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The Retooling Challenge: Canada's Struggle to Close the Capital Investment Gap

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- Investment in plant and equipment per worker by business in Canada has long lagged that in the United States and other major developed countries, likely contributing to disappointing productivity growth in Canada.
- Canada's relative performance has improved since the mid-2000s, but the outsized contributions of Alberta, Saskatchewan, and Newfoundland and Labrador to Canada's uptick suggests that other provinces need to raise their game.
- Fiscal and regulatory changes that would increase the rewards to investment and enhance competitive pressures to innovate would help ensure that Canadian workers in all provinces have the tools to keep pace with rivals abroad and achieve high and growing incomes in the years ahead.

Business investment in plant and equipment is a foundation for raising output and living standards over time. It both complements and reinforces the investments in education and training that explain why Canadians enjoy standards of living so much higher than their ancestors did and that we hope will raise living standards for generations to come.[1] From the perspective of the average worker, the amount of new physical capital that businesses create every year is a tally of the new tools with which he or she is equipped. Comparing how Canadian workers are faring on this scale relative to their counterparts abroad is a key indicator of Canada's competitiveness and relative prospects for higher productivity and economic security in the future. (Box 1 describes our data sources and methods.)

This *e-brief* updates similar surveys in previous years: see Robson and Goldfarb (2004, 2006); Goldfarb and Robson (2005); Banerjee and Robson (2007, 2008); and Busby and Robson (2009, 2010). We thank the reviewers of those papers for comments and questions that have improved the analysis and presentation of these reports.

1 Empirically, growth in capital stock has been correlated to growth in real wages across Canadian jurisdictions. A simple regression of capital stock per worker and real wages, by province, from 1991 to 2010 yields a significant positive relationship between the two variables: provinces with more capital spending also experience higher wage growth. In an oft-cited international examination of the issue, Sala-i-Martin (1997) demonstrates the positive spillover effects from investment in equipment and other capital structures on national economic growth.

Box 1: Measuring and Interpreting Investment per Worker

We use data on business capital formation – that is, investment in machinery and non-residential structures – and employment from the OECD's Economic Outlook database for countries abroad, and the Provincial Economic Accounts for Canada and the provinces. We use Statistics Canada's Capital Repair and Expenditure Survey to obtain the most recent estimates for Canada. The OECD and Statistics Canada investment numbers include private businesses and government business enterprises functioning in a commercial environment.

We convert foreign investment figures into Canadian dollars using purchasing-power parity (PPP) exchange rates from the OECD. The purchasing-power adjustment allows more meaningful comparisons of the "bang per buck" of investment spending in different countries than market exchange rates would do, since – especially at a point in time – market rates will reflect relative domestic price levels very imprecisely. We use capital-goods-specific adjustments using OECD's 2008 PPP figures for gross fixed capital formation, and then construct time series from economy-wide PPP measures for each country.

Canada's Struggle to Match Investment per Worker Abroad

In general, Canada's investment figures per worker have told a discouraging story for decades. Throughout the 1990s, the average amount of new plant and equipment per worker consistently lagged the average of Organisation for Economic Co-operation and Development's (OECD) member countries, and the gap with the United States was worse still. In the early 2000s the picture darkened further: for every dollar of new investment per worker on average in OECD countries from 2000 to 2004, only about 92 cents was invested per worker in Canada, and for every dollar of new investment per worker in the United States, new investment in Canada was only about 77 cents per worker. (Table 1)

The picture brightened somewhat later in the decade. From 2005 to 2009, new investment per worker in Canada was about 97 cents for every dollar of new investment per worker in OECD countries, on average, and about 87 cents for each dollar of new investment per US worker. In 2010, new investment per Canadian worker remained relatively steady at 96 cents for every dollar of new investment per worker in OECD countries on average and 86 cents relative to new investment per worker in the United States.

Canadians can take some satisfaction from these numbers. Canadian employment was more robust during the slump and recovery than in many other countries, a happy circumstance that somewhat dampens the relative per-worker figures. As has often been remarked, relatively sound macroeconomic policies made the recession in Canada less severe; longer term, moreover, structural changes such as lower taxes on business investment should be helping Canada's performance.

