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On Unequal Terms: The Indigenous Wage Gap In Canada

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THE INDIGENOUS WAGE GAP IN CANADA

by

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ABSTRACT

Research has demonstrated that Indigenous peoples are economically disadvantaged relative to the rest of the Canadian population. However, research on the Indigenous wage gap specifically has received little attention until recently. In this article, I draw on data from the 2016 Canadian Census to investigate differences in wages between Indigenous peoples and White Canadians, and among Indigenous groups. First Nations face the widest residual gap in wages when compared with White individuals, followed by those with Indigenous ancestry. While Indigenous women experience an 11% to 14% wage gap, only registered First Nations men experience a wage gap of approximately 16%. Additionally, Indigenous workers living in cities with a large Indigenous population face a particularly severe gap in wages. Since these findings demonstrate that sociodemographic and employment-related characteristics are unable to fully explain the gap in wages between Indigenous and White individuals, this suggests the need for broader employment equity initiatives.

Keywords: Indigenous; Gender; Wage Gap; Public Policy; Employment

INTRODUCTION

Indigenous peoples in Canada have been the focus of many policy initiatives, yet little is known about the specific mechanisms that contribute to the wage inequality experienced by Indigenous peoples. The present study seeks to examine the mechanisms that contribute to the Indigenous wage gap in Canada by calculating the wages of various Indigenous groups and comparing them to White individuals. This study has important implications as the Indigenous population is one of the fastest growing populations in Canada. In fact, we are currently experiencing an "Indigenous baby boom" (Pendakur and Pendakur 2011:81). According to Statistics Canada (2018e), approximately 4.9% of the population reported Indigenous identity in 2016, whereas in 1996 Indigenous people accounted for only 2.8% of the population. In fact, since 2006, the Indigenous population has grown by more than four times the growth rate of the non-Indigenous population at 42.5% (Statistics Canada 2018e). As such, Statistics Canada (2018e) predicts that the Indigenous population is likely to exceed 2.5 million persons within the next two decades. The Indigenous population is also younger on average than the rest of the Canadian population (32.1 versus 40.9 years, respectively) (Statistics Canada 2018e). Consequently, the economic outcomes for Indigenous peoples are important due to the younger age of the Indigenous population relative to rest of Canada. Thus, ensuring that the appropriate policies are implemented could help facilitate future economic security for Indigenous peoples.

Since 2016 the Canadian government planned to spend 15 billion dollars over two years on their "Aboriginal Skills and Employment Strategy" aimed at training initiatives centred around the needs of Indigenous communities (Government of Canada 2016). Nevertheless, Indigenous peoples remain economically disadvantaged relative to the rest of Canada (Lamb 2013; Pendakur and Pendakur 2011; Wilson and MacDonald 2010). While the education of

Indigenous peoples has received substantial attention from policymakers and researchers (e.g., Hull 2000; Walters, White, and Maxim 2004) there exists a limited body of literature on the labour market outcomes of Indigenous populations in Canada (Pendakur and Pendakur 2011). Some have argued that the lack of research on labour market outcomes and, more specifically, the Indigenous wage gap is because Indigenous peoples account for only a small proportion of the Canadian population (Pendakur and Pendakur 2011); however, because of the rapid growth of Indigenous populations, quantitative analyses of the labour market outcomes of Indigenous peoples is possible with more recent datasets.

In this article, I use the 2016 Canadian Census Public Use Microdata File (PUMF) to address the following research questions: (1) How does income differ among Indigenous and majority populations in Canada? (2) Does income differ *within* the Indigenous population by their identity or heritage? (3) Are these differences within the Indigenous population larger or smaller for women and men? (4) Do income disparities – between Indigenous and majority populations, and within Indigenous groups – vary by their urbanicity or by the share of Indigenous people living in their city? This article fills a gap in the literature, by using the most recent Canadian Census data and finer-grained Indigenous identity categories, to provide an updated analysis on the under-researched topic of the Indigenous wage gap and to examine important differences among Indigenous identity groups. In addition to accounting for a wide range of individual-level demographic, sociodemographic, and employment-related characteristics, I also test whether the composition of workers' communities (namely, the share of Indigenous people in a city) contributes to the Indigenous wage gap in Canada.

PREVIOUS WORK

There is a growing body of research demonstrating that Indigenous peoples in Canada face significant disadvantages in the labour market, specifically in terms of income (DeSilva 1999; Drost 1994; Drost and Richards 2003; Feir 2013; Gerber 2014; Lamb 2013; Lamb, Yap, and Turk 2018; Mueller 2004; Pendakur and Pendakur 2011; Kuhn and Sweetman 2002; Wilson and MacDonald 2010). Earlier research on the Indigenous wage gap has found a smaller wage gap for Indigenous peoples employed full-time-full-year (when compared with White individuals) and that Indigenous peoples experience higher returns to education compared with other minority groups in Canada (George and Kuhn 1994). Drost (1994) found that raising the retention rates in primary and secondary education could help mitigate the higher rates of unemployment found among Indigenous peoples. In addition, geography and Indigenous identity were seen as important factors in the Indigenous wage gap, as the remote location of many reserve lands contributes to lower wages among Indigenous peoples (Drost and Richards 2003). In fact, Kuhn and Sweetman (2002) found that those who marry non-Indigenous partners and who live off-reserve experience favourable labour market outcomes. More current research indicates that although Indigenous women face severe disadvantages in the labour market, the income gap is larger for men (Lamb 2013; Pendakur and Pendakur 2011).

While Indigenous women earned 10% to 20% less than non-Indigenous women in 2005, the gap between Indigenous and non-Indigenous men was about 20% to 50% for the same year (Pendakur and Pendakur 2011). Earlier research on the Indigenous wage gap has also consistently found that Indigenous women suffer from a less severe gap in earnings (DeSilva 1999; Mueller 2004). However, while Indigenous women are more likely than their male

counterparts to be university educated, they are also more likely to be unemployed (Gerber 2014). Thus, many Indigenous women may be left out of wage analyses altogether if they are unemployed and do not have positive earnings. In fact, Gerber (2014) found that First Nations women reported the lowest incomes in the 2001 and 2006 Census periods compared to any other demographic group. While some studies exclude those who work in part-time employment and those who are unemployed, I examine descriptively part-time and unemployment rates among White individuals and Indigenous groups, before turning to the wage analyses (Lamb 2013; Pendakur and Pendakur 2011). Finally, some studies restrict wage analyses to full-time-full-year workers (Lamb 2013); however, I control for part-time status.

Additionally, the wage gap tends to increase as the degree of Indigeneity increases among men and women. Those who were registered First Nations under the *Indian Act* faced the widest disparity, when compared with majority groups (Canadian, British or French origin citizens) at 50% between the 1996 and 2006 Census periods (Pendakur and Pendakur 2011). Lamb (2013) found that on-reserve Indigenous men faced a similar wage gap when compared with the non-Indigenous population during the 2006 Census period. First Nations men who were not registered and Métis men experienced a wage gap of approximately 20%, while men who reported Indigenous ancestry, but not identity, faced a gap of 10% when compared with majority groups during the same Census periods (Pendakur and Pendakur 2011). Other studies have confirmed these findings (Feir 2013; Lamb 2013). For Indigenous women, the rank ordering pattern was the same between these Census periods, but the size of the income gap was generally lower for all Indigenous women when compared to non-Indigenous women (Lamb 2013), non-minority women (Feir 2013), and majority women (Pendakur and Pendakur 2011). These patterns of income disparity hold in rural and urban locations and across the

income distribution (Pendakur and Pendakur 2011). Thus, while the remote location of many treaty lands intensifies the Indigenous wage gap, Indigenous identities seem to be an important mechanism through which income disparity functions (DeSilva 1999; Lamb 2013; Mueller 2004; Pendakur and Pendakur 2011).

At the same time, individual-level characteristics do not fully explain the wage gap between Indigenous peoples and White Canadians (Lamb 2013; Pendakur and Pendakur 2011). For instance, Lamb (2013) found that in 2005, about half of the raw wage gap (between Indigenous and non-minority groups) was attributable to the sociodemographic, human capital, and employment-related characteristics for most Indigenous identity groups; however, for on-reserve and First Nations people, the wage gap was larger and the proportion of the gap that was explained was smallest for this group. Conversely, those who reported Indigenous ancestry, but not identity, faced a smaller residual wage gap (Lamb 2013). Thus, both the Indigenous wage gap and the unexplained portion of the Indigenous wage gap follow the same pattern, in that those with a stronger Indigenous identity have the largest wage gap and the largest proportion of the gap which is unexplained by individual-level characteristics, pointing to possible discrimination in the labour market (Lamb 2013).

More recently, researchers have pointed to the implications of broader, community-level factors such as urbanization for the Indigenous income gap. For instance, non-Indigenous men in Canada enjoy an urban wage premium, an advantage that does not occur for Indigenous men unless they relocate from reserve locations (Lamb 2013). Pendakur and Pendakur (2011) confirm this finding for men; however, they find the opposite pattern for Indigenous women who perform better economically when living on-reserve. This finding has important

implications for Indigenous women as they are more likely to live off-reserve and in urban areas than their male counterparts (Gerber 2014; Williams 1997).

