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Earnings Differentials Among Ethnic Groups in Canada**

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The Colour of Money: Earnings Differentials Among Ethnic Groups in Canada

1. Introduction

The existence of income disparities across ethnic groups, and in particular visible ethnic groups has been debated since Porter's (1965) Vertical Mosaic. In the past few years, there has been a resurgence of interest in the area with a number of social scientists examining questions related to these issues. Christofides and Swidinsky (1994) analyse the Labour Market Activity Survey and find that visible minorities face a wage gap of about \$2.00 per hour compared to their white counterparts. Akbari (1993) using data from the 1986 census concludes that earnings gaps exist for a number of ethnic minorities in Canada, both visible and non-visible. More recently, Benjamin and Baker (1995) using 1991 census data, conclude that a number of visible ethnic groups face earnings gaps due to differential payoffs to characteristics in comparison to persons of European origin. On the other hand, daSilva (1993) using the 1986 Census public use sample, concludes that ethnic earnings differentials among immigrants are minimal. Rather, he finds that the major determinant of gross earnings gaps are differences in the returns to education by country of education (where an immigrant got his or her education). Beach and Worswick (1993) also paint a comparatively favourable picture of earnings for immigrant women, finding that with the notable exception of highly educated immigrant women, immigrant women do not experience a double-negative earnings effect in comparison with Canadian born men. Kelly (1995), argues that visible minorities are doing very well in Canada, with a number of the visible groups being both well educated and well represented in managerial occupations. Work on the earnings of Aboriginals in Canada has been sparse, but George and Kuhn (1994) find that in the 1986 Census, Aboriginal men and women have wages 8% and 6% lower, respectively, than equally educated white men and women.

Given these opposing conclusions, it seems that we lack consensus on both the existence and size of earnings differentials across ethnic groups, as well as on the uniformity or heterogeneity of earnings differentials among groups. Christofides and Swidinsky (1994), for example, point to substantial hourly wage differentials faced by visible minorities, but are unable

to provide detail as to whether these differentials are universal across all visible minority groups or whether there are differences between groups. Benjamin and Baker are able to identify earnings differences in five visible minority groups, but they do not ask whether a gap also exists for any non-visible ethnic groups.

At least part of the reason for such questions, and the resulting confusion, revolves around the issue of visible minority status. The term visible minority is to a large degree a politically motivated construct comprised of twelve distinct ethnic groups which include persons of Asian, South or Central American or African descent.¹ As a policy vehicle, the visible minority concept is used to identify target populations for the federal government's Employment Equity programming. However, because the visible minority definition includes such diverse groups with different experiences and histories in Canada, it is likely that different visible sub-groups face different earnings gaps. Further, we wonder whether one sub-group's advantage actually masks another's disadvantage within the visible minority aggregate. If this is the case, then aggregating ethnic groups together into broad categories will mislead us in our discussion of earnings patterns.

The goal of this paper is to determine the degree to which ethnically based earnings gaps exist in Canada's wage labour market, the degree to which these gaps are confined to visible minority groups and the degree to which these gaps extend through to the Canadian-born generations. We also evaluate whether or not gaps differ across three major cities in Canada (Vancouver, Toronto and Montreal), and whether or not broad classes like "visible minority" and

1. The term visible minority is not particularly new. It came into common government use in the mid-eighties as a substitute for the term 'race' however, it appears to have community roots which date back to the early 1970s. Possibly the first printed reference using the term is a 1971 report submitted to The Ontario Human Rights Commission entitled 'The Employment of Visible Minority Groups in Mass Media Advertising' by Frederick Elkin. At that time, the term was used to refer to all non-white groups including aboriginal peoples. By the mid-eighties, its use was restricted to non-aboriginals who were not of European descent, and its primary purpose was for use in employment equity target group identification. Aboriginal peoples were included as a separate target group because it was recognized that their situation was sufficiently different to warrant separate treatment.

“white” do justice to the heterogeneity of earnings patterns across ethnic groups. We are also able to point to significant differences in patterns of earnings gaps across cities.

Our research suggests that there exist large earnings disparities between whites and visible minorities. While these differentials diminish as we control for individual characteristics, they do not disappear. Our results on Aboriginals in the 1991 Census suggest that their earnings gap might be even larger than the wage gaps found by George and Kuhn in the 1986 Census. We cannot support daSilva’s claim that immigrant earnings differentials are driven by place of education differences; among both men and women, visible minority immigrants do worse than white immigrants, even if educated in Canada. We are able to corroborate Benjamin and Baker’s finding that different visible groups have different patterns of earnings differentials, and we are also able to confirm Akbari’s hypothesis that some white ethnic groups face large earnings gaps.

Using the 1991 public use sample we are able to extend our analysis to the Canadian-born visible minority population, and to persons of multiple ethnic origin. We find that even Canadian-born visible minorities suffer large earnings gaps; these differentials cannot easily be shrugged off on cultural differences, language skills and education quality. We also find that persons of multiple heritage may suffer if part of their background is a visible ethnic origin. Finally, we shed light on the largely unexplored questions of whether or not earnings gaps are different among men and among women, and find very different patterns across sex.

2. Data, Method and Assumptions

The analysis in this paper is divided into several parts. First, we examine earnings differentials between visible minorities, persons of aboriginal descent, and persons of European descent. Then, we refine this analysis by looking at earnings differentials across subgroups of these three basic categories, and across cities. Our data are derived from the 1991 census Public Use Microdata, individual file, a 3 percent sample of the Canadian population.

The basic independent variable used in this paper is “visible minority status” as per the employment equity definition.² Initially, we use the visible minority flag variable available on the Public Use Microdataset to define every individual as either white or a visible minority. We further separate out persons of Aboriginal origin from the “white” category, and separate persons born in Canada from immigrants. We are left with three exclusive categories of Canadian-born individuals, and two exclusive categories of immigrants. Persons born in Canada who have a non-European and non-Aboriginal origin in their ethnic background are defined as “Canadian-born visible minority”. People born in Canada whose entire background consists of European ethnic groups are defined as “Canadian-born white”. Individuals (either born in Canada or not) who are of partly or entirely of Aboriginal origin are defined as Aboriginal. In the tables, Aboriginals are defined as exclusively Canadian-born (less than 2% are immigrants). Similarly, people born outside Canada who have a non-European and non-Aboriginal origin in their ethnic background are defined as “Immigrant visible minority” and immigrants whose entire background consists of European ethnic groups is defined as “Immigrant white”. In the latter part of the paper, we break these five basic groups into seventy-eight ethnic categories.

The basic dependent variable in this paper is earnings from wages and salaries. The wage labour market is the largest sector of Canada’s labour force, comprising 87 percent of all working men and 93 percent of working women between the ages of twenty and sixty-four who are not in school full time (1991 Public Use Micro Data File). In restricting our analysis to the wage labour sector, however, we are implicitly assuming that the unobserved heterogeneity that sorts people across wage labour and self employment has a small effect on income. Since all immigrants and Canadian-born visible minorities are more likely to be self-employed than Canadian-born whites, our analysis has the potential to over-estimate earnings gaps among minority groups if there is a propensity for highly motivated (or high earnings) workers to enter the self-employed sector.

2. Under Employment Equity legislation, a person is defined as a member of a visible minority if one non-aboriginal, or non Caucasian in race and non-white in colour. The variable is defined through a combination of ethnic origin, place of birth and mother tongue. Thus the operational definition has become persons who are non-aboriginal, and non-European in ancestral origin.

We created a dataset for our empirical work comprised of all permanent residents, aged 20 to 64, not in school full time living in provinces outside the Atlantic region³ (Quebec and west) whose primary source of income was from wage labour sources.⁴ We chose to focus on persons aged 20 to 64 who were not in school because we wanted to compare people with similar (and high) rates of labour force participation, and thus avoid some problems of selection bias. We further refined our target sample by excluding all people who did not report an education level, a household type, an occupation, or an industry. We also dropped all persons who immigrated to Canada during 1990 or 1991 because their reported income data are incomplete (1991 immigrant incomes are zeroed and 1990 immigrants show part-year earnings in the Public Use Sample income data). We were left with samples of approximately ninety-five thousand men and eighty-eight thousand women.

We ran separate regressions for CMA residents and for non-CMA residents because we did not want to assume that earnings profiles are the same for these groups. However, because the results for non-CMA residents are based on very low counts for some ethnic groups, we focus on CMA residents for most of the analysis. The sample is split by sex, with separate regressions for men and for women. However, this means that our comparisons are restricted to those within, rather than across genders. The dependent variable in all regressions is the natural log of individual earnings and salary income from wage labour sources. The loglinear specification is used both in deference to Mincer's (1974) model of the returns to education, and because in evaluating earnings disparities across groups not assumed to be productively different, it seems

3. We exclude residents of Nova Scotia, New Brunswick, Prince Edward Island and Newfoundland because detailed ethnicity codes are masked in the Atlantic region.

4. Non-permanent residents include refugee claimants, people admitted to Canada on work permits, ministerial permits or foreign student visas. They are excluded from our analysis because it is impossible to differentiate between the sub-groups, each of which has a very different earnings pattern, and only some of whose members are legally able to work in Canada.

more natural *a priori* to assume percentage earnings differentials rather than fixed dollar differences.⁵

Along with the ethnic categories detailed earlier, we include as independent variables identifiers (dummies) for full time/part time status (2 categories), weeks worked in 1990 (12 categories), CMA (18 categories), household type (8 categories), occupation (16 categories), industry (16 categories), schooling (15 categories) and knowledge of English and French (4 categories). We also include continuous measures (and their squares) of potential labour market experience in Canada and in six regions outside Canada for immigrants.