A Mixed Picture Coming Out of the Slump

Closer examination of the numbers in Table 1, however, suggests there is more work to do, both for Canada as a whole and for some provinces in particular. First, preliminary figures for 2011 suggest that Canada might be failing to make ground against the average of OECD countries, with the relative tally falling from 96 cents in 2010 to 95 cents in 2011 for every dollar invested, and even more against our southern neighbour, with the relative tally there falling from 86 to 83 cents per dollar invested. To the extent that Canada's better performance over the 2008-10 period simply reflected worse collapses elsewhere, it is less promising as a sign for the future.

Pointing in the same direction, and heightening the concerns, is the fact that so much of Canada's recent robust performance comes from just three provinces – Alberta, Saskatchewan, and Newfoundland and Labrador – that have enjoyed booming prices for their fuel and non-fuel minerals. By contrast, Quebec's story is one of low-level stagnation: from 2005 to 2009, for every dollar of new investment per worker in the OECD and in the United States, new investment per

worker in Quebec was 62 and 56 cents, respectively; in 2010, the figures were 63 and 57 cents, and for 2011 the preliminary figures are 62 and 54 cents. Ontario's record is also poor, registering 71 and 63 cents relative to the OECD average and the United States, respectively, from 2005 to 2009, then 70 and 63 cents in 2010; with the dismal preliminaries for 2011 being 67 and 58 cents.[2]

Data limitations prevent our extending a precise comparison of private investment per worker in Canada to that in the emerging giants of India and China.[3] However, while income per person in those two countries is much lower than that in Canada, their high investment rates and rapid growth mean that Canada's lead over them is shrinking.

Equipping Canadian Workers to Compete at the Next Level

Notwithstanding credit constraints in parts of the economy since 2008, it is clear that lack of funds is not holding Canadian business back – businesses as a whole, which historically were net borrowers from the rest of the economy, have been net lenders for the past decade. Moreover, with interest rates at historic lows – sustaining robust residential investment – the cost of funds is not an obvious problem. And while nervousness about the world economy undoubtedly is helping to keep Canadian business leaders' ambitions in check, business leaders in many other countries are no less concerned.

The search for ways to improve Canada's relative performance reasonably turns, then, to other aspects of the environment that might be holding private investment back. Among promising policy levers to improve Canada's showing, we highlight several for early action:

- The domestic tax environment has improved markedly in recent years, but the recent rejection of sales tax harmonization in British Columbia is an unhappy reminder that Canada can still do much to reduce the tax bite on capital investment. Ontario's success in sales tax harmonization proves that those provinces that have not yet switched can yet improve their position.
- On the international tax side, Canada has recently reduced or eliminated withholding taxes on certain types of interest paid abroad generally and to US investors particularly. Reducing or eliminating remaining withholding taxes on interest and dividends, and tax measures to encourage repatriation and reinvestment of Canadian firms' earnings abroad should encourage fresh investment from both foreign and domestic sources.[4]
- Loosening ownership restrictions in key industries such as transportation, telecommunications, and finance should sharpen incentives to invest and innovate (Canada 2008b).
- Finally, on innovation, the many government-led research and development programs that operate across Canada – about 60 in 2011 – provide a wealth of lessons about what works well and less well, with corresponding scope to expand the better ones at the expense of the worse ones (Canada 2011).

2 While high resource prices have driven the Canadian dollar higher, it is difficult to determine the extent to which this phenomenon has made the exports of non-resource-based provinces less competitive by making them more expensive to buy. The rise in commodity prices corresponds to falling import prices from emerging economies, requiring manufacturing industries, particularly in Ontario and Quebec, to respond – either by cutting labour or by expanding capital – to become more productive. The data show that some manufacturing industries are proving more resilient than others, and we find it implausible that rising resource prices are the sole reason for Ontario's and Quebec's relative investment underperformance (MacDonald 2008).

