



*Centre for the
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The Stylized Facts About Slower Productivity Growth in Canada

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Outline of Presentation

I. Introduction

II. Slowdown at the Aggregate Level

III. Slowdown at the Industrial Level

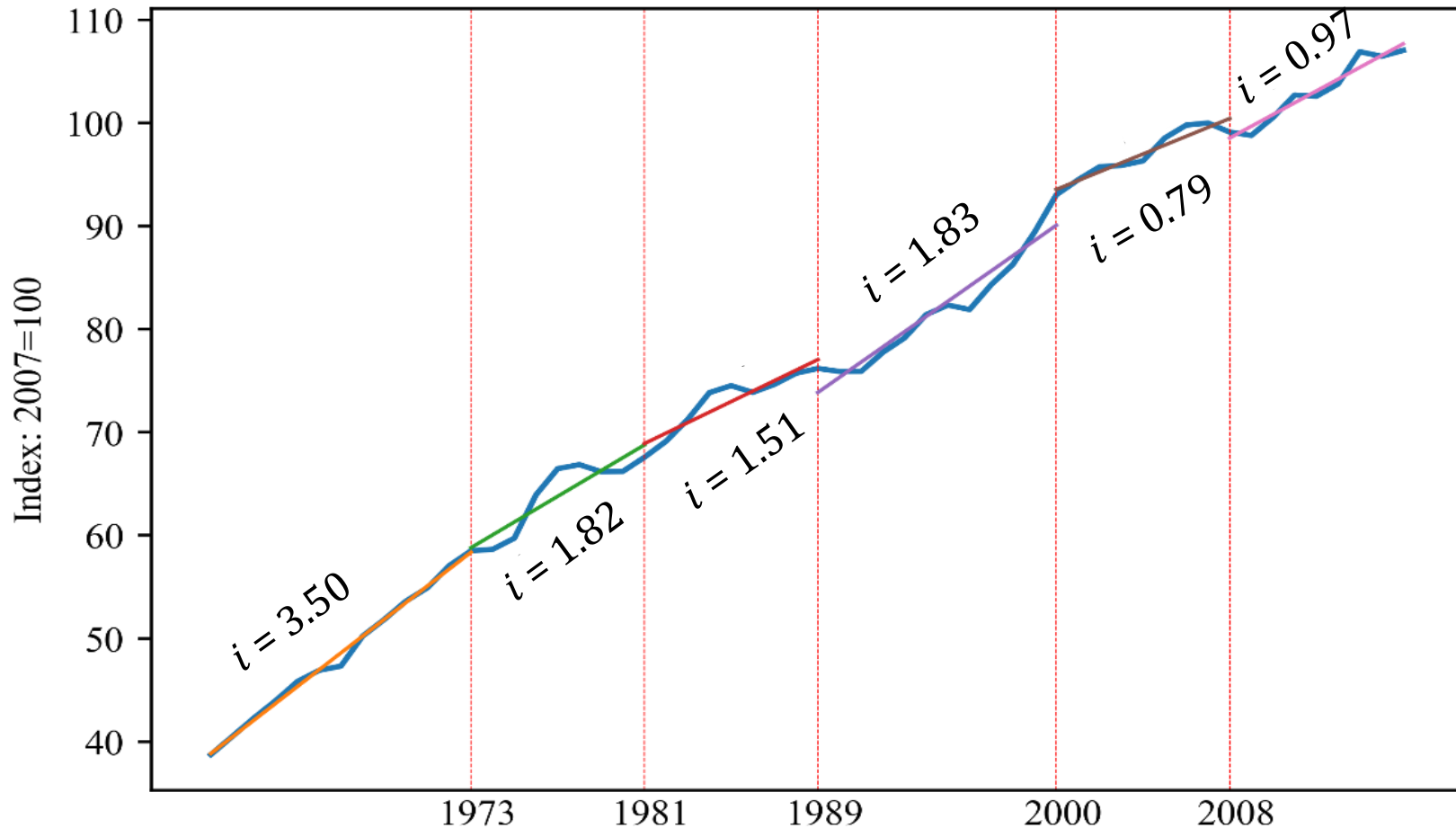
IV. Slowdown at the Provincial Level

