

UNIVERSITY OF OTTAWA

The Economic Performance of Children of Immigrants Relative to Children of Natives in Canada

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Abstract

This paper examines the labour market performance of children of immigrants (second generation) relative to that of children of natives (third generation) in Canada using a Blinder-Oaxaca decomposition method. The methodology allows for the difference in the average wage of second generation Canadians and that of third generation Canadians to be decomposed into an explained component (that reflects differences in human capital characteristics such as experience and educational attainment) and an unexplained component (that reflect difference in returns to human capital). On the whole, the results indicate that second generation Canadians (both sexes) earn about 6% to 10% more than third generation male and female Canadians. Most of the positive earnings gap is attributed to differences in observable characteristics such as higher educational attainment and the higher concentration of second generation Canadians in Census Metropolitan Area's (CMA's) and high wage provinces such British Columbia. Also observed is that second generation Canadians enjoy a work experience premium relative to third generation Canadians of the same age.

Table of Contents

| | |
|--|-----------|
| Abstract | i |
| Introduction | 1 |
| Literature Review | 5 |
| Data | 14 |
| Analyzing the Wage Gap--Econometric Model and Methodology | 19 |
| Results..... | 22 |
| Conclusion | 28 |
| References..... | 30 |
| Appendix | 34 |

1. Introduction

Immigration is generally viewed as a thorny issue in most immigrant-receiving countries and how well immigrants adapt to their new society has always been a major source of concern for policy makers; Canada is no exception. With the recent financial crisis resulting in severe jobs losses in the developed world and a stalling global recovery altering the global economic landscape, the need for assessing immigration policy has never been greater. It is therefore fully justified to examine the pros and cons and the long term benefits of immigration to society at large. Canada is a country which is home to a large number of immigrants. For example, according to the 2006 census, immigrants make up about 16% of the entire population (Jantzen, 2008). Given the importance of immigration to Canada, it is no surprise that there has been a long line of research on first generation immigrants integrating into Canadian society (Aydemir and Skuetrud, 2005; Picot and Sweetman, 2005); the general consensus among these studies is that immigrants find it difficult to assimilate into Canadian society hereby resulting in a decline in their outcomes relative to those of natives and earlier immigrants. Dungan, Fang and Gunderson (2013) also support this conclusion on the assimilation of immigrants but however indicate that an increase in immigration is likely to result in a positive outcome on the overall Canadian economy. However, just observing and comparing first generation immigrants to natives may not proffer full insight into the long term impact of immigration, as successful integration may occur over several generations.

A focal starting point in fully accounting for the long run success of immigrants integrating into Canadian society is to observe the educational, economic and social

outcomes of the children of immigrants (second generation Canadians) and how much they contribute to these societies. Second generation Canadians in this paper is defined as children who either have one or two immigrant parents whilst third generation is defined as children who have both parents as native born Canadians. Second generation Canadians have the distinct advantage of having lived in Canada since birth, gone to school with other Canadians, interacted with Canadian society at a far younger age whilst in the process also acquiring native language proficiency and vital Canadian work experience which eluded their parents; the skills of their parents to a large extent would likely have been acquired in a foreign country. So a valid question that should spring forth is how do the outcomes of second generation Canadians fare relative to the children of natives? Do they perform better or worse and why? This study seeks to provide answers to these questions by focusing on labour market earnings as a measure of economic performance of both second generation Canadians and third generation Canadians.

Various economic and sociological studies such as Picot and Hou (2011a), Aydemir and Sweetman (2007), Palameta (2007), Hum and Simpson (2007), Borg (2008) and Reitz, Zhang and Hawkins (2011) have all attempted to answer these questions, examining the outcomes of second generation Canadians relative to third generation Canadians. The general finding of these studies is that second generation Canadians perform better than third generation Canadians in earnings when other factors are not controlled for; on average second generation Canadians earn about 6% to 10% more than third generation Canadians. Theories such as the “success orientation” model and factors such as superior educational attainment of second generation Canadians, higher number of second generation Canadians

living in large Census Metropolitan Areas (CMAs) and in the high wage provinces of Ontario and British Columbia, ethnicity, culture, parental income and influence and to some extent discrimination have all been put forward by sociologists and economists in explaining the wage gap between second generation and third generation Canadians. It is important to note that just a few of these studies used the ordinary least square methodology in arriving at their conclusions whilst the others especially the sociological literature supported their findings with basic summary statistics.

