

# The Potential Contribution of Aboriginal Canadians to the future Canadian Economic Landscape

**Jean-François Arsenault**

**Economist**

Presentation for the Alliance of Sector Councils  
Session organised by the Aboriginal Human Resources Council  
December 13, 2007



*Centre for the  
Study of Living Standards  
Centre d'étude des  
niveaux de vie*

# Motivation

- Relative to all other groups, Aboriginal Canadians are disadvantaged both economically and socially.
- Their level of educational attainment is well below the national average.
- Canada currently faces two major economic challenges;
  - Reviving our lackluster rate of labour productivity growth
  - Dealing with slower labour force growth
- In this context, the rationale for assisting Aboriginal peoples increase their educational attainment is twofold;
  - It reduces poverty and increases economic well-being among the Aboriginal population
  - It contributes to greater employment, output and productivity growth in this country
- The report focused on the latter.

# Key Messages

- Investing in Aboriginal education is one of the rare public policies with no equity-efficiency tradeoff.
- Moreover, increasing the number of Aboriginals who complete high school and university is a low-hanging fruit with significant and far-reaching economic and social benefits for Canadians.
- Aboriginal Canadians are projected to contribute between 5.8 per cent (status quo) and 7.4 per cent of labour force growth over the 2001-2017 period.
- The potential additional contribution of Aboriginal Canadians if some key objectives are met ranges from \$4 to \$22 billion in 2017 only.
- Additionally, labour productivity could increase up to 0.04 percentage point annually over the 2001-2017 period.

# Background: Population

## Population Growth by Identity Group, per cent unless otherwise noted, 1996-2001

	Total Population	Non- Aboriginal	<b>Aboriginal</b>	North American Indian	Metis	Inuit
1996 (thousands of persons)	29610.8	28706.7	904.3	648.0	214.2	42.1
2001 (thousands of persons)	31021.3	29954.5	1066.5	713.1	305.8	47.6
Increase Over 1996-2001	4.8	4.3	17.9	10.0	42.8	13.1
Share of Total Population in 1996	100.0	96.9	3.1	2.2	0.7	0.1
<b>Share of Total Population in 2001</b>	100.0	96.6	<b>3.4</b>	2.3	1.0	0.2
Share of Aboriginal Population in 1996	-	-	100.0	71.7	23.7	4.7
Share of Aboriginal Population in 2001	-	-	100.0	66.9	28.7	4.5
<b>Contribution to Total Population Growth</b>	100.0	88.5	<b>11.5</b>	4.6	6.5	0.4
Contribution to Aboriginal Population Growth	-	-	100.0	40.1	56.5	3.4

Source: Statistics Canada (2005a), 1996 and 2001 Census of Population Adjusted Counts (July 1st).

# Background: Population

<b>Population Growth by Identity Group, per cent unless otherwise noted, 1996-2006</b>						
	Total Population	Non-Aboriginal	<b>Aboriginal</b>	North American Indian	Metis	Inuit
1996 (in thousands)	29,610.8	28,706.7	904.3	648	214.2	42.1
2001 (in thousands)	31,021.3	29,954.5	1,066.5	713.1	305.8	47.6
2006* (in thousands)	32,447.5	31,003.2	1,311.2	835.9	409.1	53.0
Increase 1996-2006	9.6	8.0	45.0	29.0	91.0	26.0
Share of Total Population in 1996	100	96.9	3.1	2.2	0.7	0.1
<b>Share of Total Population in 2006</b>	100	95.5	4.0	2.6	1.3	0.2
Share of Aboriginal Population in 1996	-	-	100	71.7	23.7	4.7
Share of Aboriginal Population in 2006	-	-	100	63.8	31.2	4.0
<b>Contribution to Total Population Growth 1996-2006</b>	100	81.0	14.3	6.6	6.9	0.4
Contribution to Aboriginal Population Growth 1996-2001	-	-	100.0	46.2	47.9	2.7

Source: Statistics Canada (2005a), 1996 and 2001 Census of Population Adjusted Counts (July 1st).

\*For 2006, growth rates which appeared in The Daily of January 15 2008 were used as they reflect adjustments made for incomplete enumeration. Population estimates may thus not be additive due to rounding.

