

# Productivity by the numbers

## Sausage Roll Seminar

18<sup>th</sup> July 2023



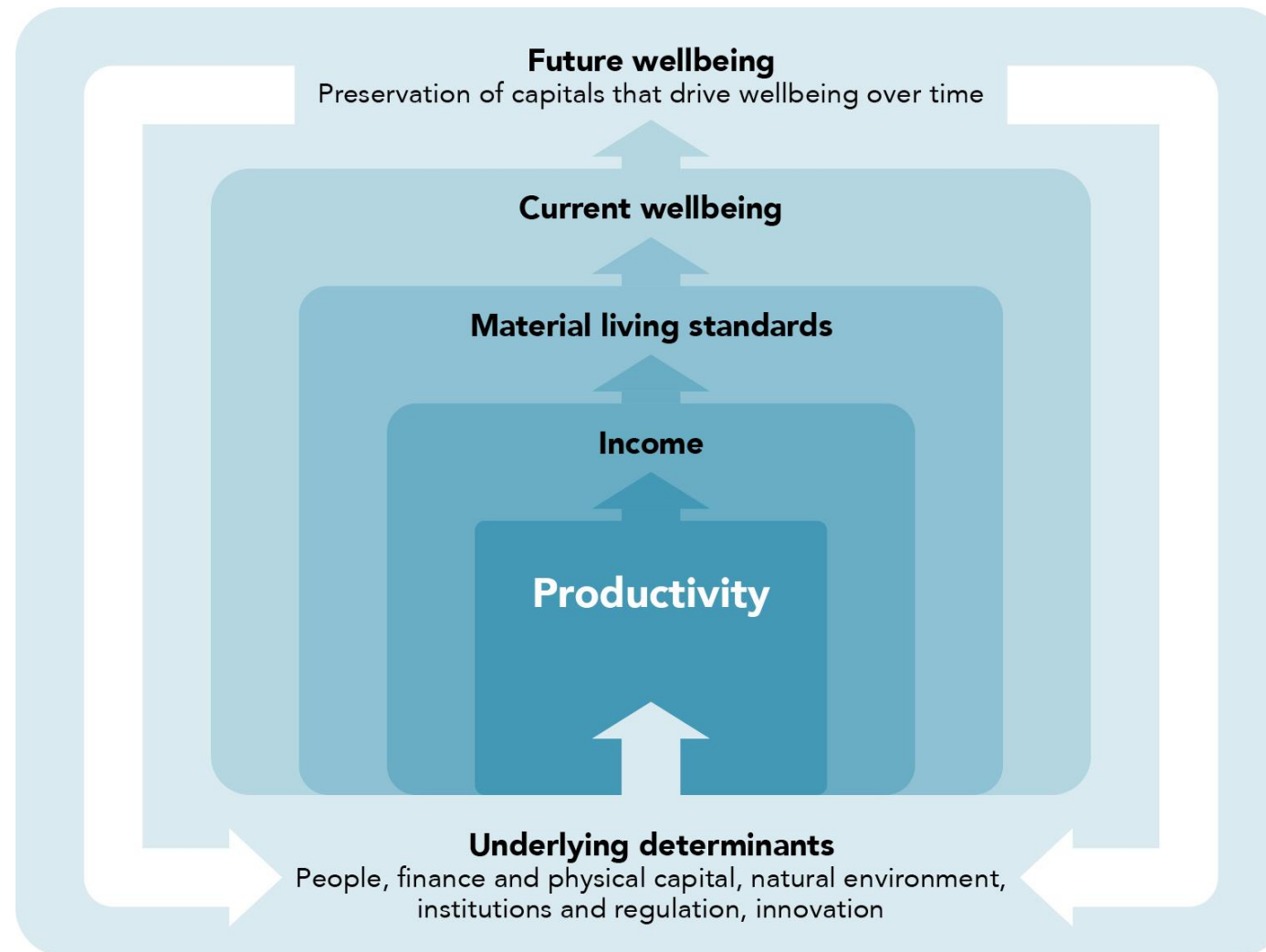
**Philip Stevens**

Director, Economics & Research

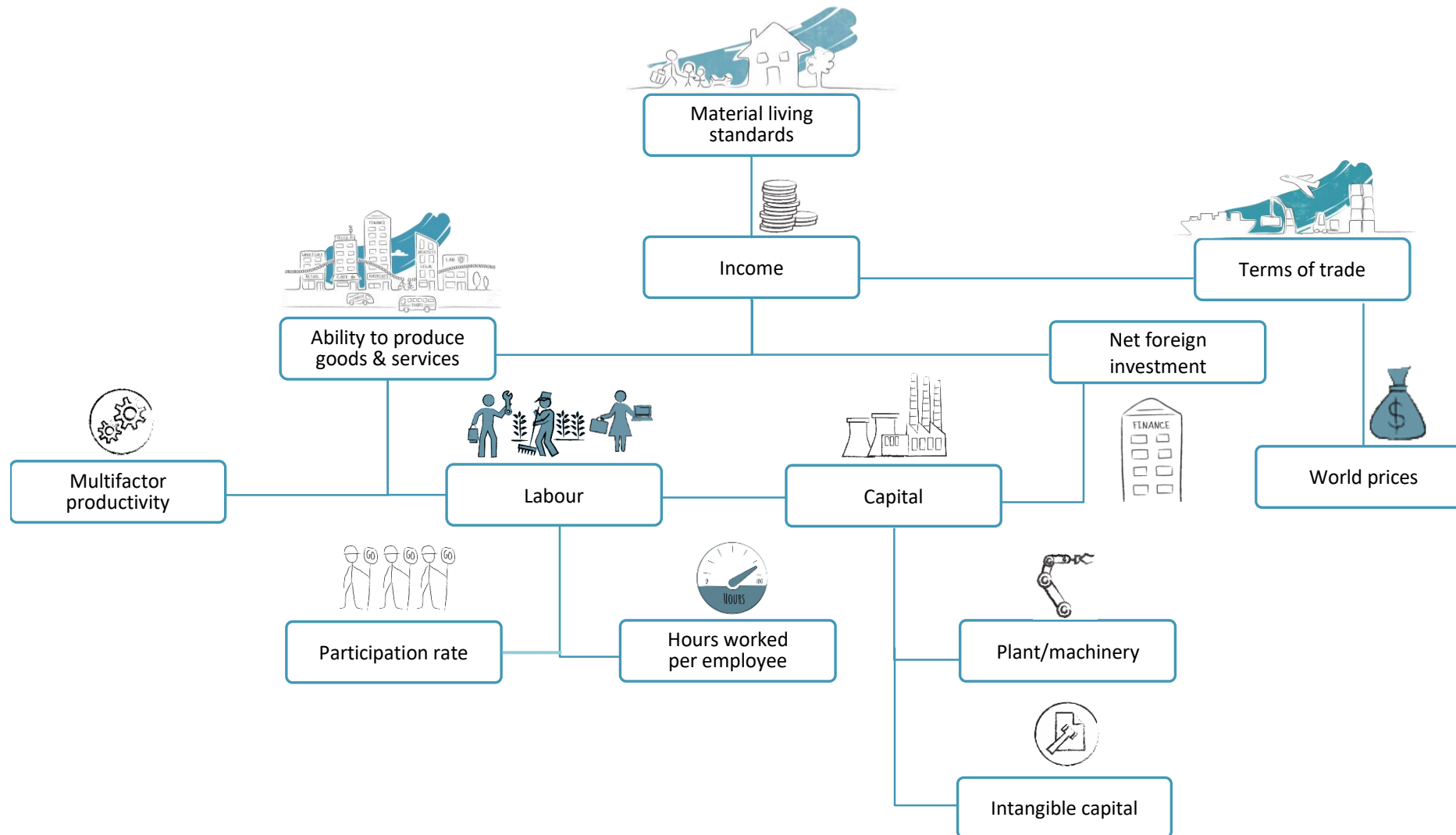
Productivity Commission | Te Kōmihana Whai Hua o Aotearoa



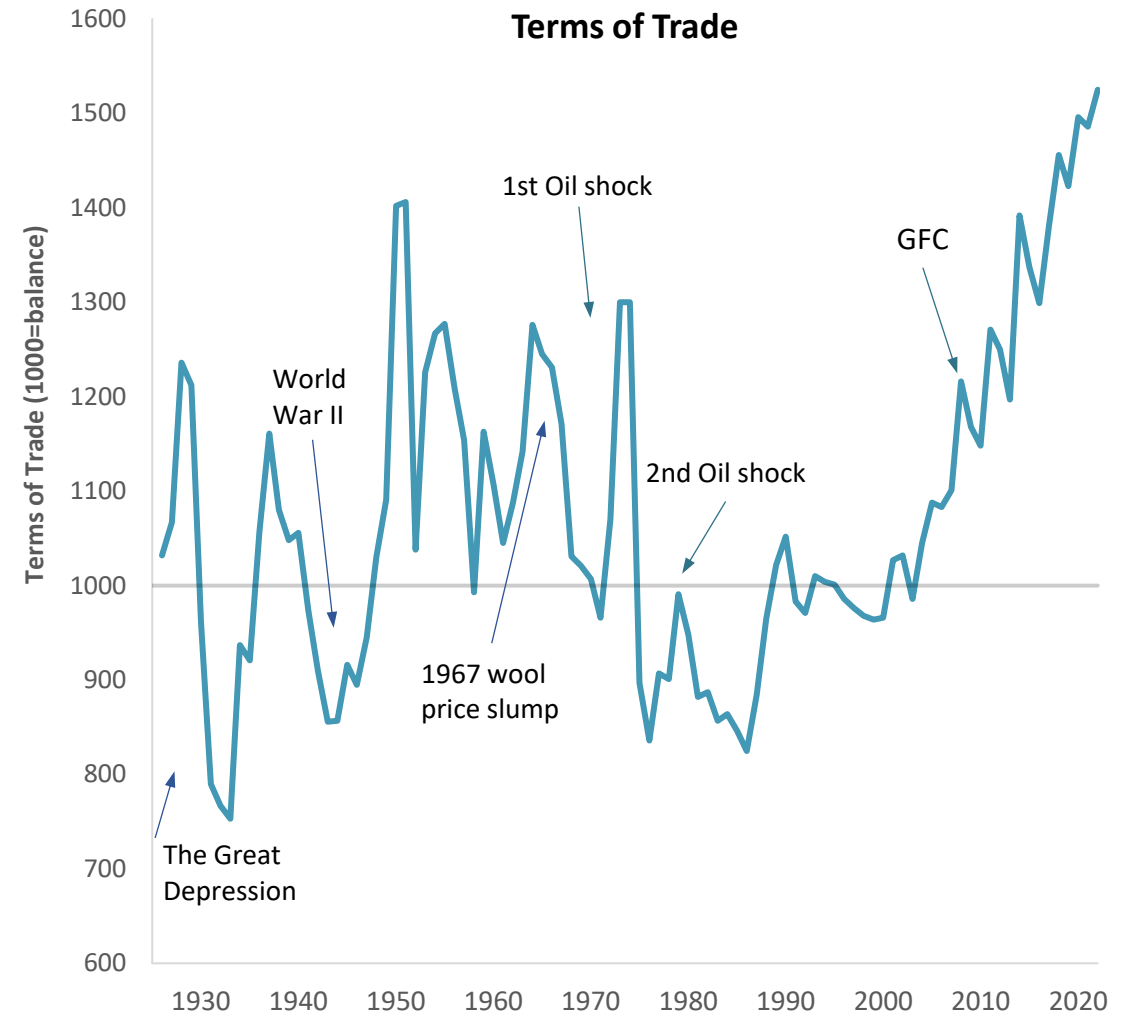
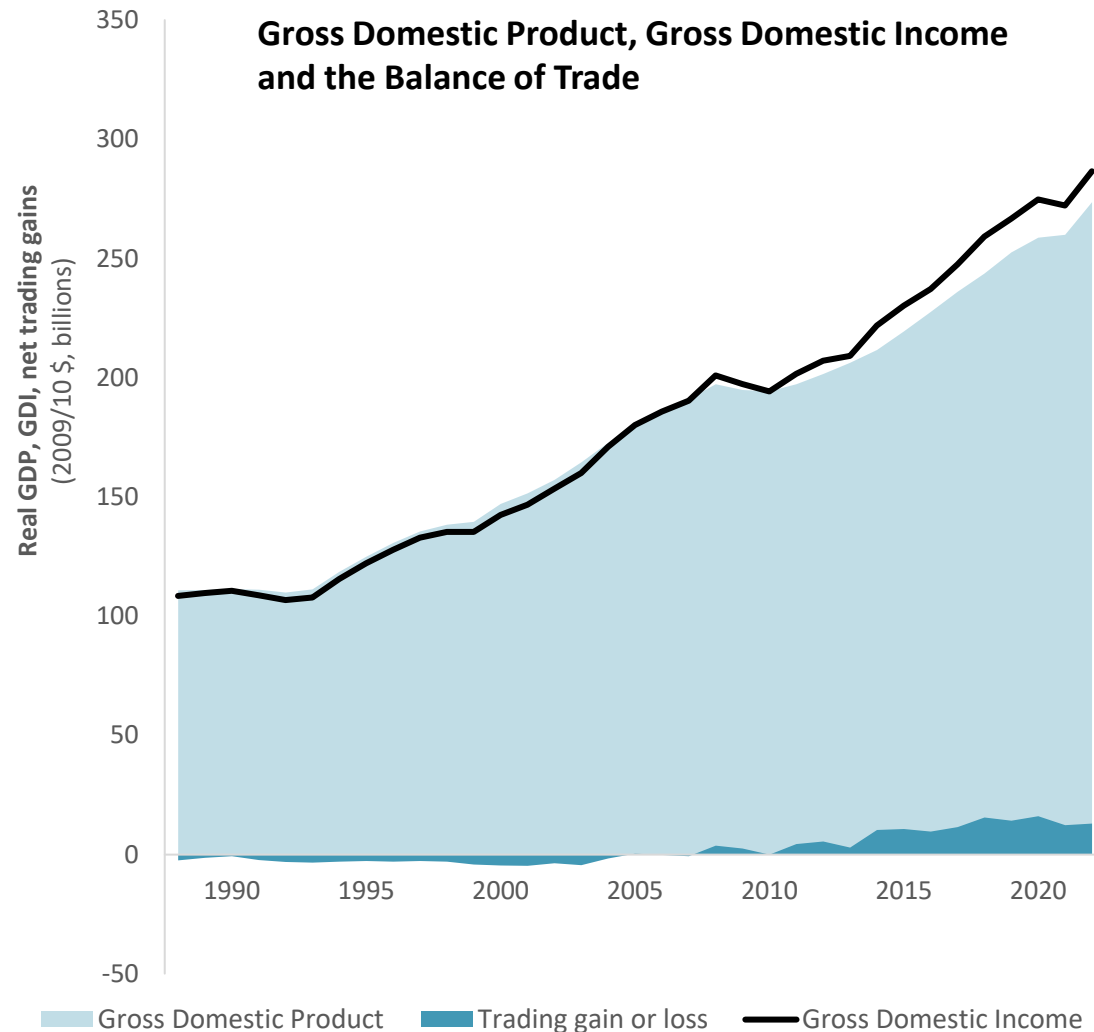
# Productivity matters



