

# Canada's Looming Demographic "Fiscal Squeeze"

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**Christopher Ragan**

Department of Economics  
McGill University  
and

**Clifford Clark Visiting Economist**  
**Finance Canada**

# Outline of Talk

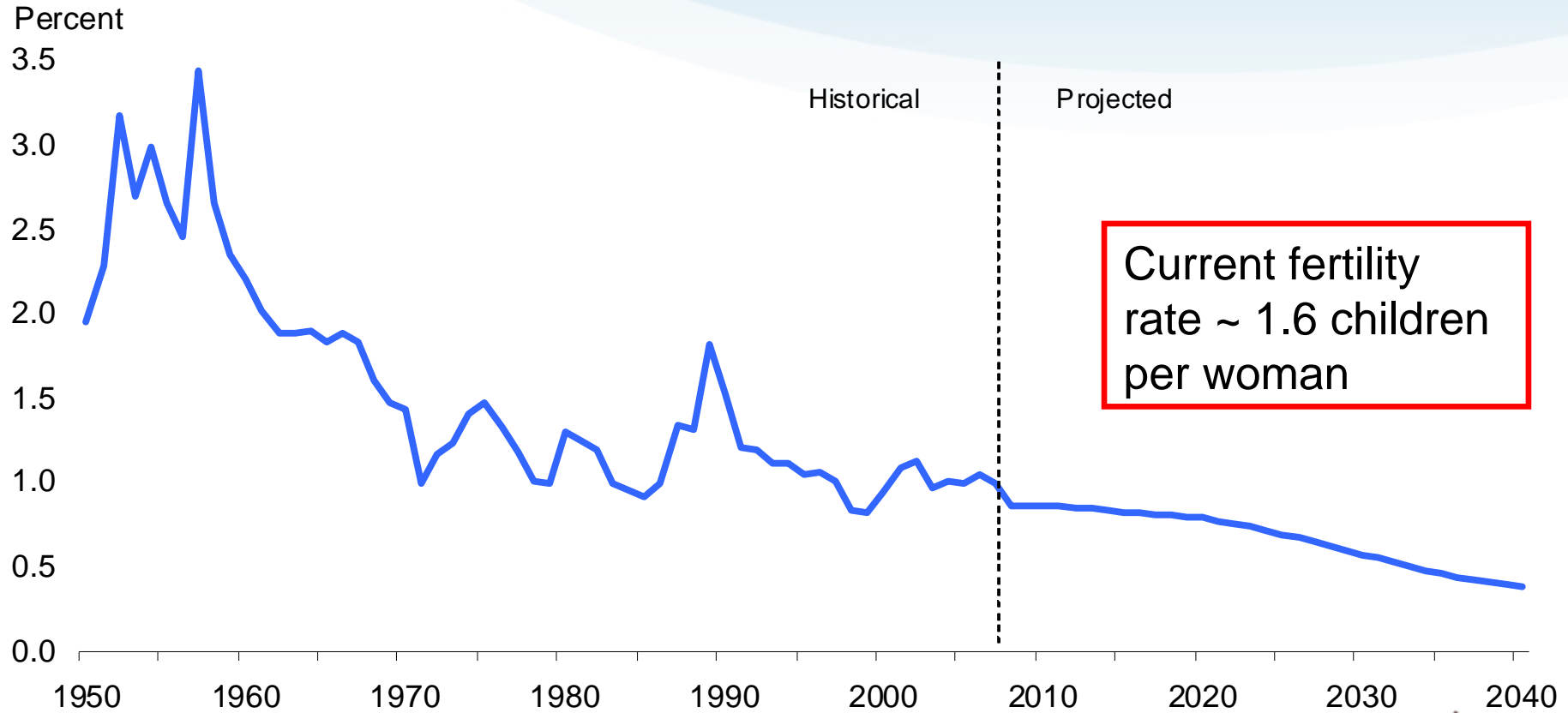
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1. The basic demographics of aging
2. A looming “fiscal squeeze”
3. Arithmetic thought experiments
4. A few thorny issues
5. Summary and final thoughts



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

Population Growth, 1950-2040

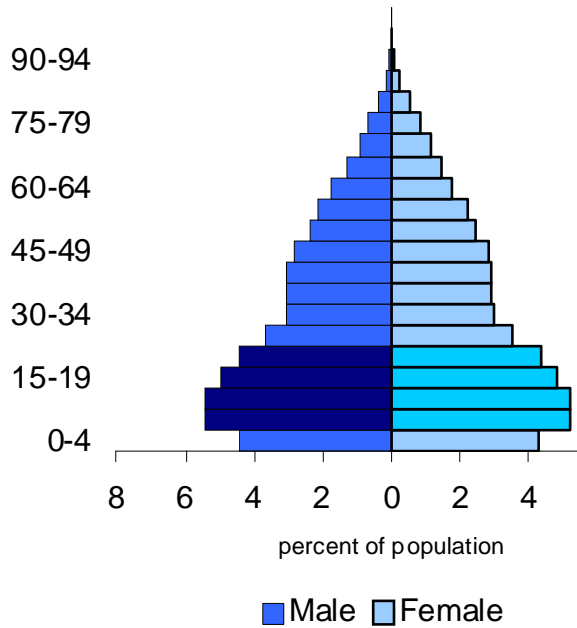


Population Growth = Births + Net Immigration – Deaths

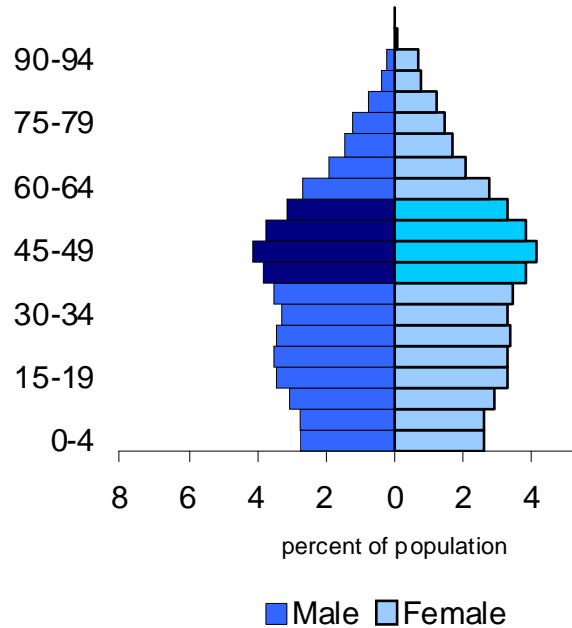
# ... which inevitably leads to population aging.

## Distribution of the Population By Sex and Age Group

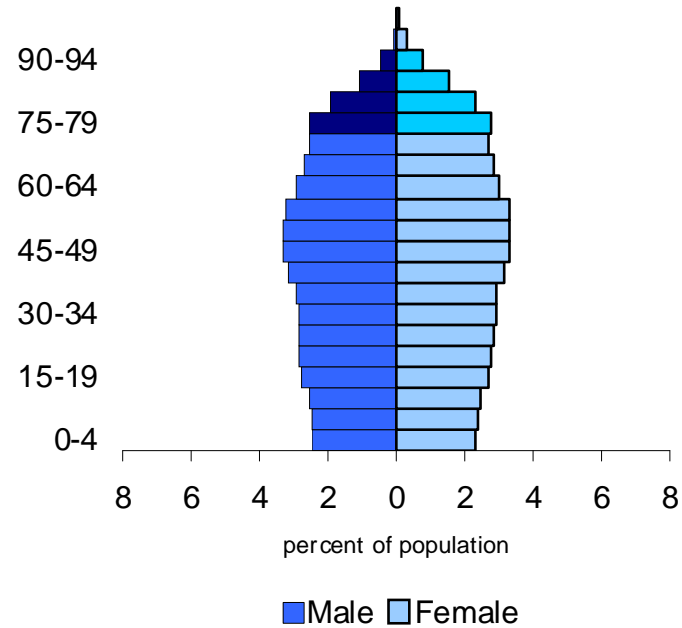
1970, Population: 21.7 M



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.

