

Some Macroeconomic Challenges from Population Aging

Christopher Ragan

Department of Economics

McGill University

and

David Dodge Chair in Monetary Policy

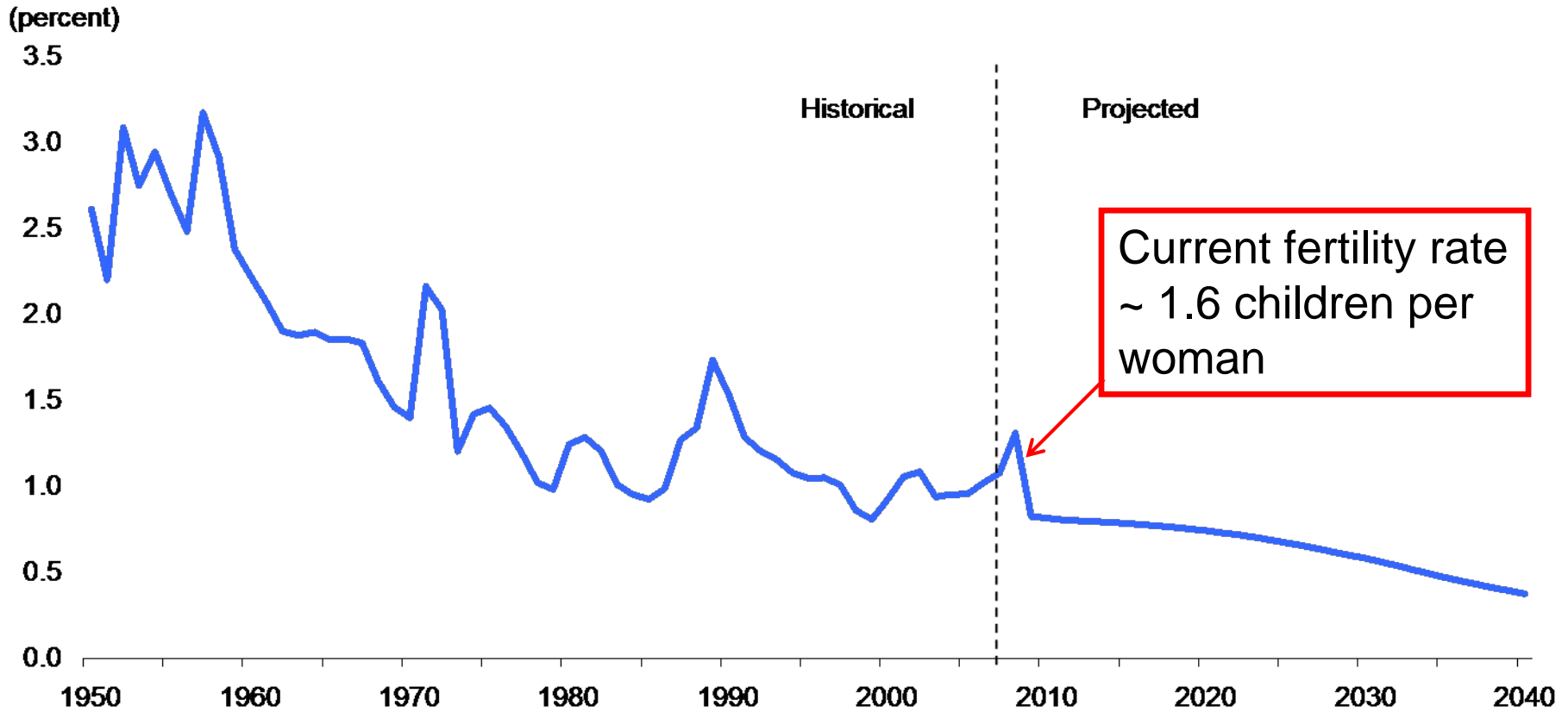
C.D. Howe Institute

Queen's University, August 2011

The Basic Demographics of Population Aging

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

Population Growth, 1950-2040

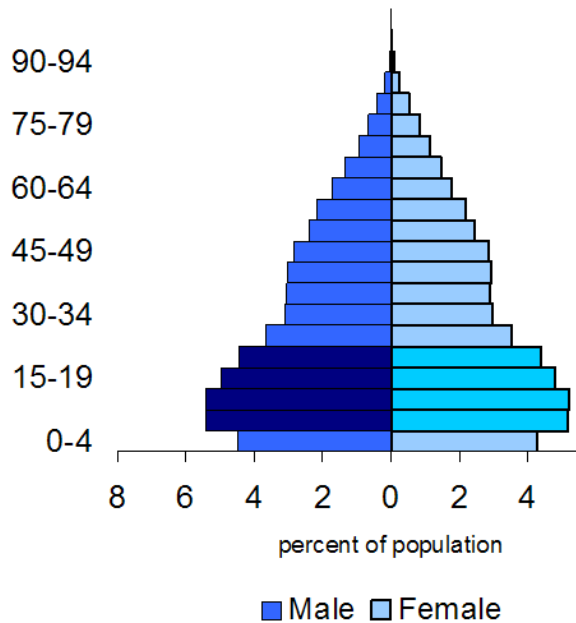


Source: Statistics Canada

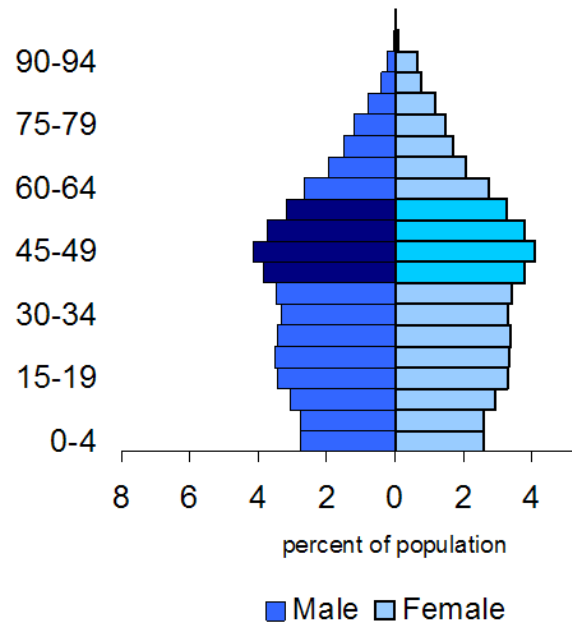
... which inevitably leads to population aging.

