

**INDICATORS AND CORRELATES OF SOCIAL EXCLUSION AMONG
MANITOBA'S ABORIGINAL WORKING AGE (15-64) POPULATION**

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Executive Summary

This paper has two objectives - those of describing what Census data can tell us about the degree and correlates of social exclusion among Manitoba's working age aboriginal populations and of identifying the questions which this profile raises for further research. The data are from special tabulations of the 1996 Census and describe the population 15 to 64 years of age living in private households in the province, both on and off reserve.

The analysis of the Census data reveals the following:

1. There are major differences in the degree of social exclusion among the three aboriginal populations, with Metis experiencing the lowest degree of social exclusion and Status Indians experiencing the highest degree of social exclusion.
2. The age, gender and family status differences between the non-aboriginal and aboriginal populations do not account for much of the differences in the degree of social exclusion.
3. The rates of return to education, in the form of higher levels of employment, are higher for aboriginals than non-aboriginals. Nonetheless, at each given level of education, aboriginals have lower levels of employment than their non-aboriginal counterparts. This gap narrows as the level of education increases but never completely closes, even with a completed university level of education.
4. Thus, raising the educational attainment levels of the aboriginal populations to those of the non-aboriginal population will, at most, reduce the gap in employment levels by 25 per cent.
5. Reducing the poverty rate among aboriginals will be more strongly influenced by raising their employment levels than their levels of educational attainment.

In turn, these findings raise the following questions for further research into the determinants of social exclusion among aboriginals:

1. What accounts for the substantial differences in outcomes between the Metis, Non-Status and Status Indian populations?
2. What factors account for the lower levels of employment among aboriginal persons having the same level of educational attainment as non-aboriginals?

INTRODUCTION

This paper has two objectives - those of describing what Census data can tell us about the degree and correlates of social exclusion among Manitoba's working age aboriginal populations and of identifying the questions which this profile raises for further research. The data are from special tabulations of the 1996 Census and reflect the population 15 to 64 years of age living in private households in the province, both on and off reserve.

This analysis covers much of the same ground and reaches some of the same conclusions as contained in the report by Jeremy Hull for the Research and Analysis Directorate of Indian and Northern Affairs Canada entitled, *Aboriginal Post-Secondary Education and Labour Market Outcomes Canada, 1996* which looked at the relationship between post-secondary educational attainment and labour market outcomes. An analysis of the 1986 Census data (Drost: 1994), using the individual microdata file, also documented the relationship between education and labour market outcomes.

A DEMOGRAPHIC PROFILE OF THE WORKING AGE ABORIGINAL POPULATIONS OF MANITOBA

In 1996, there were a total of 74,960 persons 15 to 64 years of age living in private households in Manitoba who self-identified as aboriginal, representing 10.6 per cent of the total 15-64 population. Of those, 45,430 were Registered or Status Indians, 26,350 were Metis and 3,180 were non-Status North American Indians. Of the 45,430 Status Indians, 26,265 lived on-reserve and 19,165 lived off-reserve. In addition, a small number of non-aboriginals, Metis and Non-status Indians lived on-reserve. The following tables describe the age structure, gender and family status of these aboriginal groups and compare them to the total adult non-aboriginal population living off reserve.

Table 1: The Age Structure of the Aboriginal and Non-Aboriginal Working Age Populations of Manitoba – 1996

Age Group	Off-reserve			Status Indian	
	Non-aboriginal	Metis	Non-Status Indian	Off-reserve	On-reserve
15 – 29	30.2	42.1	49.7	45.1	48.5
30 – 39	25.1	25.7	24.7	27.3	23.8
40 – 49	22.9	19.0	16.3	16.3	15.0
50 – 64	21.7	13.2	9.4	11.3	12.7
Total	100.0	100.0	100.0	100.0	100.0
Number	629,065	25,860	2,980	19,165	26,265

Table 2: The Gender of the Aboriginal and Non-Aboriginal Working Age Populations of Manitoba – 1996

Gender	Off-reserve			Status Indian	
	Non-aboriginal	Metis	Non-Status Indian	Off-reserve	On-reserve
Female	50.0	50.7	47.3	59.3	48.1
Male	50.0	49.3	52.7	40.7	51.9
Total	100.0	100.0	100.0	100.0	100.0
Number	629,065	25,860	2,980	19,165	26,265

Table 3: The Family Status of the Aboriginal and Non-Aboriginal Working Age Populations of Manitoba – 1996