Potential labour market experience in Canada is equal to *either* years since completion of schooling *or* years since immigration, whichever is less. Obviously, for Canadian-born persons, it is just equal to years since completion of schooling. Potential labour market experience outside Canada (for immigrants only) is separated by six regions of birth (US/UK, Central Europe, Southern Europe, Other Europe, Asia/Africa, and Other) and is equal to years between completion of schooling and immigration to Canada. All of these potential experience variables are imputations in the sense that we don't really know how much labour market experience a person has; rather we guess how much they *could* have given their age and highest level of schooling. The guesswork is even greater for immigrants in that we assume that their labour market experience outside Canada is limited to their region of birth.

Later in the analysis, we introduce a second imputed variable which addresses this issue of place of schooling (Canada or abroad). This is an important issue because education comprises an important part of one's human capital, and academic credentials gained abroad often go unrewarded in Canada for various reasons (see Mcdade: 1988). Thus immigrants may face a partial loss of human capital on entry.

5. We ran Box-Cox specification tests on the pure linear and pure log-linear forms, but both pure forms were rejected. Thus, the loglinear form is not obviously worse than the linear form.

3. Discussion

Table 1 shows mean earnings, log of earnings and the difference in log of earnings for whites, visible minorities and Aboriginals, by immigrant status for all persons living outside the Atlantic region, by CMA status.⁶ Percent differences are given in comparison to Canadian-born whites for both men and women (denoted by **comparison**). We see that for those born in Canada, living west of the Atlantic provinces, the mean 1990 earnings for visible minority males is just over thirty-one thousand dollars as opposed to over thirty-four thousand for white men. For native-born females, visible minority women show mean earnings that are almost two thousand dollars higher than that for white women born in Canada. For both men and women, Aboriginals earn much less than either white or visible minority workers born in Canada. Turning to immigrants, we see that white males have higher average earnings than Canadian-born white males, while visible minority male immigrants have substantially lower average earnings than other immigrants or the Canadian-born. In the same way, white immigrant women show higher average earnings than Canadian-born women, while visible minority immigrant women show somewhat lower average earnings.

***** **Insert Table 1 Here** *****

In the non-CMA areas, although the overall earnings structure is lower than for all persons, the income pattern was similar. However, there were relatively few visible minorities born in Canada. It is thus difficult to conduct any detailed analysis at this level. In the eighteen identified CMA regions west of the Atlantic provinces, both the average earnings and the disparities in earnings between visible minorities and whites are higher than is the case for the non-CMA region. The mean earnings of visible minority men born in Canada are almost five thousand dollars less than that of white men born in Canada. Immigrant visible minorities have mean earnings that are seven thousand dollars lower and aboriginal men, nine thousand dollars lower.

6. Means and counts for all the variables used in this paper are available in Appendix Table A1.

The picture for women is somewhat different. For those living in the CMAs, visible minorities born in Canada and white immigrant women have average earnings roughly equal to white women born in Canada, while aboriginal and foreign-born visible minority women have average earnings which are two to three thousand dollars lower.

Where do these observed average earnings differentials come from and why do we see an average earnings differential between visible minorities and whites among the native born? Our empirical work explores these differentials to see if they can be explained away by adjusting for differences in the individual characteristics of workers. The first part of the analysis compares visible minorities and immigrants as a whole to the Canadian-born population using two sets of control variables. The second examines the issue of foreign education, and the third offers a detailed look at differential payoffs across the twenty-five ethnic groups by immigrant status. A fourth section looks at differences across cities. This structure gives us the opportunity to explore earnings differences between visible minorities, Aboriginal persons and whites, as per the employment equity definition, and allows us to delve further into specific issues related to ethnic group differences.

3a. Endogenous versus exogenous characteristics

Table 1 shows that there are considerable earnings differentials between whites and visible minorities and these differentials vary by sample group (CMAs vs non-CMAs; men vs women). If we assert that *all* individual characteristics except for age, sex and ethnic origin are fully endogenous, that is, fully chosen at the individual level, then our work is almost done--but for age, Table 1 could be interpreted as revealing true earnings differentials. However, certain elements of our lives are not chosen freely at every moment in time. These likely exogenous elements must at least include potential experience, education, household type (marriage and children), official language knowledge and geographic area.

Table 2 shows selected coefficients from regressions which either include or exclude several “type of work” variables. All regressions include potential labour market experience (both

Canadian and foreign), education, household type, official language knowledge and geographic area (city for CMA regressions, province for non-CMA regressions). When type of work is endogenous, no additional variables describing job characteristics are added. Here, the operating assumption is that everyone wants the same kind of work, and sorting of individuals across occupation, industry and labour force status is due to constraints and not preferences. When type of work is exogenous, we add occupation, industry, full time/part time status and weeks worked to the regressions. Now comparisons across individuals are made controlling for job characteristics, the operating assumption being that individuals have free choice in getting jobs in different occupations or with different hours, and that labour market outcomes differ importantly only in earnings within type-of-work cells. In each regression, the comparison group for percentage earnings differentials is denoted by the word **comparison**.

***** **Insert Table 2 Here** *****

Regressions 2.1 and 2.2 show coefficient estimates from log earnings regressions for men without type of work variables added. The coefficient estimates show percentage differences in the same direction, but not the same as those in Table 1. In the case of male non-CMA residents, for example, the differential changed from 5% in Table 1 to 10% in Regression 2.1 which controls for five characteristics. For male CMA residents, the differential dropped from 20% to 14%. Adding these fairly exogenous individual characteristics reduced the earnings gap faced by Aboriginals living in the CMAs (Regression 2.2) but they still suffered an earnings differential of 25%. However, in both regressions, the R^2 's are near 20%, which leaves a lot of variance in the data unexplained.

Regressions 2.3 and 2.4 examine the same populations, but add four type of work variables to the control list (weeks worked, full time/part time, industry and occupation). In these regressions, the R^2 's are over 40% suggesting that these variables add a great deal of explanatory power. Despite this, however, substantial and significant earnings gaps exist both in the non-CMA and CMA regions. Aboriginal men, face earnings penalties of almost 19% in the non-CMA

regions, and of almost 13% in the CMAs, in comparison with white Canadian-born men. Visible minority men born in Canada face gaps of 8% in the CMAs and 4% (but insignificant) outside the CMAs. Neither male immigrant groups earn significantly less than white Canadian-born men outside the CMAs, but within the CMAs, white immigrant men earn 2% less than white Canadian-born men and visible minority immigrants earn over 15% less!

Regressions 2.5 to 2.8 show the same regressions run on females. Among women in the non-CMA regions, as with men, we find that only Aboriginals have earnings differentials that are strongly statistically significant, regardless of whether or not we control for type of work variables. These gaps are large; Aboriginal women earn 9% less than white Canadian-born women when type of work variables are controlled for, and over 15% less when these variables are not included. Among women in the CMAs, however, it seems that the pattern of earnings differentials is quite different from that of men. Among Canadian-born women in the CMAs, whites and visible minorities earn about the same, whether type of work variables are included or not.

Other groups of women in the CMAs do, however, face earnings gaps. White immigrant women earn slightly less than white Canadian-born women in both Regressions 2.7 and 2.8, but the differential is not statistically significant in the regression controlling for type of work. Visible Minority immigrant women, on the other hand, face statistically significant earnings gaps on the order of 8-9% in comparison with Canadian-born white women. Thus we find two stark differences between the results for men and for women. First, while Canadian-born visible minority men earn 8% less than their white counterparts, Canadian-born visible minority women earn about the same as white Canadian-born women. Second, the differentials between Aboriginals, immigrants and whites seem to be about twice as large for men as for women.

The next section explores one common explanation for immigrant earnings differentials: real or perceived differences in human capital. In this section, we add a set of new variables that impute where immigrants got their educational credentials, and ask whether or not inclusion of

these variables eliminates the earnings differentials between immigrants and the Canadian-born. Analysis at this level is restricted to individuals living in Canada's non-Atlantic CMAs because counts for visible minorities outside the CMAs are low, regardless of immigrant status.

3b. Place of Schooling and Level of Schooling

Among educated immigrants, one important reason for an earnings penalty, could be non-equivalence and non-recognition of academic credentials (see McDade, 1988 and daSilva, 1992). In other words, if professional and technical degrees gained abroad are not recognized, or are not equivalent to those gained in Canada, immigrants face an immediate loss of human capital on entry and it may also be that Canada is losing a portion of its workforce potential as skills go unrecognized. In this case, part of the earnings gap faced by immigrants may be institutionally based, and could be resolved by defining mechanisms for equivalency in schooling.

Table 3 examines issues of place of schooling by adding a series of variables which attempt to identify the place and highest level of schooling for immigrants. Table 3, Panel A shows selected regression coefficients for a model which includes controls for 6 places of schooling and 4 levels of schooling.⁷ It can be interpreted as showing differentials for residents who have likely attained their highest level of schooling in Canada. For immigrants who are imputed to have received their highest level of schooling outside Canada, Table 3, Panel B shows additional differentials. In this model, we can identify regions from which educational credentials are rewarded and those from which they are not. We can also ask whether immigrant earnings gaps disappear when we account for differences due to place of education.

