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Aboriginal/Non-Aboriginal Wage Gaps in Canada: Evidence from the *2011 National Household Survey*

Écarts salariaux entre Autochtones et Non-Autochtones au Canada à partir des données de *l'Enquête nationale auprès des ménages* de 2011

Brechas salariales entre Canadienses aborígenes y no aborígenes: Evidencias de la *Encuesta Nacional de Hogares 2011*

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Article abstract

The fact that Aboriginal peoples in Canada have experienced sizable and persistent earnings disadvantages is well documented. However, the most recent estimates of Aboriginal-non-Aboriginal wage differentials utilize data from the *2006 Census*. The present analysis seeks to address this gap by providing more recent estimates of Aboriginal earnings disparities for various groups of full-time, full-year workers using data from the *2011 National Household Survey* (NHS).

We estimate and decompose Aboriginal/non-Aboriginal wage gaps at the mean for a number of different Aboriginal and non-Aboriginal groups living on- and off- reserve. We find that, consistent with previous literature, Aboriginal peoples continue to experience sizable earnings disparities relative to their non-Aboriginal counterparts. We find that Aboriginal Identity respondents living on-reserve experience the largest earnings disparity, followed by males who identify as First Nations and live off-reserve. Respondents who report Aboriginal ancestry, but who do not identify as Aboriginal persons, experience the smallest earnings disadvantage.

Results of the decomposition analysis reveal that, unsurprisingly, educational attainment is the most salient factor contributing to the explained portion of the earnings disparity between Aboriginal and non-Aboriginal Canadians. Somewhat disconcerting, we find that where wage disparities are the largest, the explained proportion of the gap tends to be the smallest. Although previous studies can only serve as a rough comparator, relative to earlier estimates of Aboriginal/non-Aboriginal wage differentials using previous census periods, we find that earnings disparities among Aboriginal ancestry groups have remained relatively constant; wage gaps for Aboriginal identity groups have narrowed slightly; while the earnings disadvantage has widened for Aboriginal identity persons living on-reserve.

Research and policy programs aimed at improving educational attainment and access to employment among Indigenous peoples are likely worthwhile initiatives. However, more research is needed on the potential role of discrimination in contributing to the persistent earnings disparities between Indigenous and non-Indigenous persons in Canada.

Aboriginal/Non-Aboriginal Wage Gaps in Canada: Evidence from the *2011 National Household Survey*

Danielle Lamb, Margaret Yap and Michael Turk

Using data from the *2011 National Household Survey*, the present analysis seeks to provide a recent estimate of Aboriginal/non-Aboriginal earnings disparities for a sample of employees who work full-time, full-year. Wage gaps are estimated and decomposed at the mean for several Aboriginal identity groups as well as those living on- and off-reserves. Consistent with previous research, the results of the present analysis find earnings disparities are, in general, larger for Aboriginal Identity respondents (i.e. those who identify themselves as Aboriginal persons), as opposed to those who report having Aboriginal ancestry, but who do not identify as Aboriginal persons. Among Aboriginal identity groups living off-reserve (First Nations, Métis and Inuit), First Nations experience the largest earnings inequality, followed by Inuit males and Métis. Aboriginal identity respondents living on-reserve experience by far the largest earnings disadvantage of all the groups considered in the analysis. The study concludes by discussing the implications of the findings for future research, with an emphasis on the importance of addressing the potential role of discrimination in labour markets.

KEYWORDS: Indigenous Peoples, labour market outcomes, employment, earnings.

Introduction

Increasing income inequality is a growing concern for many individuals and policymakers in Canada. Relative disparities in the labour market outcomes of

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Indigenous peoples in Canada are well documented (e.g. Calver, 2015; Wilson and Macdonald, 2010). A small body of research has focused specifically on the sizable and persistent differences in earnings between Aboriginal and non-Aboriginal Canadians (e.g. George and Kuhn, 1994; De Silva, 1999; Maxim *et al.*, 2001; Mueller, 2004; Pendakur and Pendakur, 2011; Lamb, 2013; Feir, 2013). Unfortunately, however, this literature has become rather dated as, to our knowledge, the last estimates of wage differentials between Indigenous and non-Indigenous Canadians use data from the *2006 Census* as the latest year (Pendakur and Pendakur, 2011; Lamb, 2013; Feir, 2013). In the years since 2006, the Great Recession of 2008-2009 brought substantial economic instability to many nations, including Canada. A recent study measuring the estimated probabilities of unemployment between Aboriginal and non-Aboriginal groups, for example, found that Aboriginal people were disproportionately burdened by the 2008-2009 downturn (Lamb, 2015). Additionally, issues related to Indigenous peoples have often been at the forefront of recent policy and public discourse. In this context, a more recent account of the earnings disparity experienced by Indigenous peoples in Canada is needed. The present analysis seeks to explore this gap by estimating Aboriginal/non-Aboriginal wage gaps for several Aboriginal groups using data from the *2011 National Household Survey (NHS)*.

The paper is structured as follows: we first present a brief overview of some of the more recent estimates of Aboriginal/non-Aboriginal wage gaps, followed by a discussion of the data and methodological approach taken in the study. We then present our results and conclude the analysis with a discussion of the findings with particular emphasis on practical and policy considerations that might be explored in the hopes of surfacing factors that can help mitigate Aboriginal/non-Aboriginal wage disparities. The final point closing the discussion reflects upon areas of future work that may contribute to our understanding of Aboriginal earnings disparities that move beyond the common quantitative approaches taken here and in previous work on the topic.

Background Information

Aboriginal Wage and Income Gaps in Canada over Time

In addition to numerous descriptive reports (e.g. Drost and Richards, 2003; Wilson and Macdonald, 2010), a small but growing body of literature has emerged examining Aboriginal/non-Aboriginal wage differentials in Canada (e.g. George and Kuhn, 1994; De Silva, 1999; Mueller, 2004; Pendakur and Pendakur, 2011; Lamb, 2013; Feir, 2013). Building on the influential work of George and Kuhn (1994), the present analysis will provide a brief synopsis of some of the more recent studies to examine Canadian Aboriginal/non-Aboriginal wage

gaps. Aside from the influential work of George and Kuhn (1994), we focus on studies published since 2010 that focus solely on Aboriginal earnings differentials in Canada. Even though this review is illustrative rather than exhaustive, it underscores the fact that, regardless of the dataset or methodological approach used, significant earnings disparities between Aboriginal and non-Aboriginal Canadians continue to persist[1].

To our knowledge, one of the first empirical examinations of Aboriginal/non-Aboriginal wage differentials was that of George and Kuhn (1994). Using data from the 1986 public use file of the *Canadian Census*, the authors estimate earnings differentials for respondents who work full-time, full-year and identify as having either *only* Aboriginal origins or *any* Aboriginal origins (i.e. Aboriginal mixed with other ethnic origins) relative to non-Aboriginal Canadians. George and Kuhn (1994) find a raw wage gap of 11.6 percent and 6.5 percent for males and females respectively who report having any Aboriginal origins. Among those reporting only Aboriginal origins, the earnings penalty is larger at 18.1 percent and 10.8 percent for males and females respectively. Decomposition of the mean earnings differentials reveals that, for both males and females, a larger share of the disparity is attributable to differences in wage-determining characteristics (i.e. age, education, training, etc.) for those who report only Aboriginal origins as opposed to respondents with mixed Aboriginal ancestry (George and Kuhn, 1994). Finally, the authors report that Aboriginal persons living on-reserves experience an *additional* earnings disadvantage of 14.4 percent and 8.7 percent for males and females respectively, relative to Aboriginal persons who live off-reserves (George and Kuhn, 1994).