Family Status	Off-reserve			Status Indian	
	Non-aboriginal	Metis	Non-Status Indian	Off-reserve	On-reserve
Spouse/Partner	61.7	48.0	40.6	41.8	53.7
Lone Parent	4.3	10.7	10.7	19.7	7.4
Never Married Child	18.1	21.8	24.7	16.3	25.1
Non-Family Person	15.9	19.5	24.0	22.3	13.9
Total	100.0	100.0	100.0	100.0	100.0
Number	629,065	25,860	2,980	19,165	26,265

These tables reveal the following key differences between the aboriginal and non-aboriginal adult populations of Manitoba:

- The aboriginal population is considerably younger than the non-aboriginal population;
- The off-reserve Status Indian is more likely to be female;
- The aboriginal population is more likely to be a lone parent or a never-married child than the non-aboriginal population.

In the context of this paper, these differences are noteworthy because they partly account for the differences in the indicators of social exclusion which are described next.

INDICATORS OF SOCIAL EXCLUSION FOR THE WORKING-AGE ABORIGINAL POPULATIONS

The three indicators of social exclusion chosen for examination are – low levels of educational attainment, low levels of participation in the labour market and

low-income. The following tables describe these indicators for the same aboriginal sub-groups, with the exception of the indicators of labour force participation and low-income, for which there is no data for the Status Indian living on-reserve. The low-income indicator is not measured for the on-reserve population because it is based on the per cent of income spent on basic necessities and much of on-reserve housing is provided free of charge and a portion of the family's food is derived from the land.

Table 4: The Highest Level of Schooling of the Aboriginal and Non-Aboriginal Working Age Populations of Manitoba – 1996

Highest Level of Schooling	Off-reserve			Status Indian	
	Non-aboriginal	Metis	Non-Status Indian	Off-reserve	On-reserve
Grade 0-8	5.8	12.3	12.6	16.2	30.0
Some H.S.	27.0	40.0	44.5	40.9	40.8
H.S. Cert.	12.7	12.0	9.1	6.9	4.7
Some Non-University.	5.3	6.4	4.9	7.1	5.3
Complete Non-University	21.3	17.7	14.1	14.9	11.0
Some University	13.6	7.9	10.2	10.3	6.4
Complete University	14.3	3.6	4.7	3.7	1.9
Total	100.0	100.0	100.0	100.0	100.0

Table 5: The Level of Employment of the Aboriginal and Non-Aboriginal Working Age Populations of Manitoba Living Off Reserve – 1995

	Non-aboriginal	Metis	Non-Status Indian	Status Indian
None	17.5	31.8	38.2	53.4
Part-year or Part time	37.4	40.0	33.5	30.7
Full year&Full time	45.1	28.2	28.2	15.8
Total	100.0	100.0	100.0	100.0

Table 6: The Low-Income Status of the Aboriginal and Non-Aboriginal Working Age Populations of Manitoba Living Off Reserve – 1995

	Non-aboriginal	Metis	Non-Status Indian	Status Indian
Low-income	16.4	36.5	45.0	61.6
Not Low-income	83.6	63.5	55.0	38.4
Total	100.0	100.0	100.0	100.0

These three tables reveal the substantially higher risk aboriginal working-age adults face of having low educational attainment, low levels of participation in the labour force and low income.

Table 4 shows that the risk of having less than a high school level of education rises from 33 per cent for non-aboriginals to 52 per cent for Metis adults, 57 per cent for Status and Non-status Indians living off-reserve and to 71 per cent for Status Indians living on-reserve. These are staggering differences! This same dramatic gradient of increasing risk between Metis, Non-Status and Status Indians is evident in the level of employment and incidence of low incomes. Only 18 per cent of non-aboriginals of working age were not employed at all during 1995, compared to 32 per cent of Metis adults, 38 per cent of Non-Status Indians and 53 per cent of Status Indians. Similarly, the risk of low-income status among the off-reserve aboriginal population rises across the three aboriginal groups - from 36 per cent for Metis to 45 per cent for non-status Indians to 62 per cent for Status Indians.

The Effect of Differences in Demographic Composition on Rates of Social Exclusion

Because there are differences in the age structure and gender and family status of the non-aboriginal and aboriginal sub-groups and because each of these characteristics are correlated with each of the indicators of social exclusion, one can ask what the risk of social exclusion would be if the three aboriginal groups had the same demographic structure (age, gender and family status) as the non-aboriginal population.