In addition, the proportion of Indigenous peoples residing in an urban area plays a role in the Indigenous wage gap (Pendakur and Pendakur 2011). Research has shown that other visible minority groups in Canada benefit from an ethnic enclave effect, wherein visible minorities have more favourable economic outcomes in cities with a higher proportion of co-ethnic residents (Pendakur and Pendakur 2002; Pendakur and Pendakur 2011). However, the opposite pattern has been found for Indigenous peoples living in cities with a large proportion of co-Indigenous residents (Pendakur and Pendakur 2002; Pendakur and Pendakur 2011). Pendakur and Pendakur (2011) confirmed this finding by running separate analyses for 12 key cities in Canada, examining the wage gap for registered on and off-reserve First Nations people. They found that in cities with very large Indigenous populations, the wage disparity was the most severe. As such, unlike visible minorities in Canada, who enjoy a favourable ethnic enclave effect, research shows that Canadian cities with a large population of Indigenous residents also have the widest wage gap when compared with cities with a lower proportion of Indigenous residents (Pendakur and Pendakur 2011). Therefore, while earlier research has argued that the remoteness of reserve territories contributes to the Indigenous wage gap, more current literature suggests that the mechanisms that give rise to the Indigenous wage gap are more complex. As such, in addition to focusing on two representative cities, Toronto and Winnipeg, to compare the Indigenous wage gap in specific areas, an important contribution of this study is the use of a measure that accounts for the proportion of Indigenous residents in a city. This measure allows me to directly test whether the proportion of co-Indigenous resident in a city has an effect on the wage gap. Consistent with previous findings I hypothesize that,

unlike the favourable ethnic enclave effects that visible minorities enjoy, Indigenous peoples will experience a wider wage gap in cities with a larger proportion of co-Indigenous residents.

METHODOLOGY

Data

To examine the Indigenous wage gap in Canada, I draw on data from the 2016 Canadian Census Public Use Microdata File (PUMF), which provides non-aggregated cross-sectional individual information on sociodemographic characteristics and labour market outcomes of respondents residing in Canada (Fearon and Wald 2011; Waite and Denier 2015). The 2016 Census PUMF contains records for 930,421 respondents, which constitutes a 2.7 percent sample of the entire 2016 Canadian Census (Statistics Canada 2016a). The response rate for the 2016 Canadian Census was 98.6 percent of Canadian households and 100 percent of Indigenous reserves that were enumerated (Waite and Denier 2015; Statistics Canada 2016a). As such, these data are well-suited for the objectives of this study because they provide rich and representative data about individuals' employment status, income, and Indigenous identity (Feir and Hancock 2016; Pendakur and Pendakur 2011).

I limit the sample to working-aged adults between 25 and 64, and exclude those who are self-employed (Pendakur and Pendakur 2011; Waite and Denier 2015). Two samples have been defined. This first sample (n=346,189) includes all working-aged respondents who may be employed or unemployed and who are not missing values on key demographic variables, such as race and gender (Denice 2017). Of this first sample, approximately 4% are Indigenous. The second sample (n=322,309) is used for the analyses of wages, and so includes those who reported non-zero wages and who are not missing on employment-related and

sociodemographic variables. Finally, while the labour market in the Northern regions of Canada is markedly different, these regions are included in both samples, since many Inuit live in Northern communities (Drost 1994; Pendakur and Pendakur 2011).

Measures

Table A1 in the appendix presents the summary statistics for the variables in this analysis, which are detailed below.

Income. The dependent variable in this study is the natural logarithm of gross annual income from wages earned in 2015, which excludes income from self-employment, government transfers, and capital gains (Pendakur and Pendakur 2011; Waite and Denier 2015).

Race and gender. The reference group for comparison in this study is comprised of respondents who indicated that they are White for the 2016 Census question which asked about their identity to a population group. Only those who answered "white" are coded as the referent category. Since previous research has indicated that important differences exist between different Indigenous identity groups, I account for these differences in identity (Lamb 2013; Pendakur and Pendakur 2011).

I first separate Indigenous identity groups based on whether respondents indicated that they identified as Indigenous. Included in the ethnic identity question on the Census are options for First Nations, Métis or Inuit (Statistics Canada 2016b). Those who answered positively to the Indigenous identity question are coded into their corresponding category and those who indicated that they have multiple Indigenous identities are coded in a separate category. I then separate the First Nations category based on whether respondents indicated that they are

registered under the *Indian Act,* which was derived from respondents who answered "yes" to the question about status under the Act (Statistics Canada 2016b). From the Census I have identified two categories of First Nations respondents: those who are registered and those who are not. Finally, those who indicated that they have Indigenous ancestry (derived from the ethnic origin question), but do not identify as Indigenous are coded as the Indigenous ancestry category. Thus, I have a total of six categories for Indigeneity: registered First Nations, unregistered First Nations, Métis, Inuit, multiple Indigenous identity, and a category for those who did not identify as Indigenous but who reported Indigenous ancestry (Lamb 2013; Pendakur and Pendakur 2011). Some respondents who indicated either multiple Indigenous identities or ancestry also indicated that they belong to another population group. Because this analysis is primarily interested in examining the Indigenous wage gap, I coded individuals who expressed any Indigenous identity into one of the six groups listed above, regardless of other possible racial/ethnic identities[1]. Other ethnic and visible minorities are included in the analysis to examine comparative wage gaps between these groups, Indigenous groups, and White Canadians. Included in the ethnic identity variable are 13 additional categories for comparisons among White, Indigenous, and visible minority groups. Lastly, an important aspect of this analysis investigates income differences for men and women. Gender is coded dichotomously (Female=1, Male=0).

Descriptive measures. Many sociodemographic variables are controlled for in this analysis. Dichotomous variables include, knowledge of official languages, immigrant status,

[1] A sensitivity check was performed using an ethnic identity variable that excludes those from other ethnicities from the various Indigeneity groups. The sensitivity check yields similar results. The results for registered and unregistered First Nations, Métis, Inuit, and those with multiple Indigenous identities were consistent. Those with Indigenous ancestry face a slightly wider gap at 11% indicating that once those with mixed-racial backgrounds are excluded, the wage gap captures the unique disadvantages experienced by those with Indigenous ancestry. Results for all other ethnic identities were mostly similar. Results available upon request.

and presence of children under the age of 14 in the home (0=No, 1=Yes) (Feir 2013; Lamb 2013; Pendakur and Pendakur 2011). Presence of children under 14 is controlled for because research has shown this variable has an effect on women's earnings (Lamb 2013). In keeping with the existing literature, I also control for household family size, which includes 7 categories (1, 2 , 3, 4, 5, 6, and 7 or more persons in a household) with 1 person households as the referent (Feir 2013). Marital status has been coded with 4 categories (never married/single, married/common law, separated/divorced, and widowed), with never married/single as the referent. In addition, since previous studies have indicated that youth who speak an Indigenous language perform better in formal education (Bougie and Senécal 2010), this analysis includes a binary variable for knowledge of Indigenous languages (0=No, 1=Yes). The previous measure could also be thought of as an indication of the degree of colonization. Education is controlled for and is coded using categories based on highest level of schooling (Pendakur and Pendakur 2011). These categories include less than high school, completion of high school diploma, trades, college, and university-level education. Completion of high school diploma is the referent (Pendakur and Pendakur 2011).

Age is coded in 5-year intervals to account for important differences in earnings, with 20-25 years as the referent (Pendakur and Pendakur 2011). An important contribution of this study is to examine the extent to which one's urban location and the share of Indigenous people in a given city affects the wage gap. As such, I also include a city-level measure of the percentage of Indigenous peoples as previous studies have demonstrated that this affects the severity of the wage gap (Pendakur and Pendakur 2011). Additionally, I run separate regressions for two key cities in this analysis, Toronto and Winnipeg. The former represents a city with a relatively low proportion of Indigenous peoples, while the latter represents the city

with the highest proportion of Indigenous residents (Statistics Canada 2018d). Finally, I include province of residence as a control variable with 11 categories and Ontario as the referent category. It is important to note that the Northwest Territories, Yukon, and Nunavut are grouped into one category representing northern areas in Canada.

Work-related measures. Employment characteristics are controlled for and include full or part-time employment status and the number of weeks worked. Full or part-time status is coded with three categories: full-time (the referent), part-time, and unemployed (Feir 2013; Waite and Denier 2015). Number of weeks worked in 2015 is measured with four categories: zero weeks worked, 1 to 19 weeks worked, 20 to 34 weeks worked, and 40 to 52 weeks worked (the referent). Industry is measured at the sector level and occupation is measured using the National Occupation Classification System definitions for broad categories (Lamb 2013; Waite and Denier 2015).

Method of data analysis. In the first part of the analysis, I present descriptive findings to provide a demographic profile of the sample and examine differences in employment status among Indigenous and White populations. These descriptive measures provide estimates of the differences in labour market participation between Indigenous and White respondents and between men and women.

