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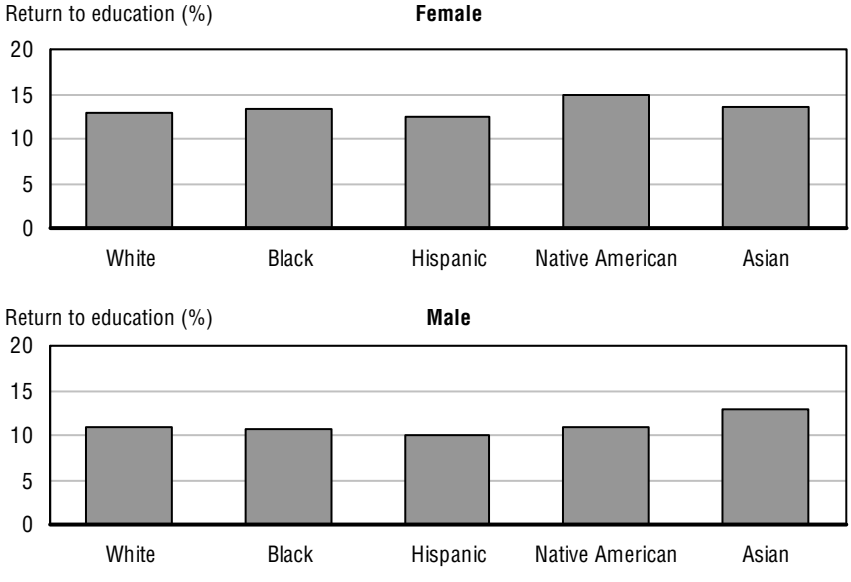
Introduction

There is substantial literature on the financial return to education. A good, recent summary of the literature can be found in Ashenfelter and Rouse (2000), which contains Figure 1. Figure 1 shows the financial rate of return to education by sex and ethnicity.

Figure 1: The return to education by sex and race/ethnicity



Source: Ashenfelter and Rouse (2000), 105.

Note from Figure 1 that women have a higher rate of return than men. This fact will be relevant below, so it is useful to ask why the data reflects this. Women, as is well known, make about one-third less the income of men in Canada. However, women with higher levels of education make very similar amounts. Why is the rate of return to education higher for women? Both males and females experience positive returns—the more education the higher average earnings. Consequently, women receive a double benefit from education. Their earnings rise because average earnings rise with education, but they also rise because they are catching up with men.

Similarly, the same is true for Aboriginal people. Note in Figure 1 that Aboriginal people have among the highest rates of return to education.[1] Why? Just as in the analysis of women, Aboriginal people earn less than non-Aboriginal people. But the difference largely disappears for higher levels of education. Consequently, Aboriginal people receive a double benefit from education.

In fact, the rate of return for Aboriginal women is truly extraordinary because they receive a triple benefit from education: their earnings rise because average earnings rise with education, because they are catching up with men, and they are catching up with non-Aboriginal earnings.

Although it is useful and interesting, the analysis summarized in Figure 1 has significant shortcomings. Foremost, the rates of return in Figure 1 are for post-secondary education alone. Figure 1 says nothing about the financial value of a high school diploma. However, a fundamental educational decision for many Aboriginal people in Canada is whether to persist and receive a high school diploma. (Correspondingly, a fundamental household decision for Aboriginal households is how much support and encouragement to provide—and what sacrifices to make—for young people making educational decisions.)

Moreover, the results in Figure 1 say nothing about the return to different types of post-secondary education. For example, the results in Figure 1 mention nothing about the return to attending a post-secondary technical school as opposed to a university. Figure 1 combines all forms of post-secondary education, whether it be law school, medical school, university, or learning to be a heavy equipment operator.

Like most of the analyses in the literature, the results shown in Figure 1 are derived using data from the United States. It would be useful to know what the results are for Canada.

Finally, the results shown in Figure 1 are not compelling for most young people. You would certainly get my attention if I were shown that I could make a 15% return on an investment. However, the same thing is not true of many young people, afflicted with inexperience and the impatience of youth.