By standardizing the demographic structure of each aboriginal group to that of the non-aboriginal population and leaving the underlying rates of social exclusion within each demographic sub-group the same, one is able to determine relative importance of the impact of the different demographic structure and the underlying rates on the risk of social exclusion.

Table 7 describes the risk of social exclusion when the demographic structure of each aboriginal population is standardized to that of the non-aboriginal population. Appendix 1 explains the methodology for standardizing the demographic structures.

Table 7

Standardized vs. Actual Rates of Social Exclusion for the Working Age Aboriginal Population Living Off Reserve in Manitoba – 1995 and 1996.

Indicator	Non-Aboriginal	Metis		Non-status Indian		Status Indian	
		Standardized	Actual	Standardized	Actual	Standardized	Actual
<u>Highest Level of Schooling</u>							
- Less than HS	32.8%	52.7%	52.3%	55.7%	57.1%	56.7%	57.1%
- HS Cert.	12.7%	11.2%	12.1%	7.1%	9.0%	6.4%	6.9%
- Some Post-sec.	18.9%	11.5%	14.3%	16.1%	15.1%	15.9%	17.4%
-Complete Post-sec.	35.6%	22.6%	21.3%	21.1%	18.8%	21.0%	18.6%
<u>Level of Employment</u>							
- None	17.5%	30.4%	31.8%	32.9%	38.2%	48.8%	53.4%
- Part time or part year	37.4%	37.9%	40.0%	31.4%	33.5%	30.4%	30.7%
- Full time & full year	45.1%	31.7%	28.2%	34.7%	28.2%	20.8%	15.8%
<u>Low Income Status</u>							
- Low income	16.4%	30.5%	36.5%	37.5%	45.0%	50.5%	61.6%
- Not low income	83.6%	69.5%	63.5%	62.5%	55.0%	49.5%	39.4%

There are several conclusions one can draw from Table 7:

- The different demographic structures of the three aboriginal groups has the least effect on their level of educational attainment and the greatest effect on their risk of being low income;
- The different demographic structures of the aboriginal groups has the least effect on their risk of social exclusion among the Metis and the greatest effect among the Status Indian population.
- The different demographic structures of the aboriginal groups accounts for very little of the difference in the rates of social exclusion between themselves and the non-aboriginal population.

Let us look at the last point, in particular, with respect to the risk of having a low educational attainment (less than high school). Of the total gap in the risk of having less than a high school education between the Metis and Non-Aboriginal populations (+19.5 percentage points), none of that gap is explained by the differences in demographic composition as the standardized rate of having a low level of education is virtually the same. Among the Non-Status and Status Indian populations, the differences in the demographic composition accounts for only 6 per cent and 2 per cent, respectively, of the total gap. Thus, virtually all of the differences in the educational attainment of the aboriginal and non-aboriginal populations are explained by other factors.

THE IMPACT OF EDUCATIONAL ATTAINMENT ON THE LEVEL OF EMPLOYMENT AMONG THE WORKING AGE ABORIGINAL POPULATIONS

Numerous studies have confirmed that differences in educational attainment between people results in differences in their rates of participation in the labour force and wage rates and, thereby, in differences in the risk of being poor.

With these census data, there are two ways in which one can assess the impact of educational attainment on levels of employment. The one is to compare how the level of employment increases as level of education increases among the non-aboriginal and aboriginal populations. This reveals the relative impact of education upon employment among the four populations. The other is to then see how much the lower level of educational attainment of the aboriginal population contributes to their lower levels of employment.

The Relative Impact of Education on Full-Time Employment Among the Aboriginal Populations

Table 8 describes the per cent of adults achieving full-year and full-time employment by their highest level of education for the non-aboriginal and aboriginal populations.

Table 8

The Per cent of Working Age Adults Living Off-reserve with Full-Year and Full-Time Employment by Highest Level of Education – Manitoba, 1995

Highest Level of Schooling	Non-Aboriginal	Metis¹	Non-Status Indian¹	Status Indian¹
Grade 0-8	34.1	17.8	15.8	11.9
Some H.S.	34.3	25.1	29.6	16.0
H.S. Cert.	48.6	34.8	37.9	24.7
Some Non-U.	46.2	32.6	21.6	22.2
Complete Non-U.	54.0	44.7	57.5	30.8
Some University	42.2	37.3	32.9	30.2
Complete U.	56.3	56.6	51.3	48.0

Notes: ¹ These are the employment rates that would have been achieved if each group had the same demographic structure as the non-aboriginal population. Standardizing the rates removes the effect of the differences in demographic composition, thus giving a more accurate picture of the effect of education alone.