V. The Post-2000 Slowdown

VI. Summary

Aggregate LP Growth

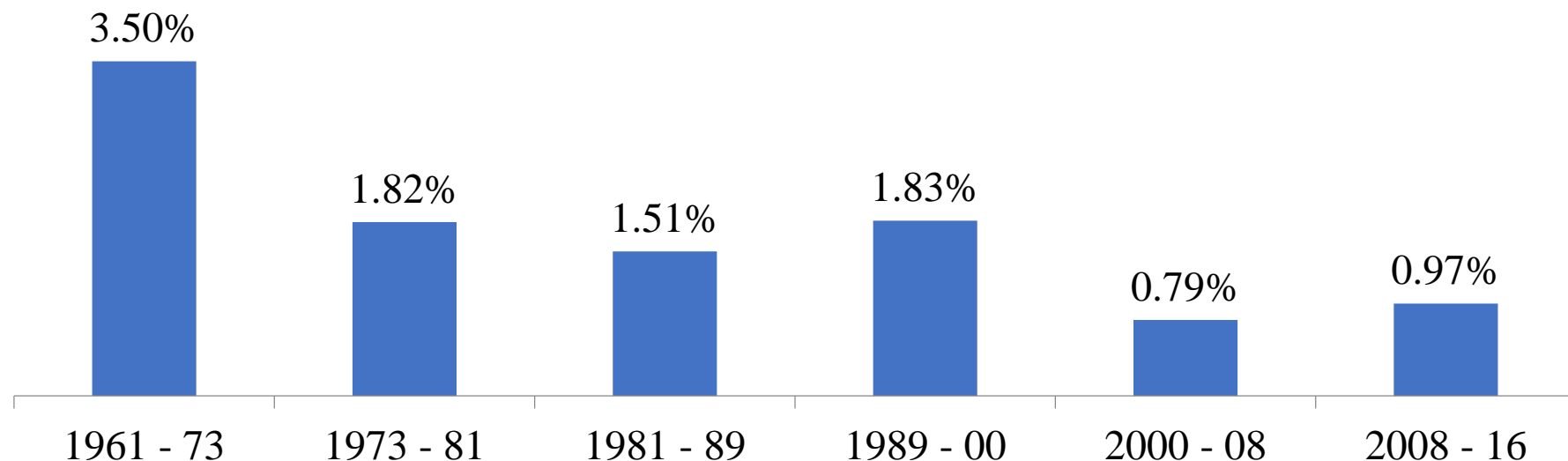
Trends in Business Sector Labour Productivity (LP) between Output Peaks, 1961 - 2016



Source: CANSIM table 383-0021.

Aggregate LP Growth

Business Sector Labour Productivity Growth, 1961 - 2016

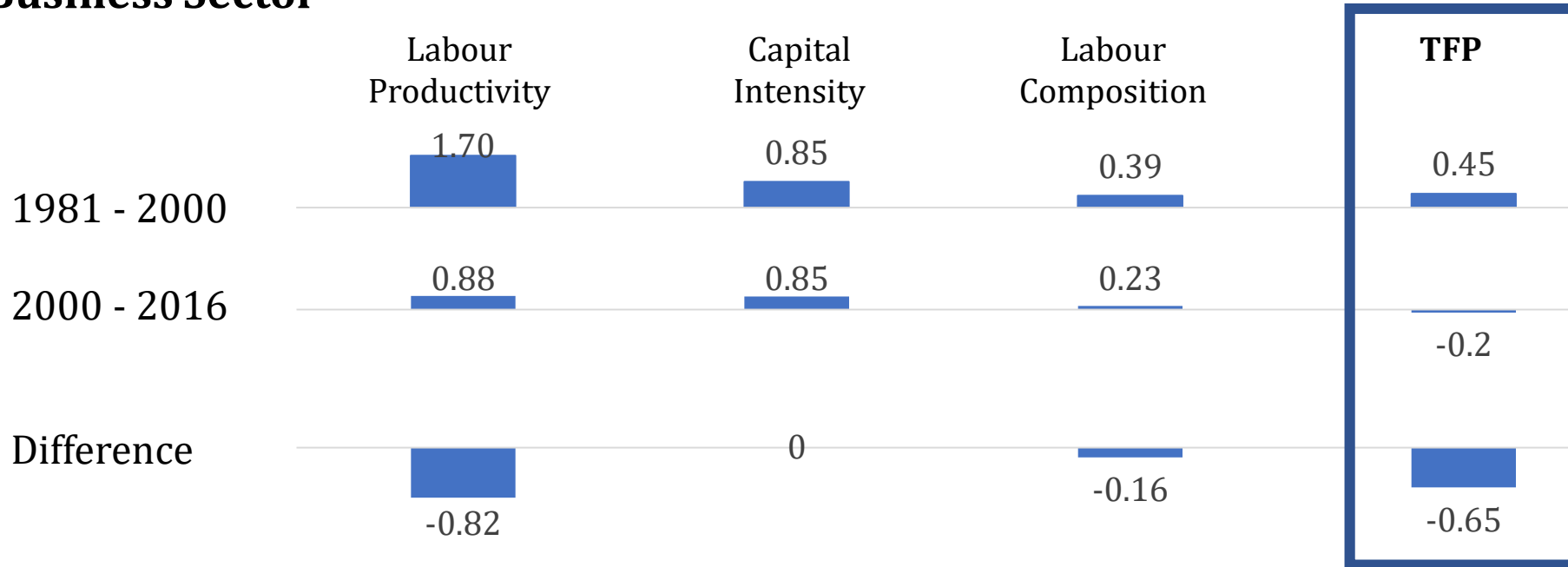


Source: CANSIM table 383-0021.

