Does Visible Ethnicity Matter in the Economic Success of Second Generation Immigrants in Canada?

Ryan O'Hare and Yanmei Yu

Winner of the Mark K. Inman Senior Essay Prize, 2009

Abstract

Previous literature on the economic integration of second generation immigrants has largely treated this group as one whole. While this literature demonstrates that this demographic group is doing either as well or better than both their parents and other Canadian-born individuals in terms of earnings, it is unclear whether these aggregate results hold for visible minorities and different visible ethnic groups. In light of the trends in Canadian immigration since the 1960s, as well as evidence indicating a certain degree of economic discrimination in Canada based on visible ethnicity, this is a significant research gap. Using the 2001 Canadian Census data and a model to estimate log earnings adapted from the work of two Canadian labour economists, Hum and Simpson (2007), we estimate, using the OLS regression procedure, the impact of visible minority status and visible ethnicity on the earnings of second generation immigrants. The results show that while male visible minorities experience a wage differential of about 5% compared to their Caucasian counterparts, female visible minorities actually experience a wage premium of about 6% compared to their Caucasian counterparts. The results for the five specific ethnic groups under consideration – Chinese, East Indian, East and Southeast Asian, Caribbean and Jamaican – proved to be largely insignificant and open to further investigation.

Acknowledgements

We would like to take the opportunity to thank Professor Bhatia, Professor Knight, and Professor Lester as well as our peers in Economics 4400E for their comments and guidance. In addition, we would like to thank Vince Gray and Teaching Assistants Andrea Sweny and Jing Wu for their assistance in gathering data and with STATA.

1. Introduction

A cursory reading of both Canadian history and current government policy reveals the centrality of immigration and its subsequent impacts on Canada's economy and society. Contributions from various social scientists indicate that there are complex push and pull factors that motivate individuals to immigrate to a new country. One such purported explanation involves dynastic considerations, whereby individuals emigrate for the socioeconomic benefit of their offspring, a demographic group dubbed 'second generation immigrants.' Accordingly, an important policy question emerges when one seeks to understand the socioeconomic outcomes, largely defined by earnings and education levels, of this second generation group.

There is a developed literature on intergenerational earnings and education mobility between parents and their children,[1] but the major focus has not been on immigrants and their children. There have been positive contributions from various studies and analyses, both in Canada and abroad, that have used a variety of different data sets, modeling techniques, and assumptions to look at this group of the population. Narrowing the focus to Canada, the general results of Hum and Simpson (2007) and Ayedmir, Chen, and Corak (2005), two of the key Canadian analyses, demonstrate that there is more or less complete integration of the second generation in terms of earnings and education levels. That is, the second generation of immigrants in Canada has earnings and education levels that either match or exceed the average levels of non-second generation native-born Canadians. While these results are encouraging, these analyses leave certain questions unanswered.

The major unknown in these analyses is how the results extend to various ethnic groups of the second generation. Namely, do the results which demonstrate that this group of the population is integrating well into the Canadian economy hold for different ethnic groups? Moreover, what is the effect of visible minority status on the socioeconomic outcomes of this group? If there are differences based on ethnicity and visible minority status, which groups are affected and what factors contribute to this? The Canadian research to date looks at this section of the population on an aggregate level, and they include the second generation largely as one group. Our analysis seeks to contribute to closing this research gap. Specifically, we address the questions above in an econometric analysis that estimates a model of log earnings through simple OLS regression techniques to isolate the effects of visible minority status and visible ethnicity on earnings outcomes. Section II will present information from relevant past studies that guide and inform our analysis. Section III will discuss the formulation of our econometric model. Section IV will provide an overview of our data set, and it will discuss data specification and limitations. Section V will cover the basic statistical results from our data set, the more in-depth results, and implications resulting from our regressions. Finally, Section VI will provide conclusions as well as areas for improvement and future investigation.

[1] For example, see Becker and Tomes (1986).

2. Relevant Past Studies

In our empirical work, we plan to investigate whether ethnicity and visible minority status are significant factors in the economic success of second generation immigrants in Canada. In this sense, this investigation is a synthesis of three different streams of equity research. It combines questions of intergenerational mobility, second generation economic integration, and socioeconomic differences based on visible ethnicity. The highlights and key work done in each of these three areas, both in the international and Canadian context, will be highlighted in turn.

First, intergenerational mobility measures "the relationship between a child's adult labour market and social success and his or her family background" (Aydemir et al. 2005, 5). While a variety of factors can and do contribute to a child's success as compared to their parents, this issue is important to many analysts because it is "a measure of the degree of equality of opportunity in a society" (Becker and Tomes 1986, S3). The first major rigorous theoretical paper to analyze mobility issues was "Human Capital and the Rise and Fall of Families" by Becker and Tomes in 1986. Using a utility maximization model that assumes parents are concerned about the welfare of their children, the key results of this paper indicate that poor families tend to exhibit lower earnings mobility than rich families (S33). As Aydemir et al. (2005, 7) note, this work serves as the theoretical basis for much of the subsequent economic analyses of earnings and educational mobility.

In the general treatment of intergenerational mobility, a number of studies have emerged since the 1980s which seek to analyze empirically the extent and the determinants of intergenerational mobility for many different countries. These analyses often diverge in terms of data sets, assumptions, modeling techniques, results, and explanations. There are two themes that can be highlighted from this body of research. First, this body of research has involved a great amount of ingenuity in the use and manipulation of data sets to generate credible results (Corak 2004, 9). While detailed and representative longitudinal data sets are ideal for this type of work, problems such as unavailability, time lags, attrition, and accuracy have forced researchers to use small longitudinal data sets or to make creative use of cross-sectional data from a variety of sources (9-10). Second, the results of the various studies exhibit a large degree of variation, both between and within countries (Corak 2004, 2). For example, based on a review of seven Canadian studies, the earnings elasticity between fathers and sons has been estimated to range from 0.13 to 0.26 (59). Although this indicates that Canada is generally an upwardly mobile society, a great deal of ambiguity clearly exists.

Second, in light of the large number of immigrants that are entering Canada on an annual basis, the issue of how well their offspring are faring in the Canadian economy is an important one to address, both from an economic and policy standpoint. Despite this significance, however, "the literature is relatively sparse" in this area of research (Hum and Simpson 2007, 1989). According to researchers, the chief cause of this neglect is rooted in the scarcity of appropriate data (Boyd and Grieco 1998, 854). Researchers have also been forced to grapple with issues related to the definitions of the second generation

and the appropriate comparison groups. The definitional issue is essentially concerned with who should be considered a second generation immigrant. Three groups can be readily identified: individuals born in Canada with both parents born abroad (pure second generation); individuals born in Canada with only one parent born abroad (mixed second generation); and individuals born aboard but "who have spent most of their formative years in Canada" (1.5 generation) (Sykes 2008, 5). The comparison issue relates to which other groups the socioeconomic outcomes of the second generation should be compared to. In practice, the choice is either their parents (first generation), non-second generation native-born Canadians (third generation or higher), or within the second generation itself. A point worth noting, however, is regardless of whether the second generation is being explicitly compared to their parents or not, the *raison d'être* for this research is rooted inexorably in notions of intergenerational progress. The distinction between the subjects of comparison does matter on a methodological level.