******* Insert Table 3 Here *******

7. We assume that place of schooling is the same as place of birth for immigrants who arrived after they finished their highest level of schooling. We included 24 dummies for each of six regions (US/UK, Southern Europe, Central Europe, Other Europe, Asia/Africa, and Other) interacted with four levels of schooling (Less than High School, High School, Some Post Secondary and University Degree or more).

The estimates in Regression 3.1 show that adding place of accreditation does not change the earnings gap much for immigrant males. Comparing Regression 3.1 to Regression 2.4, the earnings gap for immigrant men remains approximately 2% for white immigrants, and about 16% for visible minority immigrants. However, the table also shows that there are large differences in payoffs for schooling both by where schooling was received and level of education. Immigrant males receiving their schooling from the UK and USA receive up to a 13% bonus whereas those with degrees from Central Europe may expect a 13% penalty. Males receiving at least some post-secondary schooling from 'other Europe' (which includes Northern Europe) can expect about an 8% penalty. However, receiving credentials from other regions, including Asia/Africa, does not appear to have a significant penalty. Thus, even though immigrant men who were educated Canada outside may earn less than immigrant men who were educated in Canada, this difference in human capital payoff does not explain away the earnings gaps faced by different immigrant groups.

For women, as with men, the addition of place/level of schooling variables did not much change the pattern of earnings differentials for persons educated in Canada. The coefficient estimates in Regression 3.2 show that for white immigrant women, the earnings penalties are about the same as those in Regression 2.8. However, for visible minority immigrants, the earnings gap drops from 9% to 8% when place/level of schooling variables are included, and this change is marginally statistically significant at the 10% level. This suggests that place of schooling may account for some of the earnings differentials between visible minority immigrants and Canadian-born white women. However, inclusion of place/level of schooling does not drive the earnings differential for Visible Minority Immigrant women to zero. This result stands in contrast to Beach and Worswick's (1993) finding that immigrant women on the whole do not experience a double negative earnings effect. We suspect that Beach and Worswick's findings in this regard may be due to their (unavoidable) pooling of Visible Minority and White immigrants.

Looking now at the place of schooling estimates, we are able to broadly corroborate Beach and Worswick's (1993) observation that more educated immigrant women face large

additional earnings differentials. We see that in contrast to the results for men, neither the significance or payoff for education in the USA or UK is as strong. Further, we see that women who got their education in Asia or Africa suffer an earnings penalty of 16% in comparison to those educated in Canada. For those with degrees from Central Europe, the penalty is almost 22%. Thus, for women, particularly those with university degrees, place of accreditation appears to go some distance in accounting for immigrant earnings differentials.

We find, then, that place of schooling matters, and that it matters more for women than for men. There are a number of rationales for why place of schooling may effect earnings, and why women may be more effected than males. First, it is possible that foreign credentials are simply not the same as those gained in Canada, the USA or the UK. Thus, employers may pay immigrants less because a Master of Arts degree gained in Central Europe is not equivalent to one earned in Canada. Another possibility is that the credentials are the same, but that employers have no way of recognizing their relative worth. A third possibility is that professional organizations simply refuse to recognize and grant membership to immigrants with foreign credentials. A fourth explanation is that we are confusing an immigration policy-based selection problem among female immigrants with a human capital problem.

Given that the head of a prospective immigrating family is likely to be male, they are more likely to be screened for occupational suitability and job readiness than is the case for females. Primary applicants in occupations that are in short supply or who have jobs pre-arranged in Canada are given preference in the immigrant intake. Occupations requiring professional certification, however, such as doctors or engineers, are likely to be screened out at the selection stage. Thus, primary applicants are in effect prescreened. They are more likely to enter Canada with jobs ready for them, and thus, with recognized and rewarded credentials. Persons with educational certification who are not the primary applicants, on the other hand, are not screened, and thus are less likely to have jobs pre-arranged, and concomitantly less likely to have their foreign credentials recognized. Since women more often come in as dependent (and not primary) applicants, and are therefore not screened on the basis of educational qualifications, their

schooling is not as likely to be recognized, and they may be more susceptible to losing their human capital, or not getting its full return.

3c. Are Earnings Gaps Due to Differences in Characteristics?

Having found large and statistically significant earnings gaps between our broad ethnic/immigration groups, it is natural to ask if these differentials are dependent on our specification that earnings differences come in as a single dummy variable for each group. One wonders whether or not each ethnic/immigration group has an entirely different earnings *structure*. In this section, we run a more general specification, allowing a separate earnings equation for each of the five groups. Using this more general specification, we ask whether differences in average log earnings across groups are due to differences in characteristics.

Table 4 shows the differences in log earnings under a variety of Oaxaca-type comparisons⁸ (Oaxaca, 1973). For these comparisons, separate earnings equations, each with the same set of controls as in Table 3, are run by sex for each of our five basic groups. The table shows different combinations of characteristics and earnings, answering questions like: what would happen if we gave white Canadian-born women the average characteristics (including potential experience, education, occupation and industry) of Canadian-born visible minority women? Would that change their average log earnings very much? If changing their characteristics accounts for all of the difference in average log earnings, then we may conclude that earnings differentials are characteristics driven. If, on the other hand, changing their characteristics accounts for only some of the differences in average log earnings, then the remainder must be due to differences in the earnings equations. These residual earnings differences may point to discrimination.

8. Each comparison involves two earnings equations for individuals, i , in groups J and K , estimated as:

$$\ln E_{i \in J} = X_{i \in J} \beta_J + u_{i \in J} \quad u_{i \in J} \sim N(0, \sigma_J^2)$$

$$\ln E_{i \in K} = X_{i \in K} \beta_K + u_{i \in K} \quad u_{i \in K} \sim N(0, \sigma_K^2)$$

Then, using group data means, X_J and X_K , such that $X_J = \text{mean}(X_{i \in J})$ and $X_K = \text{mean}(X_{i \in K})$, we compute two comparisons. First, we ask what the expected log earnings, $\ln E_{J,K}$, is for a person with characteristics X_J and payoffs β_K , and then we ask what the expected log earnings, $\ln E_{J,K}$, is for a person with characteristics X_K and payoffs β_J as follows:

$$\ln E_{J,K} = X_J \beta_K \quad ; \quad \ln E_{K,J} = X_K \beta_J$$

In the table, we give all combinations of foreign- and Canadian-born white and visible minority characteristics and payoffs. We only compare Aboriginals to white Canadian-born persons. All results are given in comparison to mean log earnings for white Canadian-born men and women. We note that the diagonal of each panel (Males and Females) of Table 4 reproduces the differences in mean log earnings given in Table 1. To evaluate how much log earnings change when characteristics change under any particular earnings equation, we look down a column of the table. It is important to note that when we look at any pairwise comparison, say between group J and group K, there are two approaches: we could give group J the average characteristics of group K, or we could give group K the average characteristics of group J. These two approaches need not lead us to the same conclusion.

Looking first at the results for Canadian-born white and visible minority men, we see that there is a 21% difference in mean log earnings between visible minorities and whites. If we give white men the characteristics of visible minorities, their earnings fall by 13%, but the 8% remaining must be due to differences in the earnings equation. On the other hand, if we give visible minority men the average characteristics of white men, their earnings would rise by 19% (-2% minus -21%), leaving only two percentage points unexplained by characteristics. Thus, visible minority men would be better off if they had the characteristics of the average white man, but still slightly worse off than the average white man. White men would be worse off if they had the characteristics of the average visible minority man, but still much better off than the average visible minority man.

Turning now to Aboriginal men, we find that differences in characteristics account for a large part of the earnings differential experienced by Aboriginals, but we are still left with large differences in log earnings that are due to the 'lower' earnings equation of Aboriginal men. Giving white men the average characteristics of Aboriginal men drops their earnings by 23%, but leaves 12% explained by the earnings equation; giving Aboriginal men the characteristics of white men raises their earnings by 26%, but still leaves 9% left over. Aboriginal men thus earn a lot less than White Canadian-born men regardless of their characteristics.

In order to compare immigrants to Canadian-born persons, we apply immigrant characteristics to Canadian-born payoff equations and vice versa. To do this, we gave immigrants potential Canadian labour market experience equal to their total potential experience (including foreign potential experience), and assumed that they received their final level of schooling in Canada. This way, the only elements being varied in the Oaxaca comparisons are immigration status and employment equity group. Looking at immigrant men, if we gave the visible minority immigrant men the average characteristics of white immigrants, their earnings would rise by 13% (-0.12 minus -0.25), leaving 22% explained by a difference in the earnings equation. Similarly, if we gave white immigrants the characteristics of visible minority immigrants, their earnings would fall by 20% (0.10 minus -0.10), leaving 15% unexplained by characteristics. Thus, while visible minorities have characteristics that yield lower earnings than white immigrants, it also seems that the structure of earnings unambiguously hurts visible minority immigrants.

If we compare immigrants to the Canadian-born, we find that the structure of earnings is similarly important. Swapping characteristics between white immigrant men and white Canadian-born men changes earnings, but still leaves a substantial differential left over. Swapping characteristics between visible minority immigrants and white Canadian-born men yields the largest differences due to the earnings equations. Giving visible minority immigrant men the characteristics of Canadian-born white men increases their earnings by only 4%, leaving 21% explained by the earnings equations, and the opposite test leaves 35% explained by differences in the earnings equations.

