

The political economy of university education in Canada

Frances Woolley
Carleton University

Synopsis

- Future for Canadian universities
 - Greater reliance on tuition revenues
 - Redistribution replacing growth
- Hard questions about benefits of education
 - Student-consumers: What's in it for me?
 - Resource allocators: Where are benefits of education coming from?
- A system under scrutiny
 - The technological revolution that hasn't happened
- Scenario 1: Gradual change – for better or worse
 - Policy challenge: make it better
- Scenario 2: “Black swan” event - radical disruption

Canada's universities

Internationally speaking, an outlier

- Public universities
- (Mostly) provincially funded and governed
- No national standards

Provincial-level university “market”

- In most provinces: relatively few players
- Differentiated: by region, reputation, specialization
- Very high barriers to entry; little to no exit.

Provincial funding models: economic and political considerations

- Economics: market structure = less to gain from introducing inter-university competition
- Politics:
 - Voters want accessible quality education
 - Limits differentiation
 - Funding models with identifiable losers politically risky
 - Except when losers are unsympathetic characters: e.g. 2012 Ontario 5-year freeze on university presidents' salaries
 - Absence of quality private system empowers public providers
 - Voters demand quality within public system ([Iversen and Busemeyer, 2017](#); related: [Tuohy, Flood and Stabile, 2004](#))
 - Alumni connections: most provincial politicians are graduates of public universities
 - Increases lobbying power [Chatterji, Kim and McDevitt, 2016](#)

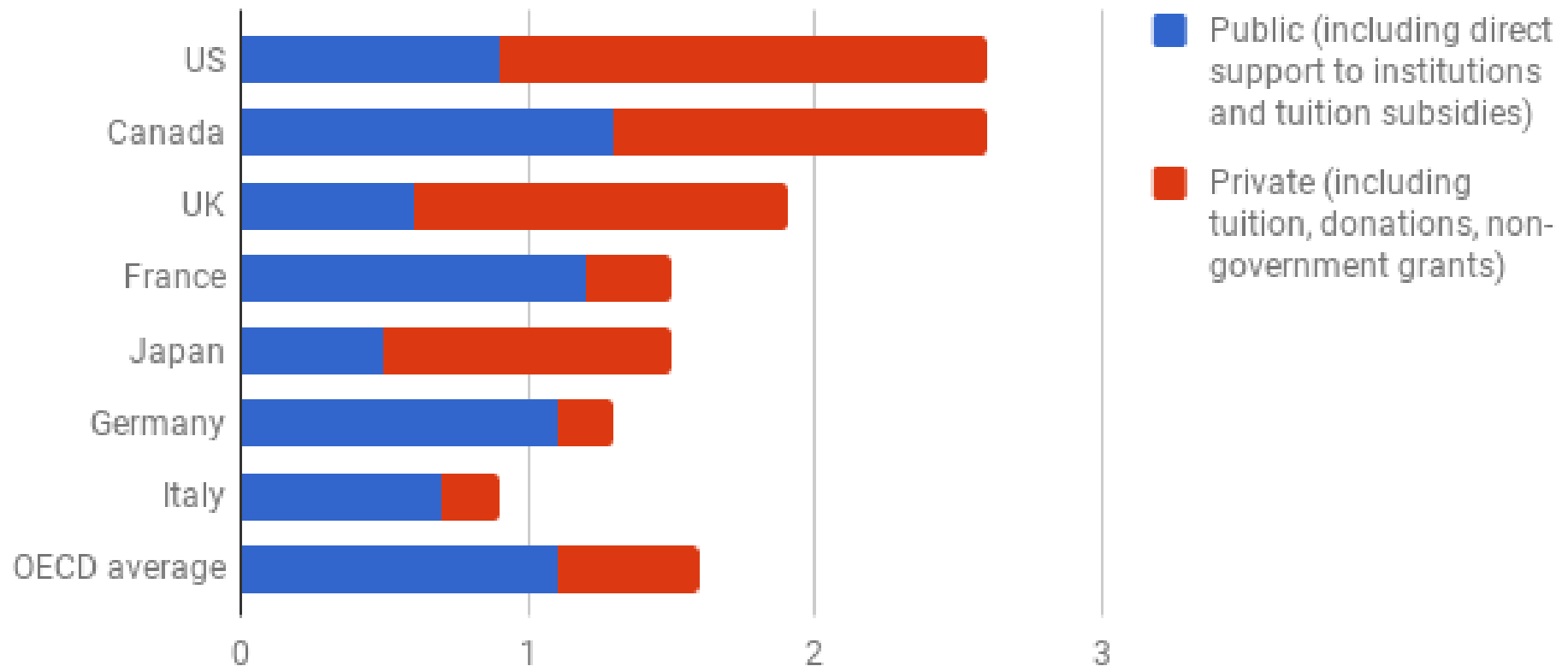
Government funding model

- Rest of World:
 - More output-based funding (e.g. graduates, research output)
 - Most US states: Kelchen, 2018; Usher, 2017
 - Many European countries: [Jongbloed and Vossensteyn, 2016](#); [Usher, 2017](#)
 - More adoption of separate research/teaching funding envelopes.
- Canada: Funding mostly based on
 - Enrolment (ON, QC)
 - And/or historically based lump-sum grants (ROC) ([Usher, 2017](#))
 - Output-based? In Canada, only Ontario; low-powered incentives. ([Usher, 2017](#))
- But current system is not sustainable

Spend more on tertiary education than any country except US

Expenditure on tertiary education by source of funding, 2014.

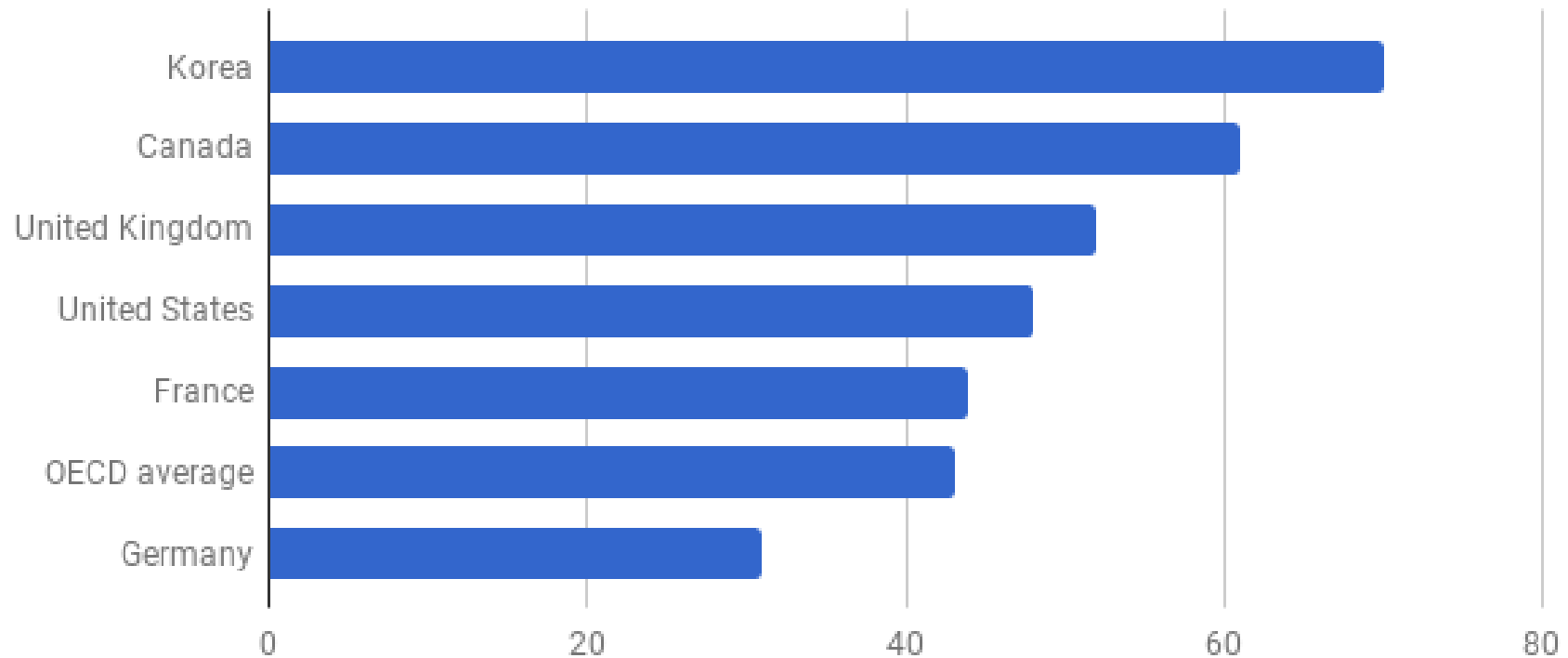
Percent of GDP



Source: OECD, Education at a Glance 2017, Table B2.3

Only Korea has more young adults with a post-secondary credential.