The techniques used to model second generation outcomes are complex and varied, dependent not only on the considerations highlighted above, but on other factors, such as variables of interest and types of data (e.g. cross-section vs. longitudinal). First, building on the discussion of general intergenerational mobility, researchers are faced with many similar econometric issues. In their review of previous research on second generation integration, Hum and Simpson (2007, 1987-9) note that these issues include unobserved characteristics and "background effects," measurement error and bias, and appropriate dummy and control variables. Second, the primary modeling techniques and underlying research questions are diverse. In terms of variables, studies often differ on the socioeconomic indicator of interest, though they usually focus on earnings or education levels. The type of data set used also bears a direct relation to the model and subsequent results in different studies. Hum and Simpson (2007) draw a comparison, based on the type of data used, between earlier literature and recent literature. While this discussion does not capture the full scope of econometric intricacy present in the literature, it does point to the need to be attentive to the exact research question posed, the methodology through which the question is answered, and ultimately, the results generated.

Although the approaches are certainly different, the results are surprisingly consistent in Canada. The literature demonstrates that the second generation is not only doing better than their parents are, but they are also doing either as well or better in terms of labour market and educational outcomes than other native-born individuals. For illustration, Hum and Simpson (2007) find "complete integration of the second generation" in terms of earnings and significantly higher levels of education (2008). In a similar vein, Aydemir et al. (2005) find relatively high intergenerational mobility, "suggesting that in the past there has been a rapid integration of the children of immigrants into the mainstream of the Canadian labour market" (20). While this is encouraging, the natural question is to ask why these results hold.

The explanations for these results are varied and range from the observable to the unobservable. For instance, many popular explanations are rooted in the notion that immigrants are "positively selected" due to their inherent ability, their motivation, or

their heightened interest in the future welfare of their children (Aydemir et al. 2005, 7). Related to intergenerational mobility, some analysts argue that the success of second generation immigrants is tied to the educational and earnings levels of their parents (Borjas 1993, 128). A final explanation for this success in North America is the linear assimilation model, or, more colloquially, the melting pot metaphor, which states that over successive generations, the descendants of immigrants "[undergo] further acculturation and [raise their] status vis-à-vis [their] parental group" (Boyd and Grieco 1998, 855).

Lastly, the major unknown in these Canadian analyses is how well the results extend to various visible ethnic groups of the second generation. The role of ethnicity and visible minority status as significant explanatory variables has been ignored to a large extent in Canadian research. While this can be attributed largely to data availability, the role of ethnicity has taken on a heightened importance for three primary reasons. First, many analysts argue that the evidence of strong second generation integration is based heavily on more ethnically homogenous immigrant parents "primarily born in the United States, the United Kingdom, or other European Countries". Due to changes in Canadian immigration laws in the 1960s which removed nationality as an admission criterion, large numbers of immigrants flowed in from Asia, Latin America, the Caribbean, and Africa (Boyd 2000, 142). Hence, because visible ethnic diversity in immigration is a relatively new phenomenon in Canada, the true economic success of their children has not been as discernable in the data (Sykes 2008, 9). A related issue is that these more recent and ethnically-diverse immigrant cohorts have witnessed declining economic success in Canada (Ostrovsky 2008, 4). This is troubling because, as indicated previously, some analysts argue that second generation success is significantly correlated with the income of their parents. In light of these trends, it is natural to wonder whether the evidence indicating overall second generation success will remain valid.

Second, there is an increasing international literature identifying ethnicity as a significant factor in explaining general intergenerational mobility and second generation integration. The pioneer in this work, George Borjas, has highlighted the role of what he calls "ethnic capital." Specifically, he demonstrates that ethnicity can act as an externality in the production of human capital because "the quality of the ethnic environment in which a person is raised... influences the skills and labour market outcomes of the children" (Borjas 1992, 148). The corollary is that persistent economic inequality between ethnic groups can endure for multiple generations (149).

Third, some Canadian studies have found evidence to indicate some degree of economic discrimination amongst visible minorities. While Hum and Simpson (1999) find little evidence of visible minority income disparity amongst native-born individuals (other than black men), they do find that visible minority immigrant men face a wage disadvantage when compared to other men (392). It is doubtful, however, that this is entirely based on visible minority status.[2] Pendakur and Pendakur (1998) find evidence to suggest that

[2] For example, it is likely that language ability and visible minority status are highly correlated amongst immigrant men.

significant wage differentials exist between white men and visible minority men, but they do not find significant disparities amongst women (543-4). In sum, it is increasingly evident that "ethnic differences in labour market outcomes matter, and ignoring them could provide... misleading results" (Hum and Simpson 2007, 1999).

3. Model/Estimation Techniques

In light of the evidence from the previous relevant literature, there is a consensus indicating that second generation immigrants in Canada have earnings levels that either equal or surpass the earnings levels of the third generation of Canadians. Moreover, the evidence also indicates that the aggregate second generation group achieves higher earnings than the first generation of Canadians (i.e. their parents). Accordingly, our model focuses solely on earnings variations within the second generation group itself. That is, since the aggregate group of second generation immigrants demonstrates strong earnings outcomes compared to these two groups, our model disaggregates the second generation to consider whether ethnicity and visible minority status impacts the earnings of the second generation group. Accordingly, our model seeks to estimate the earnings levels of second generation immigrants by explicitly controlling for these unknown ethnic effects.

Our simple model follows the theoretical model of Hum and Simpson (2007) closely. In their analysis, the authors generate a standard Mincerian model to estimate log earnings based on years of schooling, work experience and its square, and weeks worked. Moreover, the authors add in a large set of variables to control for factors such as community, employment, and demographic characteristics (Hum and Simpson 2007, 1992). Among these important control variables are age, regional area of Canada, community size, union coverage, firm size, industry, marital status, the number of children under 17 in the individual's household, and the presence of children between ages 0 and 5. This inclusive approach to measuring earnings is appropriate because the determinants of earnings are complex and varied. It is not sufficient to include only a few variables to estimate earnings because the processes determining earnings depend on many individual and employment characteristics. While our model cannot possibly claim to include all variables that determine earnings, in the interest of minimizing omitted variable bias, our model follows the work of two Canadian labour economists, Derek Hum and Wayne Simpson, which increases our confidence in the validity and the viability of our results. Although most of the control variables above appear logically connected to labour market outcomes and the determination of earnings, the inclusion of variables related to an individual's children deserves mention. Namely, the logic behind including the number of children under 17 in the household is rooted in the notion that an individual with more children may have less flexibility in the labour market to work longer hours, to take more employment risks, to switch to different (and possibly less secure) jobs, etc. Moreover, a similar logic applies to the presence of young children aged 0 to 5, as new parents may reduce and restrict their labour supply for childrearing purposes.

The econometric model motivating our analysis uses roughly the same approach and choice of variables as Hum and Simpson to estimate log earnings of the second generation group. Earnings or employment income are defined using the standard Statistics Canada definition, which includes total wages, salaries, and net self-employment income (Statistics Canada 2003, 55). Although our data does not permit us to include every variable that Hum and Simpson (2007) included in their analysis (e.g. union coverage), we were able to follow their model for the vast majority of variables. Our theoretical model also explicitly includes variables indicating visible minority and ethnicity. Accordingly, our basic equation appears as follows:

$$y_i = x_i\beta + u_i \qquad (1)$$

Our model is estimated using the ordinary least squares regression procedure. This simple procedure, using log earnings as the dependent variable, allows us to isolate the *ceteris paribus* effects of the various explanatory variables on log earnings. Most importantly, this procedure allows us to isolate the effect of visible minority status and various ethnicities on earnings. This procedure also allows for the use of simplifying assumptions that will let us use familiar statistical tests to evaluate our results.