Then, to test whether the differences in mean income are significantly different for Indigenous and White populations, I estimate a series of ordinary least squares (OLS) regression models. These models also compare wages within Indigenous groups defined by identity and heritage, and between men and women. These models control for important sociodemographic, human capital, and employment-related variables; however, if all employment characteristics are accounted for in one model, any wage gap between Indigenous

and White populations in Canada would be the result of different pay structures within occupational groupings. The assumption here would be that race and gender do not have an effect of occupational sorting and pay determination (Hou and Coulombe 2010). If occupational sorting into certain industries and occupations involves, in part, discrimination, then controlling for these variables would understate the disadvantages faced by Indigenous peoples and particularly, women (Hou and Coulombe 2010). Thus, I include two separate models that control for work characteristics: one that excludes occupation and industry and another that includes these variables. Additionally, two models are included to investigate whether Indigenous wage gaps differ for men and women. Finally, to examine the extent to which one's urban location and the share of Indigenous people in a given city affects the wage gap, I (a) include a variable indicating the city that each respondent resides in; (b) include a city-level measure of the percentage of Indigenous people within each city; and (c) estimate separate models for two key cities that vary in terms of the proportion of Indigenous residents: Winnipeg and Toronto. The city-level measure was created by first coding a city variable with 8 categories: Toronto, Montréal, Vancouver, Calgary, Edmonton, Winnipeg, Regina, and other, with Toronto as the referent. I chose these cities as previous research has indicated important differences in the proportion of Indigenous peoples within each city and important differences in the degree of the wage gap within each city (Pendakur and Pendakur 2011). I then generated a binary variable indicating Indigeneity (0= Not Indigenous, 1=Indigenous) and aggregated this binary variable to the city-level measure to indicate the proportion Indigenous peoples within each city.

FINDINGS

Descriptive Findings

I start by describing the differences in employment rates for Indigenous and White men and women in Canada in Table 1.

Table 1. Men's and Women's Employment Status by Indigenous Identity

	Men			Women		
Identity	**Full-time**	**Part-time**	**Unemployed**	**Full-time**	**Part-time**	**Unemployed**
White	0.92	0.06	0.01	0.78	0.20	0.02
Reg. First Nations	0.85	0.11	0.04	0.76	0.20	0.04
Unreg. First Nations	0.88	0.10	0.03	0.77	0.21	0.03
Métis	0.90	0.08	0.02	0.75	0.23	0.03
Inuit	0.82	0.17	0.01	0.80	0.16	0.04
Multiple	0.86	0.10	0.04	0.80	0.17	0.03
Ancestry	0.90	0.08	0.02	0.76	0.20	0.04
Total	0.91	0.07	0.02	0.77	0.20	0.02

Note: Data come from the 2016 Canadian Census. Weighted proportions are presented. Sample is restricted to men and women aged 25-64. Columns show employment status by racial-gender group. All proportions are rounded to the nearest hundredth. Totals include respondents with visible minority status not reported in table.

Men of all ethnic identities are employed full-time at higher rates than women. Moreover, White men enjoy the highest rate of full-time employment status. For instance, approximately 92% of White men are employed full-time, while only 78% of White women are employed full-time. In fact, women of all identity groups are more likely to participate in part-time employment than men (except for Inuit men).

Furthermore, consistent with previous research on Indigenous employment outcomes, Table 1 demonstrates that registered First Nations men and women are more disadvantaged than both White populations and other Indigenous identity groups in terms of employment status, with approximately 85% of registered First Nations men employed full-time, compared

to 76% of registered First Nations women. Moreover, the rate of unemployment experienced by all Indigenous identity groups is higher than for White populations, for both men and women, with the exception of Inuit men. However, Inuit men and women are more likely to have reported part-time employment status. Thus, even those who reported Indigenous ancestry, but who did not identify as Indigenous, face disadvantages in securing full-time employment when compared with White individuals in Canada. Finally, men with multiple Indigenous identities, Inuit women, women with Indigenous ancestry, and men and women who are registered First Nations face higher rates of unemployment when compared with other identity groups. These higher rates of unemployment found among Indigenous identity groups means OLS regression results may understate the magnitude of the wage gap relative to White individuals, especially for women.

OLS Logged Wage Results Across Different Ethnic Groups

In addition to employment status, Indigenous peoples are disadvantaged compared with White Canadians with respect to wages as well. Overall, White workers earn more than Indigenous peoples. Whereas mean logged annual wages among White workers is 10.65 (s=1.12), Indigenous workers overall earn 10.37 in logged wages (s=1.32). This difference is statistically significant (p<.001). To more systematically investigate how wages vary among Indigenous and other racialized groups in Canada, Table 2 presents the results from a series of OLS models estimating logged annual wages.

Table 2. OLS Regression Results of Wage Gaps

	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**
Registered First Nations	-0.480***	-0.304***	-0.280***	-0.179***	-0.164***
	(0.018)	(0.018)	(0.018)	(0.016)	(0.015)
Unregistered First Nations	-0.265***	-0.153***	-0.148***	-0.108***	-0.088***
	(0.028)	(0.026)	(0.026)	(0.022)	(0.022)

Métis	-0.127***	-0.073***	-0.058***	-0.009	-0.007
	(0.016)	(0.015)	(0.015)	(0.013)	(0.012)
Inuit	-0.373***	-0.119	-0.109	0.050	0.055
	(0.061)	(0.064)	(0.064)	(0.054)	(0.053)
Multi_Indigenous	-0.226***	-0.123*	-0.113	-0.085	-0.058
	(0.064)	(0.060)	(0.060)	(0.051)	(0.049)
Indigenous ancestry	-0.367***	-0.171***	-0.158**	-0.096*	-0.082*
	(0.052)	(0.049)	(0.049)	(0.042)	(0.041)
South Asian	-0.242***	-0.237***	-0.261***	-0.210***	-0.175***
	(0.009)	(0.010)	(0.010)	(0.009)	(0.009)
Chinese	-0.142***	-0.114***	-0.138***	-0.125***	-0.114***
	(0.010)	(0.011)	(0.011)	(0.010)	(0.009)
Black	-0.327***	-0.168***	-0.195***	-0.094***	-0.077***
	(0.013)	(0.013)	(0.013)	(0.011)	(0.011)
Filipino	-0.215***	-0.203***	-0.213***	-0.229***	-0.133***
	(0.012)	(0.013)	(0.013)	(0.011)	(0.011)
Latin American	-0.323***	-0.181***	-0.203***	-0.155***	-0.122***
	(0.018)	(0.018)	(0.018)	(0.015)	(0.015)
Arabic	-0.392***	-0.374***	-0.396***	-0.228***	-0.197***
	(0.020)	(0.020)	(0.020)	(0.017)	(0.017)
Southeast Asian	-0.273***	-0.049*	-0.076**	-0.110***	-0.064***
	(0.024)	(0.023)	(0.023)	(0.020)	(0.019)
West Asian	-0.476***	-0.436***	-0.461***	-0.297***	-0.271***
	(0.027)	(0.026)	(0.026)	(0.022)	(0.022)
Korean	-0.421***	-0.423***	-0.445***	-0.257***	-0.180***
	(0.033)	(0.032)	(0.032)	(0.027)	(0.026)
Japanese	-0.126*	-0.157**	-0.189***	-0.128**	-0.076
	(0.054)	(0.050)	(0.050)	(0.043)	(0.042)
Visible Minority NIE	-0.215***	-0.051	-0.089**	-0.073*	-0.066*
	(0.036)	(0.034)	(0.034)	(0.029)	(0.028)
Multiple Visible Minority	-0.127***	-0.073*	-0.104**	-0.083**	-0.064*
	(0.035)	(0.033)	(0.033)	(0.028)	(0.028)
White and Visible Minority	-0.170***	-0.126***	-0.160***	-0.087***	-0.069***
	(0.025)	(0.024)	(0.024)	(0.021)	(0.020)
Female		-0.452***	-0.451***	-0.273***	-0.220***
		(0.004)	(0.004)	(0.003)	(0.004)
Age					
30-34		0.252***	0.252***	0.159***	0.134***

	(0.007)	(0.007)	(0.006)	(0.006)
35-39	0.405***	0.404***	0.268***	0.234***
	(0.008)	(0.008)	(0.007)	(0.006)
40-44	0.511***	0.511***	0.341***	0.302***
	(0.008)	(0.008)	(0.007)	(0.007)
45-49	0.557***	0.558***	0.387***	0.346***
	(0.008)	(0.008)	(0.007)	(0.006)
50-54	0.557***	0.560***	0.408***	0.362***
	(0.008)	(0.008)	(0.007)	(0.006)
55-59	0.484***	0.488***	0.401***	0.356***
	(0.008)	(0.008)	(0.007)	(0.007)
60-64	0.243***	0.247***	0.319***	0.280***
	(0.009)	(0.009)	(0.008)	(0.008)
Marriage				
Married/Common law	0.253***	0.261***	0.161***	0.112***
	(0.007)	(0.007)	(0.006)	(0.006)
Separated/Divorced	0.155***	0.158***	0.086***	0.066***
	(0.008)	(0.008)	(0.007)	(0.007)
Widowed	0.103***	0.111***	0.073***	0.060***
	(0.020)	(0.020)	(0.017)	(0.016)
Official language	0.378***	0.389***	0.309***	0.208***
	(0.025)	(0.025)	(0.021)	(0.020)
Indigenous language	-0.223***	-0.204***	-0.236***	-0.254***
	(0.035)	(0.035)	(0.030)	(0.029)
Children under 14	-0.047***	-0.042***	0.011*	-0.000
	(0.006)	(0.006)	(0.005)	(0.005)
Household size				
2 persons	-0.077***	-0.076***	-0.032***	-0.022***
	(0.007)	(0.007)	(0.006)	(0.006)
3 persons	-0.069***	-0.071***	-0.023***	-0.018**
	(0.008)	(0.008)	(0.007)	(0.006)
4 persons	-0.014	-0.018*	0.026***	0.024***
	(0.009)	(0.009)	(0.007)	(0.007)
5 persons	-0.074***	-0.076***	0.004	0.005
	(0.011)	(0.011)	(0.009)	(0.009)
6 persons	-0.180***	-0.175***	-0.064***	-0.055***
	(0.019)	(0.019)	(0.016)	(0.015)
7 persons or more	-0.264***	-0.258***	-0.127***	-0.103***