# Background : Aboriginal Education

## Proportion of the Population by Educational Attainment and Aboriginal Identity, 1996 and 2001

	1996			2001		
	Aboriginal	Non-Aboriginal	Gap	Aboriginal	Non-Aboriginal	Gap
Less than Grade 9	20.2	11.8	8.4	15.0	9.7	5.3
Grade 9 to 13, Without Cert.	33.6	22.4	11.1	32.9	21.2	11.7
Grade 9 to 13, With Certificate	8.5	14.5	-6.0	9.5	14.2	-4.8
Trades Certificate or Diploma	3.8	3.7	0.1	3.9	3.5	0.4
College: Without Certificate	6.4	6.3	0.2	8.8	6.4	2.4
College: With Certificate	14.9	17.9	-2.9	16.8	18.8	-2.1
University: Without Certificate	2.7	3.3	-0.6	4.3	4.4	-0.1
University: With Certificate	7.8	20.0	-12.1	8.9	21.8	-12.8
<b>Less than High School Graduation</b>						
	53.8	34.3	19.5	47.8	30.9	16.9
<b>High School Graduation or Greater</b>						
	44.1	65.6	-21.4	52.2	69.1	-16.9
<b>High School Graduates Continuing to P.S. Education</b>						
	80.8	77.9	2.9	81.9	79.4	2.5
<b>High School Graduates Completing P.S. Education</b>						
	60.1	63.3	-3.2	56.8	63.8	-7.0
College Drop-Out Rate	30.1	26.0	4.2	34.3	25.3	8.9
University Drop-Out Rate	25.6	14.2	11.4	32.7	16.8	15.8
Source: Census Public Use Microdata Files, 1996 and 2001						

# Background : Aboriginal Education

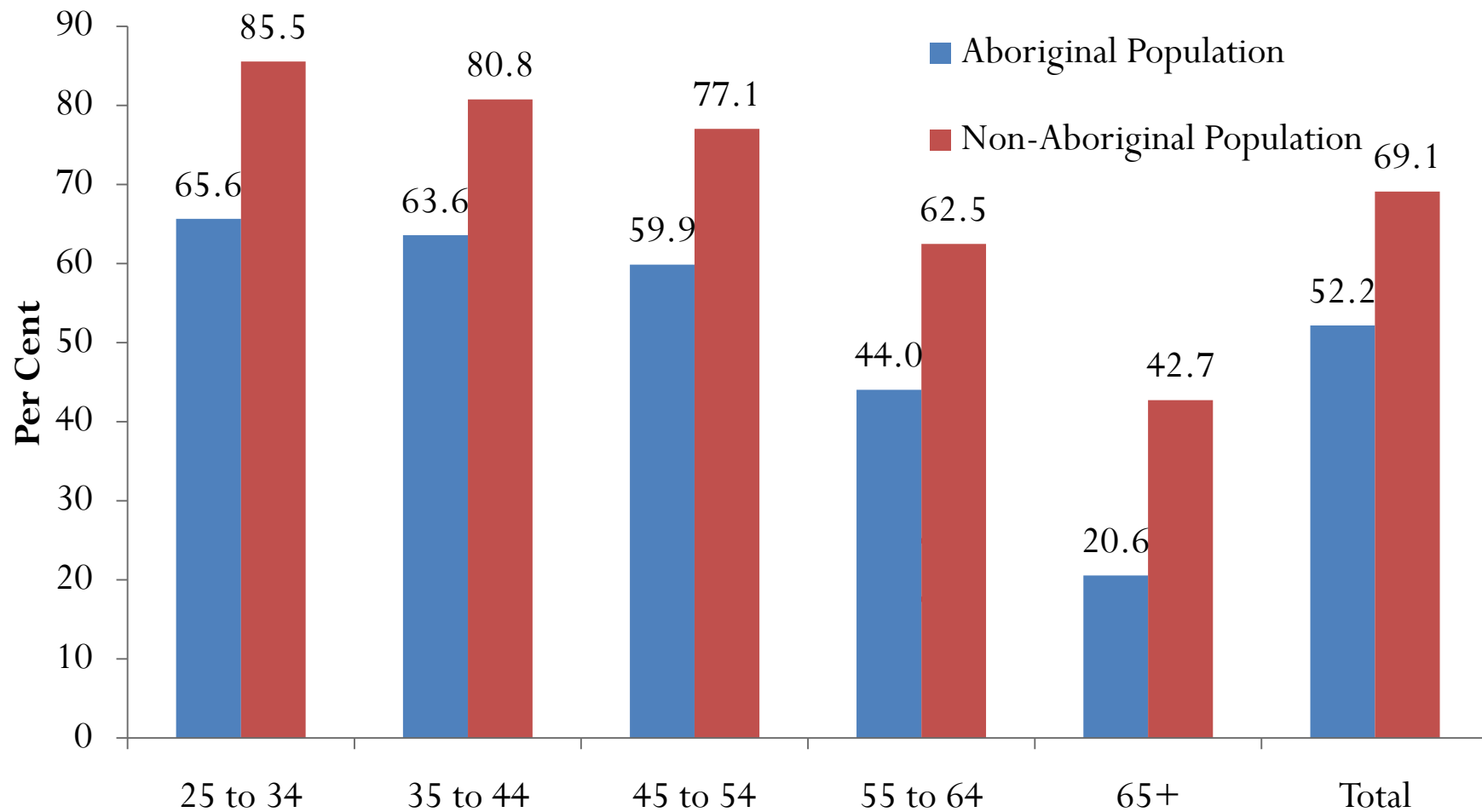
## Proportion of the Population by Educational Attainment and Aboriginal Identity, 2006