The lower part of Table 4 presents results of comparisons for women. The numbers in the upper left part of this section tell us that the actual differentials between non-Aboriginal Canadian-born women are small, and that differentials due to characteristics and payoffs are small. For Aboriginal women, however, the average log earnings is 0.19 points below average log earnings of Canadian-born white women. If we gave the Aboriginal women the characteristics of white Canadian-born women, this differential would drop to 13%, suggesting that differences in earnings equations account for six points. If we flip the test around, and give white Canadian-

born women the characteristics of Aboriginal women, earnings would drop by only 5%. Even if Aboriginal women had characteristics like white women, they would still earn much less, just because they are Aboriginal.

Among immigrant women, it seems that characteristics explain most of the differences in average log earnings. On the other hand, if we look across immigration class, and compare immigrants to their Canadian-born counterparts, we find that characteristics do not tell the whole story. Swapping characteristics between white Canadian-born women and either immigrant group does not change log earnings very much. Differences in average log earning between these groups are mainly due to the structure of earnings, and less to characteristics differences.

The results in Table 4 show that most of our basic results are robust to charges that a fixed independent effect on earnings of immigrant class/employment equity group is not general enough. Even when we generalize the specification and allow for completely different earnings equations for each of our five major groups, we still see large earnings differences between groups that cannot be accounted for by differences in characteristics like experience, education, occupation and industry. That these differences remain unexplained suggests discrimination. The next section pursues another specification issue, the appropriateness of our five basic groups.

3d. Earnings Differentials by Detailed Ethnicity

Up to this point, visible minorities have been treated as an homogenous group, using a single earnings penalty for all groups in the visible minority category, a single penalty for all groups in the Aboriginal category and a single bonus for all white ethnic groups. In this section we disaggregate these three major groups into a series of detailed ethnic groups, based on self-reported ethnic background data⁹. One might ask how much additional variance there is in the

9. The self-reported ethnic background data that form the backbone of this section are not without problems. There is no outside check on the accuracy of these data. In particular, there is no way of knowing whether or not all respondents perceive the ethnic categories in the same way. This is particularly obvious when we consider the "Canadian" ethnic category. Almost 8% of the respondents had this as one of their ethnic backgrounds, but we have little faith that it means the same thing to that group of people. Similar problems of interpretation are likely with the Spanish (does it include Latin American?) and French

earnings of the 78 groups than there was in the 5 group model used thus far. We answer this question by treating the mean earnings of each of the 78 ethnicity/immigration class groups as (weighted) units of analysis, and running a regression of mean earnings in 78 groups on the five basic group dummies. We find that the five basic group dummies do not explain a great deal of the variance in the data; for men, the basic groups explain 17% of the variance in the earnings across 78 groups, and for women, the basic groups explain 25% of the variance in earnings across 78 groups. Thus, the inclusion of a more detailed characterisation of ethnicity may shed additional light on earnings structures.

Table 5 shows earnings differentials for our disaggregated ethnic groups (Table A2 shows the counts for these disaggregated ethnic groups). People who report a single ethnic origin are identified in one of fifty dummy variables, either as Canadian-born single origin (25 variables) or immigrant single origin (25 variables). Persons who report several ethnic origins are coded somewhat differently. To deal with multiple responses, we grouped the twenty five ethnic origins into seven categories: Aboriginal, British, French, Southern European, Central European, Other European and Visible Minority. Further, we separated the multiple responses into those that were combined with white ethnic groups and those that were combined with visible ethnic groups, and we separated Canadian-born multiple responses from immigrant multiple responses, giving us a total of (7 times 4) 28 multiple response variables. The table shows white ethnic origins (single and multiple response), followed by visible ethnic origins (single and multiple origins), with the Aboriginal origin variables at the bottom. We note that while the single response ethnicity variables are dummy variables, the multiple response variables are *not* dummy variables. Cases were given fractional values for each ethnic group they reported. Thus, an immigrant who reported British-German-West Asian background would have a value of one-third in the immigrant column in each of “British with visible”, “Central European with visible” and “Visible Minority with white”.¹⁰

categories (does it include Quebecois?).

10.

***** **Insert Table 5 Here** *****

Looking first at native-born males with a single ethnic origin (Regression 5.1), we see that most estimates for white ethnic groups are not statistically significant, suggesting that earnings are not too different from British single origin men for most ethnic groups. There are some exceptions. Greek and Balkan men born in Canada appear to suffer statistically significant earnings penalties of over 10%. In the case of visible ethnic groups who are born in Canada, many of the results are hampered by a lack of cases. However, for those groups where there are over one hundred observations, such as Black and Chinese, the earnings gaps are 17% and 13% respectively. Single origin Aboriginal men also face an earnings gap of about 23% compared to Canadian-born British origin men. For those with multiple ethnic origins, most of the results are inconclusive because of a lack of cases. The exception to this is found in the Aboriginal with white group for which there is a statistically significant earnings gap of 16%.

For white immigrant men the results are mixed. White immigrants from Northern and Central Europe do not appear to face any substantial earnings penalty. The same is true of immigrants with more than one white ethnic origin. Greek immigrants, however, as was the case for those born in Canada face an earnings gap of 17%. Visible minority immigrant men universally face earnings penalties ranging from a mere 1% for Chinese immigrants to 22% for Black men. Excepting the Chinese ethnic group, Visible minority immigrant groups faced earnings gaps of over 14%. Thus, Latin American and Filipino immigrant men can expect to earn about 20% less than Canadian-born men. Vietnamese and West Asian immigrants earn about 18% less and South Asian and Arab immigrant males earn 14% and 15% respectively. These earnings gaps extend to those claiming more than one ethnic origin. Thus immigrant males claiming a visible minority origin in combination with a white origin can still expect to earn 15% to 20% less than Canadian-born British origin men.

The coefficient estimates given for Regression 5.2 show that the pattern in earnings differentials for Canadian-born women is quite different from what we saw for men. As with men,

we see a large significant penalty for Greek single ethnic women. However, in contrast to what we saw for men, *none* of the Canadian-born visible minority single ethnic coefficients are significantly different from zero. Even the coefficients on Black and Chinese women, which are based on quite large samples are neither large nor significant. That is, even with a highly disaggregated ethnicity measure, Canadian-born visible minority women do not face earnings penalties compared to Canadian-born British single ethnic women. Further, among the multiple response categories, only the coefficient for Aboriginal with white reveals a significant and large (fourteen percent) earnings gap.

Looking now at the coefficients for immigrant ethnic groups, we see that of the white ethnic groups, only Spanish single origin immigrant women face a statistically significant penalty (16%). Among visible minority immigrants, Black, Vietnamese, and West Asian single ethnic origin women seem to experience statistically significant earnings differentials ranging from 10% to 15%. Notably, however, the earnings of Chinese and South Asian immigrant women, are not significantly different from those of Canadian-born British origin women. For foreign-born women, with the exception of 'visible minority with white' the multiple response coefficients are in all cases either not significantly different from zero, or are determined from less than 100 cases.

We have, then, a mixed bag of results from our disaggregated ethnic group regressions. Among men, we find that Canadian-born Greek, Portuguese, Black and Chinese men face large and statistically significant earnings penalties ranging from twelve to sixteen percent in comparison with British origin Canadian-born men. We further find that immigrant men who report themselves as having Greek, or eight of the nine visible single ethnic backgrounds suffer earnings penalties in excess of fourteen percent. Chinese origin immigrant men, however, do not face earnings gaps. Finally, we see that Aboriginals, whether of single or multiple ethnic background, are faced with large and statistically significant earnings gaps. Among women, we see rather different patterns. Canadian-born Greek and Aboriginal women face large earnings differentials in comparison to British origin women, but Black and Chinese Canadian-born women

do not. Spanish, Arab, Black and Vietnamese immigrant women all face significant earnings differentials in excess of ten percent in comparison with British origin Canadian-born women, but Chinese and West Asian women do not face statistically significant earnings gaps. Among both men and women, it seems that neither whites nor visible minorities are particularly homogeneous in their earnings patterns.

3f. Differences by CMA

Table 3 suggested that for males in the CMAs, Canadian-born visible minorities face an 8% penalty and visible minority immigrants face a 15% earnings gap. However, these numbers use information from all Atlantic CMAs. It seems likely that the earnings penalty for being an immigrant, a visible minority or an Aboriginal may vary by CMA. In an effort to explore this possibility, Table 6 shows the results of separate regressions run for the three largest CMAs (Toronto, Montreal and Vancouver) for males and females, including all the controls in Table 3 (that is, including type of work variables and place/level of schooling variables).

******* Place Table 6 Here *******

A glance at Table 6 suggests some stark results. Looking first at the results for men (Regressions 6.1 to 6.3), we see that Aboriginals face (mildly significant, or insignificant) earnings penalties around 6-7% in all three CMAs, and that white immigrants face (significant) earnings gaps of 7% in Vancouver and Montreal, and no gap in Toronto. Visible minority immigrants experience statistically significant earnings gaps in all three CMAs, but the gap is smallest in Vancouver at 13% and largest in Montreal at 20%. Finally, and most strikingly, we see that Canadian-born visible minority men face statistically and economically significant earnings gap of 17% in Montreal and 9% in Toronto, but experience a much smaller (and insignificant) gap of 4% in Vancouver.

