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Income Inequality & the Role of ECE in Closing the Gap

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conferenceboard.ca

Outline

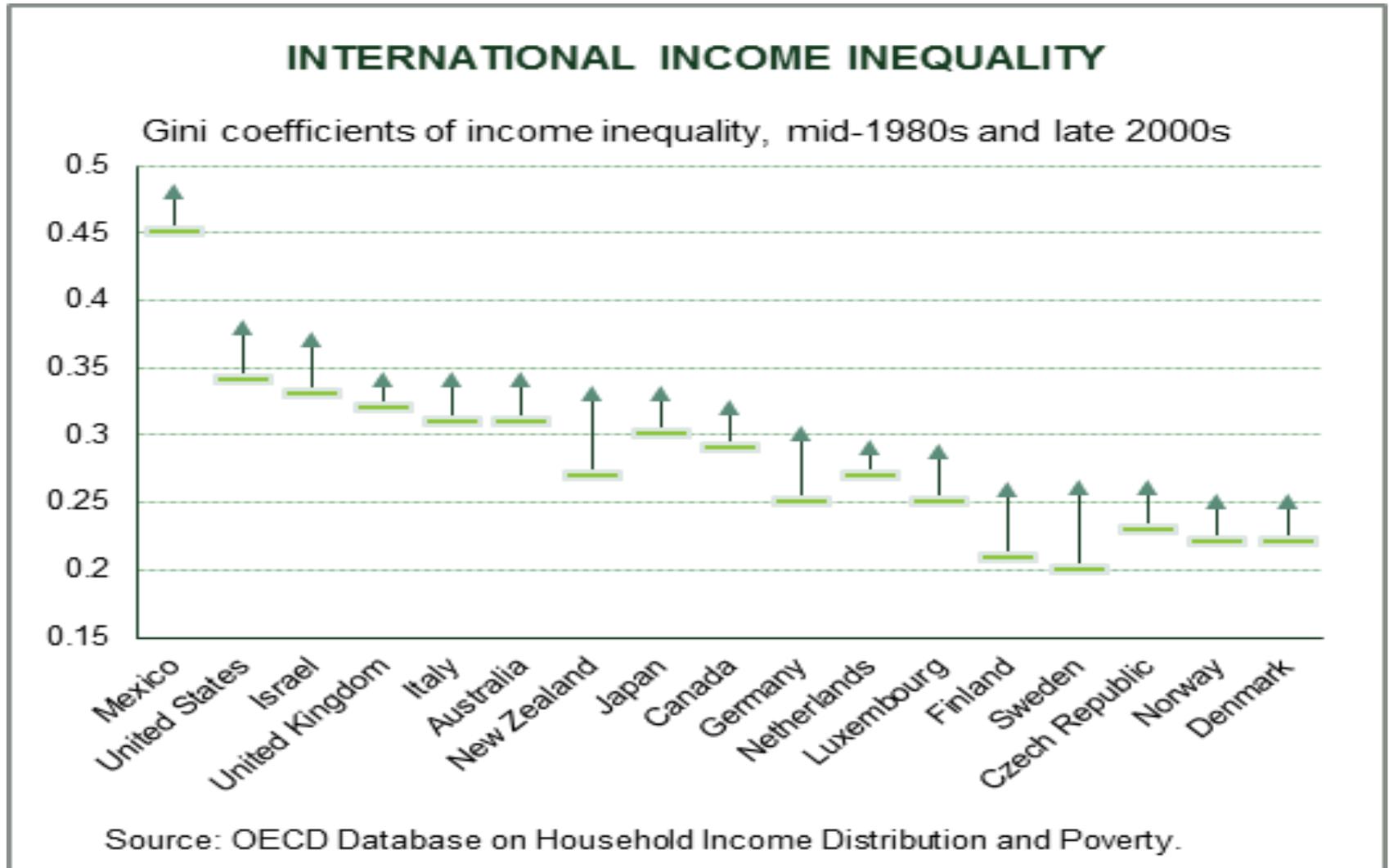
1. Income inequality is a growing problem
2. Early childhood education can be part of the solution
3. Canada spends less on ECE than other countries and has lower enrollment
4. Impact of early childhood education on labour participation
5. Impact of early childhood education on labour market success
6. Results of the Conference Board's Cost Benefit Analysis



