INEQUALITY, EDUCATION & SKILLS

Craig Alexander
Senior Vice President and Chief Economist
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INEQUALITY ON THE RISE

INCREASING INEQUALITIES
Gini coefficients of income inequality, mid-1980s and late 2000s

Source: OECD Database on Household Income Distribution and Poverty.

TD Economics
MIDDLE SKILL JOBS HAVE BEEN UNDER PRESSURE

% Change in Occupation Share Since 1999

High Skill  Medium Skill  Low Skill

Canada  United States

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

LESS PRESSURE ON CDN MIDDLE CLASS DUE TO CONSTRUCTION AND RESOURCE BOOM

EMPLOYMENT IN TRADABLE GOODS LOWER

Employment, Index 1991 = 100

Commodity  Non-commodity  Non-trade  Mining, oil & gas

Source: Statistics Canada (SEPH) and TD Economics.
"The main force in favor of greater equality has been the diffusion of knowledge and skills"

"Knowledge and skill diffusion is the key to overall productivity growth as well as the reduction of inequality both within and between countries"

Thomas Piketty
THE FIRST 5 YEARS OF LIFE CAN IMPACT ECONOMIC AND SOCIAL SUCCESS

- Research has challenged prior misconceptions. Human abilities driven more by environment (80%) than genetics (20%)
- Basic abilities can be altered early in life as genes respond to life experiences
- It is more difficult to improve a child’s learning abilities later in life
- Pre-primary education leads to cognitive and language development
- Increases labour participation of parents
- reduces stress on parents

MANY STUDIES SHOW THE BENEFITS OUTWEIGHT THE COSTS

<table>
<thead>
<tr>
<th>Study</th>
<th>Benefit / Cost ($)</th>
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</thead>
<tbody>
<tr>
<td>Economic Consequences of Quebec’s Educational Child Care Policy,</td>
<td>1.49</td>
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<tr>
<td>by Fortin, Godbout &amp; St-Cerny, 2011</td>
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<td>Better Beginnings, Better Futures</td>
<td>2.00</td>
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<tr>
<td>by Peters et al., 2010</td>
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<tr>
<td>Worforce Shortages Socio-Economic Effects,</td>
<td>2.42</td>
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<tr>
<td>by Fairholm, 2009</td>
<td></td>
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<tr>
<td>Child Care as Economic and Social Development,</td>
<td>2.78</td>
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<tr>
<td>by Prentice, 2007</td>
<td></td>
</tr>
<tr>
<td>The Benefits and Costs of Good Child Care,</td>
<td>2.00</td>
</tr>
<tr>
<td>by Cleveland &amp; Krashinsky, 1998</td>
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</tbody>
</table>

Source: Early Years Study

TD Economics
So how is Canada doing? It deeply underinvests in ECE.

- **Public Expenditure on ECE services as % of GDP**

  Source: OECD

Canada is leaving it up to parents, and enrollment is low.

- **Enrolment rates at age 4 in early childhood and primary education**

  Source: OECD.
Canada has highest participation in post-secondary education in OECD.

But we have lots of graduates that lack essential skills.
MANY CANADIANS HAVE INADEQUATE LITERACY

SHARE OF POPULATION WITH BELOW DESIRED LITERACY AND NUMERACY

Per cent of population

<table>
<thead>
<tr>
<th>Literacy</th>
<th>Numeracy</th>
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<tr>
<td>48.5</td>
<td>54.7</td>
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PROVINCIAL SCORES ON LITERACY

AVERAGE LITERACY SCORES BY PROVINCE

Average score

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<tr>
<th>NL</th>
<th>NB</th>
<th>QC</th>
<th>SK</th>
<th>OECD</th>
<th>CAN</th>
<th>MB</th>
<th>NS</th>
<th>BC</th>
<th>ON</th>
<th>PEI</th>
<th>AB</th>
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<tr>
<td>260</td>
<td>265</td>
<td>270</td>
<td>275</td>
<td>280</td>
<td>285</td>
<td>290</td>
<td>295</td>
<td>300</td>
<td>305</td>
<td>310</td>
<td>315</td>
</tr>
</tbody>
</table>

PROVINCIAL SCORES ON NUMERACY

AVERAGE NUMERACY SCORES BY PROVINCE


NO SIGNS OF IMPROVEMENT

CANADIAN LITERACY SCORES RELATIVE TO OTHER INDUSTRIAL COUNTRIES

Inequality, Education and Skills

DECLINING NUMERACY

NUMERACY PROFICIENCY

Per cent of population


HIGHER LITERACY RAISES INCOME

PERSONAL INCOME BY PROSE LITERACY PROFICIENCY

Source: Statistics Canada

TD Economics

Inequality, Education and Skills
WEAK LITERACY IS CONTRIBUTING TO INCOME INEQUALITY

EDUCATION HAS A HIGH RETURN ON INVESTMENT

Source: Survey of Adult Skills (PIAAC) (2012), Table A6.16 (L) and OECD.Stat "Country statistical profiles"

Source: Association of Universities and Colleges of Canada
LITTLE EVIDENCE OF BROAD-BASED LABOUR SHORTAGES...FOR NOW

Source: Statistics Canada, WANTED Analytics; Calculations by TD Economics.

CONCERNS ABOUT SKILL MISMATCHES, LEADING TO POOR OUTCOMES FOR YOUTH

Note: Field of study based on highest level of education attainment.
Source: Statistics Canada.

Employment rate in 2011, %
HUMANITIES & EDUCATION HIGH IN TERMS OF GRADUATES, LOW IN TERMS OF EMPLOYMENT

Source: OECD Education Database, 2011.

EMPLOYERS WANT WORK READY EMPLOYEES, BUT THEY ARE NOT DOING THEIR PART

Source: Conference Board of Canada.
CANADA MORE RELIANT ON LABOUR

Capital Investment per Worker, Canadian Dollars

Source: C.D. Howe Institute, 2007 and 2012

CANADA NEEDS TO UPSKILL ITS WORKFORCE TO ADDRESS WEAK PRODUCTIVITY PROBLEM

Average Business Sector Productivity Growth Rate by Decade, %

Source: Statistics Canada (1981-2012), Centre for the Study of Living Standards (Pre-1981)
GLOBALIZATION AND TECH CHANGE WILL PERSIST, REQUIRING MORE SKILLED WORKERS

![Chart showing the share of Canadian Real GDP contributed by services and manufacturing from 1972 to 2012.](chart1)

Source: Conference Board of Canada

DEMOGRAPHICS POINTS TO FUTURE LABOUR MARKET SHORTAGES

![Chart showing the unemployment rate in Canada from 1976 to 2020, with a long-term forecast.](chart2)

Source: Statistics Canada/Haver Analytics; Long-Term Forecast by TD Economics
ECONOMIC ASSUMPTION HIGHER PRODUCTIVITY LIFTS LABOUR INCOME HAS FAILED IN U.S.

Chart 1: U.S. labour productivity & compensation, Index 1947=100
- Real output per hour worked
- Real compensation per hour worked

Source: Bureau of Labor Statistics

TD Economics

...BUT IN CANADA MORE EVEN SPLIT BETWEEN CAPITAL AND LABOUR, SO WE NEED TO UPSKILL

Chart 2: Canada labour productivity & compensation, Index 1946=100
- Real output per hour worked
- Real compensation per hour worked

Source: Statistics Canada

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