Distribution of the Population By Sex and Age Group

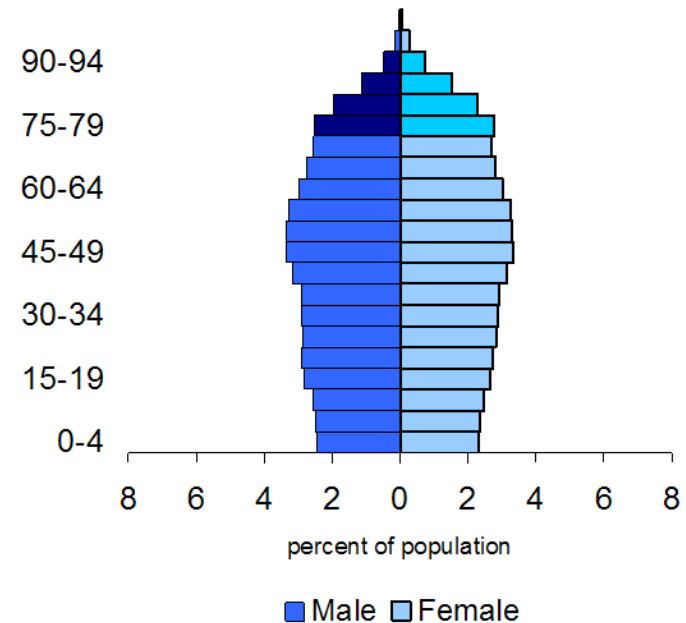
1970, Population: 21.7 M



2008, Population: 33.3 M



2040, Population: 41.2 M

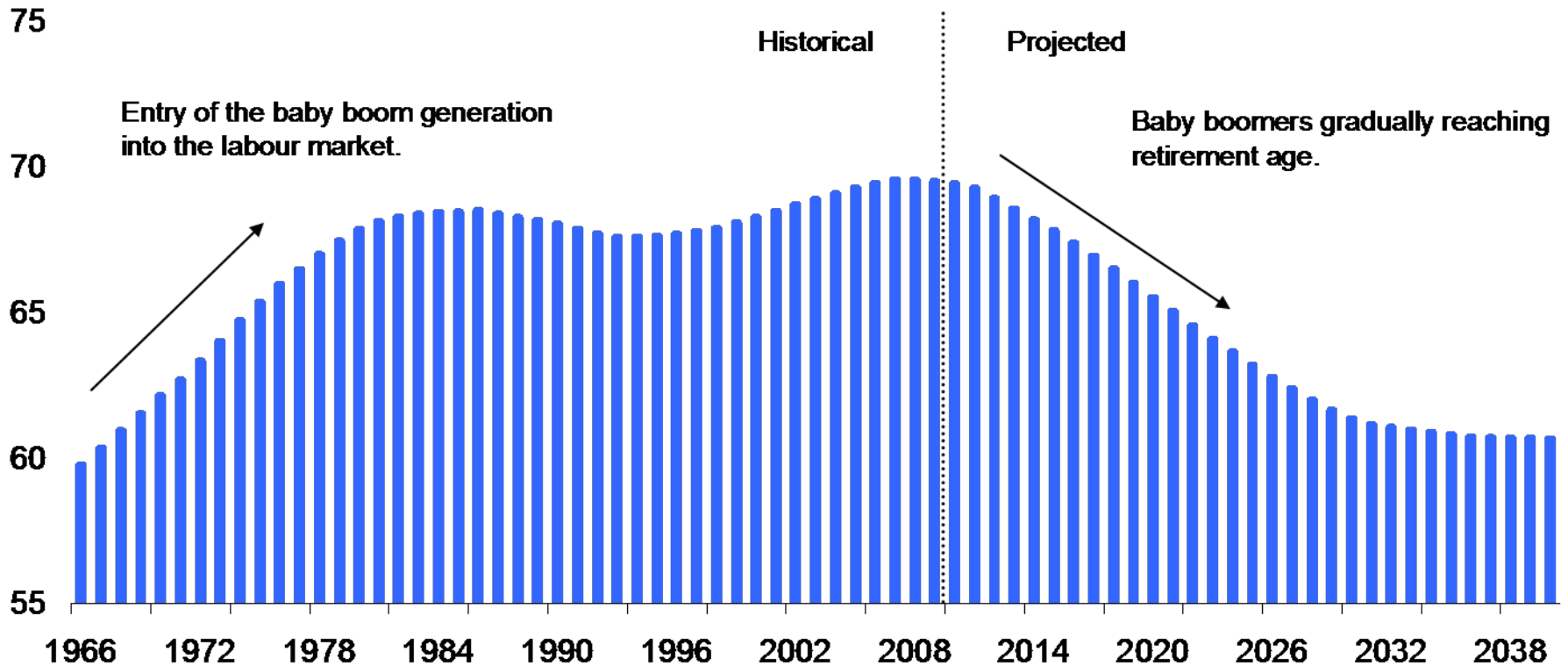


Source: Office of the Chief Actuary's 23rd Actuarial Report on the Canada Pension Plan and Statistics Canada.

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

Share of people aged 15-64 in Total Population

(percent)