Among women (Regressions 6.4 to 6.6), we see similar patterns. As in Table 2, neither Canadian-born visible minority women nor white immigrant women experience statistically

significant earnings gaps in any of the three CMAs. On the other hand, Aboriginal women and visible minority immigrant women have very different earnings patterns across the three CMAs. Aboriginals face a marginally significant earnings gap of 10% in Vancouver, and insignificant gaps in the Toronto and Montreal. Visible minority immigrant women face a statistically significant earnings gap of 20% in Montreal, a marginally significant gap of 6% in Toronto and do not face a statistically significant earnings gap in Vancouver.

It is easy to jump to the conclusion that visible minorities, be they Canadian-born or immigrant, face the largest earnings gaps in Montreal and the smallest in Vancouver, and that this represents a different pattern of earnings gaps in these two cities. However, as was noted above, within the visible minority category, different ethnic groups have different earnings outcomes. In particular, Table 5 shows that Chinese origin immigrants earn a lot in comparison with immigrants who report Black as their ethnic origin. Could it be that the differences in earnings gaps across cities shown in Table 6 are due to the fact that Montreal has more people in the visible minority ethnic groups that fare poorly, while Vancouver has more people in visible minority ethnic groups that fare well? Table 7 offers an answer to this question.

***** **Place Table 7 Here** *****

Table 7 shows Oaxaca tests for our three CMAs. We ran regressions for each of the three CMAs with 78 detailed ethnicity variables as in Table 5. Then, we applied the detailed ethnic composition of each CMA to the earnings equation (by detailed ethnic group) for each CMA. What happens if we took the population of Vancouver and changed only its detailed ethnicity composition, leaving all other variables alone, so that its detailed ethnicity composition matched that of Montreal? The earnings gap for visible minority Canadian-born men would increase from 1% (top right cell) to 3% (two cells to the left)¹¹. If we took the population of Montreal and changed its ethnic composition to match that of Vancouver, the earnings gap for visible minority

11. The earnings gaps shown in Table 7 do not quite match those shown in Table 6 because they are based on regressions with 78 ethnic groupings aggregated up to the five basic groups.

Canadian-born men would *increase* from 16% to 24%. Thus, we cannot blame the difference in earnings gaps for Canadian-born visible minority men between Montreal and Vancouver on the ethnic composition of those cities; the differences in earnings gaps are due in large part to differences in the earnings equations of the two cities. The results for immigrant visible minorities are also dramatic. Giving the population of Montreal the ethnic composition of Vancouver would make the earnings gap for visible minority immigrant men rise slightly from 20% to 21%, and giving the population of Vancouver the ethnic composition of Montreal would increase the earnings gap from 13% to 16%. Here, again, most of the difference in earnings gaps is due to the structure of earnings, and not to the different ethnic compositions in the two cities.

Turning to the results for women, we see a similar pattern for immigrants: the 20% earnings penalty for visible minority immigrant women in Montreal drops slightly to 16% if we change their ethnic composition to match that of Vancouver. For women, none of the other earnings differentials change very much when earnings equation is held constant and detailed ethnic composition is varied. The moral of Table 7 is thus that the city-specific differentials given in Table 6 are probably not artifacts due to the ethnic composition of the populations. Rather, Canadian-born visible minorities men may well experience much larger earnings gaps in Montreal than in either Toronto or Vancouver, and may indeed face no earnings gap in Vancouver. Visible minority immigrants, both men and women, may face much larger earnings gaps in Montreal than Toronto or Vancouver, but face significant gaps in all three CMAs.

4. Policy and Research Implications:

Our research shows that among men there are substantial earnings differentials between visible minority and white workers in the CMAs we examined. These differentials are not explained away by the socio-economic variables for which we tried to control. Among men, the earnings penalties faced by Aboriginals and visible minorities are large and significant and present in both native-born and immigrant populations. On the other hand, white immigrants do not face a large earnings penalty compared to white native-born Canadians; visible minority immigrants do much worse than white immigrants. In contrast, among women, native-born

visible minorities do *not* appear to suffer an earnings penalty in comparison with white Canadian-born women. Both white and visible minority immigrant women experience earnings penalties compared to native-born white women, but the earnings gap for visible minority immigrants is twice that of white immigrants.

We find that for immigrants, place and level of education goes a little way in explaining the earnings gaps faced by immigrant men, and somewhat further in explaining the earnings gaps faced by immigrant women, but even when we control for (imputed) foreign education, large earnings gaps remain. Oaxaca comparisons reveal that there are large differences in mean earnings between groups that cannot be explained by differences in characteristics. For both men and women, we are left seeing large and robust earnings gaps among our five basic groups. While we find large and substantial differentials between whites and visible minorities, our research also points to substantial heterogeneity within these groups. Lumping all the European ethnic groups together, or combining all the visible ethnic groups together, appears to lead us to a false picture of wage disparities. Finally, it seems that earnings gaps differ across CMAs, with notably larger earnings gaps for visible minorities in Montreal than either Toronto or Vancouver.

These findings could have serious implications for both the charter of human rights and employment equity legislation as well as immigration and schooling accreditation policies. First, it appears that despite having Canadian credentials and being socialized in Canada, visible minorities born in Canada continue to face substantial earnings penalties. Thus, for example, black men born and schooled in Canada may expect to earn seventeen percent less than similarly educated and aged Canadian-born men of British origin. The situation is even worse for immigrant men. If these earnings differentials are due to discrimination, it may be an argument for some kind of equalizing policy, such as quotas, comparable worth policy or hiring policy. The existing federal Employment Equity Legislation is a hiring policy (not a quota policy) which pushes governments to hire designated group members in instances where candidates have similar qualifications. However, at best, a hiring policy can only eliminate discrimination due to allocation across industries and occupation. Our findings suggest that even after controlling for such differences, substantial earnings gaps between ethnic groups remain.

In terms of immigrants, this research suggests that place of education only partially explains earnings differentials between and among immigrants. However, it is also apparent that the earnings differences attributable to place of education differs across different countries of birth. Among women, for example, the negative earnings differential due to place of schooling is much larger for immigrants who completed their education in Central Europe and Asia and Africa than for those who completed their education in other foreign countries. This suggests that educated individuals from these two groups face different barriers. Educated immigrant men from Europe may face an accreditation problem, whereas lack of credential recognition does not explain the gaps faced by those from Asia and Africa. From a policy standpoint, this suggests that instituting a means of recognizing foreign credentials might alleviate some portion of the earnings gap faced by European males, but may not have as great an impact for men of non-European origin, that is, for visible minority men.

For women, the penalty associated with non-recognition of credentials is varied across country of birth, and these penalties explain a larger proportion of earnings differentials than they do for men. This may be due to the lower likelihood that women are primary applicants when immigrating to Canada, and are therefore less likely to be selected based on schooling credentials. Thus, for immigrant women barriers to education recognition may be stronger because they are not as likely to be screened out at the source.

Finally, we found great heterogeneity in our results for detailed ethnic groups. There were two white ethnic groups, who faced earnings gaps even when born in Canada. Both Greek and Balkan origin men, as well as Greek women faced earnings penalties of over fourteen percent. These penalties remained, regardless of the controls used. We found that for men, all visible immigrant groups except those of Chinese origin face large and significant earnings differentials. For women, we found that most visible groups face large penalties, but that Chinese immigrant women do not face significant earnings gaps. Among Canadian-born men, all three of the visible groups for which there are large populations face economically and statistically significant earnings gaps, but among Canadian-born women, none of them face such earnings differentials.

These differences between men and women, and within our broad ethnic groups suggest that we must be very careful in discussions of ethnicity-based earnings gaps and discrimination to specify who we mean when we talk about the disadvantaged.

5. Conclusions

Our research on the earnings of visible minorities in Canada has four main conclusions. First, even when controlling for occupation, industry, education, potential experience, CMA, official language knowledge and household type, we find that visible minorities earn significantly less than native-born white workers in Canada. Visible minority men born in Canada suffer about a 8 percent earnings penalty, but visible minority women born in Canada do not seem to have lower earnings than white Canadian-born women. Aboriginal men and women face earnings gaps of 11 and 7 percent, respectively, in comparison with white Canadian-born men and women. Among both men and women, white immigrants suffer small earnings penalties, but visible minority immigrants suffer large earnings differentials. For immigrants, the observed visible minority penalties are much more severe for men than for women. Second, we find that controlling for foreign schooling does not much mitigate the size of earnings differentials. Third, we find some variation in earnings gaps across cities. Visible minorities, both Canadian-born and immigrant, appear to fare much worse in Montreal than in Toronto or Vancouver. Fourth, we have found substantial variation in the earnings penalties of the different ethnic groups comprising whites and visible minorities.

Bibliography:

- Akbari, A. 1992. 'Economics of immigration and racial discrimination : a literature survey (1970-1989).' Ottawa: Multiculturalism and Citizenship.
- Akbari, A. 1992. 'Ethnicity and Earnings Discrimination in Canadian Labour Markets: Some Evidence from the 1986 Census,' Ottawa: Multiculturalism and Citizenship.
- Baker, M and D. Benjamin. 1995. 'Ethnicity, Foreign Birth and Earnings: A Canada/US Comparison,' A paper prepared for the Conference: "Transition and Structural Change in the North American Laobur market," May 25-27, Kingston Ontario.

