The changing nature of work
Paths to the Future

Centre for the Study of Living Standards

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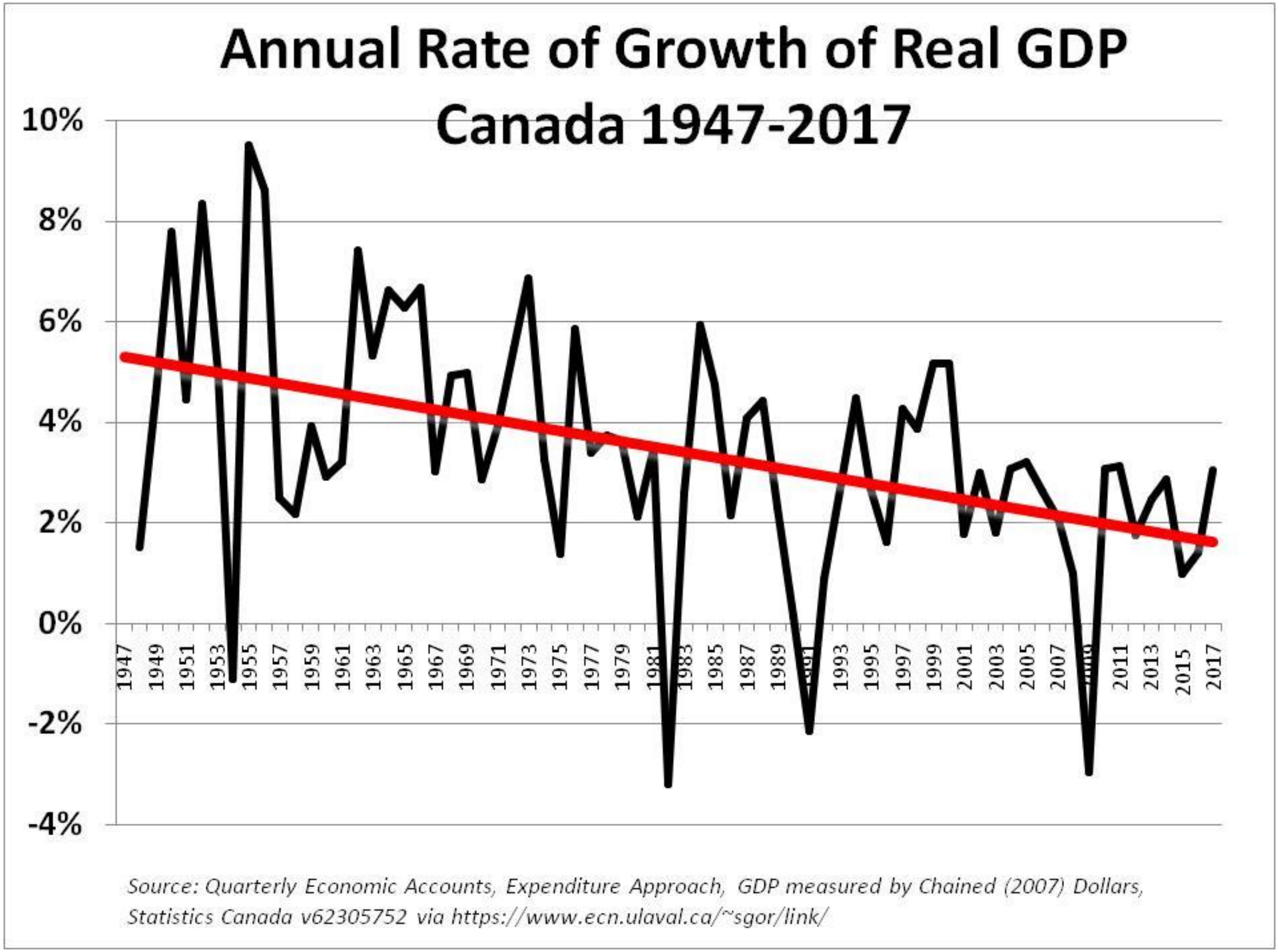
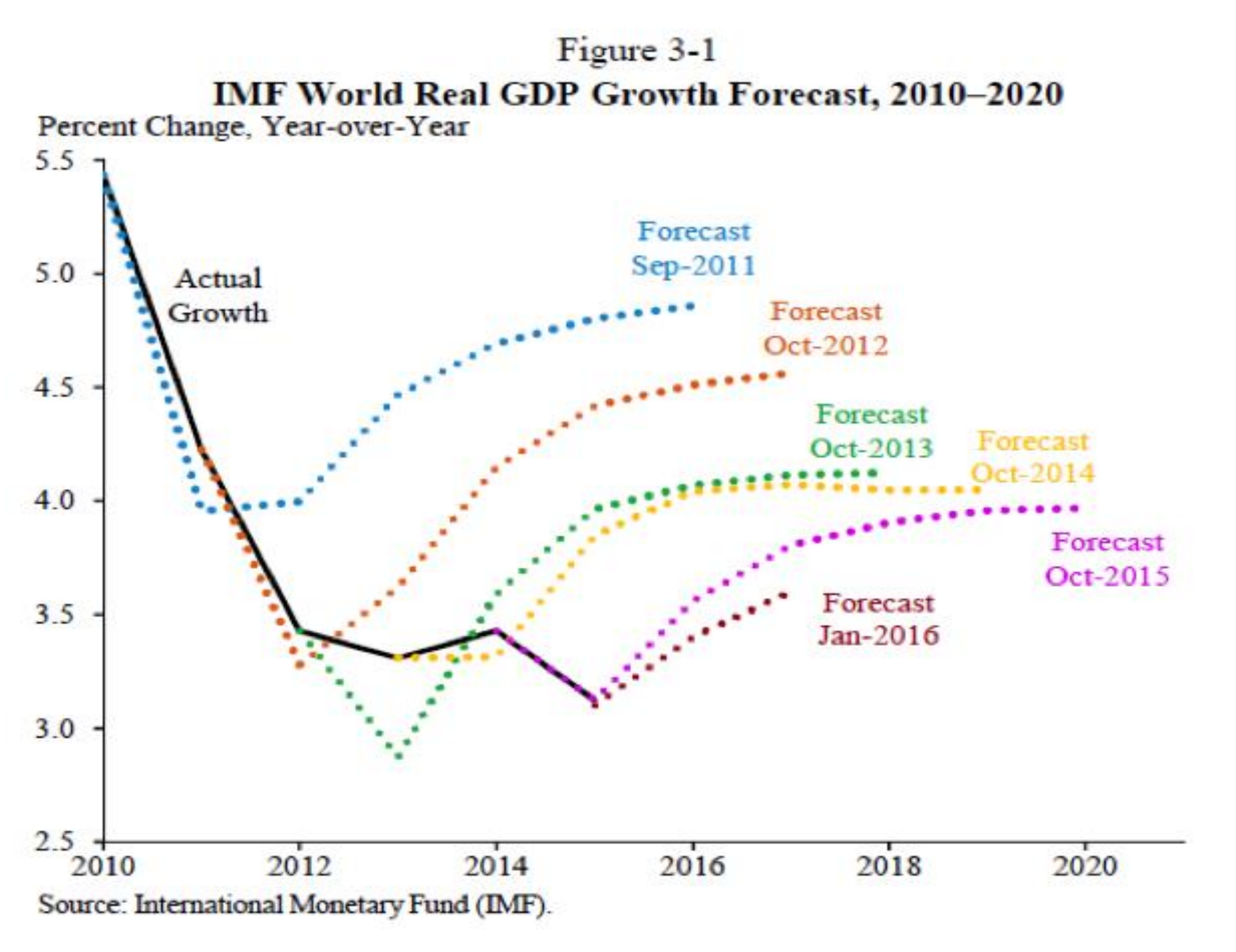
Overview

- **The New Abnormal:** **Slowth**
- **The New Clarion Call:** **Inclusive Growth**
- **Non-Digital Futures:** **Mostly Predictable?**
- **Digital Futures:** **Mostly Unpredictable?**
- **Future Frameworks:** **Highly Contested**

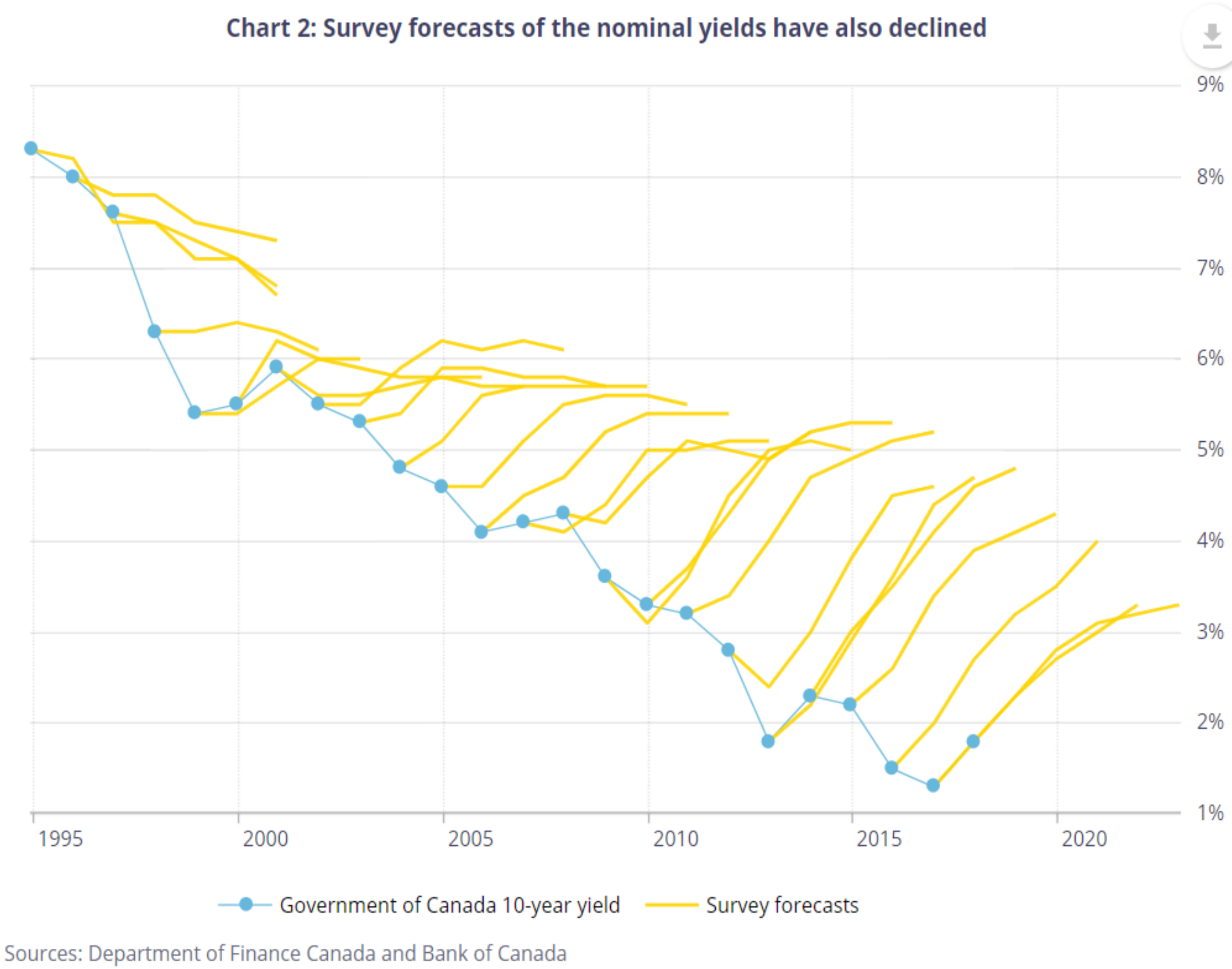
The New Abnormal: Slowth (Slow Growth)



Beyond Canada, global forecasts: slowth



Canadian Forecasts: Slowth

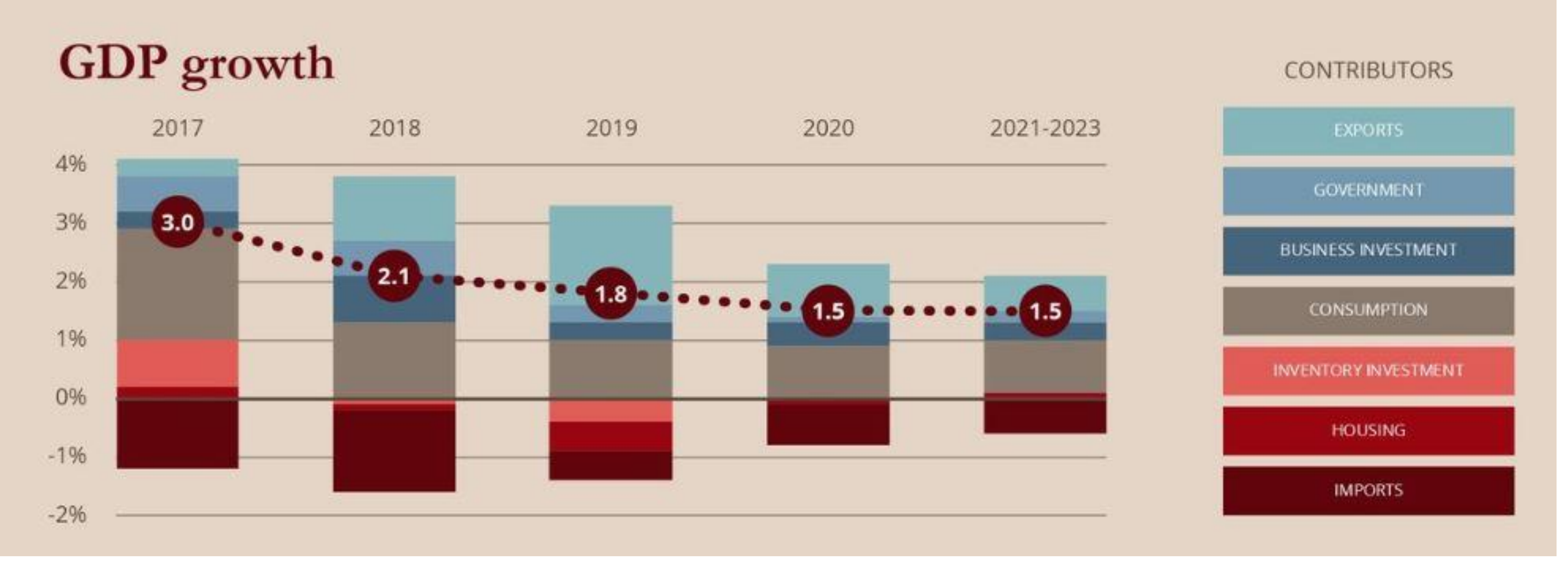


Slowing growth, coming faster

In 1960s: >5% p.a.