Consequently, the purpose of this paper is to analyze return to education for Aboriginal people in Saskatchewan. We will calculate lifetime earnings for an average Aboriginal male or female if they

- drop-out before finishing high school;
- receive a secondary school diploma;
- attend a non-university post-secondary institution (i.e., a technical school); or
- attend university.

The answer will, of course, depend on the age of the Aboriginal person; I will assume arbitrarily that they were 13 in 2002. I will analyze earnings from wages and salaries, which make up the largest part of income for both Aboriginal and non-Aboriginal people.

The Data

The principal source of data will be the microdata files for the Census of Canada. These files show the responses of a scientific sample of the one in five Canadians who receive the Census long form. For the 1996 Census microdata files, 1 in 38 Canadian residents are included in the microdata files; for 1991, 1 in 33.3 are included. There are 27,128 Saskatchewan residents in the microdata files in 1996 and 29,282 in 1991. The breakdown of the total into male and female, and into Aboriginal and non-Aboriginal, are shown in Table 1 for those who are of labour force age.[2]

Table 1: The number of individuals in the Census microdata files for Saskatchewan

	Labour Force Age Male		Labour Force Age Female	
	Aboriginal	Non-Aboriginal	Aboriginal	Non-Aboriginal
1991	434	10,401	525	10,728
1996	509	9,583	620	9,968

At the time of this writing, the microdata files for the 2001 Census were not available. Prior to 1991, the Census of Canada microdata files do not include Aboriginal status.

There are four principal categories of Aboriginal People in Canada: Registered Indians, Unregistered Indians, Metis, and Inuit. Moreover, there are fascinating issues associated with the distinction between Aboriginal identity and Aboriginal origin. In fact, many of these issues of categorization have been critical to aspects of my earlier research into Aboriginal economic

development (see Lendsay, Painter, and Howe 1997, 37–143; 2000; Stabler and Howe 1991, 137–180; 1990). However, for this paper, the data on Aboriginal people will be that for Registered Indians. This is to simplify the analysis, not to deny the Aboriginal identity of other Aboriginal people.

The Data Analysis

We need to analyze eight different types of individuals: males and females with each of four educational outcomes. As noted, each type of individual is assumed to be 13 in 2002, so they will reach labour force age in 2004, and will be assumed to retire when they reach 65 in 2054. Between 2004 and 2054, for each individual, we need to quantify four variables: their employed earnings,[3] labour force participation rate, unemployment rate and survival rate. Annual earnings will then be their employed earnings times the participation rate, times one, minus the unemployment rate, times the survival rate. Lifetime earnings will be the accumulation of annual earnings.

Only one of these variables can be treated straightforwardly: survival rates. Standard life expectancy data were used, as given in Court of Queen's Bench (2000). These were used to compute survival rates.

For the other variables—the participation rate, unemployment rate and wage rate—we will use the following procedure. Since life-cycle patterns of these variables are changing dramatically for Aboriginal people, we will use data on non-Aboriginal people to measure life-cycle patterns. We will then apply multiplicative factors to each variable to adjust for aggregate differences between Aboriginal people and non-Aboriginal people. Finally, we will use multiplicative factors to adjust for differences between Aboriginal people at differing levels of education.

As noted, employed earnings, the participation rate and the unemployment rate vary over an individual's lifetime. This variation is shown—compiled from the 1996 Census microdata files—for non-Aboriginal residents of Saskatchewan in Table 2.

Refer to the data for males in Table 2. Note that the participation rate rises rapidly in the 20s, and continues to rise until later in life. Then, beginning in the 50s, the participation rate begins to fall as people begin to take early retirement. The pattern of the unemployment rate is similar, mostly falling over an individual's lifetime. It is somewhat higher in the early 20s than in the late teens because individuals are seeking careers in their 20s, whereas they were seeking jobs in their late teens. The unemployment rate begins to rise again, beginning in the 50s, because older workers can have difficulty finding a new job if they become unemployed at that age. The unemployment rate falls again in the 60s because individuals who become unemployed in their 60s are more likely to simply retire and

drop out of the job market. The wage rate increases over an individual's life until they reach their 50s, when it begins to fall. This fall is brought about by the fact that (1) higher wage individuals are more likely to take early retirement and drop from the sample; (2) some individuals' knowledge becomes less current so they are paid less; and (3) individuals in this age range who become unemployed may have to take substantial wage cuts in order to be re-employed.