- Beach, Charles and Christopher Worswick. 1993. "Is There a Double-Negative Effect on the Earnings of Immigrant Women?" Canadian Public Policy XIX:1:36-53.
- Christofides and Swidinsky. 1994. 'Wage Determination by Gender and Visible Minority Status: Evidence from the 1989 LMAS', Canadian Public Policy, 20(1), pp 34-51.
- George, P. and P. Kuhn. 'The Size and Structure of Native-White Differentials in Canada', Canadian Journal of Economics 27(1), pp 20-42.
- Kelly, K. 1995. 'Visible Minorities: A Diverse Group,' Canadian Social Trends (no 37). Ottawa: Statistics Canada. Pp: 2-8.
- McDade, K. 1988. Barriers to recognition of the credentials of immigrants in Canada. Ottawa: Institute for Research in Public Policy.
- Mincer, Jacob. 1974. Schooling, experience, and earnings. New York: Columbia University Press.
- Oaxaca, R.L. 1973. "Male-Female Wage Differentials in Urban Labor Markets", International Economic Review August 1973, pp 693-709.
- Porter, J. 1965. The Vertical Mosaic. Toronto: University of Toronto Press.
- daSilva, A. 1992. 'Earnings of Immigrants: A Comparative Analysis,' Ottawa: Economic Council of Canada Working Paper Series.

Table 1: Mean Earnings for Selected Groups

	Immigrant Status	Employment Equity Status	Mean Earnings	Log of Earnings	Difference in Log of Earnings	count
MALES	All Residents: Quebec and West					
	Total		34,049	10.18		144,531
	Canadian by birth	White	34,036	10.19	comparison	111,541
		Visible Minority	31,318	10.04	-14.6%	1,383
		Aboriginal	25,441	9.74	-44.8%	3,847
	Immigrant	White	38,648	10.33	14.5%	17,680
		Visible Minority	29,814	10.01	-17.9%	10,080
	Non-CMA Residents: Quebec and West					
	Total		30,983	10.08		48,977
	Canadian by birth	White	30,915	10.09	comparison	42,876
		Visible Minority	30,567	10.04	-4.7%	242
		Aboriginal	23,180	9.59	-49.6%	2,024
	Immigrant	White	36,351	10.28	19.2%	3,263
		Visible Minority	33,141	10.10	1.6%	572
	CMA Residents: Quebec and West					
Total		35,621	10.23		95,554	
Canadian by birth	White	35,984	10.25	comparison	68,665	
	Visible Minority	31,479	10.04	-20.7%	1,141	
	Aboriginal	27,951	9.90	-34.8%	1,823	
Immigrant	White	39,169	10.34	9.6%	14,417	
	Visible Minority	29,612	10.00	-24.6%	9,508	
FEMALES	All Residents: Quebec and West					
	Total		20,634	9.59		130,599
	Canadian by birth	White	20,619	9.59	comparison	101,461
		Visible Minority	22,437	9.70	10.5%	1,399
		Aboriginal	17,459	9.33	-26.4%	3,554
	Immigrant	White	21,661	9.65	5.8%	14,703
		Visible Minority	20,123	9.60	0.4%	9,482
	Non-CMA Residents: Quebec and West					
	Total		17,310	9.37		41,657
	Canadian by birth	White	17,341	9.38	comparison	36,761
		Visible Minority	19,324	9.51	13.0%	192
		Aboriginal	14,623	9.11	-27.4%	1,653
	Immigrant	White	18,581	9.44	6.3%	2,610
		Visible Minority	16,340	9.33	-4.8%	441
	CMA Residents: Quebec and West					
Total		22,190	9.70		88,942	
Canadian by birth	White	22,482	9.71	comparison	64,700	
	Visible Minority	22,930	9.73	1.3%	1,207	
	Aboriginal	19,925	9.52	-19.0%	1,901	
Immigrant	White	22,326	9.70	-1.8%	12,093	
	Visible Minority	20,307	9.61	-10.5%	9,041	

Source: 1991 Public Use Microdata File. Individual file.

Notes: Population age 20-64 not in school full time, with Class of worker equal to wage earner.
Residents of non-Atlantic Canada only.

Table 2: Selected Coefficients from Log Earnings Regressions: Basic Groups

Sex	Immigrant Status	Employment Equity Status	Type of Work Endogenous		Type of Work Exogenous	
			Non CMA Residents	CMA Residents	Non CMA Residents	CMA Residents
MALES			Regression 2.1	Regression 2.2	Regression 2.3	Regression 2.4
Canadian by birth	White		comparison	comparison	comparison	comparison
	Visible Minority		-10.2% *	-13.5% *	-4.0%	-8.2% *
Immigrant	White		-36.2% *	-22.4% *	-18.8% *	-12.5% *
	Visible Minority		0.8%	-5.0% *	1.9%	-2.3% *
			-2.0%	-21.5% *	-0.8%	-15.8% *
			R ² = 0.163 n=48,977	R ² = 0.209 n=95,554	R ² = 0.403 n=48,977	R ² = 0.437 n=95,554
FEMALES			Regression 2.5	Regression 2.6	Regression 2.7	Regression 2.8
Canadian by birth	White		comparison	comparison	comparison	comparison
	Visible Minority		9.2%	0.5%	9.7% **	0.2%
Immigrant	White		-14.9% *	-13.4% *	-8.9% *	-6.8% *
	Visible Minority		1.6%	-3.4% *	2.8%	-1.4%
			-0.5%	-8.3% *	6.9%	-9.1% *
			R ² = 0.119 n=41,657	R ² = 0.124 n=88,942	R ² = 0.499 n=41,657	R ² = 0.491 n=88,942

Notes: * denotes significance at the 5% level, ** denotes significance at the 10% level

controls are household type, city or province, official language knowledge,

education, potential labour market experience in Canada and potential experience outside Canada.

additional type of work controls are: full time/part time status, weeks worked, occupation and industry.

Population age 20-64 not in school full time, with Class of worker equal to wage earner.

Non-Atlantic Residents only.

Table 3: PANEL A
Selected Coefficients from Log Earnings Regressions, Basic Groups
controlling for differences in Place of Education

Sex	Immigrant Status	Employment Equity Status	
			Regression 3.1
Males	Canadian by birth	White	comparison
		Visible Minority Aboriginal	-8.2% * -12.5% *
	Immigrant	White	-2.6% *
		Visible Minority	-16.2% *
			R ² = 0.437 n=95,554
			Regression 3.2
Females	Canadian by birth	White	comparison
		Visible Minority Aboriginal	0.1% -6.6% *
	Immigrant	White	-1.1%
		Visible Minority	-7.8% *
			R ² = 0.491 n=88,942

Table 3: PANEL B

Sex	Place of Education	Coefficients on Place of Education by Level of Education			
		Less than High School	High School	Some Post-Secondary	Post-Secondary Degree
		Regression 3.1			
MALES					
	US or UK	0.6%	10.6% *	13.2% *	13.2% *
	Central Europe	-1.5%	-4.4%	-1.1%	-13.5% *
	Southern Europe	5.6%	-3.6%	-4.3%	-4.7%
	Other Europe	-6.5%	2.6%	-8.0% *	-2.4%
	Asia or Africa	3.2%	0.9%	0.9%	-2.1%
	Other (inc Australia)	6.8%	2.1%	9.9%	10.2% **
		Regression 3.2			
FEMALES					
	US or UK	-3.6%	-7.8% **	-6.4% **	-7.3% **
	Central Europe	4.0%	0.5%	-4.4%	-21.7% *
	Southern Europe	1.6%	1.0%	-9.2%	8.8%
	Other Europe	10.0% *	8.9% **	4.7%	-1.0%
	Asia or Africa	0.0%	-1.2%	-4.2%	-16.4% *
	Other (inc Australia)	4.8%	-1.7%	4.4%	-6.4%

* denotes significance at the 5% level, ** denotes significance at the 10% level

Notes: controls are household type, city or province, official language knowledge, education, potential labour market experience in Canada and potential experience outside Canada, full time/part time status, weeks worked, occupation and industry.
Population age 20-64 not in school full time, with Class of worker equal to wage earner.
Non-Atlantic Residents only.

Table 4: Decomposition of Characteristics by Payoffs for Selected Groups,

Sex	Immigrant Status	Employment Equity Status	Earnings Equation of ...				
			Canadian by birth			Immigrant	
Characteristics of ...			White	Visible Minority	Aboriginal	White	Visible Minority
MALES	Canadian by birth	White	<i>comparison</i>	-2%	-9%	-3%	-21%
		Visible Minority	-13%	-21%	-14%	-30%	
		Aboriginal	-23%	-35%			
	Immigrant	White	23%	14%		10%	-12%
Visible Minority		10%	-2%		-10%	-25%	
FEMALES	Canadian by birth	White	<i>comparison</i>	2%	-5%	-1%	-7%
		Visible Minority	1%	1%	0%	-7%	
		Aboriginal	-13%	-19%			
	Immigrant	White	7%	16%		-1%	-2%
Visible Minority		9%	18%		-8%	-10%	

Source: 1991 Public Use Sample, individual file.

controls in earnings equations are household type, city, official language knowledge, weeks worked, full time/part time, education, potential experience inside and outside Canada, full time/part time status, weeks worked, occupation and industry.
 Population age 20-64 not in school full time, with Class of worker equal to wage earner.
 Non-Atlantic CMA residents only.