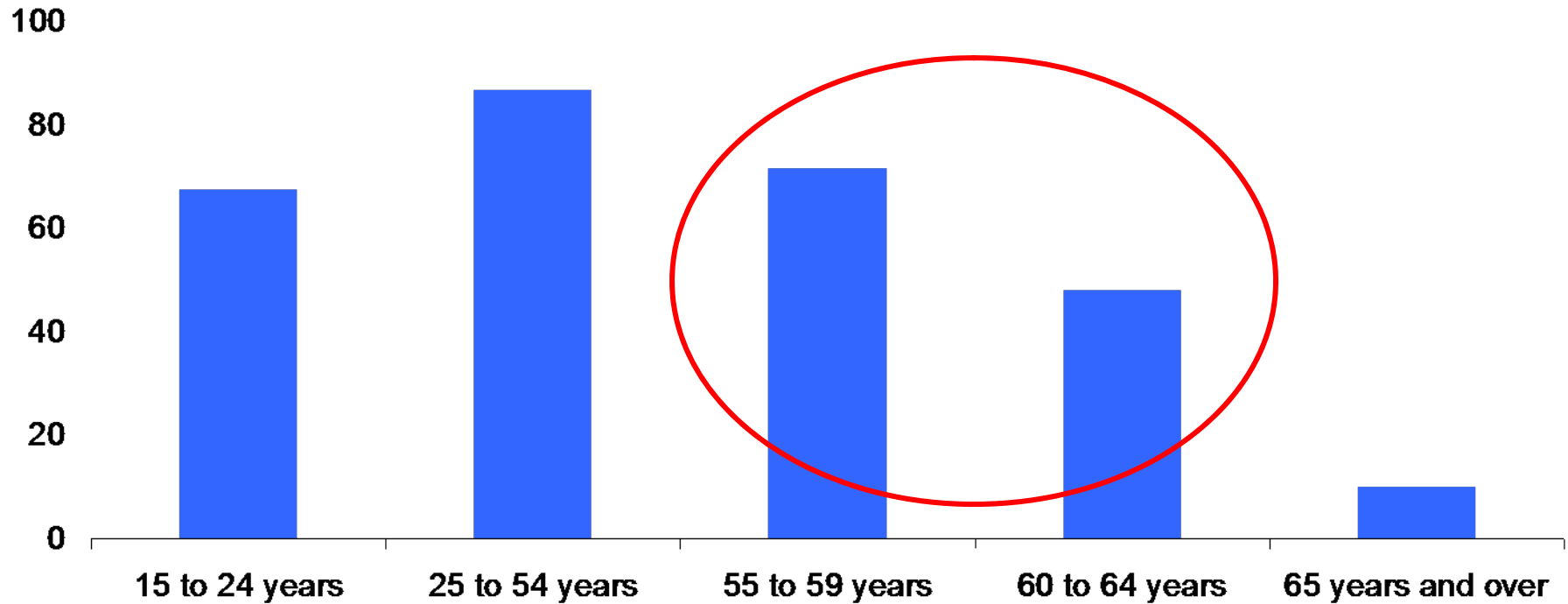


Source: Office of the Chief Actuary's 23rd Actuarial Report on the Canada Pension Plan.

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

LF Participation Rate by Age Group, 2008

(percent)

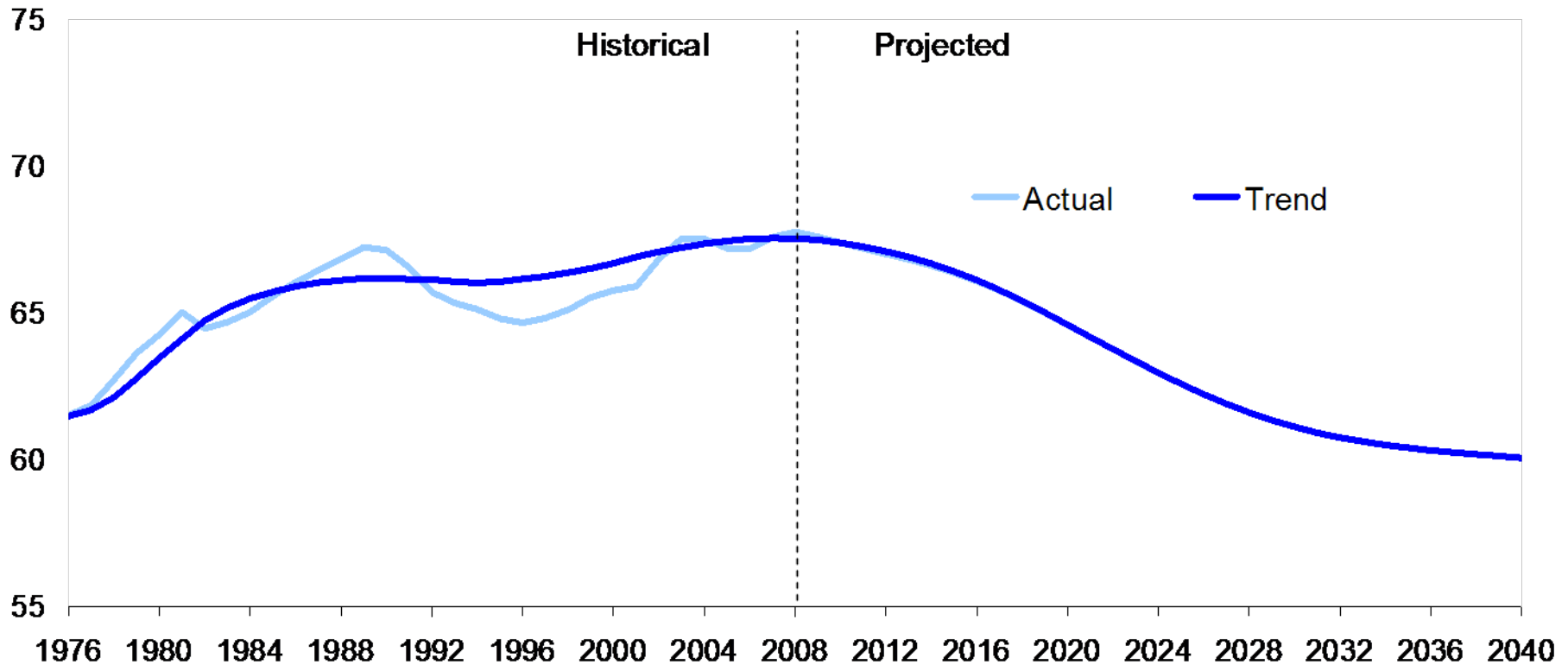


Source: Statistics Canada.

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

Aggregate LF Participation Rate

(percent)



Source: Statistics Canada calculations.

**Challenge #1:
Productivity Growth**

What drives “material” living standards?

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

(Per capita income)

(productivity)

(employment rate)

(LF participation rate)