4. Description of Data

The data set used for our empirical analysis is the 2001 Canadian Census from Statistics Canada. Since the population of interest in our study is second generation immigrants, we must use the 'long form' version of the Census. Namely, 80% of households are randomly given a 'short form' version with seven questions, while 20% of households are randomly given a 'long form' version with fifty-nine questions to answer. The question which identifies second generation immigrants, determined by the place of birth of the respondents' parents, is found only on the 'long form.' The long-form version provides a cross-section of the broader Canadian population, which will allow for a detailed comparison of different second generation individuals. We must use the 2001 version of the Census because this was the first year since 1971 that the question which identifies second generation immigrants was included (Aydemir et al. 2005, 9). The 2006 Census included this question as well, but the data is not available as of yet.

This data set is highly useful for a variety of reasons. First, Statistics Canada is a highly sophisticated and reliable agency. The Census is administered with acute awareness of appropriate content, questionnaire design, distribution, advertisement, and data collection. Second, because the Census is administered nation-wide and to most households, the data set is large and will allow for robust results. The 'long form' version of the Census includes information for 801,055 respondents. Specifically, the large data set will allow us to explore ethnic differences in second generation income levels since 5% (or 39,193 individuals) of this sample are second generation immigrants. Third, the Census includes a variety of other individual variables that will be needed for our regression analysis to control for the effect of ethnicity and visible minority status on the earnings of second generation immigrants.

On a more specific level, it is worth noting several characteristics and limitations of the particular Census data in our study. First, as stated previously, the identification of second generation immigrants is based on the self-reported birthplace of each individual's parents (either mother or father). Similarly, the visible minority indicator is self-reported and is based on whether the individual reports being a member of one or more of the following visible ethnic categories: Chinese, South Asian, Black, Filipino, Latin American, Southeast Asian, Arab, West Asian, Japanese, Korean, or Pacific Islander (Statistics Canada 2003, 142). According to Statistics Canada, visible minority "refers to whether or not a person… is non-Caucasian in race or non-white in colour" (143). We feel that having a pre-defined visible minority indicator is imperative as it prevents us from having to formulate an ad hoc or potentially incomplete definition of visible minority status, and it prevents us from having to use supplementary information such as religion, mother tongue, or self-reported ethnicity to parse out an individual's visible minority status. For example, since visible minority status is a relative concept based on the majority visual identity of Canada's population, a person born in China is not necessarily a visible minority in Canada. The ethnic categories in our analysis are also self-reported and, according to Statistics Canada, "[r]efers to the ethnic or cultural group(s) to which the respondent's ancestors belong. The ethnic origin question refers to the 'roots' of the population of Canada and should not be confused with citizenship or nationality" (Statistics Canada 2008). Like the visible minority indicator, this self-reported variable allows us to analyze ethnicity directly, without having to rely on proxies such as an individual's parent's birthplace. For example, if a second generation immigrant's father was born in China, the offspring may not necessarily be ethnically Chinese.

Second, we restrict our data sample with respect to earnings levels, employment status, age, and regional characteristics, in order to enhance the reliability and usefulness of our results. With respect to income, our sample includes only those individuals with positive earnings. This is necessary because our definition of earnings is based on both wages and salaries and net self-employment income, which can be negative. Moreover, to reduce the effect of earnings outliers and to improve the explanatory power of our model, we have restricted our sample to those with reported annual earnings of at least $1000. With respect to employment status, we have restricted our sample to include only individuals not attending school during the data collection period. Since our analysis seeks to assess earnings outcomes of the second generation, we feel it is appropriate to remove those individuals who are not full participants in the labour market. Similarly, with respect to an individual's age, our analysis is restricted to those individuals between the ages of 25 and 70. This restriction follows the data specification of Hum and Simpson (2007), who indicate that this age restriction "should avoid almost all individuals whose schooling is not complete" (1990). With respect to the regional dimension, data limitations have forced us to remove those individuals living in Canada's Atlantic provinces (New Brunswick, Nova Scotia, PEI, and Newfoundland) and territories (Nunavut, Yukon Territory, and Northwest Territories) from our sample. Since these regions are relatively sparsely populated, Statistics Canada has collapsed the detail of several important variables (e.g. wages and salaries, ethnicity, etc.) for these geographic areas in the interest of ensuring confidentiality. We do not feel this restriction is overly problematic because

these areas have low populations, particularly of immigrants and, by logical extension, their offspring. Specifically, including the other restrictions indicated above, this geographic restriction removes only 900 observations from our data set while, at the same time, it allows for a more detailed and comparable data set.

Third, as indicated previously, due to data unavailability and other limitations, our model does not follow the econometric model of Hum and Simpson (2007) exactly. Since their study uses the 1999 Survey of Labour and Income Dynamics from Statistics Canada while our study uses the 2001 Census, the data sets are not exactly equivalent. Specifically, the main variable that is not part of our analysis is work experience, because the question was not asked in the Census. Although this variable is part of the central Mincerian model, and although it would have been ideal to include it in our analysis, we feel that there are mitigating circumstances. Namely, since our analysis includes age, highest year of schooling, marital status, household size and annual weeks worked – variables that are arguably correlated with actual work experience – we feel the effect of work experience is, to some extent, captured. To test this proposition we accessed data from the 2001 Statistics Canada Survey of Labour and Income Dynamics,[3] a data set which includes actual full-time work experience. As Table 1 demonstrates, we regressed age, highest level of schooling, marital status, annual weeks worked, and household size on actual full-time work experience. The coefficients on the independent variables proved to be statistically significant and produced an R-squared value of about 0.57. Given that work experience is a complex phenomenon that is presumably influenced by numerous other factors (e.g. pension availability, industry of employment, wealth, etc.), this demonstrates that our regression includes variables that are strongly correlated with and indicative of actual work experience.

There is also another variable, number of children under 17 years of age in the individual's household, that is unavailable in the Census data. Since this variable seeks to measure the effect of the number of children in the household on earnings, our analysis has opted to use a related variable, number of persons in the economic family, to capture this effect indirectly. Namely, the number of children in the household is roughly captured in the size of the economic family. In a similar vein, Hum and Simpson (2007) use community size as an explanatory variable by splitting the variable into community size less than 50000, between 50000 and 100000, between 100000 and 500000, and greater than 500000 (1996). Based on the 2001 Census, our study is unable to specifically identify those individuals in communities with less than 100000 people. Thus, our analysis has the following two community size categories: between 100000 and 500000 and greater than 500000. Fortunately, this data limitation only causes a loss of 144 observations from the visible minority group, indicating that the vast majority of this

[3] As mentioned previously, Hum and Simpson (2007) used the 1999 SLID data set for their analysis.