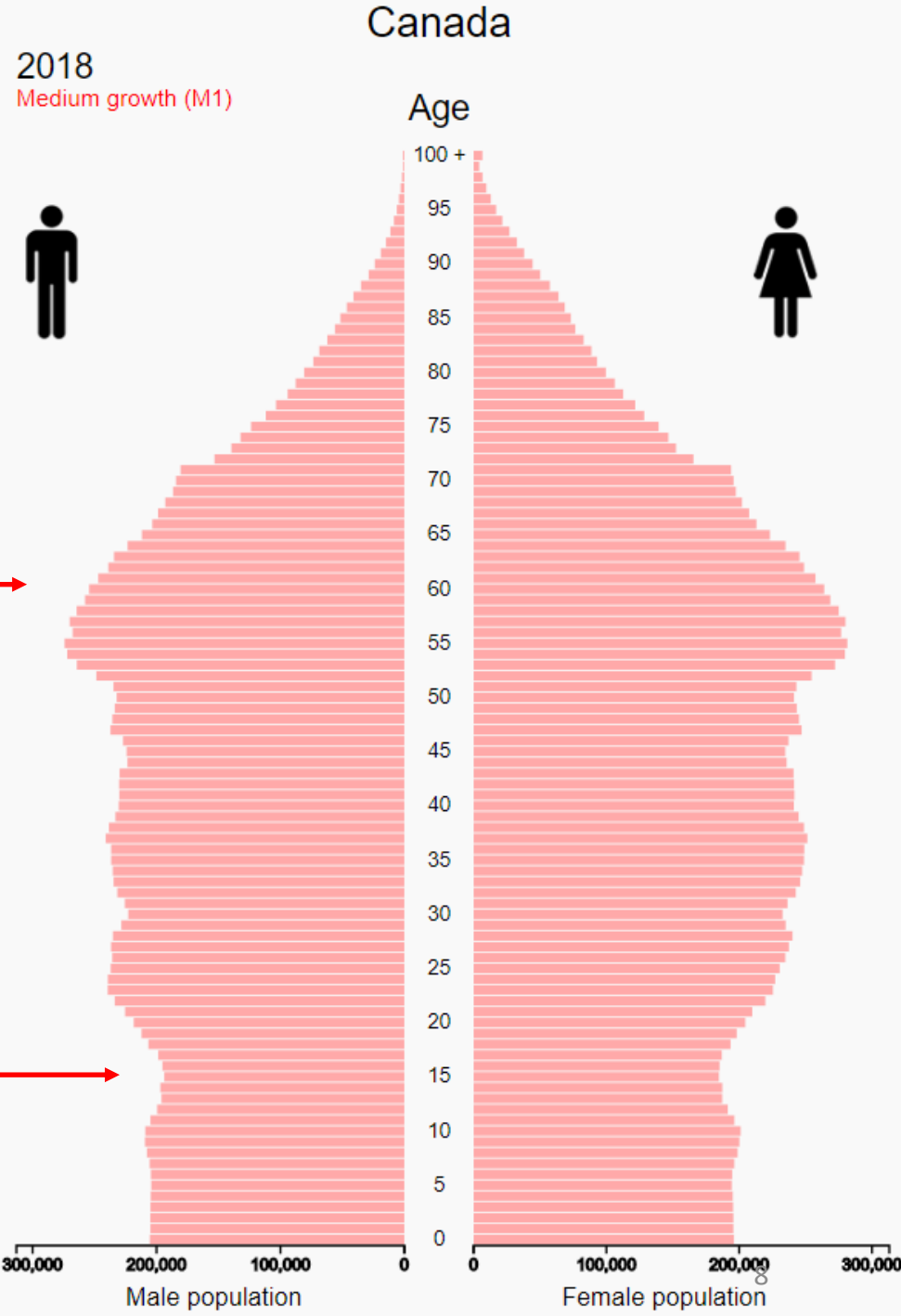
Percentage of 25-34 year olds with tertiary educational qualification, 2016



Source: OECD, Education at a Glance, 2017, Table A1.2.

Demographics

- Booming older population
 - Health care
 - Long-term care
- Shrinking university-age population
 - Especially outside GTA, Calgary, Lower Mainland



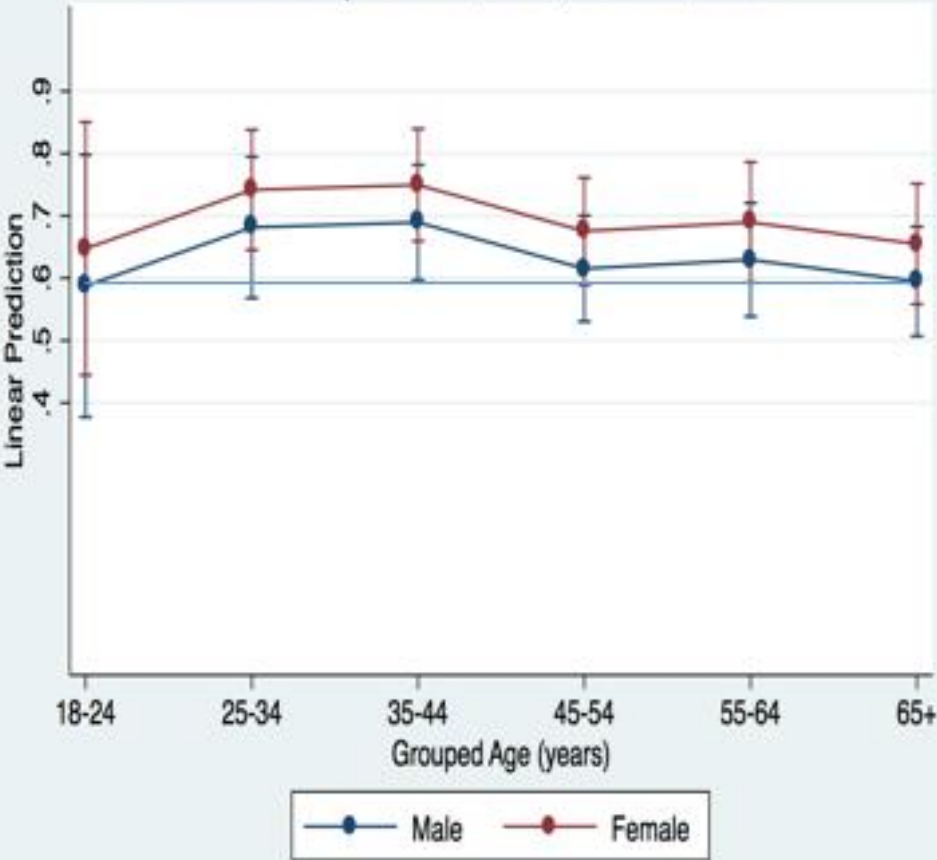
Source: Statistics Canada. Projected from 2016 Census data.