Table 2: The participation rate, the unemployment rate, and wage rate for non-Aboriginal residents of Saskatchewan, by age

	Participation Rate		Unemployment Rate		Wage Rate	
	Male	Female	Male	Female	Male	Female
Age Cohort			%	%	$	$
15–20	0.28073	0.23925	12.57	15.63	5,116.03	3,772.12
21–25	0.53376	0.49958	14.76	12.23	16,063.46	11,313.45
26–30	0.73125	0.67632	9.26	7.65	26,354.27	17,569.70
31–35	0.77679	0.66391	5.29	6.36	32,299.97	18,716.64
36–40	0.80842	0.74062	5.01	4.85	34,296.34	20,301.75
41–45	0.81593	0.76133	3.36	2.92	36,728.05	22,058.09
46–50	0.87097	0.75429	3.44	2.73	37,197.27	23,113.02
51–55	0.82448	0.69894	3.58	4.98	35,566.96	20,599.53
56–60	0.65462	0.50977	5.52	5.11	29,690.52	16,947.00
61–65	0.31533	0.12635	4.97	3.57	16,542.83	9,672.18

Examining the data for females in Table 2, note that the results are broadly similar to the results for males. The participation rate is somewhat lower because it is more common for women not to work outside the home, and does not climb as rapidly in the 20s because women are more likely to stay at home to raise their young children. The unemployment rate tends to be similar and follows a similar pattern. In Saskatchewan, the wage rates for women tend to be about 60% of that of men.

Following our methodology, we need to compute multiplicative adjustments to correct the above results for the average differences between labour market outcomes for Aboriginal and non-Aboriginal people. We will first discuss participation rates, then unemployment rates and finally wage rates.

Table 3 shows the average labour force participation rate for residents of Saskatchewan, compiled from the 1991 and 1996 Census microdata files. Here we see an Aboriginal participation rate that is leaning towards the rate for non-Aboriginals. Our hypothetical Aboriginal individuals, who are 13 in 2002, will not be labour force age until 2004, by which time the difference in labour force participation rates is expected to be eliminated.

Table 3: Average labour force participation rates for residents of Saskatchewan

	Male			Female		
	Aboriginal %	Non-Aboriginal %	Ratio	Aboriginal %	Non-Aboriginal %	Ratio
1991	61.14	82.68	1.35	41.81	66.57	1.59
1996	68.05	80.14	1.18	51.97	66.17	1.27

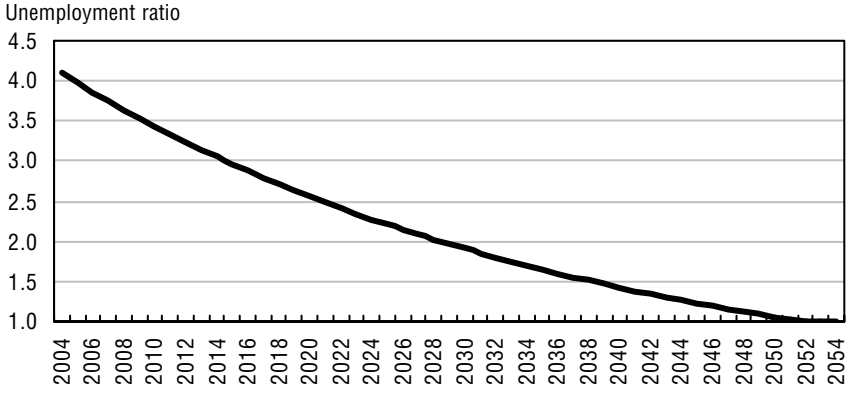
Before leaving the analysis of Table 3, note the rapid increase in the female Aboriginal participation rate. Between 1991 and 1996 the rate increased by a quarter, from 42% to 52%. This observation will be important below in the analysis of unemployment rates and wage rates.

Table 4 shows the average unemployment rate for residents of Saskatchewan, compiled from the 1991 and 1996 Census microdata files. For males, the data is straightforward—the Aboriginal unemployment rate is leaning towards the rate for non-Aboriginals. The ratio of the two rates decreases from 5.652 to 4.881 in five years. This implies a 2.891% decrease in the ratio per year.