TABLE 1: Work Experience Regression

Source	SS	df	MS	Number of obs	= 23352
				F(7, 23344)	= 4387.85
Model	1609172	7	229882	Prob > F	= 0
Residual	1223004	23344	52.3905	R-squared	= 0.5682
				Adj R-squared	= 0.568
Total	2832176	23351	121.287	Root MSE	= 7.2381

Work Experience	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
Age	1.015313	.0383735	26.46	0	0.9400984	1.090528
Age^2	-0.00247	.0004428	-5.59	0	-0.0033413	-0.00161
Legally married?	0.795159	.1606622	4.95	0	0.4802499	1.110067
Single?	0.714451	.1775018	4.03	0	0.366536	1.062366
No. of people in family	-0.14935	.0417565	-3.58	0	-0.2311904	-0.0675
Weeks worked	0.099366	.0049684	20.00	0	0.0896279	0.109105
Highest level of school	-0.14672	.0154311	-9.51	0	-0.1769666	-0.11647
_cons	-23.1195	.8504672	-27.18	0	-24.78647	-21.4525

Source: Survey of Labour and Income Dynamics, 2001

group lives in Central Metropolitan Areas with populations greater than 100000.[4]

Lastly, it is important to note that our analysis is primarily concerned with the effect of visible minority status and *visible* ethnicity on second generation earnings. That is, our analysis explicitly considers the visible minority demographic and then disaggregates the analysis to consider specific ethnicities within the visible minority definition. For example, the analysis considers the Chinese ethnicity but not the Russian ethnicity, since the former is included in the Statistics Canada definition of visible minority while the latter is not. Moreover, because of the restrictions we have placed on our data (e.g. positive income, non-students, etc.), and because of the aforementioned immigration patterns since the 1960s, there are several ethnic groups that fall into the visible minority definition but do not have sufficient observations to analyze separately. Therefore, our analysis includes two separate regressions. The first two regressions explicitly focus on the visible minority indicator for both males and females. The second two regressions remove the visible minority indicator and explicitly control for the effect of ethnicity for the five most populous ethnic groups (Chinese, East Indian, East and Southeast Asian, Caribbean, and Jamaican) for both males and females.

5. Results and Explanations

Basic Results

Table 2 and Table 3 present the basic results of our second generation data. The tables present simple summary statistics on the number of observations, the means, the medians, the standard deviations of several variables, and some earnings differential calculations. Table 2 presents information based on the visible minority indicator, while Table 3 presents information based on an individual's visible ethnicity. In both instances, the variables under consideration include earnings, age, years of schooling, and weeks worked. The key results from each table will be discussed in turn.

Table 2 explicitly compares various socioeconomic outcomes of the visible minority second generation group with the non-visible minority second generation group ('others'). The comparison is also split between men and women due to the noted differences in earnings outcomes based on sex. An obvious distinction to make is the vast difference in size of the two groups in our sample, with 1458 individuals in the visible minority group and 22135 in the other group. This is expected based on the aforementioned Canadian immigration patterns, whereby immigrants from visible ethnic countries were admitted to Canada only after the 1960s. Previously, immigrants came from countries and ethnic groups that do not fit the definition of visible minority in Canada (e.g., United Kingdom, Netherlands, United States, etc.). Moreover, this pattern is reflected in the mean ages of the two groups insofar as individuals, both male and female, in the visible minority category are younger on average than the 'others.' Both male and female visible minorities are, on average, about seven years younger than their non- visible minority counterparts. Namely, since visibly ethnic immigrants were

[4] Specifically, the number of observations in the key visible minority groups changes from 1602 to 1458.

admitted to Canada in large numbers only in the last fifty years, it is expected that their offspring would be generally younger.

In terms of mean and median earnings, two observations are worth noting. First, male visible minorities, on average, earn significantly less than the other group. In fact, Caucasian males earn $6462 more per year than visible minority males. Second, this pattern does not hold for females: visible minority females earn, on average, $2660 more than their Caucasian counterparts do. Given that these observations give contrasting impressions of the effect of visible minority status on earnings, the regression results will be critical. In terms of the mean and median highest level of schooling of the second generation group, both visible minority men and women have, on average, at least one year more of schooling than the 'others.' Finally, in terms of average weeks worked per year, there is no difference among second generation females, whereas non-visible minority second generation men work 1.2 more weeks per year than the visible minority group. The difference in years of schooling may help explain the earnings results discussed above, i.e., visible minority women earn more on average than other second generation women earn. Moreover, the data on weeks worked may help explain the earnings differentials among men.

Table 3 explicitly breaks down the visible minority category into the five most populous ethnic groups in our data set: Chinese, East Indian, Jamaican, Caribbean, and East and Southeast Asian. In terms of size, the largest group is the Chinese ethnic group with 560 individuals, with the East Indian ethnic groups as a distant second with 199 individuals. Since China and India are very populous countries and have been major sources of Canadian immigrants in the past, these numbers are not surprising. Moreover, given that these two countries are presently the two top sources of newcomers to Canada, having large samples of these two groups is beneficial, as it may aid in the robustness and the predictive value of our results (Statistics Canada 2007).

With respect to mean and median earnings, the Chinese have the highest average earnings by far, while the Jamaicans have the lowest average earnings. The earnings differential between Chinese men and Jamaican men is $13884, while the difference for women is $14544. These earnings differentials are rather large, and there exist significant differences between the Chinese and every other ethnic group considered. The East Indian and Southeast Asian ethnic groups trade places for second and third positions, and they generally display relatively similar average earnings outcomes for both males and females. Despite the comparably high average earnings of Chinese males, however, the average earnings of this group does not surpass the average earnings of the non-visible minority male group in Table 2. The large and successful Chinese male group significantly affects the aggregate group, because only the Chinese males have average earnings that are greater than or equal to the visible minority group average. The female case is less clear because, as mentioned previously, visible minority females have earnings that exceed the non-visible minority female group. Specifically, the Chinese and East and Southeast Asian females have average earnings that exceed the aggregate visible minority group, while these two groups plus East Indian females have average earnings that exceed the non-visible minority female group. By extension, Jamaican and

Caribbean females are below average, both compared to the aggregate visible minority group and to the non- visible minority group.

The basic results regarding years of schooling and average weeks worked may help explain the earnings results. Namely, the Chinese ethnic group generally has the highest average schooling levels and highest average weeks worked per year. The only exception is that Chinese women only have the second highest mean level of schooling, with East Indian women having the highest (9 years vs. 10 years). Other than this, the basic results for these other variables appear to display less explanatory power. For example, even though Jamaican men have the lowest average earnings, they have the second highest mean weeks worked. Similarly, both East and Southeast Asian men and women have the lowest mean weeks worked of the five ethnicities, yet this group displays generally the second highest earnings among the ethnic groups. The regression results clearly will be significant in shedding further light on these basic results.

Regression Results

As stated previously, our analysis includes two regressions: the first considers the effect of visible minority status on earnings, and the second considers the effect of five individual ethnicities on earnings. Moreover, based on the well-documented earnings differentials between men and women in Canada, separate regressions were run for males and females. Accordingly, the results from each of these four regressions will be discussed in turn.