Demographics: political considerations

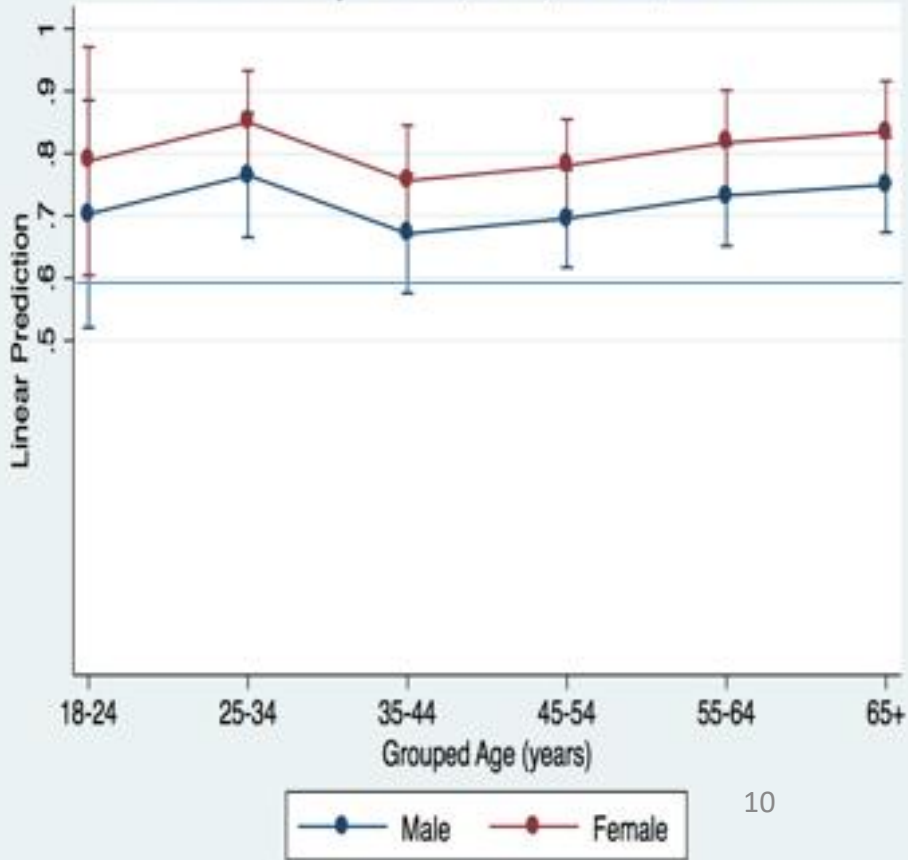
- Population aging implies less public support for government spending on education (e.g. Poterba, 1997).
 - Narrow self-interest: old benefit more from health care, other spending, than education.
 - Mitigating factors: concerns about human capital, growth, future generations.
 - Empirical studies finding population aging/lower public spending relationship:
 - US, college: [Brunner and Johnson 2016](#)
 - US, K-12: [Harris, Evans and Schwabb, 2001](#) or [Reback, 2014](#)

Should governments spend more or less on...?

Spend more, or much more, on education
Portion of respondents, ISSP, Canada, 2006



Spend more, or much more, on health
Portion of respondents, ISSP, Canada, 2006



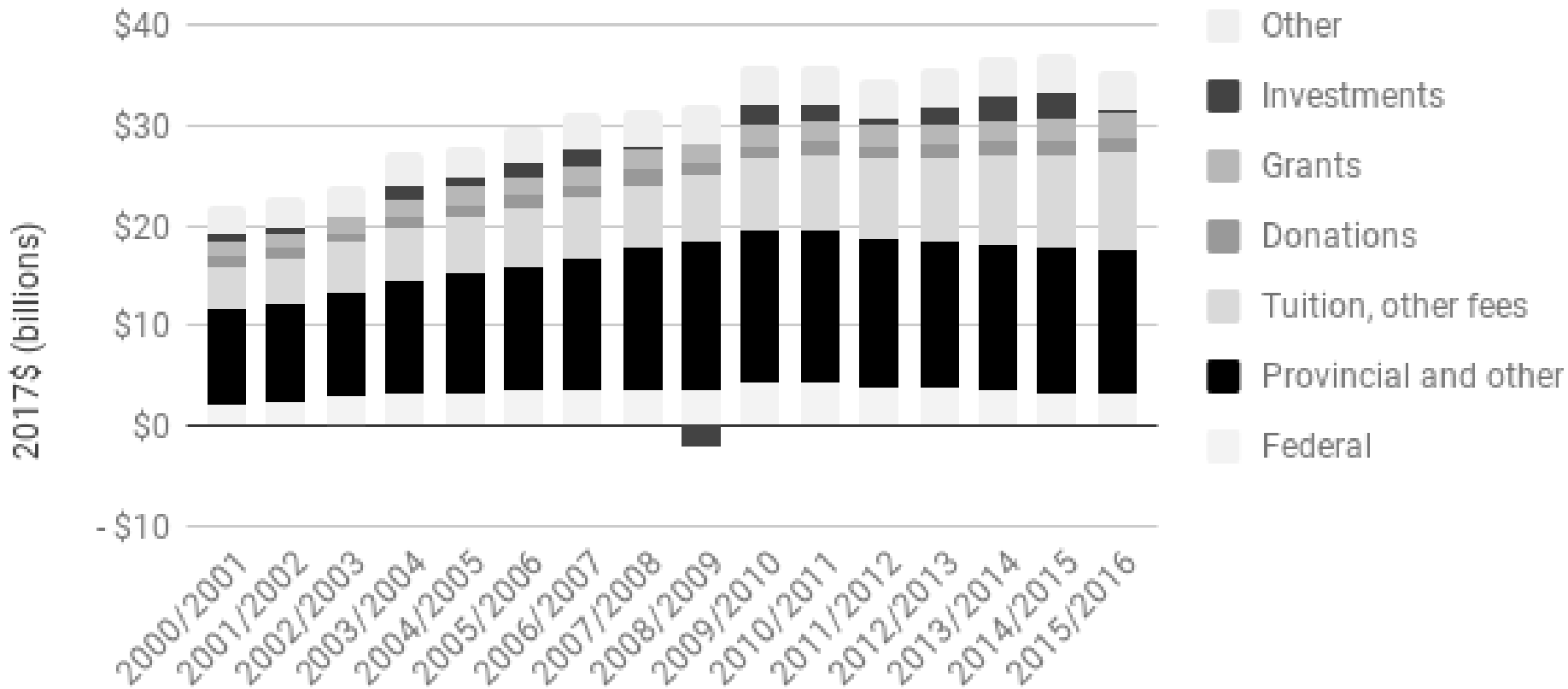
Demographics and Canadian political institutions

- Education and health both provincial responsibilities
- Provincial spending levels not fiscally sustainable given current levels of taxation (PBO)
- Spending on health care mandated through Canada Health Act
- No national standards for post-secondary education
- No one dies when they cannot access post-secondary education
 - Easier to cut.

Direct government funding of post-secondary institutions declining in real terms since 2009/10.

Revenues of universities and degree-granting colleges, Canada

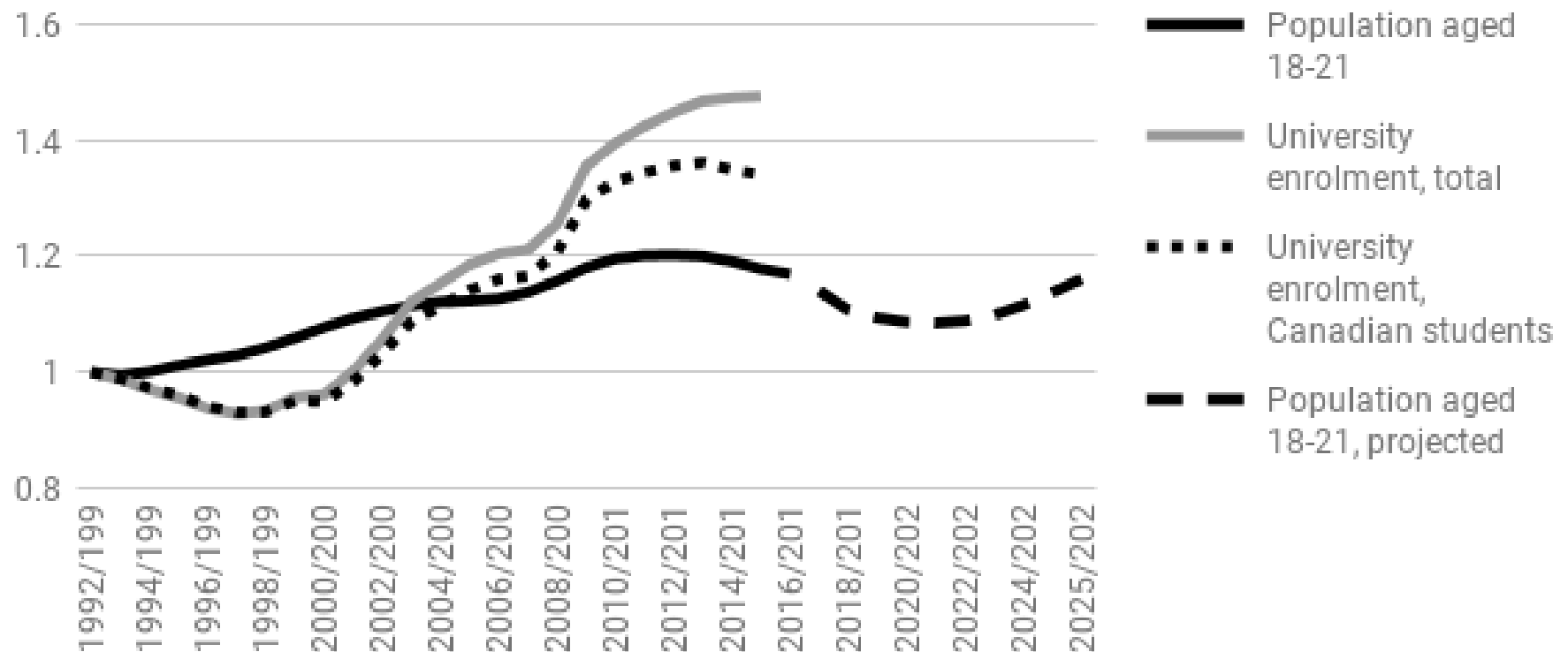
2017 dollars (billions)



Sources: CANSIM Table 477-058, 326-0021

Can enrolments keep growing? I don't think so.