- A two-step downward trend: (1) 70s – 80s and (2) Early 2000s
- The first decline (1973 – 1981): - 1.7 percentage points
- The second decline (2000 – 2016): - 0.8 percentage points

Sources of Aggregate LP Growth

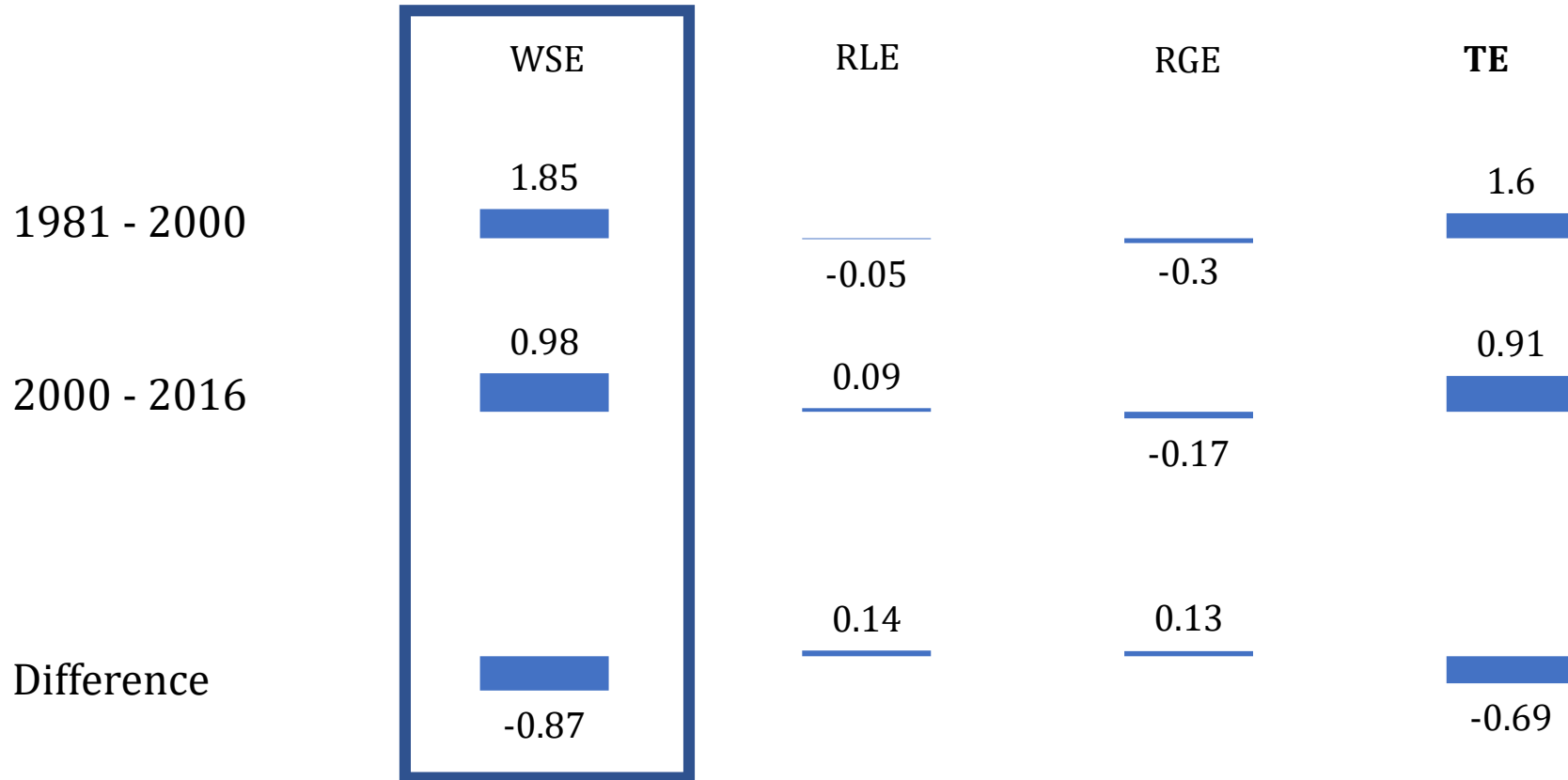
Percentage Point Contributions to Labour Productivity Growth, Business Sector



- TFP growth accounted for four fifths of the LP slowdown
- No contribution to the LP slowdown came from capital intensity