Past 40 years

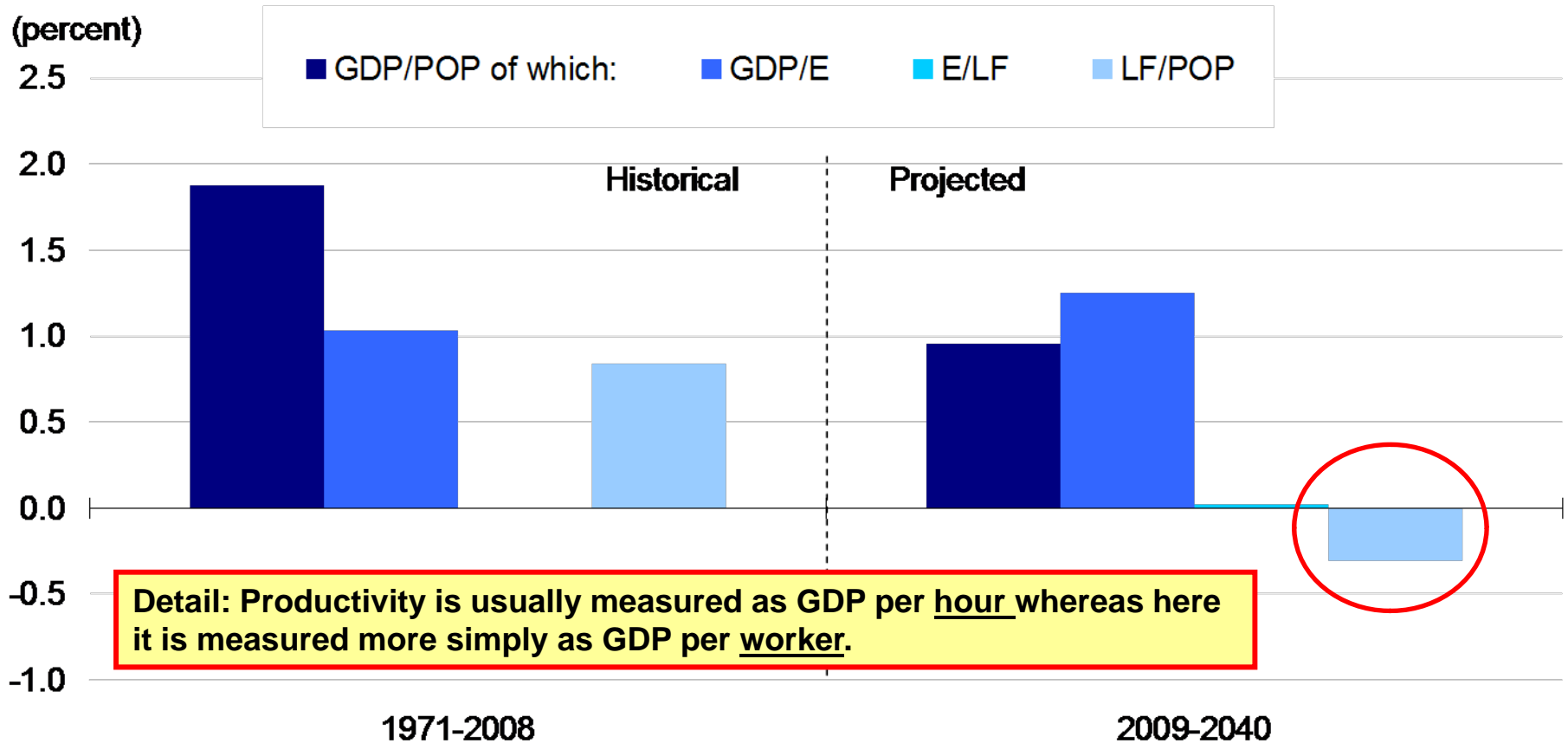


Next 40 years



Decomposing past and future growth:

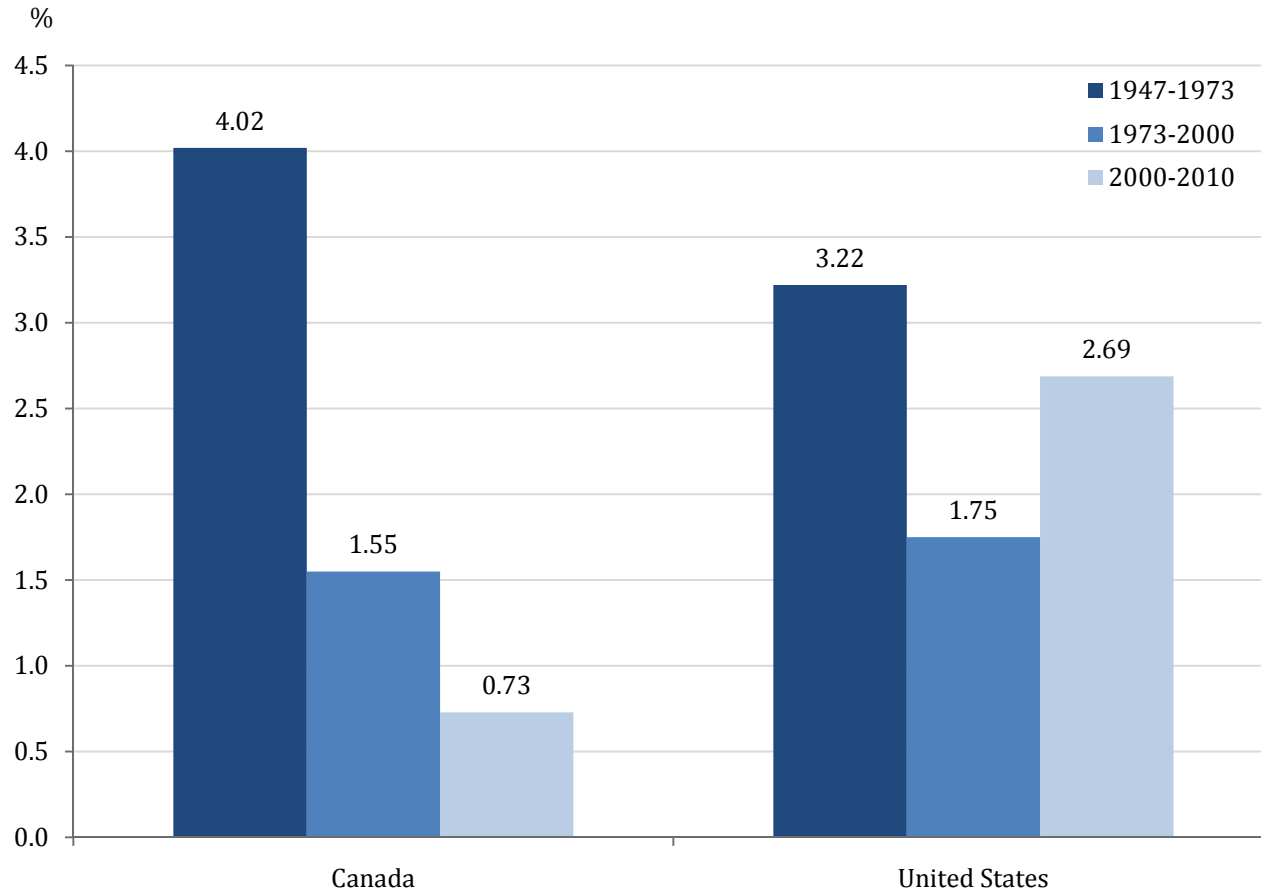
Decomposition of per capita Real GDP Growth



Policies to promote productivity growth?