Today: ~2.5% p.a.

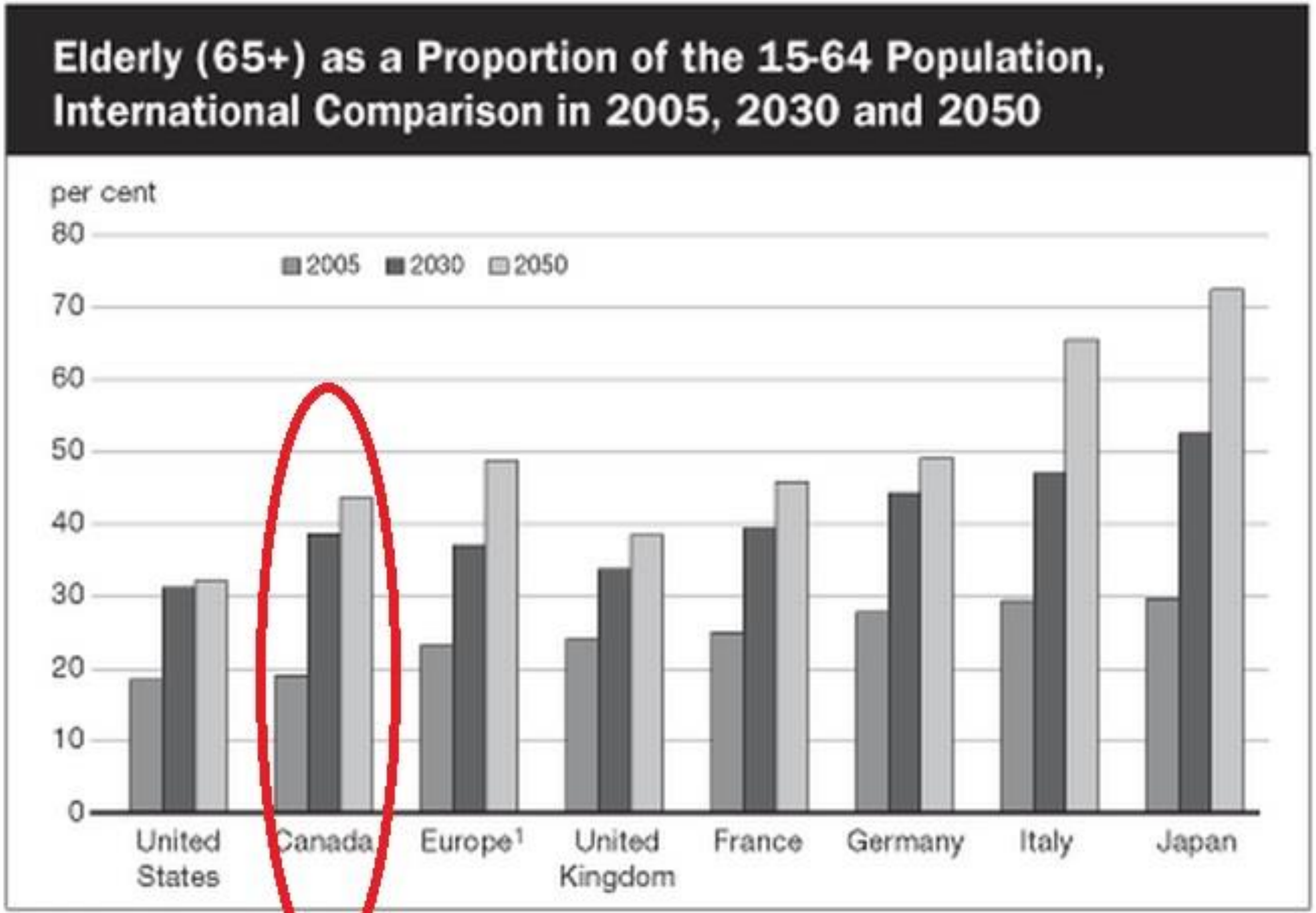
In 2 years: 1.5%



Why Slowth Is Not Temporary

- **Population Aging**
- **Extreme Climate Events**
- **Geopolitical Shifts**
- **Income and Wealth Inequality Trends**

Population Aging In The Richest Nations –
Less Spending Power Globally?



[1] Includes 47 European countries.
Source: United Nations.

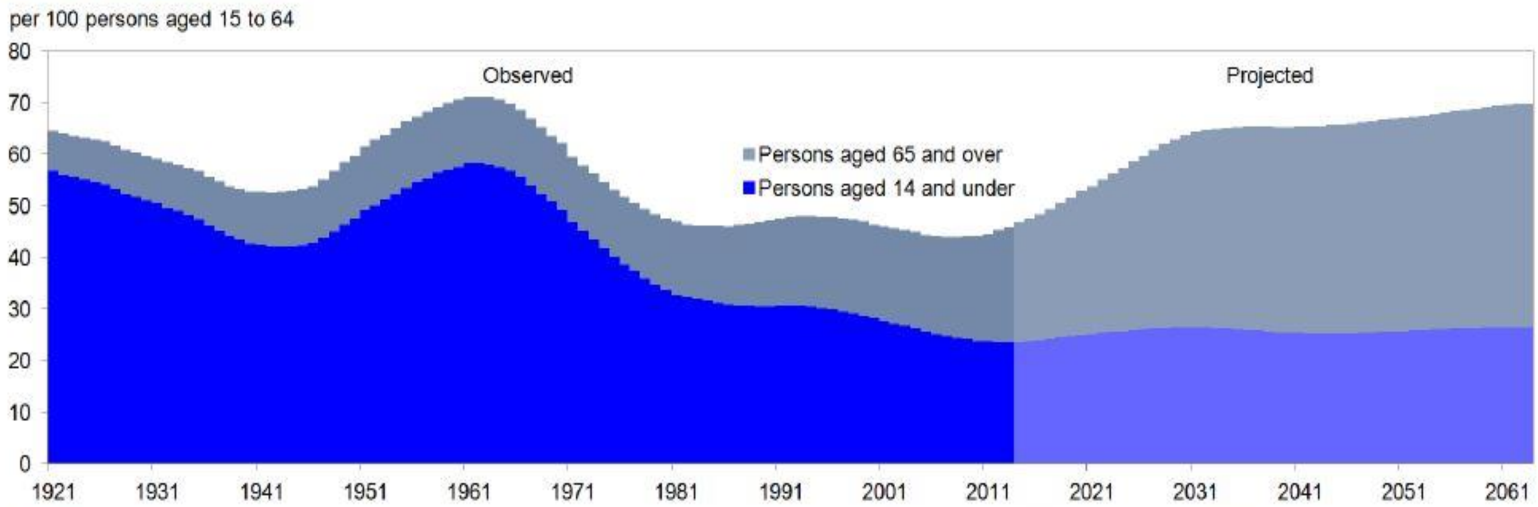
Canadian Population Aging

Approaching the same dependency ratio as in 1960s,*BUT* for longer, and with half the rate of GDP growth

Population Projections for Canada (2013 to 2063), Provinces and Territories (2013 to 2038)

Figure 2.7

Demographic dependency ratio, observed (1921 to 2013) and projected (2014 to 2063) according to the medium-growth (M1) scenario, Canada



Note: The demographic dependency ratio is the number of persons aged 14 and under or 65 and over per 100 persons aged 15 to 64 years.
Source: Statistics Canada, Demography Division.

Costs of Extreme Climate Events

- **Globally, insurance payouts for weather-related damage grew 5-fold since 1980s (inflation-adj.)**
- **In Cda: $400M in 1983, $1.7B by 2011. $3.2B for just 2 floods in 2015. $3.8B for just insurance costs of Fort McMurray fire in 2017.**
- **60% of damage not insured (CDN rule of thumb)**
- **National Roundtable on Environment and Economy 2011 estimate: $5B by 2020, $21-43B p.a. by 2050**
- **StatCan doesn’t measure economic impacts.**

Geopolitical Shifts

Rise Of

- China (& Russia?)
- Nationalism
- Autocracy
- Populism

Drag On

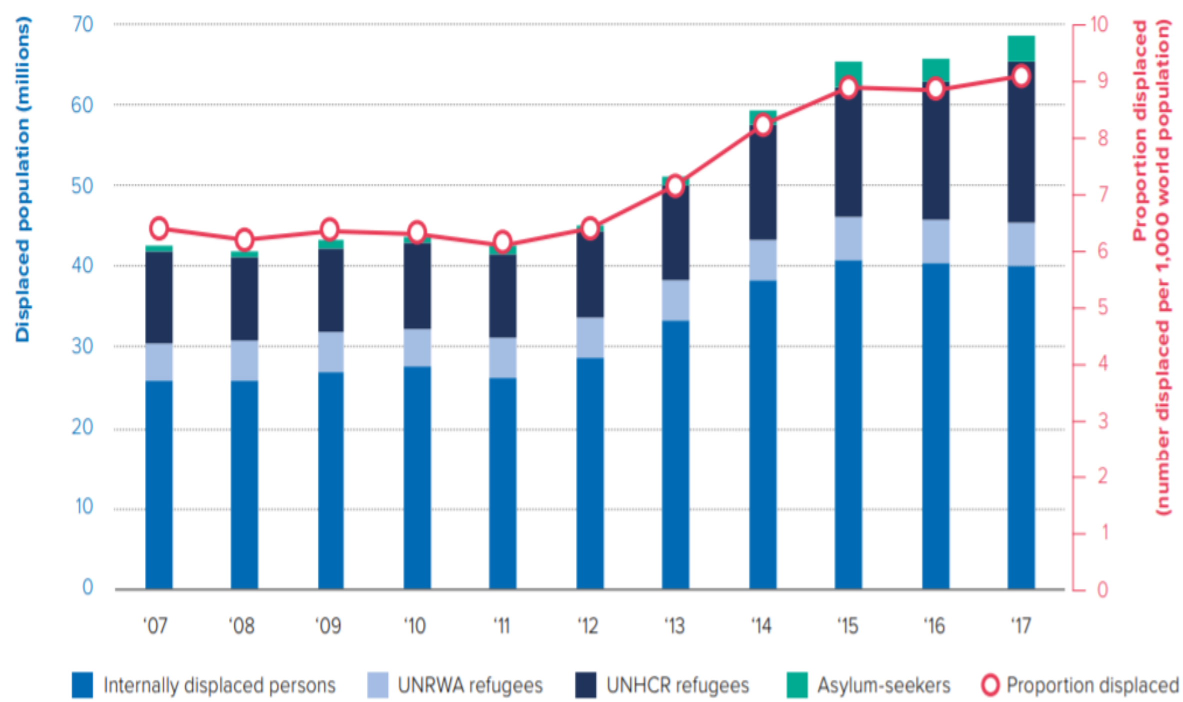
- Trade
- Multilateralism
- Immigration
- Tolerance

Globally: More People Forced to Move

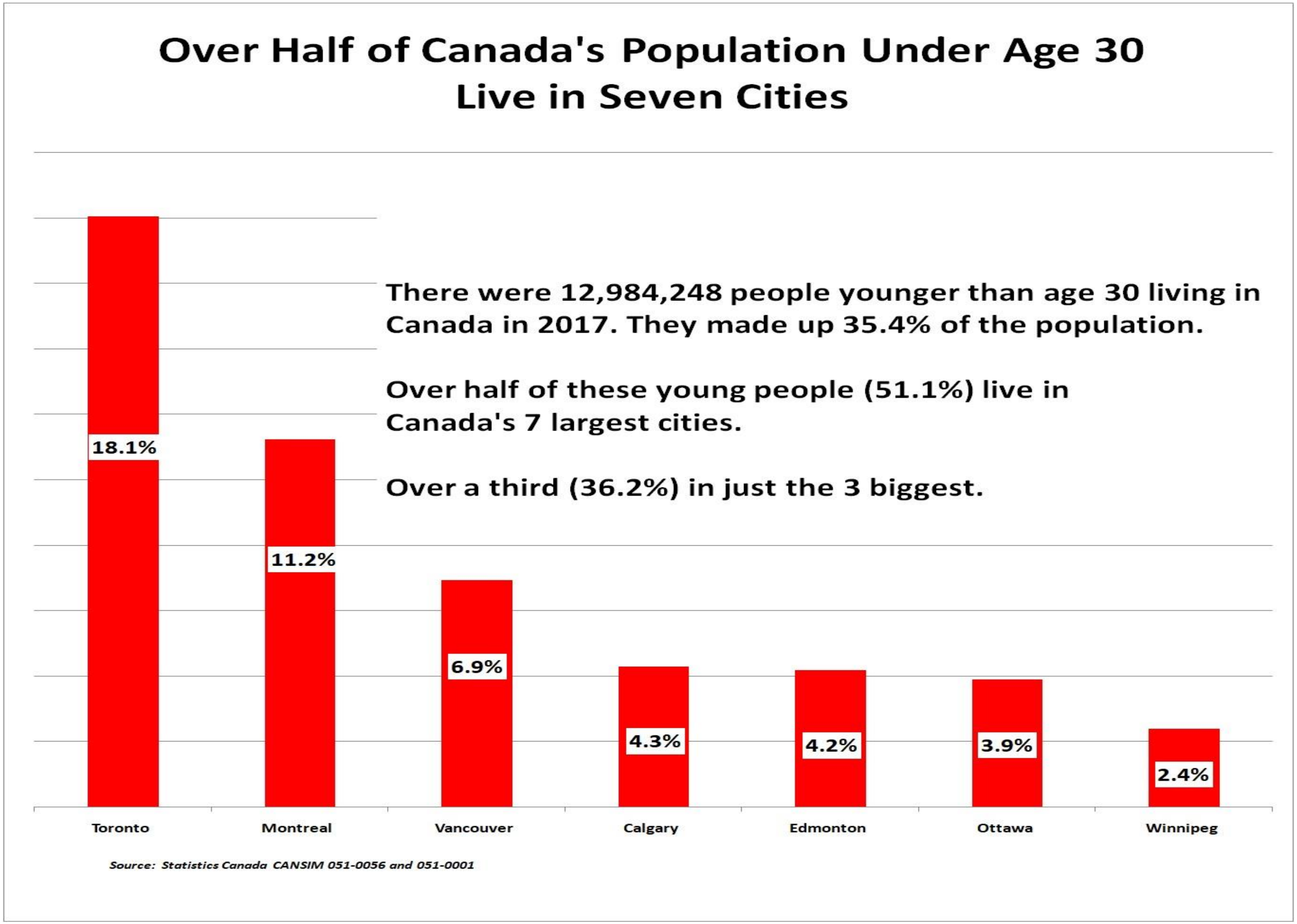
- 68.5 M forcibly displaced in 2017
- 52% children
- Rising share displaced from home country