Although there are already a number of studies on the economic performance of second generation relative to third generation Canadians, this study differs as it uses a different methodology - the recognised Blinder-Oaxaca Decomposition - in analyzing the average wage gap between second generation and third generation Canadians. While this methodology has been used in other immigrant related studies (see for example, Nadeau and Seckin, 2010 and Coulombe, Grenier and Nadeau, 2012), I am not aware of any study that has used it to analyze the difference in the performance of second generation Canadians relative to third generation Canadians. The advantage of using the Blinder-Oaxaca Decomposition technique is that it allows us to identify and quantify the separate contributions of group differences in the measurable characteristics such as education, experience and marital status (Fairlie, 2005). Other advantages of the technique are that it is well known, easy to apply, provides easily interpretable results and is based on standard statistical methods (linear regression) (Johnston and Lee, 2011). Finally, the use of the Blinder-Oaxaca methodology will contribute and shed more light on the literature with

regards to the economic performance of second generation relative to third generation Canadians.

This study examines the economic performance of second generation Canadians relative to third generation Canadians using the Blinder-Oaxaca Decomposition method. The paper makes use of the 2006 Canadian census data. I focus on second generation and third generation Canadians who are between the ages of 20 and 64, not self-employed and have a high labour force attachment¹. The Decomposition involves running separate earning regressions for each group, taking the differences between average estimated wages for the two groups and manipulating the results in order to obtain an explained and unexplained component. Three Blinder- Oaxaca Decomposition regressions are run in total; one for the groups as a whole and the others for both second generation and third generation males and females. Also in estimating the decomposition, pooled and categorical restrictions are applied in order to solve for the index number problem and the identification problem.

The results in this paper indicate that third generation males earn about 7% less than second generation males whilst third generation females earn about 9.5% less than second generation females. The signs and magnitude of all the coefficients are as expected and the results are both economically and statistically significant and are in line with the general literature reviewed. According to the Decomposition, 86.5% of the female wage gap is explained by better observable characteristics such as higher educational attainment and

¹ High labour force attachment refers to Individuals who work full time and more than 20 hours in the reference week and 26 weeks in the year.

larger numbers of second generation females living in cities whilst about 13.5% is attributed to the difference in returns to its characteristics, in particular second generation females enjoy a higher return to work experience than third generation workers of the same age. Over 100% of the male wage gap is explained by the difference in observable human capital characteristics and the unexplained component is not statistically significant. Higher educational attainment and the large numbers of second generation males and females living in CMA's and high wage provinces account for a significant portion of the positive wage gap. Other likely factors which are mentioned in the literature such as the drive of the parents were unable to be controlled for as the relevant data is not available.

The remaining sections of this paper are as follows: Section 2 provides a review of the literature on the economic performance of second generation compared to the third generation (children of native born citizens). Section 3 provides a background on the data used in this paper whilst Section 4 provides an overview of the econometric model. Finally, Section 5 reports the results and Section 6 concludes the paper.

2. Literature Review

This section examines literature on the economic performance of the children of immigrants (second generation) relative to the children of natives (third generation) in Canada and other developed countries. With most of the earlier empirical research on immigrants in Canada having focused largely on comparing the economic performance of first generation immigrants with their native born counterparts it is no surprise that very little attention has been paid to studying the performance of second generation Canadians relative to third generation Canadians. Although this has largely been attributed to data

limitations, current research on the economic performance of second generation Canadians relative to the third generation Canadians is largely in its infant stage and is still relatively underdeveloped. In a bid to present a holistic view on the economic performance of second generation Canadians relative to third generation Canadians, available literatures from fields such as sociology are also incorporated into the paper.