3 We are unaware of up-to-date data from emerging economies that are easily comparable with those from Canada. In past comparisons, we used data on investment and purchasing-power-parity exchange rates from the International Monetary Fund's International Financial Statistics database, but we do not think these data are sufficiently comparable to warrant numerical estimates.

4 The standard withholding-tax rate for non-resident investors who repatriate interest, dividends, royalties, and other payments from Canada is 25 percent. Bilateral tax treaties normally reduce the rate to around 10 percent, and sometimes lower. Offering national (or non-discriminatory) treatment similar to the treatment that applies to Canadian corporations operating in many foreign countries would boost inbound investment (Cockfield 2008). Treating all foreign active business income as exempt surplus would encourage repatriation and reinvestment (Canada 2008a).

Table 1: Private Non-Residential Gross Capital Formation per Worker in Canada (by Province), the OE

	2000	2001	2002	2003	2004	2005	
					(Canadian dollars)		
Alberta	19,100	20,300	18,900	19,800	22,100	28,100	
British Columbia	6,900	7,500	7,100	7,300	7,900	8,600	
Manitoba	7,100	7,400	7,200	7,000	7,300	7,200	
New Brunswick	8,000	6,100	5,900	6,600	6,900	7,400	
Newfoundland & Lab.	11,800	10,900	10,000	11,600	13,900	15,400	
Nova Scotia	7,800	8,000	8,200	7,500	7,000	7,100	
Ontario	8,000	7,700	7,400	7,200	7,300	7,800	
Prince Edward Island	5,300	5,100	5,000	5,100	5,500	5,300	
Quebec	7,100	6,500	6,300	6,400	6,900	6,800	
Saskatchewan	11,900	11,700	10,600	11,400	11,200	13,500	
Canada	9,000	9,000	8,600	8,600	9,200	10,300	
OECD	9,800	9,700	9,300	9,500	9,900	10,600	
United States	12,300	12,000	11,000	11,100	11,600	12,200	
Relative to OECD							
Alberta	195	209	202	209	223	265	
British Columbia	71	78	76	77	80	82	
Manitoba	73	76	77	74	74	68	
New Brunswick	81	63	63	70	70	70	
Newfoundland & Lab.	120	112	107	123	141	145	
Nova Scotia	80	82	88	79	71	67	
Ontario	81	80	79	76	74	74	
Prince Edward Island	54	52	53	54	56	50	
Quebec	73	67	68	68	70	64	
Saskatchewan	121	121	114	120	113	128	
Canada	92	93	92	91	93	97	
Relative to United States							
Alberta	155	169	172	179	190	231	
British Columbia	56	63	65	66	68	71	
Manitoba	58	61	66	64	63	59	
New Brunswick	65	51	53	60	60	60	
Newfoundland & Lab.	96	91	91	105	120	126	
Nova Scotia	63	67	75	68	61	58	
Ontario	65	65	67	65	63	64	
Prince Edward Island	43	43	45	46	48	43	
Quebec	58	55	57	58	60	56	
Saskatchewan	96	98	97	103	96	111	
Canada	73	75	78	78	79	85	

n.m. = not meaningful.
Data for 2010 are estimates; data for 2011 are forecast. Sources: OECD; Statistics Canada; authors' calculations.