Using master files of the *Canadian Census* for the years 1996, 2001 and 2006, Pendakur and Pendakur (2011) estimate wage gaps for a number of Aboriginal groups, including: Aboriginal respondents who have legal Registered Status; respondents who report having Aboriginal ancestry, but who do not identify as Aboriginal persons; and several groups of self-reported Aboriginal identities (Métis, Inuit and North American Indian[2]), who identify as Aboriginal persons, but who do not have legal Registered Status. The study further separates the Registered population into those living on-reserve and off-reserve. The authors employ quantile regressions to estimate changes in Aboriginal/non-Aboriginal wage gaps at different points along the earnings distribution. The findings suggest that among males in 2006, for example, earnings disparities are largest for those living on-reserve at approximately 48 percent, followed by those who identify as First Nations at 18 percent. Earnings differentials are smallest for males who report multiple Aboriginal ancestries (i.e. having different ethnic origins, at least one of which is identified as Aboriginal) at roughly 6 percent. Among females, wage penalties are smaller and range from 9 to 15 percent, with

women reporting other Aboriginal identities (i.e. not identifying as Inuit, Métis or First Nations) fairing the worst. Interestingly, Inuit women actually experience a sizeable earnings advantage of roughly 33 percent relative to non-Aboriginal women (Pendakur and Pendakur, 2011). Furthermore, for most Aboriginal groups, earnings gaps have narrowed slightly over the three census periods examined in the study (Pendakur and Pendakur, 2011).

The estimates of various Aboriginal/non-Aboriginal wage differentials obtained from Pendakur and Pendakur (2011) do not allow for the possibility that different Aboriginal groups may receive different returns to the same wage-determining characteristics, nor does this approach permit the decomposition of earnings gaps into their respective endowments and coefficients portions. Lamb (2013) builds upon the work of Pendakur and Pendakur (2011), addressing some of these constraints by estimating separate earnings equations for several Aboriginal and non-Aboriginal groups living both on-and-off reserves using data from the 1996 and 2006 master files of the *Canadian Census*. The findings are consistent with previous research in that earnings disparities are largest for those living on-reserve, followed by those who identify as First Nations. Respondents who report having Aboriginal origins, but who do not identify themselves as Aboriginal persons, experience the smallest earnings differential (Lamb, 2013). These results echo a rather troubling trend noted in previous studies that the earnings disparity between Aboriginal and non-Aboriginal persons tends to widen the more *intensely* one identifies as an Aboriginal person as seen in the difference between the Aboriginal origins group as compared to the other identity groups, most significantly those who identify as First Nations (George and Kuhn, 1994; Pendakur and Pendakur, 2011; Lamb, 2013). Decomposition of the mean earnings gap reveals that, for groups living off-reserve (depending on the particular group), roughly 40-98 percent of the earnings gap was attributable to differences in observable characteristics between Aboriginal and non-Aboriginal groups. From 1996 to 2006, wage differential estimates at various points on the earnings distribution reveal a more pronounced improvement in the relative position of Aboriginals at the 90th percentile and a widening of the gap at the 10th percentile (Lamb, 2013).

Feir (2013), using data from the 1996 and 2006 *Census*, estimates Aboriginal/non-Aboriginal earnings gaps for a sample of respondents aged 25 to 55 years, living both on-and-off reserves. Using weekly earnings as the dependent variable, the study finds that earnings gaps are smaller comparing weekly earnings than when the gap is computed using annual earnings. In fact, the author states that up to half of the Aboriginal/non-Aboriginal wage gap may be attributed to differences in weeks worked (Feir, 2013). The findings of the study are consistent with the pattern established in other works cited here: that Aboriginals living on-

reserve face the largest earnings penalty; wage gaps are smaller for respondents identifying as Métis as compared with First Nations; and disparities in weekly earnings are typically smaller for females as compared to males. Furthermore, the study finds a narrowing of the annual earnings gap for all off-reserve groups over the 10-year period examined. Considering weekly earnings, Métis males and females have experienced a less substantial narrowing of the gap (as compared to that observed for annual earnings), while the weekly earnings gap for male First Nations was consistent from 1995 to 2005. For respondents living on-reserve, the disparity in annual and weekly earnings has actually increased across the two census periods. Decomposing the various earnings gaps, the study finds that, for the off-reserve groups, more than half of the difference is attributable to observable characteristics, whereas among those living on-reserve, the vast majority of the wage disparity is unexplained, (i.e. due to differential returns to the various wage determining characteristics included in the models) (Feir, 2013).

Contextual Realities affecting the Labour Market Outcomes of Aboriginal Peoples in Canada

The determination of employment income based on human capital theory emphasizes various individual, observable wage-determining attributes. As mentioned in the preceding section, for example, much of the earnings disparities between Aboriginal and non-Aboriginal groups can be attributed to differences in human capital characteristics such as age, education, occupation and health. There is, however, an endogeneity inherent in such techniques in that they fail to adequately capture the sociocultural factors, both contemporary and historic, which have come to shape the context in which wages are earned in the first place. Wilson and Macdonald (2010), for example, assert that the long history of colonialism experienced by Indigenous peoples in Canada, and the lasting scars of the residential school system (e.g. Indigenous and Northern Affairs Canada, 2014), have a profound impact on present-day income inequalities between Aboriginal and non-Aboriginal groups. The results of the present analysis and implications that follow must be viewed within this contextual reality.

Defining Aboriginal Identity in NHS Data

As described in greater detail in the following section, the present analysis distinguishes between several groups of Indigenous and non-Indigenous Canadians based on self-reported identity as well as whether or not the respondent lives on or off a reserve. We further differentiate between respondents who report having Aboriginal ancestry, but who do not presently identify themselves as Aboriginal persons, from those who currently identify as Aboriginal persons. As mentioned

by Maxim *et al.* (2001, 467), for example: "Too often, we view Indigenous populations as homogenous when they are actually distinct subpopulations of peoples with unique characteristics." We therefore also separate the Aboriginal Identity population living off-reserve into three identity groups: First Nations, Inuit and Métis. Throughout the analysis we utilize the term *Aboriginal*, as this is the terminology employed in the NHS questionnaire to which respondents self-identify. Although beyond the scope of this study, we acknowledge the importance of terminology in that such taxonomies have various cultural as well as legal implications. The federal government, for example, has recently moved to employ the term *Indigenous* (as opposed to Aboriginal) to be more in line with the *United Nations Declaration on the Rights of Indigenous Peoples* (i.e. Joseph, 2016). What is germane to the present analysis, however, is the recognition of the fact that the demarcation between various groups and subgroups may influence the measured outcomes associated with each of the groups (e.g. Walter and Andersen, 2013). This is an important point to bear in mind as the decision to self-identity as an Aboriginal person, or as having Aboriginal ancestry, is perhaps influenced by a number of sociocultural considerations, factors which may in turn also be correlated with earnings. Trejo (2006), for example, suggests that intermarriage between ethnic groups is one factor that may contribute to the high degree of subjectivity in self-reported measures of race/ethnicity. This may help to explain the sizable group of respondents in our sample who report having Aboriginal ancestry, but who do not identify themselves as Aboriginal persons. Add to this the history of colonization experienced by Indigenous peoples in Canada that threatened Indigenous identities. The measure of Aboriginal identity in statistical data is culturally complex and may be itself endogenous with earnings as well as other labour market outcomes.