Table 4: Average unemployment rates for residents of Saskatchewan

	Male			Female		
	Aboriginal %	Non-Aboriginal %	Ratio	Aboriginal %	Non-Aboriginal %	Ratio
1991	30.432	5.384	5.65	22.66	6.31	3.59
1996	31.408	6.434	4.88	28.27	6.71	4.21

Figure 2: Ratio of Aboriginal to non-Aboriginal unemployment rates for male and female residents of Saskatchewan



For females, the data is more complicated. The large increase in the Aboriginal female labour force participation rate, shown in Table 3, drove up the Aboriginal female unemployment rate. The ratio of the two increases from significantly below the male to marginally below the male. Consequently, the following analysis supposes that the multiple for Aboriginal females will rise to the multiple for Aboriginal males and then decrease following the same pattern, which is given in Figure 2.

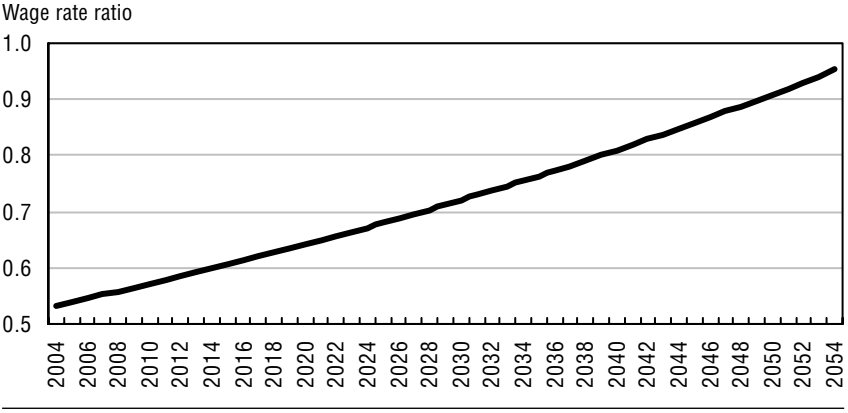
Examining Figure 2, the ratio of the Aboriginal to non-Aboriginal unemployment rate is expected to gradually decline. The two rates will be equal just after the middle of the twenty-first century.

Table 5 shows the average wage rate for residents of Saskatchewan, compiled from the 1991 and 1996 Census microdata files. Again, the data for males are relatively straightforward. Here we see that the ratio increased from .4579 to .4853 in five years, for a 1.169% increase per year. However, again because of the rapid increase in the Aboriginal female participation rate, the Aboriginal female wage rate actually decreased. Again, this has been regarded as a movement towards the result for males, and the female rate was predicted to follow that for males, so the same ratio was used for both sexes. The ratio is shown in Figure 3.

Table 5: Average wage rates for employed residents of Saskatchewan

	Male			Female		
	Aboriginal $	Non-Aboriginal $	Ratio	Aboriginal $	Non-Aboriginal $	Ratio
1991	11,971.54	26,147.44	.4579	12,132.87	14,592.24	.8314
1996	13,951.34	28,750.74	.4853	11,744.84	16,779.67	.6999

Figure 3: Ratio of Aboriginal to non-Aboriginal wage rates for male and female residents of Saskatchewan



Examining Figure 3, the ratio of Aboriginal to non-Aboriginal wage rates is expected to gradually increase, but wage differences will persist and wage parity will not be achieved even by the middle of the twenty-first century.

In addition to the above, multiplicative adjustments are required for the relationship between the labour market outcomes for Aboriginal people with differing levels of education. All are compiled from the 1996 Census microdata files. Table 6 provides the multiplicative adjustments for the participation rate; Table 7, the unemployment rate; and Table 8, the wage rate.