Income Inequality is a Growing Problem

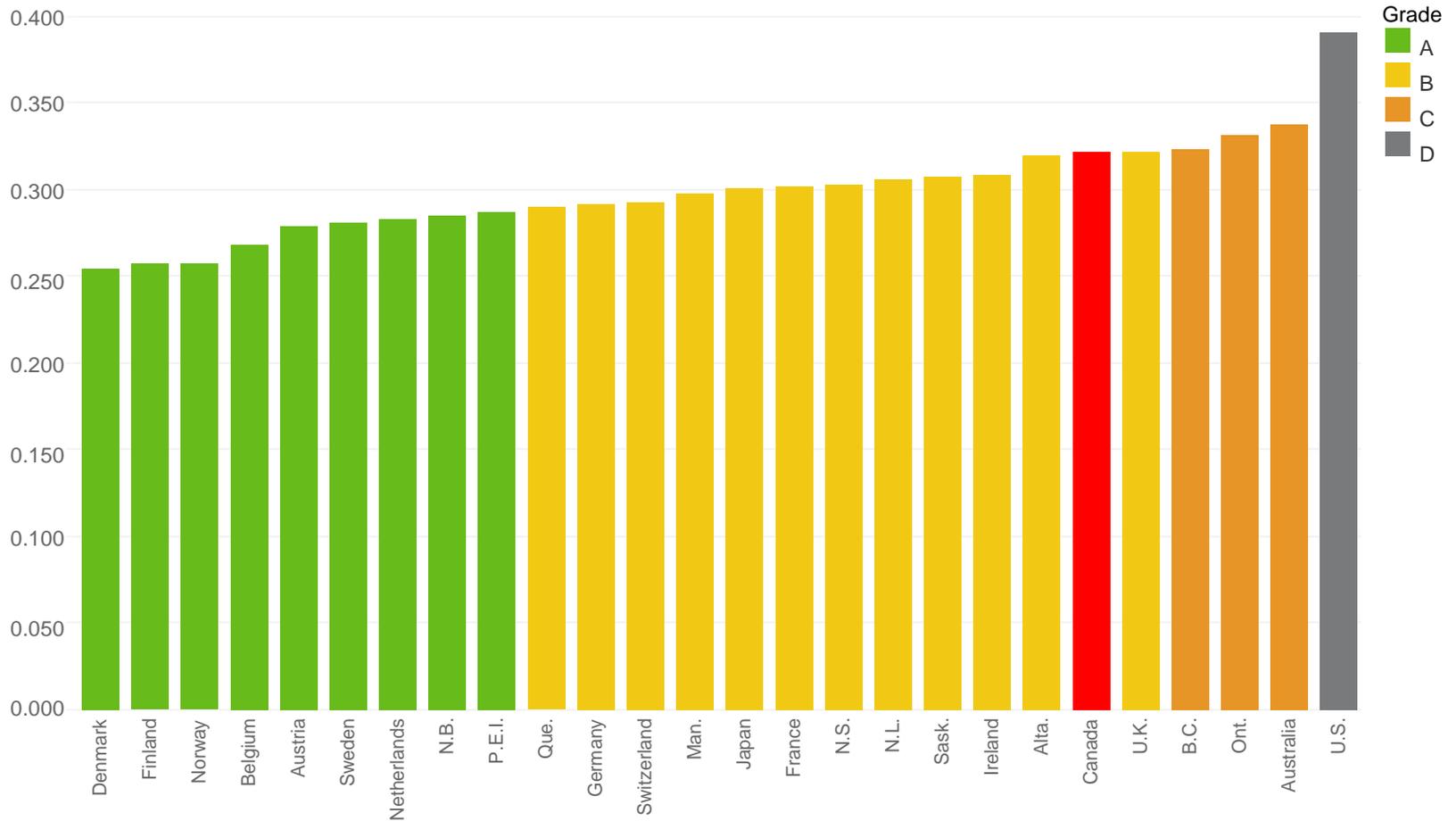


Rising Income Inequality a Global Challenge



Income Inequality by Province

Gini coefficient after taxes and transfers

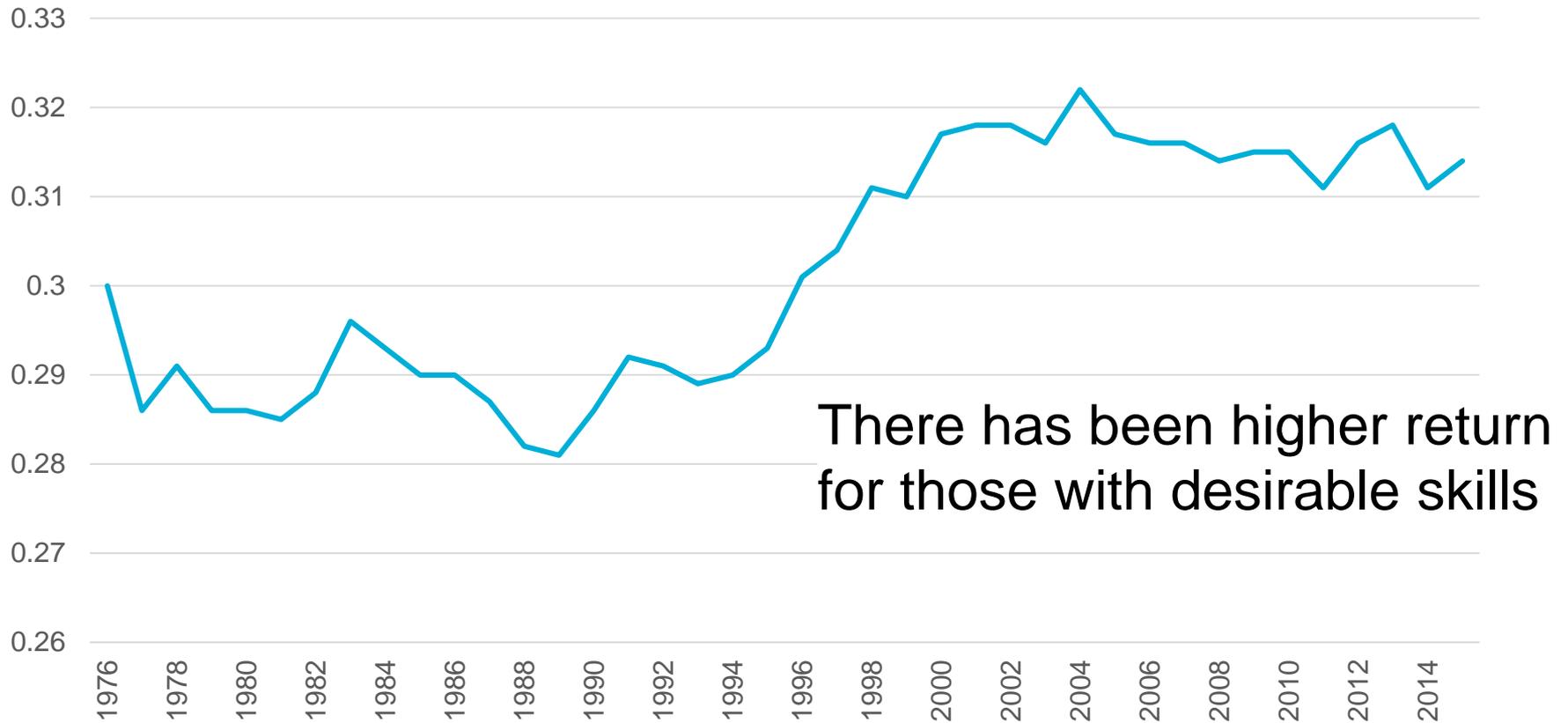


Sources: The Conference Board of Canada; OECD.



Income Inequality

(Gini coefficient using adjusted after-tax income)



There has been higher return for those with desirable skills

Source: Statistics Canada.

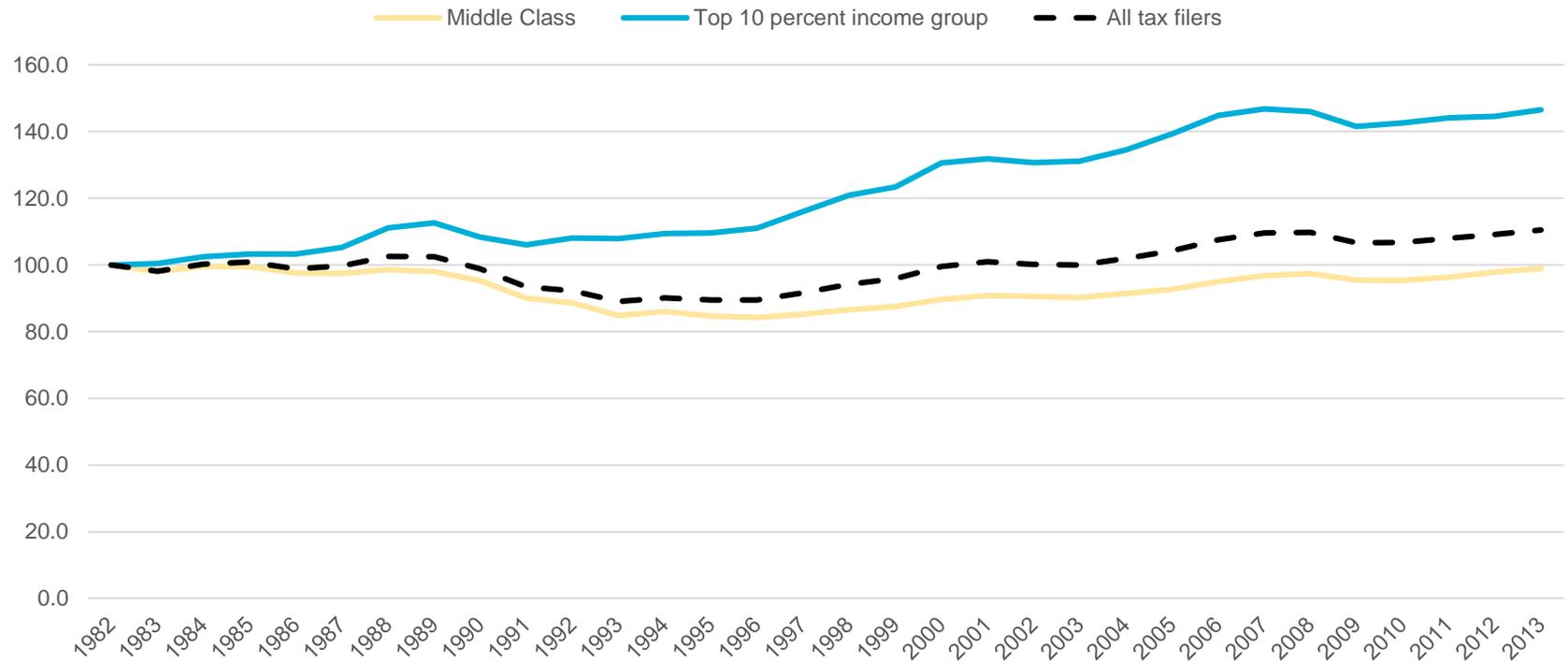


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Modest Middle Class Income Growth over Last Two Decades

index of average incomes of the 50th to 90th percentile, top ten per cent and all tax filers, 1982-13



Source: CBoC, Statistics Canada.

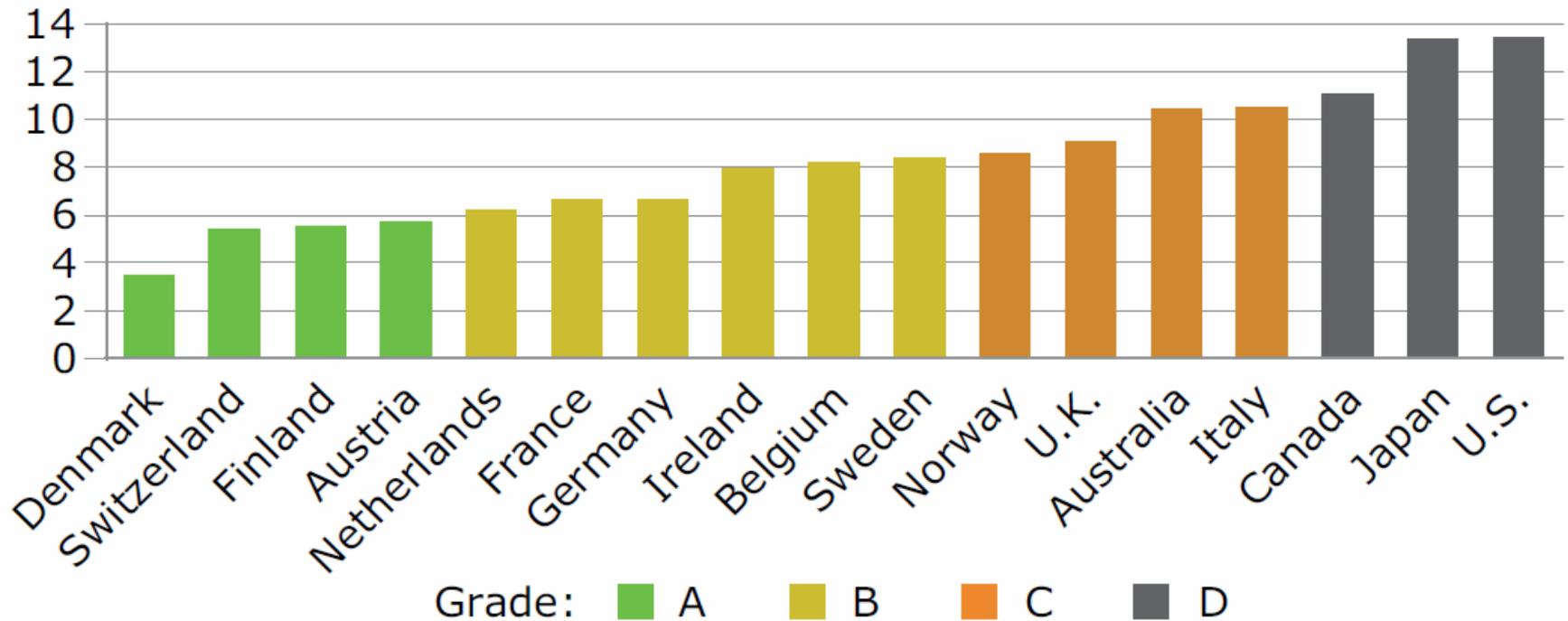


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Working-Age Poverty Rate, mid-2000s

(per cent)



Source: OECD, Conference Board of Canada.