This table reveals that educational attainment has a much stronger effect on the likelihood of full employment among aboriginals than non-aboriginals. For non-aboriginals, the likelihood of being employed full-year and full-time increases by 22 percentage points (34% to 56%) as one goes from having a grade 0 to 8 level of education to a completed university education. By comparison, the rise in full-time employment rates is 39 percentage points for Metis, 35 percentage points for Non-Status Indians and 36 percentage points for Status Indian adults. In the language of the economist, education shows a higher 'rate of return' for aboriginal adults than non-aboriginals.

However, the effect of educational attainment on full-time employment rates is much stronger among the aboriginal groups only because their chances of full-time employment are much lower if they have less than a completed university degree. For example, compared to 49 per cent of non-aboriginals with a completed high school certificate with full-time employment, only 35 per cent of Metis, 38 per cent of Non-Status Indians and 25 per cent of Status Indians with a high school degree have full-time employment. This employment gap persists up to the level of a completed university degree and, even at that level of education, Non-Status and Status Indians are less likely to work full-year and full-time.

Thus, there is a persistent and large gap in the level-of-employment returns to education at all but the highest level of educational attainment among the aboriginal and non-aboriginal populations that is not explained by their demographic differences in age, gender and family status.

The Impact of the Educational Differences between the Aboriginal and Non-aboriginal Populations on their Levels of Employment

Tables 4 and 7 reveal that aboriginal adults have lower levels of education attainment than the non-aboriginal population while Table 8 shows that educational attainment has a weaker effect on employment among aboriginal than non-aboriginal adults. Given this, what impact does this lower level of educational attainment among aboriginal adults have on their overall levels of employment?

Table 9 answers this question by describing the change in employment rates which occur when aboriginal adults are assigned the same levels of educational attainment as their non-aboriginal counterparts but retaining their demographic structure.

Table 9

The Effect of Changes in Education on Employment Levels Among the Working Age Aboriginal and Non-aboriginal Populations Living Off-Reserve in Manitoba, 1995

Group	No Employment	Part-year or Part-time	Full-year & Full-time
1. Non-aboriginal	17.5%	37.4%	45.1%
2. Metis			
2.1 Actual Levels of Education	31.8%	40.0%	28.2%
2.2 Non-aboriginal levels of education ¹	24.9%	42.7%	32.4%
% Change in Gap Due to Education	-48%	+103%	-25%
3. Non-Status Indian			
3.1 Actual Levels of Education	38.2%	33.5%	28.2%
3.2 Non-aboriginal levels of education ¹	31.7%	37.4%	30.8%
% Change in Gap Due to Education	-31%	-100%	-15%
4. Status Indian			
4.1 Actual Levels of Education	53.4%	30.7%	15.8%
4.2 Non-aboriginal levels of education ¹	42.8%	36.1%	21.0%
% Change in Gap Due to Education	-30%	-81%	-18%

Note: ¹ These are the levels of educational attainment which would be attained by each aboriginal population if it retained its demographic composition.

It shows that increasing the educational attainment of the three aboriginal populations to that level achieved by a non-aboriginal population with their same demographic composition would result in appreciable improvements in their level of employment. The per cent with no employment would fall by between 30 and 48 per cent and those with part- and full-time employment would increase. The biggest improvements would occur among the Metis adults with the Non-Status and Status Indian adults showing smaller but still substantial improvements in employment levels.

Nonetheless, Table 9 shows that just improving the educational attainment of aboriginal adults will not result in substantially higher rates of employment. In part, this is due to the weaker effect which educational attainment has on employment, as seen in Table 8.