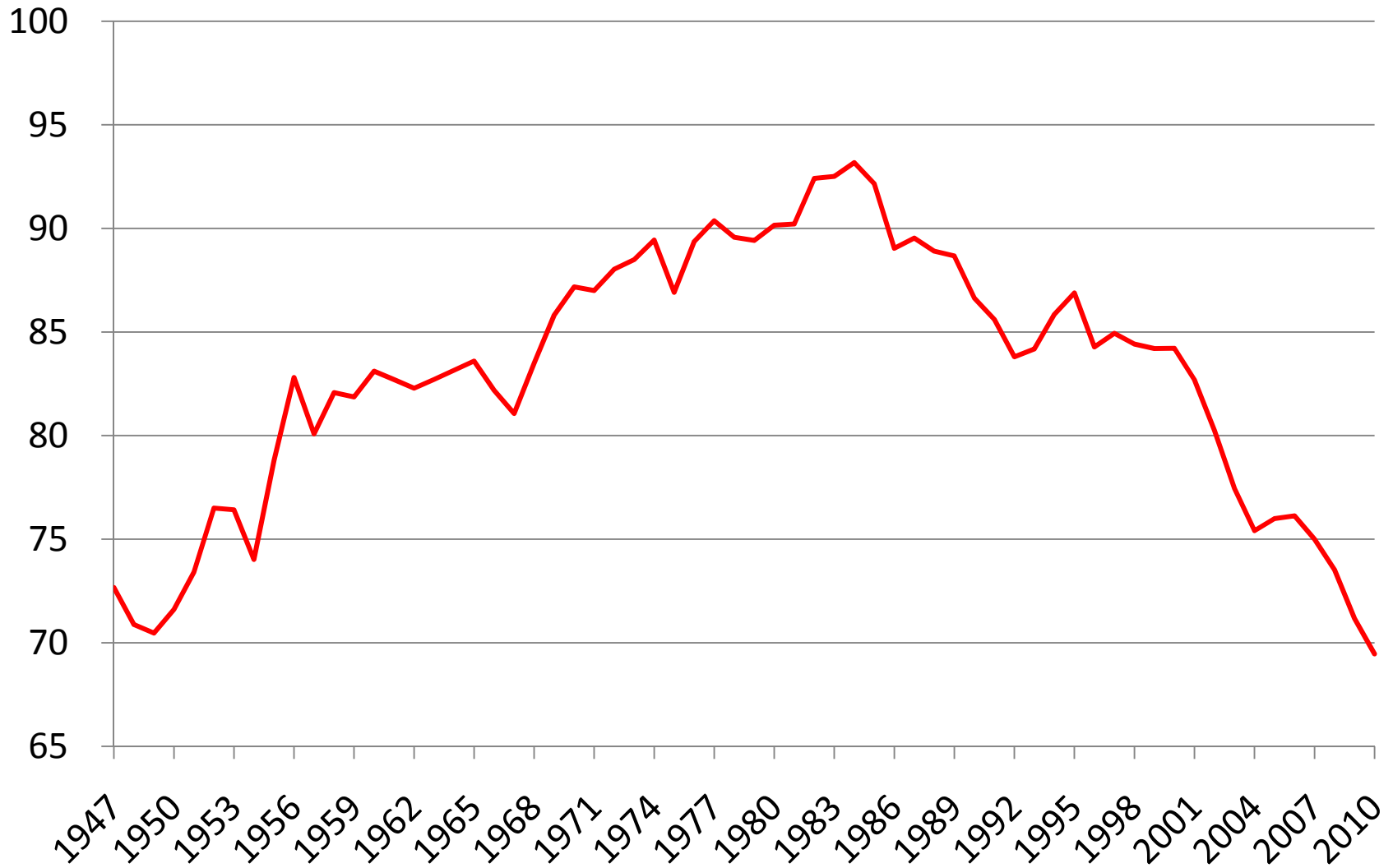
1. A beneficial overall economic environment.
2. Other policies are centered around:
 - quality of labour
 - quantity and quality of capital
 - innovation and technical knowledge
 - competition, role of FDI
3. The costs of productivity policies:
 - direct fiscal costs
 - winners and losers

Real Output per Hour Growth, Business Sector, Canada and the United States (1947-2010)



•Source: GDP in chained dollars and total hours worked from the Productivity and Costs Program of the Bureau of Labor Statistics for the United States, and annual averages of quarterly estimates from the Productivity Program Database of Statistics Canada for Canada.

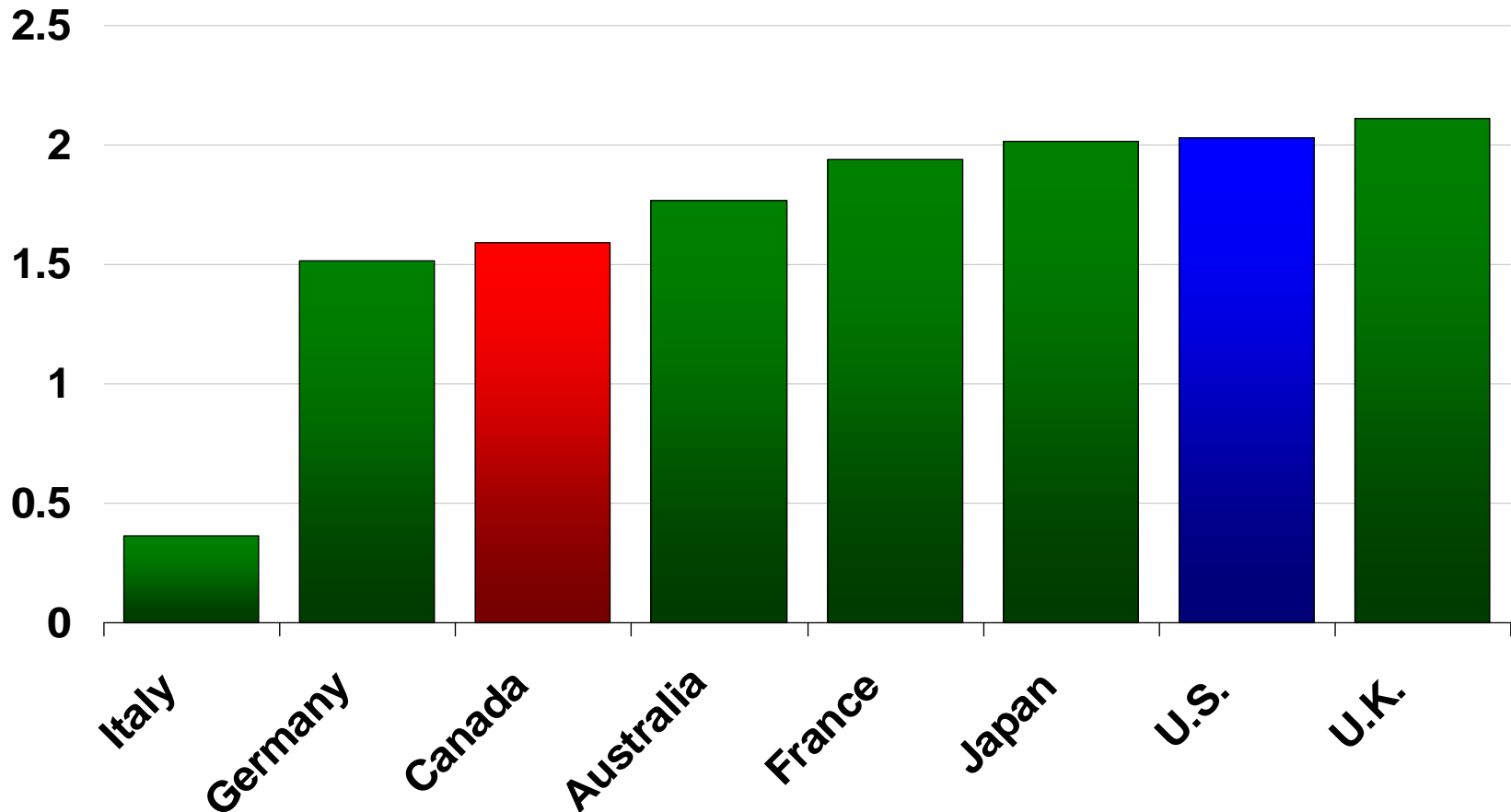
GDP per hour in the Business Sector in Canada, 1947-2010 (Canada as % of the United States)