Table 6: The participation rate, contingent on education levels, for Aboriginal residents of Saskatchewan

Education Level	Participation rate (%)	Ratio to each sex's Aboriginal average
Male		
Stopped education prior to high school graduation	39.39	.57889
Graduated from high school	68.00	.99925
Attended non-university post-secondary institution	84.81	1.24627
Attended university	80.00	1.17559
Female		
Stopped education prior to high school graduation	16.76	.32238
Graduated from high school	50.00	.96203
Attended non-university post-secondary institution	64.95	1.24964
Attended university	76.19	1.46595

Table 7: The unemployment rate, contingent on education levels, for Aboriginal residents of Saskatchewan

Education Level	Unemployment rate (%)	Ratio to each sex's Aboriginal average
Male		
Stopped education prior to high school graduation	47.7	1.51849
Graduated from high school	20.6	.65551
Attended non-university post-secondary institution	29.9	.95042
Attended university	27.5	.87558
Female		
Stopped education prior to high school graduation	39.683	1.40376
Graduated from high school	33.333	1.17915
Attended non-university post-secondary institution	23.810	.84255
Attended university	16.250	.57434

Table 8: The wage rate, contingent on education levels, for Aboriginal residents of Saskatchewan

Education Level	Wages rate ($)	Ratio to each sex's Aboriginal average
Male		
Stopped education prior to high school graduation	9,870.72	.70751
Graduated from high school	12,953.21	.92846
Attended non-university post-secondary institution	14,831.98	1.06312
Attended university	18,149.46	1.30091
Female		
Stopped education prior to high school graduation	7,300.15	.62156
Graduated from high school	7,584.35	.64576
Attended non-university post-secondary institution	12,350.93	1.05160
Attended university	19,743.95	1.68107

A final adjustment is necessary to allow for economic growth, which will occur between now and the middle of the twenty-first century. The Saskatchewan Bureau of Statistics estimates wage income in Saskatchewan in its Income and Product Accounts. These amounts were converted to constant dollars using the Consumer Price Index from Statistics Canada. Statistics Canada also provides estimates of Saskatchewan employment in its Labour Force Survey. The ratio—real wages per employee—increases by 0.655% per year, which was used for the growth in the overall real wage rate. The Consumer Price Index was also used to convert the above 1991 and 1996 wage rates to 2002 dollars.

Annual Earnings

Using data from the previous section, it is possible to estimate annual earnings for Aboriginal people in Saskatchewan. There are eight separate sets of computations: four educational categories, each with separate computations for males and females.

All eight sets of computations are available on request, but only two are produced in this paper. Table 9 shows the computation of lifetime earnings for an Aboriginal male who drops out before receiving his high school diploma. Table 10 shows the computation for an Aboriginal female dropout.

Refer first to Table 9. The first column shows the individual's age and the second shows the year. The third column shows the wage rate, which for each year is obtained as a product of the following five terms:

1. the non-Aboriginal male wage rate for the appropriate age, from Table 2;
2. the Aboriginal wage rate adjustment ratio, from Figure 3;
3. the Consumer Price Index to obtain 2002 dollars;
4. the Aboriginal male education adjustment ratio, from Table 8; and
5. the wage growth rate adjustment.

Table 9: Earnings for an Aboriginal male if he dropped out prior to completing high school, measured in 2002 dollars