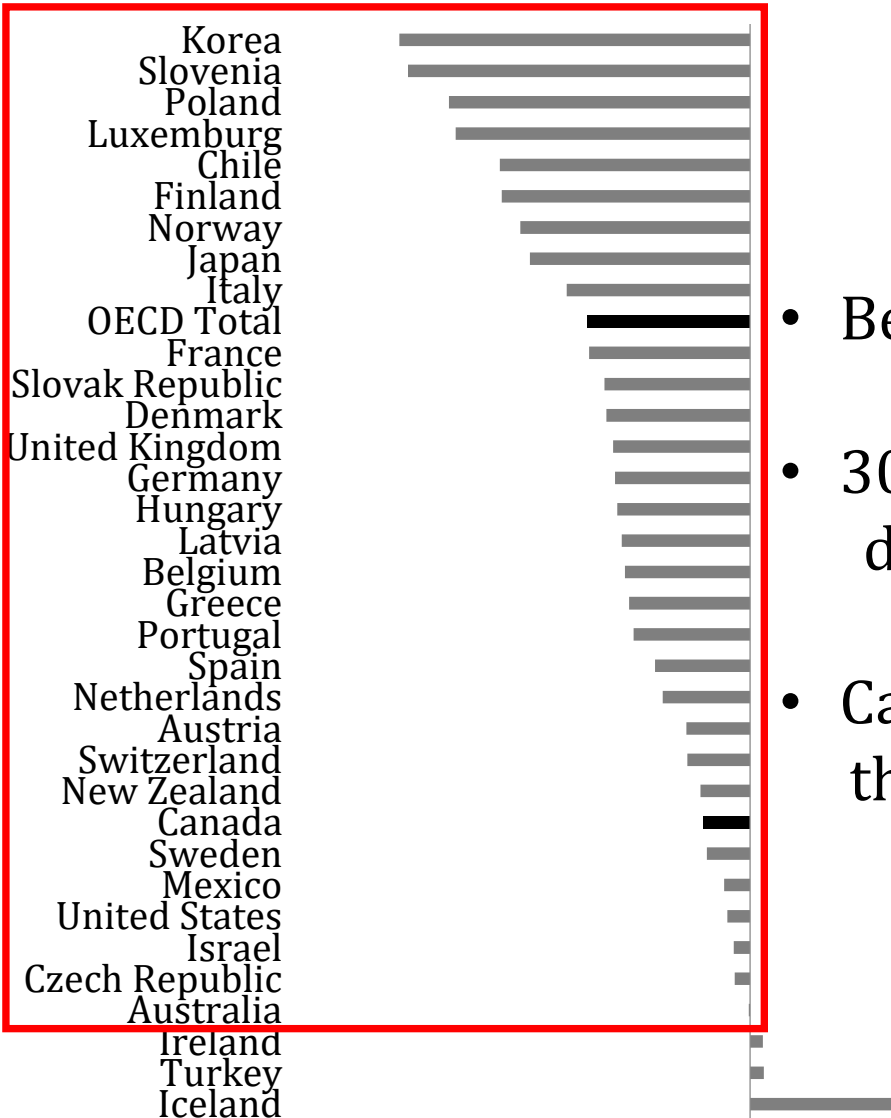
Aggregate LP Growth: Decomposition

Percentage Point Contributions to Labour Productivity Growth, Business Sector



WSE: Within Sector Effect, RLE: Reallocation Level Effect, RGE: Reallocation Growth Effect, TE: Total Effect