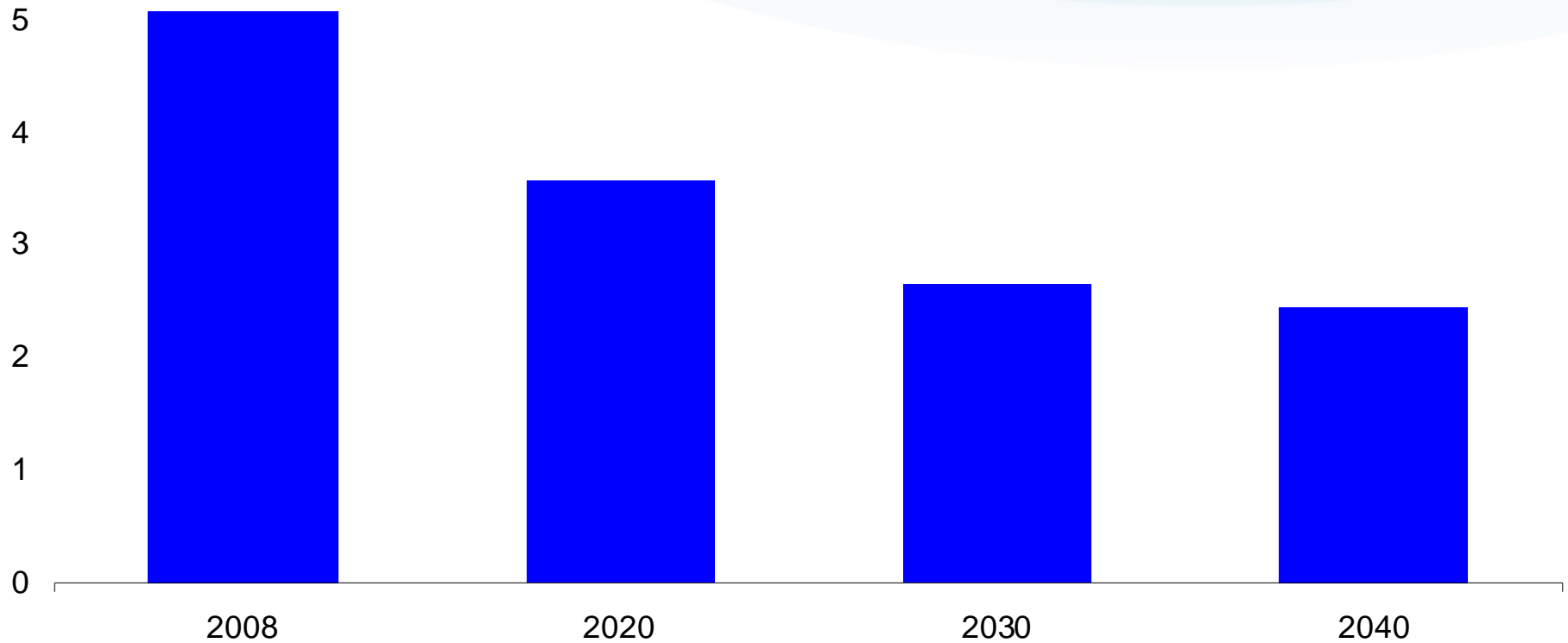


# By 2040, Canada's "providing ratio" will fall by half.

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Ratio of people aged 15-64 to people aged 65+

(persons)



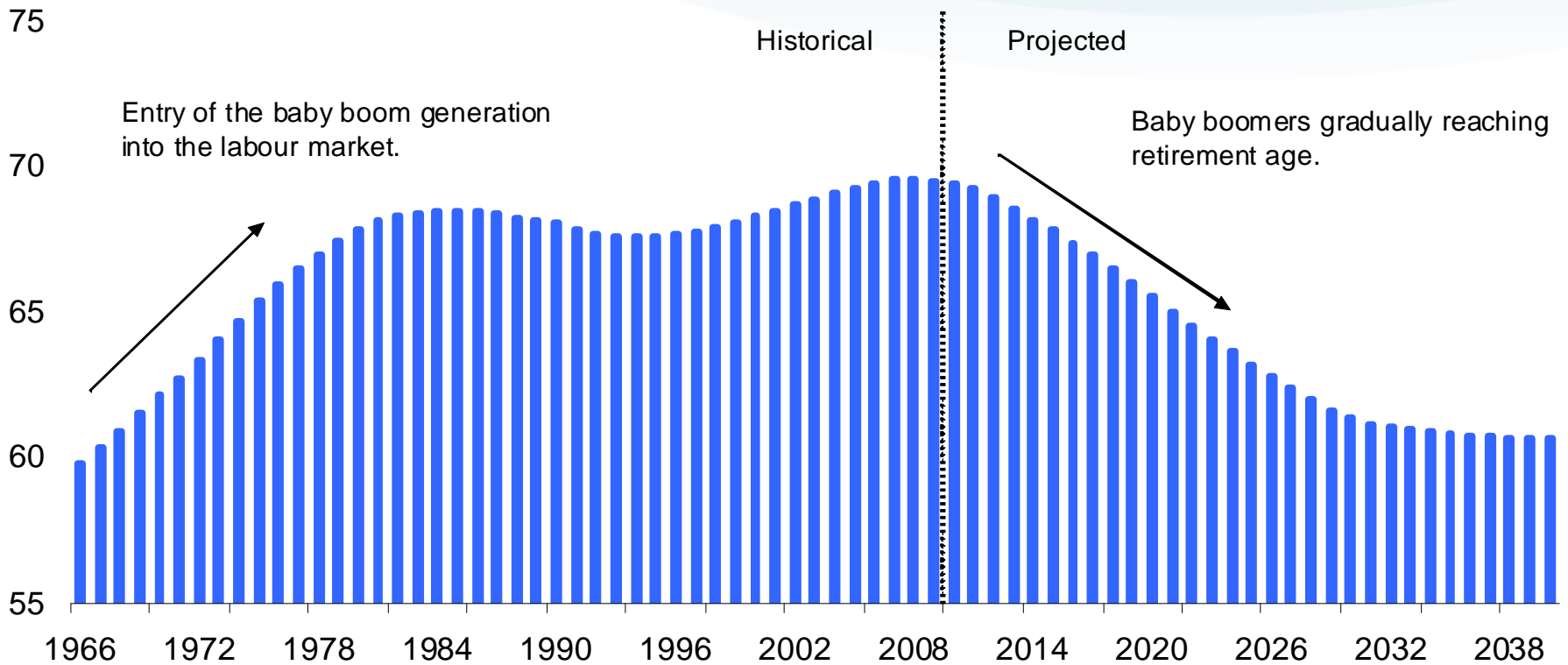
Source: Statistics Canada and Office of the Chief Actuary's 23rd Actuarial Report on the Canada Pension Plan.