Number of students enrolled in university and population aged 18-21. Canada. 1992/93=1.0



Sources: CANSIM 477-0031, 051-0001, 052-0005

Synopsis

- Future for Canadian universities
 - Greater reliance on tuition revenues
 - Redistribution replacing growth
- **Hard questions about benefits of education**
 - **Student-consumers: What's in it for me?**
 - Resource allocators: Where are benefits of education coming from?
- A system under scrutiny
 - The technological revolution that hasn't happened
- Scenario 1: Gradual change – for better or worse
 - Policy challenge: make it better
- Scenario 2: “Black swan” event - radical disruption

“Going to university will cost me tens of thousands of dollars. What kind of job will I get when I graduate? **Is it worth it for me?**”

Conventional wisdom: yes. But...

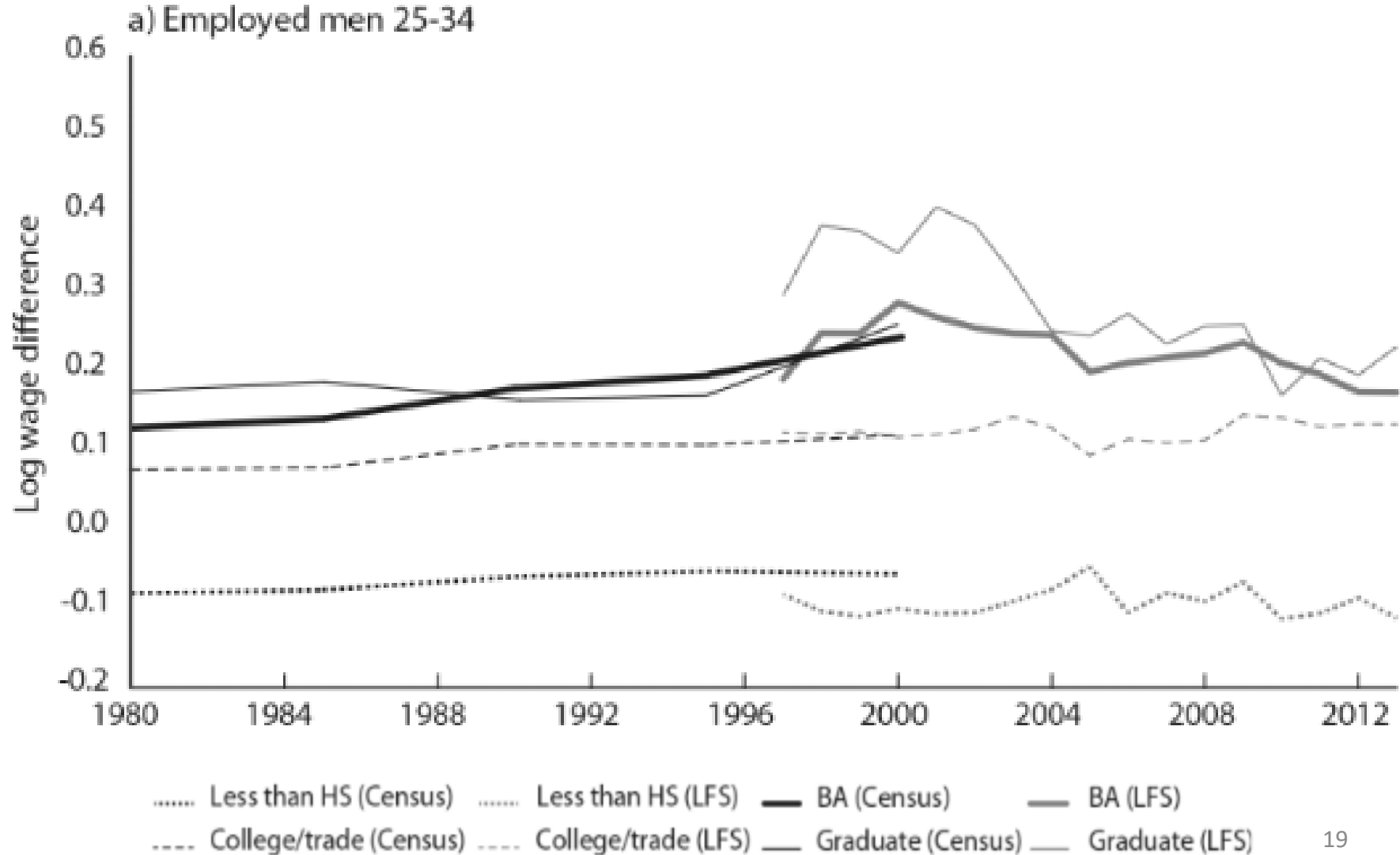
- Returns to education in future may be different from past returns
- Skill-biased technological change
 - Could increase or decrease returns
- Supply and demand
 - if the value of a university degree is determined by supply and demand, and...

Trends in returns to education

- Consensus finding: average wage premium enjoyed by more educated workers rising up to around 2006.
 - Burbidge, Magee and Robb (2002), Boudarbat, Lemieux and Riddell (2010), Ren and Shannon (2017), and Bourbeau, Lefebvre and Merrigan (2012).
- Foley and Green (2015): for men, returns may have peaked.

Figure 3

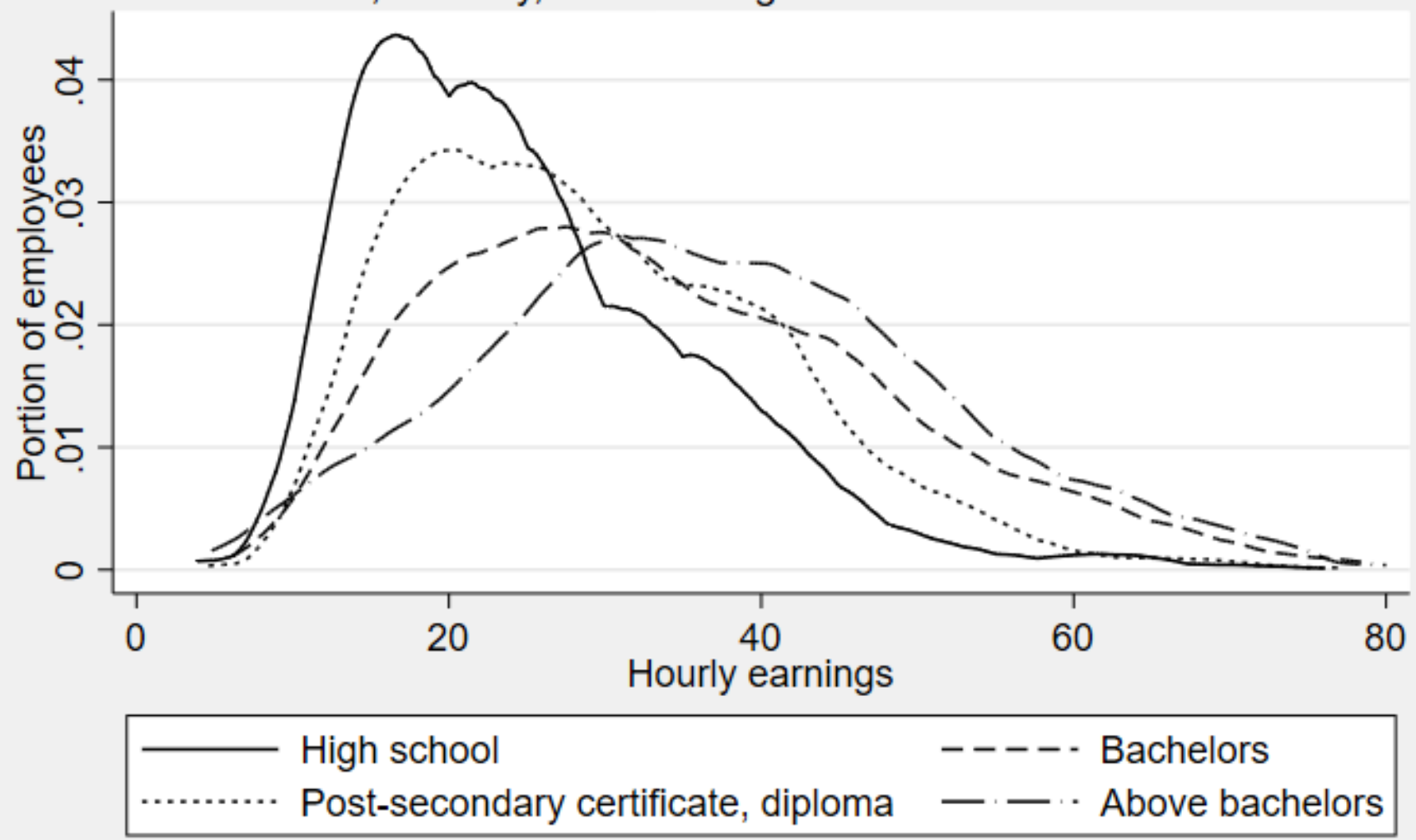
Education-based wage gap relative to high school graduates, by education level, Canada, 1980-2013