# The drivers of material living standards

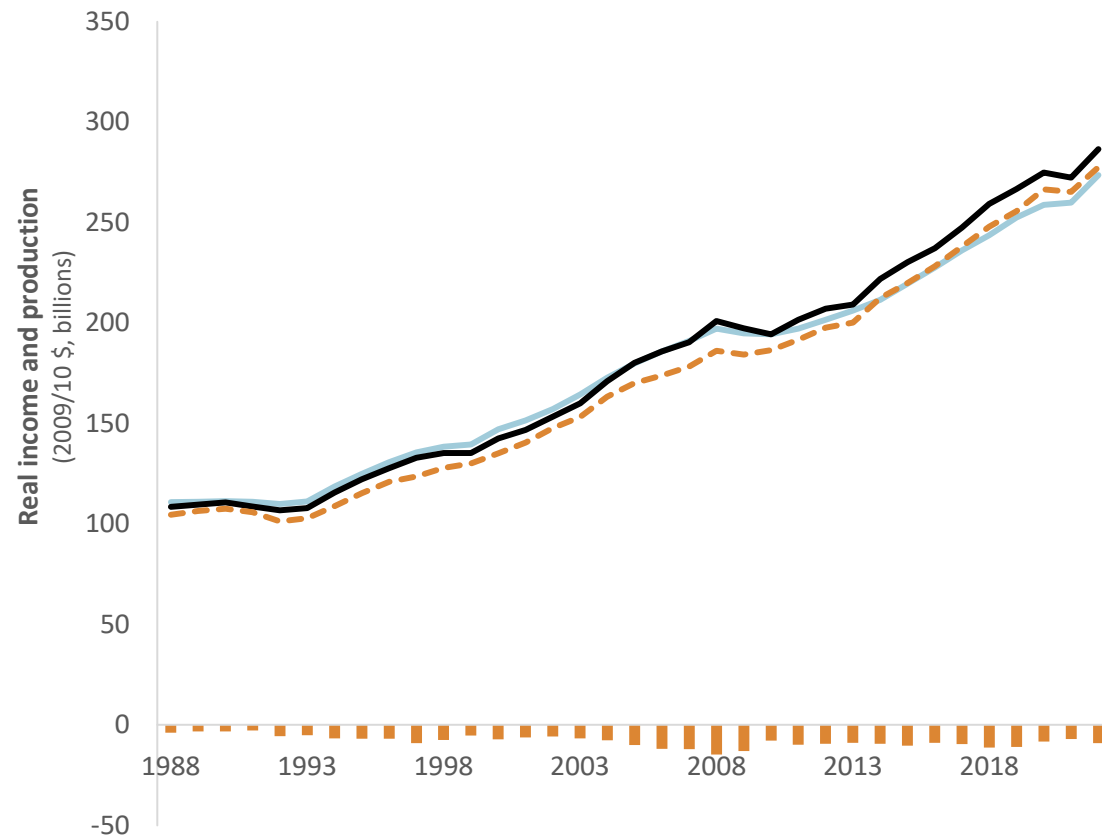


# In the last decade and a half, positive terms of trade changes have increased incomes



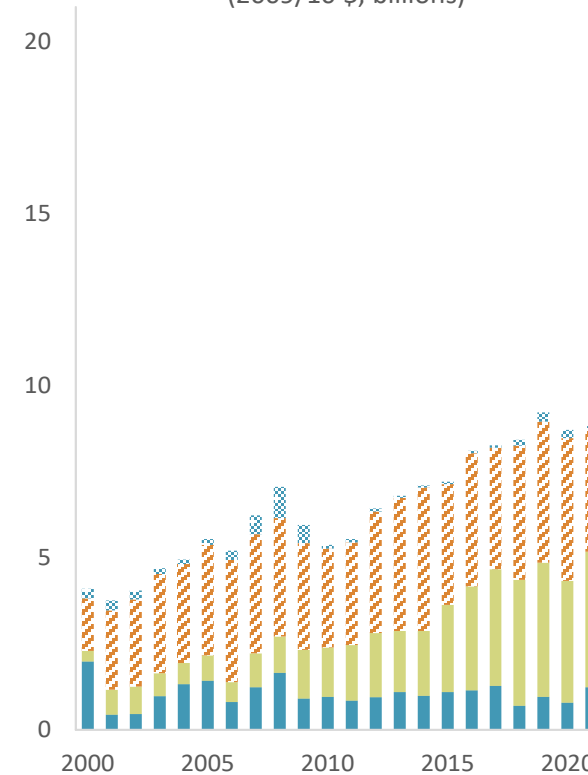
# Some of the income gains have flowed abroad

GDP, GDI, GNI and the flow of incomes, 1988–2022



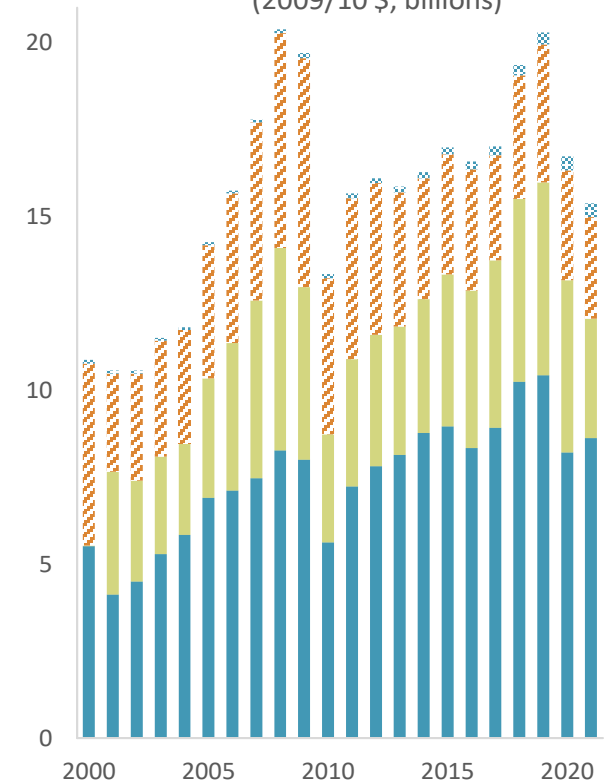
Real income inflows

(2009/10 \$, billions)



Real income outflows

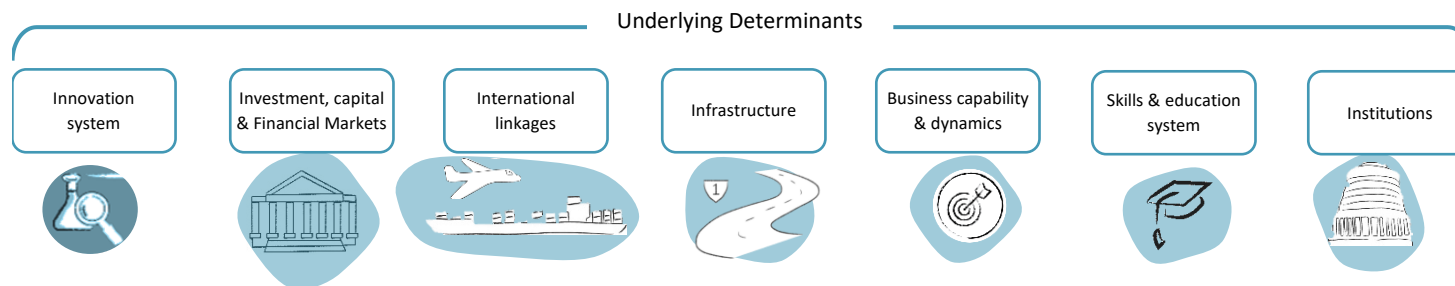
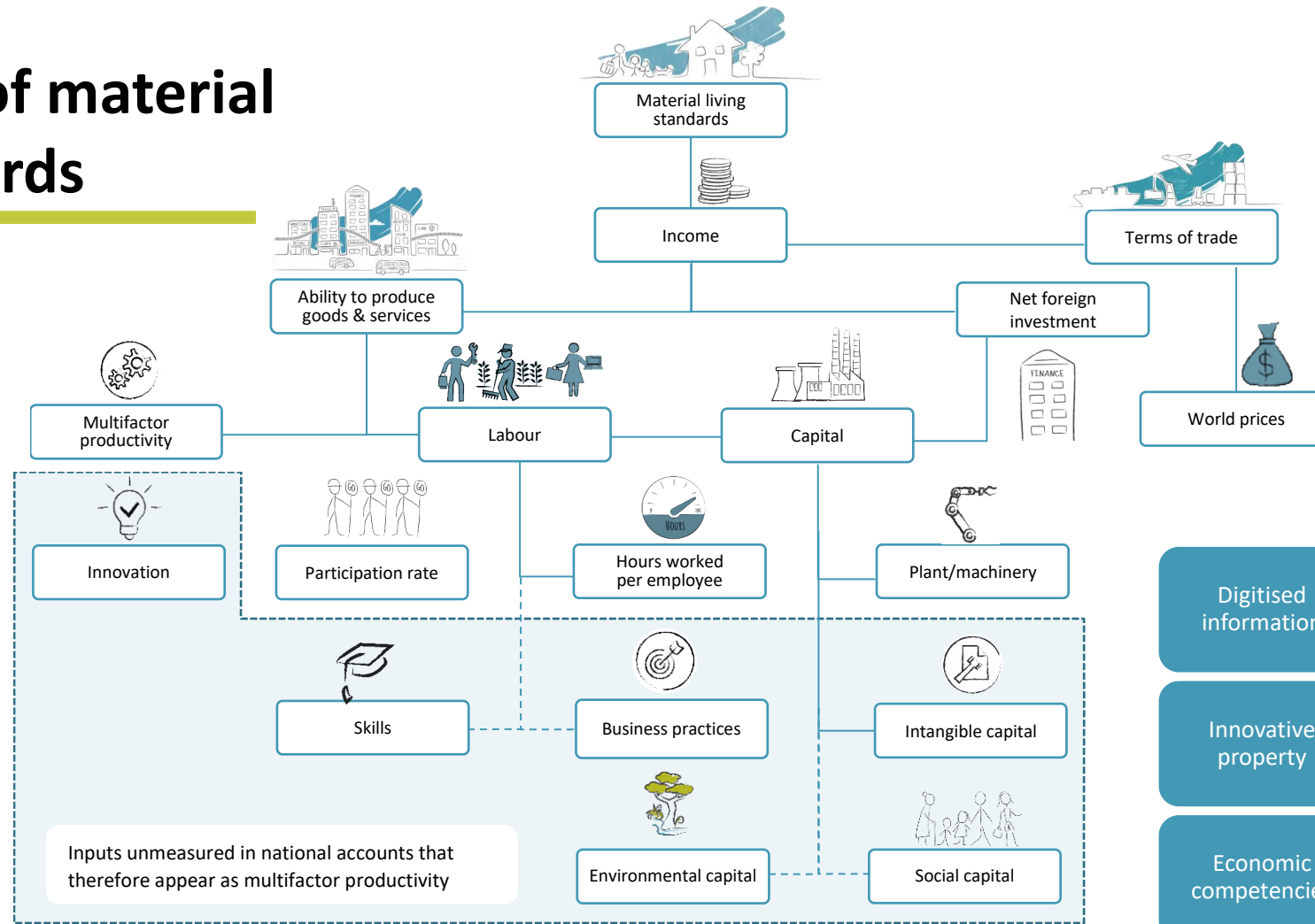
(2009/10 \$, billions)