	2006		
	Aboriginal	Non-Aboriginal	Gap
No certificate, diploma or degree	43.7	23.1	20.6
High school certificate or equivalent	21.8	25.7	-3.9
Apprenticeship or trades certificate or diploma	11.4	10.8	0.6
College, CEGEP or other non-university certificate or diploma	14.5	17.4	-2.8
University certificate, diploma or degree	8.6	23.0	-14.4
University certificate or diploma below bachelor level	2.8	4.5	-1.7
University certificate or degree at or above bachelor level	5.8	18.5	-12.7
<b>High School Graduation or Greater</b>	56.3	76.9	-20.6
<b>High School Graduates or Above Completing P.S. Education</b>	61.3	66.6	-5.3

Source: 2006 Census

# Background : Aboriginal Education

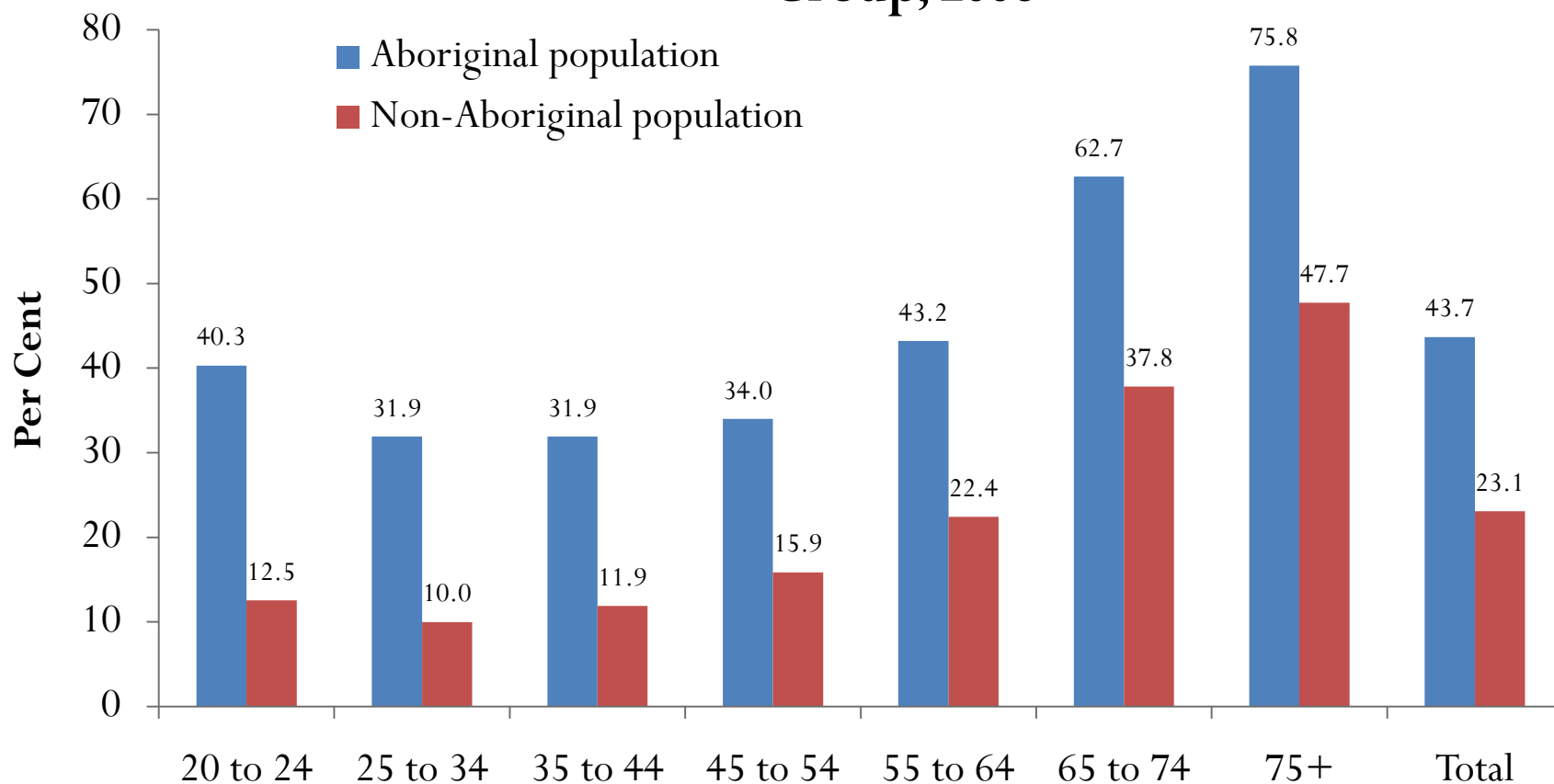
Proportion of the Population who Completed High School,  
by Age Group, 2001