Given the different datasets, sample restrictions and methodological approaches, it is difficult to track the precise trend in the Aboriginal/non-Aboriginal wage gap over time. However, the studies reviewed here paint a very similar picture. While Aboriginal wage disparities have generally narrowed over the decade 1996 to 2006, a sizable earnings disadvantage remains and is largest for those living on-reserve (Pendakur and Pendakur, 2011; Lamb, 2013; Feir, 2013). From the studies that decompose Aboriginal/non-Aboriginal wage gaps, differences in important wage determining characteristics are often cited as '*explaining*' substantial portions of the observed disparities. Differences in education (George and Kuhn, 1994; Lamb, 2013; Feir, 2013), age, occupation (Lamb, 2013; Feir, 2013), weeks worked, disability and industry (Feir, 2013) are cited as among the most salient contributors to the Aboriginal/non-Aboriginal wage gaps. Previous studies also underscore the importance of Aboriginal identity, with marked differences in earnings observed across identity groups and between the on-and-off-reserve populations (George and Kuhn, 1994; Pendakur and Pendakur, 2011;

Lamb, 2013; Feir, 2013). The present study seeks to update this literature by providing more recent estimates of the Aboriginal/non-Aboriginal earnings gap for several Aboriginal groups living on- and off-reserve.

Data and Methodology

The data for the present analysis are taken from the *2011 Canadian National Household Survey* (NHS). The NHS was a part of *Statistics Canada's Census Program* and replaced the traditional long-form census questionnaire in 2011. The NHS was distributed to a random sampling of roughly one-third of the private dwellings in Canada, which included persons living in each province and/or territory as well as those living on reserves. Data collection took place between May and August of 2011. Participation in the NHS was voluntary and the response rate was 68.6 percent (Statistics Canada, 2013).

Given that the focus of the present analysis is on earnings differentials, the sample was restricted to individuals 18 years of age and older who reported positive earnings from wages and salaries. Respondents who did not work in 2010 and those who were self-employed (or unpaid family workers) were not included in the study. Table 1.1 details the proportion of Aboriginal and non-Aboriginal respondents across employment categories (i.e. employed, self-employed, unemployed and/or not in the labour force). We further restrict the sample to include only those who worked full-time, full year (FTFY). We define full-time, full-year employment as working 30 hours or more in most weeks for at least 48 weeks of the year. Admittedly this restriction introduces additional potential for sample selection bias, a point to which we will return when discussing the limitations of the present analysis. The focus on full-time-full-year employees does, however, allow for greater consistency in that variations in earnings among groups are less sensitive to differences in weeks or hours worked. Table 1.1 illustrates the proportion of Aboriginal and non-Aboriginal identity groups employed in full-time-full-year work in 2010.

We begin by estimating a series of OLS models where the natural logarithm of gross annual earnings from wages and salaries is regressed on a number of observable characteristics. We then employ the well-known Blinder (1973)-Oaxaca (1973) technique to decompose mean earnings gaps into two components: an *explained* portion, which is due to differences in the observable characteristics of Aboriginal and non-Aboriginal Canadians, and an *unexplained* portion, which is due to the differential returns to those same characteristics. For illustrative purposes, using the presentation of male-female earnings gaps in Gunderson (1979), we adapt the following to the decomposition of Aboriginal/non-Aboriginal wage differentials; where subscripts NA and A denote non-Aboriginal and Aboriginal respondents respectively, β represents a set of estimated coefficients, including

an intercept and X refers to a vector of observable characteristics described in detail in the following paragraph (Gunderson, 1979: 479).

The mean log earnings for non-Aboriginal and Aboriginal groups can be written as:

$$\overline{LnW_{NA}} = \Sigma\beta_{NA}\overline{X}_{NA}$$
$$\overline{LnW_{A}} = \Sigma\beta_{N}\overline{X}_{A}$$

The Oaxaca decomposition of the difference in mean earnings between non-Aboriginal and Aboriginal groups ($\overline{LnW_{NA}} - \overline{LnW_{A}}$) can be written as:

$$(\overline{LnW_{NA}} - \overline{LnW_{A}}) = \Sigma(\beta_{NA} - \beta_{A})\overline{X_{A}} + \Sigma\beta_{NA}(\overline{X}_{NA} - \overline{X}_{A})$$

Where the second part of the above expression ($\Sigma\beta_{NA}(\overline{X}_{NA} - \overline{X}_{A})$) represents the endowments or 'explained' portion of the earnings gap, and the first term ($\Sigma(\beta_{NA} - \beta_{A})\ \overline{X}_{A}$) represents the coefficients or 'unexplained' portion of the gap.

The above illustrative example assumes that the wages of non-Aboriginal persons are free from discrimination and, as such, serves as a suitable benchmark against which to gauge the relative earnings of various Aboriginal groups. Jann (2008: 4) summarizes what others have suggested in that it is possible that both groups simultaneously experience discrimination such that "the undervaluation of one group comes along with the overvaluation of the other (e.g. Cotton, 1988)." To address this concern, following Jann (2008), we use the 'pooled' option, which uses the coefficients from a model including both Aboriginal and non-Aboriginal groups as the reference coefficients with an additional control variable denoting membership in either an Aboriginal or non-Aboriginal group (Jann, 2008: 12). We further sub-decompose the endowments (explained) and coefficients (unexplained) portions of the Aboriginal/non-Aboriginal wage gap to reveal the contribution of each variable in the analysis to the two aforementioned components. Our presentation of the detailed sub-decomposition, however, focuses on the contribution of various predictors to the explained portion only, as the extent to which any individual variable contributes to the unexplained portion of the earnings gap is highly dependent on the choice of omitted reference category (e.g. Jann, 2008)[3]. Finally, all estimation models are weighted using STATA's probability weight option and the person-level weights provided in the NHS.

We estimate models separately by gender for each Aboriginal and non-Aboriginal group. The sample is first divided into groups living off-reserve and those living on-reserve. The off-reserve sample is separated into three mutually exclusive groups: non-Aboriginals, which serve as the benchmark comparator; Aboriginal ancestry only, those who report having Aboriginal ancestry, but do not identify themselves as Aboriginal persons; and Aboriginal identity, which includes all respondents who self-identify as an Aboriginal person. Models are also estimated for several Aboriginal Identity groups living off-reserve: First Nations, Métis and

Inuit. The on-reserve sample is divided into two groups: non-Aboriginal and Aboriginal identity. The non-Aboriginal on-reserve group includes respondents who live on-reserve, but who do not identify as Aboriginal persons (nor do they report having any Aboriginal origins) to maintain consistency using only non-Aboriginals as the benchmark for comparison. The Aboriginal identity on-reserve group refers to those who live on-reserve and identify as an Aboriginal person. (Persons living on-reserve and reporting Aboriginal ancestry only are excluded).

The models estimated in the study include a number of individual-level wage determining characteristics. Of particular interest in this analysis are the human capital variables, which include measures of highest level of education, occupation and age. Occupational categories are based on the *2011 National Occupational Classification* broad categories. Unfortunately, occupation was measured for the NHS reference week of May 7-11, 2011 and therefore serves as a proxy for the occupation of the respondent in 2010. We do recognize the possibility that some respondents may have changed occupations from 2010 to 2011, which would most certainly affect their wages. However, the use of very broad occupational categories hopefully mitigates this concern, at least to an extent. The models also include variables related to language (mother tongue and self-reported proficiency in either or both official languages), marital status, the presence of at least one child under the age of 14, geographic region of residence, and an indicator noting if the respondent lives in a large or small urban area as opposed to a rural area. All models also include an indicator of whether or not the respondent is an immigrant (as opposed to born in Canada). The non-Aboriginal and Aboriginal ancestry only models contain a visible minority indicator, which is not included in the Aboriginal identity models as these two groups (i.e. visible minorities and Aboriginal identity) are mutually exclusive. Since the sample is restricted to full-time, full-year employees only, we do not control for hours worked[4].

Results

Descriptive Statistics

Table 1.1 displays the proportion of the sample who are employees, self-employed or unemployed/not in the labour force after restricting the sample to include only respondents between the ages 18-65 who were not unpaid family workers.