■ Net primary incomes from abroad     — Gross Domestic Product  
— Gross Domestic Income     - - - Gross National Income

■ Direct investment     ■ Portfolio investment     ▨ Other investment     ▨ Compensation of employees

# The drivers of material living standards

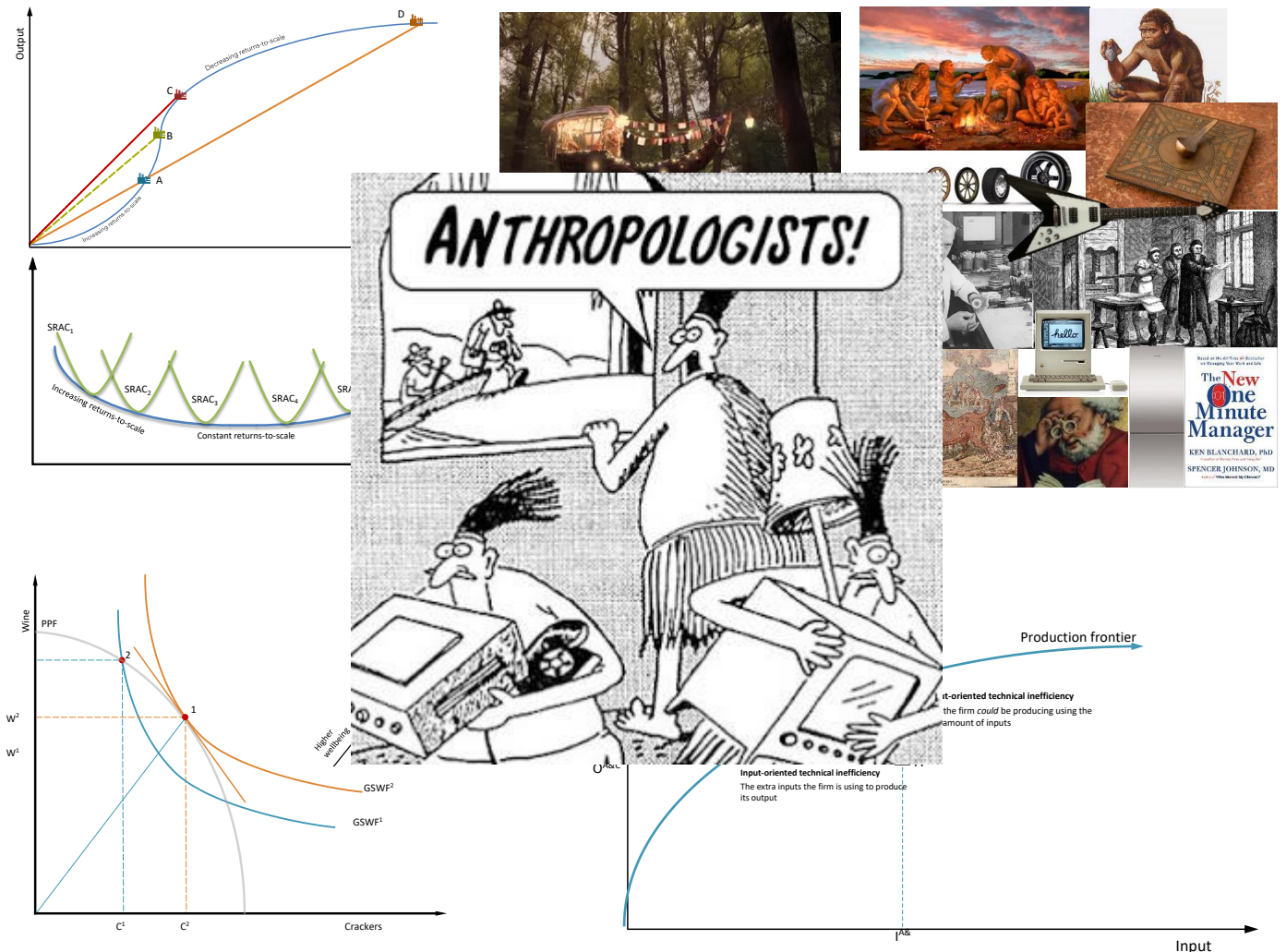


# The components of productivity

- Economies-of-scale
- Economies-of-scope
- Technical efficiency
- Allocative efficiency
- Knowledge/technology

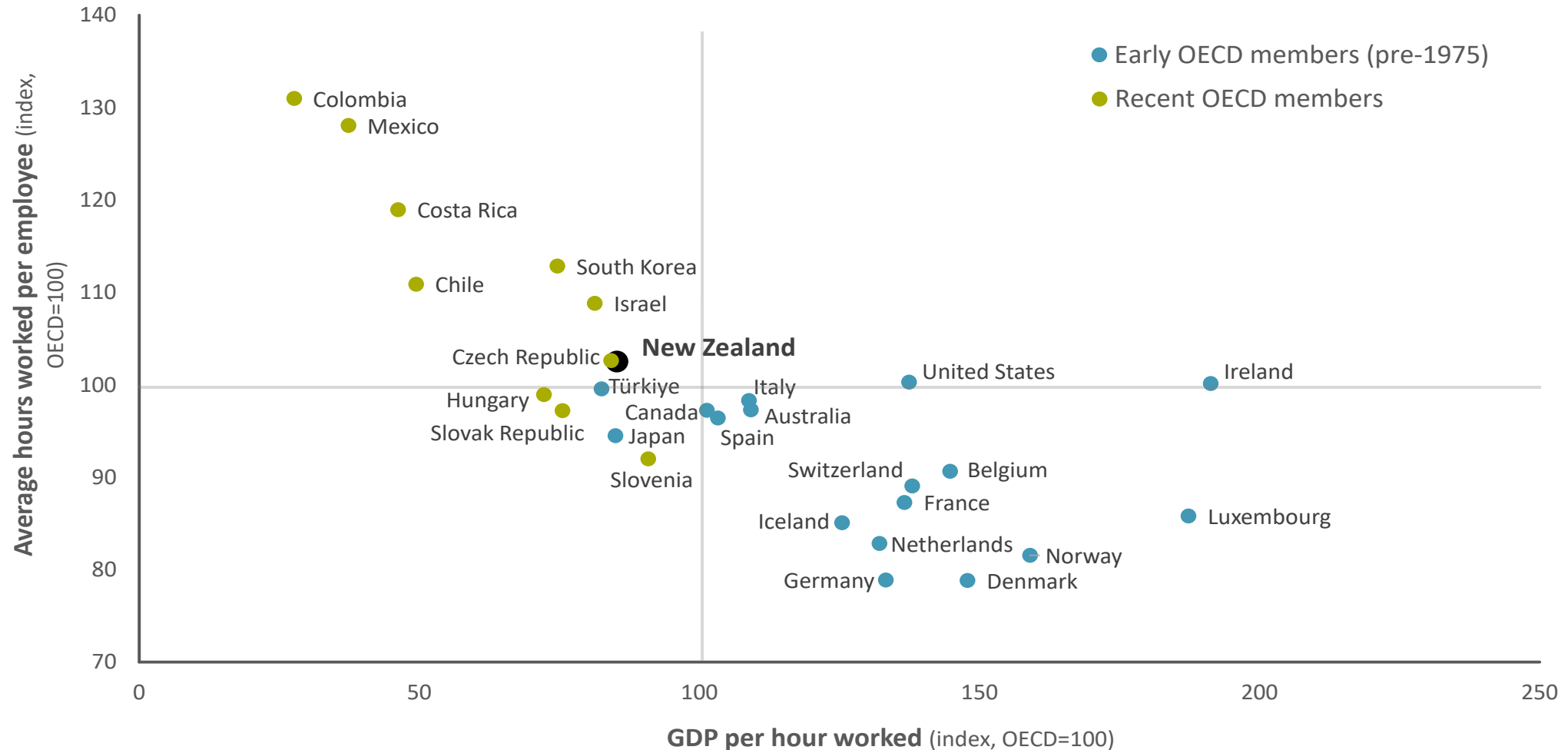
And, in reality:

- Mismeasurement



# New Zealanders work longer hours and get less output per hour than most OECD countries

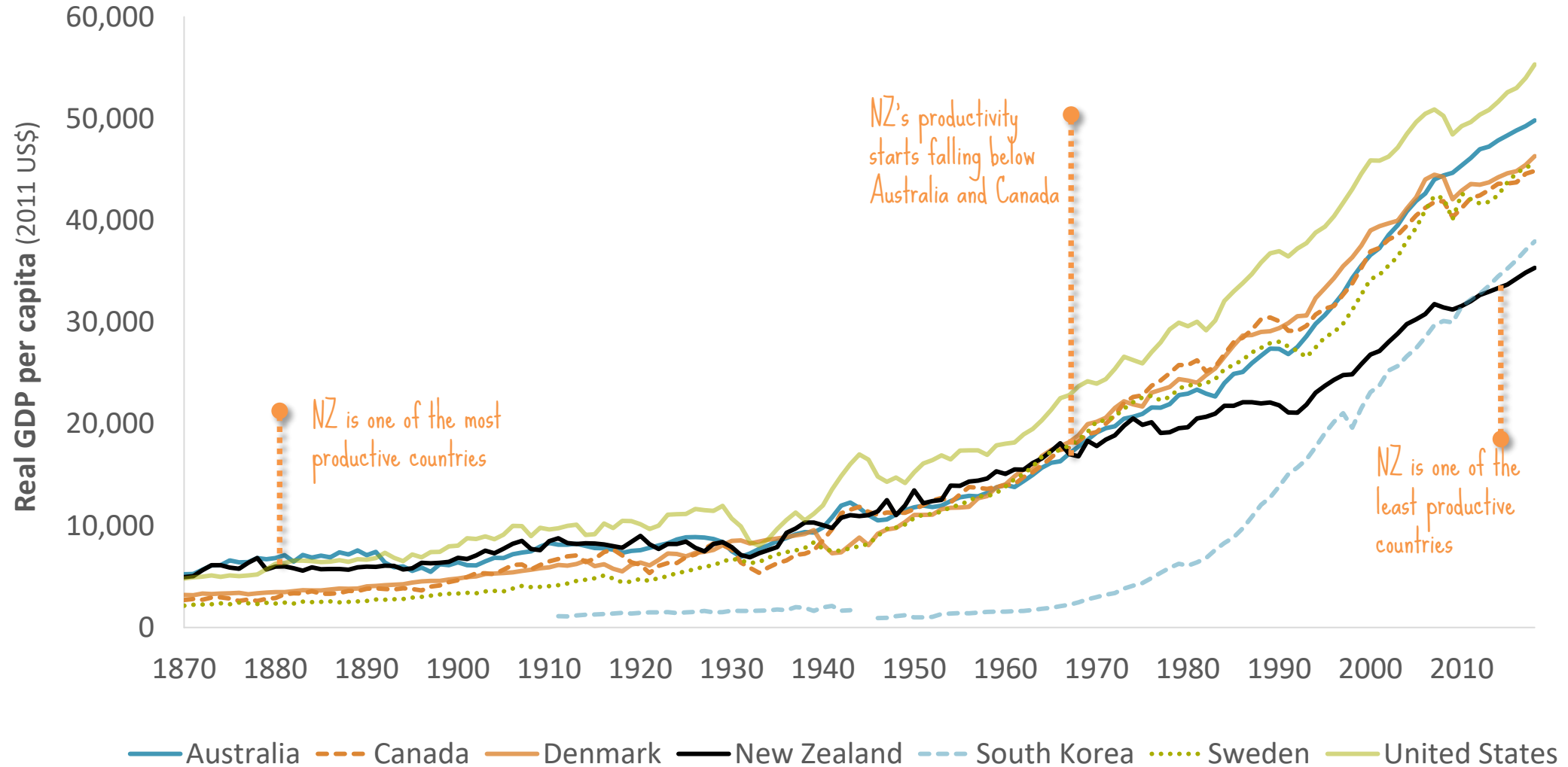
Hours worked per year vs output per hour relative to the OECD average, 2019