# 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.

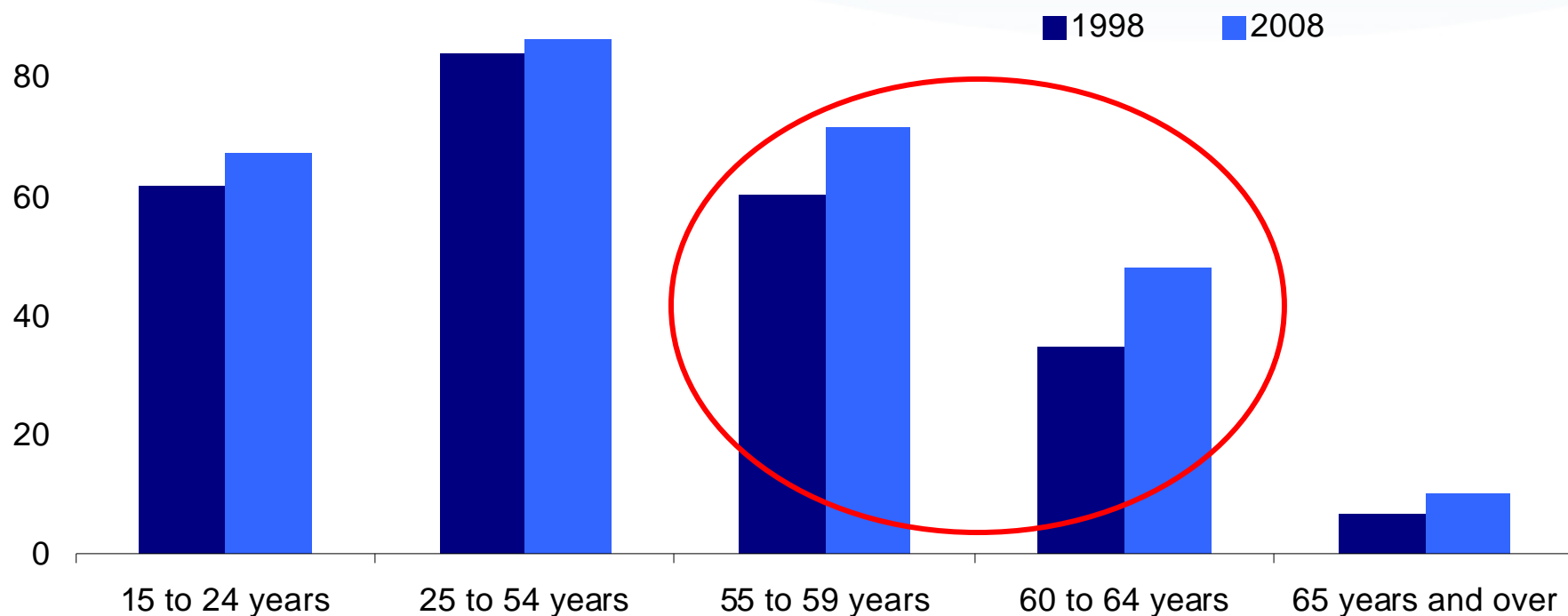


... and will also cause a shift toward groups with lower LF participation rates ...

### LF Participation Rate by Age Group

(percent)

100



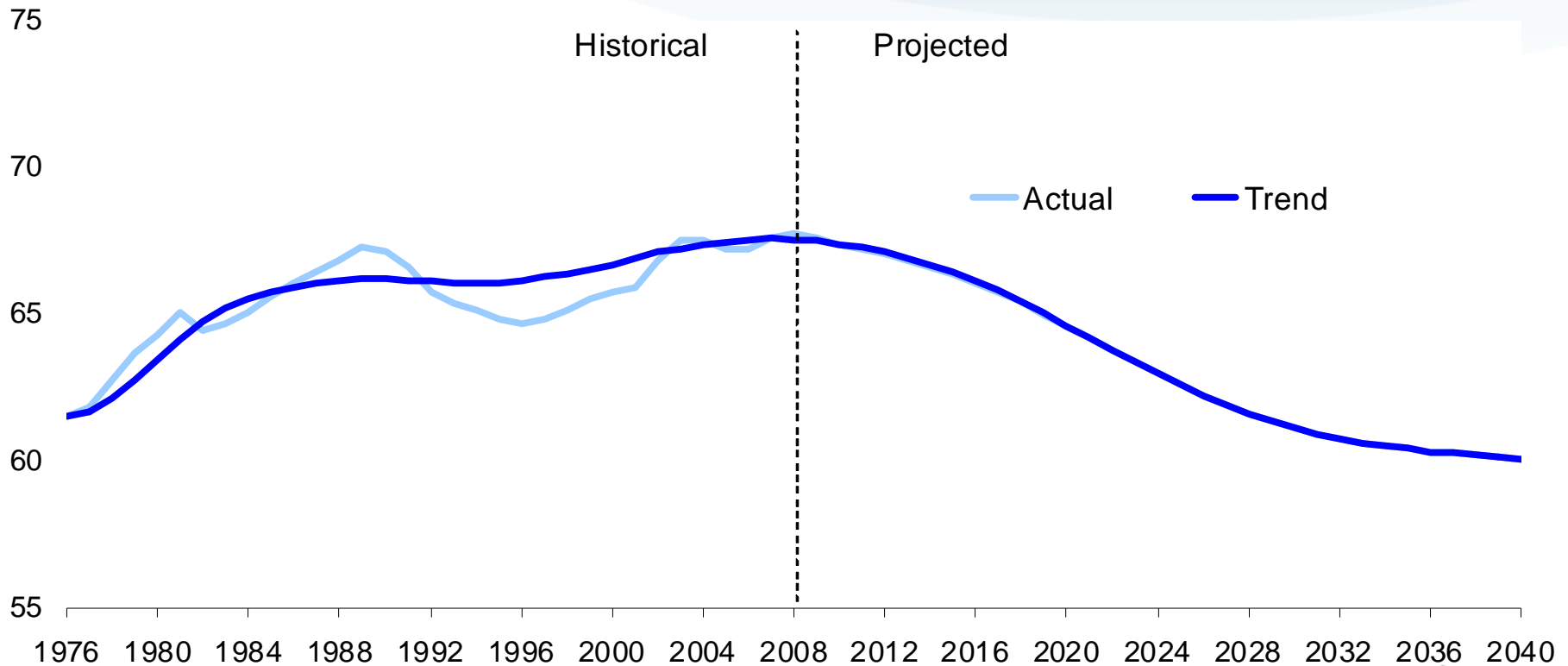
Source: Statistics Canada.



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

### Aggregate LF Participation Rate

(percent)



Source: Statistics Canada and Finance Canada calculations.



## Part 1 of the demographic “fiscal squeeze”

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Declining LF participation rate:

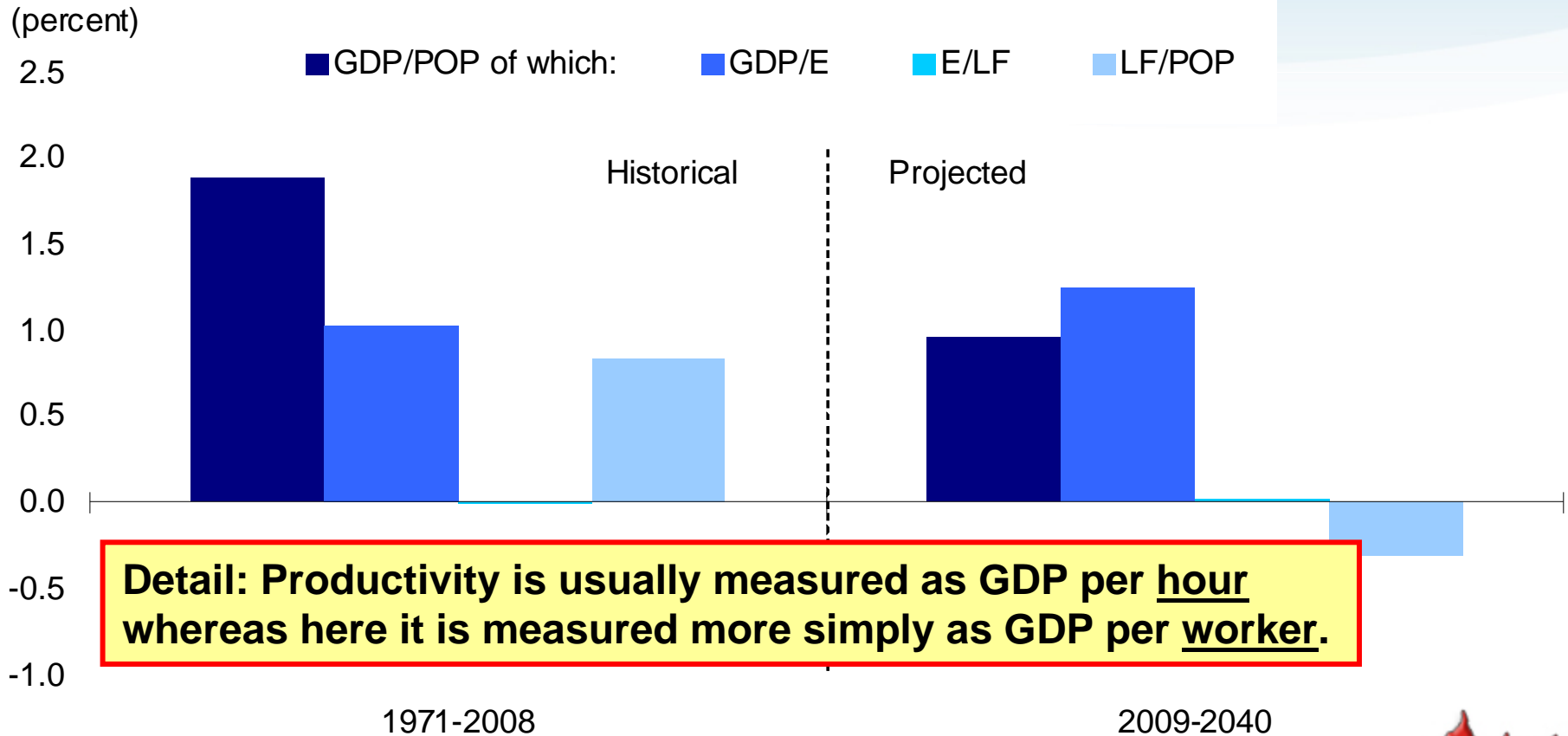
- reduced growth in real per capita GDP  
(for given productivity growth)
- reduced growth in per capita tax base