  (more refugees, more asylum seekers)
- Falling share able to return home

Figure 1 | Trend of global displacement and proportion displaced | 2007-2017



In Canada: More people in biggest cities



Inequality becomes hardwired as income polarization turns into spatial polarization

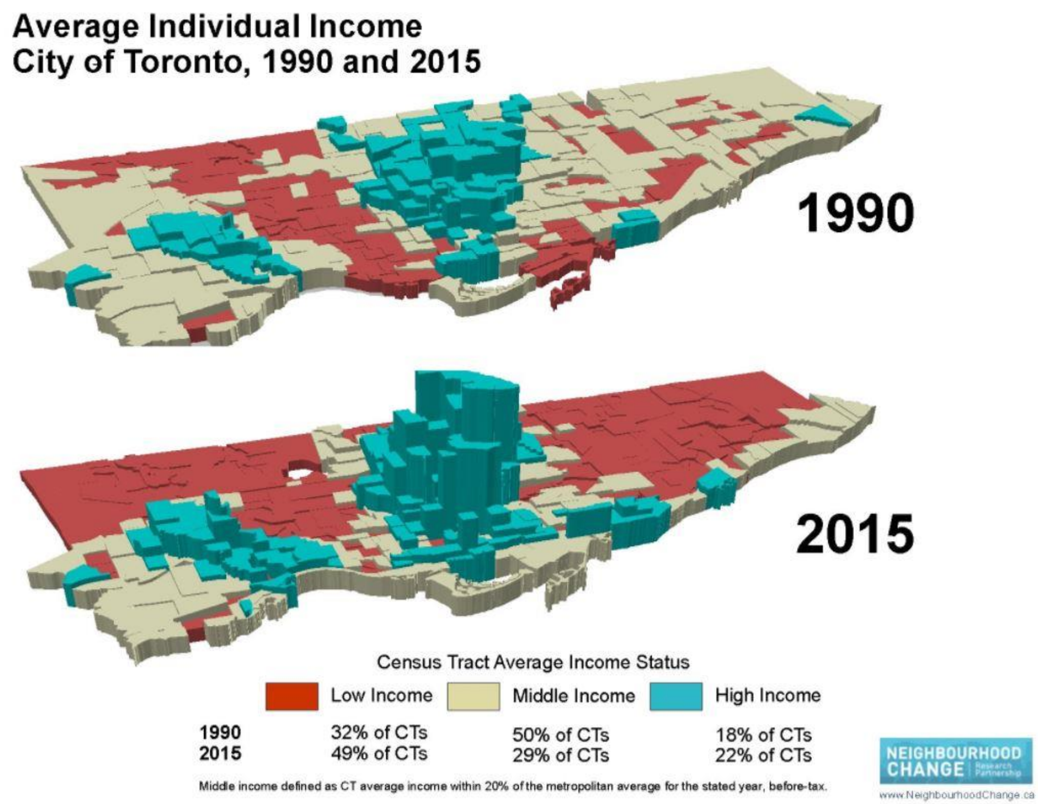
- **1990: 50%**

of census tracts were middle income

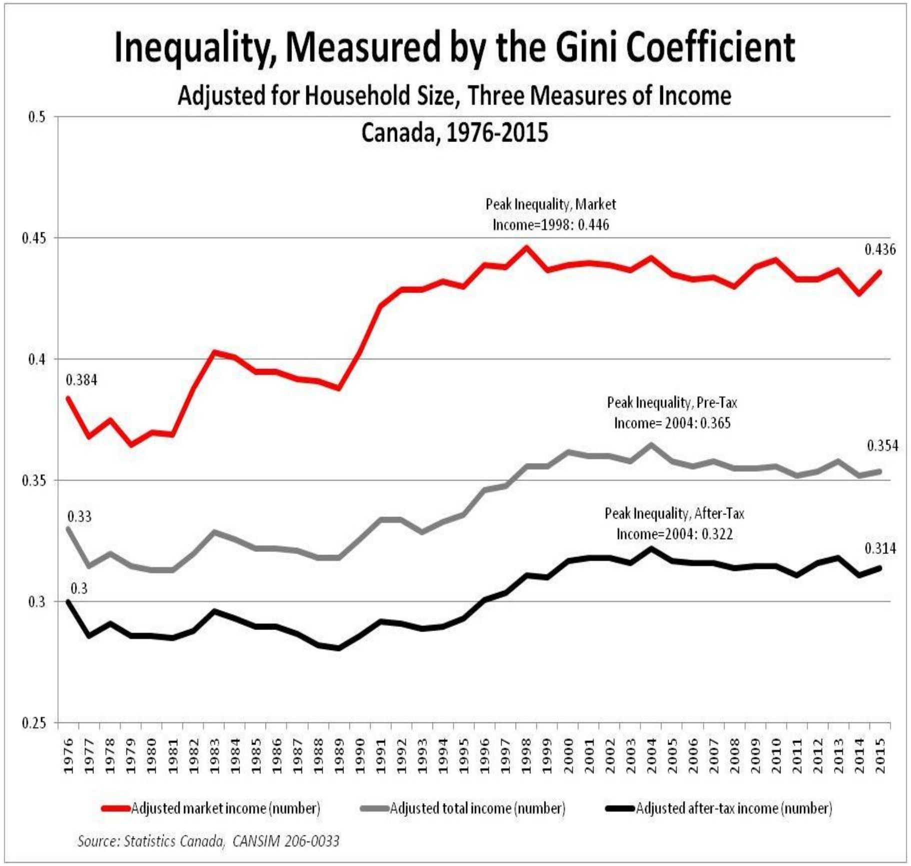
- **2015: 49%**

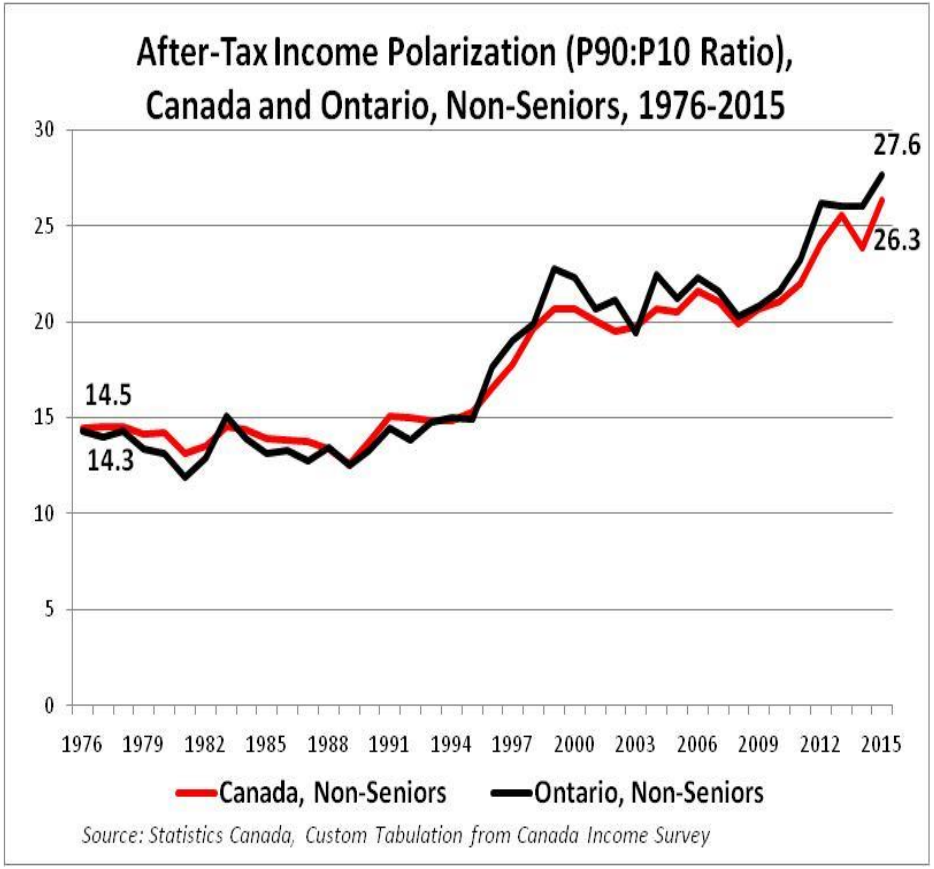
of census tracts were low income

- **Inequality of opportunity shaped by inequality of outcome**
- **Less social mobility**

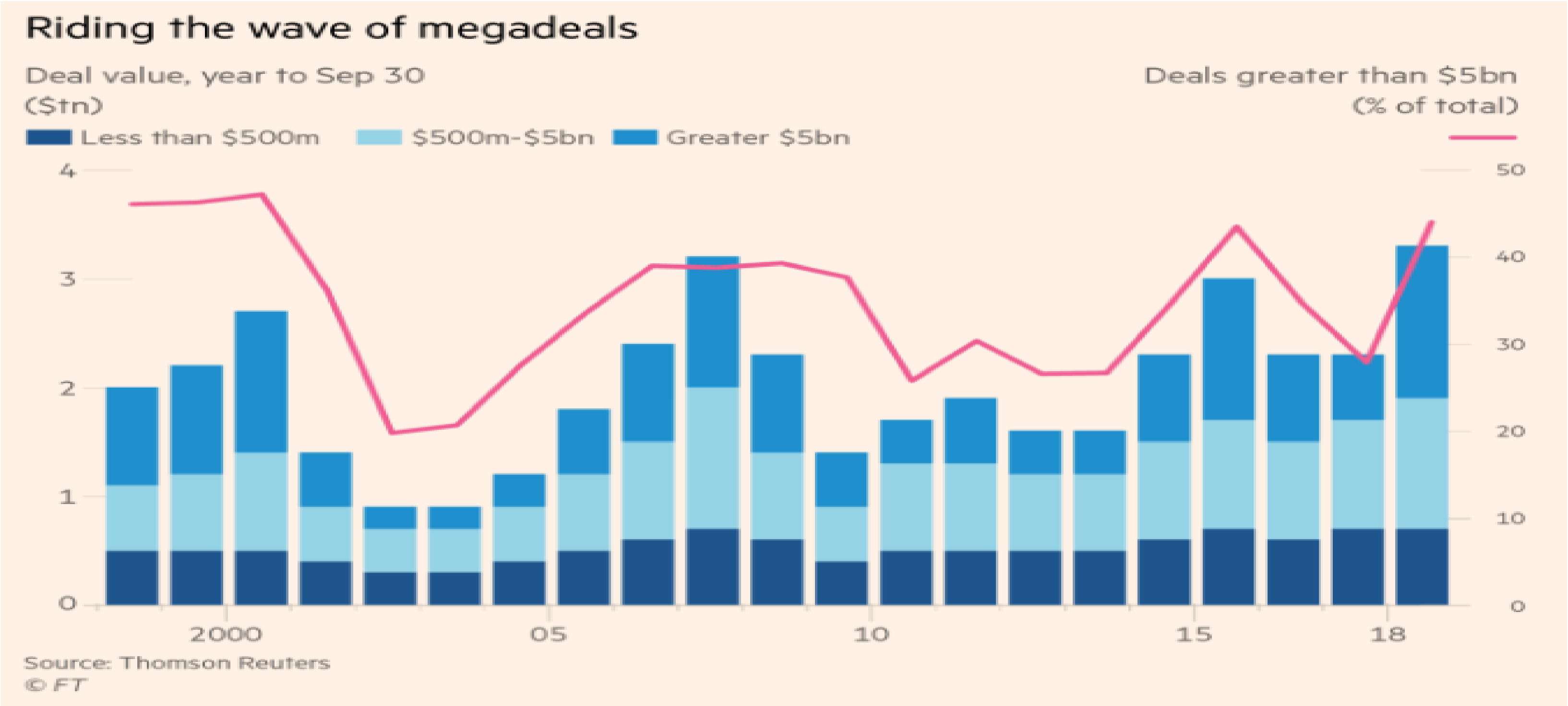


Around the world and in Canada: Higher inequality, more polarization within nations