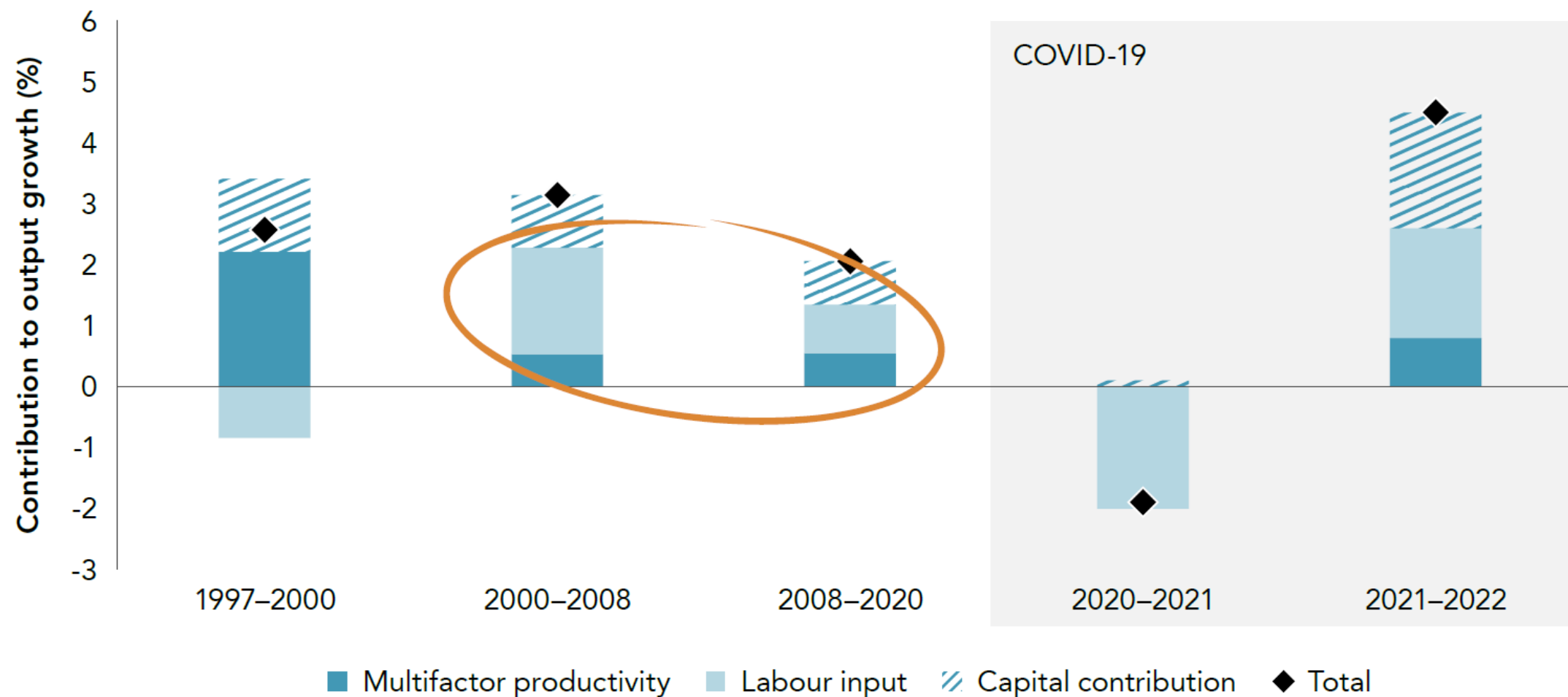


# New Zealand's relative decline began in the mid-20<sup>th</sup> century

Real GDP per capita (USD 2011), 1870–2018



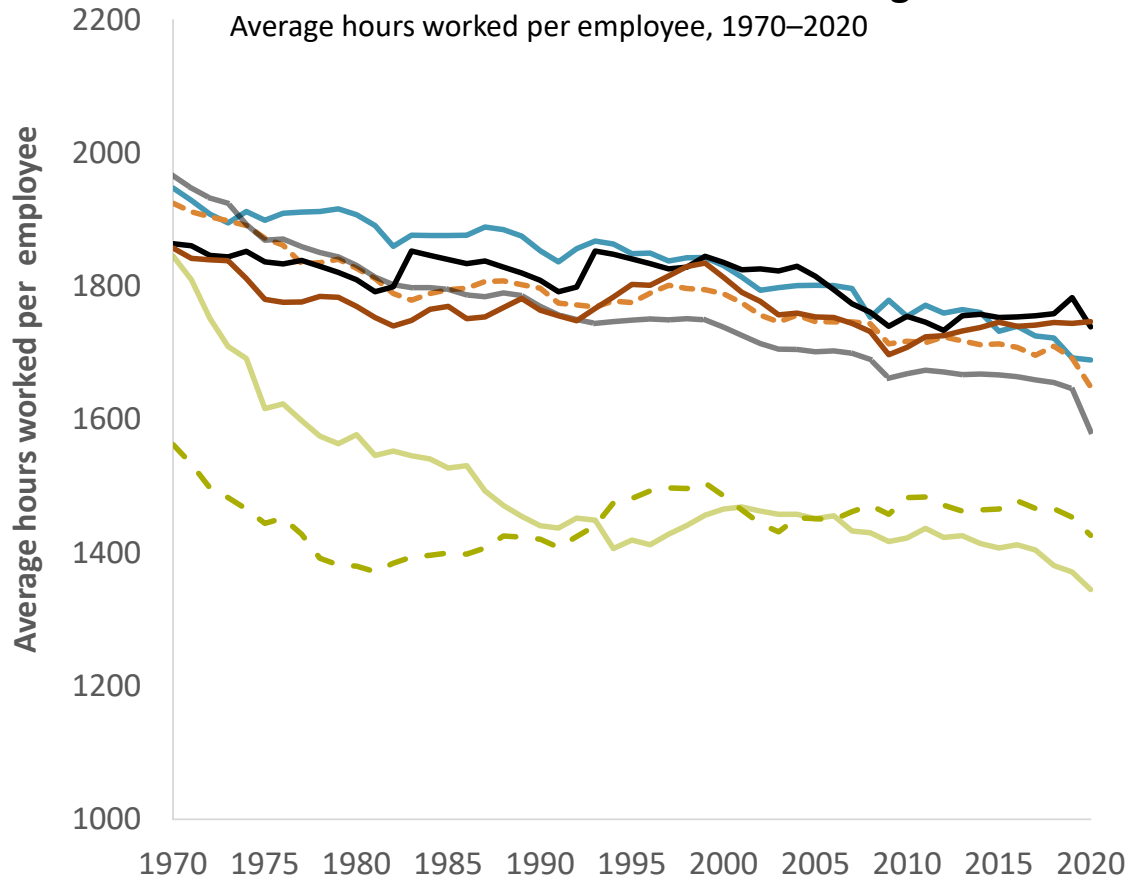
# New Zealand's economic growth was driven by increasing labour input in the two decades prior to COVID-19



# Aotearoa New Zealand's growth has come from working more hours, rather than increased productivity

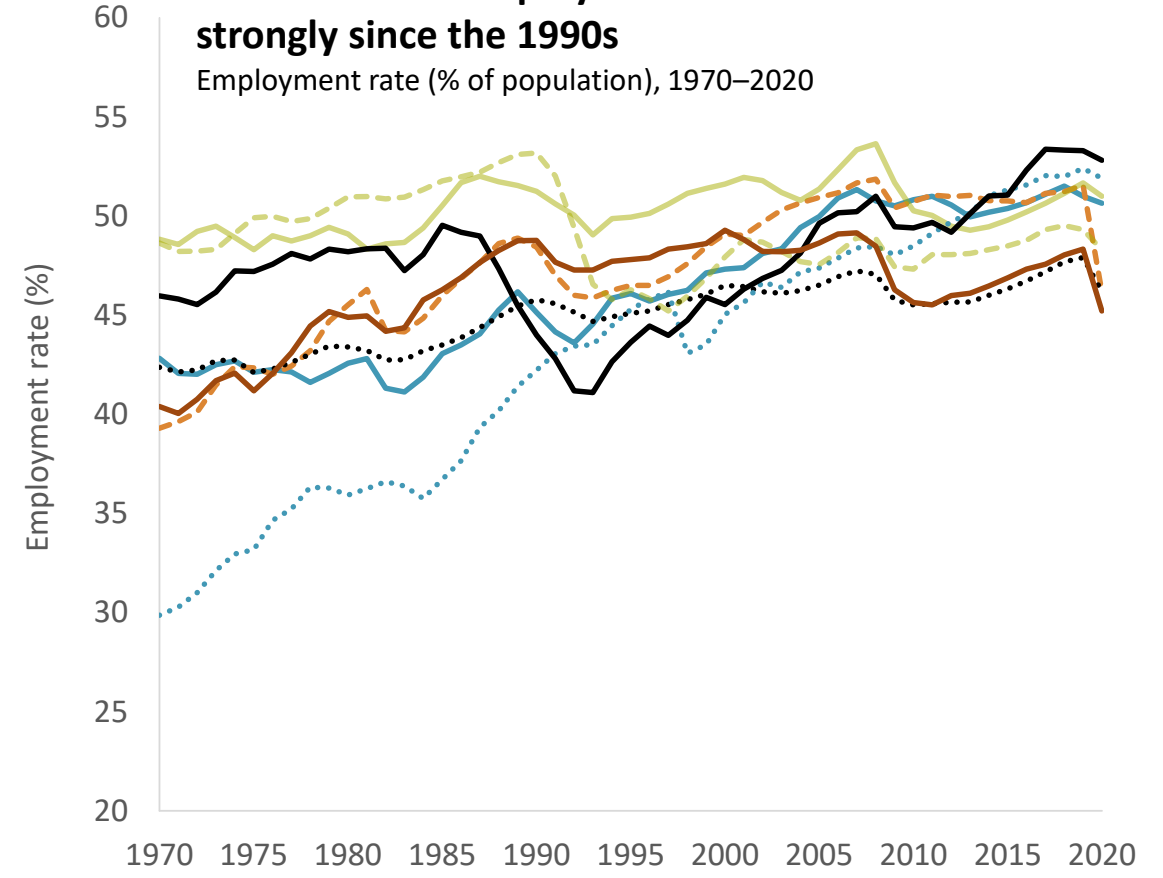
**New Zealanders continue to work long hours**