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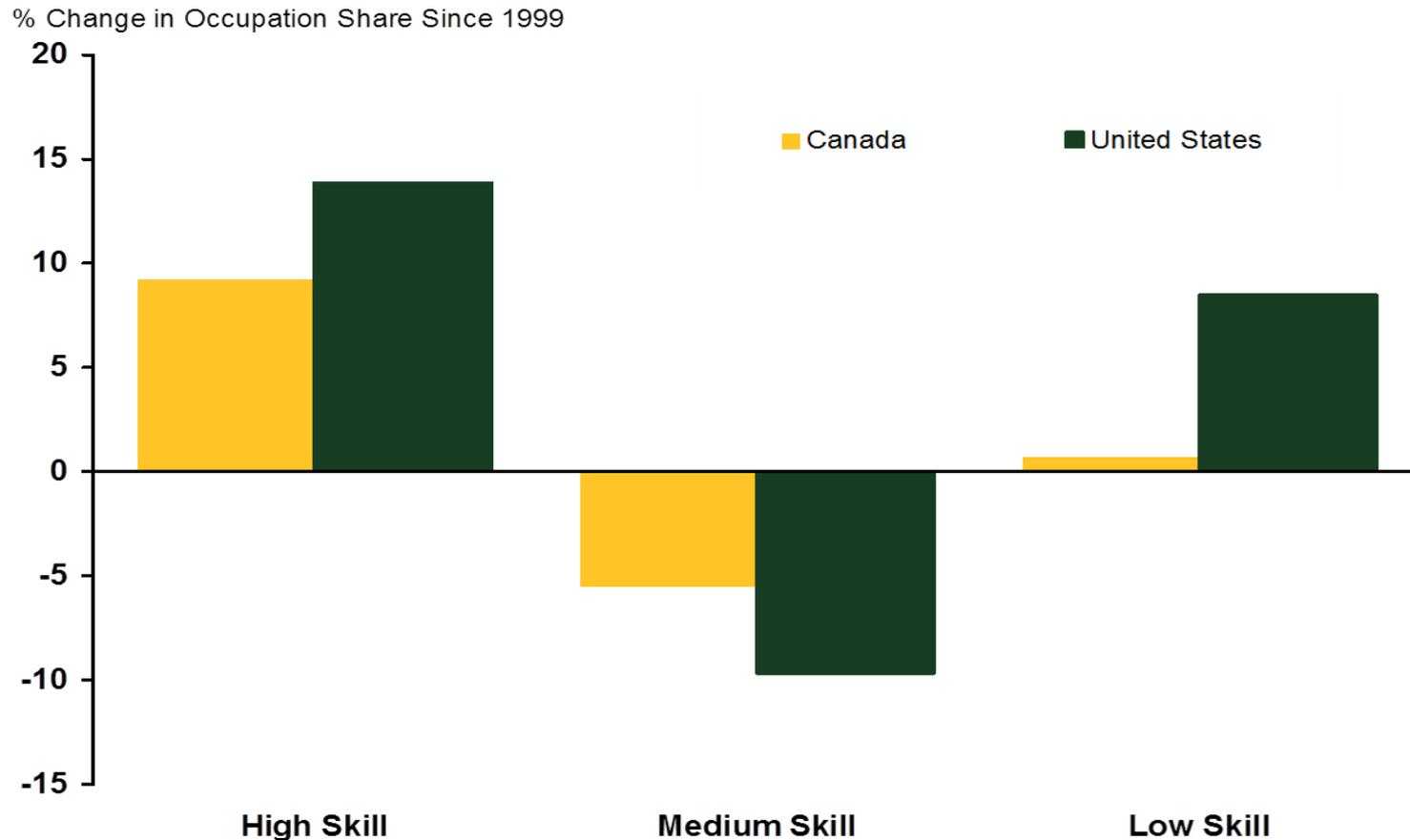
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Why has Income Inequality Surged?

- Main factor behind the increase in inequality has been technological change and globalization
- Globalization has resulted in low value-added manufacturing jobs moving to developing countries like China.
- Global competition has reduced union employment and reduced labour bargaining power
- But, technical change has had the greatest impact in disrupting labour demand
- Technology fundamentally changing demand for labour skills



Labour Demand Fundamentally Changed



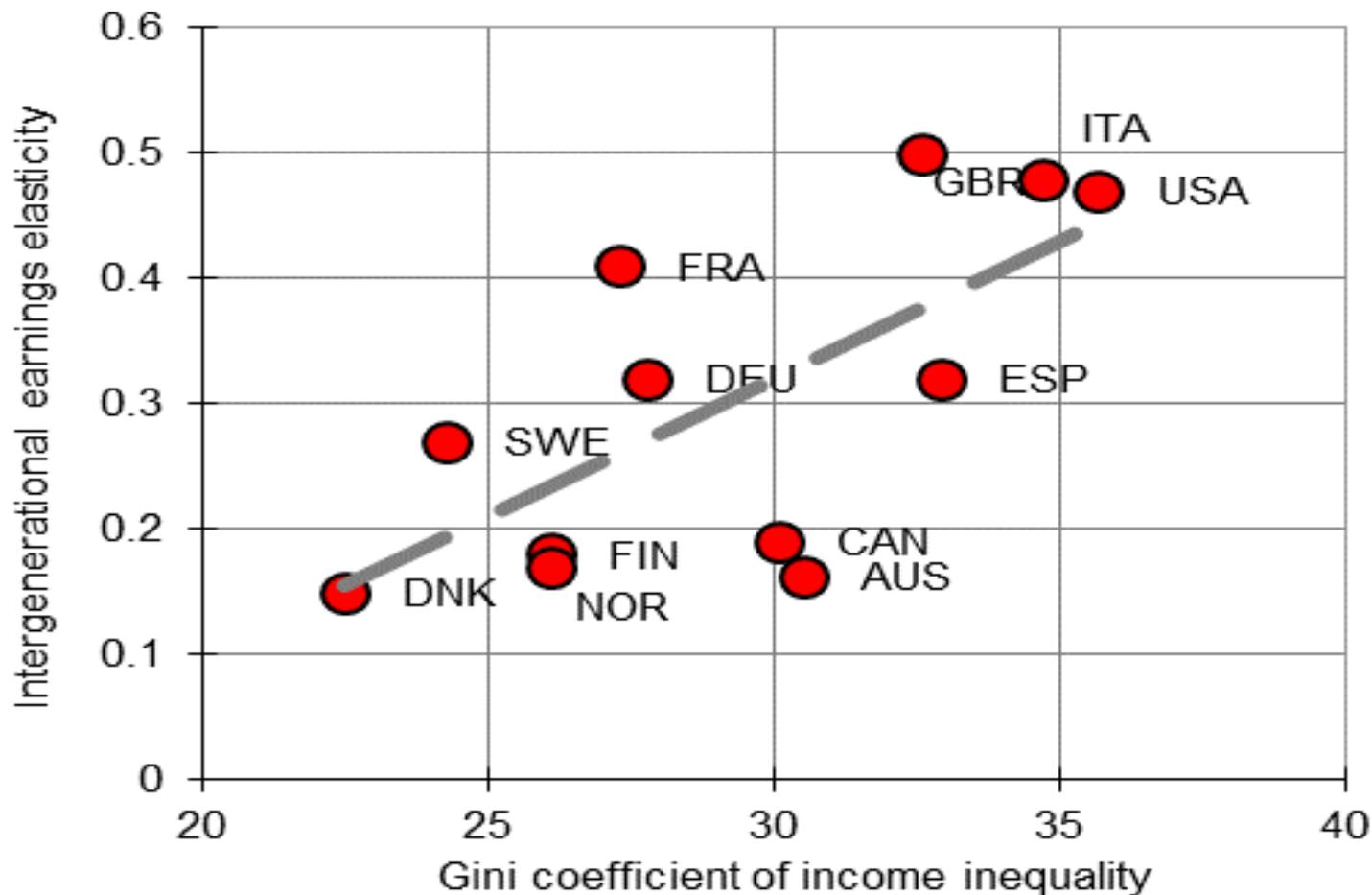
* Canada's data encompasses 1999-2012, whereas U.S. data cover 1999-2009.

Source: TD Economics, Statistics Canada, BLS, David Autor (MIT)



Higher Inequality Reduces Social Mobility

The Great Gatsby Curve



How to Address Rising Income Inequality?

- Redistribute more income through higher taxes on wealthy.
- Problem is greater taxation on the top 1% or 10% won't solve the problem. They are simply too few in number.
- So, need higher taxes on middle income individuals. Less politically appealing and they have had weak income growth
- A more impactful, approach is to remove barriers to opportunity.
- Help improve labour outcomes for low and middle income workers
- ECE can do this. It can help raise future income prospects of disadvantaged kids and can lift labour participation of women



Early Childhood Education Can Help Reduce Income Inequality



ECE has an Impact on Labour Market Success

- Education is the great enabler. Weak educational outcomes especially prevalent for children from disadvantaged families.
- Children attending ECE programs develop stronger essential skills (literacy/numeracy)
- More likely to complete high school, which greatly lowers unemployment rates and raises income prospects. More likely to attend college or university.
- Empirical analysis reveals that children who attend ECE programs are more productive and have higher incomes later in life compared with children who don't attend.