THE IMPACT OF EDUCATIONAL ATTAINMENT AND LEVELS OF EMPLOYMENT ON THE LOW-INCOME STATUS OF WORKING AGE ABORIGINAL POPULATIONS

In a similar fashion, one can extend the analysis of the previous section to that of determining the relative effect of the differences in both educational attainment and level of employment on the higher rates of low income among the three aboriginal populations. However, In this section we will only show the individual and cumulative effect of changing the educational and employment levels of each of the aboriginal populations to those of the non-aboriginal population on their rates of low income. Table 10 presents the results:

Table 10

The Effect of Changes in Education and Employment Levels on the Rate of Low-Income Among the Working Age Aboriginal Populations Living Off-Reserve in Manitoba - 1995

Group	Changes in Education Levels Only	Changes in Education and Employment Levels
1. Non-aboriginal	16.4%	16.4%
2. Metis		
2.1 Actual Levels of education/employment	36.5%	36.5%
2.2 Non-aboriginal levels of education and employment ¹	34.1%	25.9%
% Change in Gap Due to education/employment	- 12%	- 53%
3. Non-Status Indian		
3.1 Actual Levels of education/employment	45.0%	45.0%
3.2 Non-aboriginal levels of education and employment ¹	43.3%	35.6%
% Change in Gap Due to education/employment	- 6%	- 33%
4. Status Indian		
4.1 Actual Levels of education/employment	61.6%	61.6%
4.2 Non-aboriginal levels of education and employment ¹	59.8%	41.6%
% Change in Gap Due to education/employment	- 4%	- 44%

Note: ¹ These are the levels of educational attainment and employment which would be attained by each aboriginal population if it retained its demographic composition.

Among the Metis, the rate of low-income is 20 percentage points higher than the non-aboriginal rate (36.5-16.4). Table 10 shows that this gap is reduced by only 12 per cent (from 20.1 to 17.7) if just their level of educational attainment was that of the non-aboriginal population. However, if both their level of education and employment was that of the non-aboriginal population, then the gap would drop by 53 per cent (from 20.1 to 9.5). Thus, raising the employment rates among the Metis population has a much stronger effect on reducing the incidence of low-income than improving their educational levels.

This stronger effect of employment than education on the incidence of low income also was documented by an HRDC-sponsored analysis of the economic performance of off-reserve aboriginal Canadians (HRDC: 2002).

The same story holds true for the Non-Status and Status Indian populations. For Non-Status Indians the low-income gap would decline by only 6 per cent if just their level of educational attainment was raised to that of the non-aboriginal population but by 33 per cent if both their levels of education and employment were increased to their non-aboriginal counterparts. For the Status Indian population, education alone has a similar weak effect with the impact of employment having a stronger effect, reducing the gap by a further 40 per cent.

KEY FINDINGS

Some of the findings of this paper are not news to those who have studied the circumstances of Canada's aboriginal population. Compared to the non-aboriginal population, it is younger, more likely to be lone parent and have substantially lower levels of educational attainment and employment and higher levels of income poverty.

However, this multivariate analysis of Census data has revealed the following facts about Manitoba's working-age aboriginal population, some of which have been confirmed by other research using both Census and non-Census data:

1. There are major differences in the degree of social exclusion among the three aboriginal populations, with Metis experiencing the lowest degree of social exclusion and Status Indians experiencing the highest degree of social exclusion (Tables 4 to 6).
2. The age, gender and family status differences between the non-aboriginal and aboriginal populations do not account for much of the differences in the degree of social exclusion (Table 7).
3. The rates of return to education, in the form of higher levels of employment, are higher for aboriginals than non-aboriginals. Nonetheless, at each given level of education, aboriginals have lower levels of employment than their

non-aboriginal counterparts. This gap narrows as the level of education increases but never completely closes, even with a completed university level of education (Table 8).

4. Thus, raising the educational attainment levels of the aboriginal populations to those of the non-aboriginal population will, at most, reduce the gap in employment levels by 25 per cent (Table 9).
5. Reducing the poverty rate among aboriginals will be more strongly influenced by raising their employment levels than their levels of educational attainment (Table 10).

IMPLICATIONS FOR FURTHER RESEARCH

These key findings beg the following questions which future research could focus on answering:

1. What accounts for the substantial differences in outcomes between the Metis, Non-Status and Status Indian populations?
 - Are the factors the same as those which explain the differences between the non-aboriginal and aboriginal populations or are they different?
 - Are there differences in outcomes according to the length of time an aboriginal person has lived in non-aboriginal communities? Does the pattern of gradually improving circumstances among immigrant populations, as their duration in Canada increases, hold true with aboriginal persons?
 - Are there differences in outcomes among non-Reserve and Reserve communities that face the same general economic opportunities/constraints and what accounts for these differences?
 - What features of Reserve communities account for the differences in the outcomes which occur across these communities?

