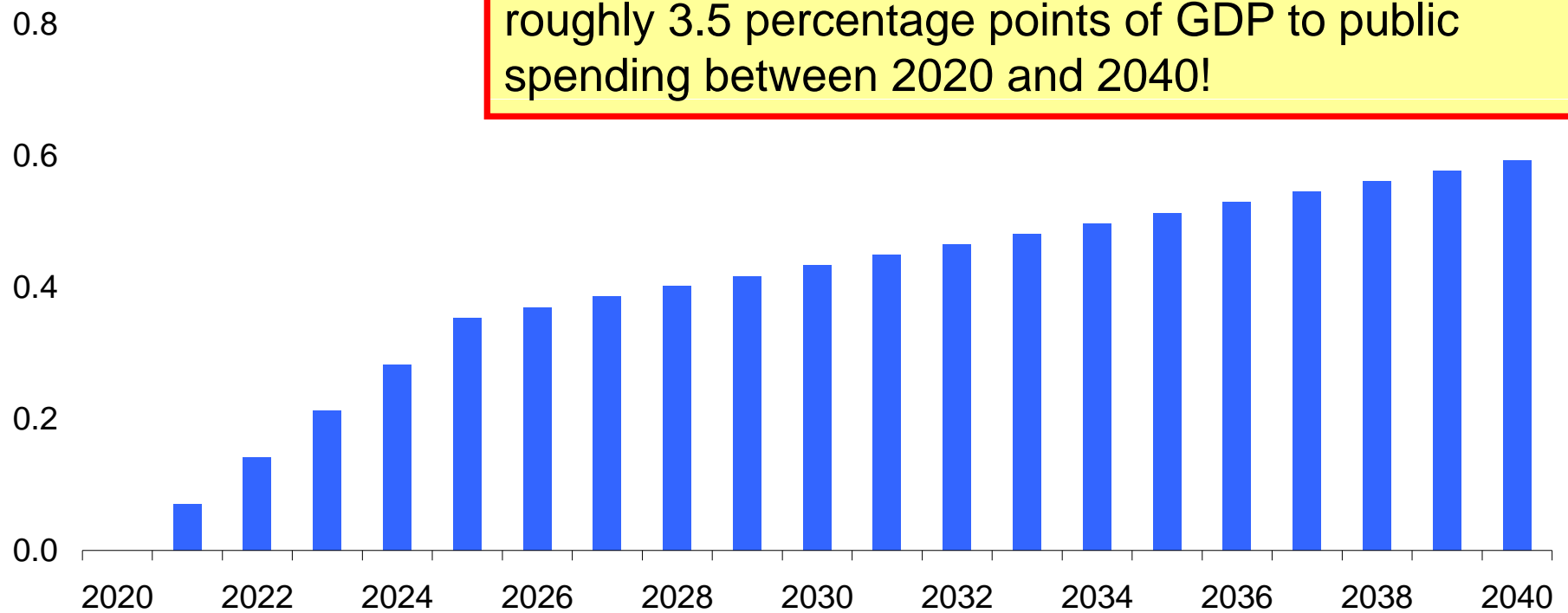
Source: OECD cost pressure scenario and author's calculations.

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.