It is evident that Aboriginal groups are less likely to be self-employed than non-Aboriginals. Aboriginal Identity respondents are more likely to be unemployed or not in the labour force as compared to both non-Aboriginal respondents and those reporting Aboriginal Ancestry only. Note that, at this

TABLE 1.1
Proportion of Sample by Labour Force Activity and Aboriginal Identity

	Employee	Self- Employed	Unemployed or Not in Labour Force
Non-Aboriginal	74%	9%	17%
Aboriginal Identity	69%	5%	27%
Aboriginal Ancestry Only	75%	7%	17%

Note: Percentages do not add up to exactly 100% due to rounding.

point, there is no distinction made between the on-and-off reserve populations.

The sample is then further restricted to include only those respondents who worked full-time, full-year (FTFY) in 2010 and reported positive earnings from wages and salaries. Self-employed persons are excluded from this sample. After imposing these restrictions, the total sample was approximately 1.8 million respondents. Table 1.2 provides the proportion of FTFY workers by detailed Aboriginal identity, gender and on/off-reserve status.

Since all respondents in Table 1.2 were employed with positive earnings, those who were not employed FTFY would be individuals who worked part-time (i.e.

TABLE 1.2
Proportions of FTFY Employees by Identity Group, Gender and Reserve Status

	Group	Prop FTFY
Respondents Living Off-Reserve	Non-Aboriginal Males	67%
	Non-Aboriginal Females	56%
	Aboriginal Ancestry Only Males	62%
	Aboriginal Ancestry Only Females	54%
	All Aboriginal Identity Males	57%
	All Aboriginal Identity Females	51%
Detailed Aboriginal Identity Groups Living Off-Reserve	First Nations Males	56%
	First Nations Females	51%
	Métis Males	60%
	Métis Females	52%
	Inuit Males	48%
	Inuit Females	47%
Respondents Living On-Reserve	Non-Aboriginal Males	58%
	Non-Aboriginal Females	53%
	Aboriginal Identity Males	47%
	Aboriginal Identity Females	55%

less than 30 hours per week) and/or less than 48 weeks per year. Unsurprisingly, females had lower rates of FTFY employment than males, with the exception of Aboriginal identity females living on-reserve. Among Aboriginal groups, Inuit females and Aboriginal identity males living on-reserve had the lowest rates of FTFY employment, while Métis males (off-reserve) had the highest.

A similar pattern of disparities can be observed from Table 1.3, which presents the mean annual earnings of each group. Females have lower average earnings than males with a gender gap of roughly 25% among non-Aboriginals. Aboriginal identity males and females living on-reserve have the lowest earnings. Interestingly, Inuit females living off-reserve experience a small earnings advantage relative to non-Aboriginal females living off-reserve.

TABLE 1.3

Mean Annual Wages, FTFY by Identity Group, Gender and Reserve Status

	Group	Mean Annual Wages, 2010 ($)	(Ln $)
Respondents Living Off-Reserve	Non-Aboriginal Males	66,944.00	10.852
	Non-Aboriginal Females	49,760.00	10.602
	Aboriginal Ancestry Only Males	60,047.00	10.780
	Aboriginal Ancestry Only Females	46,132.00	10.535
	All Aboriginal Identity Males	58,051.00	10.721
	All Aboriginal Identity Females	44,675.00	10.484
Detailed Aboriginal Identity Groups Living Off-Reserve	First Nations Males	55,209.00	10.671
	First Nations Females	43,284.00	10.443
	Métis Males	60,166.00	10.765
	Métis Females	45,015.00	10.508
	Inuit Males	58,417.00	10.704
	Inuit Females	54,706.00	10.620
Respondents Living On-Reserve	Non-Aboriginal Males	58,764.00	10.758
	Non-Aboriginal Females	47,512.00	10.540
	Aboriginal Identity Males	37,695.00	10.234
	Aboriginal Identity Females	34,706.00	10.228

Separate Earnings Equations: Non-Aboriginal, Aboriginal Ancestry and Aboriginal Identity by Gender, Respondents Living Off-Reserve

To better understand the differences in returns to productivity-related attributes to the wages of non-Aboriginal, Aboriginal ancestry and Aboriginal identity males and females, we ran separate earnings equations for each of these groups[5].

As expected, higher educational attainment is also associated with higher wages for all groups. The positive effects are qualitatively larger for females than

for males at the *below bachelor's degree* level and higher. For example, non-Aboriginal females who have a bachelor's degree earn 72.29% (coefficient of 0.544) more than non-Aboriginal females with less than a high school education. Among non-Aboriginal males, the premium associated with a bachelor's degree is only 56.05% (coefficient of 0.445) relative to non-Aboriginal males with less than a high school diploma. For Aboriginal ancestry males and females, the positive effects associated with achieving a bachelor's degree are 48.59% (coefficient of 0.396) for males and 74.89% (coefficient of 0.559) for females respectively. For Aboriginal identity males and females, the positive effects associated with achieving a bachelor's degree are 81.48% (coefficient of 0.596) for females and 52.2% (coefficient of 0.412) for males respectively.

Being an immigrant is negatively correlated to wages for non-Aboriginal males and females, but not statistically significant among Aboriginal groups. Being a visible minority was related to lower earnings for non-Aboriginals. Among those reporting Aboriginal ancestry only, visible minority (*vismin*) was negatively correlated with earnings for males. For Aboriginal ancestry females, the coefficient on *vismin* was positive, although not statistically significant. The visible minority indicator was not included in the models for Aboriginal identity groups, as we have defined Aboriginal identity and visible minority to be mutually exclusive in our analysis, although we recognize that persons may self-identify as both an Aboriginal person as well as a member of a visible minority group.

Relative to respondents whose mother tongue is English, having French as a mother tongue is statistically significant and positively related to earnings for non-Aboriginal males and females. However, it is not statistically significant among other groups. Reporting an Aboriginal language as one's mother tongue is only statistically significant (and negatively related to earnings) among Aboriginal identity males. Proficiency in both French and English is positively related to earnings and statistically significant for non-Aboriginals, Aboriginal ancestry and Aboriginal identity females. However, this relationship is not statistically significant among Aboriginal ancestry or Aboriginal identity males. Speaking only French (as opposed to only English) is negatively related to earnings for all groups, however, not statistically significant among Aboriginal ancestry females or Aboriginal identity males. Speaking neither French nor English (nolang) is generally negatively related to earnings and statistically significant for non-Aboriginals and Aboriginal ancestry males. Although the coefficients are positive, nolang is not statistically significant for Aboriginal identity males or females. Oddly, however, nolang is positively related to the earnings of Aboriginal ancestry females and this result is statistically significant at the 5% level (i.e. $p<0.05$). This result should be interpreted with a great deal of caution, as it may well be an outlier or representative of some error in the data (i.e. measures of language

proficiency are self-reported). It is rather inconceivable that a large number of people who do not speak either official language would be represented in the full-time-full year employed sample, let alone be associated with an earnings premium among Aboriginal ancestry females.

Separate Earnings Equations: First Nations, Metis and Inuit, by Gender Respondents Living Off-Reserve

Similar to the models for non-Aboriginals, Aboriginal ancestry and Aboriginal identity groups, age and marital status are again positively associated with higher wages for both genders in all three off-reserve groups (First Nations, Métis and Inuit). Being married is also associated with higher wages; however, the magnitudes are again qualitatively larger for males than for females for all three groups and this relationship is not statistically significant for Inuit females.

Higher educational attainment is associated with higher wages for all off-reserve identity groups. Again, the positive effects are consistently qualitatively larger for females than for males at the below bachelor's degree level of education and higher, as they are for the non-Aboriginal, Aboriginal ancestry and Aboriginal identity groups in the previous section. For example, First Nations females with a bachelor's degree earn wages of 76.8% higher (coefficient of 0.570) than First Nations females with less than a high school diploma; however, the positive association for First Nations males is only 43.76% (coefficient of 0.363). For Métis males and females, the positive effects associated with achieving a bachelor's degree are 49.93% (coefficient of 0.405) for males and 83.31% (coefficient of 0.606) for females. For Inuit males and females, the positive effects associated with achieving a bachelor's degree are 91.17% (coefficient of 0.648) for males and 113.4% (coefficient of 0.758) for females. Qualitatively speaking, Inuit respondents experience the highest returns to a bachelor's degree among the three identity groups.