	(0.034)	(0.034)	(0.029)	(0.028)
Education				
No certificate	-0.237***	-0.228***	-0.151***	-0.101***
	(0.008)	(0.008)	(0.007)	(0.006)
Trades	0.105***	0.114***	0.115***	0.082***
	(0.007)	(0.007)	(0.006)	(0.006)
College	0.228***	0.226***	0.200***	0.109***
	(0.005)	(0.005)	(0.005)	(0.005)
University	0.531***	0.515***	0.468***	0.322***
	(0.005)	(0.005)	(0.005)	(0.005)
Immigrant	-0.180***	-0.204***	-0.162***	-0.132***
	(0.007)	(0.007)	(0.006)	(0.006)
Province				
Que	-0.161***	-0.164***	-0.147***	-0.135***
	(0.005)	(0.005)	(0.004)	(0.004)
BC	-0.055***	-0.027***	0.019***	0.024***
	(0.006)	(0.006)	(0.005)	(0.005)
Alta	0.181***	0.220***	0.235***	0.184***
	(0.006)	(0.006)	(0.005)	(0.005)
Man	-0.054***	0.073***	0.049***	0.034***
	(0.011)	(0.012)	(0.010)	(0.010)
Sask	0.063***	0.160***	0.139***	0.109***
	(0.012)	(0.012)	(0.010)	(0.010)
NS	-0.236***	-0.182***	-0.138***	-0.116***
	(0.012)	(0.012)	(0.011)	(0.010)
NB	-0.268***	-0.220***	-0.158***	-0.134***
	(0.013)	(0.013)	(0.012)	(0.011)
NL	-0.197***	-0.104***	0.014	0.004
	(0.015)	(0.016)	(0.014)	(0.013)
PEI	-0.298***	-0.203***	-0.146***	-0.114***
	(0.031)	(0.031)	(0.026)	(0.026)
Northern Canada	0.351***	0.436***	0.382***	0.327***
	(0.043)	(0.043)	(0.037)	(0.036)
City proportion Indigenous		-1.708***	-1.025***	-0.952***
		(0.060)	(0.051)	(0.051)
Employment status				
Part-time			-0.981***	-0.876***
			(0.005)	(0.005)
Weeks worked				

1-19				-1.506***	-1.473***
				(0.007)	(0.007)
20-39				-0.519***	-0.496***
				(0.005)	(0.005)
Constant	10.654***	9.847***	9.902***	10.242***	10.522***
	(0.002)	(0.026)	(0.026)	(0.022)	(0.027)
N	322309	322309	322309	322309	322309

Note: *p< .05; **p< .01; ***p< .001 denotes levels of statistical significance. Data comes from the 2016 Canadian Census. Weighted values are presented. Sample is restricted to men and women aged 25-64. Standard errors presented in parenthesis under each coefficient. Model 5 controls for occupation using the National Occupational Classification for Statistics major groups and industry using the North American Industry Classification System at the sector level. All coefficients and standard errors are rounded to the nearest thousandth. NIE="Not Included Elsewhere".

Five main patterns are observed from Table 2. First, all Indigenous identity groups have lower wages than White individuals (with the exception of Inuit individuals); however, the gaps narrow as sociodemographic and employment-related controls are added across the five models. Second, registered First Nations, unregistered First Nations, and those with Indigenous ancestry all have significant wage gaps when compared with White individuals. In fact, consistent with previous research on the Indigenous wage gap, registered First Nations face the widest disparity across all five models. The gap in wages for this Indigenous identity group is on par with the most disadvantaged visible minority groups in Canada. Third, accounting for employment-related characteristics, such as weeks worked and full or part-time employment status, explains the gap in wages experienced by those who identify as Métis when compared with White individuals. Likewise, Inuit people's lower earnings, as well as those with multiple Indigenous identities, is fully explained by sociodemographic and employment-related measures, such as full or part-time employment status and weeks worked. Finally, I find that those with Indigenous ancestry suffer from a wage gap when compared with White individuals. This category for Indigeneity also includes individuals with mixed-racial background. As such, these individuals could be suffering from double-disadvantage in the labour market.

The exponentiated values of each coefficient represent the proportionate difference in wages between the various ethnic identity categories and White individuals. In terms of the raw wage gap in Model 1, Registered First Nations face the most severe wage gap, earning 38%[2] less than their White counterparts, followed by Inuit and those who reported Indigenous ancestry, but who did not identify as Indigenous, at 31%. The next widest raw wage gap is observed for unregistered First Nations, who suffer a 23% raw wage gap. Finally, those who have multiple Indigenous identities suffer from a 20% gap in wages, while Métis have a raw wage of 12%. Thus, the rank-ordering of the raw wage gap is largest for registered First Nations peoples at 38% and narrowest for Métis people at 12%.

Once sociodemographic control variables are added in Model 2, the wage gaps between Indigenous and White workers are reduced by approximately half. Results show that registered First Nations still have the widest wage gap at 26%, followed by those do not identify as Indigenous but who reported Indigenous ancestry, with a 16% wage gap. Unregistered First Nations suffer a 14% wage gap, followed by those with multiple Indigenous identities at 12%. Finally, Métis suffer the narrowest wage gap at 7%. The results for the Inuit population are no longer statistically significant.

Model 3 demonstrates that the inclusion of the city-level variable, that measures the proportion of Indigenous peoples residing in a city, reduces the Indigenous wage gap even further for all Indigenous identity groups. This is especially true for registered First Nations people. In addition, the wage gap for those with multiple Indigenous identities is no longer significant. As such, the proportion of Indigenous peoples in an urban area negatively affects

[2] Percentage difference calculated by: (exp(-.480) -1_* 100 = 38.12. All percentages have been rounded to whole numbers for ease of interpretation.

the wages of Indigenous peoples since the coefficient for this variable is very large, negative, and significant at conventional levels. Thus, consistent with previous literature, I find that unlike visible minority groups, who enjoy a favourable ethnic enclave effect, Indigenous peoples' wages are penalized when they live in cities with a larger proportion of co-Indigenous residents (Pendakur and Pendakur 2011). With the inclusion of this measure, the wage gap experienced by registered First Nations was reduced the most of all the Indigenous identity categories and suggests that they are the most affected by this phenomenon.

Models 4 and 5 reported in Table 2 control for work-related characteristics. As stated, controlling for occupation and industry could underestimate the disadvantages faced by Indigenous peoples in the labour market if race is a determining factor in occupational sorting because, when these two characteristics are included, any wage gap found between White and Indigenous peoples reflects different occupations and pay structures within these occupations (Hou and Coulombe 2010). As such, two separate models are included in this analysis to account for the possibility of occupational sorting by race. Model 4 demonstrates that Indigenous peoples still face a wage gap, when compared with White individuals, even when controlling for full or part-time status and weeks worked. As expected, we see that the wage gaps for all ethnic identity groups are reduced once full or part-time work status and weeks worked are accounted for. In fact, we can see that these two work-related characteristics fully explain the wage gap for Inuit, Métis, and those with multiple Indigenous identities when compared with White individuals. Thus, these identity groups are more likely to work part-time and fewer weeks throughout the year. This finding could represent barriers to gainful employment for these groups or possibly, discriminatory practices in the labour market. Conversely, accounting for different occupations and industries does not fully explain the gap

between registered and unregistered First Nations and those who have Indigenous ancestry, when compared with White individuals. Thus, even when all employment-related characteristics are accounted for, these groups still experience a residual gap in wages. What Model 5 does show is that there may be some occupational sorting occurring for Indigenous employees because all the wage gaps, that are statistically significant, are reduced once industry and occupation are accounted for in the model. This finding reflects the fact that some Indigenous groups could be experiencing occupational sorting as they are more likely to work in lower paid occupations and industries.

Even individuals with Indigenous ancestry suffer from a significant residual wage gap across all five models. As stated, I preference Indigenous identity in this analysis over other visible minority identities, so it could be argued that these individuals suffer from double disadvantage on account of their multiple identities. For instance, because those who have Indigenous ancestry may have also indicated that they belong to another population group (i.e. Black, South Asian, etc.) their disadvantage could be magnified by their multiple minority identities. What is of greater importance, however, is that any Indigenous background seems to produce disadvantages that are unique to this group. Thus, Indigeneity seems to be an important mechanism through which wage inequality functions.