In order to examine the role of length of time lived in a non-aboriginal community, one could focus on Status Indians living off-reserve and, using special tabulations of the Census data, correlate mobility status and place of residence one and five years ago with indicators such as highest level of schooling. Focusing on key sub-groups like young adults 15-19 might serve to sharpen the analysis.

The only study known to the author which attempted to look at the characteristics of Reserve and 'comparable' non-Reserve communities was that undertaken by the staff of Indian and Northern Affairs Canada (INAC: 1997). Using data from the 1971, 1976, 1981, 1986 and 1991 Censuses, the researchers matched each reserve with a non-reserve community located in the same area and having approximately the

same population. They then compared the socio-economic and demographic characteristics of these matched communities with those of the reserve communities and the total Canadian population and determined how much of the difference between reserve communities and the Canadian population was due to their geographical size and location.

This type of analysis could be updated by carrying out the same kind of exercise with the 2001 Census data and extended by collecting comparable indicators of those aspects of the community known or hypothesized to be correlated with key indicators of social exclusion like levels of education and labour force participation. The community indicators would be created from Census and administrative data maintained by INAC. One would build an analytical file with each community as the unit of observation and use regression-type analyses to determine the factors which affect the degree of social exclusion experienced by members of each community.

2. What factors account for the lower levels of employment among aboriginal persons having the same level of educational attainment as non-aboriginals?
 - To what extent are the lower levels of employment due to intra-personal factors such as - work ethic, physical and mental health status and to institutional factors such as discrimination by employers?

There is a very limited role which further analysis of the Census data can play in answering this question. However, special tabulations which looked at *current* indicators of labour market participation, such as whether employed and hours employed and controlled for demographic characteristics (age, gender, family status, highest level of schooling, disability status), community size and location and level of dependency on government transfers the previous year could serve to sharpen the question. The alternative would be an analysis of the Census micro-data file on individuals.

In approaching these questions, there are two theoretical perspectives which can be taken. The one is to look for the causes within the individual and the other is to look for the causes within the operation of the institutions which affect the lives of the individuals. The first is often pejoratively referred to as 'Blaming the Victim'. In a similar vein, the second could be called 'Blaming the Institution'.

To do full justice to these questions, both perspectives are likely needed. For example, we know that the rates of involvement with the child welfare system are much higher for aboriginals than non-aboriginals. We also know, from the early analyses of the National Longitudinal Survey of Children and Youth (NLSCY), that the quality of parenting has a very strong impact on a child's readiness to learn and their success in the school system (see, Ryan and Adams 1998). Putting these two pieces of evidence together indicates that part of reason for the lower educational attainment of aboriginal children may well rest with the higher

incidence of inadequate parenting among aboriginal families. Analyses of the NLSCY could shed light on the degree to which this causal pattern prevails among aboriginal and non-aboriginal families in Canada.

A focus on institutional behaviour is also warranted. For example, a careful study of some years ago by the Social Planning Council of Toronto of the hiring practises of employers revealed that applicants having a foreign name or accent but identical levels of qualifications were less likely to get a job interview. More recently, a study of aboriginal high school students and school leavers in Winnipeg's inner city (Silver et al: 2002) revealed that aboriginal students did experience racist comments and felt that their teachers did not understand them. Most indicated they would prefer to have an aboriginal content to the curriculum and more aboriginal teachers on staff. The authors concluded that the school system was not sufficiently geared to their needs to enable them to succeed in it.

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Appendix 1

Methodology for Standardizing Rates of Social Exclusion

The starting point for producing standardized rates of social exclusion is the production of separate multivariate tables for the non-aboriginal and each of the aboriginal populations which show the rate of social exclusion separately for each demographic sub-group comprising each population. Table A1 below, provides an example of such a table which displays the level of employment separately for the non-aboriginal and metis populations for each combination of gender and family status.

In order to understand the logic of standardization, one needs to see that the overall rate for a particular population is the weighted average of the separate rates that prevail for each sub-group within that population. For example, if one looks at the per cent of all Metis with no employment (31.8%), that rate is the sum of the product of each sub-group percent multiplied by the number of people in that sub-group then divided by the total number. To use our example,

$$31.8 = ((31.8 \times 6,140) + (51.3 \times 2,380) + \dots + (28.9 \times 3,015)) / 25,555$$

In a similar fashion, one can calculate the per cent with part-time/part-year and full-time/full-year employment for the total population. In effect, the overall rate for a total population is made up of two factors - the rates within each sub-group and the number of people in each sub-group.