Source: CSLS Canada-US Productivity Database

Our productivity growth is “OK” by world standards.

International Comparison of Productivity Growth
(Average Annual Growth, %, 1997-2007)



**Challenge #2:
Fiscal Adjustment**

The Two-Part Demographic “Fiscal Squeeze”

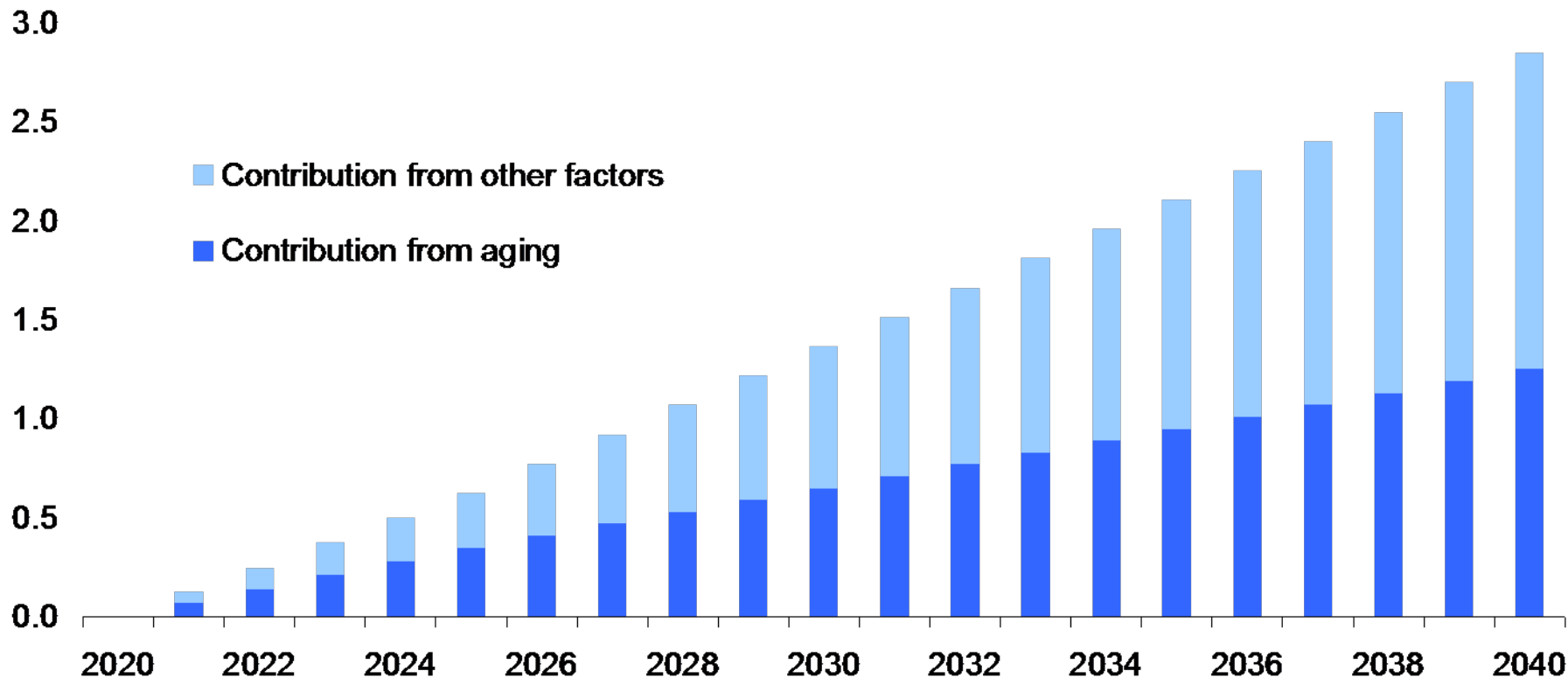
Over the next ~ 30 years there will be:

1. Slower growth in per capita tax base
(growth will be cut roughly in half from past 40 years!)
2. Faster growth in per capita spending on “age-related” items

Aging + “other” factors will drive health spending.