Considering variables related to language, both those capturing mother tongue and proficiency in either or both official languages, few statistically significant relationships emerge. Having an Aboriginal language as a mother tongue (as compared to English as a mother tongue) is significantly negatively related to earnings for First Nations males and females. Reporting a mother tongue other than English, French or an Aboriginal language is negatively related to earnings for First Nations males. The category of 'mother tongue other' is confounded by the fact that among the 'other options,' NHS data list combinations of languages that include Aboriginal languages (i.e. English and Aboriginal; French and Aboriginal; English, French and Aboriginal; and other multiple responses). Among First Nations, it is likely that the mother tongue other category may be capturing multiple responses that include an Aboriginal language as a mother tongue. Proficiency in French only is negatively associated with the earnings

of Métis females, while reporting French as one's mother tongue is negatively correlated with earnings for Inuit males[6].

Separate Earnings Equations: Non-Aboriginal and Aboriginal Identity, by Gender Respondents Living On-Reserve

We estimate separate earnings equations for non-Aboriginal and Aboriginal identity males and females living on-reserve. To avoid confounding the results of decomposition analysis, we exclude respondents who live on-reserve but report only Aboriginal ancestry. Considering first the non-Aboriginal respondents living on-reserve, significant relationships were found between age and earnings for both males and females. *Immigrant* was negative and statistically significant for non-Aboriginal females, and identifying as a member of a visible minority group (*vismin)* was negatively correlated with the earnings of non-Aboriginal males. Being married was only significantly positively related to the earnings of males, whereas children were negatively related to the earnings of non-Aboriginal females on-reserve. Most language variables were not significantly related to earnings with the exception of *nolang* being negatively related to the earnings of non-Aboriginal males living on-reserve[7]. As expected, education was positively related to earnings for males; however, the coefficients for high school graduate and below bachelor's degree were not statistically significant. Among females, high school graduate and trades/apprenticeship certification were not statistically significant.

Among Aboriginal Identity males and females living on-reserve, the relationships between earnings, age and marital status were similar to those found among non-Aboriginals living on-reserve. The presence of children was not statistically related to the earnings of Aboriginal identity respondents living on-reserve. Having an Aboriginal language as a mother tongue was negatively associated with the earnings of Aboriginal Identity males. With respect to language proficiency, being bilingual is correlated with lower earnings as compared to those who speak English only for Aboriginal identity females, whereas speaking only French is associated with negative earnings for Aboriginal identity males and females living on-reserve. Finally, all levels of education higher than less than high school (the omitted reference group) were positively related to earnings for both Aboriginal Identity males and females living on-reserve.

Decomposition Analyses

As discussed in the methods section, the earnings gap between any two groups can be decomposed into two parts: an explained portion due to differences in endowments and an unexplained portion that is attributed to differential returns to the endowment characteristics in the models. Table 2.1 provides a summary of the decomposition of earnings differentials between FTFY off-reserve non-

TABLE 2.1

Detailed Decomposition of Aboriginal/non-Aboriginal Wage Gaps, Off-Reserve

	Aboriginal Ancestry Males		Aboriginal Ancestry Females		Aboriginal Identity Males		Aboriginal Identity Females	
Difference	**0.072****	**100%**	**0.067****	**100%**	**0.131****	**100%**	**0.118****	**100%**
Total Explained	**0.028****	**38%**	**0.032****	**47%**	**0.022****	**17%**	**0.022****	**18%**
Age	0.174**	-	0.168**	-	0.193**	-	0.138**	-
Age^2	-0.146**	-	-0.143**	-	-0.158**	-	-0.112**	-
Immigrant	-0.014**	-	-0.018**	-	-0.015**	-	-0.019**	-
Visible Minority	-0.026**	-	-0.017**	-	-0.029**	-	-0.019**	-
Married	0.006**	-	0.001**	-	0.011**	-	0.002**	-
Separated, Divorced or Widow	0.000	-	0.000*	-	-0.001*	-	0.000**	-
Child 0 to 14 years	0.000	-	0.001**	-	0.000	-	0.001**	-
Mother Tongue French	-0.002*	-	-0.002**	-	0.001*	-	0.001*	-
Mother Tongue Aboriginal Language	0.000	-	0.000	-	0.005**	-	0.001	-
Mother Tongue Other Language	-0.018**	-	-0.016**	-	-0.018**	-	-0.015**	-
Bilingual	-0.003**	-	-0.008**	-	0.001**	-	0.003**	-
French Only	0.001**	-	0.001**	-	-0.005**	-	-0.004**	-
No Official Language	-0.001**	-	-0.001**	-	-0.001**	-	-0.001**	-
Education (all levels)	0.034**	-	0.031**	-	0.069**	-	0.065**	-
Large Urban Centre	0.003**	-	0.010**	-	0.005**	-	0.019**	-
Small Urban Centre	-0.002**	-	-0.001**	-	-0.004**	-	-0.002**	-
Province (all)	0.013**		0.019**	-	-0.053**	-	-0.045**	-
Occupation (all categories)	0.009**		0.006**		0.021**		0.010**	
Total Unexplained	0.0445**	62%	0.036**	53%	0.108**	83%	0.097**	82%

* p<0.05; ** p<0.01

Note: Where explained and unexplained portions do not sum to the total difference, this is due to rounding at the 3rd decimal place.

Aboriginal men and women and Table 2.2 shows the decomposition of earnings gaps for all off-reserve Aboriginal groups relative to non-Aboriginal males and females respectively.

Off-reserve non-Aboriginal males have an overall earnings advantage of 0.0723 log points (roughly 7%), compared to Aboriginal ancestry males. This difference can be broken down into two parts: 0.0278 log points (or 38% of the difference) can be attributed to endowment differences and 0.0445 log points (62% of the difference) remained unexplained. Off-reserve non-Aboriginal females have an overall earnings advantage of 0.0669 log points (roughly 6.7%) relative to Aboriginal ancestry females. Approximately 47% of the difference can be attributed to endowment differences and 53% of the difference is unexplained. The results of the detailed sub-decomposition suggest that differences in educational attainment between non-Aboriginal and Aboriginal ancestry males and females are the largest factor contributing to the explained portion of the earnings gap in both cases. The positive coefficients on education suggest that if Aboriginals and non-Aboriginals had the same mean levels of educational attainment, the wage gap between the two groups would be smaller (e.g. Powers *et al.,* 2011). The combined coefficients on education account for 0.034 and 0.031 log points of the explained portion of the decomposition for males and females respectively.

Off-reserve non-Aboriginal males have an overall earnings advantage of 0.1305 log points (roughly 13%) over Aboriginal identity males, and about 17% of this gap can be attributed to differences in endowments, while the vast majority (83% of the difference) is unexplained. Off-reserve non-Aboriginal females have an overall earnings advantage of 0.1184 log points (approximately 11.8%) relative to Aboriginal identity females; 18% of which is explained by endowment differences and 82% is unexplained. Again, in both of these decompositions, the most significant variable to contribute to the explained portion of the earnings differential is education, accounting for 0.069 log points for males and 0.065 log points for females.

Overall, comparing Aboriginal ancestry and Aboriginal identity groups, the variables included in the models explain 38% to 47% of the wage gap between non-Aboriginal and Aboriginal ancestry males and females, but only explain 17% to 18% of the wage gap between non-Aboriginal and Aboriginal identity males and females.