Likewise, the differences in the overall rates between two populations are due to two factors - the differences in the rates between each sub-group and the differences in the proportions of the total population represented by each sub-group. This can be seen by comparing the differences in the overall per cent of those with no employment between the non-aboriginal and metis populations - 17.5 vs. 31.8. One can see that, for each sub-group, there are a higher proportion of Metis than non-aboriginals with no employment. However, there are also a higher proportion of Metis in those sub-groups with a high proportion of no employment, such as female lone parents and never-married children. Thus, both these factors are producing the overall higher rates of those with no employment.

In order to control for the differences in the demographic structure of the two populations, in order to see more clearly the effect of the differences in just the rates, one simply recalculates a weighted average rate by multiplying the rate within each Metis sub-group by the number of non-aboriginals in that sub-group, summing those and dividing by the non-aboriginal total population. This results in the following standardized per cent of Metis with no employment:

$$29.4 = ((31.8 \times 198,525) + (51.3 \times 22,285) + \dots + (28.9 \times 55,605)) / 627,885$$

This estimate of 29.4 per cent indicates that, if the Metis population had the same gender and family status composition as the non-aboriginal population, only 29.4 per cent would have no employment, compared to the actual 31.8 per cent. Then, by comparing the actual and standardized rates to those of the non-aboriginal population, one can calculate the contribution which the different demographic structure makes to the overall gap in rates. In this example, the demographic differences account for 17 per cent of total gap in those with no employment $((31.8 - 29.4)/(31.8-17.5))*100$.

In the foregoing example, both gender and family status were set equal to that of the non-aboriginal population. However, this process of standardizing rates can be used to examine the separate effect of each variable. Doing so requires a two-step weighting process. For example, to look at the effect of just the family composition of the two groups on the total gap in levels of employment, one first would calculate a weighted average using the non-aboriginal weights for each gender. The separate weighted averages for females and males would be:

$$36.8 = ((31.8 \times 198,525) + (51.3 \times 22,285) + (50.0 \times 48,870) + (37.5 \times 43,880)) / 313,560$$

$$22.1 = ((15.0 \times 189,240) + (29.8 \times 4,590) + (36.0 \times 64,940) + (28.9 \times 55,605)) / 314,375$$

Then, one would multiply these weighted averages by the number of Metis females and males and divide the sum by the total Metis population. This would result in a new weighted average of 29.2 per cent for the entire Metis population and would reflect the impact of just the differences in the family composition of the two populations.

This two-stage weighting process was used to determine the unique effect of just the differences in education on low-income status reported on in Table 10.

Table A1

Employment Levels for the Non-Aboriginal and Metis Working Age Populations by Gender and Family Status

Non-Aboriginals

Level of Employment	Female				Male				Total
	Spouse/ Partner	Lone Parent	Never Married Child	Non-Family Person	Spouse/ Partner	Lone Parent	Never Married Child	Non-Family Person	
None	21.2%	24.1%	27.9%	21.3%	7.5%	11.7%	24.3%	16.0%	17.5%
Part –time	40.0%	35.0%	59.2%	35.6%	23.6%	24.3%	56.6%	36.4%	37.4%
Full – time	29.9%	40.9%	12.9%	43.1%	68.9%	64.1%	19.0%	47.6%	45.1%
Number	198,525	22,285	48,870	43,830	189,240	4,590	64,940	55,605	627,885
Per cent	31.6%	3.5%	7.8%	7.0%	30.1%	0.7%	10.3%	8.9%	99.9%

Metis

Level of Employment	Female				Male				Total
	Spouse/ Partner	Lone Parent	Never Married Child	Non-Family Person	Spouse/ Partner	Lone Parent	Never Married Child	Non-Family Person	
None	31.8%	51.3%	50.0%	37.5%	15.0%	29.8%	36.0%	28.9%	31.8%
Part –time	36.5%	29.4%	42.8%	37.5%	38.3%	40.4%	50.8%	46.8%	40.0%
Full – time	31.7%	19.3%	7.2%	24.9%	46.7%	29.8%	13.2%	24.4%	28.2%
Number	6,140	2,380	2,360	1,985	6,180	285	3,210	3,015	25,555
Per cent	24.0%	9.3%	9.2%	7.8%	24.2%	1.1%	12.6%	11.8%	100.0%