Average hours worked per employee, 1970–2020



**New Zealand's employment rate has recovered strongly since the 1990s**

Employment rate (% of population), 1970–2020

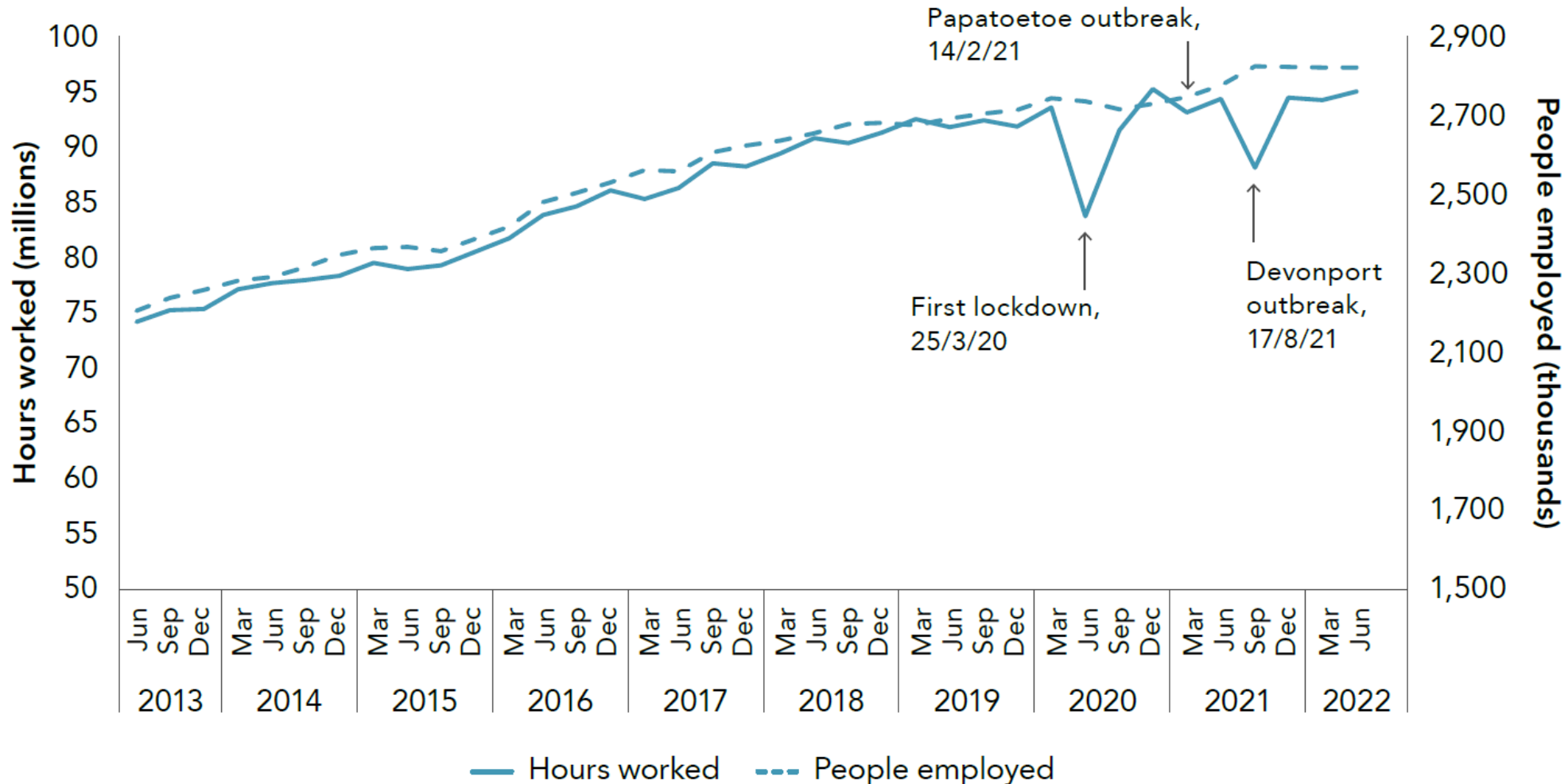


— Australia    - - - Canada    — Denmark    — Early OECD  
— New Zealand    - - - Sweden    — United States

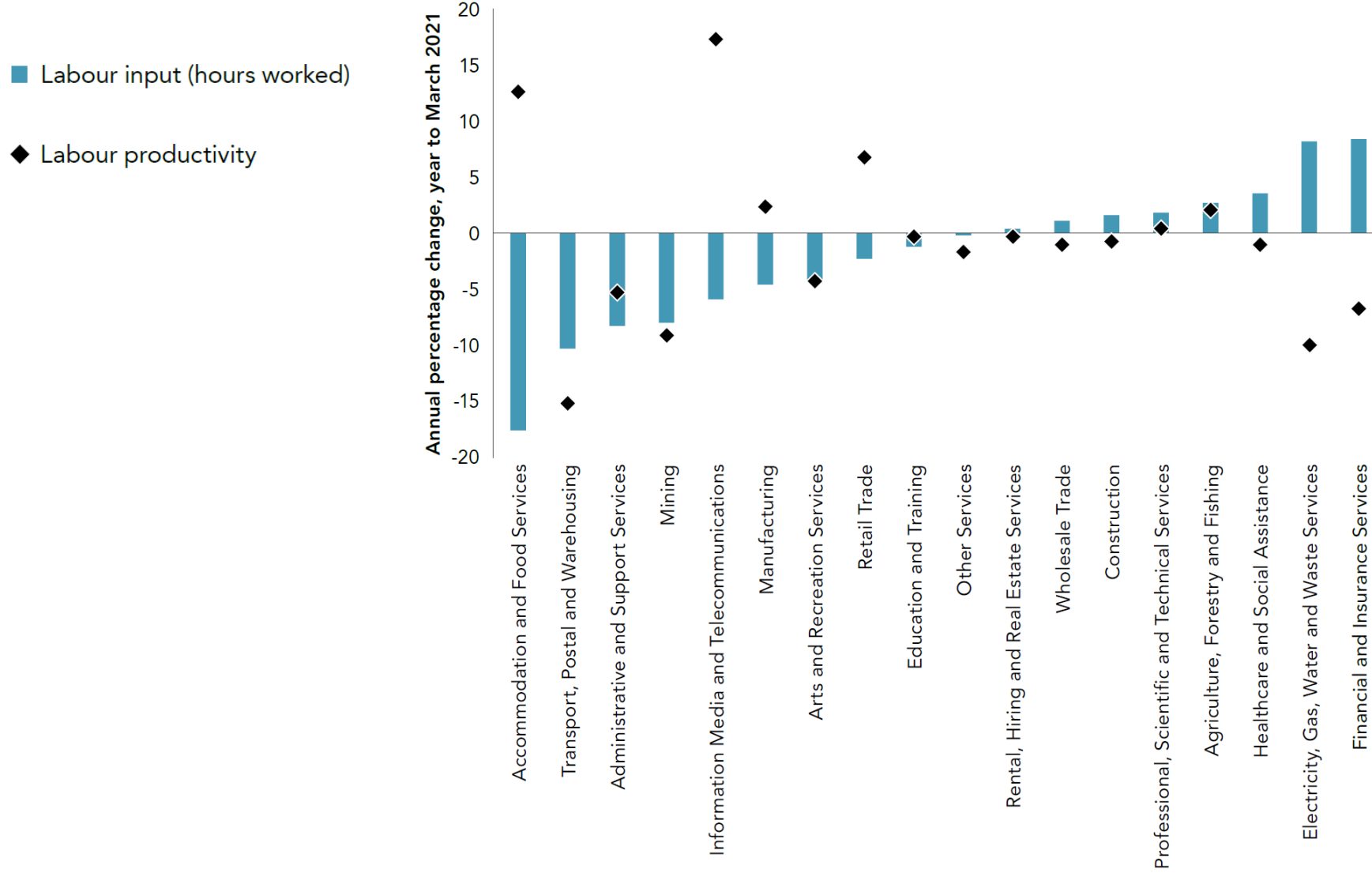
— Australia    - - - Canada    — Denmark    ..... Early OECD  
..... South Korea    — New Zealand    - - - Sweden    — United States

# COVID-19 hit hours worked, not employment

Quarterly hours worked and employment (seasonally adjusted)



# Labour productivity and hours worked during the COVID-19 pandemic



# The underlying determinants of productivity

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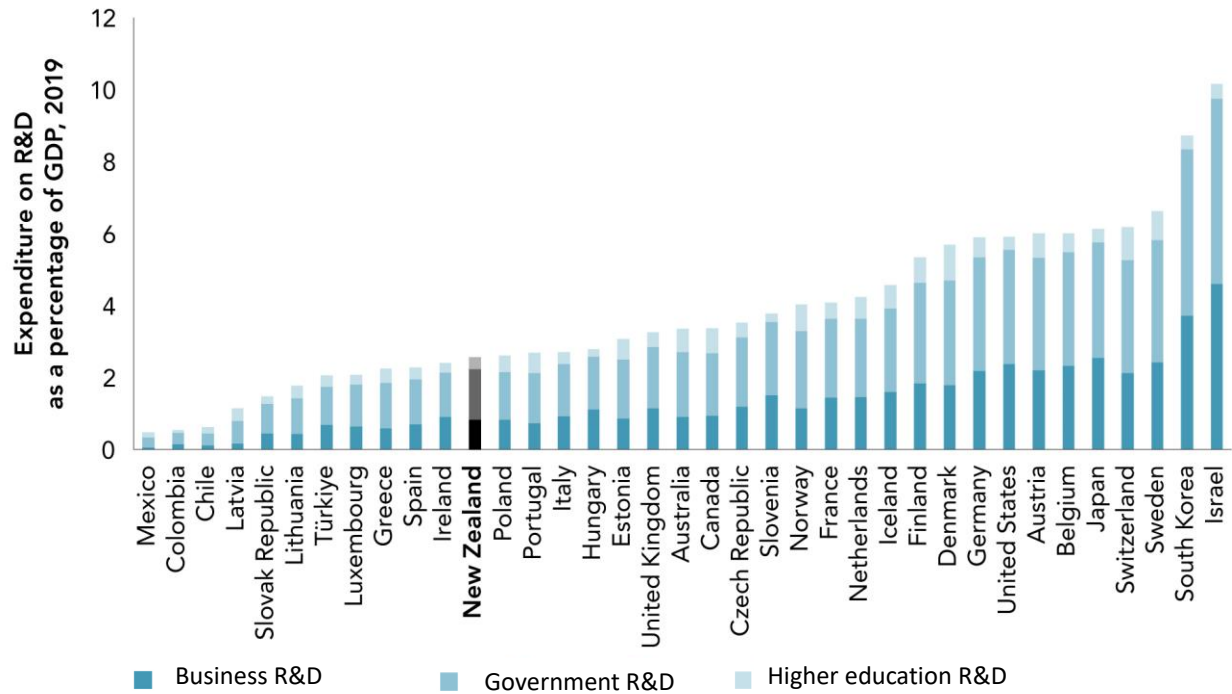
**Innovation through research and development helps boost Productivity, and as a country we still under-invest in R&D, both at a business and a Government level, compared to other countries.**