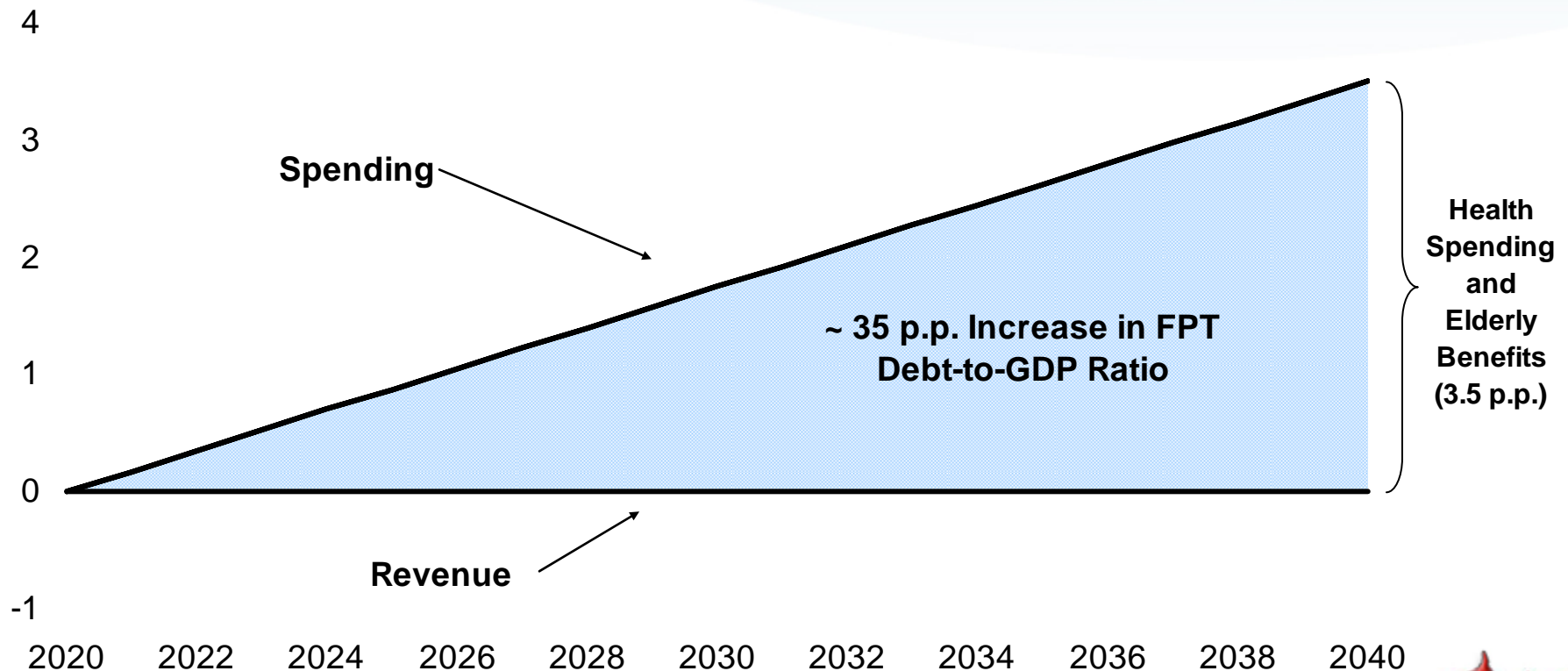
Difficult Fiscal Choices

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)



Source: OECD, CIHI, and author's calculations.

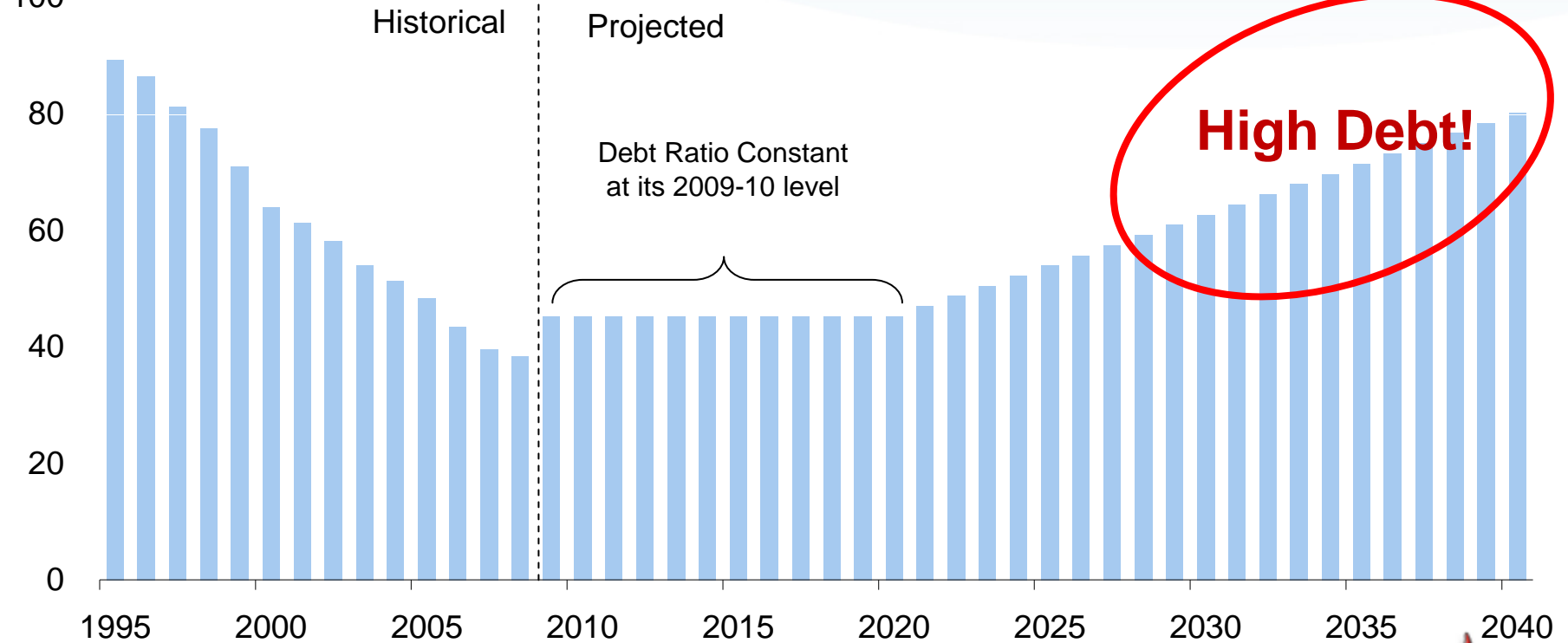


For Canadian governments, this would mean a return to the high-debt situation of the mid 1990s.

FPT Debt-to-GDP Ratio

(percent)

100



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!