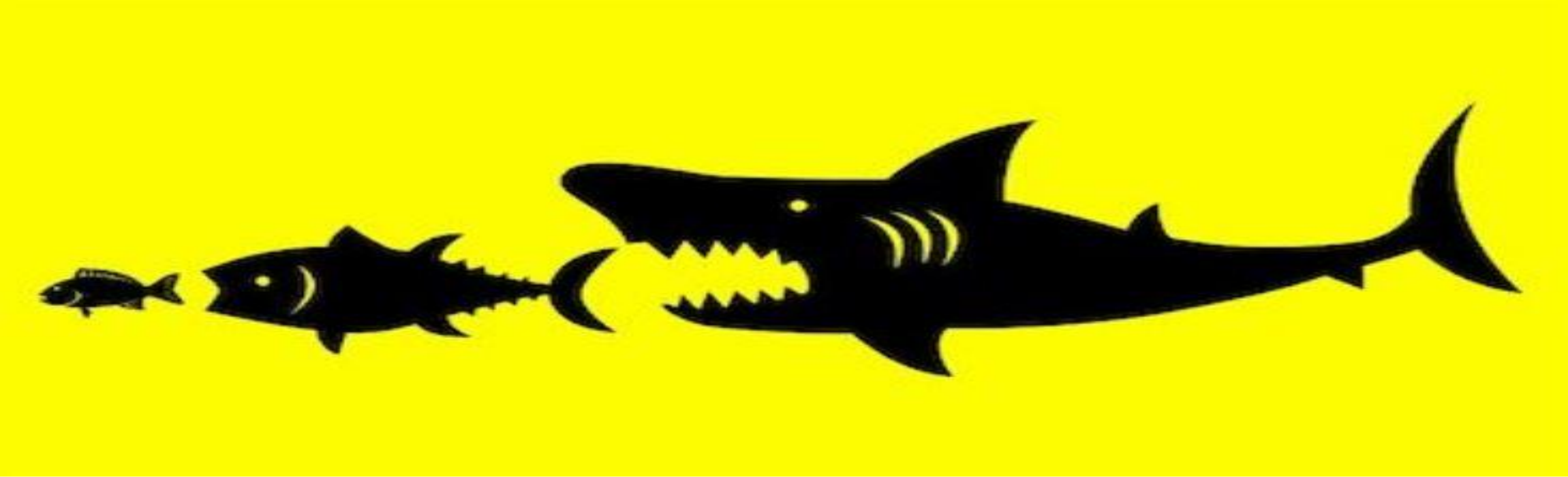


Around the world and in Canada: The big are getting bigger.



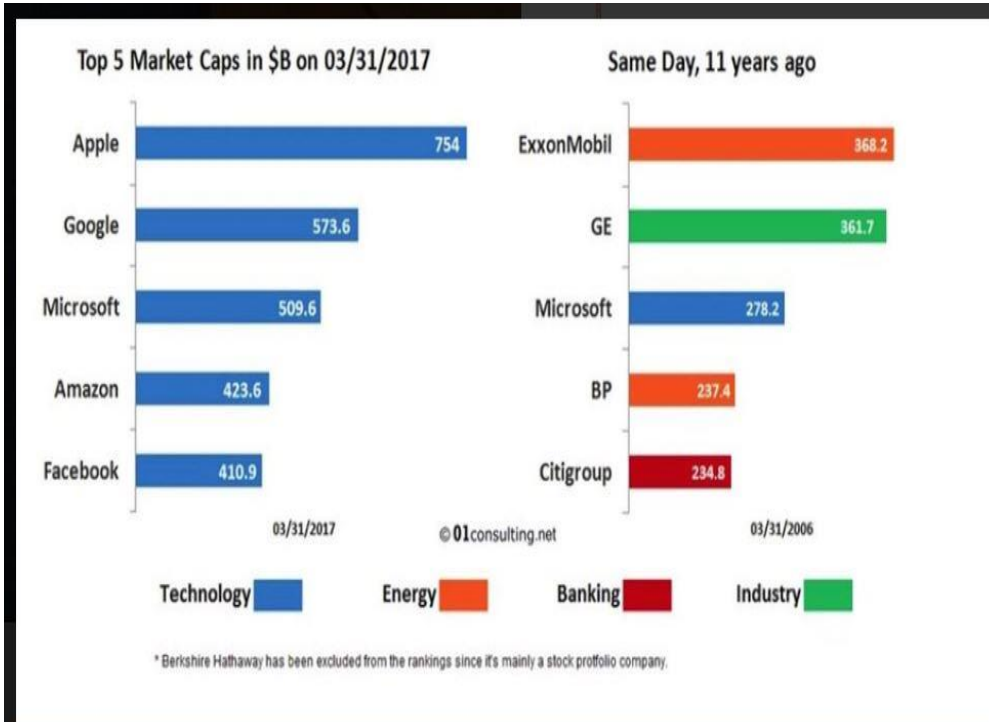
2018 posed to be biggest year on record for M&A ($3.3TR)

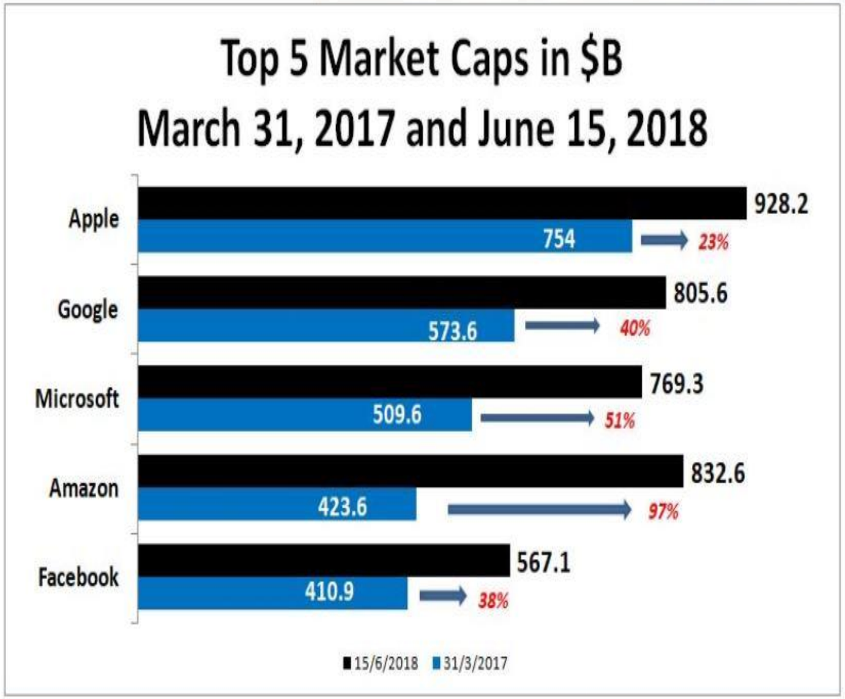
Around the world and in Canada: Corporate Concentration



Fewer than 10% of publicly traded companies account for over 80% of profits globally (2015)

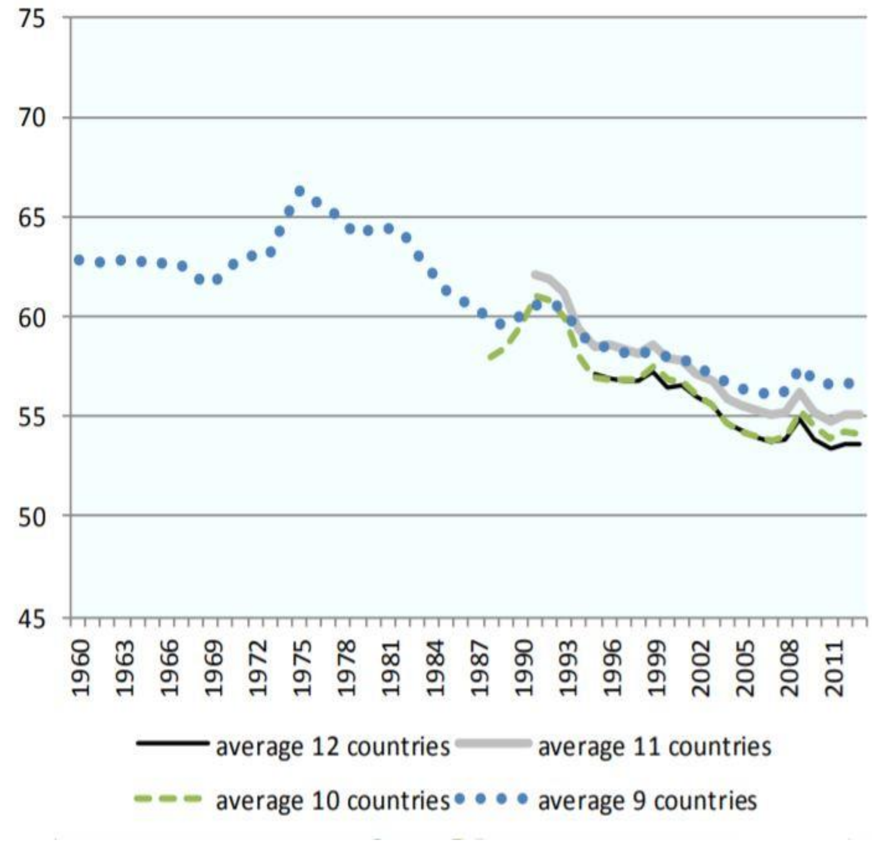
The New Corporate Titans: Fewer Jobs, Harder to Tax & Regulate





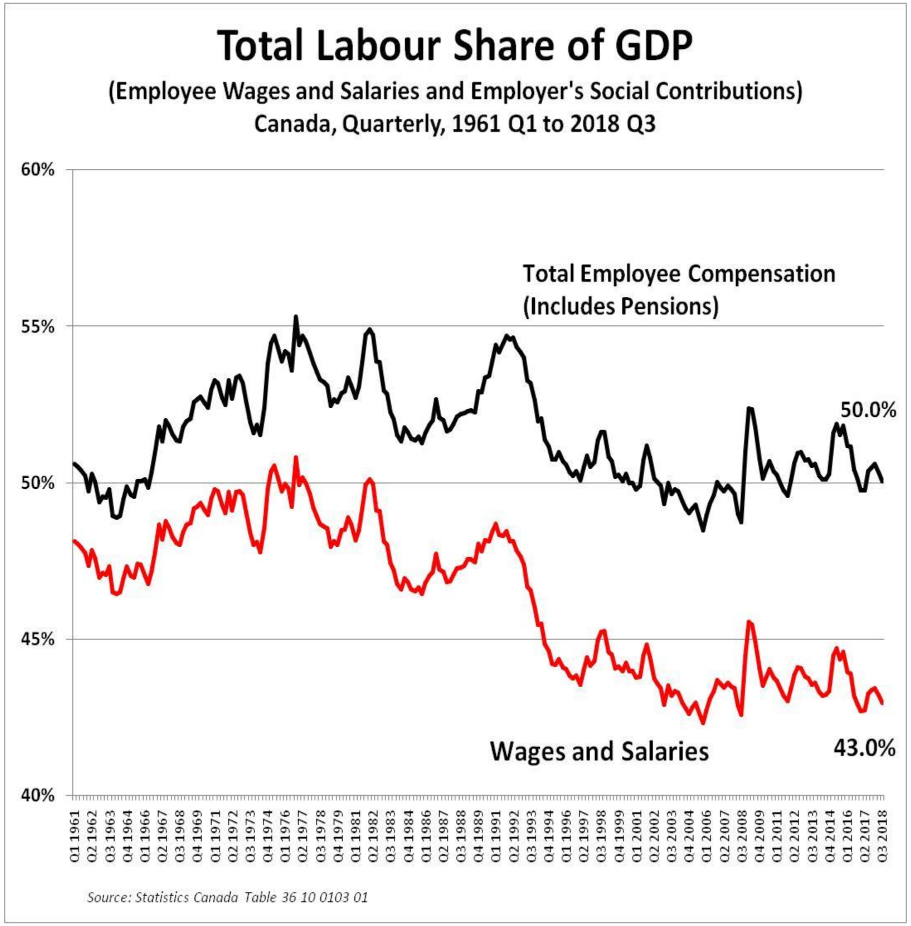
Why We Are Talking About Inclusive Growth

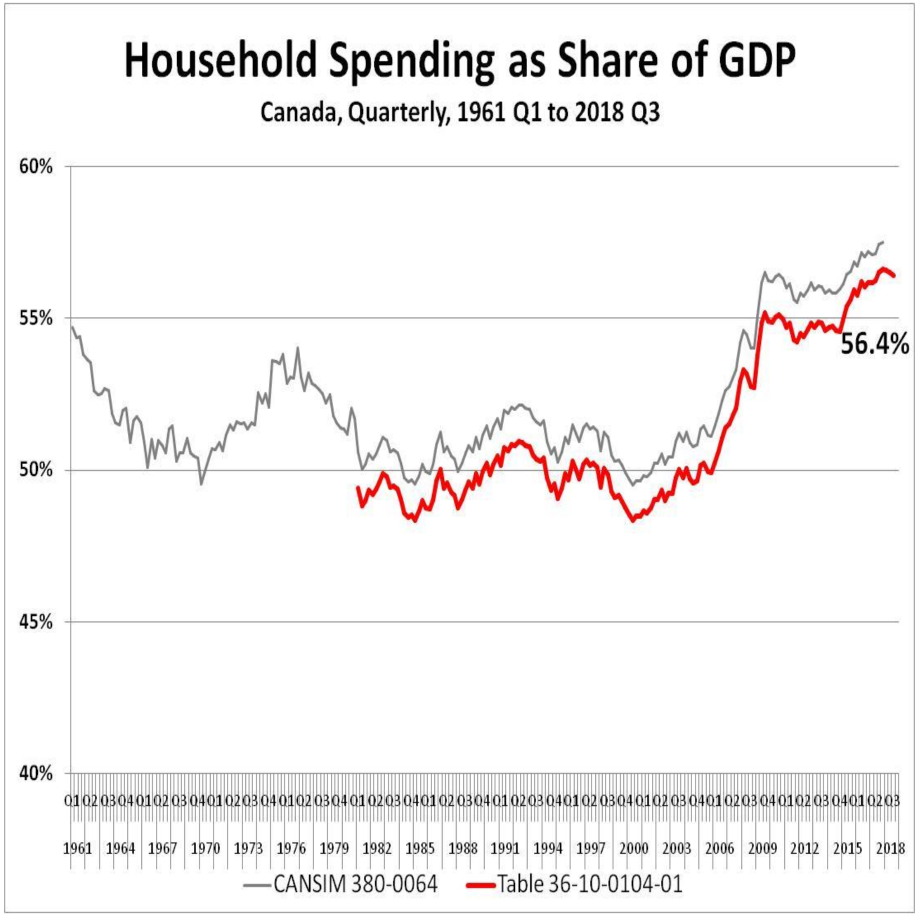
- **Falling Labour Share of GDP**
- **“The Game Is Rigged”**
  Trump Brexit
- **Challenge to Stability**
- **Is Canada different?**
  “exceptional”?