Catherine Beard | BusinessNZ

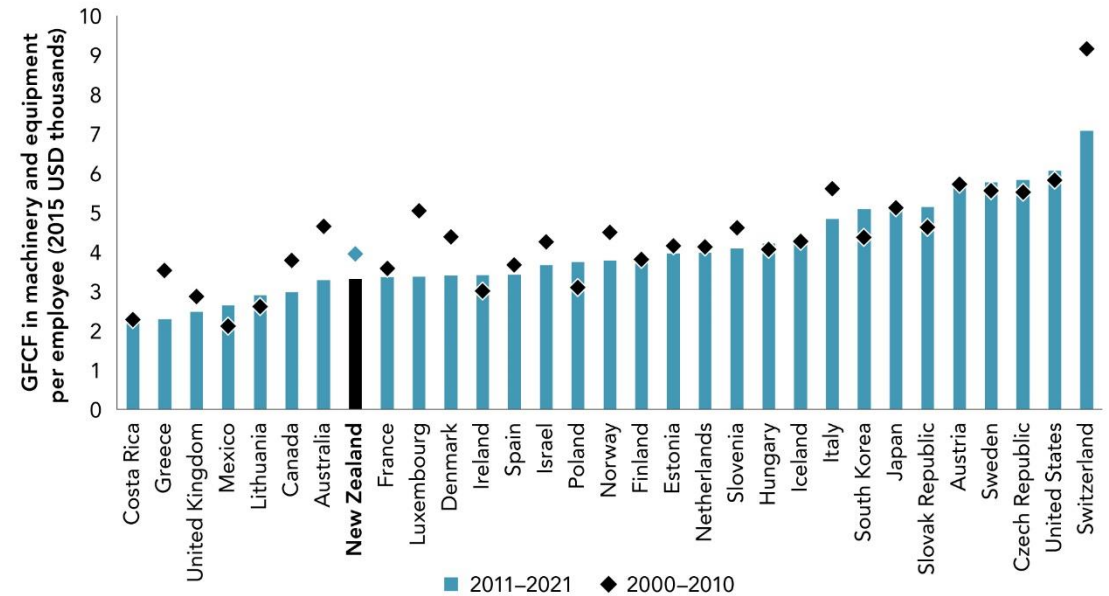


# Investment is low

## Research & Development

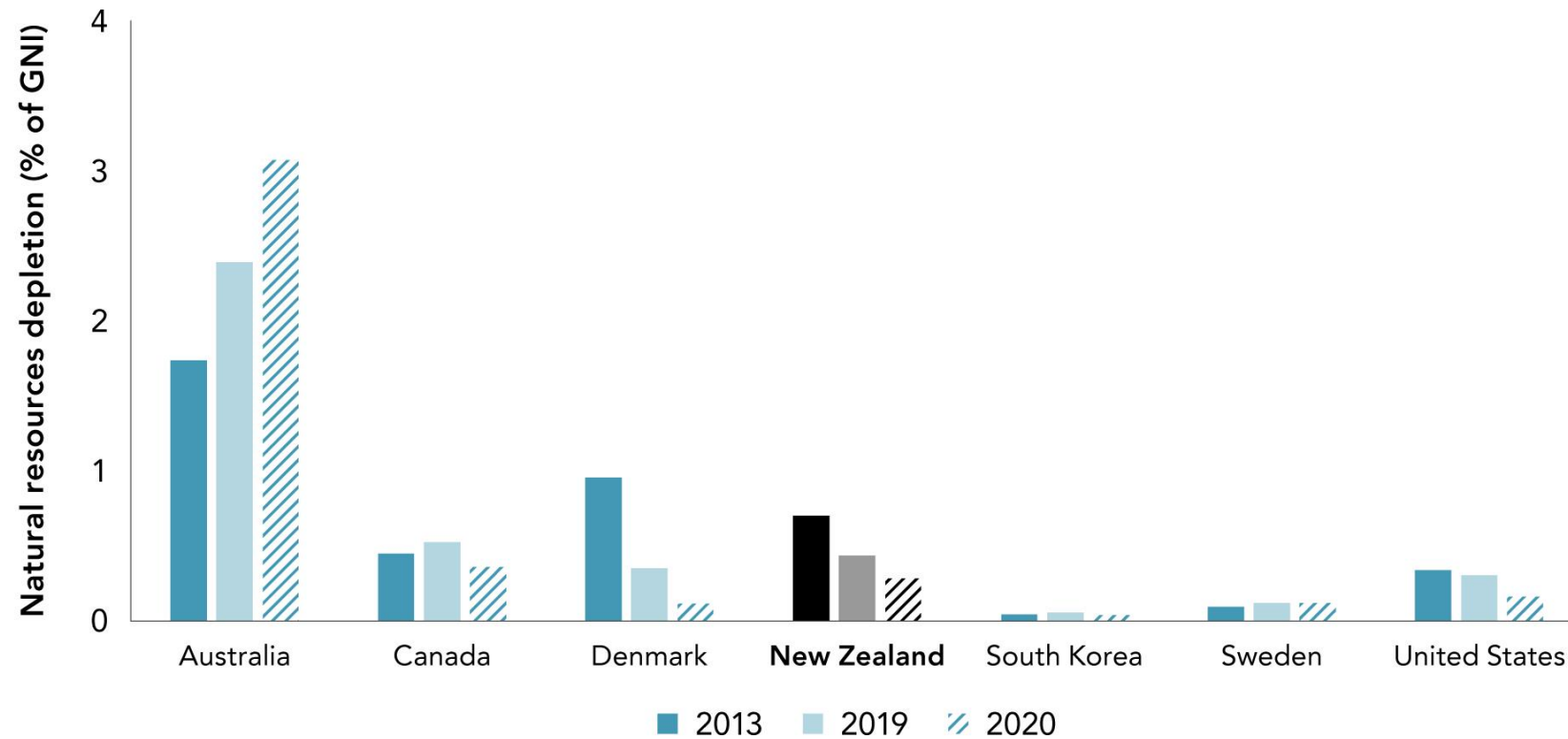


## Machinery, equipment & IT



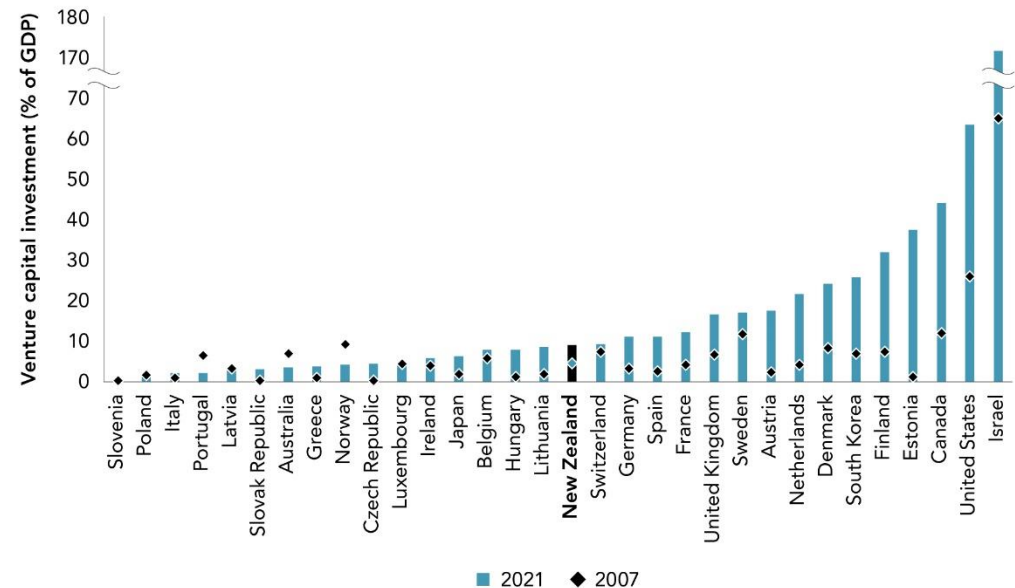
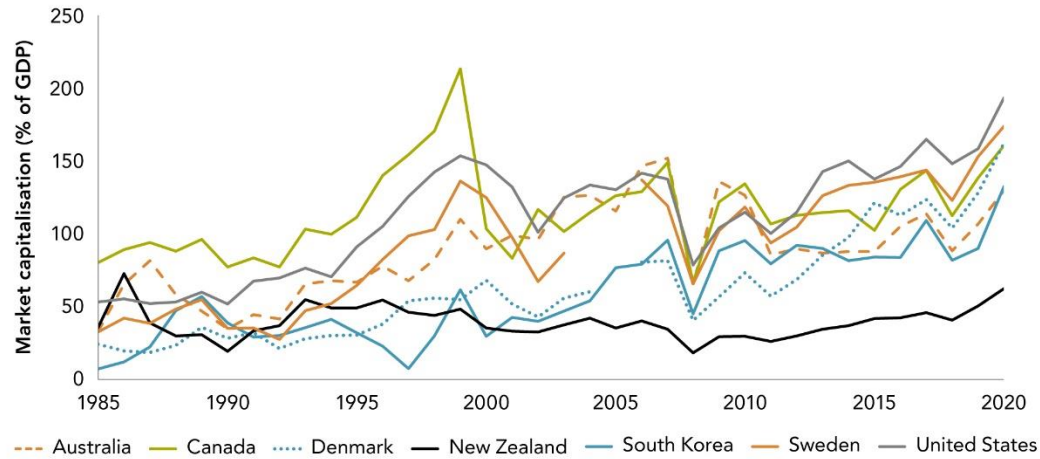
# ...or negative