# Background : Aboriginal Education

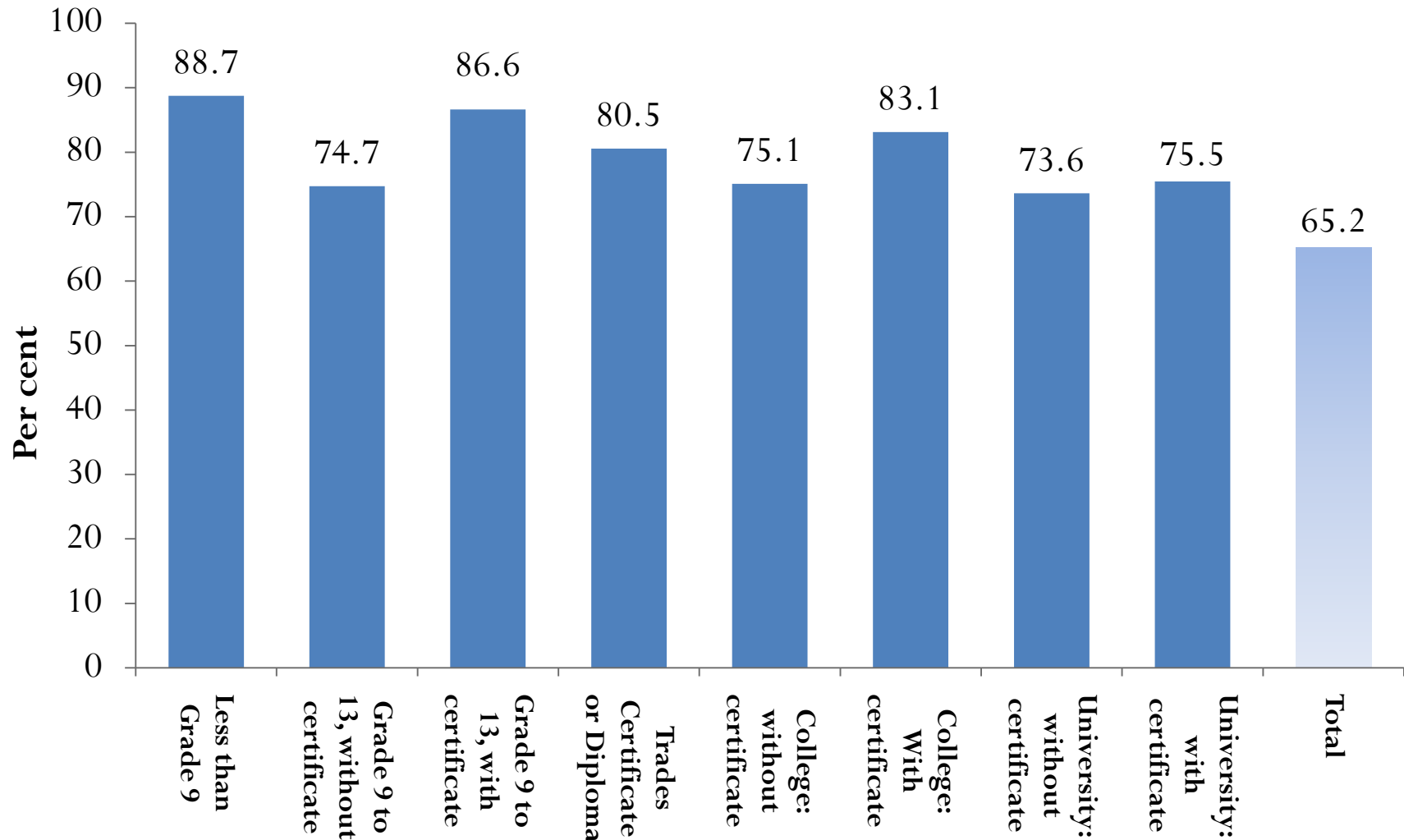
## Proportion of the Population with No Certificate, by Age Group, 2006