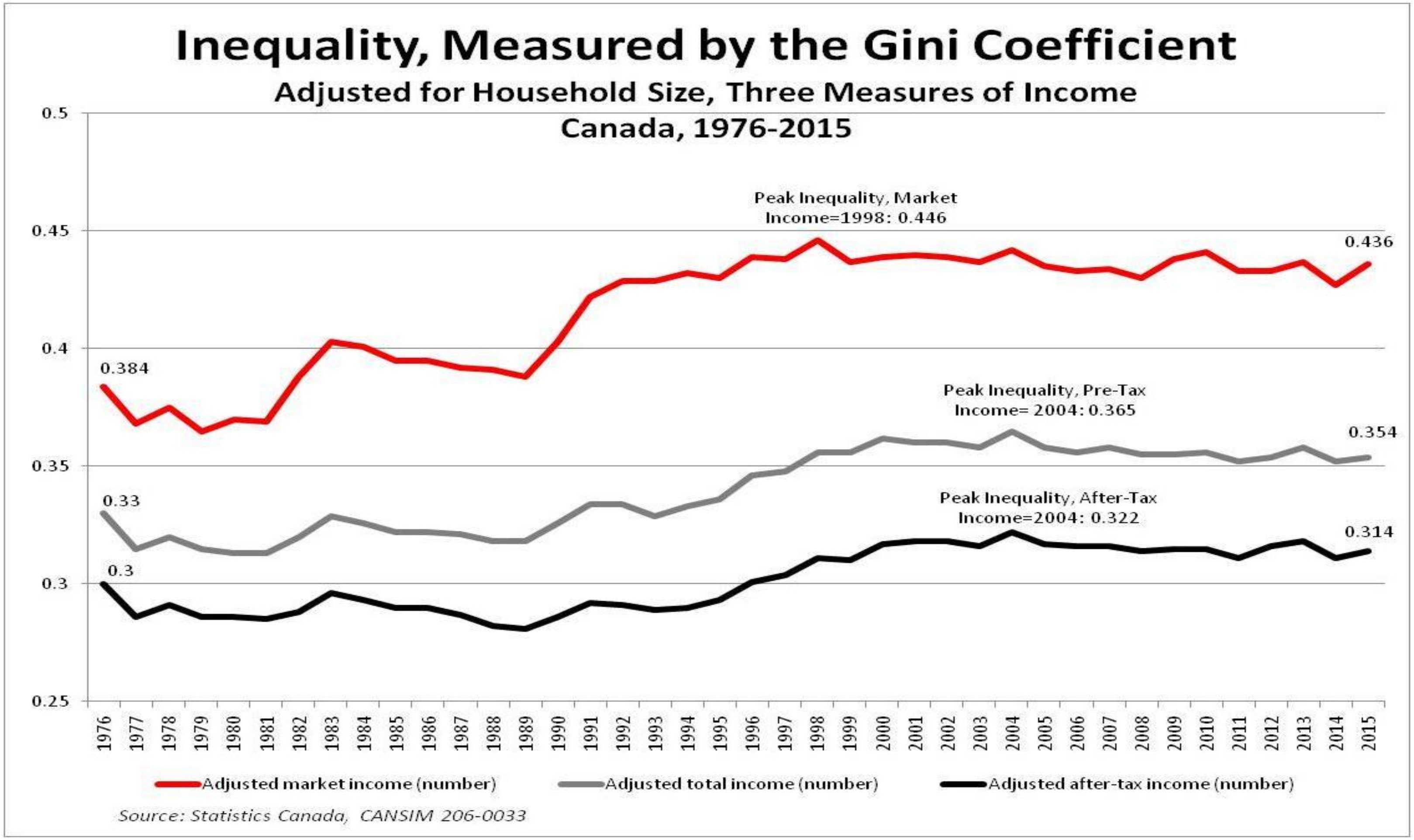
Canadian Exceptionalism:

Labour share of GDP hasn't kept falling but household consumption share has soared.





Canadian Exceptionalism: Inequality did not worsen, but even robust GDP growth didn't reduce it.



Canadian “Exceptionalism”: Tapped Out?

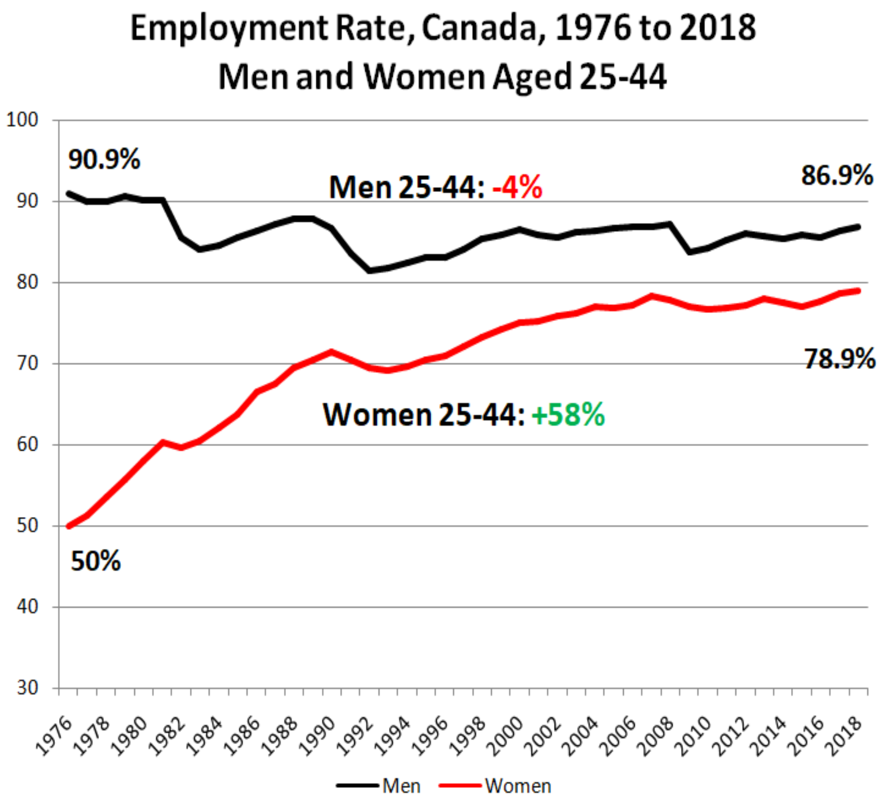
Commodity Supercycle

- Regionally specific
- More capital than labour intensive
- Increased both men’s and women’s wages
- Permitted expansion of public services (women-centric)

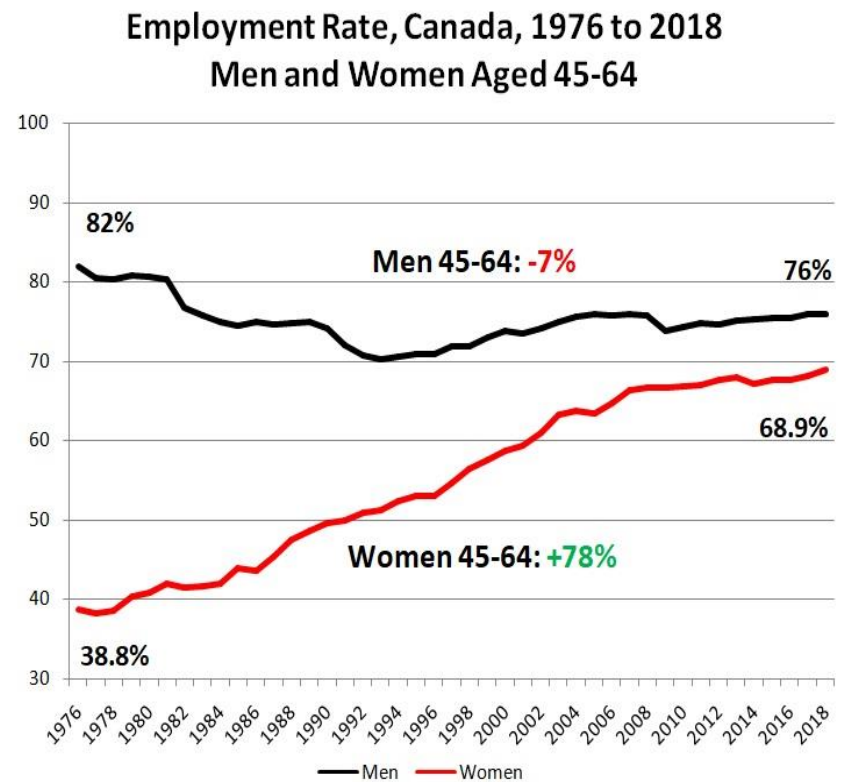
The Girl Effect

- Rising enrolment in post-secondary education
- Rising employment rates
- More diverse, better paid occupational choices

Girl Power – A Strategy With Diminishing Returns?

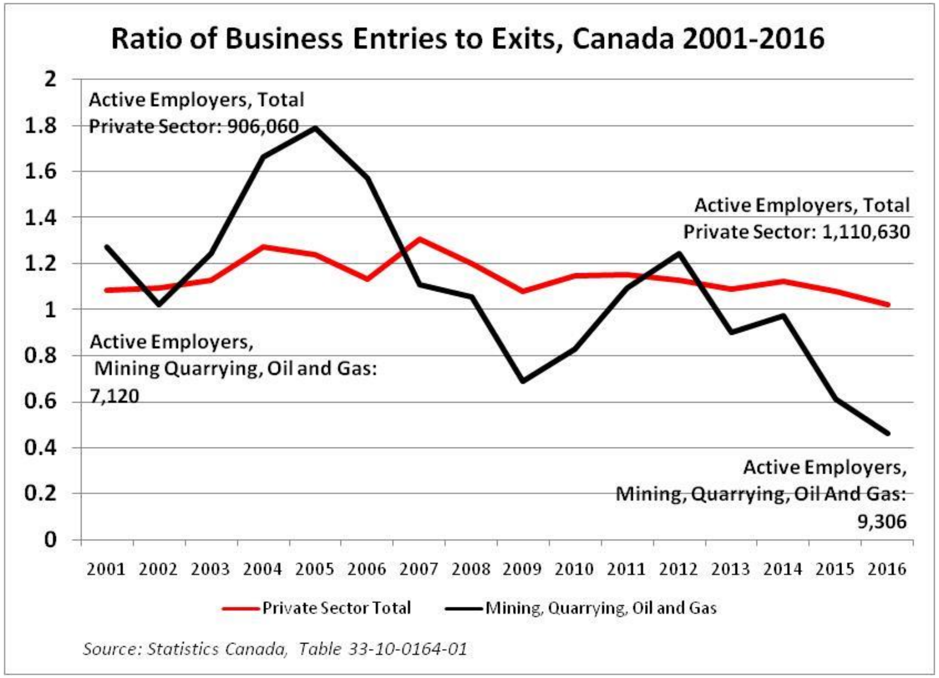


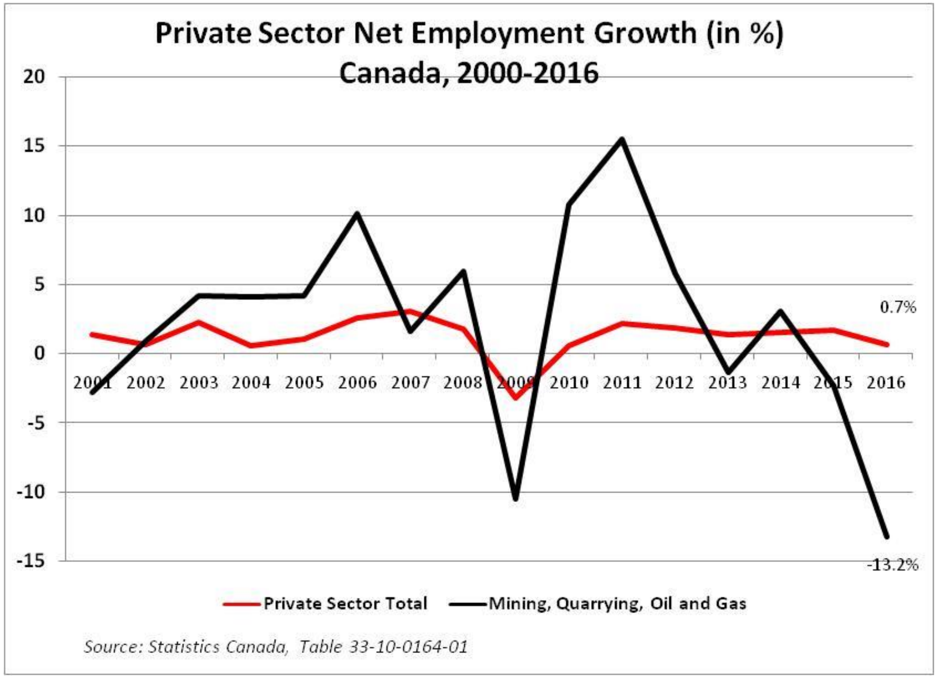
Source: Statistics Canada, Table 14 10 0018 01



Source: Statistics Canada, Table 14 10 0018 01

Mining, Quarrying, Oil and Gas declining as engine of growth





What's Next?