Table 4 displays the results for the regression in which visible minority status and the other explanatory variables are regressed on male log earnings. The basic summary statistics described above indicate a significant earnings differential between visible minority men and 'others' of $6462. As would be expected, the coefficient describing visible minority status, *vismin*, is statistically significant at the five percent level. The coefficient on this variable is negative and is approximately -0.0529, indicating roughly a 5% earnings differential between visible minority men and 'other' second generation men. By controlling for a variety of other variables that determine earnings, we feel that this result provides evidence of economic discrimination for visible minority second generation men in Canada.

TABLE 2: Selected Summary Statistics – Visible Minority Status

Visible Minority Status	Male	Female	Total
Visible Minority	761	697	1458
Others	11589	10546	22135
Total Number of observations	12350	11243	23593

Sex	Visible Minority Status	Mean Earnings ($)	Median Earnings ($)	Standard Deviation of Earnings	Difference in Mean Earnings
MALES	Total	47,404	43,229	27709.28	
	Visible Minority	41,340	37,000	26098.65	Comparison
	Others	47,803	44,000	27249.62	6462
FEMALES	Total	33,159	30,000	21942.15	
	Visible Minority	35,655	32,000	21775.33	Comparison
	Others	32,995	30,000	232244.30	-2660

Sex	Visible Minority Status	Mean Highest Level of Schooling	Median Highest Level of Schooling	Mean Weeks Worked in 2000	Mean Age
MALES	Total	7.6	8.0	48.0	41.48
	Visible Minority	8.5	9.0	46.9	34.96
	Others	7.5	8.0	48.1	41.91
FEMALES	Total	7.8	8.0	46.2	40.41
	Visible Minority	8.9	10.0	46.2	33.43
	Others	7.7	8.0	46.2	40.87

TABLE 3: Selected Summary Statistics – Ethnic Group

Ethnic Group	Male	Female	Total
Chinese	299	261	560
East Indian	105	94	199
Jamaican	40	45	85
Caribbean	51	52	103
East and Southeast Asian	60	42	102

Sex	Ethnic Group	Mean Earnings ($)	Median Earnings ($)	Standard Deviation of Earnings	Difference in Mean Earnings
MALES	Chinese	46924	40000	27401	Comparison
	East Indian	39908	36000	27721	-7015
	Jamaican	32362	28202	18196	-14562
	Caribbean	33039	33000	21599	-13884
	East and Southeast Asian	39850	39684	25717	-7074
FEMALES	Chinese	42314	40000	23248	Comparison
	East Indian	34431	28912	22406	-7883
	Jamaican	27770	24000	15765	-14544
	Caribbean	29249	26514	18240	-13065
	East and Southeast Asian	36494	30000	27735	-5820

Sex	Ethnic Group	Mean Highest Level of Schooling	Median Highest Level of Schooling	Mean Weeks Worked in 2000	Mean Age
MALES	Chinese	9	11	49	36
	East Indian	8	9	47	31
	Jamaican	7	8	47	30
	Caribbean	8	8	46	30
	East and Southeast Asian	8	10	44	46
FEMALES	Chinese	9	11	47	35
	East Indian	10	11	45	30
	Jamaican	7	8	45	31
	Caribbean	8	8	46	31
	East and Southeast Asian	8	8	44	39

Table 5 displays the results for the regression in which visible minority status and the other explanatory variables are regressed on female log earnings. Since the basic results indicated that visible minority women earn more than the other group, we expect a positive coefficient on *vismin*. Indeed, the results of our regression indicate a positive coefficient of approximately 0.0612 on *vismin*, indicating that visible minority second generation women realize an earnings premium of about 6% compared to the 'other' second generation women. Moreover, this result exhibits even stronger statistical significance than for males; it is significant at the 5% level and almost significant at the 1% level, as evidence by a *p*- value of 0.018. The higher significance value is likely a function of the stronger explanatory nature of the female regression, as evidenced by about a 7.5 percentage points higher R-squared value.

The regressions presented in both Tables 4 and 5 present the strongest results generated from our various robustness exercises. As compared to the original approach outlined in Sections III and IV, there is one major category of variables that has been eliminated from our analysis. In our earlier regressions, we included variables to control for the province of residence of the individual. We felt that these were important variables to include for two reasons. First, provincial controls were both implemented and statistically significant in the guiding model for our analysis, Hum and Simpson (2007). Second, it seems intuitive to include provincial controls due to the noted regional differences in Canadian labour market outcomes. The provincial control in our regressions, however, proved insignificant, except for the province of Ontario. Moreover, dropping the provincial controls did not affect the explanatory power of our regressions markedly.[5] Most importantly, they changed the coefficients measuring visible minority status from being statistically insignificant to statistically significant. We hypothesize two primary reasons for the overall insignificance of the provincial controls. First, as stated previously, the individuals in the territories and the Atlantic provinces were dropped from our analysis earlier due to data limitations. Since the Atlantic region is traditionally the lowest-income region of Canada, it may be the case that the remaining provinces in the analysis exhibit less variation in earnings to capture. Second, given the large population of Ontario and its history of being a major immigrant settlement area (especially Toronto), the data set is heavily skewed towards the traditionally higher-income province of Ontario. Indeed, for both males and females, the number of individuals in the province of Ontario is larger than the number of individuals in the rest of the provinces combined (see Appendix A). Therefore, given the preponderance of respondents in Ontario, it is probably not surprising that Ontario was the only province for which there was a statistically significant effect of provincial residence on log earnings.

[5] The regressions with provincial controls resulted in R^2 of 35.74% for males and 43.19% for females. The regressions without provincial controls resulted in R^2 of 35.18% for males and 42.86% for females.

TABLE 4: Regression Estimates of Log Earnings Performance – Males

Source	SS	df	MS		Number of obs	= 12350
					F(43, 12306)	= 267.51
Model	2691.95645	25	107.678258		Prob > F	= 0
Residual	4960.58362	12324	0.402514088		R-squared	= 0.3518
					Adj R-squared	= 0.3505
Total	7652.54008	12349	0.61968905		Root MSE	= 0.63444

Log of Earnings	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
Community<50,000?	0.060838	0.0139463	4.36	0	0.0335011	0.0881748
No. of people of family	0.003583	0.0052647	0.68	0.496	-0.0067366	0.0139025
Children age (0-5)?	0.0435815	0.0159896	2.73	0.006	0.0122393	0.0749237
Age	0.0619942	0.0043317	14.31	0	0.0535033	0.0704851
Age^2	-0.0006702	0.0000477	-14.05	0	0.211497	0.279723
Legally married?	0.24561	0.0174032	14.11	0	0.1251453	0.234064
Separated/widow/divorced?	0.1796047	0.0277832	6.46	0	-0.1008505	-0.0049524
Visible Minority?	-0.0529015	0.0244618	-2.16	0.031	0.0380403	0.045967
Highest level of school	0.0420037	0.002022	20.77	0	0.729319	0.8277414
Fulltime?	0.7785302	0.0251058	31.01	0	0.0237736	0.0264126
Weeks worked	0.0250931	0.0006732	37.28	0	-0.1818193	-0.030046
Construction?	-0.1059327	0.0387146	-2.74	0.006	-0.0545708	0.089681
Manufacturing?	0.0175551	0.036796	0.48	0.633	-0.2354993	-0.0902469
Trade?	-0.1628731	0.0370512	-4.4	0	-0.1759697	-0.0191253
Transport/Warehousing?	-0.0975475	0.0400081	-2.44	0.015	-0.1568497	0.0028969
Finance/Ins/Real Estate?	-0.0769764	0.0407484	-1.89	0.059	-0.0944661	0.0590106
Professional/Technical?	-0.0177278	0.0391491	-0.45	0.651	-0.4192555	-0.2403364
Management/Admin.?	-0.329796	0.045639	-7.23	0	-0.1918287	-0.0232322
Education?	-0.1075304	0.0430059	-2.5	0.012	-0.1789903	0.009453
Health care/Social work?	-0.0847686	0.0480684	-1.76	0.078	-0.0958409	0.0780106
Information/Culure?	-0.0089152	0.0443463	-0.2	0.841	-0.4524752	-0.2594378
Accommodation/Food?	-0.3559565	-7.23	-7.23	0	-0.3958158	-0.2212669
Other services?	-0.3085414	0.0445242	-6.93	0	-0.087279	0.0730723
Public Admin.?	-0.0071034	0.0409027	-0.17	0.862	-0.429512	-0.2122192
Industry not Reported?	-0.3208656	0.0554274	-5.79	0	-0.0007637	-0.0005767
_cons	6.798019	0.0969894	70.09	0	6.607905	6.988134