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



# The reduction in future per capita GDP growth.

## Decomposition of per capita Real GDP Growth



## Part 2 of the demographic “fiscal squeeze”

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### 1. Need for more public spending:

- Health-Care Spending
- Elderly Benefits

### 2. Offsetting effects expected to be small:

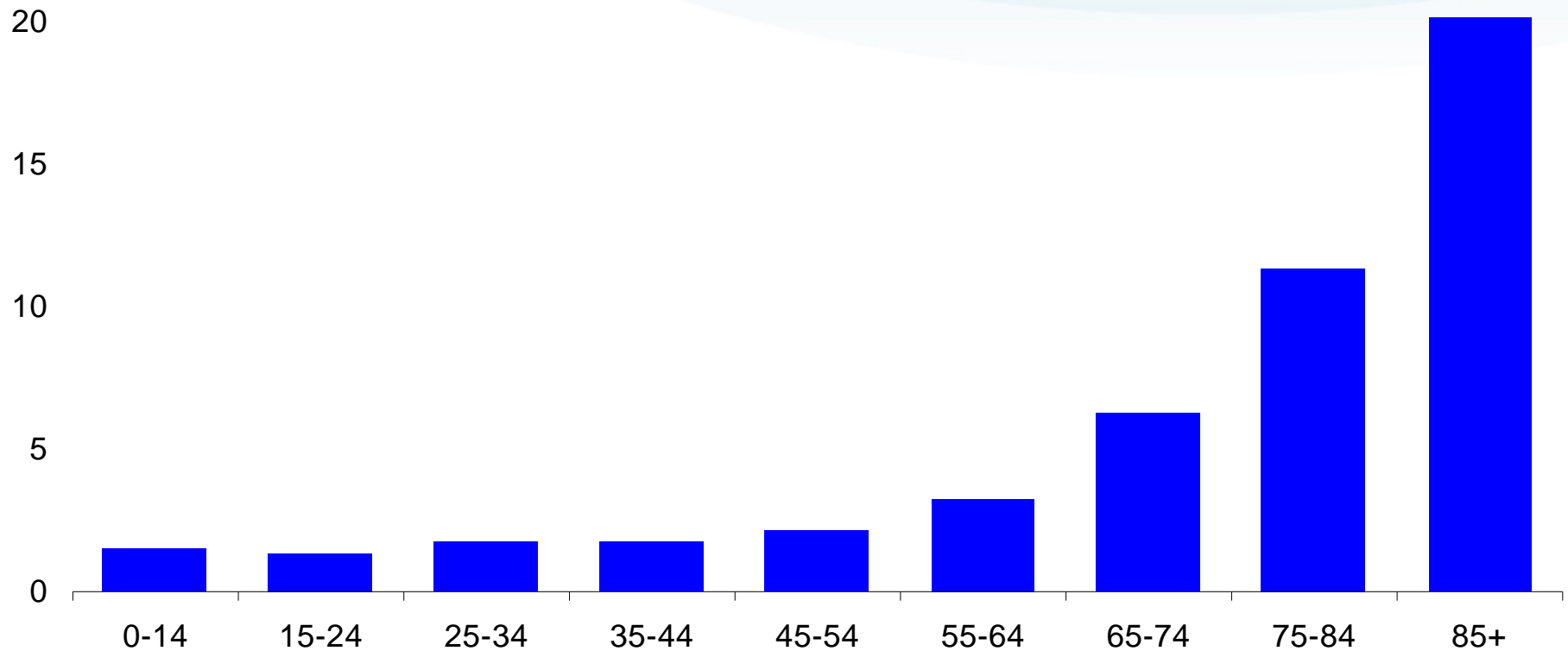
- Education, children’s benefits and some social services



# Not surprisingly, per capita health-care expenditures rise rapidly in later years of life ...

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Per Capita Provincial-Territorial **Public** Health Spending by Age Group, 2006  
(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)

3.0

2.5

2.0

1.5

1.0

0.5

0.0

■ Contribution from other factors

■ Contribution from aging

2020 2022 2024 2026 2028 2030 2032 2034 2036 2038 2040

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

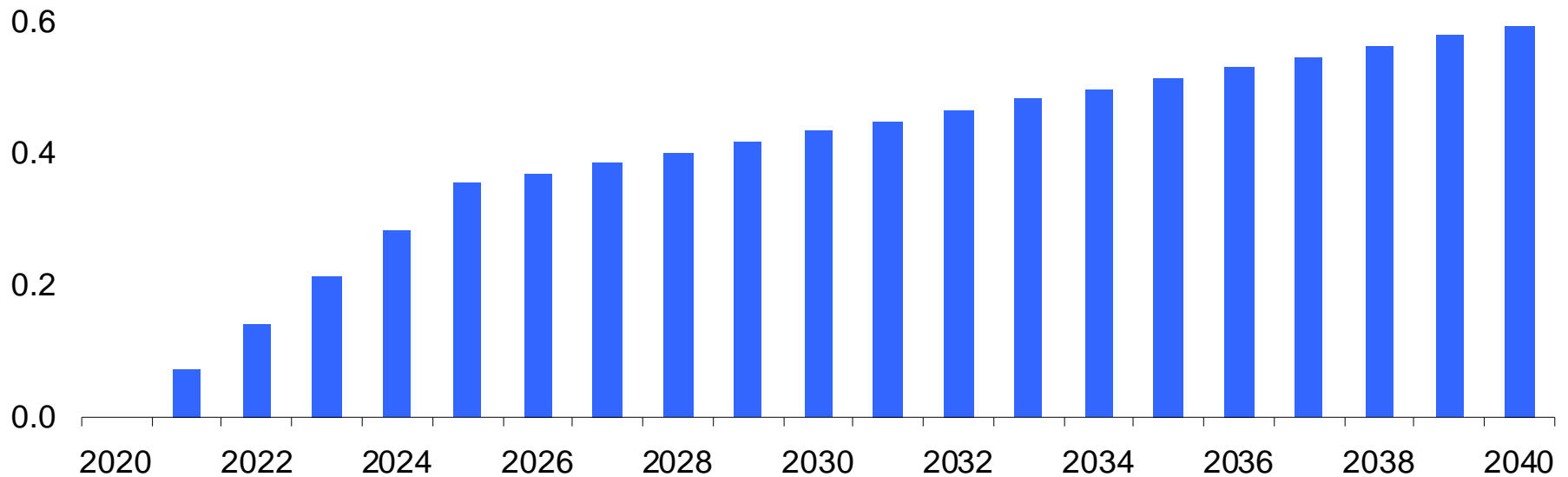
**Spending pressures will likely come from income growth and the development of advanced (and costly) new treatments.**