Age	Year	Wage rate $	Participation rate	Unemployment rate %	Survival rate	Adjusted earnings $
15	2004	2,343	0.16251	78.1	0.9976	83
16	2005	2,386	0.16251	75.9	0.9959	93
17	2006	2,430	0.16251	73.7	0.9939	103
18	2007	2,474	0.16251	71.5	0.9918	114
19	2008	2,520	0.16251	69.5	0.9896	124
20	2009	2,566	0.16251	67.5	0.9872	134
21	2010	8,204	0.30899	76.9	0.9849	576
22	2011	8,354	0.30899	74.7	0.9826	642
23	2012	8,507	0.30899	72.5	0.9803	707
24	2013	8,663	0.30899	70.4	0.9784	774
25	2014	8,822	0.30899	68.4	0.9764	841
26	2015	14,738	0.42331	41.7	0.9748	3,547
27	2016	15,008	0.42331	40.5	0.9731	3,680
28	2017	15,283	0.42331	39.3	0.9714	3,815
29	2018	15,563	0.42331	38.2	0.9699	3,951
30	2019	15,848	0.42331	37.1	0.9684	4,089
31	2020	19,779	0.44968	20.6	0.9669	6,831
32	2021	20,142	0.44968	20.0	0.9650	6,995
33	2022	20,511	0.44968	19.4	0.9634	7,163
34	2023	20,886	0.44968	18.8	0.9618	7,332
35	2024	21,269	0.44968	18.3	0.9599	7,501
36	2025	22,997	0.46799	16.8	0.9581	8,579
37	2026	23,418	0.46799	16.3	0.9561	8,769
38	2027	23,847	0.46799	15.8	0.9538	8,958
39	2028	24,284	0.46799	15.4	0.9514	9,149
40	2029	24,729	0.46799	14.9	0.9485	9,336
41	2030	26,967	0.47233	9.7	0.9457	10,872
42	2031	27,461	0.47233	9.5	0.9423	11,066
43	2032	27,964	0.47233	9.2	0.9389	11,261
44	2033	28,476	0.47233	8.9	0.9353	11,458
45	2034	28,998	0.47233	8.7	0.9317	11,655
46	2035	29,906	0.50420	8.6	0.9277	12,784
47	2036	30,454	0.50420	8.4	0.9235	12,995
48	2037	31,012	0.50420	8.1	0.9190	13,203
49	2038	31,580	0.50420	7.9	0.9143	13,410

Table 9: Earnings for an Aboriginal male if he dropped out prior to completing high school, measured in 2002 dollars (continued)

Age	Year	Wage rate $	Participation rate	Unemployment rate %	Survival rate	Adjusted earnings $
50	2039	32,158	0.50420	7.7	0.9088	13,607
51	2040	31,312	0.47728	7.7	0.9032	12,454
52	2041	31,886	0.47728	7.5	0.8967	12,621
53	2042	32,470	0.47728	7.3	0.8900	12,786
54	2043	33,064	0.47728	7.1	0.8823	12,938
55	2044	33,670	0.47728	6.9	0.8737	13,075
56	2045	28,622	0.37895	10.3	0.8649	8,415
57	2046	29,146	0.37895	10.0	0.8551	8,499
58	2047	29,680	0.37895	9.7	0.8445	8,576
59	2048	30,224	0.37895	9.4	0.8333	8,643
60	2049	30,777	0.37895	9.2	0.8213	8,701
61	2050	17,462	0.18254	8.0	0.8082	2,370
62	2051	17,782	0.18254	7.8	0.7947	2,379
63	2052	18,108	0.18254	7.6	0.7795	2,382
64	2053	18,440	0.18254	7.5	0.7639	2,377
65	2054	18,777	0.18254	7.5	0.7470	2,367

Table 10: Earnings for an Aboriginal female if she dropped out prior to completing high school, measured in 2002 dollars

Age	Year	Wage rate $	Participation rate	Unemployment rate %	Survival rate	Adjusted earnings $
15	2004	1,469	0.07713	89.8	0.9989	12
16	2005	1,496	0.07713	87.2	0.9982	15
17	2006	1,523	0.07713	84.7	0.9975	18
18	2007	1,551	0.07713	82.2	0.9967	21
19	2008	1,580	0.07713	79.8	0.9959	24
20	2009	1,609	0.07713	77.5	0.9953	28
21	2010	4,913	0.16106	58.9	0.9944	323
22	2011	5,003	0.16106	57.2	0.9937	343
23	2012	5,094	0.16106	55.6	0.9931	362
24	2013	5,188	0.16106	54.0	0.9925	382
25	2014	5,283	0.16106	52.4	0.9918	402
26	2015	8,354	0.21803	31.8	0.9913	1,231
27	2016	8,507	0.21803	30.9	0.9907	1,270
28	2017	8,663	0.21803	30.0	0.9900	1,309
29	2018	8,822	0.21803	29.1	0.9892	1,348
30	2019	8,983	0.21803	28.3	0.9882	1,388
31	2020	9,745	0.21403	22.8	0.9873	1,589
32	2021	9,924	0.21403	22.2	0.9860	1,630
33	2022	10,105	0.21403	21.5	0.9850	1,671
34	2023	10,291	0.21403	20.9	0.9838	1,713
35	2024	10,479	0.21403	20.3	0.9827	1,756
36	2025	11,575	0.23876	15.0	0.9816	2,305
37	2026	11,787	0.23876	14.6	0.9805	2,356