What We Don't Know: Digital Futures

What We Do Know: Non-Digital Trends

Responses:

Skill/Labour Shortages

Skills Development or Immigration?

Inclusive Growth Policies

The GBA+ Factor

The Wage Factor

The Services Factor

Tax/Spend: Needs versus Constraints

Unknown: Digital Futures

- Estimates of job/task loss via automation by 2030: 5% to 47%
- Job creation less foreseeable than destruction
- OnLine Labour Index: Canadian demand is growing most rapidly, but is it new work?
- Measurement issues (BLS, StatCan, OECD)
- Job creation in Canada’s IT sector fastest in world

Friendly Reminder

FACTS

- New York City replaced 50 clerks with an electronic brain that does their work.
- All but 70 of a National Insurance staff of 2,400 can be replaced by one accounting machine.
- Ford's in Cleveland, U.S.A., have robots and 250 men doing twice the work that 2,500 men used to do.
- Vauxhall, in Luton, need only one man and a machine to turn rough castings into finished and checked gear boxes.

When will the UNIONS wake up to the ROBOT REVOLUTION?

This union leader DID wake up

THE NEW AGE OF 'LOOK—NO HANDS!' IS UPON US

NO need to count on your fingers. No need to carry the right figure to the next column.

This robot counting machine does it all for you . . . Without hands. Without fatigue. Without mistakes.

At the flick of a switch it counts medicinal tablets as they are fed into containers.

UGLY

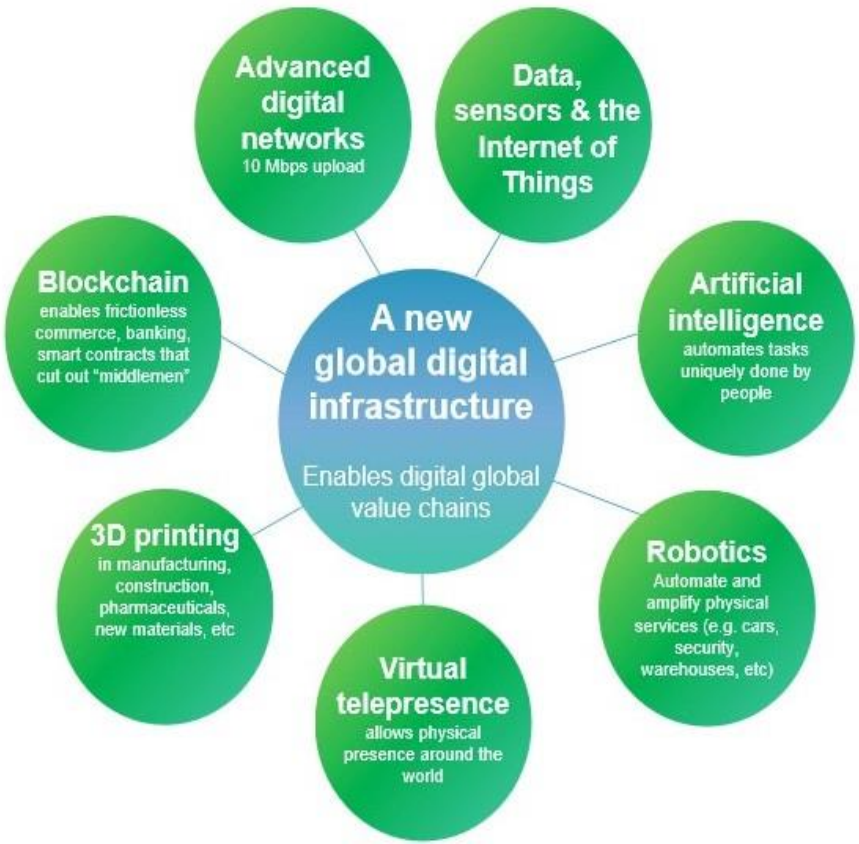
IGNORED

OVERTIME

AND WE SHALL HAVE LEARNED NO LESSON FROM THE LOOM-SMASHERS OF A CENTURY AND A HALF AGO.

TOMORROW: What will happen in YOUR office, YOUR factory

This Time It's Different?
Robots For Brawn, Digital For Brains



- **Substitutes for workers**

  (robotics, AI, 3D printing)
- **Moves work from place to place**

  (telepresence, telerobotics)
- **Eliminates work**

  (fintech, blockchain, no middle man)

Jobs to Tasks: Work is being "unbundled"

- **Online freelancing**

  (Upwork, Freelancer)

- **Crowd-based microwork**

  (Amazon Mechanical Turk, Cloudflower)

- **Real World On-demand**

  (Uber, AirBnB, Taskrabbit, Foodora)

- **Virtual Worlds**

  (Second Life, VR)

The Big Shift Forward
feels like the past for many

- Shift from the farmer's field to the office in 20^{th}C; from the office to the web in 21^{st}C
- Borderless digital and virtual realities mean global rebalancing of wages
- More flexibility also means less predictability
- A virtual Wild West means more exploitation
- Workers' level of control echoing 100 years ago?

Future Shock or Future Schlock?

Taylor Mann @Mann_Major ·18h

Never in American history has technology displaced so few and scared so many. See chart: rate of occupational change (job churn) by decade, 1850 to 2015.

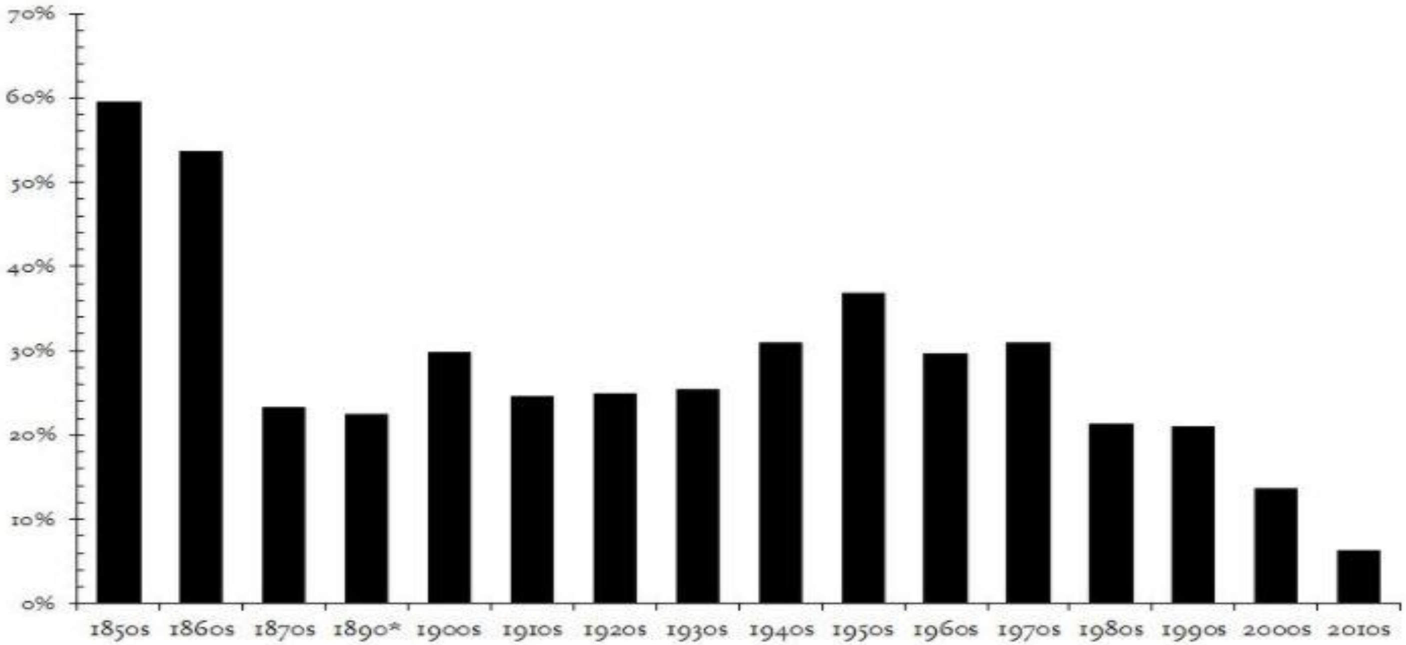


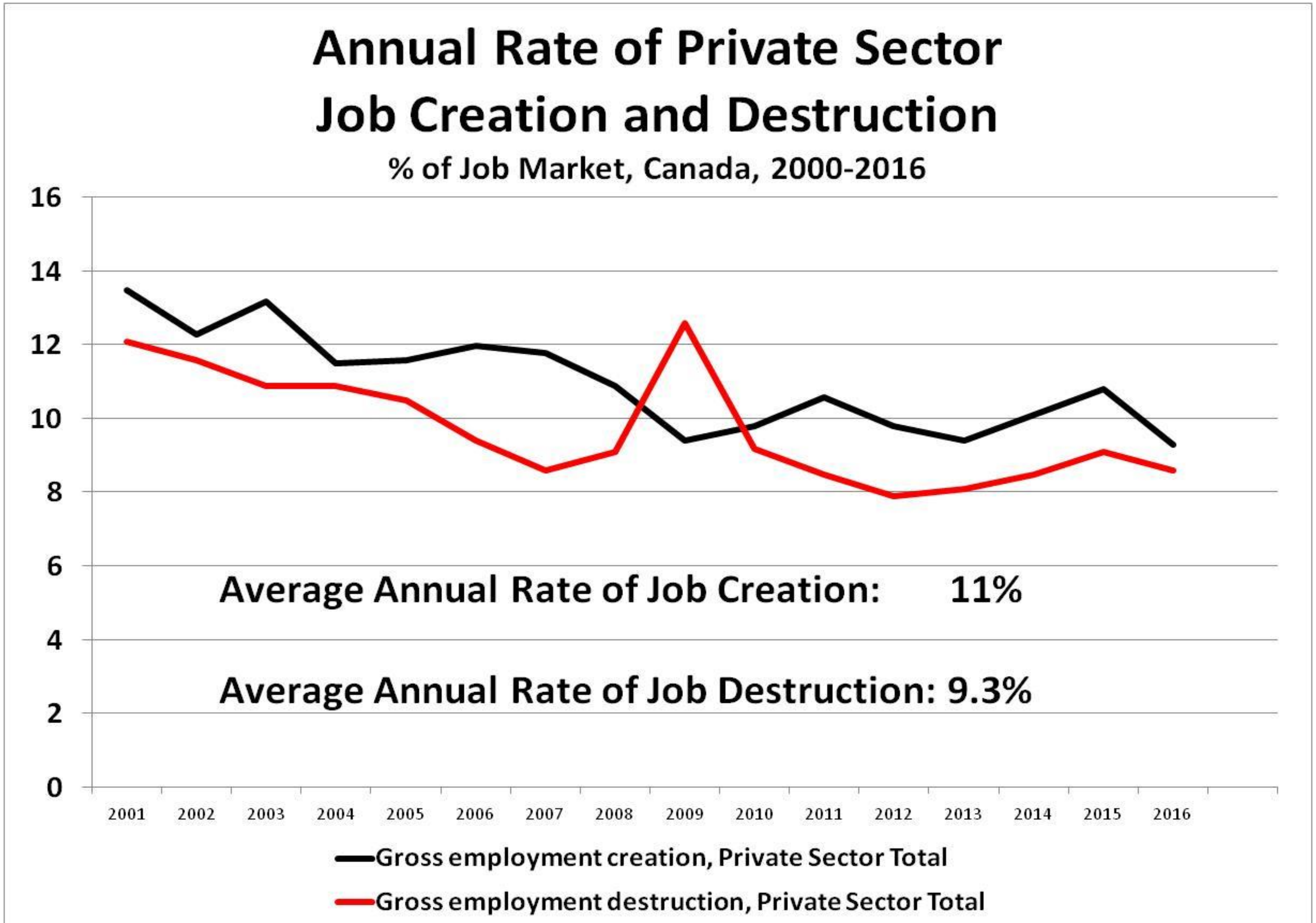
FIGURE 1. RATE OF OCCUPATIONAL CHANGE BY DECADE: 1950 OCCUPATIONAL CATEGORIES, 1850-2015

Notes: job churn is defined as 'the sum of the absolute values of jobs added in growing occupations and jobs lost in declining occupations' per source [2]. *Source*: Steen Ruggles, Katie Genadek, Ronald Goeken, Josiah Grover, and Matthew Sobek. *Integrated Public Use Microdata Series: Version 7.0* [dataset]. Minneapolis: University of Minnesota, 2017. https://doi.org10.18128/D010.V7.0; [2] Robert D. Atkinson and John Wu. *False Alarmism: Technological Distruption and the U.S. Labor Market, 1850-2015* [dataset]. Washington: Information Technology & Innovation Foundation, 2017. https://itif.org/publications/2017/05/08/false-alarmism-technological-disruption-and-us-labor-market-1850-2015.