**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!

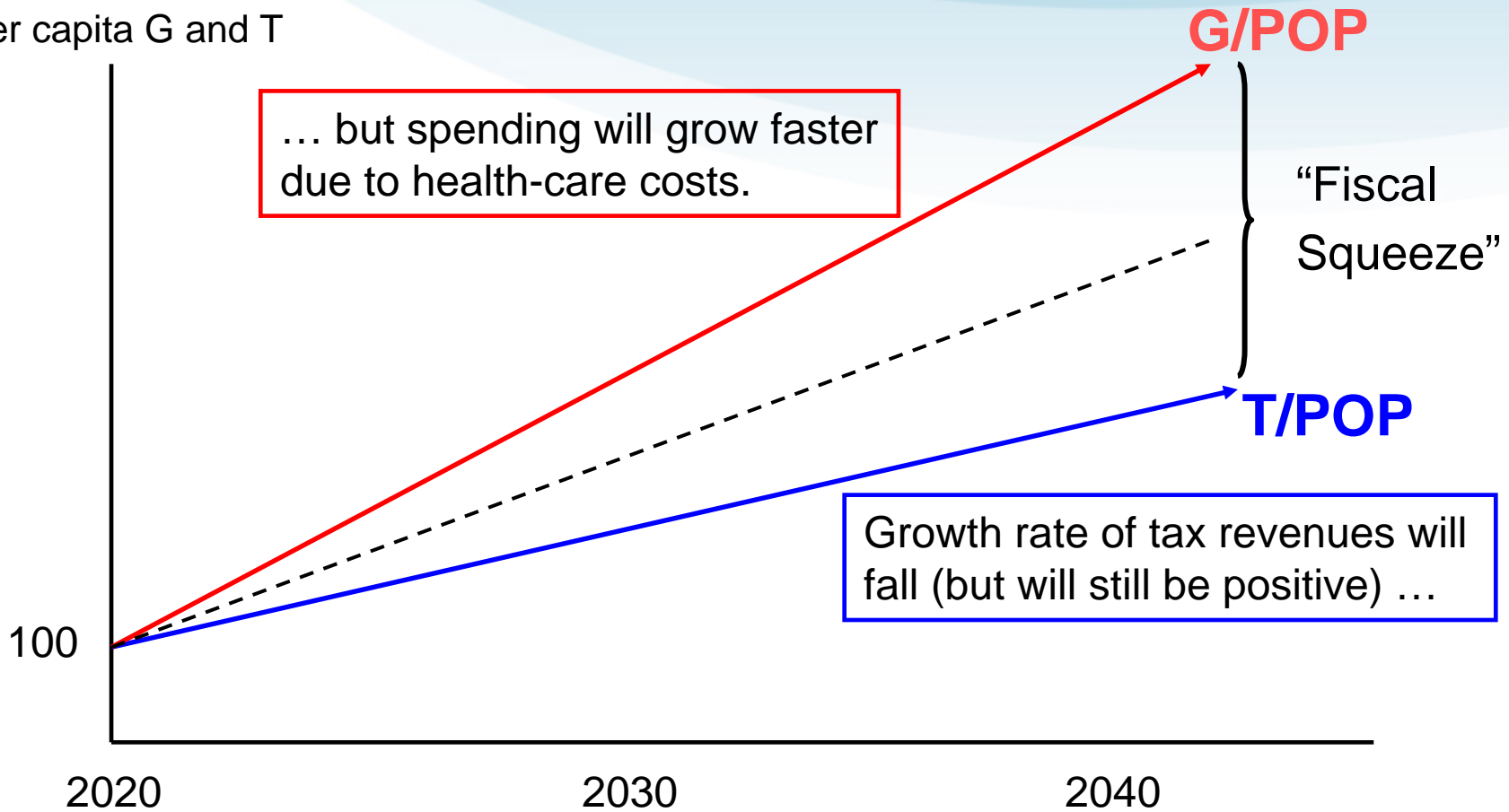


Source: Chief Actuary (scenario: benefits rates indexed at inflation plus 60% of the assumed real wage growth) and author's calculations.



# We can view the fiscal squeeze in terms of the growing divergence between per capita spending and tax revenues

per capita G and T



Hold this constant

$$\begin{aligned} G/POP &= (G/GDP) \times (GDP/POP) \\ T/POP &= (T/GDP) \times (GDP/POP) \end{aligned}$$



# What (non fiscal) policies are available to Canadian governments to deal with this challenge?

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1. Increase immigration rate?
2. Increase fertility rate?
3. Increase labour-force participation rate?
4. Restrain the growth of health-care spending?
5. Increase the productivity growth rate?  
(more on this later)



# What broad fiscal choices are available?

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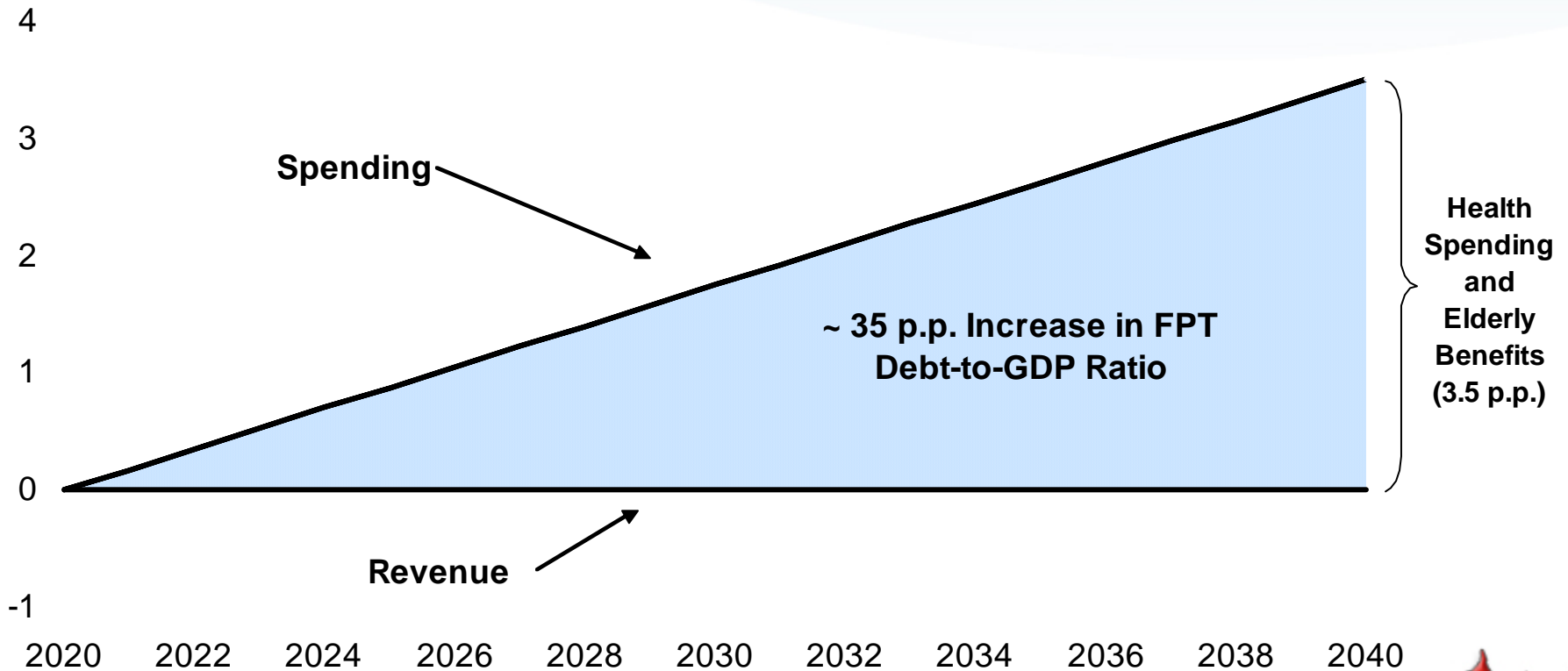
1. Restrain spending growth
  - especially on non-age-related items?
2. Increase tax rates (or the “tax burden”)
3. Defer the problem
  - increase borrowing (debt)



# Can these costs be absorbed purely through debt?

## Spending and Revenue Paths From 2020 to 2040

(percentage points of GDP)