Table 10: Earnings for an Aboriginal female if she dropped out prior to completing high school, measured in 2002 dollars (continued)

Age	Year	Wage rate $	Participation rate	Unemployment rate %	Survival rate	Adjusted earnings $
38	2027	12,003	0.23876	14.2	0.9792	2,408
39	2028	12,222	0.23876	13.8	0.9778	2,460
40	2029	12,446	0.23876	13.4	0.9764	2,513
41	2030	13,771	0.24544	7.8	0.9749	3,038
42	2031	14,023	0.24544	7.6	0.9732	3,095
43	2032	14,280	0.24544	7.4	0.9712	3,153
44	2033	14,541	0.24544	7.2	0.9691	3,211
45	2034	14,808	0.24544	6.9	0.9670	3,270
46	2035	15,800	0.24317	6.3	0.9646	3,472
47	2036	16,090	0.24317	6.1	0.9618	3,533
48	2037	16,384	0.24317	6.0	0.9590	3,594
49	2038	16,684	0.24317	5.8	0.9561	3,655
50	2039	16,990	0.24317	5.6	0.9532	3,717
51	2040	15,420	0.22533	9.9	0.9499	2,972
52	2041	15,702	0.22533	9.7	0.9464	3,025
53	2042	15,990	0.22533	9.4	0.9426	3,078
54	2043	16,283	0.22533	9.1	0.9384	3,129
55	2044	16,581	0.22533	8.8	0.9340	3,181
56	2045	13,891	0.16434	8.8	0.9288	1,933
57	2046	14,145	0.16434	8.6	0.9239	1,964
58	2047	14,404	0.16434	8.3	0.9181	1,992
59	2048	14,668	0.16434	8.1	0.9124	2,022
60	2049	14,937	0.16434	7.8	0.9063	2,050
61	2050	8,681	0.04073	5.3	0.8999	301
62	2051	8,840	0.04073	5.2	0.8930	305
63	2052	9,002	0.04073	5.0	0.8858	309
64	2053	9,167	0.04073	5.0	0.8776	311
65	2054	9,335	0.04073	5.0	0.8691	314

The fourth column shows the labour force participation rate, which for each year is obtained as a product of the following two terms:

1. the non-Aboriginal male participation rate for the appropriate age from Table 2; and
2. the Aboriginal male education adjustment ratio from Table 6.

The fifth column shows the unemployment rate, which for each year is obtained as a product of the following three terms:

1. the non-Aboriginal male unemployment rate for the appropriate age from Table 2;
2. the Aboriginal male unemployment adjustment ratio from Figure 2; and
3. the Aboriginal male education adjustment ratio from Table 7.

The sixth column shows the survival rates from the standard mortality tables. The seventh column computes average annual earnings as the following product:

1. column 3;
2. column 4;
3. one minus column 5; and
4. column 6.

The accumulated value of the seventh column yields lifetime earnings. Table 10 is computed similarly, using data for females.

Lifetime Earnings

Lifetime earnings of an Aboriginal male and female are summarized in Table 11. One of the notable results from Table 11 is the extraordinary return to education achieved by Aboriginal people in Saskatchewan. An Aboriginal dropout lives an economically marginalized life in which the male earns only a little more than a third of a million dollars, and the female earns less than ninety thousand dollars. That is over an entire lifetime. If, however, they persist through university or technical school, they receive up to fourteen times more.

Table 11: Aboriginal lifetime earnings in Saskatchewan

	Male lifetime earnings $	Female lifetime earnings $
An Aboriginal person drops out of school prior to receiving a high school diploma, and does not subsequently obtain a high school equivalency	344,781	89,502
An Aboriginal person obtains a high school diploma either by graduation or by subsequently completing high school equivalency, with no further formal education	861,636	294,350
An Aboriginal person attends a program at a non-university post-secondary institution (a technical school), with no further formal education	1,191,146	646,904
An Aboriginal person attends a program at a university	1,386,434	1,249,246

Another remarkable feature of Table 11 is the difference between the earnings of males and females. An Aboriginal male who contemplates dropping out of high school experiences a drop in his lifetime earnings of: $861,636 - $344,781 = $516,855.