Model 5 also demonstrates a similar pattern to the four previous models. Registered First Nations face the widest wage gap, earning 15% less than White individuals. Unregistered First Nations face a 9% wage gap, while those who reported Indigenous ancestry, but who did not identify as Indigenous, face an 8% wage gap. Again, the results for Métis, Inuit, and those with multiple Indigenous identities were not statistically significant meaning the wage gap between these groups and White individuals is fully explained once work characteristics are

accounted for in the models. Thus, we can see that consistent with previous research, most Indigenous identity groups, except for Métis, Inuit, and those with multiple Indigenous identities, face a wage gap when compared with White populations in Canada (Pendakur and Pendakur 2011). However, the rank-ordering of the wage gap among the Indigenous identity groups is different from prior studies. Moreover, the rank-ordering pattern among Indigenous identity groups changes between the five models.

These changes occur because there is heterogeneity across the different identity groups in terms of sociodemographic and employment-related characteristics, pointing to the importance of accounting for differences within and variations between Indigenous identities. Some identity groups are also heterogenous in their racial composition, especially those with multiple Indigenous identities. For example, many of these respondents also indicated that they identify as White, which would bring average wages up for this group. Finally, because a smaller number of individuals are in the multiple Indigenous identity category, the estimate for this group may suffer from a lower precision. Nevertheless, the ranking of the wage gaps is in keeping with the existing body of literature in that registered First Nations face a wider gap in wages, while those who report Indigenous ancestry, but who do not identify as Indigenous, face the smallest gap in wages.

All other controls across the five models operate as expected. For example, most visible minorities also earn less than White individuals. Age was grouped as it does not assume a linear relationship and thus, explains more of the variation in wages. As expected, the relationship between age and logged wages evinces an inverse U-shaped pattern; relative to those aged 25 to 29, all age groups earn more; however, adults between 50 and 54 and 55 to 59 years of age earn the most, while adults aged 60 to 64 and those between the ages of 30 and

39 earn less. In addition, on average, women earn significantly less than their male counterparts across all models. As noted, a key contribution of this study is the inclusion of a measure that accounts for knowledge of Indigenous languages for the Indigenous populations. Based on previous research, I hypothesized that Indigenous workers with knowledge of an Indigenous language would earn more; however, the coefficients for this variable are large, negative, and statistically significant across all five models[3]. This could be interpreted at face value: knowledge of an Indigenous language lowers wages; however, I suggest that because this analysis does not account for whether First Nations individuals live on or off-reserve, the measure accounting for knowledge of an Indigenous language could be acting as a proxy for the residential location of Indigenous peoples, in that those who live on-reserve are experiencing a larger wage gap. In fact, Statistics Canada (2018c) states that in 2010, registered First Nations living on-reserve were more than three times as likely to be able to conduct a conversation in an Indigenous language than those who were registered and living off-reserve, adding credence to this interpretation.

[3] To compare, a regression was produced based on Model 5 without the inclusion of the Indigenous language variable. Coefficients are similar for all Indigenous identity categories as are levels of statistical significance, with the exception of registered First Nations. Knowledge of an Indigenous language explains some of the wage gap for this identity group as the gap in wages goes from 15% to 20% when the language variable is omitted from the model.

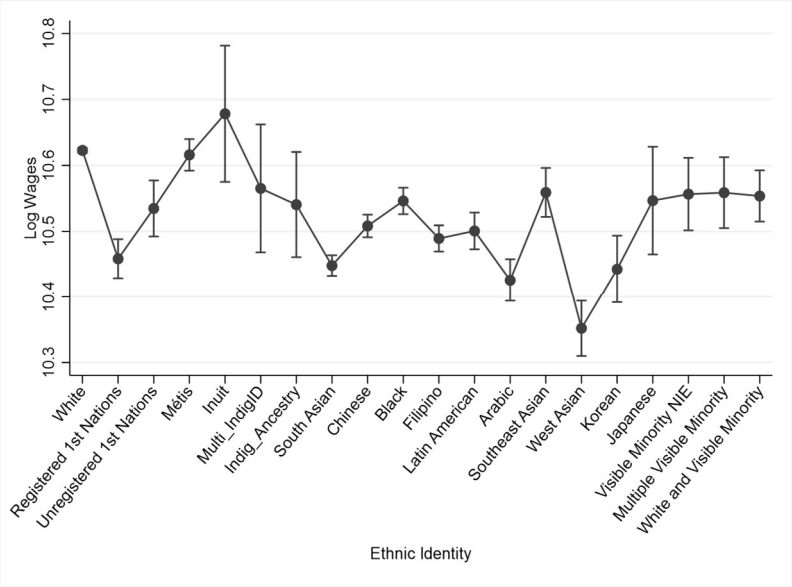

Figure 1. Predicted log wages of each ethnic identity group. Notes: Predictions based on Model 5 in Table 3. All other explanatory variables are averaged. NIE= "Not included elsewhere".

To illustrate how wages differ between Indigenous and White individuals, and among Indigenous identities, I predict workers' logged annual wages from Model 5 in Table 2. As evident in Figure 1, all identity groups, expect for Métis and Inuit, are predicted to earn less than White individuals. Moreover, consistent with previous research, these estimates show that registered First Nations face a wider wage gap relative to White Canadians than other Indigenous identity groups. Their wage gap is consistent with the most disadvantaged visible minority groups in Canada, such as Arabic or South Asian individuals. While this analysis finds that those with Indigenous ancestry face an unexplained wage gap, the confidence intervals demonstrate the heterogeneity within this group. Finally, Figure 1 also shows that those who identify as multiple visible minorities and white and visible minorities also suffer from a wage gap when compared with White individuals, demonstrating the importance of accounting for differences in identities.

OLS Logged Wage Results for Men and Women

Table 3. OLS Regression Result for Log Wages of Men and Women

	Men	Women
Registered First Nations	-0.178***	-0.146***
	(0.022)	(0.021)
Unregistered First Nations	-0.057	-0.112***
	(0.030)	(0.031)
Métis	-0.007	-0.007
	(0.017)	(0.018)
Inuit	-0.006	0.128
	(0.073)	(0.076)
Multi_Indigenous	-0.101	0.000
	(0.068)	(0.072)
Indigenous ancestry	0.004	-0.152**
	(0.060)	(0.055)
South Asian	-0.221***	-0.108***
	(0.012)	(0.013)
Chinese	-0.173***	-0.060***
	(0.013)	(0.013)
Black	-0.155***	-0.006
	(0.015)	(0.015)
Filipino	-0.199***	-0.088***
	(0.016)	(0.014)
Latin American	-0.167***	-0.074***
	(0.020)	(0.021)
Arabic	-0.200***	-0.192***
	(0.021)	(0.026)
Southeast Asian	-0.119***	0.003
	(0.027)	(0.027)
West Asian	-0.300***	-0.230***
	(0.029)	(0.032)
Korean	-0.250***	-0.119**
	(0.037)	(0.037)
Japanese	-0.021	-0.112*
	(0.066)	(0.054)
Visible Minority NIE	-0.145***	0.003

	(0.040)	(0.040)
Multiple Visible Minority	-0.088*	-0.049
	(0.039)	(0.039)
White and Visible Minority	-0.097***	-0.047
	(0.027)	(0.029)
Constant	10.404***	10.403***
	(0.035)	(0.044)
N	161447	160862

Notes: Separate models for men and women based on Model 5 in Table 2. *p< .05; **p< .01; ***p< .001 denotes levels of statistical significance. Data comes from the 2016 Canadian Census. Weighted values are presented. Sample is restricted to men and women aged 25-64. Standard errors presented in parenthesis under each coefficient. All coefficients and standard errors are rounded to the nearest thousandth. Models include the same controls as Model 5 in Table 2 (not shown). NIE="Not Included Elsewhere".

Are these differences in wages within the Indigenous population larger or smaller for women or men? Table 3 presents separate regression results for men and women of various ethnic identities. There are a number of conclusions that can be drawn from Table 3. First, the wage gaps that are significant, for men and women, are quite large. Second, the range of the wage gap across the various Indigenous identity groups is different for men and women. In fact, only registered First Nations men were found to suffer a residual wage gap of 16% when compared with White men. The estimated wage gap for Indigenous women ranges from approximately 11% to 14% when compared with White women. Specifically, women with Indigenous ancestry and registered First Nations women both suffer from a 14% wage gap, when compared with White women, while unregistered First Nations women experience an 11% gap in wages.