Source: 2001 Canadian Census

TABLE 5: Regression Estimates of Log Earnings Performance – Females

Source	SS	df	MS		
Model	3539.951200	25	141.598048	Number of obs	= 11243
Residual	4719.128130	11217	0.420712	F(25, 11217)	= 336.57
				Prob > F	= 0
				R-squared	= 0.4286
				Adj R-squared	= 0.4273
Total	8259.079330	11242	0.734663	Root MSE	= 0.64862

Log of Earnings	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
Community<50,000?	0.126923	0.014885	8.53	0.000000	0.097746	0.156099
No. of people of family	-0.040504	0.005698	-7.11	0.000000	-0.051672	-0.029336
Children age (0-5)?	0.043814	0.016983	2.58	0.010000	0.010525	0.077103
Age	0.069121	0.004933	14.01	0.000000	0.059452	0.078790
Age^2	-0.000732	0.000056	-13.06	0.000000	-0.000842	-0.000622
Legally married?	0.048676	0.018774	2.59	0.010000	0.011876	0.085475
Separated/widow/divorced?	-0.008552	0.025153	-0.34	0.734000	-0.057856	0.040751
Visible Minority?	0.061890	0.026157	2.37	0.018000	0.010617	0.113163
Highest level of school	0.054474	0.002207	24.68	0.000000	0.050148	0.058800
Fulltime?	0.683447	0.015663	43.63	0.000000	0.652745	0.714149
Weeks worked	0.028802	0.000584	49.32	0.000000	0.027657	0.029947
Construction?	0.070269	0.069264	1.01	0.310000	-0.065500	0.206038
Manufacturing?	0.090094	0.055899	1.61	0.107000	-0.019479	0.199666
Trade?	-0.095195	0.053420	-1.78	0.075000	-0.199908	0.009517
Transport/Warehousing?	0.129755	0.060591	2.14	0.032000	0.010987	0.248523
Finance/Ins/Real Estate?	0.119147	0.054411	2.19	0.029000	0.012492	0.225801
Professional/Technical?	0.105501	0.055070	1.92	0.055000	-0.002447	0.213448
Management/Admin.?	-0.081604	0.059358	-1.37	0.169000	-0.197957	0.034748
Education?	0.033733	0.054388	0.62	0.535000	-0.072877	0.140343
Health care/Social work?	0.026965	0.053321	0.51	0.613000	-0.077554	0.131483
Information/Culure?	0.137334	0.059254	2.32	0.020000	0.021186	0.253481
Accommodation/Food?	-0.331847	0.060411	-5.49	0.000000	-0.450262	-0.213432
Other services?	-0.191108	0.059089	-3.23	0.001000	-0.306932	-0.075284
Public Admin.?	0.127608	0.056898	2.24	0.025000	0.016078	0.239138
Industry not Reported?	-0.155876	0.070861	-2.20	0.028000	-0.294777	-0.016975
_cons	6.303727	0.115560	54.55	0.000000	6.077209	6.530245

Source: 2001 Canadian Census

With respect to the explanation of our results, as stated previously, the results for men and women confirmed our expectations based on the summary statistics. That is, male visible minorities experience a wage disparity, while female visible minorities experience a wage premium. In effect, this appears to indicate two competing forces at work: economic discrimination for men, but no economic discrimination for women. Given that ethnic discrimination is based ostensibly on visual characteristics and not on sex, this result appears curious at first. Moreover, the information from the summary statistics in Table 2 sheds little light on this result. Specifically, because the *ceteris paribus* effects of age, weeks worked, and schooling levels are controlled for in the regressions, the differences in Table 2 provide little information. Despite this, however, there are a number of plausible explanations for these results.

First, these results are not alone in finding evidence of visual discrimination in Canada. Although the variety of Canadian studies in this area of research consider diverse groups and apply different approaches, Pendakur and Pendakur (1998) note in their review of several studies that there is evidence indicating "earnings and wage differentials among ethnic groups that cannot be attributed to differences in observable individual characteristics such as age and education. Although suitably cautious, these [studies] conclude that discrimination may play a negative role for some ethnic groups" (519).

Second, Pendakur and Pendakur (1998) find an incidence of discrimination for men, but not for women in their Canadian study. Although this study likewise considers the Caucasian/visible minority dichotomy, they do not specifically consider second generation immigrants. That is, their study is concerned with the difference between visible minorities (including first generation immigrants and third-plus generation immigrants) and Caucasian individuals in Canada. Fortunately, their results are largely consistent with our results. That is, for Canadian-born male visible minorities, they find evidence of discrimination in the area of 8%; for Canadian-born female visible minorities, they find no evidence of visual discrimination (520). Although their study includes individuals that are not included in our study, namely visible minorities born in Canada but not to immigrant parents, many of the characteristics of the different groups are similar. For example, both second generation visible minorities and non- second generation Canadian-born visible minorities are often educated in Canada, speak one of the official languages, and have been acculturated since birth into Canadian society. Their evidence of discrimination faced by first generation visible minority immigrants is less applicable to our study because these individuals are less assimilated into Canadian culture (e.g. language, education, socialization, etc.), and they may suffer from unobservable selection bias. In sum, our results largely have precedent in previous Canadian research.

The explanations provided by Pendakur and Pendakur (1998) for the difference between male and female visible minorities are not particularly illustrative. For example, they suggest that the differences may be rooted in unobservable differences in labour market preferences (544). While this may be the case, we do not feel that it provides a sufficient explanation. One hypothesis that we propose is what we have loosely titled a 'visible minority glass ceiling.' Based on the summary statistics in Table 2, male visible

minorities earn, on average, $5685 more per year than female visible minorities. In light of this, we hypothesize that since men earn more, they are probably more predominantly employed in 'higher-skilled' jobs or employed higher up on the corporate ladder. It may be the case, then, that at lower-skilled jobs (e.g. administration, service industry, etc.) there is less discrimination, but as a visible minority individual moves further up in the labour market, they face a 'glass ceiling' or, more colloquially, an 'old boys club' that exposes them to higher levels of economic discrimination. This hypothesis obviously does not explain everything as there exists previously documented economic discrimination based on sex and, moreover, females are more likely to leave the labour market for purposes of childrearing. The other key explanation that Pendakur and Pendakur (1998) provide for the difference between men and women is based on the aggregate nature of the visible minority/Caucasian dichotomy. They argue that the visible minority categorization "may be quite misleading as an indicator for anti-discrimination policy," since there are important differences based on individual ethnicities (545). That is, they feel that aggregating visible minorities into one category may disguise important ethnic differences, (e.g., Chinese men may not face discrimination, while Jamaican women may face discrimination). Indeed, this particular explanation motivates our second set of regressions.