Source: Census 2006

# Background : Aboriginal Income

Average Employment Income of the Aboriginal Population (15+), as a Share of non-Aboriginal Income, 2001



# Background: Impact of Education

## Share of Aggregate Income and Labour Market Outcomes Gap Accounted for by Differences in Educational Attainment, 2001

	Non-Aboriginal	Aboriginal	Gap	Aboriginal at Non-Aboriginal Educational Shares*	Education-Adjusted Gap	Gap Explained by Educational Attainment, %
	A	B	$C = A - B$	D	$E = A - D$	$F = ((1 - (E/C)) * 100)$
Employment Income (\$2001)	19,727	12,866	6,861	16,113	3,614	47.3
Participation Rate (%)	66.6	61.3	5.2	67.7	-1.2	122.0
Unemployment Rate (%)	6.3	18.0	-11.6	15.2	-8.9	23.9
Employment Rate (%)	61.8	49.5	12.3	56.7	5.2	57.9

\* The approach is to apply non-Aboriginal working age population shares to the education specific Aboriginal values for the variable to determine what aggregate value could be obtained if Aboriginal had the same educational profile as non-Aboriginal Canadians.

# Analysis: Labour Force Growth

Abor. Part. Rate in  
2017 = Non-Abor.  
Part. Rate in 2001

## Summary of Aboriginal Labour Force (15+) Projections

	Labour Force (15+)		Share of labour force in 2001	Share of labour force in 2017	Absolute change, 2001- 2017	Per cent growth, 2001-2017	Contribution to overall labour force growth, 2001-2017, per cent
	2001	2017					
Scenario 1	439,317	622,535	2.73	3.23	183,218	41.7	5.75
Scenario 3	439,317	674,889	2.73	3.50	235,572	53.6	7.39

## Summary of Aboriginal Employment Projections

	Employment		Share of Employment in 2001	Share of Employment in 2017	Absolute change, 2001- 2017	Per cent growth, 2001-2017	Contribution to overall employment growth, 2001-2017, per cent
	2001	2017					
Scenario 1	355,604	503,908	2.38	2.73	148,305	41.7	4.17
Scenario 3	355,604	627,181	2.38	3.39	271,577	76.4	7.64