ECD, and the United States, 2000 to 2011

2006	2007	2008	2009	2010	2011	Average: 2000–04	Average: 2005–09
31,300	31,700	33,100	23,100	23,400	24,500	n.m	n.m
9,900	10,100	11,000	9,200	10,800	11,200	n.m	n.m
7,900	8,300	9,500	9,100	9,600	9,600	n.m	n.m
9,500	9,500	10,800	9,100	7,200	7,100	n.m	n.m
13,500	11,600	13,900	12,800	17,000	22,700	n.m	n.m
7,000	7,200	6,300	6,700	6,500	6,600	n.m	n.m
8,300	8,200	8,400	7,500	7,700	7,600	n.m	n.m
5,700	7,500	7,100	4,800	4,900	4,700	n.m	n.m
7,000	7,300	7,500	6,800	6,900	7,100	n.m	n.m
15,400	16,900	20,400	21,900	22,900	23,800	n.m	n.m
11,300	11,500	12,100	10,100	10,500	10,800	n.m	n.m
11,300	12,000	12,200	10,600	10,900	11,400	n.m	n.m
12,900	13,600	13,500	11,600	12,100	13,100	n.m	n.m
276	264	271	217	214	214	208	259
87	84	90	87	99	98	76	86
70	69	78	86	88	84	75	74
84	79	89	84	66	62	69	81
119	97	114	121	156	199	121	119
62	60	52	63	59	58	80	61
73	68	68	70	70	67	78	71
51	63	58	45	45	41	54	53
62	61	61	64	63	62	69	62
136	140	167	206	210	208	118	155
100	96	99	95	96	95	92	97
242	234	244	199	192	187	173	230
77	74	81	80	89	86	64	77
61	61	70	79	79	73	62	66
74	70	80	78	59	54	58	72
104	86	103	111	140	174	101	106
54	53	47	58	53	51	67	54
64	61	62	65	63	58	65	63
44	55	53	42	40	36	45	47
54	54	55	59	57	54	57	56
119	124	150	189	188	182	98	139
87	85	89	87	86	83	77	87

Conclusion

Canada now equips its workers with new plant and equipment relatively better than it did in the early 2000s. Its reputation as a good place to work and invest has stood higher both at home and abroad since 2008. It has more fiscal and political room to improve its tax and regulatory environment than do many other countries. The critical importance of capital investment to productivity and income growth means that Ottawa and the provinces should reinforce their efforts to ensure that Canadian workers get better tools with which to earn their living so that Canadians will live better in the future than they do today.

References

Banerjee, Robin, and William Robson. 2007. "Give Canadian Workers the Tools to Do the Job! Why Canada Needs More Robust Capital Investment." *e-brief* no. 44. Toronto: C.D. Howe Institute. May.

————. 2008. "New Tools for a Richer, Greener Future: Why Canadian Workers Need More Robust Business Investment." *e-brief* no. 60. Toronto: C.D. Howe Institute. July.

Busby, Colin, and William Robson. 2009. "Equipping Ourselves in Tough Times: Canada's Improved Business Investment Performance." *e-brief* no.83. Toronto: C.D. Howe Institute. June.

————. 2010. "Disarmed and Disadvantaged: Canada's Workers Need More Physical Capital to Confront the Productivity Challenge." *e-brief* no.107. Toronto: C.D. Howe Institute. October.

Canada. 2008a. Advisory Panel on Canada's System of International Taxation. "Enhancing Canada's International Tax Advantage." Ottawa.

————. 2008b. Competition Policy Review Panel. *Compete to Win*. Ottawa: Industry Canada.

————. 2011. *Innovation Canada: A Call to Action*. Ottawa: Industry Canada.

Cockfield, Arthur J. 2008. *Finding Silver Linings in the Storm: An Evaluation of Recent Canada-US Crossborder Tax Developments*. Commentary 272. Toronto: C.D. Howe Institute. September.

Goldfarb, Danielle, and William B.P. Robson. 2005. "Canadian Workers Need the Tools to Do the Job and Keep Pace in the Global Investment Race." *e-brief* no.17. Toronto: C.D. Howe Institute. May.

MacDonald, Ryan. 2008. "Terms of Trade in Central Canada." Cat. 11-624-M – No. 022. Ottawa: Statistics Canada.

Robson, William B.P., and Danielle Goldfarb. 2004. "Tools for Workers: How Canada Is Faring in the Competition for Capital Investment." *Backgrounder* 87. Toronto: C.D. Howe Institute. December.

————. 2006. "Canadian Workers Need Better Tools: Rating Canada's Performance in the Global Investment Race." *e-brief* no.30. Toronto: C.D. Howe Institute. June.

Sala-i-Martin, Xavier. 1997. "I Just Ran Two Million Regressions." *American Economic Review* 87 (2): 178-83.

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