*Represents the time period between 1880-1899

PINE CAPITAL

Job Birth and Death Rates Both Falling

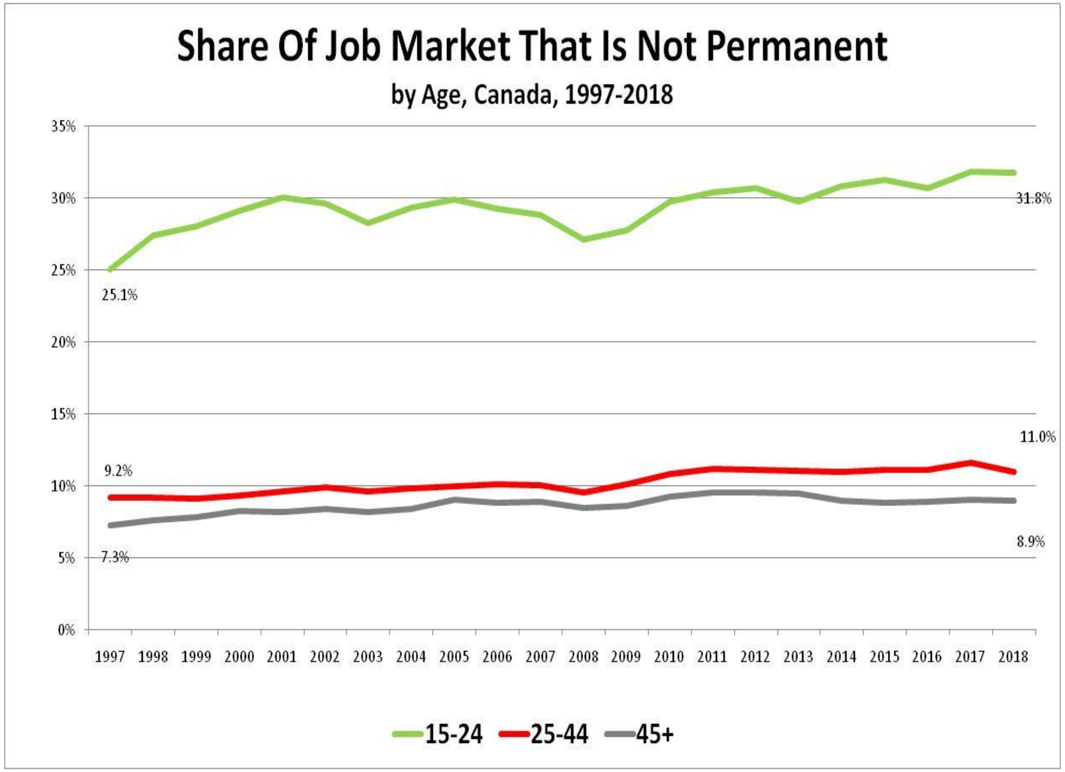


Is Digital Killing or Creating Jobs?

- Canada punching above its weight
  - OLI (from 4% to 8% of global demand since 2016)
  - Toronto job growth > SF Bay, Washington, Seattle combine overtook NYC
- % of labour market? Measurement issues
- Not just #, but quality of work.Contingent/precarious

Beyond Digital: Contingency – On The Rise?

- Aggregate: little change since 2008 recession
- Age specific changes
- Main job versus all work? Measurement Issues?



Beyond Digital – The Future Of Work in The Caring Economy

- Population Aging means more care needs
  - Health care
  - Child care and early learning
- Smaller working age population, more life-long learning needs
- Aging worker profiles: 40% of RNs aged 50+, 49% of doctors aged 50+

- **15%** of the labour market currently provide health, education and child care (2.9M jobs)
- 25% job growth in health care over last decade, 10% in education
- Regulated child care market could grow >35% (est 254K workers in 2016)

Beyond Digital – The Future Of Work in The [Re] Building Economy

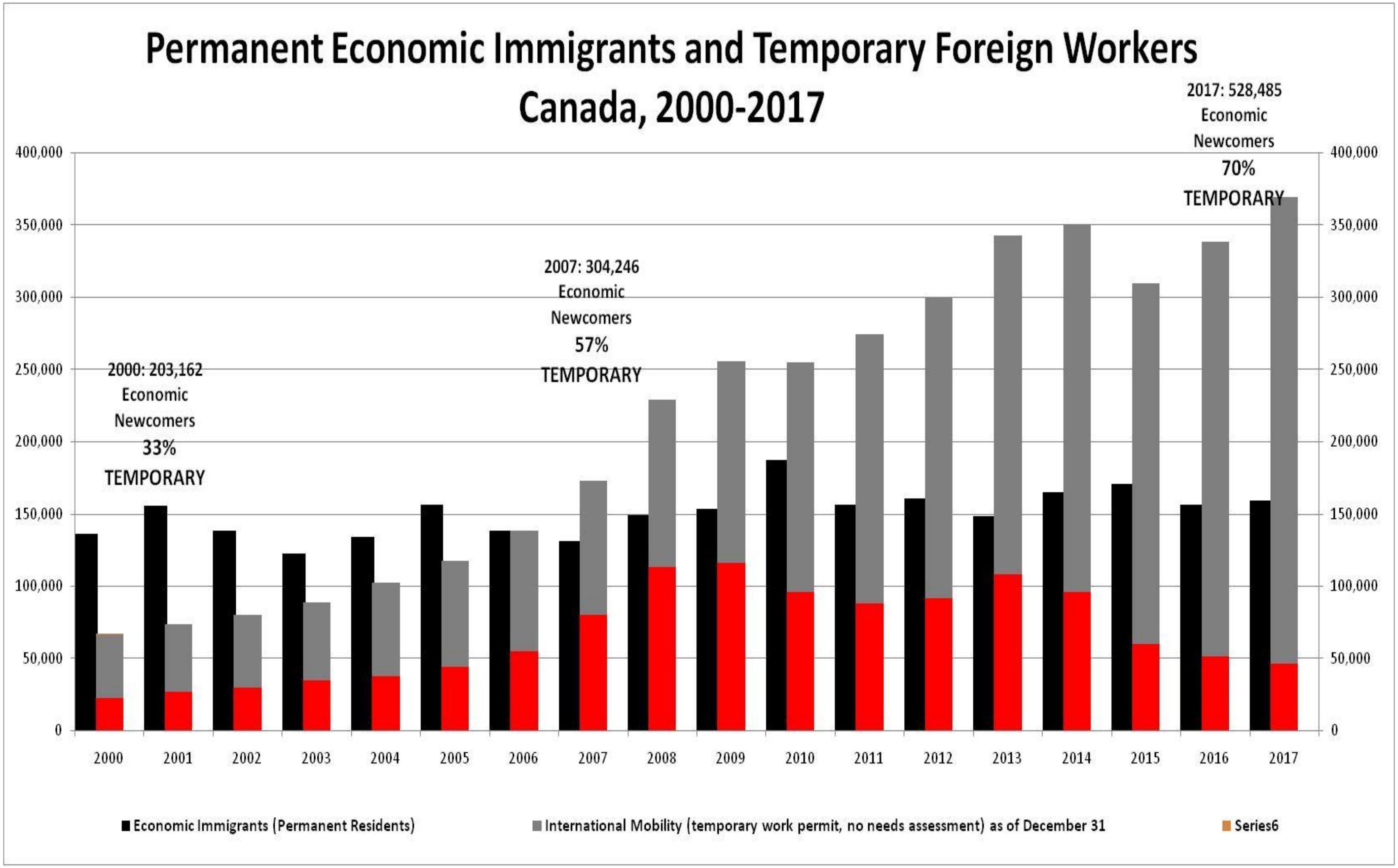
- Public Infrastructure investments over next 10 years >$500B, ~$186B federally alone
- Private sector residential needs due to immigration, population aging, relocation
- Unclear demographic profile of skilled trades, many others aging out

- **~15%** of the labour market currently provides construction, repair and maintenance services (just of 3M jobs, 1 M in skilled trades alone)
- 13% job growth in last decade

Addressing Known Skills/Labour Shortages What balance of strategies will we choose?

- **Skills Development**
  - Youth Strategies
  - Reduce un-/underemployment of existing citizens/residents
- **Immigration**
  - Permanent Economic Immigration
  - Temporary Foreign Workers

Imported Solutions: Rise of the Temps



Inclusive Growth: Radical Prescription?

- **Private Sector Strategies**
  - Skills and Training
  - Collective Bargaining
  - Investment (Innovation or Market Share Expansions?)
  - Reliance on global vs local markets for production/consumption
- **Public Sector Strategies**
  - Supports
  - Rules
  - Corporate oversight, offsetting concentration
  - Direction-setting investments? (Green transition, healthier populations, lifelong learning)

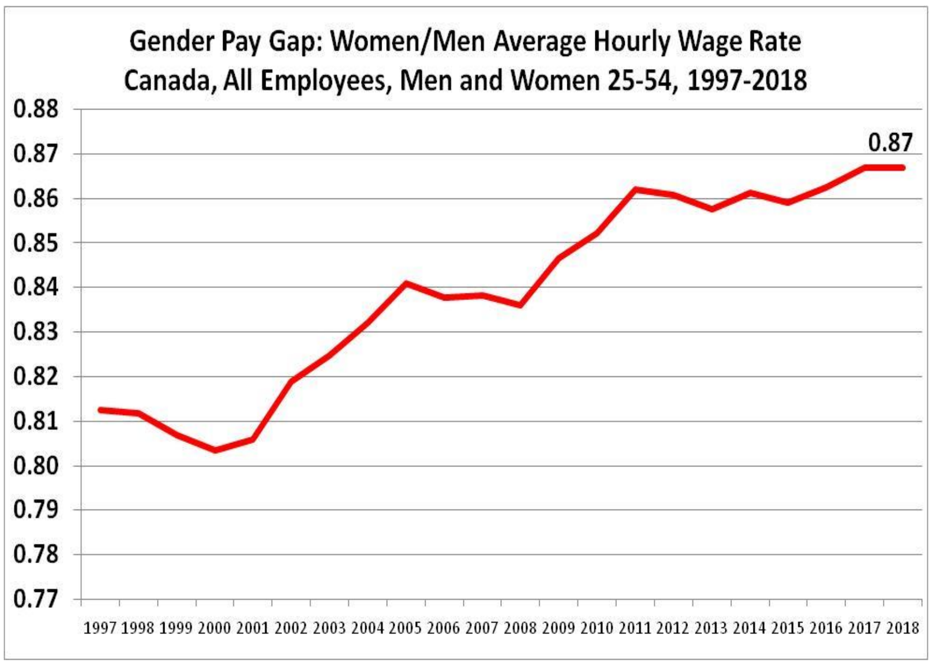
Inclusive Growth: The Gender Factor

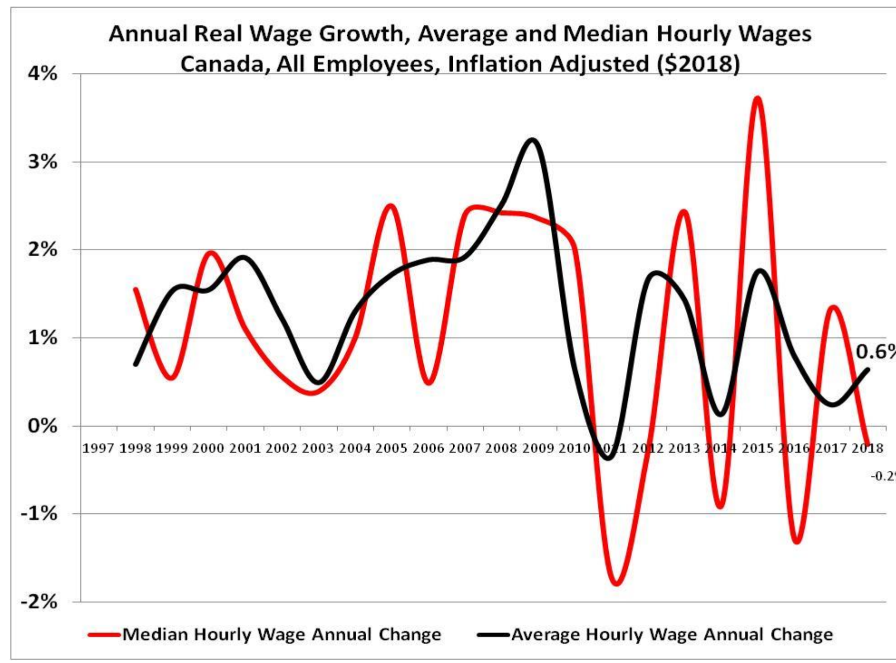
- 2017 McKinsey Report, The Power Of Parity
- $150B more GDP by 2026 (6% more growth)
- Increase labour force participation rates from 61% to 64%
- Longer working hours
- Better pay

GBA+ could multiply that (improve human capital development, employment rates, reduce pay disparities)

Inclusive Growth: The Wage Factor

- Gender pay gap stalling out around 87 cents
- Boost the economy from the bottom up?