First Nations males and females living off-reserve experience the largest disparities in earnings relative to their non-Aboriginal counterparts at gaps of roughly 18% and 16% for males and females respectively. Furthermore, the vast majority of these gaps are unexplained by factors included in the models. The wage gaps for Métis males and females are approximately 9% in each case.

TABLE 2.2

Detailed Decomposition of Aboriginal/non-Aboriginal Wage Gaps, Aboriginal Identity Groups Off-Reserve

	First Nations Males		First Nations Females		Metis Males		Metis Females		Inuit Males		Inuit Females	
Difference	**0.181****	**100%**	**0.159****	**100%**	**0.087****	**100%**	**0.094****	**100%**	**0.148****	**100%**	**-0.018**	**100%**
Total Explained	**0.058****	**32%**	**0.036****	**23%**	**-0.014****	**-16%**	**0.015****	**16%**	**0.064***	**43%**	**0.026**	**-147%**
Age	0.233**	-	0.116**		0.150**	-	0.162**	-	0.242**		0.235**	-
Age^2	-0.195**	-	-0.098**		-0.120**	-	-0.130**	-	-0.199**		-0.191**	-
Immigrant	-0.015**	-	-0.018**		-0.015**	-	-0.019**	-	-0.015**		-0.019**	-
Visible Minority	-0.029**	-	-0.019**		-0.029**	-	-0.019**	-	-0.029**		-0.019**	-
Married	0.013**	-	0.003**		0.010**	-	0.002**	-	0.002		0.000	-
Separated, Divorced or Widow	0.000	-	-0.001**		-0.001**	-	0.000*	-	0.001		0.001**	-
Child 0 to 14 years	0.000	-	0.001**		0.001*	-	0.001**	-	-0.008**		0.009**	-
Mother Tongue French	0.001*	-	0.001**		0.001*	-	0.001**	-	0.002*		0.003**	-
Mother Tongue Aboriginal Lang	0.009**	-	0.010**		0.001	-	0.000	-	0.004		-0.032	-
Mother Tongue Other Language	-0.018**	-	-0.015**		-0.018**	-	-0.016**	-	-0.018**		-0.015**	-
Bilingual	0.002**	-	0.005**		0.001**	-	0.000	-	0.004**		0.008**	-
French Only	-0.004**	-	-0.004**		-0.005**	-	-0.004**	-	-0.008**		-0.006**	-
No Official Language	-0.001**	-	-0.001**		-0.001**	-	-0.001**	-	0.001**		0.001**	-
Education (all levels)	0.073**	-	0.061**		0.062**	-	0.063**	-	0.113**		0.144**	-
Large Urban Centre	0.005**	-	0.017**		0.006**	-	0.018**	-	0.014**		0.052**	-
Small Urban Centre	-0.004**	-	-0.003**		-0.003**	-	-0.002**	-	-0.004**		-0.004**	-
Province (all)	-0.038**	-	-0.036**		-0.068**	-	-0.046**	-	-0.069**		-0.135**	-
Occupation (all categories)	0.025**	-	0.015		0.017**	-	0.006**	-	0.031**		-0.002	-
Total Unexplained	**0.123****	**68%**	**0.123****	**77%**	**0.101****	**116%**	**0.079****	**84%**	**0.084***	**57%**	**-0.044**	**247%**

* p<0.05;** p<0.01

Note: Where explained and unexplained portions do not sum to the total difference, this is due to rounding at the 3rd decimal place.

However, for Métis males, the negative sign on the explained portion of the gap suggests that if Métis and non-Aboriginal males had the same distribution of observable characteristics, the gap would be even *larger* (e.g. Jann, 2009). Inuit females living off-reserve actually experience a slight earnings advantage over non-Aboriginal females; however, this difference is not statistically significant.

Finally, we decompose the wage gaps between off-reserve non-Aboriginals, and 1- non-Aboriginals who reside on-reserve, and 2- the Aboriginal identity group living on-reserve.

TABLE 2.3

Decomposition of Aboriginal/non-Aboriginal Wage Gaps, On-Reserve

	Non-Aboriginal Males		Non-Aboriginal Females		Aboriginal Identity Males		Aboriginal Identity Females	
Difference	**0.094****	**100%**	**0.062***	**100%**	**0.618****	**100%**	**0.374****	**100%**
Total Explained	**-0.031****	**-33%**	**-0.006**	**-9.7%**	**0.049****	**7.9%**	**0.052****	**14%**
Age	-0.196**		-0.118**		0.035**		-0.018*	
Age^2	0.177**		0.113**		-0.029**		0.009	
Immigrant	-0.006**		-0.008**		-0.015**		-0.018**	
Visible Minority	-0.016**		-0.014**		-0.029**		-0.019**	
Married	-0.005		0.000		0.006**		0.002**	
Separated, Divorced or Widow	-0.002**		-0.001*		0.000		0.000	
Child 0 to 14 years	0.002		-0.003**		-0.005**		0.006**	
Mother Tongue French	0.001*		0.002**		0.002		0.002*	
Mother Tongue Aboriginal Language	0.000		0.000		-0.011		-0.028**	
Mother Tongue Other Language	-0.011**		-0.010**		-0.018**		-0.015**	
Bilingual	0.002**		0.005**		0.004**		0.009**	
French Only	-0.006**		-0.005**		-0.004**		-0.003**	
No Official Language	-0.001**		-0.001**		-0.001**		-0.001**	
Education (all levels)	0.029**		0.015		0.111**		0.101**	
Large Urban Centre	0.008**		0.029**		0.018**		0.060**	
Small Urban Centre	0.001**		0.001**		0.003**		0.002**	
Province (all)	-0.024**		-0.009**		-0.044**		-0.019**	
Occupation (all categories)	0.013**		-0.001		0.027**		-0.017**	
Total Unexplained	**0.126****	**134%**	**0.067***	**108%**	**0.569****	**92.1%**	**0.322****	**86%**

* p<0.05;** p<0.01

Note: Where the sum of the explained and unexplained portions does not equal 100%, this is due to rounding to 3 decimal places. Percentages do not add up to 100% due to rounding.

Non-Aboriginal males and females living on-reserve experience earnings penalties of roughly 9% and 6% respectively relative to non-Aboriginals living off-reserve. This comparison is important, as it allows to us (at least to an extent), to separate out the earnings effects of living on-reserve from other considerations related to Aboriginal identity. Aboriginal identity males and females living on-reserve experience by far the largest earnings penalty of any of the groups considered in the analysis at roughly 62% and 37% respectively. Furthermore, only between roughly 8% and 14% of the earnings disparities between Aboriginal identity males and females living on-reserve and non-Aboriginals living off-reserve are explained by the set of observable characteristics included in the models, leaving the vast majority of these gaps unexplained.

Discussion and conclusion

Before discussing the implications that arise from the findings of this study, some important limitations bear mention. Firstly, unlike previous census surveys, response to the NHS was voluntary. This could result in a biased sample if those who responded to the survey are different in important observable or unobservable ways than those who did not respond to the survey. This is particularly important among Aboriginal respondents, especially given issues related to incomplete and under-enumeration of some reserves. In addition to concerns over the on-reserve population, Statistics Canada further suggests that there is evidence of non-response bias in the NHS with respect to Aboriginal groups living off-reserve as well. Comparisons to other data sources suggest that there may be some *overestimation* among certain Inuit populations as well as Métis and First Nations living off-reserve, with non-response bias being only one possible factor accounting for the growth in the Métis and First Nations off-reserve populations (Statistics Canada, 2013b: 7).