Affordability is a Problem

- The top 10 per cent of wage earners in Canada receive around \$200,000 per year or more.
- This high income enables these families to provide their children with quality childcare, extracurricular activities and have a high probability of attending university.
- Conversely, families in the bottom 10 per cent generally earn about \$30,000 per year, less than half the average annual family income in Canada of close to \$80,000.
- The high cost of quality ECE programs are unaffordable to many low and middle income households and can deter labour participation. (e.g. Ottawa \$20k a year)



First Nations Communities

- The bottom 10 per cent is where most First Nations families living off reservations are positioned.
- The median income of Canada's Indigenous population in the 25-64 age cohort is about \$11,000 lower than their non-Indigenous counterparts.
- Essential skills are weak, with 6-of-10 lacking desired level of literacy for Canadian labour market
- In 2011, the post-secondary graduation rate for First Nations young people was only 35 per cent.



Effects on Children

- Canada consistently ranks as having one of the most equitable education systems.
- However, when comparing students from families in the top and bottom 10 per cent of the income distribution, there remain significant differences in children's readiness for school.
- Children from low income families have far greater behavioral problems compared with other children and are less likely to attain an education that would enable them to escape poverty and earn incomes that could potentially lower income inequality in Canada.

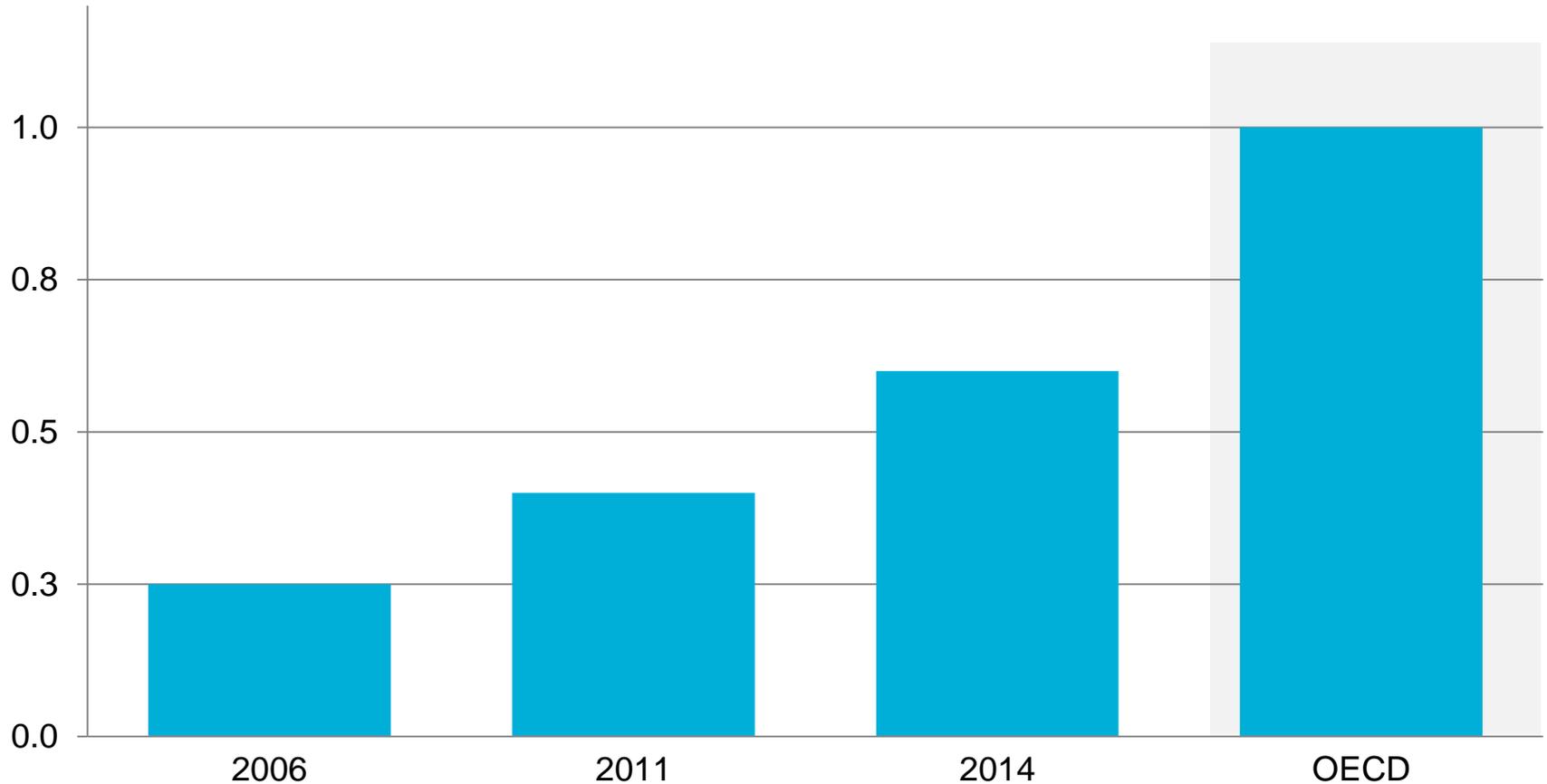


Canada Spends Less on ECE Than Other Countries and Has Lower Enrollment



Canada Spends Less on ECE Than Other Countries

% of GDP

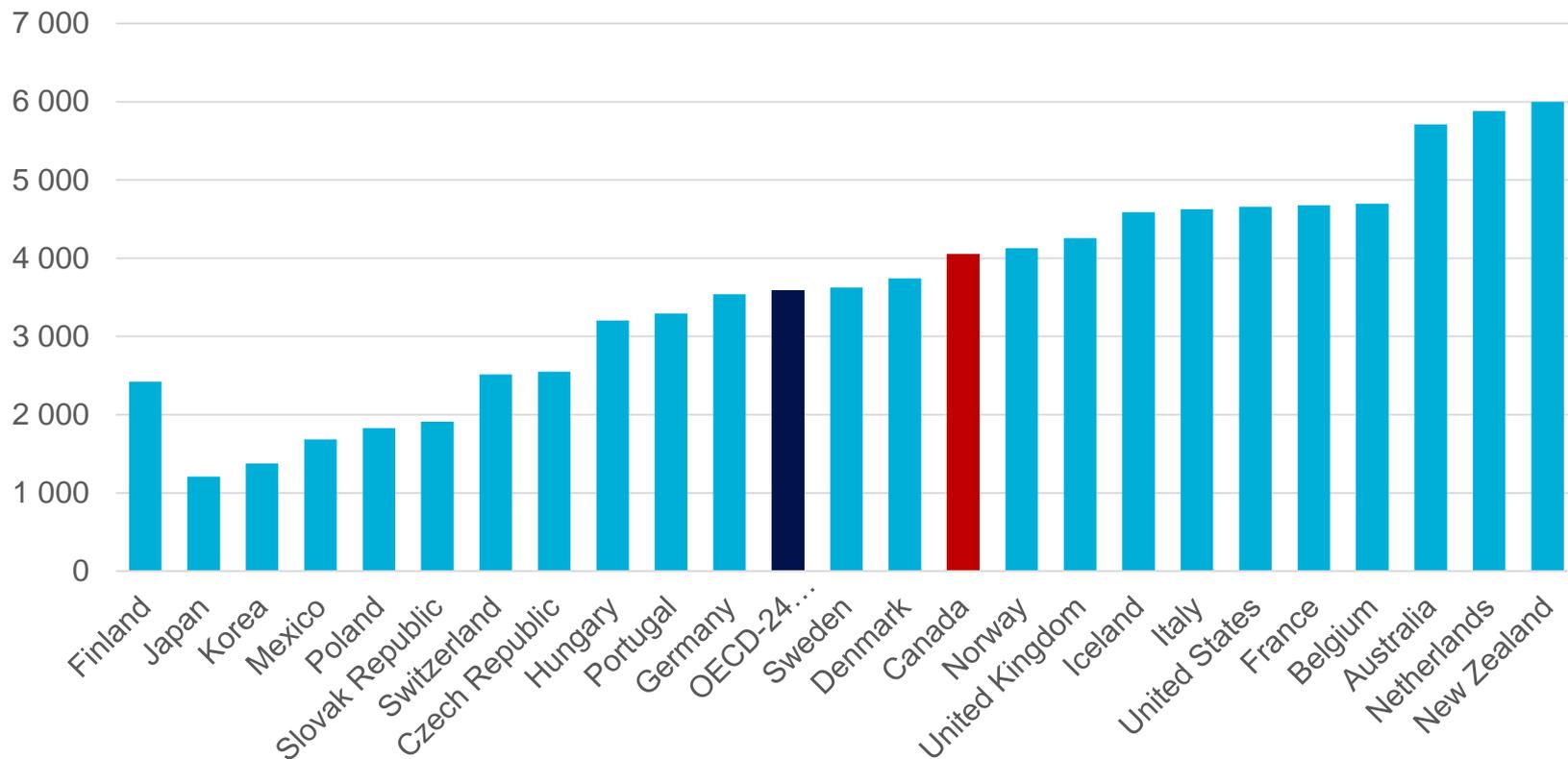


Source: ECE Report 2014.