“Going to university will cost me tens of thousands of dollars. What kind of job will I get when I graduate? Is it worth it **for me?**”

Focus on average returns to education ignores variance, risk.

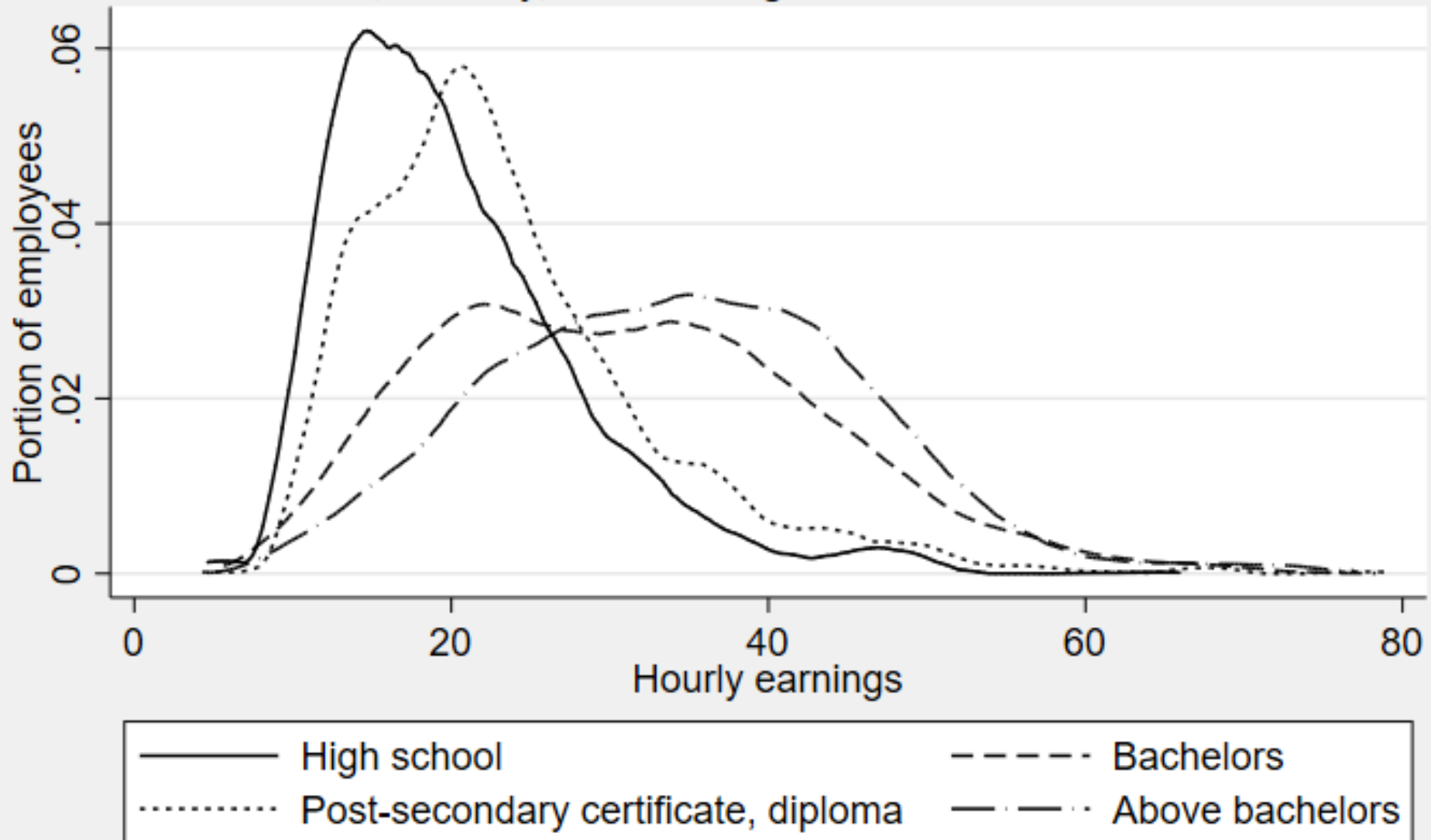
Hourly wage distribution, employed men 25-40.
Canada, January, 2018. Immigrants and students excluded.



Calculated by F. Woolley using LFS PUMF. Earnings truncated at \$80/hour

Hourly wage distribution, employed women 25-40.

Canada, January, 2018. Immigrants and students excluded.



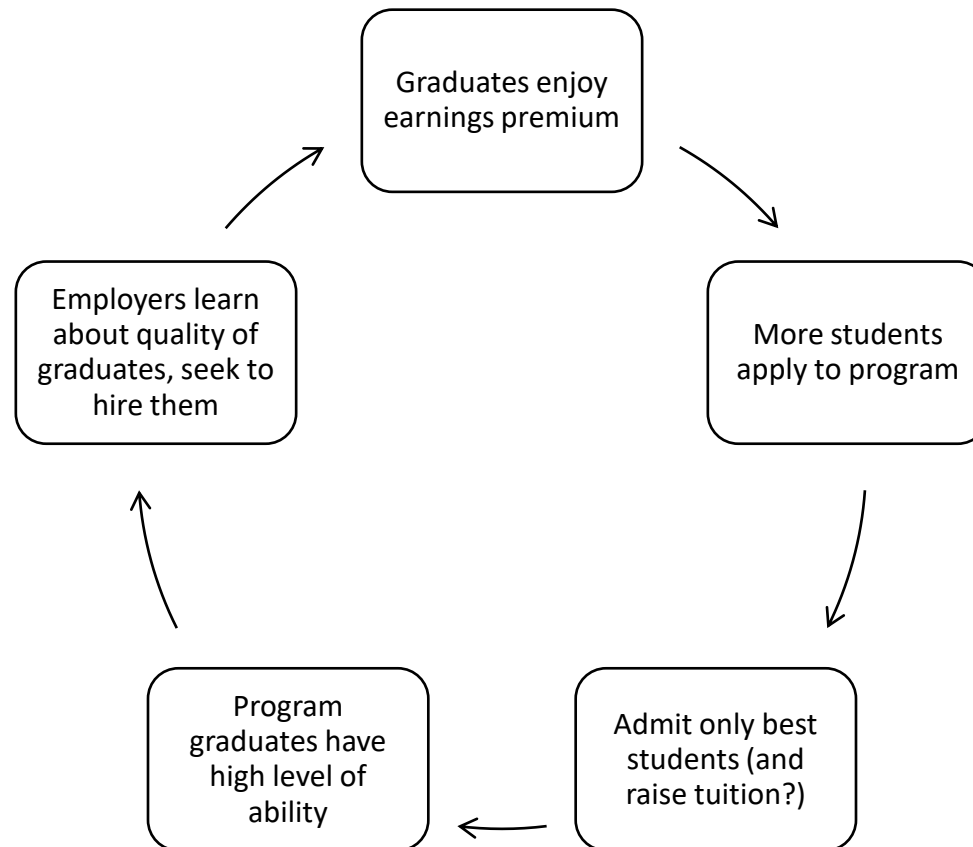
Calculated by F. Woolley using LFS PUMF. Earnings truncated at \$80/hour

Place on earnings distribution determined by

- Gender, ethnicity, geography
- Field of study
 - E.g. Finnie and Frenette (2003), Ostrovsky and Frenette (2014), and Frenette and Frank (2016)
 - Endogenous to
 - abilities,
 - family background,
 - gender norms,
 - possibly university reputation (US evidence [here](#))
 - Human capital, signaling, or matching (Lemieux, 2014) effect
- Quality or source of education credential
 - literature on value of foreign v. Canadian credentials e.g. [Fortin, Lemieux and Torres \(2016\)](#), [Ferrer and Riddell \(2008\)](#)
 - Human capital or signaling effect?
 - No literature on impact of institutional reputation within Canada.
- Unobserved heterogeneity

The quest for high returns creates virtuous and vicious cycles

- Virtuous cycle (e.g. Business programs)



Why? Suitcases versus business programs



Suitcases used to be crummy. Now they're better.