Table 6 displays the results for the regression in which the five ethnic groups and other explanatory variables are regressed on male log earnings.[6] Although the base results indicate that there are significant earnings differentials between these ethnic groups, the results of this regression, using the Chinese group as the base ethnicity, demonstrate that the ethnic coefficients are not close to being statistically significant at any standard significance levels. Moreover, it is interesting to note that only the Caribbean ethnic group has a negative coefficient, despite the basic results indicating large earnings differentials between the Chinese and the other four ethnic groups. Finally, Table 7 displays the results for the regression in which the five ethnic groups and other explanatory variables are regressed on female log earnings. This regression, also using the Chinese ethnic group as the base, provides more of a mixed picture than the analogous male regression. Namely, the four ethnicities generated negative coefficients for log earnings. This fits with the previous basic results, which indicated that Chinese women, on average, have higher earnings outcomes than the other four ethnic groups under consideration. Moreover, the ethnic coefficient for the East Indian ethnic group is statistically significant at the 5% level and the coefficient for the Caribbean ethnic group is significant at the 15% level. The coefficients for the Jamaican and East and Southeast Asian are not close to being statistically significant at any standard significance level.

[6] As stated previously, the five ethnic groups are Chinese, East Indian, East and Southeast Asian, Jamaican, and Caribbean.

TABLE 6: Regression Estimates of Log Earnings Performance – Male Ethnic Groups

Source	SS	df	MS		
				Number of obs	= 555
				F(28, 526)	= 15.26
Model	169.842345	28	6.06579804	Prob > F	= 0
Residual	209.071271	526	0.3974739	R-squared	= 0.4482
				Adj R-squared	= 0.4189
Total	378.913616	554	0.683959596	Root MSE	= 0.63046

Log of Earnings	Coef.	Std. Err.	t	P>t	[95% Conf. Interval]
Community<50,000?	0.062614	0.0970311	0.65	0.519	-0.1280021 0.25323
No. of people of family	-0.0520555	0.0217473	-2.39	0.017	-0.0947778 -0.0093332
Children age (0-5)?	0.0478371	0.0793928	0.60	0.547	-0.1081289 0.203803
Age	0.0778312	0.0222546	3.50	0.001	0.0341125 0.12155
Age^2	-0.0008683	0.000263	-3.30	0.001	-0.0013848 -0.0003517
Legally married?	0.1810521	0.0752618	2.41	0.016	0.0332014 0.3289028
Separated/widow/divorced?	-0.0058256	0.1644187	-0.04	0.972	-0.3288236 0.3171723
East Indian?	0.0526407	0.0808387	0.65	0.515	-0.1061657 0.2114471
Jamaican?	0.0682649	0.1134946	0.60	0.548	-0.1546935 0.2912234
East & South Asian?	0.0511332	0.1033246	0.49	0.621	-0.1518463 0.2541128
Caribbean?	-0.0459674	0.1029373	-0.45	0.655	-0.248186 0.1562513
Highest level of school	0.0460417	0.0108362	4.25	0.000	0.0247542 0.0673292
Fulltime?	0.5632197	0.1038279	5.42	0.000	0.3592515 0.7671879
Weeks worked	0.0372822	0.0031449	11.85	0.000	0.0311041 0.0434603
Construction?	-0.2425789	0.2213705	-1.10	0.274	-0.6774579 0.1923
Manufacturing?	-0.1303236	0.1927715	-0.68	0.499	-0.5090202 0.2483729
Trade?	-0.3431331	0.1911088	-1.80	0.073	-0.7185633 0.0322972
Transport/Warehousing?	-0.3745208	0.2059987	-1.82	0.070	-0.7792019 0.0301604
Finance/Ins/Real Estate?	-0.3472268	0.1977863	-1.76	0.080	-0.7357748 0.0413212
Professional/Technical?	-0.2665404	0.1933469	-1.38	0.169	-0.6463674 0.1132865
Management/Admin.?	-0.3600427	0.231636	-1.55	0.121	-0.815088 0.0950027
Education?	-0.0665983	0.2226207	-0.30	0.765	-0.503933 0.3707365
Health care/Social work?	-0.2264562	0.2064094	-1.10	0.273	-0.6319443 0.1790319
Information/Culure?	-0.3106484	0.2129894	-1.46	0.145	-0.7290627 0.107766
Accommodation/Food?	-0.5395945	0.2213241	-2.44	0.015	-0.9743822 -0.1048068
Other services?	-0.3420774	0.2184741	-1.57	0.118	-0.7712663 0.0871115
Public Admin.?	-0.2138223	0.2145261	-1.00	0.319	-0.6352555 0.2076109
Industry not Reported?	0.2715672	0.3394711	0.80	0.424	-0.3953185 0.9384528
_cons	6.407926	0.5245392	12.22	0.000	5.377477 7.438375

Source: 2001 Canadian Census

TABLE 7: Regression Estimates of Log Earnings Performance – Female Ethnic Groups

Source	SS	df	MS		
				Number of obs	= 494
				F(28, 465)	= 15.54
Model	154.270926	28	5.50967595	Prob > F	= 0
Residual	164.819303	465	0.354450113	R-squared	= 0.4835
				Adj R-squared	= 0.4524
Total	319.090229	493	0.647241844	Root MSE	= 0.59536