Increase in **Public** Health Spending

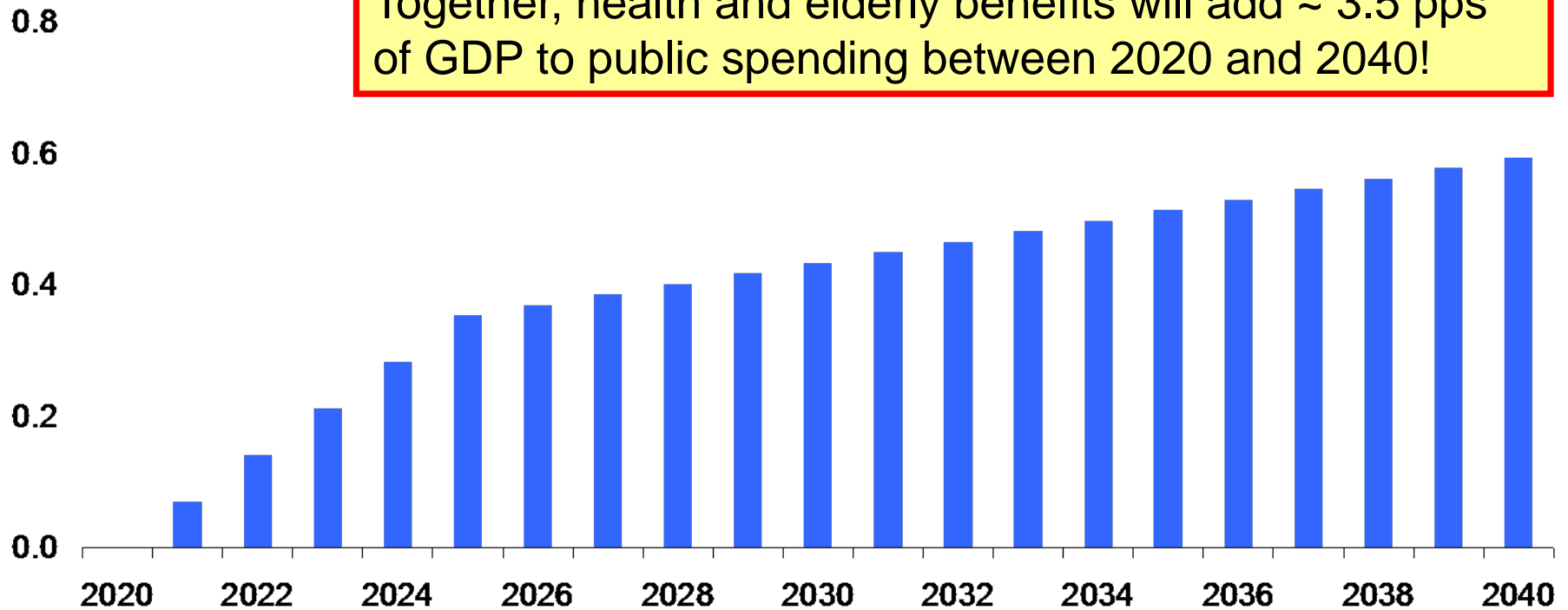
(percent of GDP)



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

Elderly benefits will also rise as a share of GDP.

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



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

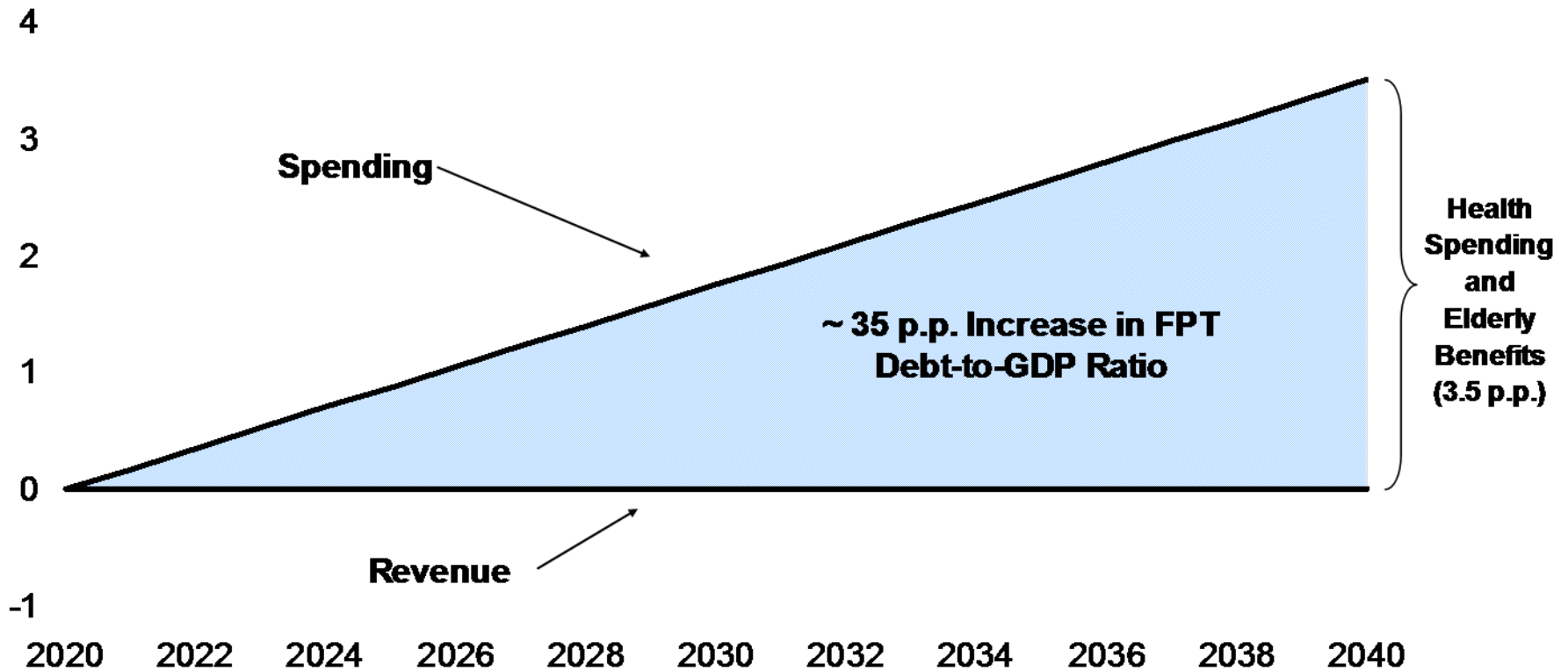
The Difficult Fiscal Choices?

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)

If we absorb these costs purely through debt ...