Table 5: Selected Coefficients from Log Earnings Regressions: Detailed Ethnic Groups

			Men		Women	
			Regression 5.1		Regression 5.2	
Visible Minority Status	Ethnic response type	Ethnic Group	Canadian by birth	Immigrants	Canadian by birth	Immigrants
White Ethnic Origins	Single ethnic responses only	British	comparison	0.0%	comparison	-0.2%
		French	0.6%	0.0%	0.2% *	-0.7% *
		Canadian	-1.2%	-12.2% *	-0.2%	0.7%
		Dutch	0.1%	-0.5% **	-0.4%	-0.6%
		German	0.2%	-0.3%	0.3% **	-0.3%
		Polish	0.1%	-0.3%	0.5%	-0.2%
		Hungarian	-0.2%	0.2%	0.0%	-0.7%
		Jewish	0.5% **	-0.2%	0.5% **	-0.6%
		Spanish	-0.8% †	-0.9% *	-12.3% †	-15.9% *
		Greek	-14.5% *	-17.0% *	-14.6% *	0.1%
		Italian	-0.3% *	-0.4% *	0.1%	-0.1%
		Portugeuse	-0.9% **	0.0%	0.6%	0.0%
		Balkan	-10.5% *	-0.8% *	0.0%	0.5%
	Ukrainian	0.2%	-0.1%	0.4% *	12.4%	
	Other	0.1%	-0.4% **	0.5% *	0.3%	
	Multiple ethnic responses	British with white	-0.1%	0.0%	0.0%	-0.7%
		French with white	-0.4% **	-0.2%	0.3%	15.5%
		Southern European with white	0.4%	-0.6%	-0.3%	14.6%
		Central European with white	-0.1%	-0.1%	0.2%	0.5%
		Other European with white	0.9%	0.3%	0.2%	-0.8%
Visible Ethnic Origins	Single ethnic responses only	Arab	-11.6% †	-15.4% *	-0.1% †	-1.0% *
		Black	-17.4% *	-22.2% *	0.4%	-12.4% *
		Chinese	-12.5% *	-1.0% *	0.2%	-0.2%
		Filipino	0.5% †	-20.3% *	-36.1% †	-0.9% *
		Latin	0.9% †	-21.4% *	0.4% †	-0.9% *
		South Asian	0.1% †	-14.3% *	0.2% †	-1.0% *
		Vietnamese	28.4% †	-18.4% *	-0.4% †	-14.8% *
		West Asian	-11.9% †	-18.6% *	10.6% †	-10.3% *
		Other Visible	-0.8% **	-14.4% *	0.2%	-0.5%
	multiple ethnic responses	Visible Minority with white	0.9%	-20.0% *	0.2%	-12.3% *
		British with Visible	-0.7% †	-15.3% **	-0.8%	-0.4%
		French with Visible	0.4% †	0.8% †	21.9% †	12.3% †
		Southern European with Visible	-55.5% †	0.6% †	0.7% †	-20.0% †
		Central European with Visible	-44.2% †*	14.0% †	10.6% †	12.5% †
		Other European with Visible	-0.7% †	-16.2% †	14.3% †	-48.0% †*
Visible Minority with Visible	15.6% †	-17.7% *	-36.1% †	-10.9% **		
Aboriginal Origins	single	Aboriginal	-22.5% *	0.4% †	-0.1%	-146.0% †*
	Multiple	Aboriginal with white	-16.1% *	-48.4% †**	-17.1% *	-55.6% †*
		Aboriginal with Visible	0.4% †	18.0% †	12.9% †	-23.0% †
			R ² = 0.438	n=95,554	R ² = 0.492	n=88,942

Notes: † denotes less than 100 observations in the cell; * denotes significance at the 5% level, and ** at the 10% level
controls are household type, city, official language knowledge,
weeks worked, full time/part time, education, potential experience inside and outside Canada,
full time/part time status, weeks worked, occupation and industry.
Population age 20-64 not in school full time, with Class of worker equal to wage earner.
Non-Atlantic CMA residents only.

**Table 6: Selected Coefficients from Log Earnings Regressions, Basic Groups
Regressions by City**

Sex	Immigrant Status	Employ-ment Equity Status	Census Metropolitan Area		
			Montreal	Toronto	Vancouver
			Regression 6.1	Regression 6.2	Regression 6.3
MALES	Canadian by birth	White	comparison	comparison	comparison
		Visible Minority	-16.7% *	-8.9% *	-3.6%
		Aboriginal	-6.0%	-5.3%	-7.3% **
	Immigrant	White	-7.7% *	-0.7%	-7.4% *
		Visible Minority	-20.1% *	-16.7% *	-12.9% *
				R ² = 0.470 n=18,167	R ² = 0.402 n=22,928
			Regression 6.4	Regression 6.5	Regression 6.6
FEMALES	Canadian by birth	White	comparison	comparison	comparison
		Visible Minority	-2.9%	0.8%	-0.2%
		Aboriginal	-3.3%	-7.6%	-9.7% **
	Immigrant	White	-4.0%	-0.7%	-3.9%
		Visible Minority	-19.6% *	-5.9% **	-2.4%
				R ² = 0.504 n=16,872	R ² = 0.441 n=22,306

* denotes significance at the 5% level, ** denotes significance at the 10% level
controls are household type, city, official language knowledge,
weeks worked, full time/part time, education, potential experience inside and outside Canada,
full time/part time status, weeks worked, occupation and industry.
Population age 20-64 not in school full time, with Class of worker equal to wage earner.
Non-Atlantic CMA residents only.

Table 7: Matching Earnings Equations with Detailed Ethnic Composition, 3 Selected CMAs, 1991

Sex	Immigrant Status	Employment Equity Status	Montreal earnings equation matched with the detailed ethnic composition of			Toronto earnings equation matched with the detailed ethnic composition of			Vancouver earnings equation matched with the detailed ethnic composition of		
			Montreal	Toronto	Vancouver	Montreal	Toronto	Vancouver	Montreal	Toronto	Vancouver
MALES											
	Canadian by Birth	White	comparison	comparison	comparison	comparison	comparison	comparison	comparison	comparison	comparison
		Visible	-16%	-10%	-24%	2%	-9%	-5%	-3%	1%	-1%
		Aboriginal	-11%	-30%	-25%	0%	-3%	-2%	-12%	-10%	-12%
	Immigrant	White	-10%	-8%	-3%	-3%	-2%	-1%	-14%	-8%	-8%
		Visible	-20%	-23%	-21%	-14%	-14%	-12%	-16%	-15%	-13%
FEMALES											
	Canadian by Birth	White	comparison	comparison	comparison	comparison	comparison	comparison	comparison	comparison	comparison
		Visible	-5%	-5%	-8%	3%	1%	6%	9%	4%	1%
		Aboriginal	-4%	-17%	-8%	-15%	-18%	-17%	-6%	-18%	-17%
	Immigrant	White	-6%	-5%	-7%	0%	-1%	-1%	5%	-1%	-3%
		Visible	-20%	-18%	-16%	-7%	-6%	-3%	-6%	-5%	-3%

Notes: controls in earnings equations are household type, city, official language knowledge, weeks worked, full time/part time, education, potential experience inside and outside Canada, full time/part time status, weeks worked, occupation and industry.
 Earnings Equations are defined over Detailed Ethnic Groups in 78 categories
 Population age 20-64 not in school full time, with Class of worker equal to wage earner.
 Non-Atlantic CMA residents only.