Financially, a male's most important single educational decision is whether to get a high school diploma. On the other hand, the situation for an Aboriginal female is decidedly different. She is economically marginalized with lifetime earnings of less than $90,000 without a high school diploma, yet her lifetime earnings more than triples with a high school diploma. However, in order to achieve (approximate) income parity with her male counterpart, she has to go to university. She will still earn less (principally because female participation rates are lower), but only 10% less. Only by going to university will she be able to earn more than a million dollars in lifetime earnings. This would seem to be a factor explaining why Aboriginal females typically outnumber Aboriginal males at university. At the University of Saskatchewan's College of Arts and Science, Aboriginal females outnumber Aboriginal males by nearly two to one.

In order for the above analysis to influence the behaviour of Aboriginal youth as they make educational decisions, it is necessary to state the numbers in a way Aboriginal children will find compelling.[4] Moreover, the information must be provided at a very young age. Thus, note the following. A brand new, fully loaded Ford F150 Supercab, XLT, 4x4 with a 5.4l V-8 Engine costs $38,600, so for an Aboriginal male to dropout is equivalent of owning

{~~ $861,636 ~-~ $344,781 ~~} over {$38,600} ~=~ 13 of these and pushing them off a cliff! For an Aboriginal female, dropping out as opposed to obtaining a diploma and then attending university is equivalent to owning

{~~ $1,249,246 ~-~ $89,502 ~~} over {$38,600} ~=~ 30 of these trucks and pushing them off a cliff!

Although the above analysis is in terms of educational choices, it also has important implications for reproductive choices. If a young Aboriginal woman gets pregnant before she earns her high school diploma, both she and her partner may well end up dropping out of school, which condemns the couple and their child to a life of poverty. If they drop out, the couple will only have lifetime earnings of: $344,781 + $89,502 = $434,283

On the other hand, if they postpone having children until they both receive their high school diplomas, they will yield lifetime earnings of: $861,636 + $294,350 = $1,155,986

If they both attend technical school, they will have lifetime earnings of: $1,191,146 + $646,904 = $1,837,050

If they both attend university, they will have lifetime earnings of: $1,386,434 + $1,249,246 = $2,635,680

When young people have a child and allow that to end their formal education, they are not doing what is best for themselves or their child.

The above analysis has important implications for the funding of educational programs to enhance the opportunities and increase the success rates for Aboriginal people. Income foregone to an individual represents a loss to society both in terms of what the individual would have produced to earn that income, and also any resulting expenditure on social assistance programs. The half million dollars that a young Aboriginal man wastes by dropping out of high school is a loss to him, but it is also a loss to society. When a young Aboriginal woman drops out of school, society's loss of the value of what she would have produced is great, but probably less than the resulting social assistance payments. It would be better to have programs that would keep both of them in school.

The above analysis has important implications for the economic future of Saskatchewan. Amounts of money of the magnitude shown herein will not be lightly left unclaimed. It is true that some Aboriginal people face impediments and as a consequence do not have significant educational choices. Others, however, supported by their own determination and encouraged by their families, can make choices. Faced with the financial implications of their choices, many Aboriginal people are currently seeking higher levels of education. There will be many more in the future, as the number of role models and mentors increase, and as educational expectations change. With young people making their choices, the average education level for Aboriginal people will rise to that of non-Aboriginal people in Saskatchewan sometime in the twenty-first century.

Endnotes

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1. In particular, the highest rate of return is for Aboriginal females. Among men, Aboriginal males are in a tie for second place.
2. Following Statistics Canada, labour force age is taken to be 15. Prior to age 15, Statistics Canada does not keep track of labour market outcomes.
3. That is, what their earnings would have been if they had been employed. This includes earnings from both full-time and part-time employment.
4. I am indebted for this point to Allan Blakeney, former premier of Saskatchewan, who observed that many educational decisions are made when children are very young. It would be unfortunate, for example, if the above results are only compelling to Aboriginal people who are in Grade 12, since important educational decisions are made long before Grade 12.

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