Secondly, we limit our sample to respondents who work full-time-full year and report positive employment earnings (excluding those who are self-employed). These restrictions are in place to allow for more appropriate comparisons to be made between employees with similar levels of labour force attachment and due to the fact that actual hours worked is measured in the NHS reference week in May of 2011 whereas annual earnings are reported for 2010. However, we do acknowledge that such restrictions create potentially two selection concerns: the selection into paid employment and then the selection into full-time, full-year employment. Additionally, when considering the difference between the on- and off-reserve groups, there may be further selection bias in that some unobservable characteristics that relate to whether a respondent lives on a reserve (or not) are also related to their earnings. Therefore, taken together, the various ways in which selection concerns may bias the sample considered here, these findings

should be taken as very rough approximations in that the true estimate of the earnings disparity between non-Aboriginals and the Aboriginal groups considered might be higher or lower than what is estimated in the absence of corrections for selection bias. The difficulty in formally correcting for such selection bias is in finding an appropriate instrument(s) that is related to the probability that an individual is included in a particular sample or sub-sample, but is uncorrelated with the outcome of interest in this study (i.e. employment earnings).[8]

Consistent with the previous literature, the present analysis finds earnings disadvantages persist for various Aboriginal groups relative to non-Aboriginal persons, even when comparing only those in full-time, full-year employment. Among groups living off-reserve, the gaps are larger for respondents reporting Aboriginal identity than those reporting Aboriginal ancestry only. Furthermore, the share of the earnings gap that is *unexplained* is larger for Aboriginal identity males and females than it is for Aboriginal ancestry groups. Comparing across Aboriginal identity groups, those reporting First Nations identities experience the largest gaps, with the vast majority of the disparity being *unexplained*. Those reporting Métis identities experience sizably smaller earnings disparities than First Nations, while Inuit females actually enjoy a slight earnings advantage relative to non-Aboriginal females; however, this gap is not statistically significant. Finally, among those living on-reserve, non-Aboriginal males and females experience earnings disadvantages of roughly 9% and 6% respectively relative to their non-Aboriginal counterparts who live off-reserve. This serves as a useful point of comparison as it suggests that there is a penalty associated with simply living on a reserve apart from any Aboriginal identity. When considering those who identify as Aboriginal persons *and* live on-reserve, the wage gaps are the highest at roughly 62% for males and 37% for females.

How then do these more recent estimates of Aboriginal/non-Aboriginal wage disparities compare to previous studies? Although employing a slightly different definition of FTFY (i.e. at least 48 weeks per year and 35 hours per week) and age restriction (15-65), Lamb (2013) provides the closest comparator to the current study. The author reports mean Aboriginal/non-Aboriginal earnings gaps for groups similar to those considered in the present analysis using data from the *2006 Census*. The findings report mean earnings gaps for Aboriginal ancestry males and females of roughly 9% and 7.5% respectively (Lamb, 2013). All Aboriginal identity respondents experienced an earnings gap of approximately 16% for males and 15% for females. Those reporting different Aboriginal identities living off-reserve, experienced earnings penalties of roughly 12%, 15% and 21% for Métis, Inuit and First Nations males respectively; whereas the gaps for similarly identifying females are approximately 15%, +3% and 16% respectively. Finally, those living on-reserve experienced an earnings penalty of

about 50% for males and 34% for females (Lamb, 2013). Using Lamb (2013) as a rough point of comparison, it appears that the disparities experienced by Aboriginal ancestry respondents have remained relatively constant, whereas the earnings gaps for Aboriginal identity groups are somewhat *smaller* than those reported using previous census periods. The wage differential for Aboriginal identity respondents living on- reserve, however, appears somewhat *larger* in the current study than that estimated using previous census data. It is important to bear in mind that comparisons with earlier studies are only rough approximations in that differences in estimates may be due to different model specifications, sample restrictions and the fact that participation in the NHS was voluntary.

Similar to previous studies, the results here highlight the importance of education as among the most salient contributing factor to the explained portion of the Aboriginal/non-Aboriginal wage gap. Suggestions aimed at increasing educational attainment among Indigenous peoples without consideration of the contextual realties in which such investments are made are likely unhelpful. Further research at understanding and removing barriers to education would be beneficial. Partnerships between educational institutions, policymakers and Indigenous communities to explore ways to amend curriculum and make postsecondary educational opportunities more accessible to Indigenous persons may serve as an important step in bridging the education gap that contributes to persistent earnings inequalities between Indigenous and non-Indigenous people in Canada. Public and private sector organizations can also examine their recruitment, selection and promotion practices with the intent of addressing systemic barriers that may make it difficult for some Indigenous employees to access comparable, high quality employment opportunities. Organizations, for example, might collaborate with Indigenous leaders and work to create mentorship and development programs for Aboriginal employees, particularly in industries and at organizational levels where Indigenous persons are underrepresented.

While particular programs or policy interventions aimed at improving access to employment and education for Indigenous peoples are important initiatives, they do not address the underlying problem of discrimination in labour markets. Discrimination affects all labour market outcomes from educational attainment prior to labour market entry, to employment type and trajectory and, of course, earnings. Studies that measure wage differentials are ill-equipped to address discrimination in that they can only speak to what is measured, meaning that the role of potential labour market discrimination can only be *inferred* as contributing to the unexplained portion of the wage differential (e.g. Pager and Shepherd, 2008).[9] Discrimination towards Indigenous peoples is a reality. Currie *et al.* (2012), for example, surveyed post-secondary students from Edmonton, Alberta, who identify as Aboriginal persons. The study finds that: "Overall, 80%

of students had experienced racial discrimination in their lives. Two-thirds had experienced high levels of racism (3 or more situations)" (Currie *et al.*, 2012: 620). Recently the Canadian Broadcasting Corporation (CBC) decided to remove the option to leave comments on online articles about Indigenous people. "Brodie Fenlon, acting director of digital news [at CBC], said that while many topics incite problematic discussion, the number of comments that descend into hate speech and personal attacks are disproportionately higher on stories related to Indigenous issues" (Chapin, 2015). While the present analysis cannot directly measure discrimination, the fact that large portions of the Aboriginal/non-Aboriginal wage gap remains unexplained is suggestive of the role of discrimination as at least a contributing factor to the unexplained portion of the earnings disparities. Further underscoring this point is the finding that increasing levels of education alone only go so far in narrowing the earnings gap for Indigenous peoples, particularly those who identify as Aboriginal peoples and live on-reserve. Although speculation, the finding that in some cases there was a negative relationship between having an Aboriginal language as a mother tongue, even after controlling for language proficiency in French and/or English, may be serving as a proxy measure for possible discrimination experienced by some Indigenous peoples. Since discrimination is not directly measured in the NHS data, these inferences are merely that and as such future research on the objective and subjective experiences of discrimination in labour markets as a barrier to employment and earnings among Indigenous peoples is needed.

Notes

1 Pendakur and Pendakur (1998, 2002), for example, consider Aboriginal peoples as one among several minority groups.

2 The terminology "North American Indian" that was used in earlier versions of Census data has now been replaced with the term "First Nations".

3 This concern and additional details of the sub-decomposition of earnings differentials using the Oaxaca methodology is again explained in Jann (2008), p. 8-10.

4 We acknowledge that there may still be some variation in hours even among the FTFY sample. The reason for not including hours worked as a control variable is due to the fact that the reference period is annual wages for 2010, whereas hours worked is measured in the reference week of data collection, May 7-11, 2011. Therefore, the hours worked in the reference week may not reflect the usual hours worked in the previous year.

5 Due to space constraints, the results of the individual regression models are not shown here, but are available from the authors upon request. For ease of interpretation, the coefficients on dummy variables were converted to percentages following Halvorsen and Palmquist (1980), where $100.g = 100.\{\exp(c) - 1\}$, g = relative effect on the dependent variable and c = coefficient of the dummy variable.

6 In the models estimating earnings for Métis males and females, the variable 'nolang' was not included due to collinearity (i.e. there were no Métis respondents living off-reserve who did not speak either French or English).

7 Nolang and Territory, a control variable for residing in one of the territories, were not included in the models for non-Aboriginal females living on- reserve due to collinearity.