## Disinvestment in environmental capital

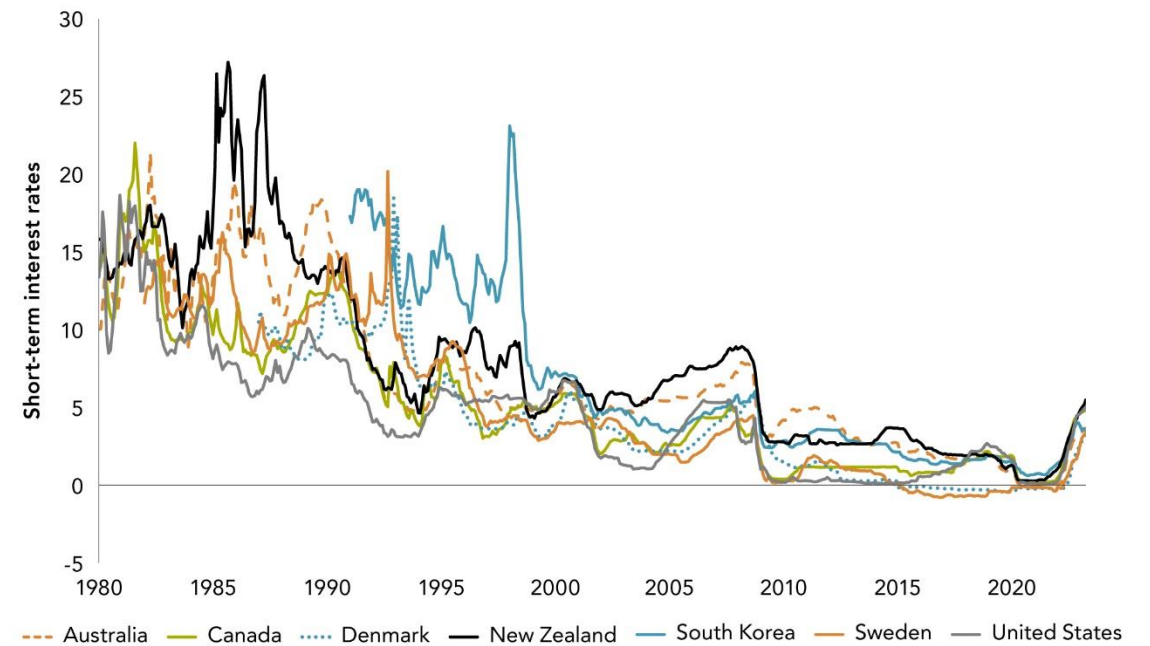




# Share and venture capital markets are small

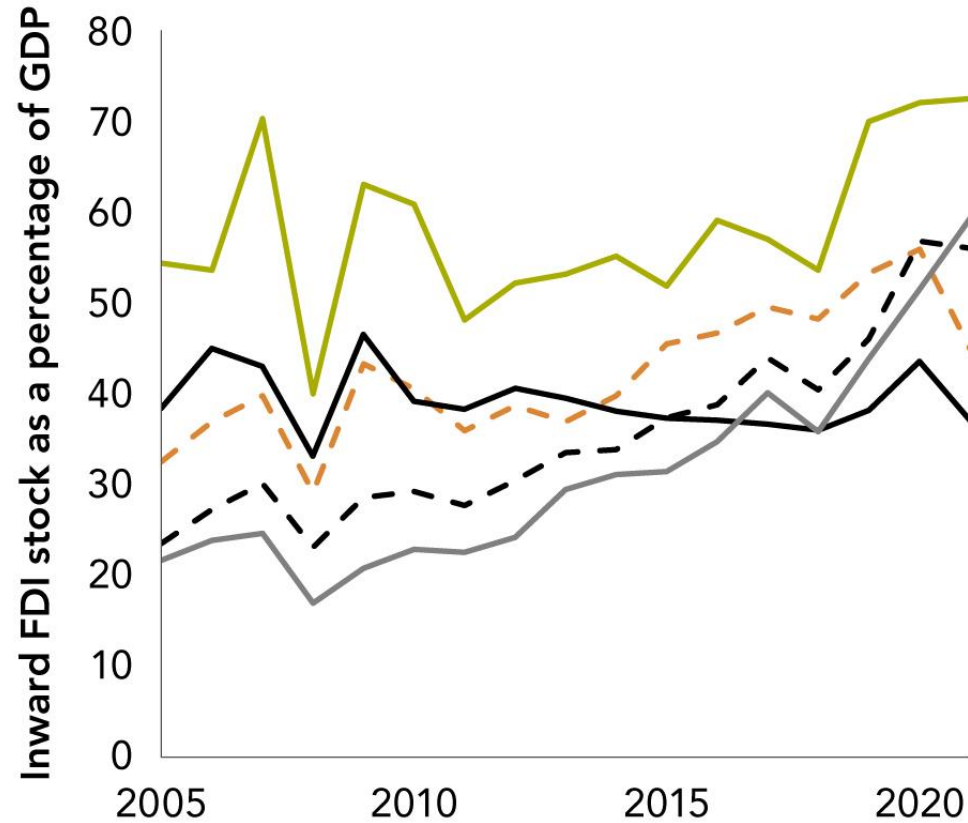


## Interest rates have tended to be high

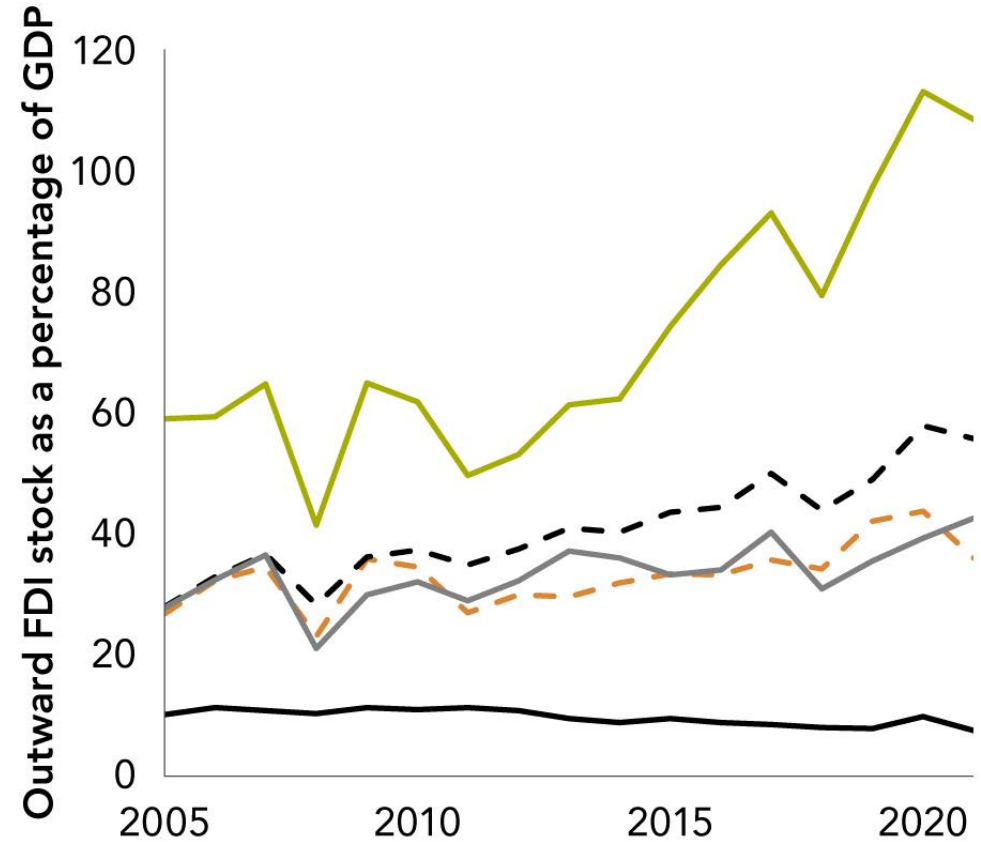


# Foreign direct investment

**Inward FDI has been falling...**

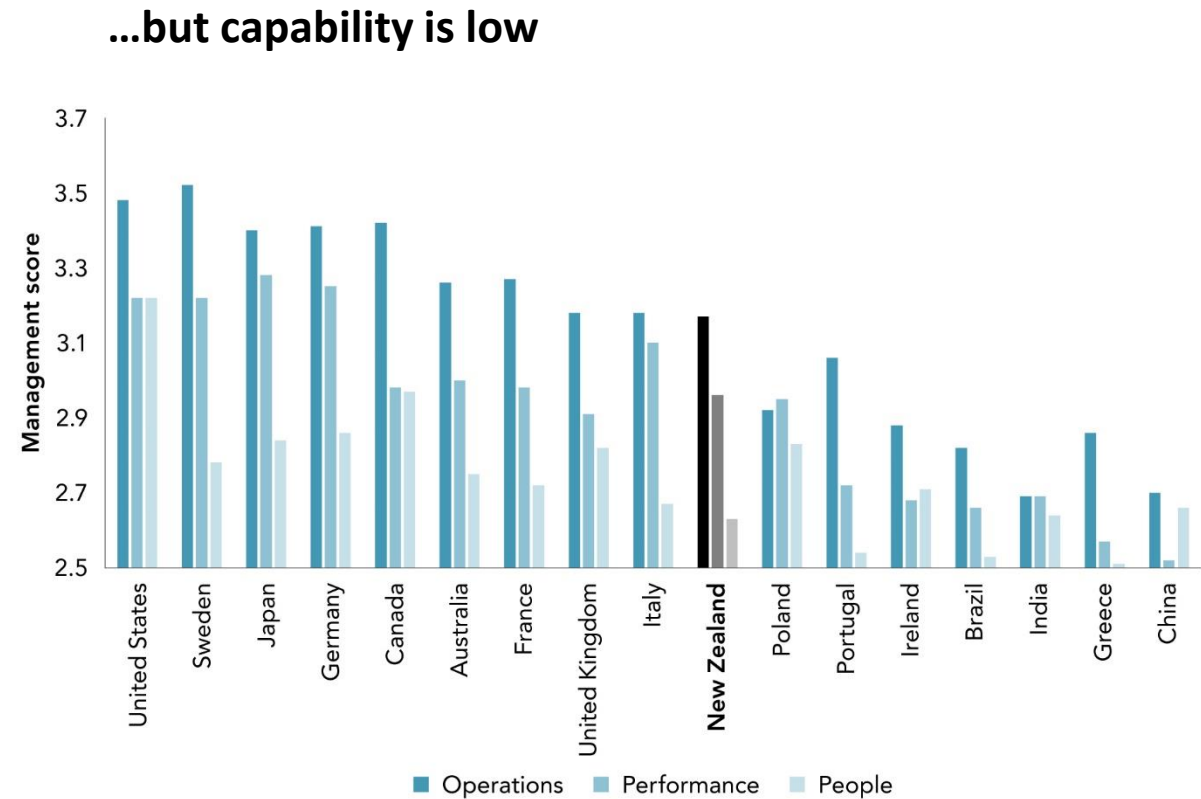
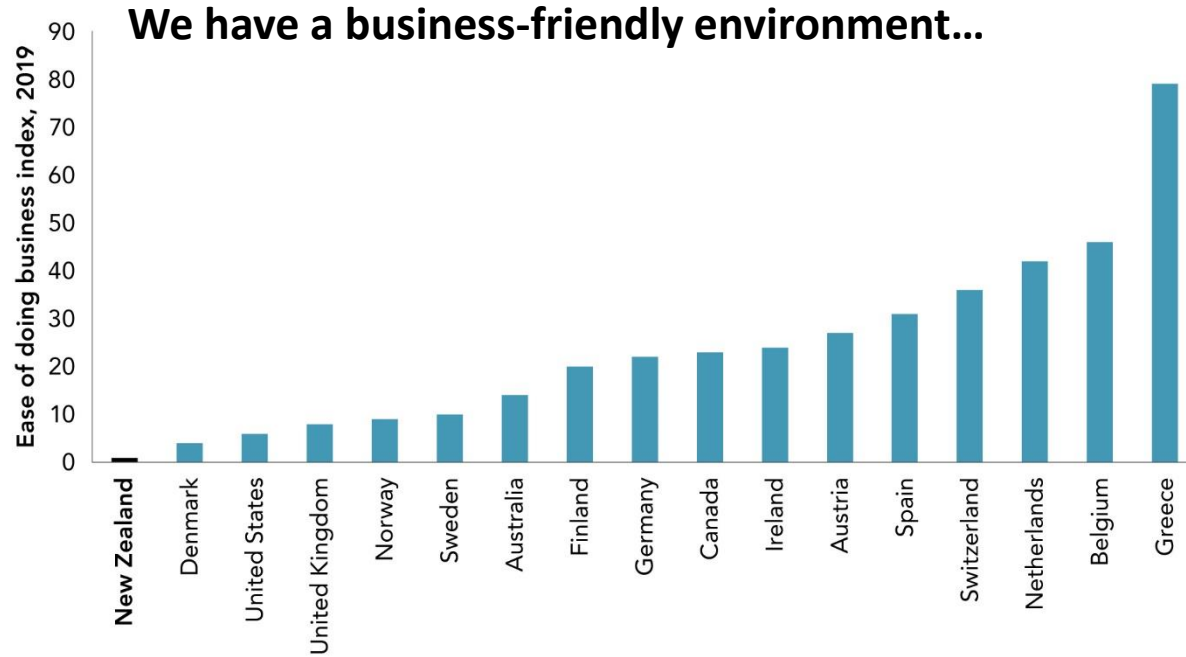


**...Outward FDI has always been low**



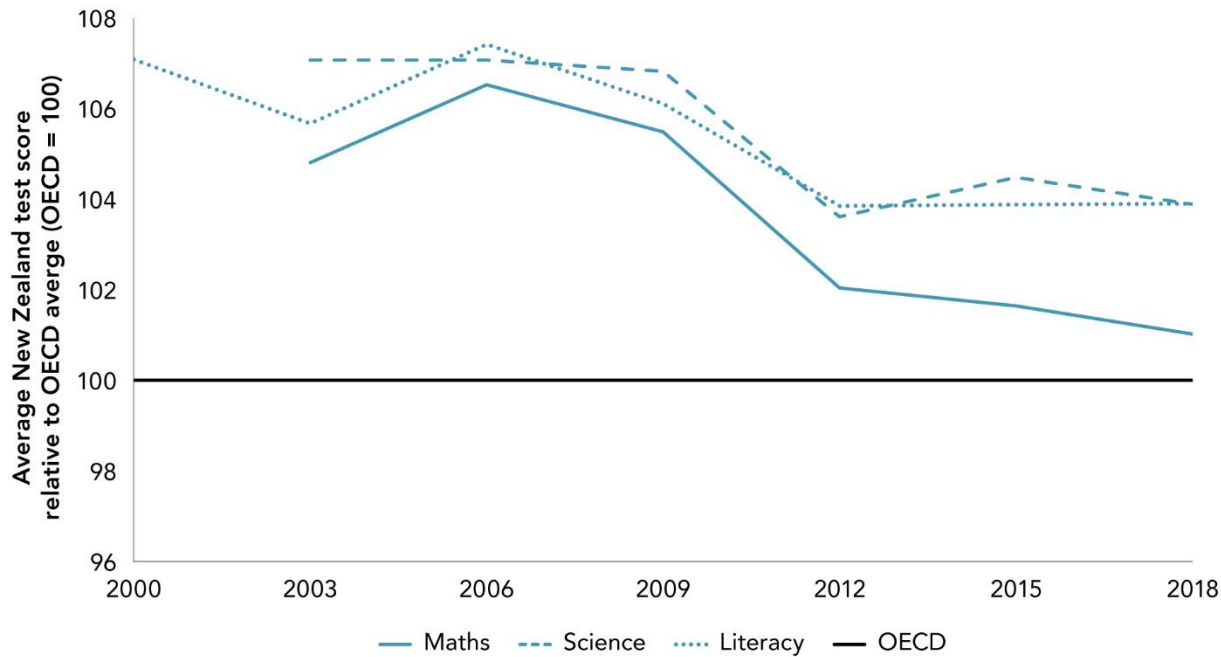
--- Australia    — Canada    — New Zealand    --- OECD    — United States

# The business environment and capability

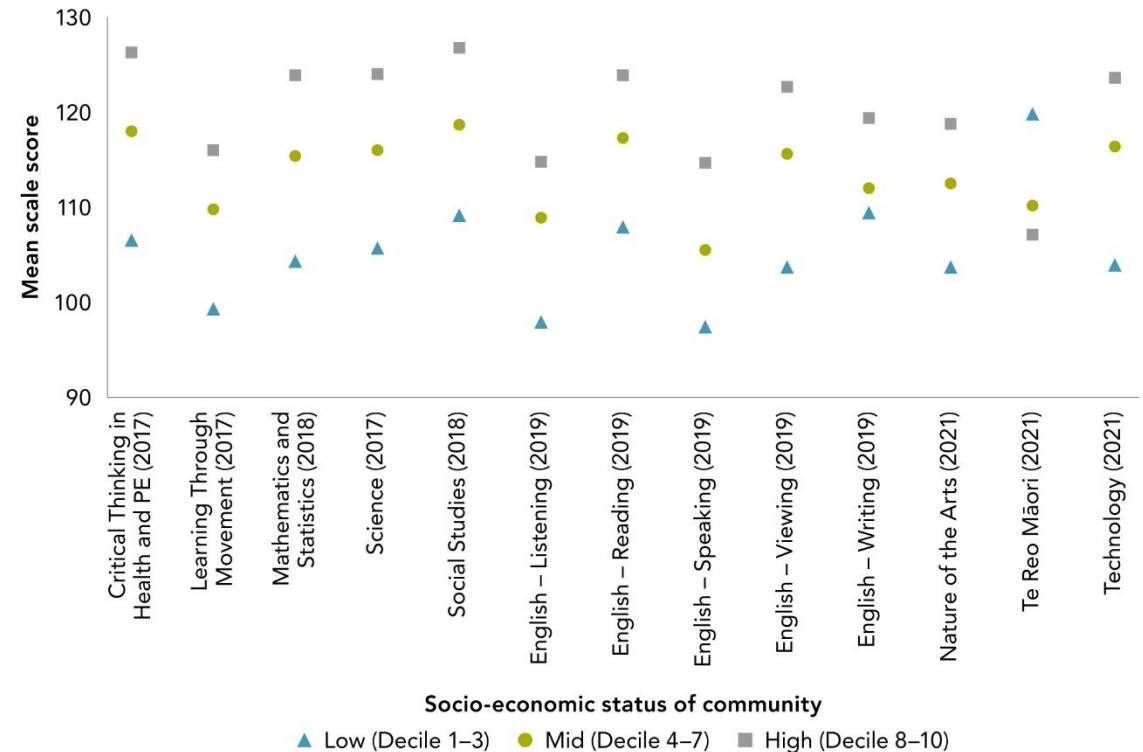


# Education and skills are vital

Education outcomes are declining from past levels...