Public expenditure on pre-primary education per child

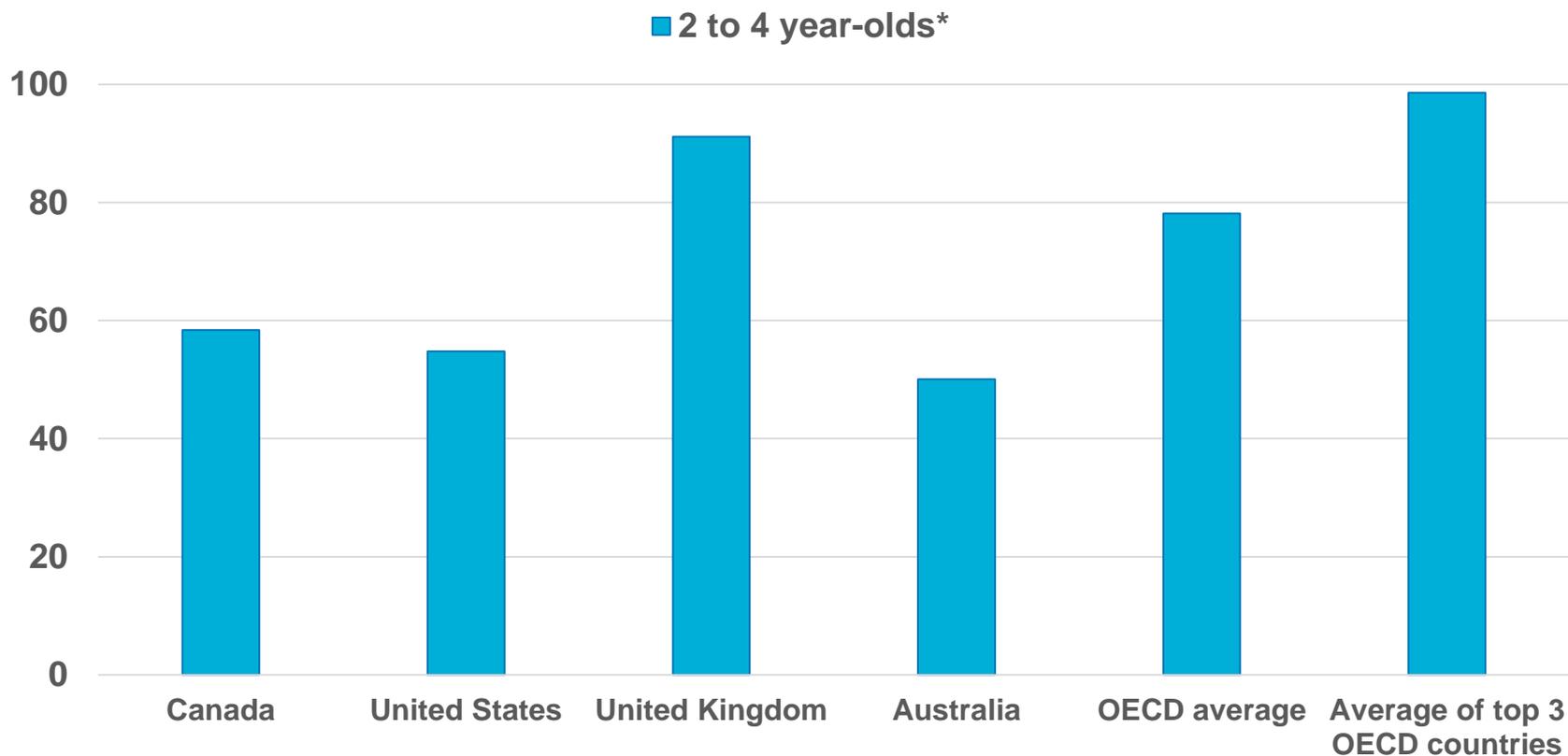
2011, US\$ PPP Converted



Source: Social Expenditure database 2013; OECD Education database; Eurostat for Non-OECD countries.



Enrolment: How does Canada Stack Up?



All figures in per cent

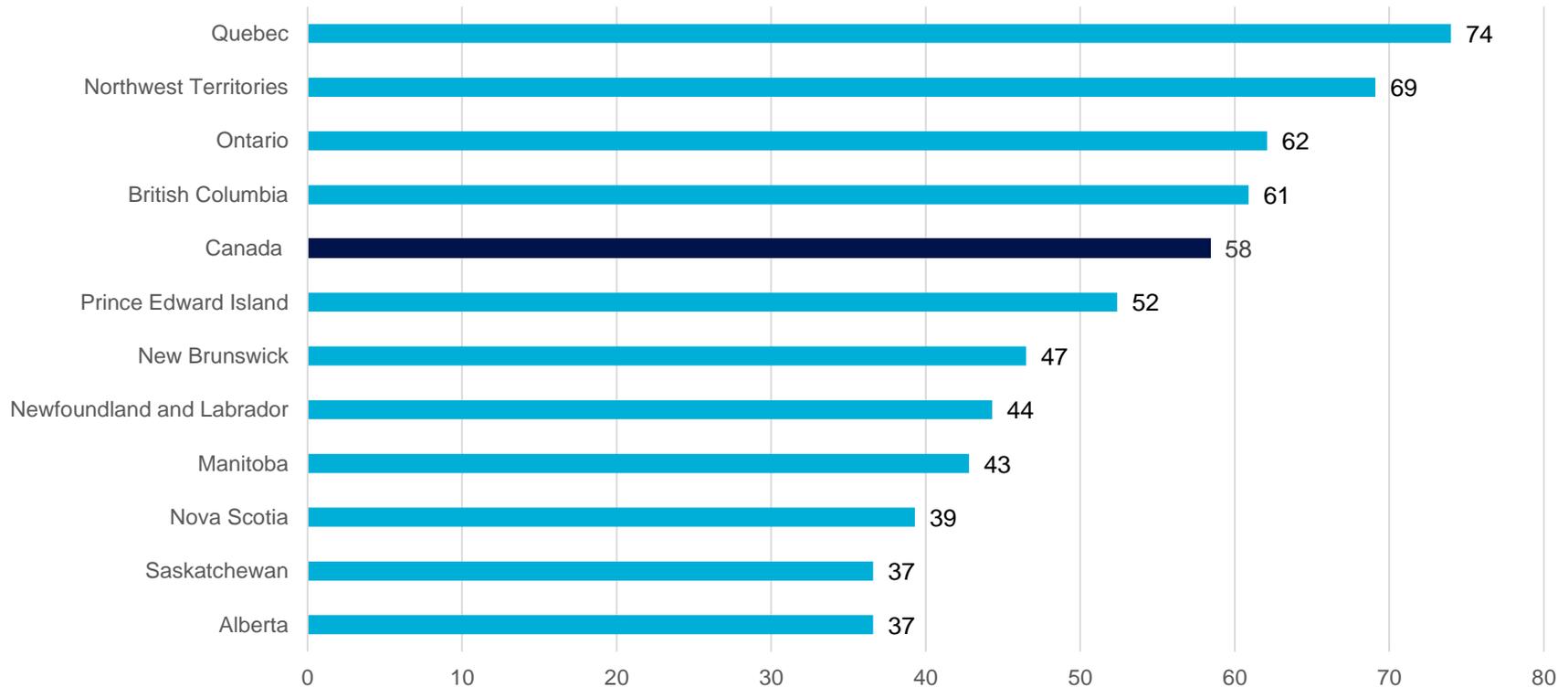
Source: Organization for Economic Cooperation and Development (OECD), The Conference Board of Canada

*The OECD does not provide enrolment data for the 2 to 4 year-old age cohort; as such, we use the average of the 3 year-old and 4 year-old enrolment rates above for all countries other than Canada



2-4 years old enrolment in ECEC as a share of population age cohort

percent



Source: Early Childhood Education Report 2014 - Provincial/Territorial Profiles



Impact of Early Childhood Education on Labour Participation



Impact of Affordable Care on Labour Participation

- Many studies have looked at how female labour force participation rates change when there is access to affordable child care.
- The range of outcomes vary significantly. Research into Norway's universal childcare program showed no impact on maternal labour supply.
- Pierre Fortin's Canadian study shows the implementation of the affordable daycare program in Quebec increased the likelihood of women to work outside of the home compared with mothers in other provinces.