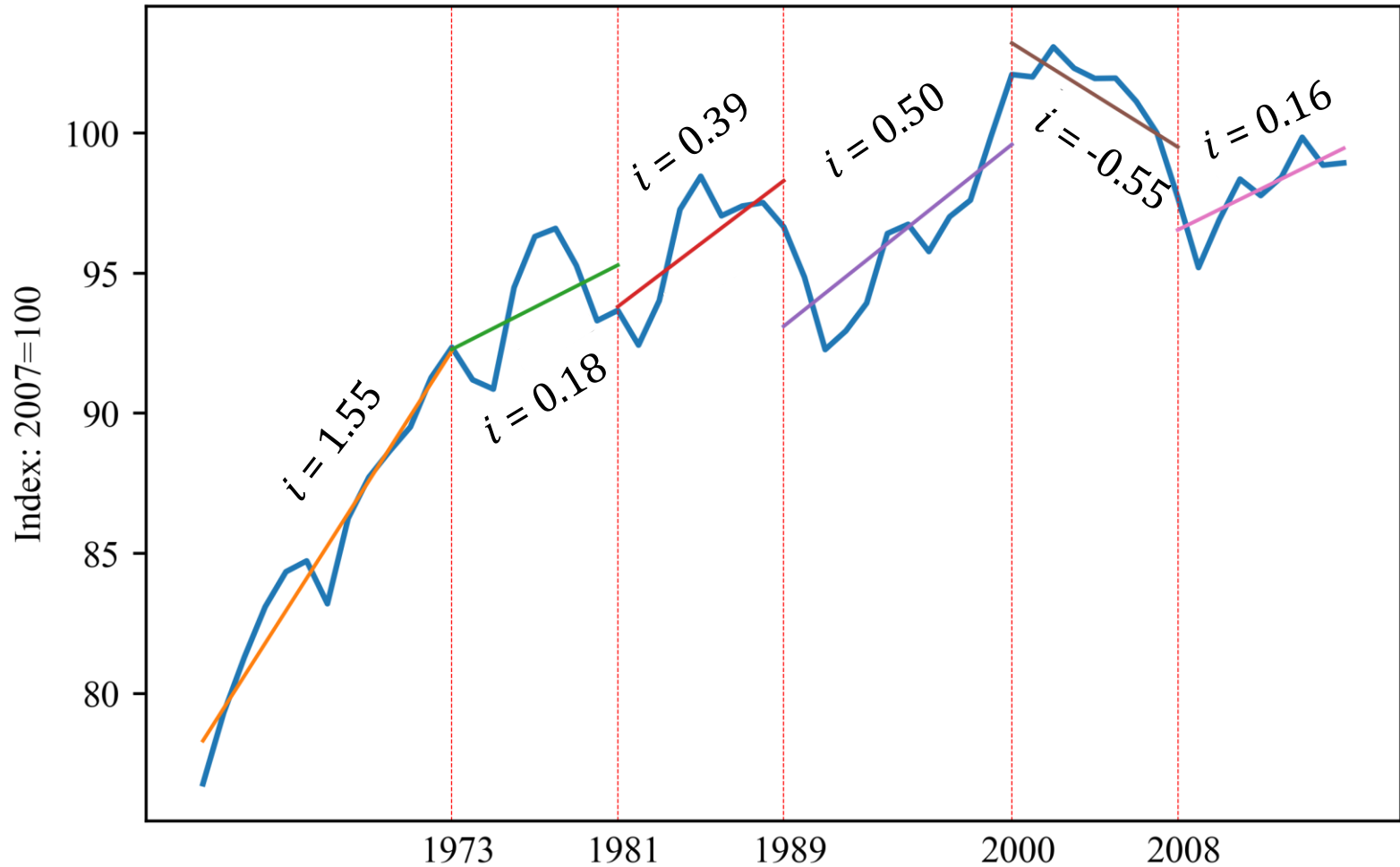
The slowdown is not unique in Canada...



- Between 1981 – 2000 and 2000 – 2016
- 30 of 33 OECD countries' GDP per hour declined
- Canada (-0.5 percentage point) had the 7th smallest GDP per hour growth