Abor. Emp. Rate in  
2017 = Non-Abor.  
Emp. Rate in 2001

# Analysis: Selected Scenarios

## Summary of Different Assumption Sets for Aboriginal Income and Productivity Projections in 2017

Scenario	Share of Aboriginal Population in Each Educational Category	Assumptions	
		Aboriginal Average Income Increase Given Education	Aboriginal Employment Rate Given Education
Base Scenario 1	2001 Share of the Aboriginal Population	Increase with average wage growth	Level of Aboriginal Employment Rate in 2001
Base Scenario 2		Level of Non-Aboriginal Income in 2017	Level of Non-Aboriginal Employment Rates in 2001
3	Half of the Gap Between the Aboriginal and Non-Aboriginal Education in 2001 is Eliminated	Increase with average wage growth	Level of Aboriginal Employment Rate in 2001
6		Level of Non-Aboriginal Income in 2017	Level of Non-Aboriginal Employment Rates in 2001
7	Complete Gap Between the Aboriginal and Non-Aboriginal Education in 2001 is Eliminated	Increase with average wage growth	Level of Aboriginal Employment Rate in 2001
10		Level of Non-Aboriginal Income in 2017	Level of Non-Aboriginal Employment Rates in 2001

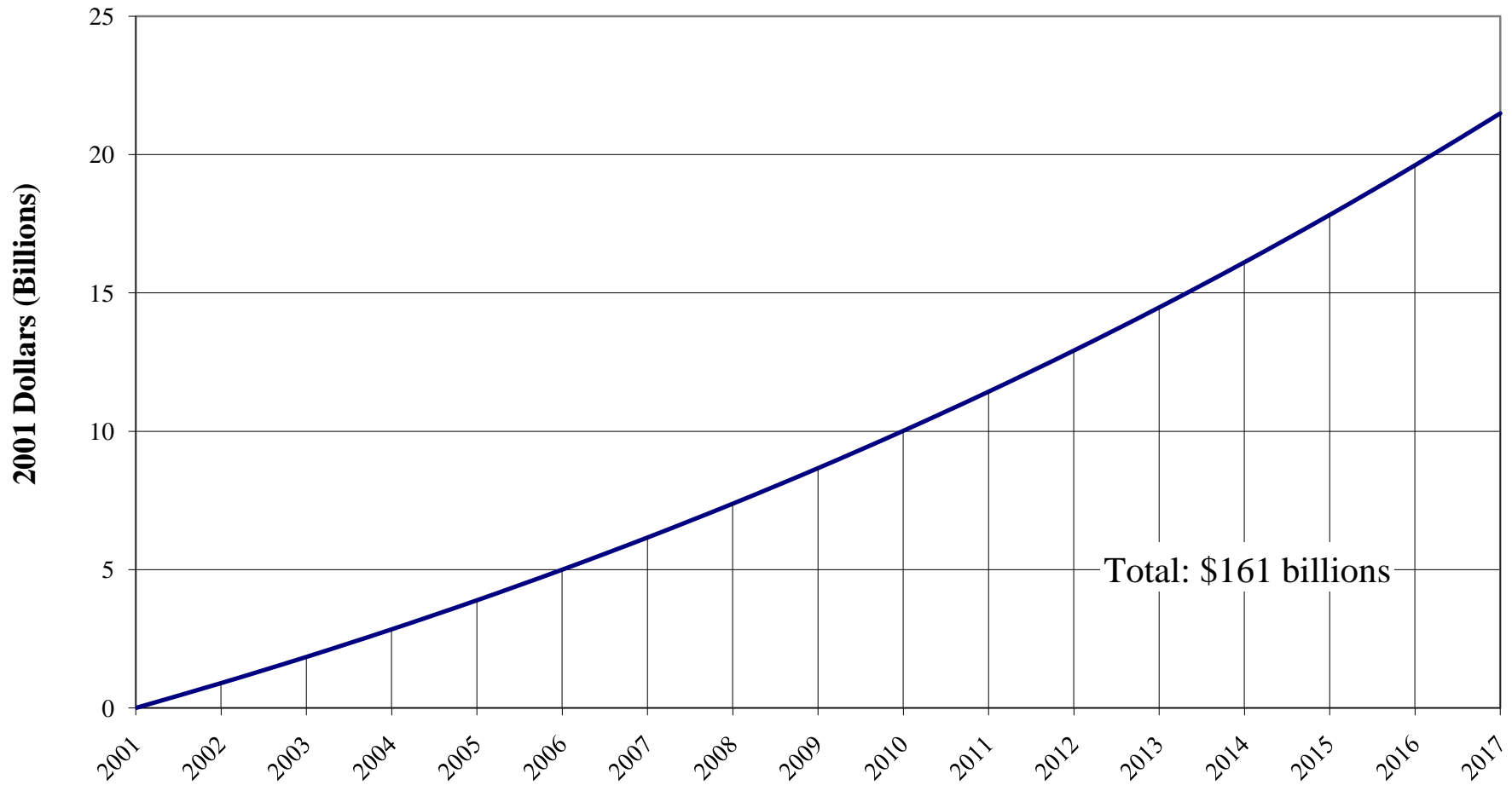
# Analysis: Effect on Output

## Contribution of Increases in Aboriginal Educational Attainment and Labour Market Outcomes in 2017 only

	Half the 2001 Educational Gap is Eliminated by 2017 (Billion of Dollars)	The Complete 2001 Educational Gap is Eliminated by 2017 (Billion of Dollars)
Contribution of Aboriginal Assuming Increases in Educational Attainment and Employment Rates and Income Level at Given Level of Educational Attainment (Scenario 6 and 10 over Scenario 1)	16.9	21.5
Lower-Bound Contribution of Increases in Educational Attainment (Scenario 3 and 7 over Scenario 1)	4.2	8.3
Upper-Bound Contribution of Increases in Educational Attainment (Scenario 6 and 10 over Scenario 2)	4.9	9.5

# Analysis: Cumulated Effect on Output

## Difference Between Canadian GDP in Best Case Scenario and Base Scenario, 2001-2017



# Analysis: Cumulated Effect on Output

## Cumulated Contribution of Increases in Aboriginal Educational Attainment and Labour Market Outcomes in 2017 only

	Half the 2001 Educational Gap is Eliminated by 2017 (Billion of Dollars)	The Complete 2001 Educational Gap is Eliminated by 2017 (Billion of Dollars)
Contribution of Aboriginal Assuming Increases in Educational Attainment and Employment Rates and Income Level at Given Level of Educational Attainment (Scenario 6 and 10 over Scenario 1)	126.3	161.0