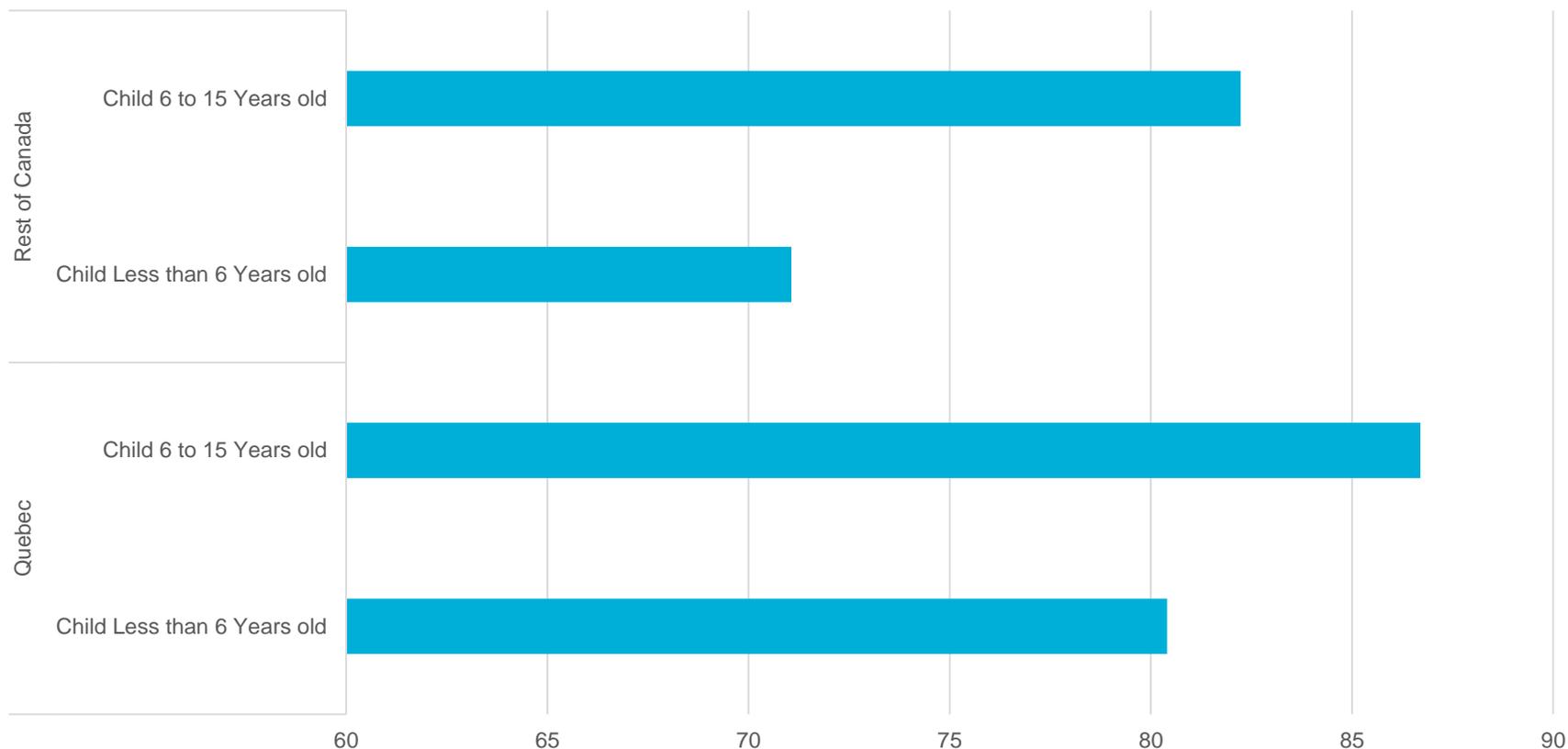
Evidence of the Impact of Early Childhood Education on Society and the Economy

- For many mothers, the absence of reliable and affordable daycare can be a barrier to entering the labour force
- Between 1998 and 2016 the participation rate for women in the 20-44 age cohort in Quebec increased from 76 to 85 per cent.
- Over the same time period, the rate only increased by 2 percentage points (from 78 to 80 per cent) for women in other provinces.
- Note this took Quebec from below average labour participation to well above average.
- According to Fortin, 70,000 more Quebec women between 1998 and 2008 were working outside of the home due to the availability of subsidized daycare.



Participation Rate of Woman with Children

percent, 2016



Source: CBoC, Statistics Canada.



Impact of early childhood education on labour market success



Impact of ECE on Labour Market Success

- The OECD conducted one of the largest benchmark studies that assessed the skills of children who had access to ECE education compared with those that didn't.
- The results clearly revealed that children involved with ECE tended to perform better than those who didn't over a wide range of indicators.
- Studies also reveal that children who start kindergarten with a higher skill set generally experience fewer grade repetitions and higher post-secondary attendance compared with those who start with weaker skills.
- Remember higher education translates to lower unemployment and higher incomes



Impact of ECE on Labour Market Success in America

- Several studies were commissioned by the state of Tennessee assessing the long term educational achievements of children who attended pre-kindergarten
 - Findings are that children who attended universal pre-kindergarten programs received lasting benefits.
- The test scores for disadvantaged children in Georgia living in regions with low levels of population density increased by 12 per cent.



Impact of ECE on Labour Market Success

One of the most important analysis of the effect of ECE on children's behavior later in life in the United States was completed by the Pre-Kindergarten Task Force:

- greatest improvement from pre-k for economically disadvantaged children and dual language learners than for more advantaged and English-proficient children.
- success of the program requires well implemented, evidence-based curriculum.
- improvements in learning are detectable during elementary school, but studies also reveal null or negative longer-term impacts for some programs. Shows that it is quality programs that are necessary



Impact of ECE on Labour Market Success

- Researchers in the U.S. examined the potential impacts of expanding preschool access to children who are 4.
- Based on higher math scores in grade 8, they estimate that wages are 1.3 per cent higher for someone in their mid-20's.
 - Improvement in math scores diminishes between grade 4 and 8 and this study assumes that the gains do not diminish further past grade 8.
- Positive impact on test scores observed in children from low income families, no statistical impact on children from higher income families.



Impact of ECE on Labour Market Success

- Positive future income gains observed in many studies – especially from programs that target high risk youth – but the literature is not in full agreement.
- OISE studying FDK in Ontario found children remained ahead in self-regulation and vocabulary but their half day counterparts caught up in numeracy.
- 2011 CIRPEE study looking at evidence from Quebec’s childcare program found reduced cognitive abilities for children aged 5.
- However, CIRPEE also noted that “average quality in Québec’s subsidized daycare network is at best satisfactory and in many cases low or not acceptable, particularly for children in lower-income families.”