Total Factor Productivity (TFP) Growth

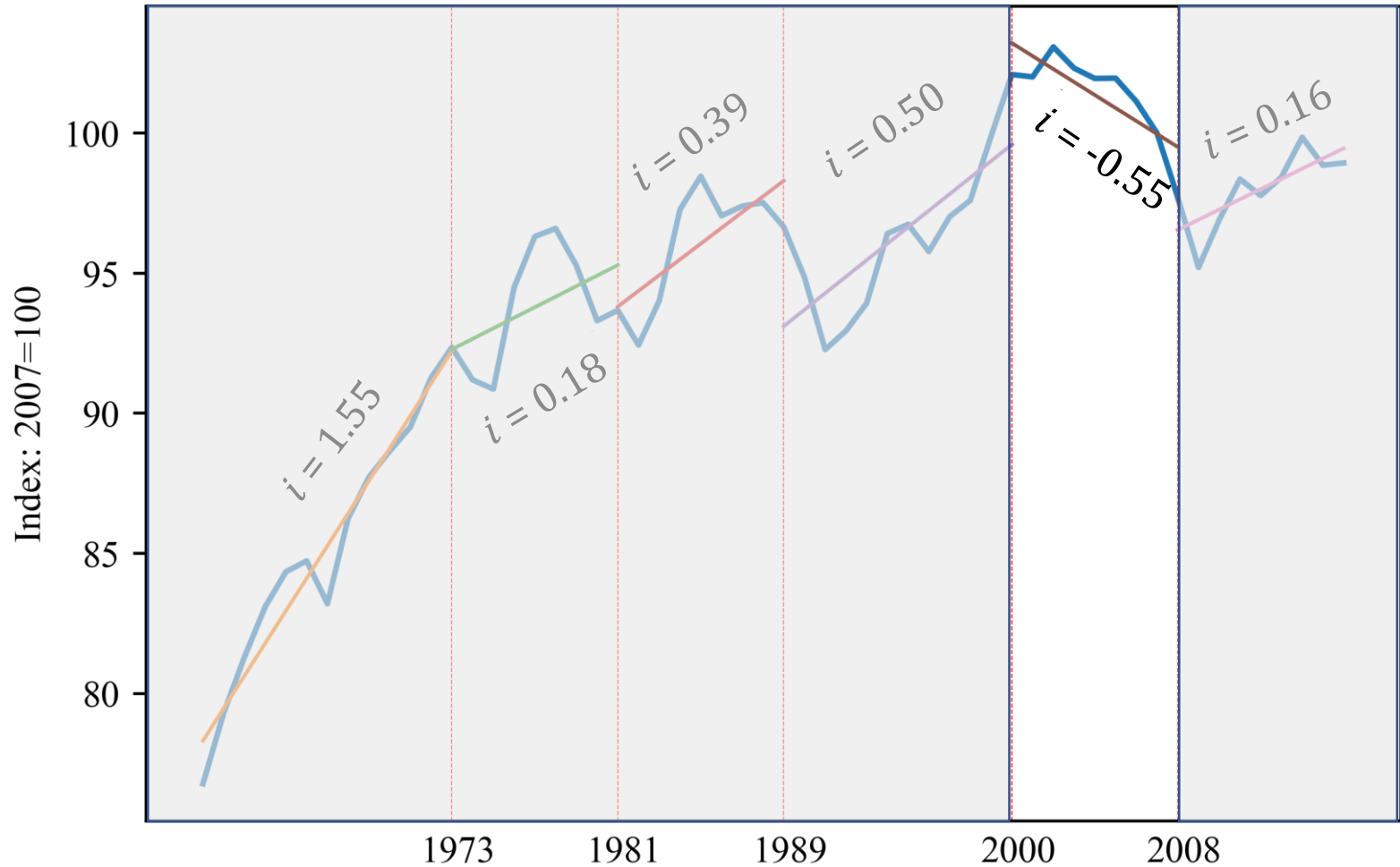
Trends in Business Sector TFP between Output Peaks, 1961 - 2016



Source: CANSIM table 383-0021.

Total Factor Productivity (TFP) Growth

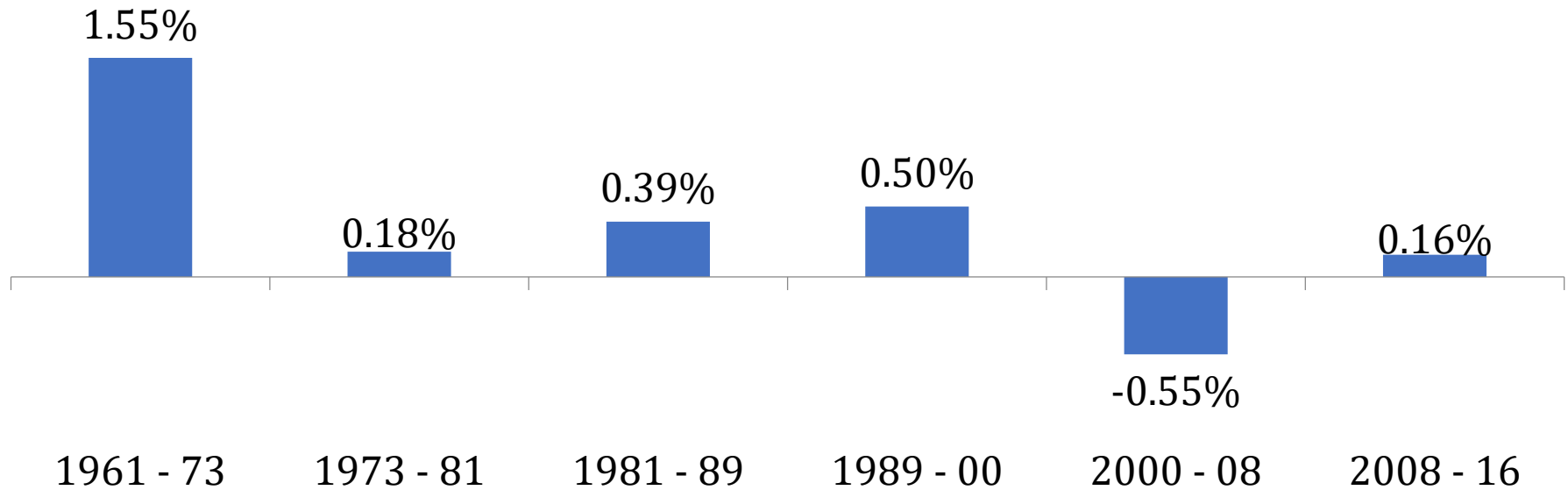
Trends in Business Sector TFP between Output Peaks, 1961 - 2016



Source: CANSIM table 383-0021.