The results for Métis men and women, Inuit men and women, and men and women with multiple Indigenous identities are not statistically significant. Since these estimates are based on Model 5, it can be concluded that: (1) for both Métis men and women, the employment-related controls explain the wage gap; (2) the sociodemographic and employment related controls explain the wage gap for Inuit men and women; and (3) for those with

Indigenous ancestry, women are producing the large and statistically significant wage gap presented in Table 3. It can also be concluded that unregistered First Nations women are contributing to the large and significant wage gap displayed in Model 5. In addition, the coefficient for the city-level variable, measuring the proportion of each city's population that is Indigenous, is nearly double for women than for men, suggesting that women are doubly affected by this phenomenon. Although this analysis did not examine the on and off-reserve population, it is known that Indigenous women are increasingly urbanized when compared with their male counterparts and that Indigenous women earn more on-reserve than off-reserve (Pendakur and Pendakur 2011). Thus, this measure could represent women's further marginalization when living in an urban area. Women's wages are also negatively impacted by the presence of children under the age of 14 in the home, unlike their male counterparts. For men, there appears to be a wage penalty for knowledge of an Indigenous language, unlike for women. Since Indigenous women are more likely to live off-reserve than their male counterparts, the measure could be accounting for the disadvantages produced from living on-reserve.

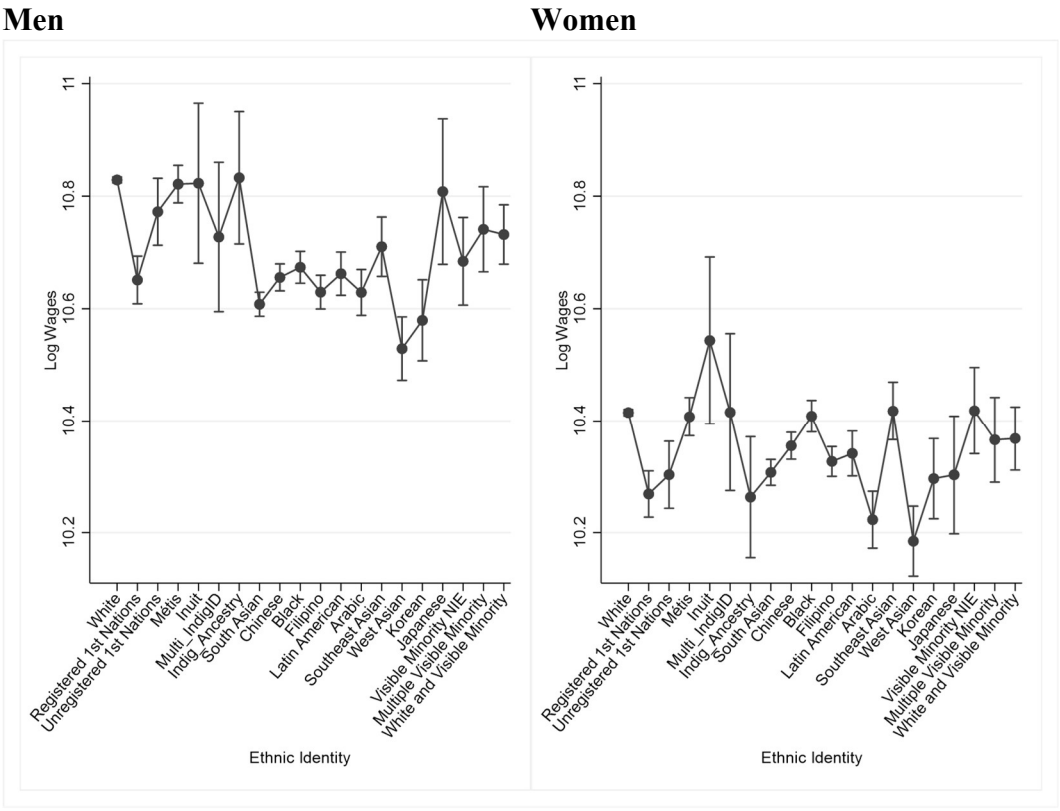

Figure 2. Predicted log wages of each identity group for men and women. Note: Predictions based on Model 5 in Table 3. All other explanatory variables are averaged. NIE= "Not included elsewhere".

Figure 2 displays the predicted logged wages of men and women. Firstly, this figure illustrates that predicted logged wages are lower for all women when compared with men. Consistent with the regression results, this figure also shows that there is a range of the wage gap across Indigenous identity groups for women, whereas only men who are First Nations suffer from a gap in wages when compared to White men. We can also see that, consistent with prior research, men and women who are registered First Nations are more disadvantaged, relative to White Canadians, than other identity groups. In addition, the figure shows that many Indigenous groups experience a wage gap that is on par with other visible minorities for both men and women. Finally, the confidence intervals demonstrate the variation with these estimates, which are less stable for Inuit men and women, men and women with multiple

Indigenous identities, and men and women who reported Indigenous ancestry, in part because of their smaller sample sizes.

The Indigenous Wage Gap Across Cities

In order to examine more closely the relationship between the wages of Indigenous groups and the city context in which workers live, I carry out two additional analyses. First, I add to Model 5 of Table 2 an interaction term between the ethnic identity categories and a variable measuring the proportion of a city's residents who are Indigenous. Second, I estimate Model 5 of Table 2 separately for two cities—Toronto and Winnipeg—that represent different contexts.

In the first analysis the interaction terms tests whether the negative relationship between wages and the share of Indigenous peoples in a city, that was observed in Table 2 above, holds or varies across different Indigenous and other ethnic groups. Previous research has demonstrated that Indigenous peoples residing in an area with a larger proportion of co-Indigenous residents suffer from a larger wage gap (Pendakur and Pendakur 2011). In adding the interaction terms to Model 5, I also combined some of the Indigenous identity categories due to small cell sizes: (1) registered and unregistered First Nations; (2) Métis; and (3) all other Indigenous identities including Inuit, multiple identities, and those with ancestry.

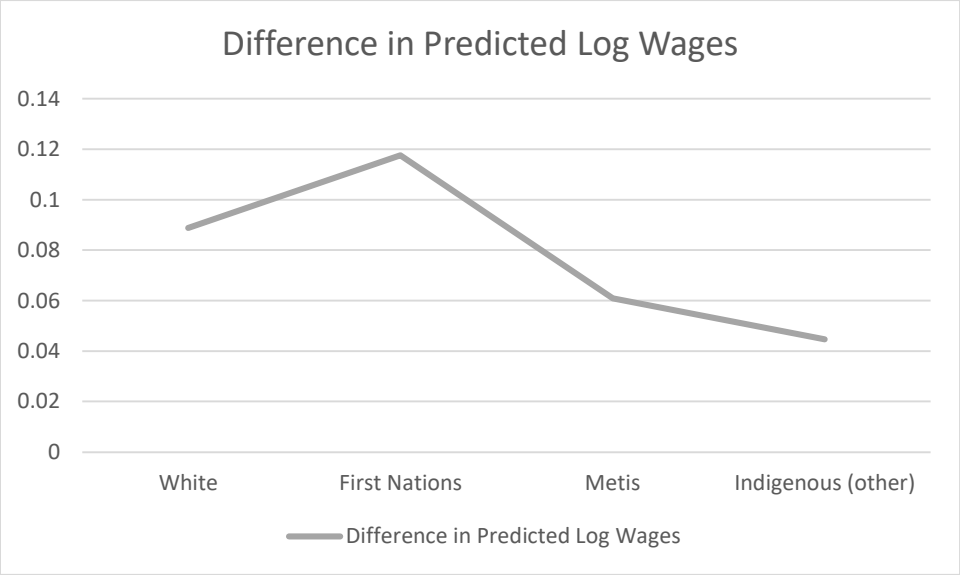

Figure 3. Difference in predicted log wages in cities representing the 75th and 25th percentiles (proportion of Indigenous peoples in a city). Based on Model 5 in Table 2 as well as the interaction between Ethnic identity and City Proportion Indigenous. All other explanatory variables are averaged.

Figure 3 is based off of the interaction model (full results available upon request). In Figure 3, I show the difference in predicted logged wages for White and Indigenous workers living in two hypothetical cities: one with a relatively high share of Indigenous peoples (at about the 75th percentile, or 9.8%) and one with a relatively low share (at the 25th percentile, or 0.8%). As hypothesized, predicted logged wages are lower in a city at the 75th percentile across Indigenous identity groups. Interestingly, even the predicted logged wages for White individuals are lower in the city with a higher proportion of Indigenous residents and the difference in predicted logged wages for Whites is greater than for Métis individuals and for those in the Indigenous (other) category. Finally, the difference between predicted logged wages in these two cities is largest for First Nations individuals. This indicates that, as hypothesized, wages are lower for Indigenous peoples living in a city with a higher proportion of co-Indigenous residents. This is especially true for First Nations individuals. Thus, unlike visible minorities, who enjoy a favourable ethnic enclave effect, in which visible minorities

who live in a city with a large proportion of co-ethnic resident have better economic outcomes, Indigenous peoples suffer from greater economic disadvantage in cities with a large proportion of co-Indigenous residents.

While previous research has primarily examined this effect for the on/off-reserve populations of First Nations peoples, this analysis does not differentiate between these two populations. It could be argued that the remoteness of many reserve lands contributes to the severity of the wage gap and that may be why First Nations suffer the widest wage gap when compared with White individuals and, furthermore, why this group suffers the greatest difference between the predicted logged wages in these two hypothetical cities. While this analysis is unable to separate urban Indigenous peoples from on-reserve populations, previous literature has found that, contrary to the previous argument, both on-reserve First Nations and urbanized First Nations individuals experience a severe wage gap when compared with White individuals (Feir 2013; Lamb 2013; Pendakur and Pendakur 2011). Thus, the Indigenous wage gap is not produced from the remoteness of reserve territories alone, since both urban and reserve populations experience a wage gap.