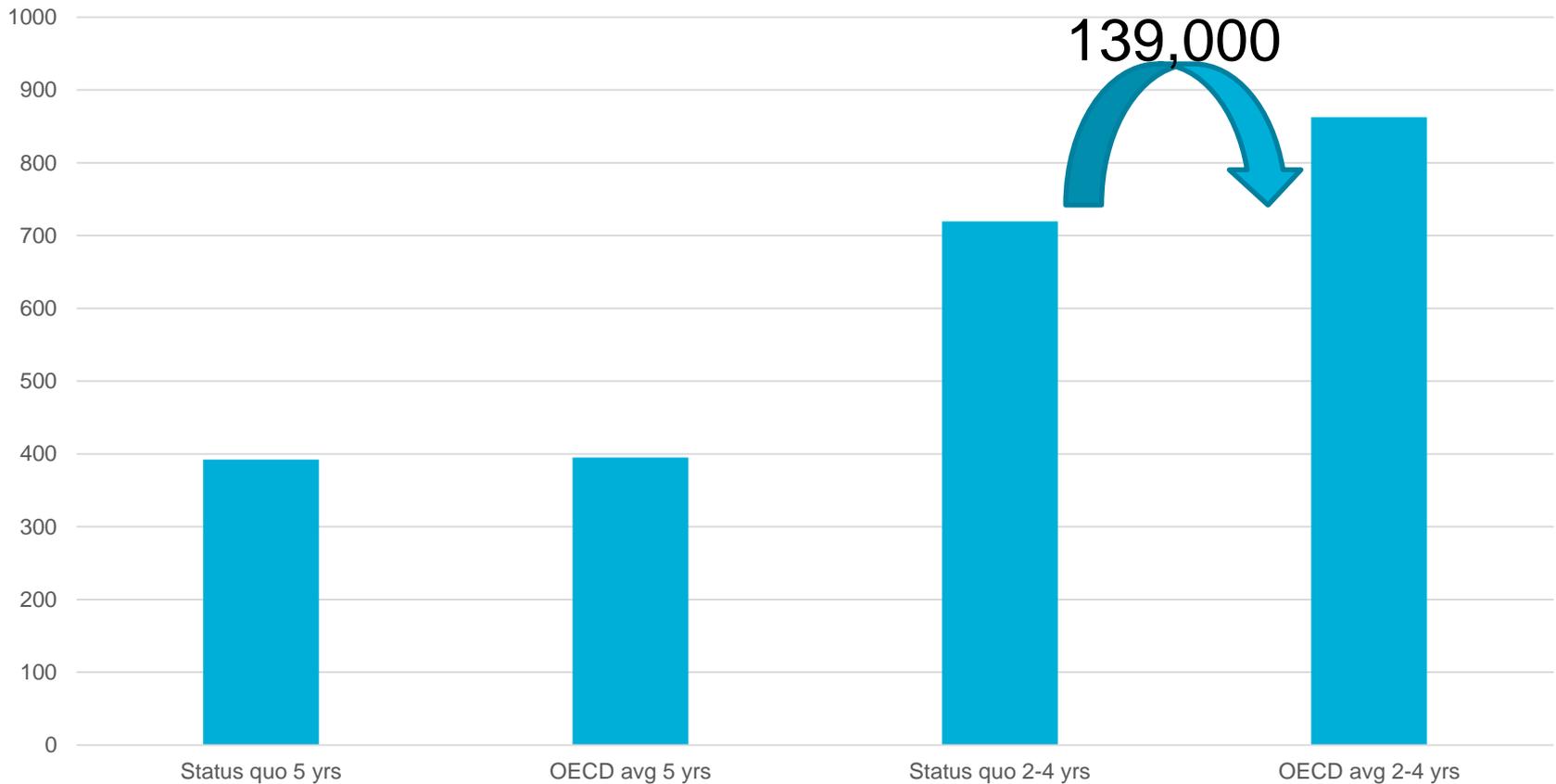


Conference Board of Canada Assessment of the Cost Benefit Analysis for ECE



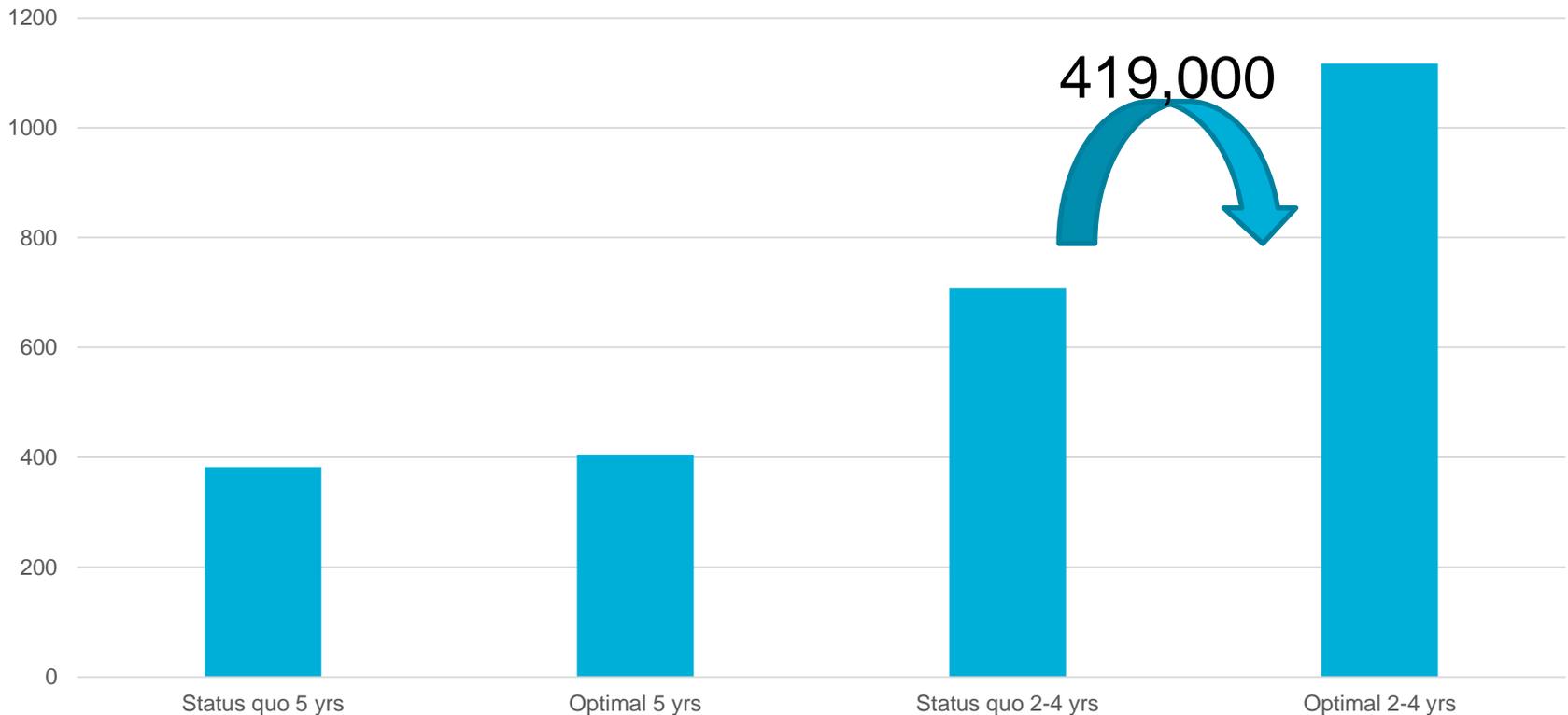
Increasing Demand for ECE to OECD Average

number of children, OECD avg. vs current enrollment, 000s, 2018 to 2023



Increasing Demand for ECE to Top 3 OECD Performers

number of children in programs, optimal vs current enrollment, 000s, 2018 to 2023

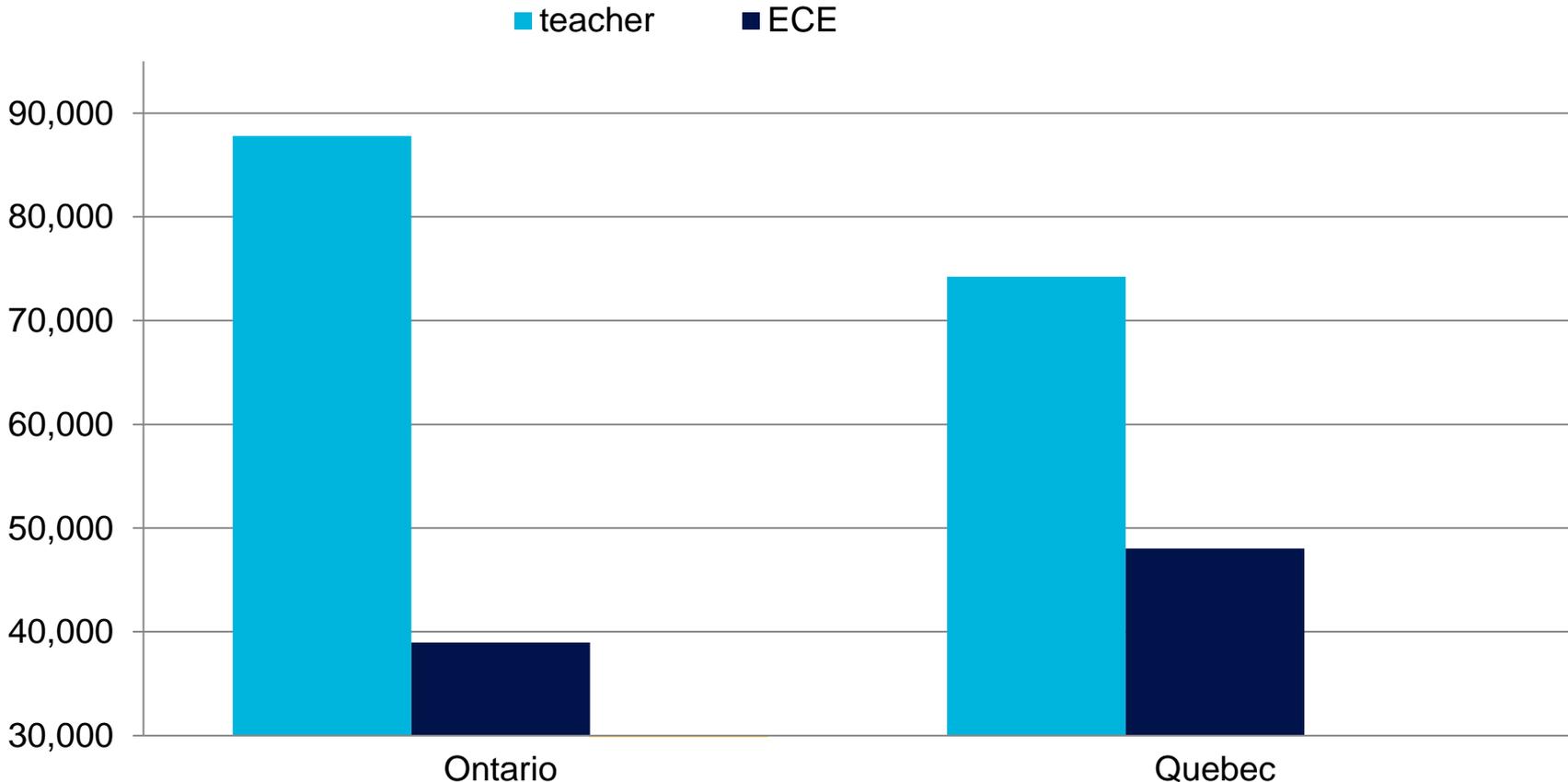


GDP Impacts of Higher Spending

- Assumes an educator to pupil ratio of 1:12
- Classroom includes one teacher and one ECE instructor
 - Teacher salary set to Ontario teacher salary, ECE's to 60 per cent of teacher salary (currently 44 per cent).
- Operating expenses add 18.5 per cent (based on current shares).
- Total cost in 2022 of adding 439,000 new spots when fully phased in is \$3.7bn.
- GDP multiplier on spending is 1.23. Lift GDP by \$4.6bn.



Teacher/ECE Remuneration 2014



Source: ECE Report 2014.