Entrepreneurs make more profits by selling more suitcases.
Innovations diffuse

Business schools: an academic innovation.

Producers generally chose to

- increase resource inputs and quality through accreditation
- charge more to students
- Professors don't get rich by expanding program; prefer to seek personal rents (high salaries, smart students, research time)
- Universities have limited scope for resource re-allocation (e.g. firing tenured profs or reallocating to business school).
- Universities happy to restrict entry to high demand programs, have students fill seats in existing programs.

Cycles can persist regardless of quality of instruction

- Only requires sufficiently strong innate ability, peer effects or signaling effects

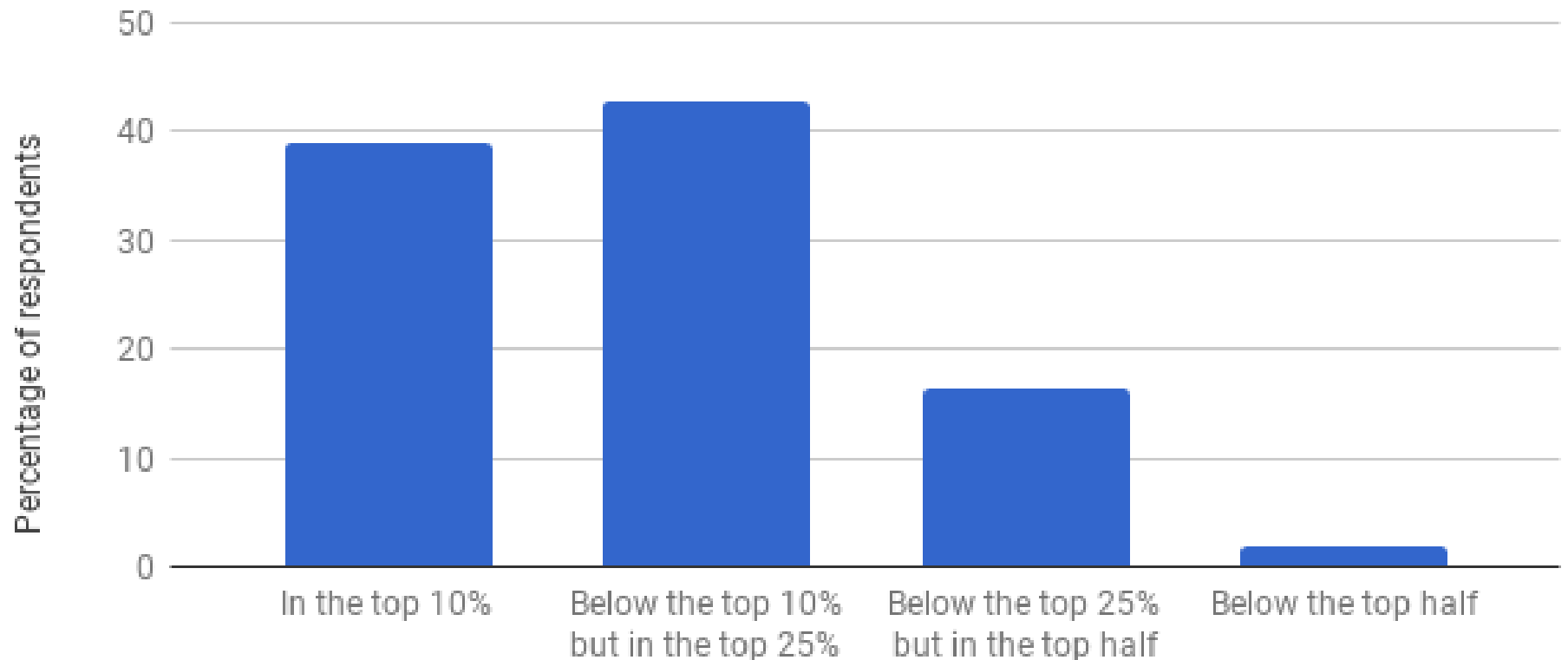
Evidence that virtuous cycles can/do exist?

- Excess demand and high GPA requirements for, e.g., business and computer science programs
- Peer effects and ability matter.
- Higher earning \neq more learning.
 - Arum and Roksa (2011) *Academically Adrift*: business majors demonstrate weak gains in writing and reasoning skills – US data, interpret with caution.
- Quality of information available to students

Information students have is often misleading or incomplete

- Based on earnings or employment rates of graduates
 - In Ontario, 77.3% graduation rate (2007 entry cohort, percentage graduating within 10 years – [Source.](#))
 - Returns to *graduating* from university overstate returns to *entering* university
 - For US: [Avery and Turner, 2012.](#)
 - Confounded with graduates' other characteristics e.g. gender, location.
- Based on largely research- and reputation-driven rankings (e.g. Times Higher Ed).
 - Relevance to instructional quality?
- Major information gaps
 - e.g. can Canadian PhD students get realistic information on
 - completion rates – around 50% [SSHRC, 2009](#)
 - job prospects?
- Returns to education based on ability, but people often unaware of own ability

Compared to the rest of your graduating class in your field(s) of study, did you rank academically...?



Calculated from 2013 National Graduate Survey PUMF. All respondents.

Can student-consumers introduce market discipline?

Only highly imperfect competition.

- Universities will compete on observable characteristics (free yoga, guaranteed room in residence, university rankings).
- But quality of instruction largely unobservable ex-ante.
 - Few indicators available
 - Potential indicators confound students' socio-economic and demographic background with teaching quality
 - Example graduation, earnings, employment rates.
- Successful innovators tend to raise price not expand quality

Synopsis

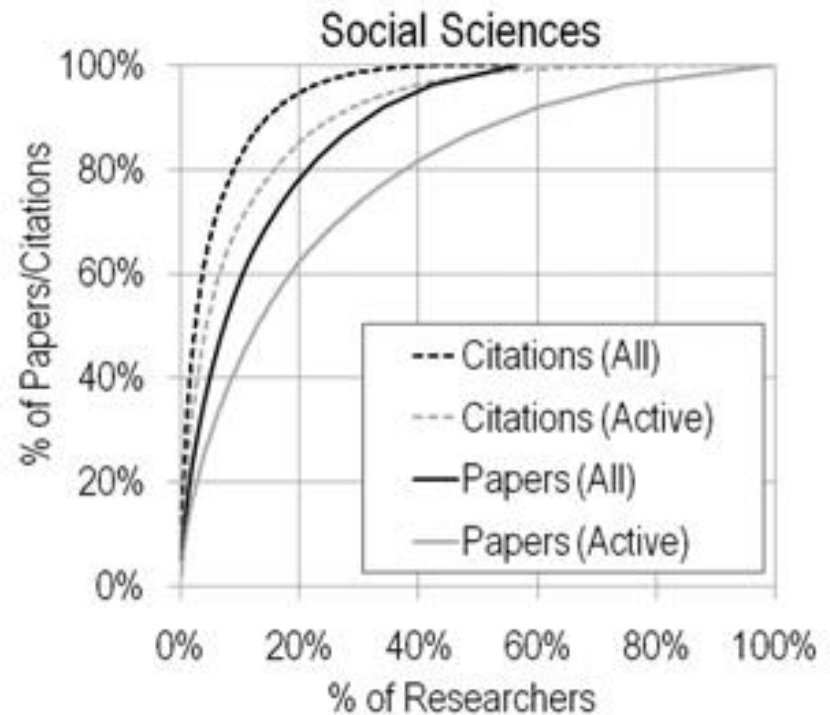
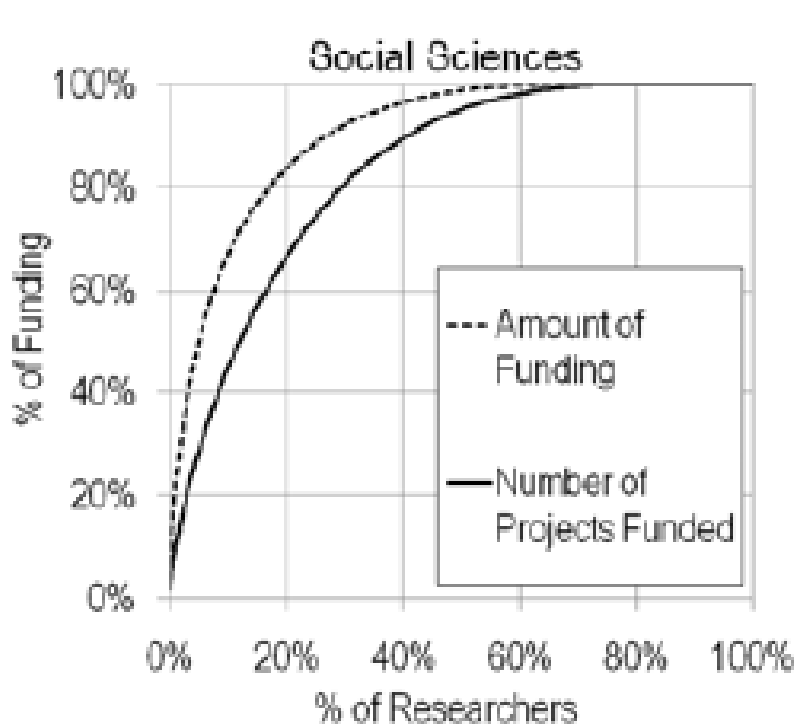
- Future for Canadian universities
 - Greater reliance on tuition revenues
 - Redistribution replacing growth
- **Hard questions about benefits of education**
 - Student-consumers: What's in it for me?
 - **Resource allocators: Where are benefits of education coming from?**
- A system under scrutiny
 - The technological revolution that hasn't happened
- Scenario 1: Gradual change – for better or worse
 - Policy challenge: make it better
- Scenario 2: “Black swan” event - radical disruption