Patterns Across Toronto and Winnipeg

Finally, I re-estimated versions of Model 5 from Table 2 separately for individuals living in two key cities: Toronto and Winnipeg. These two cities were chosen because Indigenous peoples in Toronto represented only 0.8% of the total population in 2016, while in Winnipeg Indigenous peoples accounted for 12.2% of the total population in that same year (Statistics Canada 2018d). In fact, Winnipeg has the highest proportion of Indigenous peoples of all major cities in Canada. Thus, examining the Indigenous wage gap in Winnipeg and Toronto allows me to see if the wage gap is larger or smaller for Indigenous peoples residing

in these two cities, which represent different contexts and populations. Again, the collapsed categories of Indigeneity are used in these regressions because of small cell counts. Finally, because of issues with collinearity, Indigenous language and province were removed as control variables[4].

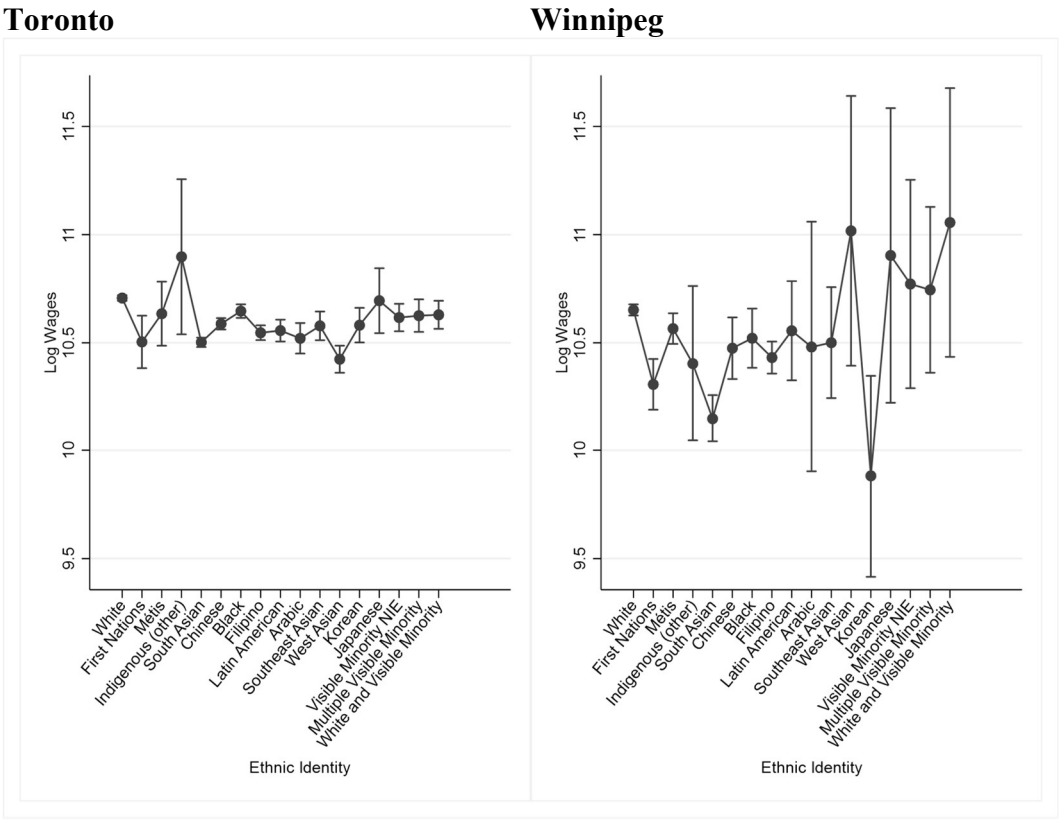

Figure 4. Predicted log wages of ethnic identity groups in Toronto and Winnipeg. Based on regression results for these two key cities using Model 5 in Table 2. All other variables have been averaged. City proportion Indigenous, Province, and Indigenous language were omitted from this analysis because of issues with collinearity. Note: NIE="Not included elsewhere".

Figure 4 presents the predicted logged wages of each ethnic identity group in Toronto and Winnipeg. We can see that, consistent with previous findings, First Nations individuals earn less than White individuals in both cities; at the same time, First Nations individuals in

[4] The issue of collinearity for Indigenous language is interesting for the city of Toronto. Because the Greater Toronto Area has the most reserve territories in Canada, as stated previously, this variable could be acting as a proxy for residential location for the on/off-reserve Indigenous population.

Winnipeg suffer a wider gap than those who reside in Toronto, when compared with White individuals. In fact, the regression results (full model results available upon request) indicate that in Toronto, of all three Indigenous identity categories, only First Nations individuals suffered a statistically significant wage gap when compared with White individuals in that city. The gap represents a 18% difference in wages. Therefore, Métis individuals and, individuals who are Inuit, have multiple Indigenous identities, or ancestry do not have wages that are significantly different from White individuals in Toronto.

In Winnipeg, however, both First Nations and Métis individuals earn significantly less than White individuals. Specifically, First Nations individuals in Winnipeg suffer a wage gap of approximately 29%, while Métis individuals experience an 8% wage gap, when compared with White individuals. Thus, as hypothesized, the wage gap is more severe in Winnipeg than in Toronto. Moreover, First Nations in both cities experience a gap in wages that is consistent with other disadvantaged visible minority groups in these cities. In fact, First Nations individuals are among the most disadvantaged groups. Interestingly, the predicted logged wages are also lower for Whites in Winnipeg than in Toronto. It could be argued that wages are lower for all individuals residing in prairie cities (which also happen to be the cities with a higher proportion of Indigenous residents) because of differences in the structure of opportunities present in Winnipeg and Toronto labour markets; however, such differences do not explain the 29% wage gap experienced by First Nations people in Winnipeg, when compared with White individuals. In addition, the wage gap in Toronto is still quite severe for First Nations individuals, which suggests that some other phenomenon is occurring. In Toronto, for example, it could be because Indigenous women are more urbanized than their male counterparts and, while men enjoy an urban wage premium (Lamb 2013), Indigenous

women's wages are lower off-reserve than on-reserve (Pendakur and Pendakur 2011). This phenomenon could be contributing to the large wage gap for First Nations individuals residing in Toronto, but because of issues with small cell sizes, I am unable to separate by gender. Again, however, these findings indicate that Indigenous identities seem to be important mechanisms through which the wage gap manifests.

The confidence intervals displayed in Figure 4 demonstrate the variation with these estimates and are consistent with what we know about the racial composition of these two cities. For instance, Winnipeg has the highest proportion of Indigenous peoples – represented by the narrower confidence bands – and a lower proportion of visible minorities – which is represented by the wider confidence bands for these groups (Statistics Canada 2018d). In Toronto, however, we see wider confidence bands for all Indigenous groups and narrower bands for visible minority groups. Finally, as stated earlier, I was interested in comparing the wages of individuals with mixed-racial backgrounds to other identity groups to examine whether these groups are experiencing disadvantages. This analysis found that those with multiple visible minority identities in Toronto do face a wage gap when compared with White individuals that is significant at conventional levels. In Winnipeg, these estimates are less stable because of small cell sizes. Nevertheless, it is interesting to note that the findings for this group is also consistent with the findings from Model 5. Specifically, those with mixed racial background experience a wage gap when compared with White individuals. Again, because of the plurality of ethnic identities, these groups may be experiencing double disadvantage in terms of wages.

DISCUSSION AND CONCLUSION

Using nationally representative data from the 2016 Canadian Census (PUMF) I find evidence that Indigenous men and women face a severe wage gap when compared with White individuals in Canada. Furthermore, important differences in the severity of the wage gap were found within the Indigenous population. Consistent with previous research, I find that, across all five models, registered First Nations individuals face the widest disparity in wages. Inconsistent with previous literature, I find that only registered and unregistered First Nations and those with Indigenous ancestry face a significant gap in wages. The wage gaps for these Indigenous groups are consistent with other racialized minorities examined in this analysis. Additionally, while Indigenous women face a wage gap of approximately 11% to 14%, findings indicate that only registered First Nations men face a wage gap, when compared with White men, of approximately 16%. As expected, First Nations men suffer from the widest wage gap when compared with White men. However, when compared with White women, women with Indigenous ancestry unexpectedly face the most severe gap, followed by registered and unregistered First Nations women. These findings demonstrate that women with Indigenous ancestry and First Nations women are facing barriers to securing gainful employment and that gender and race may be producing barriers that are unique to Indigenous women.

A key contribution of this analysis is the inclusion of a city-level measure that accounts for the proportion of Indigenous residents in a city. As hypothesized, I find that wages are lower for First Nations and Métis individuals living in a city with a higher proportion of co-Indigenous residents. Further, I regressed logged wages for two key cities – Winnipeg and Toronto – and found that Indigenous individuals living in Winnipeg (a city with the highest

proportion of Indigenous residents) face a more severe wage gap than do Indigenous peoples living in Toronto (a city with one of the lowest proportions of Indigenous residents). Moreover, as hypothesized, First Nations individuals face the most severe wage gap in Winnipeg and Toronto (29% and 18% respectively). Thus, consistent with previous research I find that the economic outcomes of Indigenous peoples living in cities with large Indigenous populations are worse than in cities with a smaller Indigenous population (Pendakur and Pandakur 2011).