Log of Earnings	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
Community<50,000?	0.2023493	0.1022423	1.98	0.048	0.0014352	0.4032634
No. of people of family	-0.0119273	0.0226245	-0.53	0.598	-0.0563863	0.0325316
Children age (0-5)?	-0.0172168	0.0676749	-0.25	0.799	-0.1502033	0.1157696
Age	0.0538664	0.0278325	1.94	0.054	-0.0008266	0.1085594
Age^2	-0.0005547	0.0003466	-1.60	0.110	-0.0012358	0.0001265
Legally married?	0.1825912	0.0730899	2.50	0.013	0.0389638	0.3262187
Separated/widow/divorced?	0.0437261	0.1306362	0.33	0.738	-0.2129844	0.3004366
East Indian?	-0.1705714	0.0795882	-2.14	0.033	-0.3269685	-0.0141743
Jamaican?	-0.0779609	0.1074755	-0.73	0.469	-0.2891586	0.1332369
East & South Asian?	-0.0092717	0.1077855	-0.09	0.931	-0.2210786	0.2025353
Caribbean?	-0.1510828	0.0995063	-1.52	0.130	-0.3466205	0.0444549
Highest level of school	0.069682	0.0112765	6.18	0.000	0.0475228	0.0918412
Fulltime?	0.8655918	0.0882843	9.80	0.000	0.6921061	1.039077
Weeks worked	0.0235849	0.0027297	8.64	0.000	0.0182209	0.0289489
Construction?	0.4321658	0.6295367	0.69	0.493	-0.8049233	1.669255
Manufacturing?	-0.1420968	0.2345525	-0.61	0.545	-0.6030111	0.3188174
Trade?	-0.2853223	0.214088	-1.33	0.183	-0.7060221	0.1353774
Transport/Warehousing?	-0.4665894	0.25255	-1.85	0.065	-0.9628702	0.0296913
Finance/Ins/Real Estate?	-0.0889792	0.212575	-0.42	0.676	-0.5067057	0.3287474
Professional/Technical?	-0.1547903	0.2163475	-0.72	0.475	-0.5799301	0.2703495
Management/Admin.?	-0.205358	0.2372551	-0.87	0.387	-0.671583	0.2608671
Education?	-0.0554529	0.2171076	-0.26	0.799	-0.4820863	0.3711805
Health care/Social work?	-0.1030195	0.2102412	-0.49	0.624	-0.5161601	0.310121
Information/Culure?	-0.4158746	0.2294122	-1.81	0.071	-0.8666876	0.0349385
Accommodation/Food?	-0.5872066	0.2865049	-2.05	0.041	-1.150211	-0.024202
Other services?	-0.435639	0.2618537	-1.66	0.097	-0.9502021	0.0789241
Public Admin.?	-0.1815898	0.2263201	-0.80	0.423	-0.6263265	0.263147
Industry not Reported?	-0.6231527	0.3683133	-1.69	0.091	-1.346917	0.100612
_cons	6.683326	0.6064265	11.02	0.000	5.49165	7.875001

Source: 2001 Canadian Census

These results are inexplicable both in terms of the general lack of significance as well as in terms of certain specific results. First, given the nontrivial earnings differential among ethnic groups in Table 3, it is unexpected to find that these differentials are not significantly confirmed in our regressions. That is, the results do not confirm significant earnings differentials based on individual ethnicities after controlling for other variables that affect earnings. Second, as alluded to above, the particular results for certain groups defy expectations. For example, given that the Chinese males in our sample earn, on average, much more than the other groups, it is not clear why the results show positive coefficients for every group other than Caribbean males. Moreover, it is also not entirely clear why East Indian women demonstrate statistically significant differentials at standard levels when the other three groups do not. Although the approaches are largely different, these results are not broadly consistent with the Canadian evidence provided by Pendakur and Pendakur (1998), among others, that more or less demonstrate incidences of earnings penalties for particular ethnic groups. Indeed, our results do not indicate the "substantial heterogeneity" among ethnic groups postulated by Pendakur and Pendakur (1998, 544). Hence, these results should probably be taken with caution, as they are not fully explicable.

There are a number of postulations that may help to rationalize our second set of results. First, although previous studies find ethnic differences, it may be the case that visual discrimination is not particularly nuanced or discerning. If an employer is discriminatory, it may not matter that an individual is Chinese versus Jamaican. Second, our results may be affected by the particular demographic and immigration patterns of Canada. In particular, the number of observations in each particular ethnic group is not very large, especially compared to the extremely large number of observations of non-visible minority second generation immigrants. Since visibly ethnic immigrants were only admitted to Canada in large numbers beginning with immigration law changes in the 1960s, it must be the case that their offspring are, on average, smaller in number and younger in age than the offspring of immigrants from historically important immigration areas, such as Europe and the United States. Since their numbers are significantly smaller, there may be less variation to measure, and patterns of discrimination may be less evident in the smaller numbers of observations. Moreover, in line with Borjas (1992), since these visibly ethnic groups are relatively newer to Canada, particularly compared to European communities in Canada, there may be less of an impact of 'ethnic capital.' In other words, because these groups are newer to Canada, their individual ethnic communities and networks may be less strong and developed than other longer-standing groups in Canada. An important exception to this may be the Chinese ethnicity, which has been present in Canada in significant numbers since the building of the Canadian Pacific Railway in the 19th century. Indeed, the incidence of stronger Chinese networks and 'ethnic capital' in Canada (e.g. major 'Chinatowns') may partially explain why Chinese individuals earn more, on average, than the other four groups under consideration.

6. Areas for Further Investigation and Conclusions

Regrettably, similar to other Canadian studies, our research has identified the incidence of economic discrimination against second generation immigrants based on visible minority status. Although previous studies indicate that the second generation demographic group achieves strong earnings outcomes in comparison to their parents and other Canadian-born individuals, this is not the case when visible minority status is specifically controlled for. Using a model to estimate log earnings generated by Hum and Simpson (2007) and the OLS estimation procedure, our analysis indicates that visible minority males experience a significant wage penalty of about 5%, while visible minority females experience a significant wage premium of about 6%. Although this may seem counterintuitive, this result is in line with previous Canadian work and may be explained by what we call the 'visible minority glass ceiling.' The results considering the effect of particular ethnicities on the log earnings of second generation immigrants produced no significant results and should be treated with caution. Although several explanations may be offered for these weak results, some of these ethnic results are inexplicable.

Going forward, this area is an area of inquiry that should be investigated further. Given that the Canadian Census now allows this demographic group to be specifically identified, research should continue to identify groups that are not doing as well as the second generation group in aggregate. Our research begins to address these group differences by considering visible minority status and particular ethnic groups. The consideration of ethnic groups, however, was largely hampered by small data sets. For example, although we considered five ethnic groups, there were eight other ethnicities that were dropped from our analysis due to an insufficient number of observations. This issue will be remedied in future years as more and more ethnically diverse children of immigrants enter the Canadian labour force and begin to move up the employment ladder. For example, if a Jamaican immigrant came to Canada in the 1980s or the 1990s, their Canadian-born child would either still be in school or be relatively new to the labour market. Indeed, repeating this study with the currently unreleased 2006 Census data would be worthwhile.

Related to the last point, the relatively low numbers of observation in the ethnic groups under consideration prevented a closer analysis of specific industries. In the four regressions above, the sixteen industries controlled for produced varying levels of statistical significance. In that sense, there may be an argument to potentially drop certain insignificant industries from consideration and take a closer look at the patterns of employment among various ethnicities. This approach was not taken in our analysis, however, because our number of observations in each ethnic category was low and dropping industries would have affected the degrees of freedom. Moreover, a quick visual check of employment of visible minorities among different industries demonstrated that although some industries are more populated by this group than others are, there was no obvious industry to drop.

In our view, future research could take many directions. Overall, we feel that future research must be conducted from both an equity and policy standpoint. We should be proud of multiculturalism in Canada, but that success should not be a license to sit on our laurels; one only needs to look at the strife and dissatisfaction in European ethnic enclaves to prove that. Future research should identify the groups and the areas that are falling behind, and it should learn from the groups and areas that are doing well. Based on this research, policymakers should be committed to ensuring all Canadians – regardless of ethnicity – have an opportunity to succeed in Canada.

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Appendix A

Table 8: Selected Summary Statistics - Provinces

Province	Male	Female	Total
Ontario	6880	6415	13295
Quebec	1436	1271	2757
Alberta	1523	1300	2823
Saskatchewan	833	644	1477
Manitoba	458	422	880
British Columbia	1815	1617	3432