Aggregate TFP Growth

Business Sector Total Factor Productivity Growth, 1961 - 2016



- A two-step downward trend: (1) 1970s and (2) Early 2000s
- The first decline (1973 - 1981): -1.37 percentage points
- The second decline (2000 - 2008): -1.05 percentage points

LP & TFP Growth By Industry

Between 1981 – 2000 and 2000 – 2016:

- LP and TFP growth by industry in the two periods are similar.
- Growth
 - 8 / 15 Industries declined
 - Mining and oil and gas extraction had the greatest decline
 - Service industries had positive growth
 - Slowdown concentrated in the goods sector

LP & TFP Growth By Industry

Between 1981 – 2000 and 2000 – 2016:

- Contribution to Growth
 - 8 / 15 Industries had negative contribution
 - Manufacturing had the greatest negative contribution
 - Service industries had positive contribution

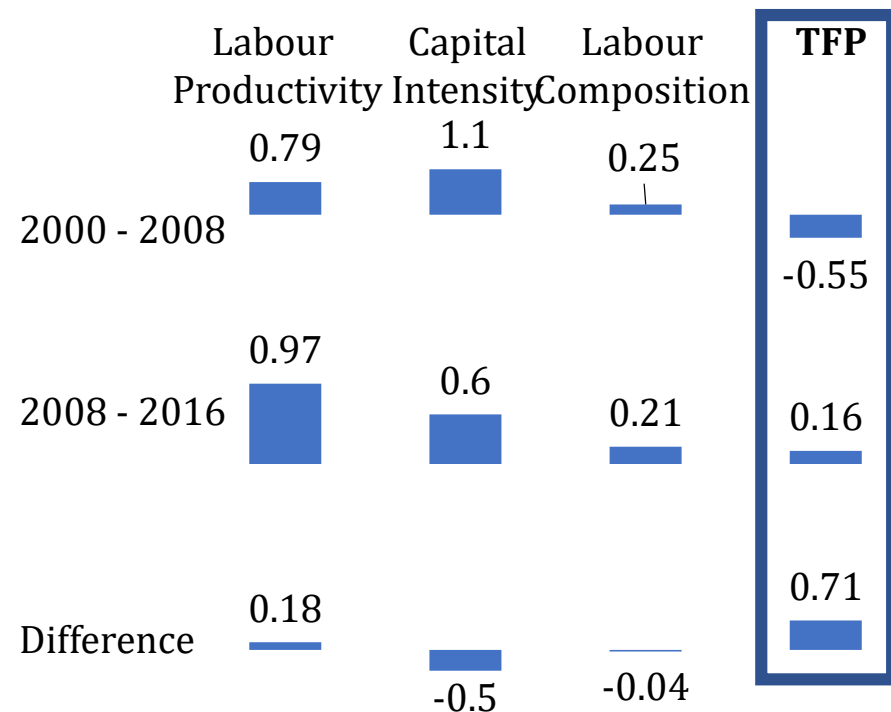
LP & TFP Growth By Province

Between 1997 - 2000 and 2000 - 2016:

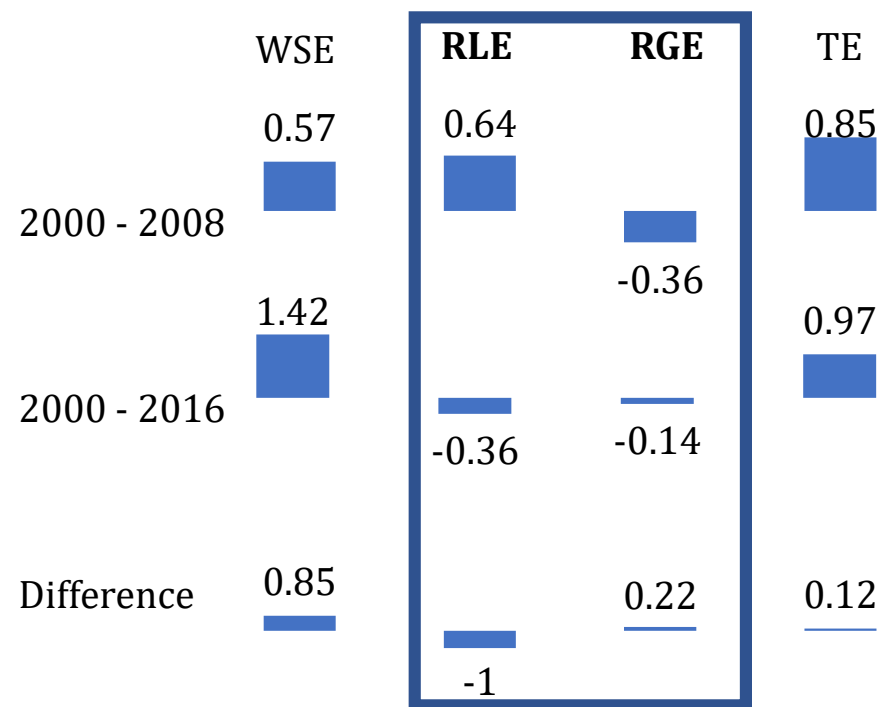
- LP and TFP growth in the two periods are similar.
- Growth
 - LP : 8 / 10 provinces declined
 - TFP: 7 / 10 provinces declined
 - Newfoundland and Labrador declined the most, followed by Ontario
- Ontario contributed the most to LP growth, followed by Quebec