Included in this article are descriptive measures that account for rates of full or part-time employment, as well as unemployment rates, which demonstrate that women of all ethnic groups experience higher rates of part-time employment and unemployment when compared with men. In addition, I find higher rates of unemployment among all Indigenous identity groups (except for Inuit men) and higher participation in part-time employment than White individuals, even for those who reported only Indigenous ancestry among both men and women. These descriptive findings are important for Indigenous populations since those who are unemployed are left out of wage analyses. Thus, Indigenous workers may be experiencing barriers to labour market participation, as well as an unexplained wage gap when compared with White workers. In addition, wage analyses may understate the overall disparity faced by Indigenous workers.

Together, these findings have important implications for policy initiatives. Since many Indigenous identity groups face an unexplained or residual gap in wages compared with White individuals, which may reflect discriminatory practices in the labour market and in wage setting practices, then anti-discrimination policies may be needed to eliminate this disparity. Moreover, while Indigenous peoples are subject to protections in certain industries under the *Employment Equity Act,* this analysis found that those with Indigenous ancestry (but who do

not identify as Indigenous) face a gap in wages. This finding is especially true for women with Indigenous ancestral background. Thus, these individuals may be left out of the protections ensured by this piece of legislation as they may be more likely to not identify themselves as a protected group. In addition, this legislation is limited in its application by only deeming these groups protected in industries that are federally regulated, which may be particularly important for women as well as Indigenous peoples (Government of Canada 2019). As such, policymakers should focus attention to reducing the Indigenous wage gap by implementing employment equity initiatives in all industries of employment and recognize the disadvantages that are produced for those with a plurality of identities. Finally, since descriptive findings suggest that Indigenous identity groups suffer from higher rates of unemployment, policymakers should focus on anti-discriminatory practices in hiring, as well as wage setting.

Since this analysis is based on the publicly available 2016 Canadian Census dataset, I do not account for the on/off-reserve population of First Nations individuals. While some have argued that the remoteness of may reserve territories contributes to the Indigenous wage gap, I was unable to separate urban Indigenous individuals from the on-reserve population. Moreover, a larger sample would help produce more precise estimates of the gaps between specific Indigenous groups and White Canadians. In addition, I was unable to control for public and private sector employment. Finally, because of the cross-sectional nature of the dataset, I am unable to account for the long history of colonization endured by Indigenous peoples in Canada nor the collective body of assimilationist policies implemented by the federal government including the *Indian Act* and the imposition of the residential school system (Capitaine and Vanthuyne 2017; Miller 2003). These policies have historically functioned to disrupt Indigenous lives and communities (Capitaine and Vanthuyne 2017; Miller 2003). As

such, this history has contributed to the various disparate outcomes of Indigenous peoples when compared with the rest of the Canadian population (Richmond and Cook 2016).

Despite these limitations, this analysis did control for knowledge of an Indigenous language as a sort of proxy measure of colonization. While I hypothesized that this measure would have a positive effect on wages, the opposite was found. As mentioned, this finding could be accounting for important differences in the on/off-reserve population of First Nations people. As such, future research could investigate the Indigenous wage gap in Canada, using the confidential Census files, and include a measure of knowledge of Indigenous languages to parse out its effect. In addition, I included a measure that accounts for the proportion of Indigenous individuals residing in each city. As stated, Indigenous women are more urbanized than their male counterparts (Gerber 2014). Thus, future research could use the confidential Census file to examine urbanization and test whether these differences in the Indigenous wage gap occur in both urban and rural locations. Finally, while this analysis focused on total wage disparity, there is an emerging body of literature that has investigated the Indigenous wag gap across the income distribution (Lamb 2013; Pendakur and Pendakur 2011). Future research could incorporate such an investigation to see if Indigenous people employed in occupations that require higher levels of education still face a gap in wages.

In demonstrating that there are important differences in the wage gap among Indigenous identity groups, including those with mixed-racial and ancestral backgrounds, this articles' findings have important implications for narrowing the wage gap between Indigenous and White individuals in Canada, as well as gender-based wage gaps. While this analysis was unable to separate public and private sector employment, the residual wage gaps found suggest a need for broader policy initiatives that include a plurality of identities and that extend

protections beyond sectors of employment that are federally regulated. In addition, the difference in rates of full-time employment found between Indigenous identity groups and White individuals suggests there may be a need for anti-discrimination initiatives in hiring practices as well as wage setting. Finally, since women of all identity groups participate in part-time employment at higher rates than men, and Indigenous women at higher rates than White women, this suggests that race and gender function to produce differential barriers to full-time employment for all women, especially Indigenous women.

Appendix

Table A1. Summary Statistics

Variable	Mean	Std. Dev.
Log wages	10.57	1.20
Ethnic Identity		
White	0.76	0.43
Registered First Nations	0.01	0.12
Unregistered First Nations	0.01	0.07
Métis	0.02	0.13
Inuit	0.00	0.03
Multiple Indigenous identity	0.00	0.03
Indigenous ancestry	0.00	0.04
South Asian	0.05	0.22
Chinese	0.04	0.20
Black	0.03	0.16
Filipino	0.03	0.17
Latin American	0.01	0.12
Arabic	0.01	0.10
Southeast Asian	0.01	0.09
West Asian	0.01	0.08
Korean	0.00	0.06
Japanese	0.00	0.04
Visible minority NIE	0.00	0.06
Multiple visible minorities	0.00	0.06
White and visible minority	0.01	0.08
Indigenous (Whole population)	0.04	0.19
Female	0.50	0.50
Age		
25-29	0.14	0.34
30-34	0.14	0.34
35-39	0.13	0.33
40-44	0.12	0.33
45-49	0.13	0.33
50-54	0.14	0.35
55-59	0.13	0.33
60-64	0.08	0.27
Marriage		
Never married/single	0.21	0.41
Married/Common law	0.70	0.46
Separated/Divorced	0.09	0.28
Widowed	0.01	0.10
Knowledge of official lang.	0.99	0.09

Knowledge of Indigenous lang.	0.00	0.07
Presence of children under 14	0.32	0.46
Household size		
1 person	0.19	0.39
2 persons	0.30	0.46
3 persons	0.21	0.41
4 persons	0.22	0.41
5 persons	0.06	0.24
6 persons	0.01	0.11
7 persons or more	0.00	0.06
Education		
No certificate	0.09	0.28
High school	0.23	0.42
Trades	0.11	0.31
College	0.27	0.44
University	0.30	0.46
Immigrant	0.24	0.43
Employment status		
Full-time	0.84	0.36
Part-time	0.14	0.34
Unemployed	0.02	0.14
Industry (NAICS)		
11 Agriculture, forestry, fishing and hunting	0.01	0.12
21 Mining, quarrying, oil and gas extraction	0.02	0.13
22 Utilities	0.01	0.09
23 Construction	0.07	0.25
31-33 Manufacturing	0.10	0.30
41 Wholesale trades	0.04	0.20
44-45 Retail trade	0.10	0.30
48-49 Transportation and warehousing	0.05	0.22
51 Information and cultural industries	0.02	0.15
52 Finance and insurance/55 Mgmt of companies	0.05	0.22
53 Real estate, rental and leasing	0.02	0.12
54 Professional, scientific, and technical services	0.07	0.25
56 Administrative and support, waste mgmt	0.04	0.19
61 Educational services	0.09	0.28
62 Health care and social assistance	0.13	0.33
71 Arts, entertainment, and recreation	0.01	0.11
72 Accommodation and food services	0.05	0.22
81 Other services (except public administration)	0.04	0.19
91 Public administration	0.08	0.27
Not available	0.02	0.13
Occupation (NOCS)		

A Management occupations	0.10	0.30
B Business, finance, and administrative	0.17	0.38
C Natural and applied sciences or related occupations	0.08	0.26
D Health occupations	0.07	0.26
E Social science, education, and government services	0.13	0.33
F Art, culture, recreation and sport	0.02	0.14
G Sales and service	0.19	0.39
H Trades, transport and equipment operators	0.14	0.35
I Occupations unique to primary industry	0.02	0.13
J Manufacturing and Utilities	0.05	0.22
Not available	0.03	0.17
Weeks worked		
None	0.02	0.14
1-19 weeks	0.07	0.25
20-39	0.11	0.32
40-52	0.80	0.40
Province		
Ont	0.38	0.49
Que	0.24	0.43
BC	0.13	0.34
Alta	0.12	0.33
Man	0.03	0.18
Sask	0.03	0.17
NS	0.03	0.16
NB	0.02	0.14
NL	0.02	0.12
PEI	0.00	0.06
Northern Canada	0.00	0.05
City proportion Indigenous	0.05	0.04
N		346,189

Note: Data come from 2016 Canadian Census. Weighted values are presented. Sample is restricted to men and women aged 25-64. This sample includes individuals who were unemployed in 2015. All means and standard deviations are rounded to the nearest hundredth.

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