8 George and Kuhn (1994) control for both selections into full-time, full-year employment as well as living on-reserve. Counter-intuitively, the authors find *negative* selection into FTFY and use a variable similar to mother tongue to correct for selection on-reserve. Here we control for mother tongue as an Aboriginal language and find in some cases there is a statistically significant relationship between mother tongue and earnings.

9 Pager and Shepherd (2008) provide a detailed summary of the various ways in which discrimination is often measured.

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SUMMARY

Canadian Aboriginal/Non-Aboriginal Wage Gaps: Evidence from the *2011 National Household Survey*

The fact that Aboriginal peoples in Canada have experienced sizable and persistent earnings disadvantages is well documented. However, the most recent estimates of Aboriginal-non-Aboriginal wage differentials utilize data from the *2006 Census*. The present analysis seeks to address this gap by providing more recent estimates of Aboriginal earnings disparities for various groups of full-time, full-year workers using data from the *2011 National Household Survey* (NHS).

We estimate and decompose Aboriginal/non-Aboriginal wage gaps at the mean for a number of different Aboriginal and non-Aboriginal groups living on- and off- reserve. We find that, consistent with previous literature, Aboriginal peoples continue to experience sizable earnings disparities relative to their non-Aboriginal counterparts. We find that Aboriginal Identity respondents living on-reserve experience the largest earnings disparity, followed by males who identify as First Nations and live off-reserve. Respondents who report Aboriginal ancestry, but who do not identify as Aboriginal persons, experience the smallest earnings disadvantage.

Results of the decomposition analysis reveal that, unsurprisingly, educational attainment is the most salient factor contributing to the explained portion of the earnings disparity between Aboriginal and non-Aboriginal Canadians. Somewhat disconcerting, we find that where wage disparities are the largest, the explained proportion of the gap tends to be the smallest. Although previous studies can only serve as a rough comparator, relative to earlier estimates of Aboriginal/non-Aboriginal wage differentials using previous census periods, we find that earnings disparities among Aboriginal ancestry groups have remained relatively constant; wage gaps for Aboriginal identity groups have narrowed slightly; while the earnings disadvantage has widened for Aboriginal identity persons living on-reserve.

Research and policy programs aimed at improving educational attainment and access to employment among Indigenous peoples are likely worthwhile initiatives. However, more research is needed on the potential role of discrimination in contributing to the persistent earnings disparities between Indigenous and non-Indigenous persons in Canada.

KEYWORDS: Indigenous Peoples, labour market outcomes, employment, earnings.

RÉSUMÉ

Écarts salariaux entre Autochtones et Non-Autochtones au Canada à partir des données de l'*Enquête nationale auprès des ménages* de 2011

Le fait que les peuples autochtones du Canada connaissent des écarts salariaux importants et persistants est bien documenté. Toutefois, les dernières estimations des écarts salariaux entre Autochtones et Non-Autochtones reposent sur les données du *Recensement* de 2006. La présente analyse vise à fournir des estimations plus récentes des écarts salariaux chez les Autochtones, et cela pour diverses catégories de travailleurs à temps plein toute l'année, à l'aide des données de l'*Enquête nationale auprès des ménages* (ENM) de 2011.

Pour ce faire, nous estimons et décomposons la moyenne des écarts salariaux entre Autochtones et Non-Autochtones pour divers groupes autochtones et non autochtones vivant en réserve et hors réserve. Nous avons constaté que, conformément à la littérature existante, les Autochtones continuent de subir des écarts salariaux importants par rapport à leurs homologues non-autochtones. Nous constatons que les répondants qui se déclarent Autochtones vivant en réserve connaissent les plus grands écarts salariaux, suivis en cela des répondants qui se déclarent Autochtones vivant hors réserve. Les répondants qui déclarent avoir une ascendance autochtone, mais qui ne s'identifient pas comme Autochtones affichent, quant à eux, les écarts salariaux les moins prononcés.

Sans surprise, les résultats de l'analyse de décomposition de la moyenne des écarts salariaux révèlent que le niveau de scolarité est de loin le facteur qui contribue le plus à la portion expliquée des écarts salariaux entre les Autochtones et Non-Autochtones du Canada. Quelque peu déconcertante, toutefois, est l'observation que, là où les écarts salariaux sont les plus importants, la portion expliquée de l'écart tend aussi à être la plus faible. Bien que les études antérieures ne puissent fournir que des comparaisons approximatives, par rapport aux estimations des écarts salariaux entre Autochtones et Non-Autochtones obtenues sur la base des périodes de recensement précédentes, nous constatons que les écarts salariaux chez les groupes d'ascendance autochtone sont demeurés relativement constants; tandis que les écarts salariaux pour les groupes d'identité autochtone ont légèrement fléchi; alors que les écarts salariaux se sont accrus pour les personnes d'identité autochtone vivant en réserve.

Les programmes de recherche et de politique visant à améliorer le niveau d'instruction et l'accès à l'emploi chez les personnes autochtones constituent des initiatives valables. Cependant, il faudra davantage de recherches sur le rôle potentiel de la discrimination pour comprendre les écarts salariaux persistants entre Autochtones et Non-Autochtones au Canada.

MOTS-CLÉS: peuples autochtones, situation sur le marché du travail, emploi, salaire, écart.

RESUMEN

Brechas salariales entre Canadienses aborígenes y no aborígenes: Evidencias de la *Encuesta Nacional de Hogares 2011*

El hecho que los pueblos aborígenes en Canadá hayan experimentado desventajas salariales cuantificables y persistentes ha sido bien documentado. Sin embargo las estimaciones más recientes de los diferenciales salariales entre aborígenes y no aborígenes utilizan datos del Censo de 2006. El presente análisis enfoca dicha brecha, según diferentes grupos, proporcionando estimaciones más recientes de las disparidades de ingreso de los aborígenes que trabajan a tiempo completo, durante todo el año. Se utiliza para ello los datos de la *Encuesta Nacional de Hogares* (ENH) de 2011.

Estimamos y descomponemos las diferencias salariales entre aborígenes y no aborígenes, que viven dentro y fuera de las reservas. Constatamos que, en concordancia con la literatura previa, los pueblos aborígenes siguen experimentando considerables disparidades de ingresos en comparación con sus contrapartes no aborígenes. Se muestra también que las personas encuestadas de identidad aborigen que viven en una reserva experimentan la más grande disparidad de ingresos, seguidos de los hombres que se identifican originarios de las Primeras Naciones y que viven fuera de la reserva. Los participantes que revelan tener ancestros aborígenes, pero que no se identifican como personas aborígenes, experimentan menos desventaja de ingresos.

Los resultados de los análisis de descomposición revelan que, como era de esperar, el logro educativo es el factor más destacado que contribuye a la explicación de la disparidad de ingresos entre canadienses aborígenes y no aborígenes. De manera desconcertante, constatamos que donde las disparidades salariales son más grandes, la proporción explicada de dicha brecha tiende a ser más pequeña. Aunque los estudios previos no pueden ser utilizados para fines de comparación, encontramos que las disparidades de ingresos entre aborígenes y no aborígenes se han mantenido relativamente contantes; las brechas salariales de los grupos de identidad aborígenes se han reducido ligeramente; mientras que la desventaja de ganancias se ha ampliado para los aborígenes que viven en la reserva.

Los programas de investigación y políticas destinados a mejorar el logro educativo y el acceso al empleo de los pueblos aborígenes son iniciativas que valen la pena. Sin embargo, se necesita más investigaciones sobre el rol potencial de la discriminación en la contribución a las persistentes disparidades salariales entre personas aborígenes y no aborígenes en Canadá.

PALABRAS CLAVES: Pueblos aborígenes, situación del mercado de trabajo, empleo, remuneración.