Which parts of the university create graduates' earnings premiums?

- Admissions: signal ability
 - Individual or social benefit?
- Teaching faculty:
 - Impart valuable human capital
 - But some impart more valuable human capital than others
 - Make students jump through more ability-signaling hoops
 - Individual or social benefit?
- Pubs, clubs, frat houses, sororities:
 - Social capital e.g. [Mara, Davis and Schmidt](#).
- University residences:
 - Peers e.g. [Sacerdote](#).
- Research faculty:
 - Increase ranking of university, thus value of signal
 - Individual or social benefit?

“What about my research?”

- [Larivière, Macaluso, Archambault, and Gingras 2010](#): census of Quebec academics, 2000 to 2007.



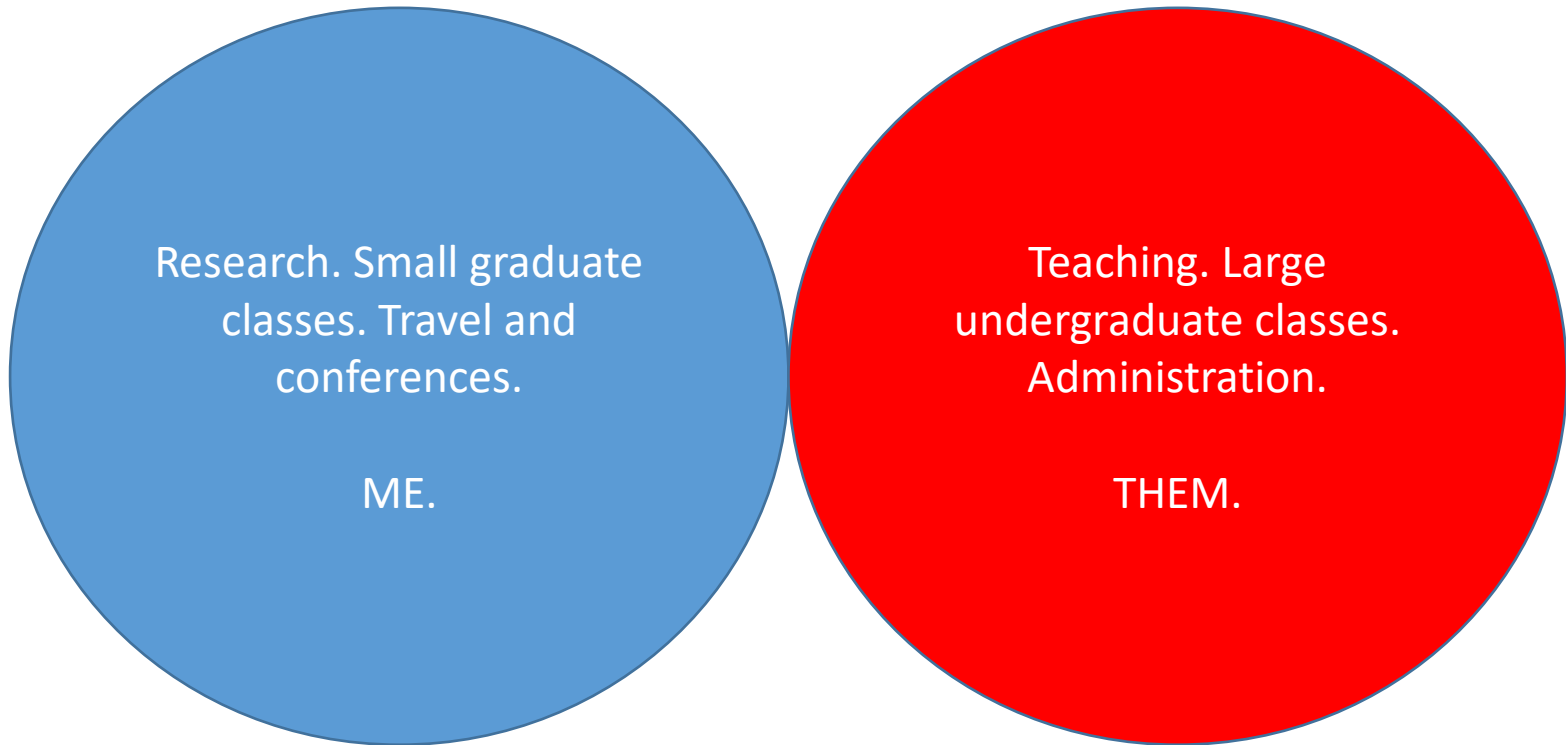
Cumulative Pareto distribution of 2000 to 2007 research funding (left) and 2000-2007 citations (right). Active researchers are those with at least one published paper.

Administrative rationality

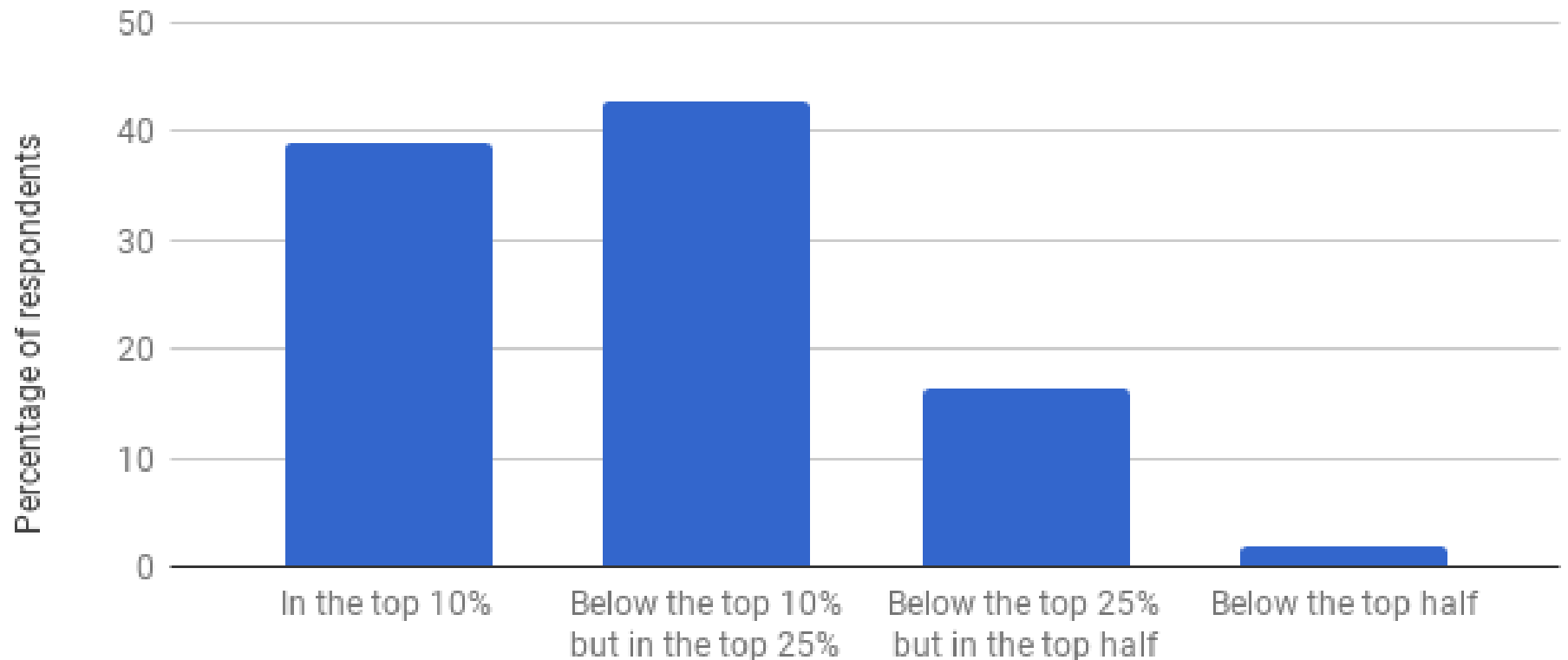
- Cut non-beneficial activities e.g.
 - Research time of non-active researchers
- Encourage beneficial activities e.g. ...?
- Deliver benefits in cost effective way
 - E.g. substitute high paid professorial time with less well paid but equally good professional service time
- Specialize according to comparative advantage