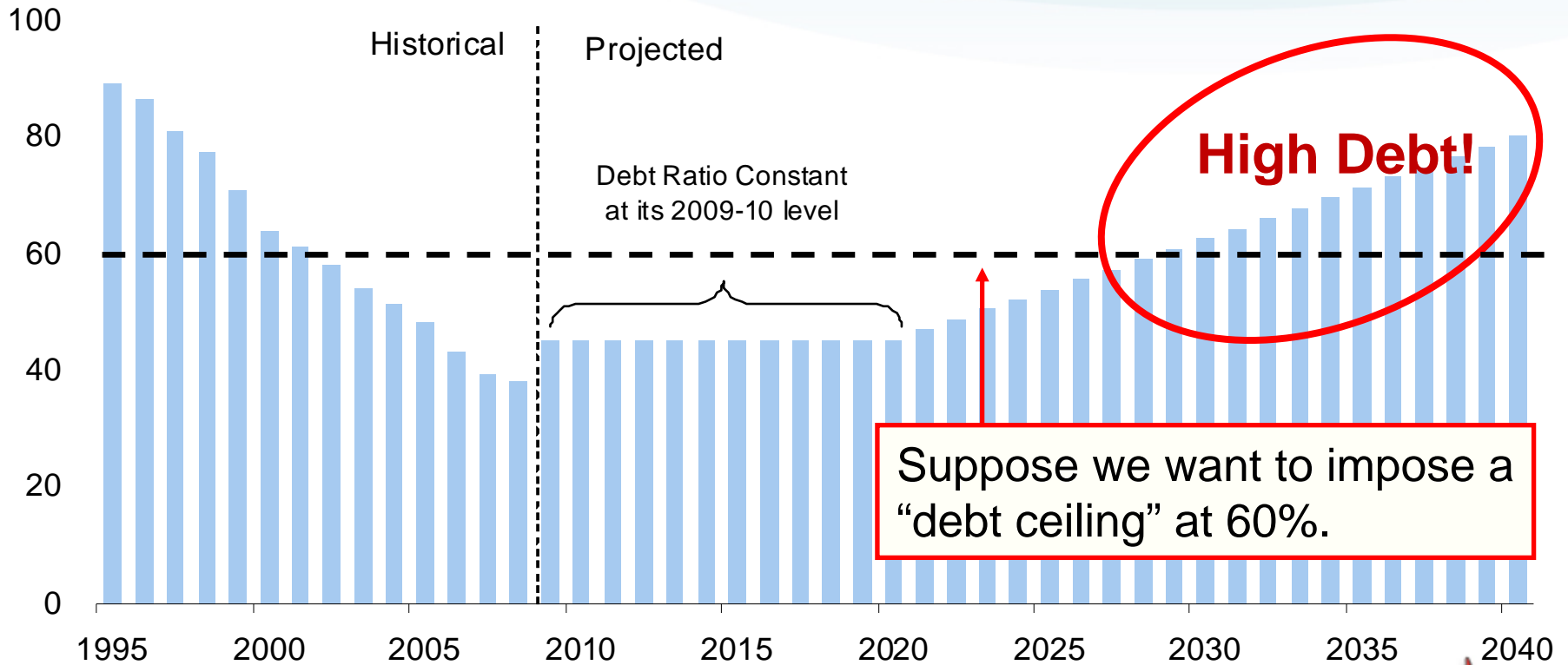
Source: OECD, CIHI, and author's calculations.



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

## FPT Debt-to-GDP Ratio

(percent)



Source: Author's calculations.



# Many alternatives to stay under this “debt ceiling”:

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## #1. “Front-loaded” debt-reduction strategy:

- ➔ Further reducing debt before the full impacts of aging materialize

## #2. “Back-loaded” fiscal-adjustment strategy:

- ➔ Restrain non-age-related spending and/or increase taxes as the impacts of aging materialize

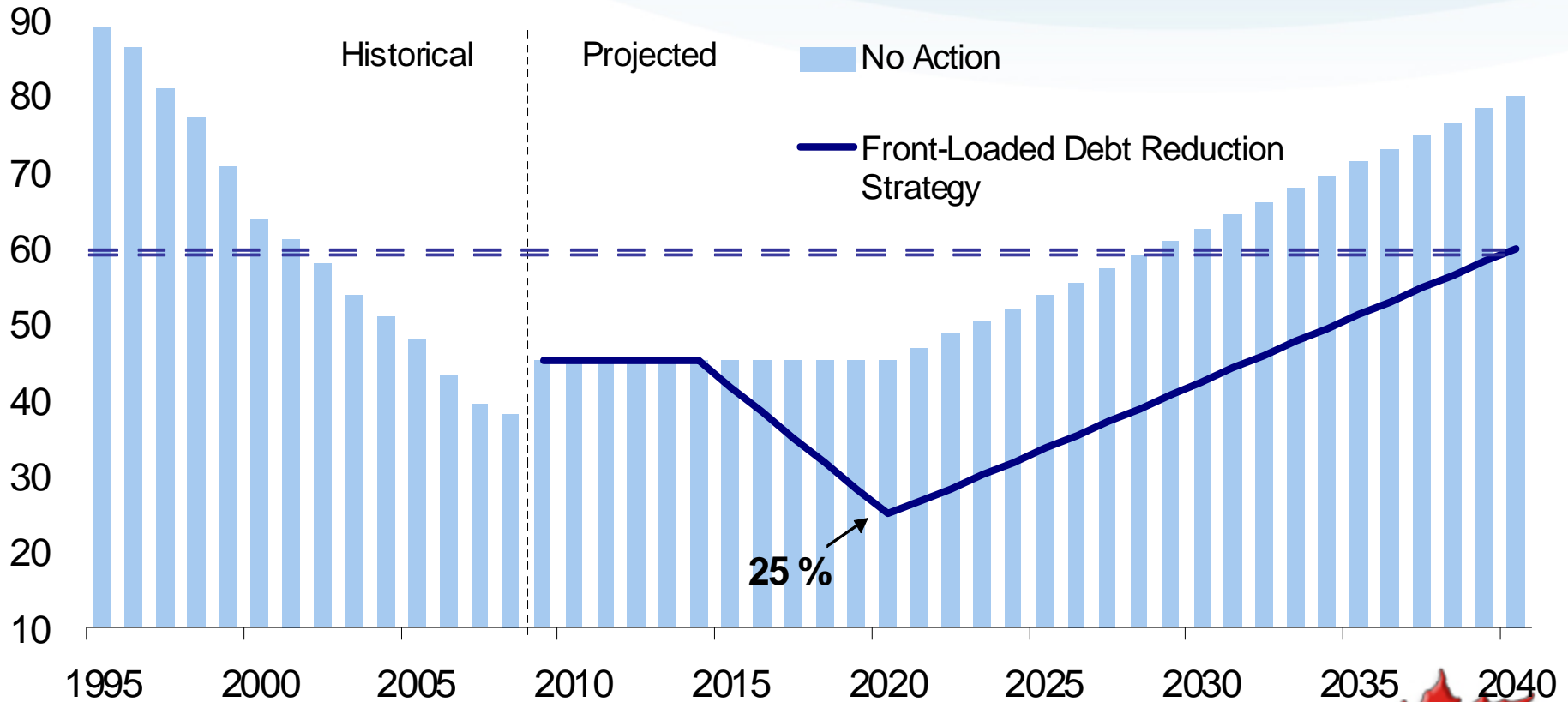
## #3. Many others as well ...



# #1: Front-Loaded Debt-Reduction Strategy

## FPT Debt-to-GDP Ratio

(percent)