Post-2000: LP Slowdown

Growth Accounting

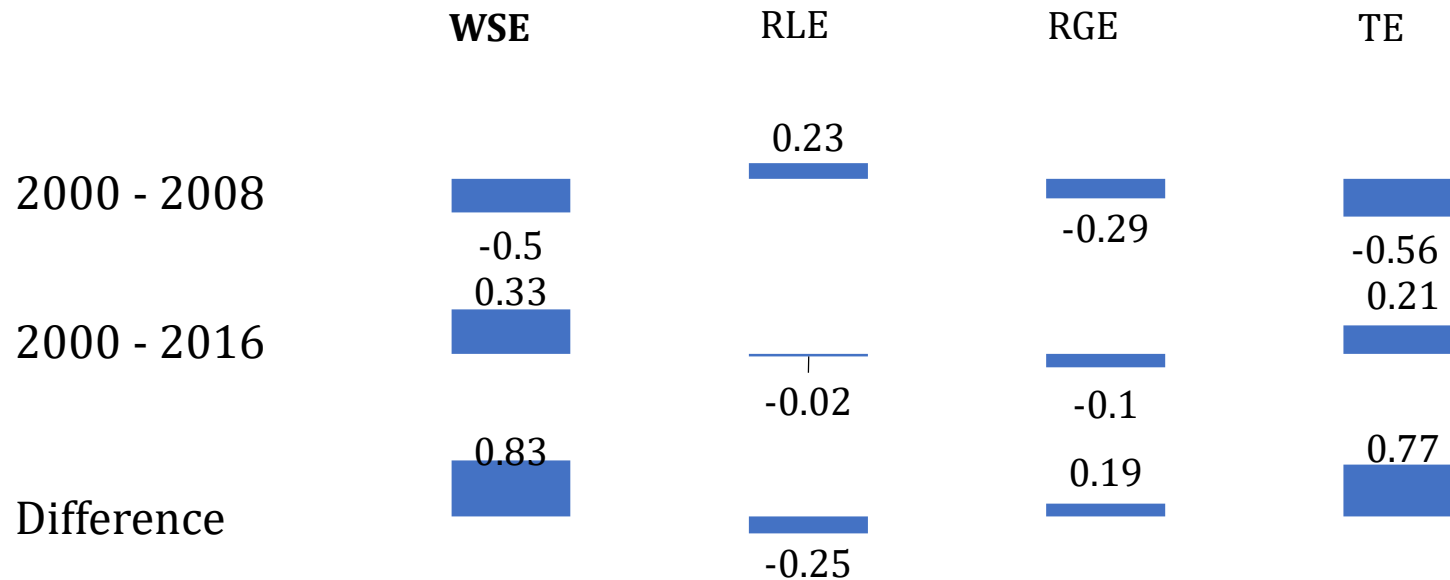


Decomposition



- Growth accounting: TFP picked up after 2008
- Similar overall growth but different patterns:
 - 2000 – 2008: +ve reallocation effect
 - 2008 – 2016: -ve reallocation effect

Post-2000: TFP Slowdown



- Different from LP: reallocation effects did not fall
- Mainly driven by within sector effects

Summary

- Both LP and TFP peaked around 2000. Growth in LP and TFP was weaker in 2000 – 2016 compared with 1981 – 2000.
- The magnitude of the slowdown after 2000 was about twice smaller than in 1970s.
- GDP per hour growth in Canada was the 6th smallest amongst OECD countries in 1981 – 2000 relative to 2000 – 2016.
- Fourth fifths of labour productivity growth in Canada between the 1981 – 2000 and 2000 – 2016 periods come from TFP.
- Slower labour productivity growth has not been pervasive across all industries.

Summary

- Manufacturing accounted for the largest of the slowdown of both LP and TFP while mining and oil and gas extraction made equally large contributions to TFP
- The post-2000 slowdown is largely a goods sector phenomenon.
- 8 of 10 provinces experienced productivity slowdown after 2000. Newfoundland and Labrador declined the most.
- Sources of LP growth, impact of reallocation effects and the number of industries experiencing stronger growth are different between 2000 – 2008 and 2008 – 2016.