“Differentiation”

How some academics see differentiation



Compared to the rest of your graduating class in your field(s) of study, did you rank academically...?



Calculated from 2013 National Graduate Survey PUMF. All respondents.

University Differentiation

- Typical differentiation schemes separate research- and teaching-intensive universities
 - However universities' rankings are largely determined by research output
 - Best students will want to go to top-ranked university; best paying employers will recruit from top-ranked universities.
 - Can't separate teaching and research.
- Entrenches income and geographic inequality – what about kids who don't live near a high ranked university?
- Mandate creep: everyone wants to be one up the status ladder.
- Locked in differentiation scheme, does not set up mechanism for universities to compete, or individuals within universities to compete
- But competition brings excellence.

Fundamental issues: universities' inability to change

- New programs only created through growth,
- Universities rarely redeploy existing resources
- But how can universities accommodate new student demands when the university-age population is stagnant, and there's no mandatory retirement?

Synopsis

- Future for Canadian universities
 - Greater reliance on tuition revenues
 - Redistribution replacing growth
- Hard questions about benefits of education
 - Student-consumers: What's in it for me?
 - Resource allocators: Where are benefits of education coming from?
- **A system under scrutiny**
 - **The technological revolution that hasn't happened**
- Scenario 1: Gradual change – for better or worse
 - Policy challenge: make it better
- Scenario 2: “Black swan” event - radical disruption

There's something in the zeitgeist....

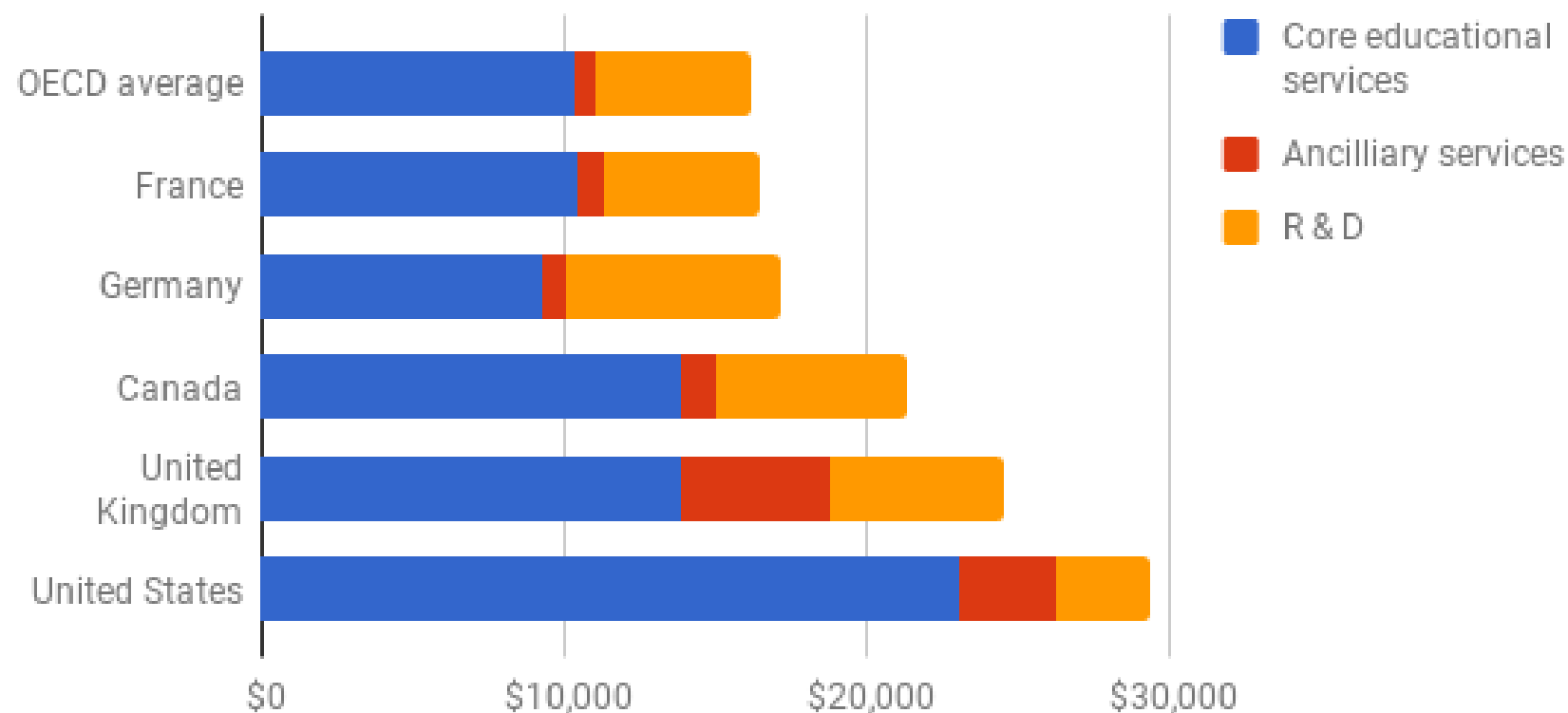
- **Feminization, racialization**
 - Canadian university graduates disproportionately female, members of visible minorities
 - Causes devaluation of education?
- **Millennial despair**
 - Can't buy a home, get a partner, even with good, university-type job.
 - Why try?

Canada spends a lot on tertiary education

- Greater percentage of GDP than any other OECD country, except US.
- High level of participation: CEGEPs, large college sector.
- Higher than average costs per student

Annual expenditures per student, tertiary institutions

In 2014 USD, converted on PPP basis. Per FTE student.



Source: OECD Education Indicators, 2017, Table B1.2

Cost concerns

“Entry- and top-level salaries for Ontario full-time faculty are the highest in the country and among the highest in the world.” *Higher Education Quality Council of Ontario: [Source](#)*

“...mushrooming administrative expenditures”
Association of Nova Scotia University Teachers: [Source](#)

“Refocus resources and rewards towards teaching” *The Drummond report [Source](#)*

Why have universities reaped so few cost savings from new technology?

- Lack of scale economies
- Rent seeking

Models for reform

- Accountability
 - Outcome indicators
 - Learning objectives
- Differentiation
- Blow the whole system up
- Other means of introducing competition

Learning outcomes

- Sound grand, e.g. “teach students to teach critically”
- Profs have no idea how to produce these learning outcomes
- Measuring these learning outcomes would be tremendously expensive
- Aspirations without accountability are of dubious value.

The charges

There's a disconnect between what students expect from their university experience and what universities believe they're responsible for – [Michael Bloom, Conference Board of Canada, September, 2017](#)

...when universities take on social justice mandates, they “become combatants in the culture wars” – [Bruce Pardy, quoted by Christie Blatchford, March, 2018.](#)

But the status quo works so well for the universities, it's unlikely they will want to slay this golden goose. – [CBC, September, 2014.](#)

Campus life isn't what it used to be – [Margaret Wentz, September, 2017](#)

“Sorry, we’re just not into you.”

- Vilification of universities
 - Rational response to decay of campus life?
 - Baby boomer’s post-hoc rationalization for cutting university funding, using resources for other priorities?