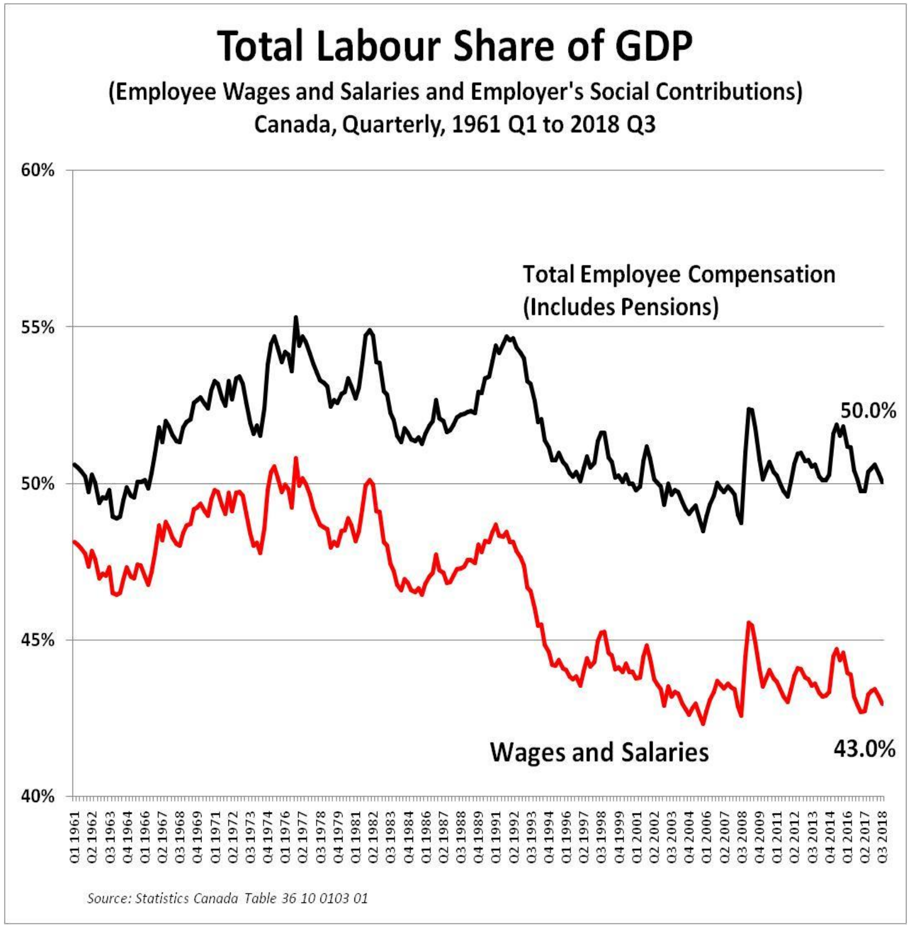
Inclusive Growth: The Skill Factor

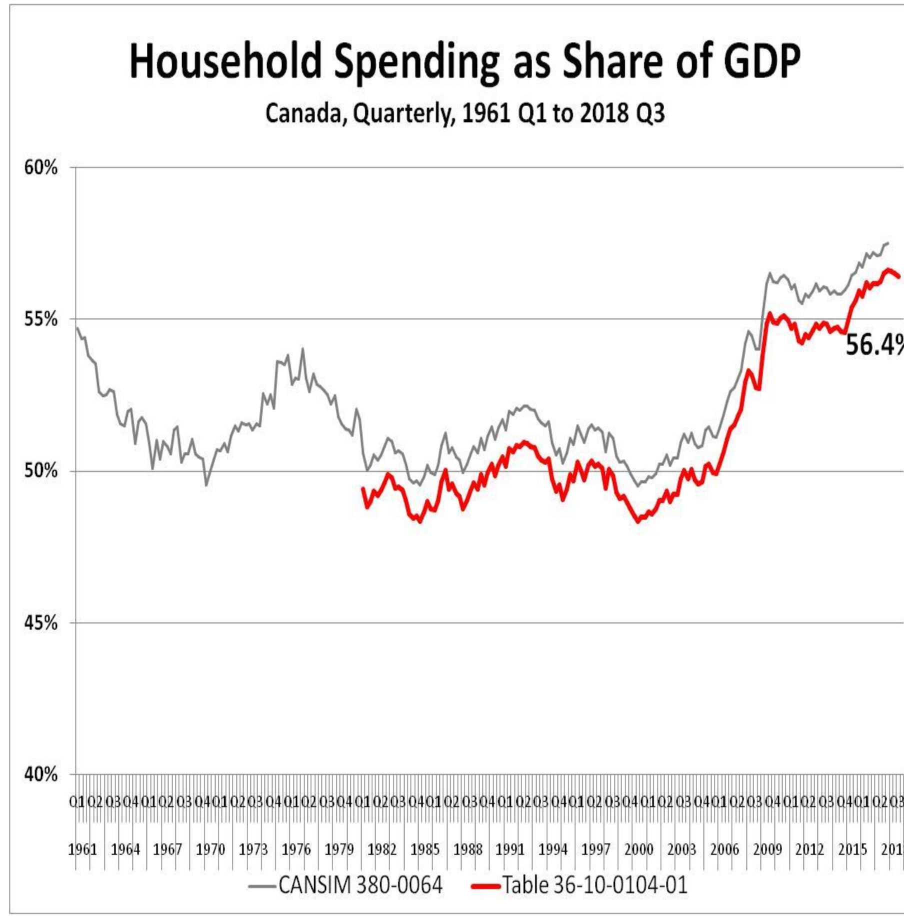
- **Skills Upgrading and Life-long learning -- necessary but not sufficient**
- **Schooling: based on a seasonal norm set 100 years ago, because of the importance of agriculture. Update?**
- **Tertiary education: expensive, time-consuming, does not guarantee decent work**
- **Business investment in on-the-job training on the wane (importing the solution is cheaper/easier?)**
- **"Badging": life-long learning through short-term skills upgrading. Private or public sector driven?**

Inclusive Growth: Redistribution or Predistribution

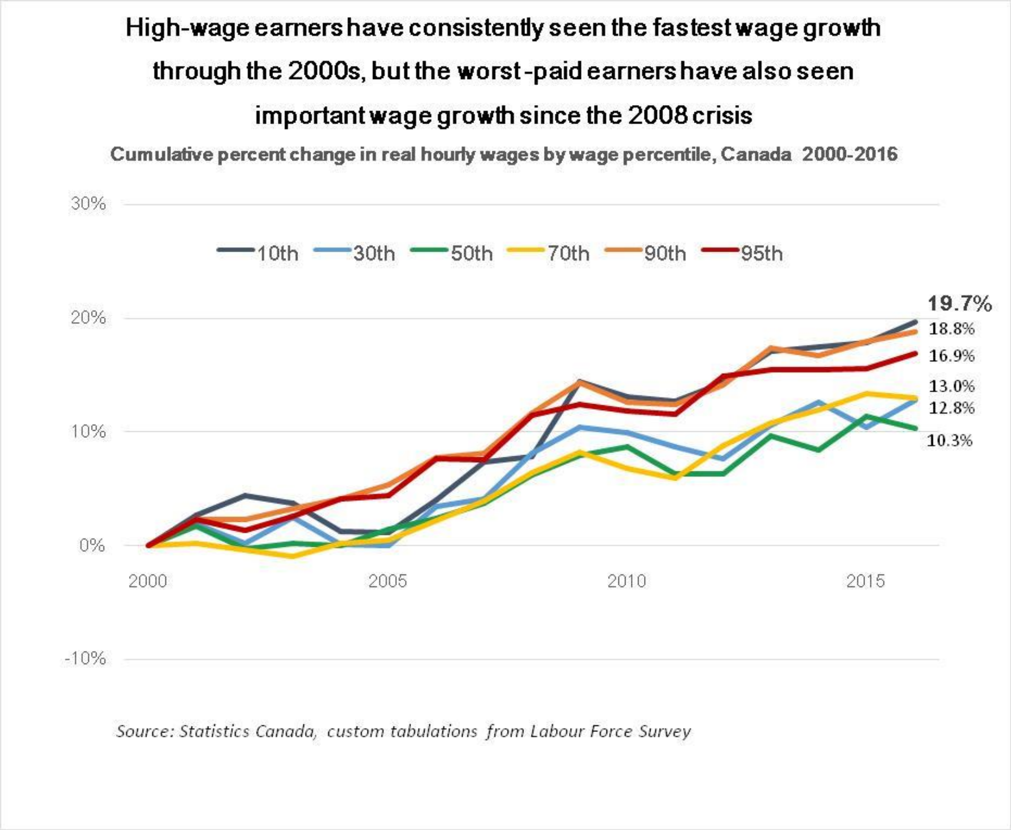
- **Money? (Is basic income the answer?)**
- **Social wage? affordable and quality basic services (ex. housing, education, health care, child care, transit) reduce the need for money**
- **Focus on full employment/decent work?**

Inclusive Growth:
Wage-Led Growth or Debt-Led Growth?





Inclusive Growth: Pay Rates or Social Wage?



- Higher quality of life by improved income OR
- More income support OR
- Subsidized rent, education, child care, transit OR
- More publicly funded health care, education, legal services, etc.

Inclusive Growth:
Rebalance Bargaining Power Domestically

- **New labour standards** for “grey” workers (neither employee nor independent contractor)
- **Joint employer status** to reduce risk-shifting
- **Improve supports** for all workers and the unemployed
- **Use laws/courts** to exercise sovereignty re worker and human rights, privacy against corporate interests

Inclusive Growth:
Rebalance Bargaining Power Internationally

- **Reduce tax avoidance, develop an internationally coordinated response (OECD BEPS)**

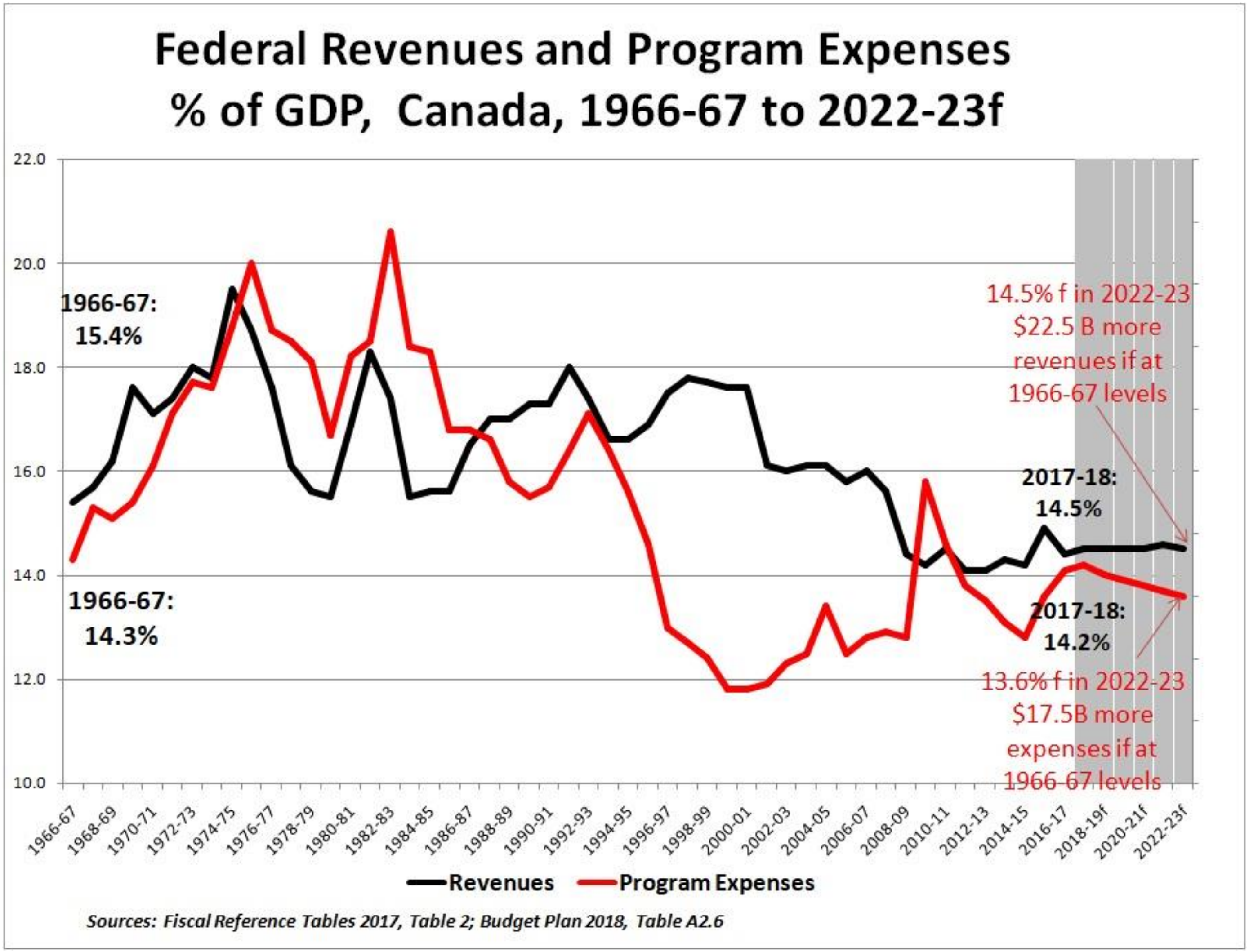
- **Develop a 21st C anti-trust approach to "natural" monopolies and corporate concentration (Roosevelt Institute)**

- **Update/craft trade agreements to set labour rights as equal to investor rights, regulate supply chains (ETUC, ILO)**

A Radical New Methodology: Measuring the Meaning of Government

- **Not how big government is, but what it does**
- **Future of more constrained revenue growth requires more clarity: what do taxpayers get for their taxes?**
- **Analysis of benefits, not just costs (methodologically difficult)**
- **Promise (and limitations) of GBA+ analysis – outcomes-focused; evidence-based; distributional impact; return on investment/value proposition**

Is This The Right Trendline For The Future?



Role of Government: More Necessary, But More Contested

- Bigger Government? Less Revenue Growth?
- Aging population, more public services?
- Immigration or skills development priority to address predictable labour/skill shortages?
- Inclusive Growth = Shifts in bargaining power?
- More regulation? (corporate concentration)
- More international coordination?

Summary

- **Slowth:** Slow growth reshapes labour markets as much as technological change, plus destabilizes capitalism, democracy. Past growth strategies are not enough.

- **Inclusive growth:** A game-changing frame? Only if policy reforms are game-changing re skills, wages, services, immigration, taxation and corporate regulation.

- **Bigger government?** Government's role is growing more obviously important than in the past half century. But bigger government will be a highly contested trend.

Thank you for your time.

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