Table A1: Data Means and Counts

Cases	Group	Variable	Males		Females	
			CMA	Non-CMA	CMA	Non-CMA
			95554	48977	88942	41657
Means	Potential Experience	Canada	17.346	19.009	16.918	18.416
		US or UK	0.196	0.116	0.197	0.125
		Central Europe	0.100	0.024	0.095	0.029
		Southern Europe	0.135	0.021	0.078	0.014
		Other Europe	0.179	0.059	0.128	0.042
		Asia or Africa	0.630	0.071	0.633	0.065
		Other	0.094	0.015	0.076	0.010
Counts	Education	Less than Grade 8 (reported)	5,433	4,475	3,881	2,291
		Grade 9 to 11, no HS Certificate	11,650	8,872	9,222	6,296
		Grade 12 to 13, no HS Certificate	5,658	3,090	5,120	2,733
		Less than Grade 12, HS Certificate	2,504	1,435	2,879	1,325
		Grade 12 to 13, HS Certificate	11,587	6,430	14,100	7,301
		HS Certificate with some Training	9,033	3,060	9,159	3,296
		Trades Certificate	15,571	10,529	8,103	4,911
		Non University Certificate	13,296	5,667	18,035	8,209
		University Certificate	2,054	635	2,857	1,257
		Bachelor's Degree	11,967	3,138	11,059	3,073
		University Certificate above BA/BSc	1,881	542	1,892	543
		Professional Degree	282	74	136	19
		Master's Degree	3,665	848	2,292	377
		Earned Doctorate	973	182	207	26
	Foreign Education	US or UK, <HS	319	98	409	132
		US or UK, HS	343	97	672	197
		US or UK, PS	1,079	330	823	255
		US or UK, Degree	532	121	362	92
		Central Europe, <HS	169	33	202	48
		Central Europe, HS	152	17	220	32
		Central Europe, PS	525	95	368	58
		Central Europe, Degree	188	11	143	11
		Southern Europe, <HS	1,141	97	726	68
		Southern Europe, HS	204	17	132	10
		Southern Europe, PS	262	32	87	3
		Southern Europe, Degree	33	2	10	1
		Other Europe, <HS	632	117	453	79
		Other Europe, HS	280	59	349	54
		Other Europe, PS	905	216	505	80
		Other Europe, Degree	311	31	186	16
		Asia or Africa, <HS	1,584	132	1,590	115
		Asia or Africa, HS	1,311	68	1,437	71
		Asia or Africa, PS	1,636	96	1,717	74
	Asia or Africa, Degree	1,362	80	942	60	
	Other, <HS	143	9	130	4	
	Other, HS	184	14	208	12	
	Other, PS	328	29	262	26	
	Other, Degree	259	26	122	9	
	Language	English	64,329	31,242	59,280	27,012
		French	8,692	10,110	9,631	8,780
		English and French	21,991	7,583	19,435	5,814
		Neither English nor French	542	42	596	51
	Household Type	Single Adult	9,342	3,972	9,540	2,806
		Single Adult, with Child(ren)	3,133	1,512	7,046	2,925
		Single, with Dependent(s)	1,561	716	1,998	702
		Adult Couple	18,874	10,028	18,425	9,164
		Couple, with Child(ren)	46,704	27,376	38,832	22,294
		Couple, with Dependent(s)	7,172	2,908	5,971	2,086
		Non Census Family	6,278	1,846	4,763	1,160
		Multiple Family Household	2,490	619	2,367	520
	Full Time/Part Time	Full Time	91,515	46,664	70,845	29,694
		Part Time	4,039	2,313	18,097	11,963
	Weeks Worked	1-4 Weeks	1,011	627	1,559	1,038
		5-9 Weeks	829	596	1,450	973
		10-14 Weeks	1,342	1,167	2,094	1,437
		16-19 Weeks	1,282	1,103	1,989	1,402
		20-24 Weeks	2,954	2,266	3,610	2,435
		25-29 Weeks	2,416	1,747	2,893	1,684
		30-34 Weeks	2,801	2,116	3,096	1,700
		35-39 Weeks	2,084	1,418	2,624	1,330
		40-44 Weeks	4,687	2,900	5,294	2,815
45-49 Weeks		8,062	4,096	7,525	3,307	
50-52 Weeks		68,086	30,941	56,808	23,536	
Counts	Industry	Agriculture	568	1,557	508	1,420
		Other Primary Industries	1,477	4,072	567	515
		Manufacturing	21,017	12,048	9,802	4,207
		Construction	8,476	5,083	1,372	732
		Transportation and Storage	6,679	3,528	2,483	871

	Communication and Other Utilities	4,679	2,021	2,811	970
	Wholesale Trade	6,244	2,467	3,238	847
	Retail Trade	8,996	4,389	10,322	5,747
	Finance, Insurance and Real Estate	5,584	1,201	9,471	2,758
	Business Management	6,619	1,234	6,331	1,433
	Public Administration:Federal	3,549	1,575	3,018	930
	Other Public Administration	5,730	2,842	4,583	1,975
	Education and Related Services	5,497	2,895	9,541	4,993
	Health and Welfare	2,852	1,280	14,733	8,087
	Accommodation and Food Services	3,416	1,137	4,781	3,653
	Other Services	4,171	1,648	5,381	2,519
Occupation	Management and Administration	13,989	4,217	9,835	2,627
	Science, Engineering, Math	7,976	2,415	2,190	476
	Social Science and Related	1,478	512	2,806	1,247
	Teaching and Related	3,480	1,846	6,282	3,472
	Medicine and Health	1,483	687	8,627	4,717
	Art, Literature and Recreational	1,569	434	1,377	347
	Clerical and Related	8,437	2,371	31,370	12,661
	Sales	10,053	3,731	8,340	3,618
	Service	9,225	4,009	10,361	7,281
	Farming and Horticulture	1,000	1,723	344	1,126
	Other Primary Occupations	512	2,383	32	121
	Processing Occupations	3,085	3,284	983	839
	Machining and Factory	12,567	7,332	3,226	1,464
	Construction Trades	8,374	6,216	237	160
	Transport Equipment	5,514	3,686	631	436
	Other Occupations	6,812	4,131	2,301	1,065
Ethnicity/ Immigrant Status	Canadian-born White	68,665	42,876	64,700	36,761
	Canadian-born Visible Minority	1,141	242	1,207	192
	Aboriginal	1,823	2,024	1,901	1,653
	Immigrant White	14,417	3,263	12,093	2,610
	Immigrant Visible Minority	9,508	572	9,041	441
City	Montreal	18,168		16,873	
	Quebec	3,991		3,614	
	Sherbrooke	1,631		1,388	
	Ottawa	5,797		5,589	
	Oshawa	1,639		1,369	
	Niagara	2,137		1,891	
	Kitchener	2,254		2,025	
	London	2,245		2,229	
	Windsor	1,551		1,330	
	Sudbury	1,745		1,468	
	Winnipeg	3,962		3,766	
	Regina	2,392		2,249	
	Victoria	1,550		1,505	
	Toronto	22,929		22,307	
	Hamilton	3,778		3,284	
	Calgary	4,912		4,461	
Edmonton	5,304		4,697		
Vancouver	9,569		8,897		
Province	Quebec		14,914		11,882
	Ontario		16,963		14,788
	Manitoba		2,053		1,837
	Saskatchewan		2,308		2,375
	Alberta		4,869		4,357
	British Columbia		7,870		6,418

Notes: Population age 20-64 not in school full time, with Class of worker equal to wage earner.
Residents of non-Atlantic Canada only.

Table A2: Mean Log Earnings and Number of Cases, Detailed Ethnic Groups

Visible Minority Status	Ethnic response type	Ethnic Group	Men				Women			
			Canadian by birth		Immigrants		Canadian by birth		Immigrants	
			Avg log earnings	Cases	Avg log earnings	Cases	Avg log earnings	Cases	Avg log earnings	Cases
White Ethnic Origins	Single ethnic responses only	British	10.31	21,097	10.50	4,071	9.73	19,167	9.76	3,794
		French	10.18	20,388	10.36	380	9.68	18,934	9.78	339
		Canadian	10.31	3,465	10.36	154	9.74	2,824	9.93	113
		Dutch	10.24	712	10.40	577	9.57	651	9.57	404
		German	10.26	2,389	10.43	1,068	9.67	2,131	9.68	820
		Polish	10.34	523	10.07	664	9.85	515	9.60	619
		Hungarian	10.23	221	10.37	300	9.63	212	9.61	201
		Jewish	10.52	622	10.43	340	9.91	747	9.77	349
		Spanish	9.77	23	9.95	357	9.58	30	9.29	285
		Greek	9.77	255	9.95	554	9.52	223	9.52	438
		Italian	10.12	2,058	10.26	2,498	9.76	1,926	9.59	1,743
		Portugeuse	9.91	165	10.12	1,005	9.77	126	9.56	804
		Balkan	10.07	216	10.23	565	9.70	194	9.73	444
		Ukrainian	10.30	1,593	10.39	145	9.74	1,546	10.00	133
	Other	10.26	1,133	10.37	987	9.80	987	9.79	815	
	Multiple ethnic responses	British with white	10.23	5,998	10.41	314	9.72	6,194	9.80	376
		French with white	10.17	2,727	10.44	121	9.71	2,964	9.89	119
		Southern European w/ white	10.23	604	10.19	138	9.71	614	9.83	117
		Central European w/ white	10.24	3,647	10.43	409	9.72	3,885	9.81	445
Other European w/ white		10.22	1,605	10.38	134	9.72	1,649	9.74	140	
Visible Ethnic Origins	Single ethnic responses only	Arab	9.84	58	9.91	527	9.70	72	9.39	314
		Black	9.84	118	9.95	1,277	9.68	132	9.64	1,484
		Chinese	10.07	312	10.09	2,306	9.84	312	9.67	2,120
		Filipino	9.36	5	9.95	709	9.29	8	9.78	987
		Latin	9.74	5	9.70	317	10.17	3	9.38	291
		South Asian	9.92	52	10.07	2,032	9.54	62	9.56	1,668
		Vietnamese	10.72	2	9.81	400	10.04	1	9.38	279
		West Asian	9.63	11	9.90	280	9.69	15	9.48	213
		Other Visible	10.28	195	9.91	410	9.86	185	9.43	397
	multiple ethnic responses	Visible Minority with white	9.87	144	9.95	506	9.63	158	9.60	479
		British with Visible	10.05	98	10.06	121	9.66	100	9.72	131
		French with Visible	10.05	36	10.07	22	9.72	32	9.86	27
		Southern European w/ Visible	9.86	11	10.36	38	9.79	11	9.75	36
		Central European w/ Visible	9.85	35	10.24	31	9.58	47	9.74	46
		Other European w/ Visible	10.13	22	10.02	43	9.60	26	9.53	43
Visible Minority w/ Visible	9.87	20	10.03	143	9.51	16	9.68	148		
Aboriginal Origins	single	Aboriginal	9.63	458	10.95	1	9.42	469	8.18	7
	Multiple	Aboriginal with white	9.99	560	10.03	13	9.55	569	9.33	17
		Aboriginal with Visible	9.89	15	10.29	1	9.59	17	9.44	2
Total			71,598		23,958		67,754		21,187	

Notes: Population age 20-64 not in school full time, with Class of worker equal to wage earner.
Residents of non-Atlantic Canada only.