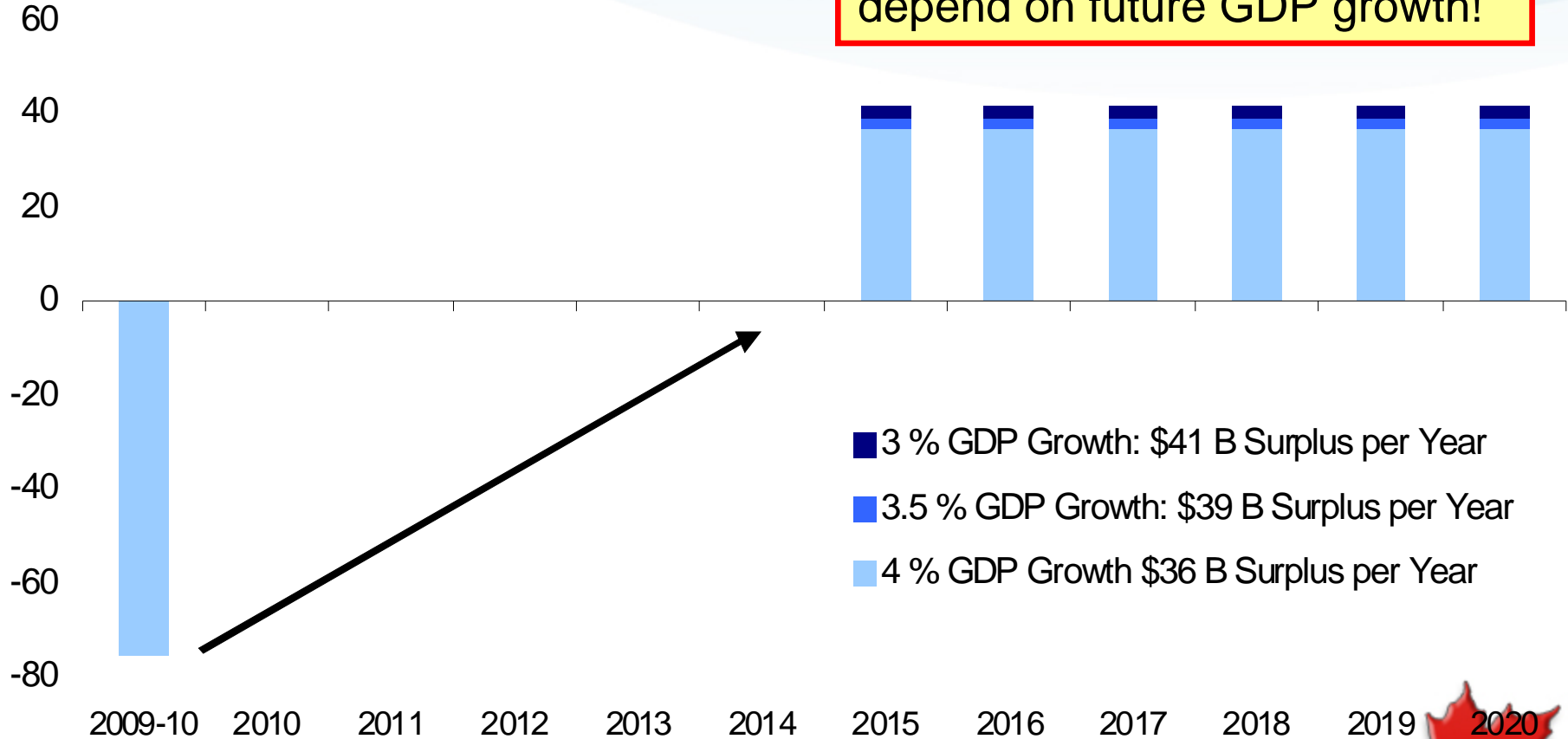


Source: Author's calculations.

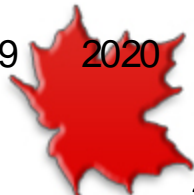


# But this requires considerable fiscal discipline over the next decade by all levels of government.

FPT Budget Balance  
(billions of dollars)



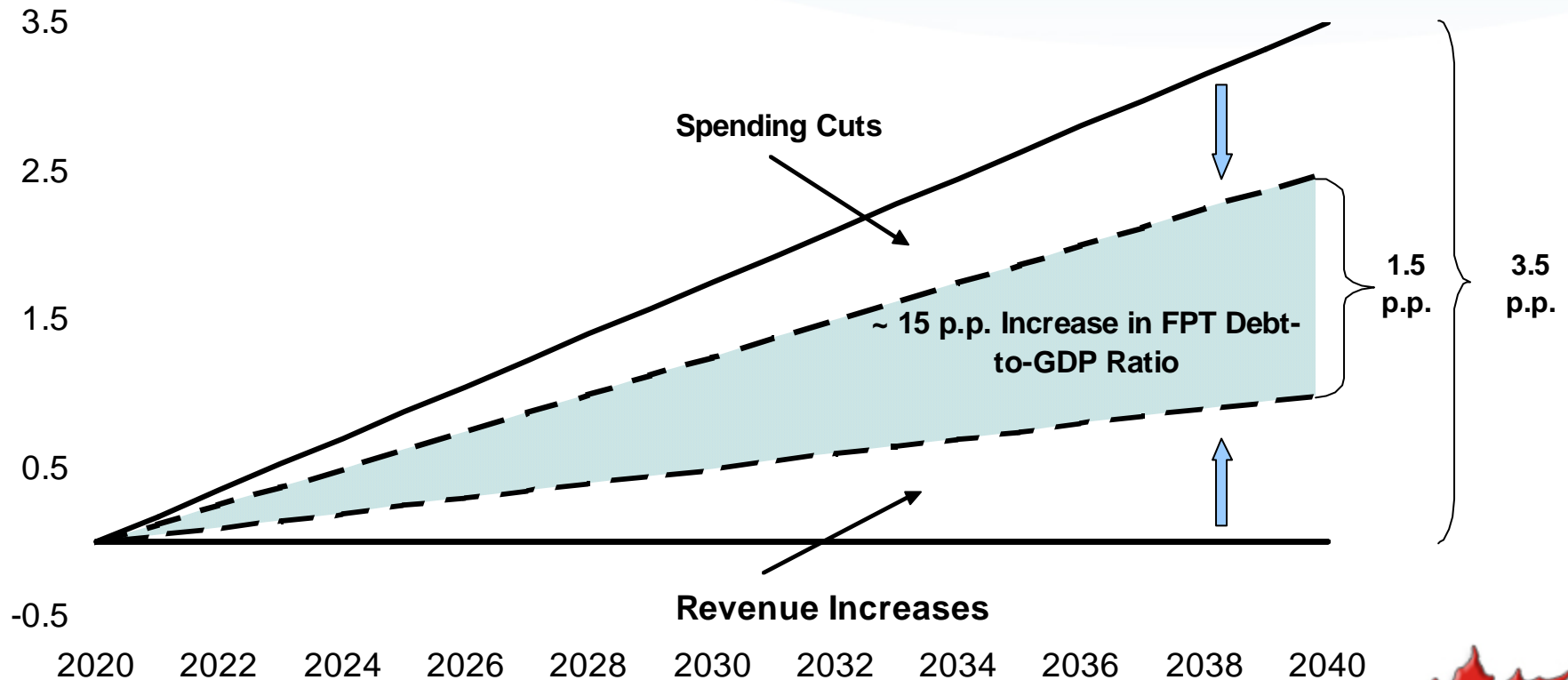
Source: September Update of Economic and Fiscal Projections, provincial-territorial Public Accounts and author's calculations.



# #2: Back-Loaded Fiscal-Adjustment Strategy

Fiscal Adjustments between 2020 and 2040  
(percentage points of GDP)