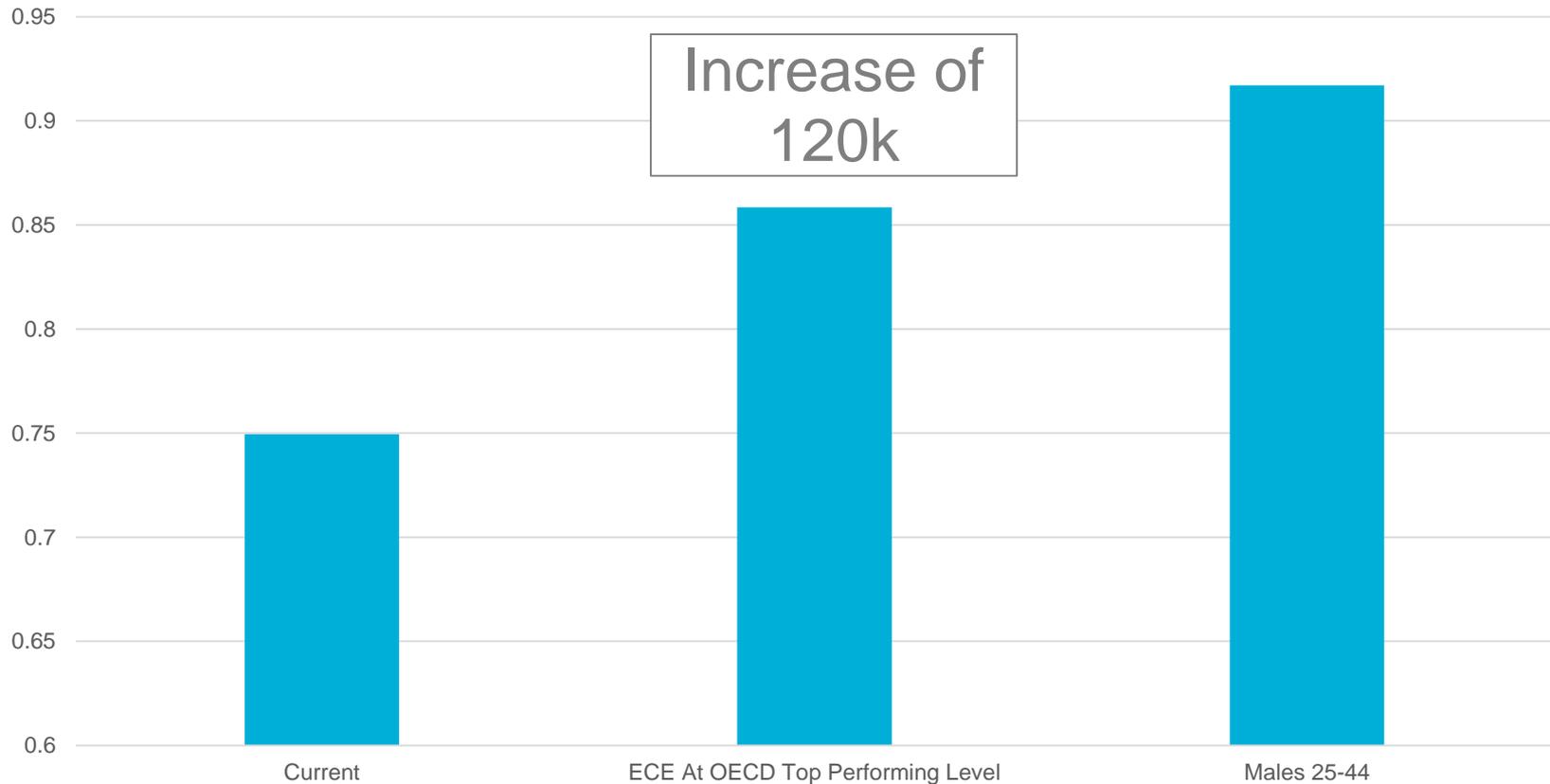
Impact of Increased Daycare on Labour Participation

- Calculated the impact on the labour force for each space created in Quebec based on Fortin's work.
- Two scenarios for demand for new ECE spaces considered:
 - difference between the status quo and the OECD average (139k spaces)
 - difference between the status quo and the optimal (419k spaces)
- Assumed that the impact on the participation rate would be half that estimated from Fortin.
- Wages are assumed to be 0.65 per cent higher for children who receive ECE education (half of the impact in the U.S. study).



Participation Rate of Woman with Children

percent, 2016



Source: CBoC, Statistics Canada.



NPV Benefit to Cost Ratio's

	NPV 2018 to 2050	NPV 2018 to 2093
Increase to labour participation rate - no future wage gains	2.2	3.0
Increase to labour participation rate and future wage gains	2.4	4.4



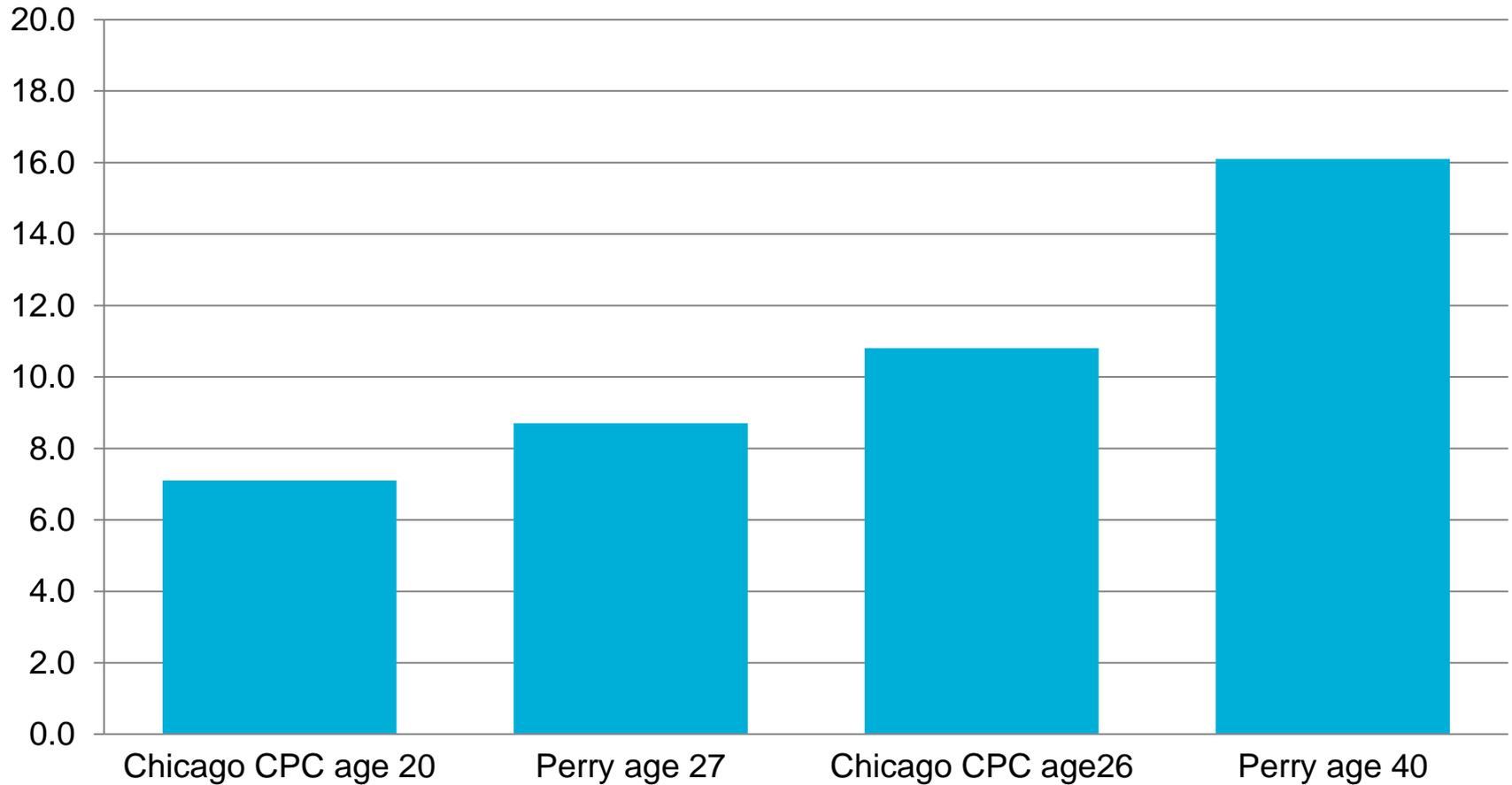
Canadian Studies of Cost-benefit Analysis of ECE

Study	Benefit-Cost
Economic Consequences of Quebec's Child Care Policy (Fortin 2013)	1.7
Better Beginnings Better Futures (Peters, 2010)	2.0
The Benefits and Costs of Good Childcare (Cleveland, 1998)	2.0
Workforce Shortages Socio-Economic Effects (Fairholm, 2009)	2.4
Childcare as Economic and Social Development (Prentice, 2007)	2.8



Ratio of Benefits to Costs

Returns for \$1 invested in pre-school education that have conducted long-term follow-ups in the US



Source: Center for Equitable Growth.



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Summary

- Income inequality is a problem
- Additional investment in ECE will boost labour participation. Since lower income families have less access to high quality ECE, the increase in labour participation will have a greater impact on low and middle income families, lowering inequality.
- ECE has the possibility of improving labour market success. Higher wage prospects for disadvantage kids will lower inequality.
- Our cost benefit analysis aligns with other research and is expected to rise over time. ECE is a good investment, with many gains, including reducing inequality.
- Next Steps: Evaluating the impact on Gini Coefficient





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