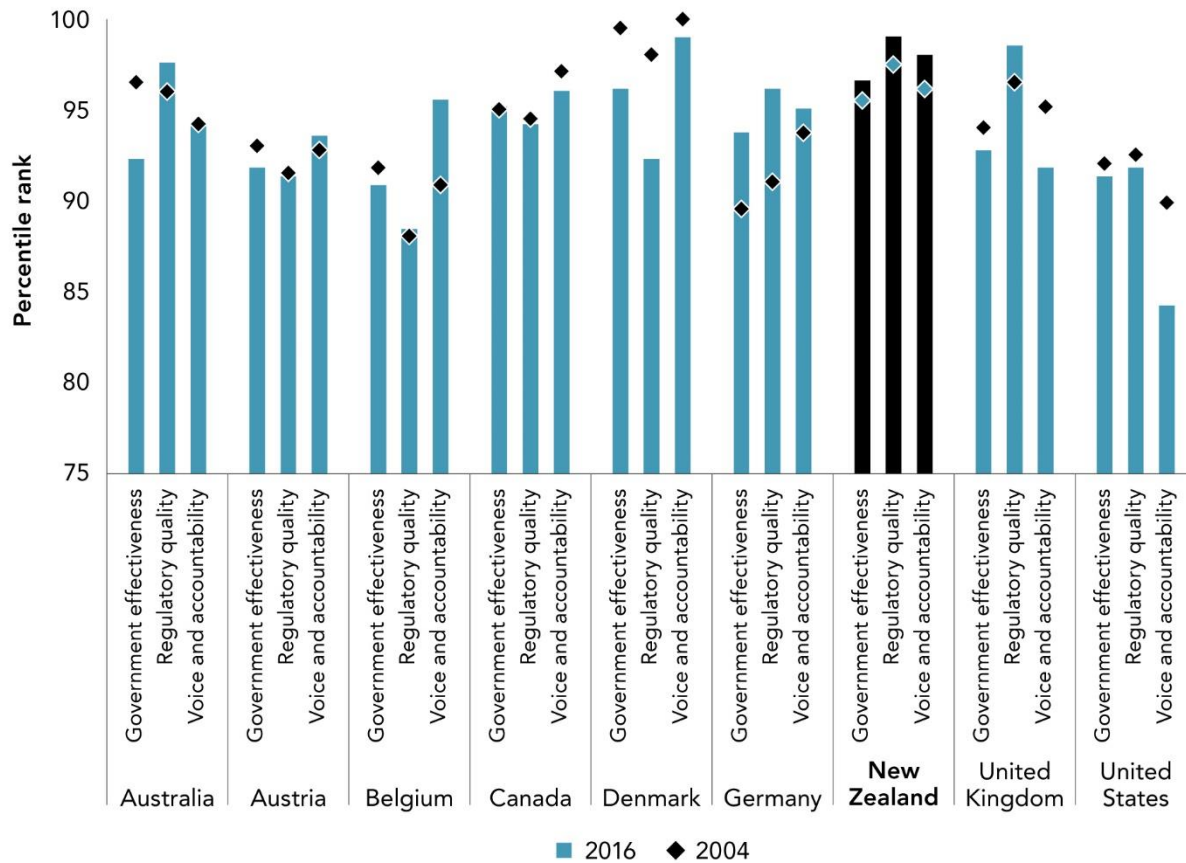


...and there are wide disparities

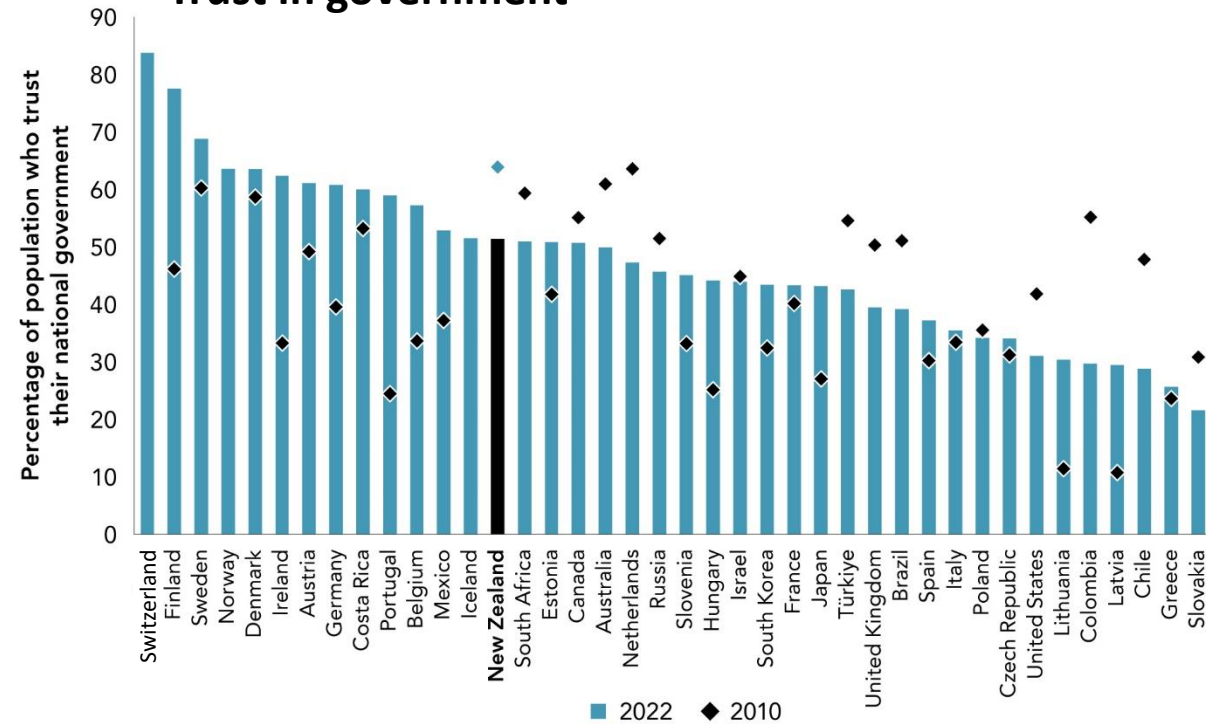


# Our institutions are strong

## Institutional quality



## Trust in government



# How to improve productivity

## A better process for selecting focus areas

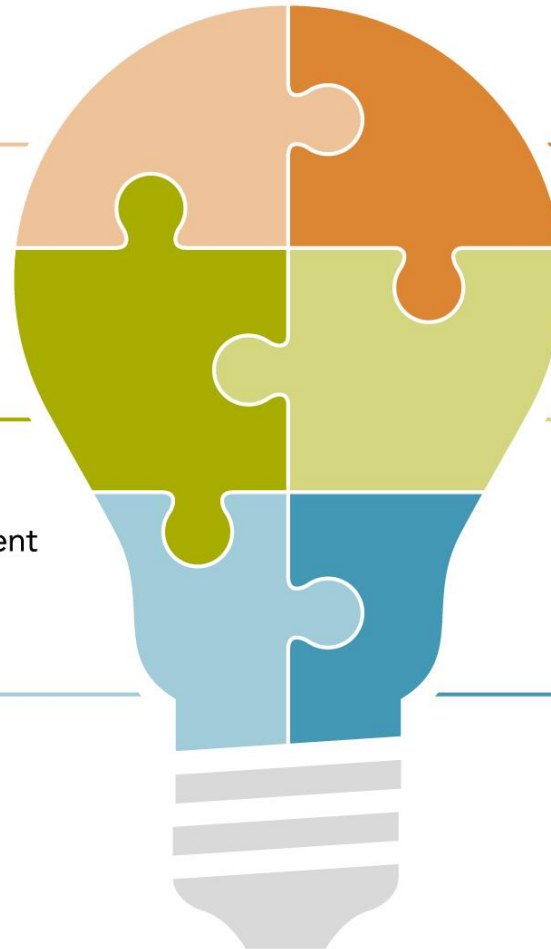
Collaborative, to identify 3–4 areas of strength in innovation and exporting

## Significant funding

Material, long-term government funding for each focus area, devolved decision making, industry co-investment

## Māori leadership and voice

Māori voice in decisions, Māori leadership, government resources and support



## Improved governance

High-level council and devolved ones for each focus area, with right people at the table and a long-term view

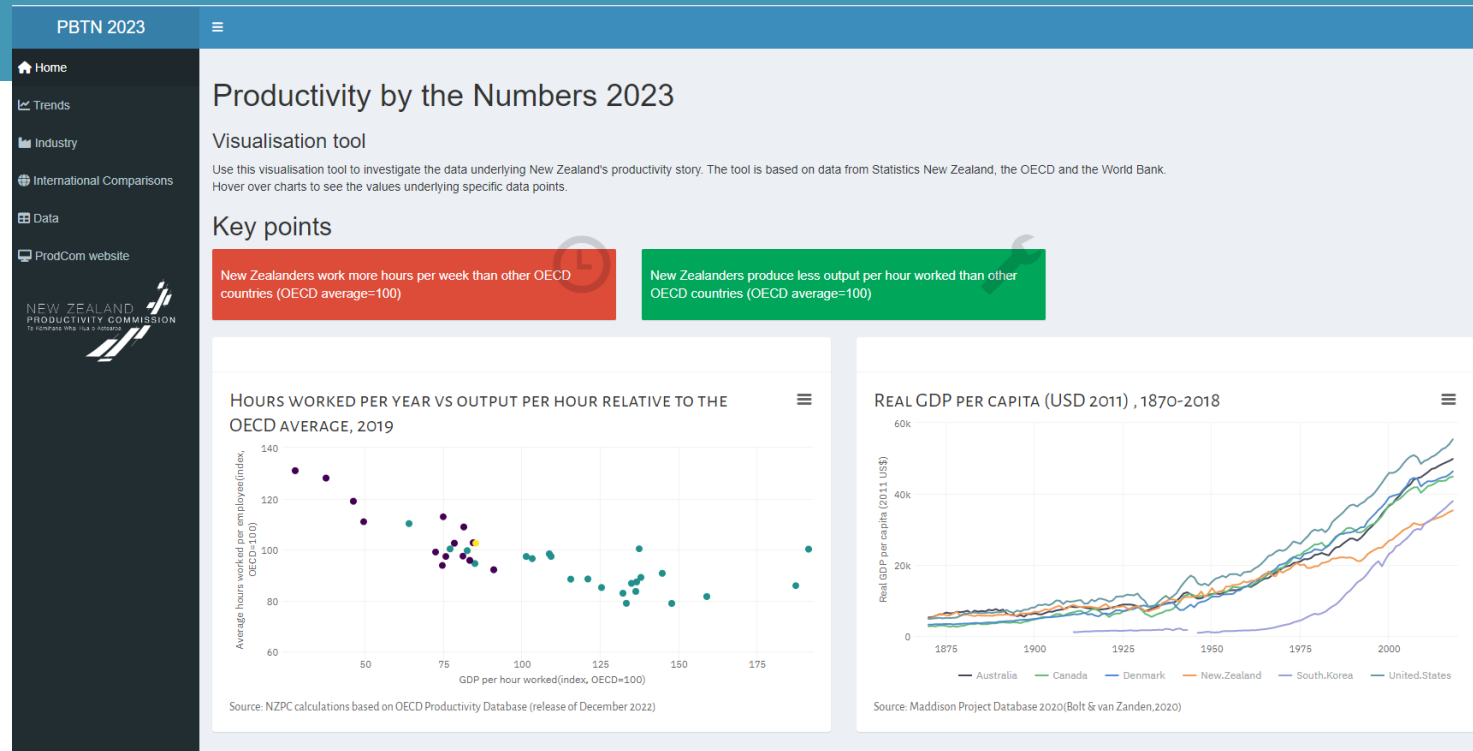
## Alignment of efforts

Policy alignment, reduced fragmentation, clear direction for research, industry and skills

## Monitoring and evaluation

Embedded, transparent, outcomes-focused

# Explore the numbers for yourself with our visualisation tool: <https://nzpc.shinyapps.io/pbtn23/>



Read the full report: [www.productivity.govt.nz/numbers](http://www.productivity.govt.nz/numbers)

NEW ZEALAND  
PRODUCTIVITY COMMISSION  
Te Kōmihana Whai Hua o Aotearoa





**Thank you**