Lower-Bound Contribution of Increases in Educational Attainment (Scenario 3 and 7 over Scenario 1)	31.2	62.3
Upper-Bound Contribution of Increases in Educational Attainment (Scenario 6 and 10 over Scenario 2)	36.5	71.1



# Analysis: Effect on Productivity

- Education would have positive effects on both output and employment. From a social productivity perspective, both these effects are beneficial.
- From a strict economic perspective, productivity could decrease. However, our estimates show a slight increase in productivity :
  - Best case scenario (10 over 1): up 0.037 percentage point a year
  - Only an increase in education;
    - Half the 2001 gap (3 over 1) - up 0.003 percentage point a year
    - Complete 2001 gap: (7 over 1) - up 0.007 percentage point a year
- Increases in labour market outcomes and education have complementary effects : education accounts for more than 40% (0.015 percentage point) of the productivity increase in the best case scenario.

# Social Benefits

- There exist links between increased educational attainment and better health, higher living standards, and lower crime rates.
- Increased government expenditures now would decrease the dependence of the Aboriginal population on future government expenditures and increase output, and hence lead to higher future tax revenues and lower future expenditures.
- Better educated Aboriginal Canadians will be more effective leaders and thereby provide better direction for the economic development of Aboriginal communities.

# How to do it?

- Any solution will require increased accountability, especially in relation to the monitoring of performance of individual schools (BC).
- There are no clear panacea – federal, provincial and Aboriginal leaders must work together. About  $\frac{3}{4}$  of Aboriginal students are in provincial education systems.
- Experimentation is key to finding what works and what does not work.

# Conclusion

- Education is one of the most effective tools a society has to help disadvantaged populations, and it provides the best chance for economic benefit and growth.
- Increased Aboriginal education would not only significantly contribute to increase the personal well-being of Aboriginal Canadians, but it would also contribute somewhat to alleviating slower labour force growth and lackluster labour productivity growth in Canada.
- Without better education, younger Aboriginal cohorts will be denied the choice of integrating or not into the mainstream Canadian economy.
- To achieve these goals, focused and imaginative policies and more resources are needed.