**As shown, the policy mix is roughly balanced between G, T, and debt.**

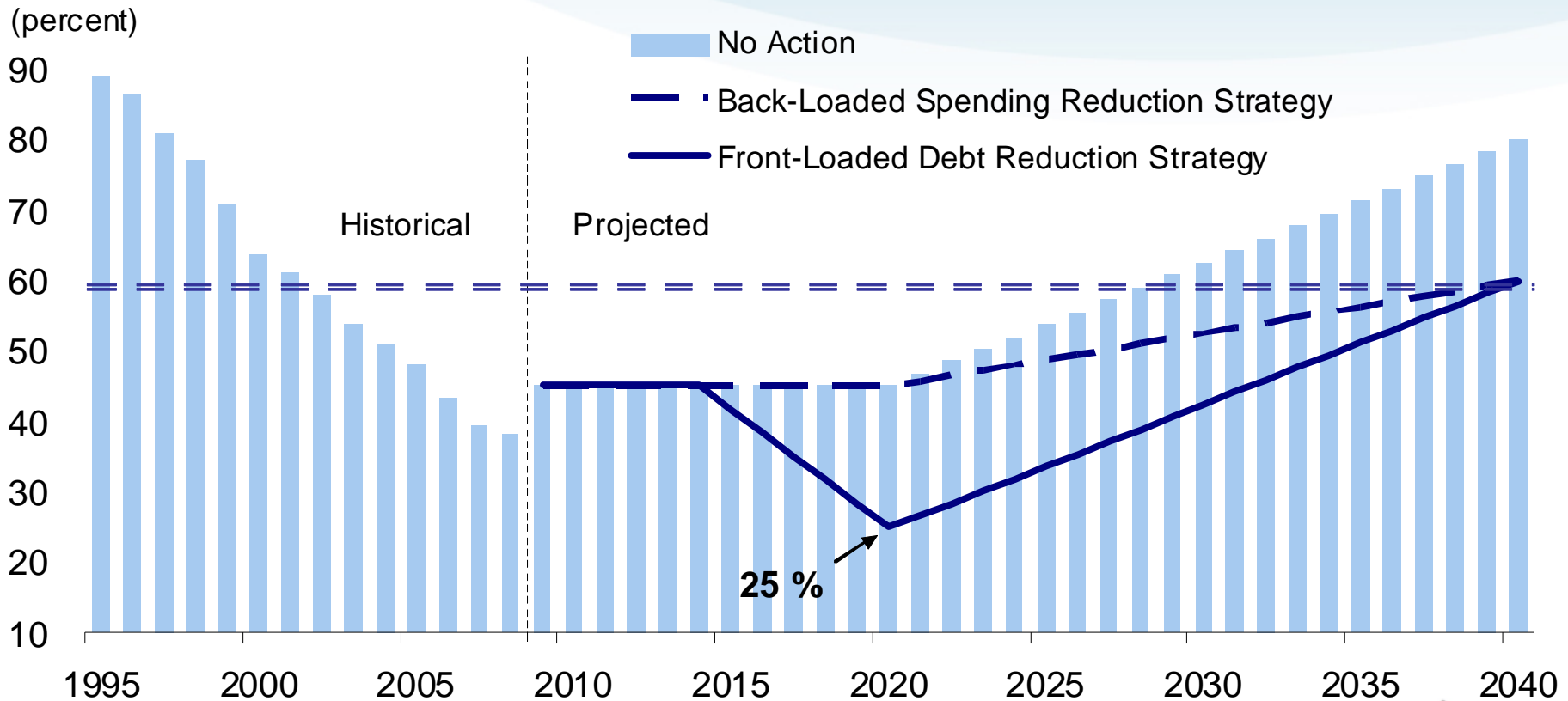


Source: Author's calculations.



This alternative also honours the “debt ceiling”, but does not avoid the need to make difficult decisions.

### Federal-Provincial-Territorial Debt-to-GDP Ratio



**Which decisions? Tax burden increases by 1 pp of GDP and total spending falls by 1 pp of GDP between 2020 and 2040.**

# A Key Difference?

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1. Both approaches honour the “debt ceiling” and both involve making difficult decisions.
2. But they have very different implications for intergenerational equity.
3. Who “should” pay for the baby-boom generation’s old-age health care?



# A Few Thorny Issues

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1. Aren't we getting steadily richer?
2. Would higher productivity growth help?
3. A Federal-Provincial Dimension?



# #1: Won't our growing income provide the resources necessary to finance these health-care costs?

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1. I have already assumed a baseline rate of productivity growth (1.3% p.a.).
2. So, it is true that real living standards are rising throughout the projection period.
3. But I have also assumed a constant tax burden (in option #1) or a rising tax burden (option #2), so these rising incomes are already built into tax revenues.
4. So the size of the challenge is not overstated.



## #2: Can a higher productivity growth rate help ease the fiscal squeeze?

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1. Yes -- subject to some important caveats:
2. How will increases in GDP translate into greater demand for health-care (and other) spending?

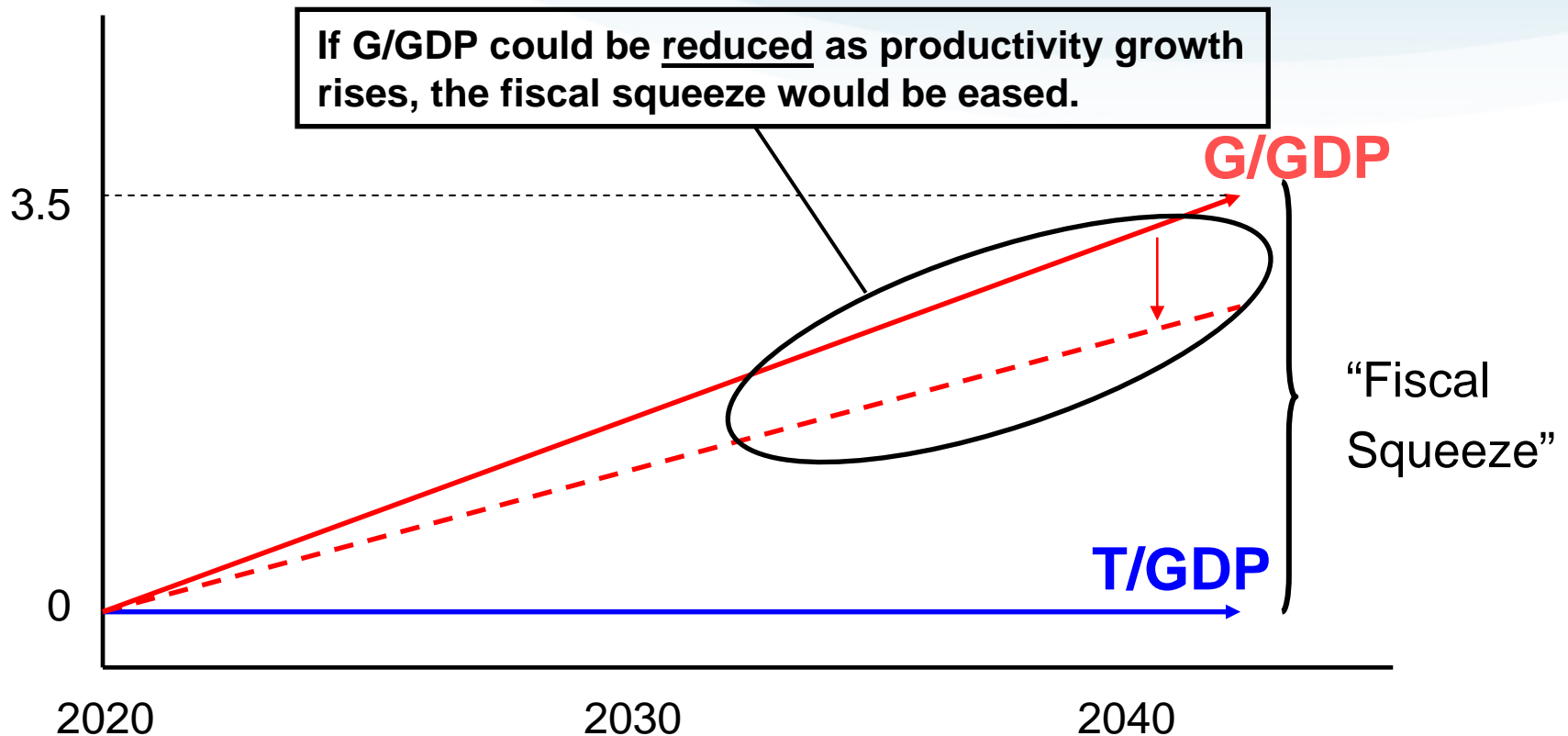
Is the income elasticity for health care  $> 1$ ?

3. Will governments be able to restrain the spending pressures created by income growth?



# Impact of higher productivity growth on revenues and spending as shares of GDP

Change in ppts of GDP



**Crucial question: As GDP rises more quickly, which elements of public spending will be unaffected, so that G/GDP falls?**

# Some possible effects of higher productivity growth on the fiscal squeeze:

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**Additional productivity growth rate required to keep the debt ratio below the 60% ceiling (with no change in the tax burden)**

<b>If <u>only</u> age-related spending is unaffected by higher productivity growth:</b>	<b>~ 0.4 percentage points</b>
<b>If <u>all</u> public spending is unaffected by higher productivity growth:</b>	<b>~ 0.2 percentage points</b>

Recall that baseline productivity growth is assumed to be 1.3 % per year.



## #3: The Federal-Provincial Dimension

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1. Provision of direct health-care services is a provincial jurisdiction.
2. The federal government plays an important role with federal transfers (as well as by providing health-care services to special groups).
3. How will the coming fiscal squeeze be shared between the two levels of government?



# Summary and Final Thoughts

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1. The coming demographic forces will lead to much higher spending on “age-related” items.
2. We must adjust to this increase in spending – but how?
3. Regard to intergenerational equity suggests reducing the debt ratio well ahead of 2020.
4. But this means a fairly rapid return to a balanced budget, followed by substantial budget surpluses.
5. How do we maintain public support for such surpluses?



# Summary and Final Thoughts

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6. Apart from debt reduction, there are several actions that governments can take.
7. Restraining spending and/or increasing taxes in the future is another approach.
8. Policies aimed at increasing the LF participation rate can also play a role (eg., immigration, retirement, etc..).
9. Faster productivity growth will:
  1. **certainly** be good for living standards
  2. **probably** help to ease the fiscal squeeze



# Questions?

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