Spending and Revenue Paths From 2020 to 2040

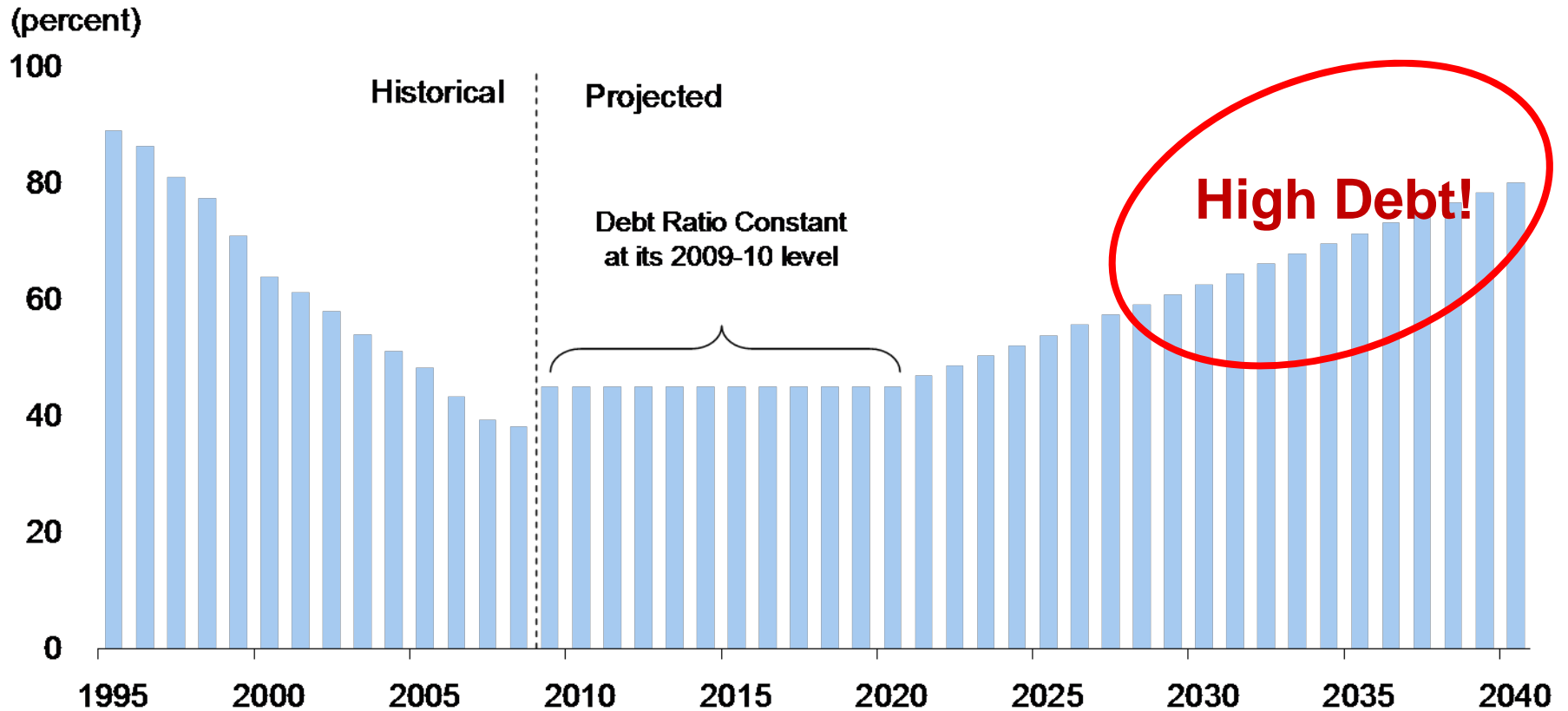
(percentage points of GDP)



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

... we will revisit the “debt wall” of the mid 1990s.

FPT Debt-to-GDP Ratio



Source: Author's calculations.

Some Popular Quick Fixes?

1. Increase immigration.
2. Increase fertility.
3. Increase retirement age (or LF part rates).
4. Restrain the growth of health-care spending.

Final Remarks

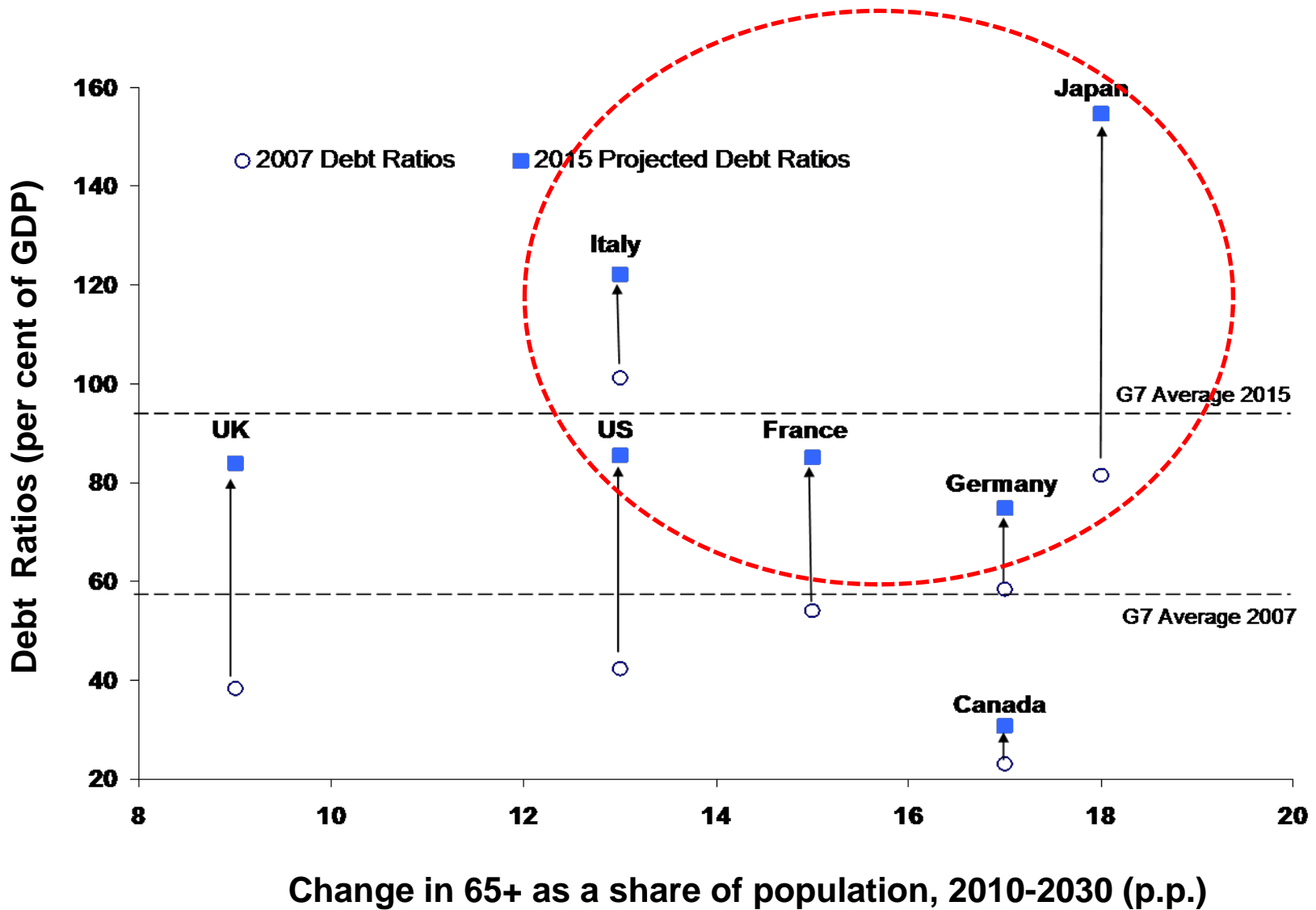
The coming demographic forces will drive two macro policy agendas in Canada:

- 1. The need for enhanced productivity growth**
- 2. The need to make difficult fiscal adjustments**

Better productivity growth → find cost-effective policies.

Fiscal adjustment → identify our fiscal priorities.

Some international perspective?



Thank you. Questions?