With the addition of the question “ place of birth of parents” in the census in 2001, a small number of studies have analyzed the economic performance, labour market outcomes (Picot and Hou, 2011a; Jiong, 2010) and educational performance (Picot and Hou 2011b) of second generation Canadians relative to first generation Canadians and third generation Canadians. Most of the studies with regards to economic performance have focused on earnings and virtually all of them have found a positive gross average earnings gap between second generation and third generation. For example, Aydemir and Sweetman (2007) using data from the 2001 census and restricting their sample to individuals between the ages 20 and 64, show that the average earnings for second generation males (when both parents are immigrants) is 18.9% higher than that of third generation males, and 29.9% higher for females. Aydemir, Chen and Corak (2005) also using the 2001 census and restricting their sample to individuals between the ages 16 and 64 also find similar results; with the average annual earnings of the second generation individuals 9% higher than the average earnings of the third generation. Picot and Hou (2011a) using the 2006 census data also report a positive earnings gap between the second and third generation Canadians when only age is controlled for. The authors find that second generation males on average earn 5.6% more than third generation white males, whilst the female gap is 14.1%.

Two other studies, Hum and Simpson (2007) and Palameta (2007) make use of a different dataset, The Survey of Labour and Income Dynamics (SLID), to conduct similar studies. Both studies report results similar to those studies which used Canadian census data when controls were not accounted for; the second generation having a positive earning advantage over the third generation. For example, Hum and Simpson (2007) using 1999 data and restricting their sample to individuals between the ages of 23 to 70 report that second generation males and females earn on average about 10% more than third generation individuals. Palameta (2007) using panel data for the period 1996 to 2004 and restricting it to individuals between the ages of 17 and 29 find that second generation women (when both parents are immigrants) earn on average 39% more than third generation females when only controlling for age whilst no significant differences were found for males.

The positive earnings gap between second generation and third generation Canadians is significantly reduced and in some of the studies turns negative when additional controls such as education, location and marital status are added to the models. In virtually all the studies looked at, the addition of controls for education and location accounts for significant portions of the positive earnings gap. For example, Aydemir and Sweetman (2007) report that the earnings advantage for second generation Canadian male drops from 18.9% to 8.7% when years of schooling are added implying that second generation Canadians are more educated than third generation Canadians. The earning advantage also drops further to -5.5% when controls for city, rural and urban, marriage and ethnicity were added. Most of the latter drop in earnings is mainly accounted for by the

location variable; wages are higher in cities and second generation Canadians are more likely to live in cities than third generation Canadians. Picot and Hou (2011a) also find similar outcomes with earnings gap for second generation males dropping from 5.6% to -5.4% when education and location are accounted for. Similar results are also observed with females as the earnings gap drops from 14.1% to -1.6%.

Other studies that use the SLID dataset also supports to a certain extent the findings of Ayedemir and Sweetman (2007) and Picou and Hou (2011a): education and location account for a significant portion of the earnings gap. For example, Palameta (2007) reports that the second generation females earning gap drops from 39% to 13% when controls for education, marriage, location and other variables are added. The author finds that marriage, presence of children and location account for more than half of the wage gap whilst education only contributes marginally; second generation women are less likely to have children (which means higher earnings) and are more likely to be living in higher wage provinces such as Ontario and British Columbia. Hum and Simpson (2007) on the other hand attribute the earnings gap mainly to education as they observe a diminishing of the positive earnings gap between the second and third generation Canadians when the education variable is introduced in the regressions.

The shift in Canada's immigration policy in the sixties significantly altered the source countries of immigrants from those of European stock to those mainly from developing countries such as China and Africa (Boyd and Greico, 2000). Looking at second generation Canadians as a whole tends to mask the disparity in performance by various ethnic groups or visible minority groups. Picot and Hou (2011a) observed that there exists

significant variation in the earnings gap among different visible minority groups, with the Chinese and South Asians performing better than others. The authors report that second generation males of Chinese and South East Asians descent earn about 4.1% and 0.8% respectively more than third generation Canadians white males whilst second generation males of black and other-visible minority descent earn about 21.2% and 8.6% less than third generation white males. Second generation female minorities on the whole perform better than third generation white females; Chinese and South East Asians females earn 24.7% and 19.8% more than third generation white females whilst blacks and non-visible minorities also earn about 6.1% and 11.3% more than other third generation white females (Picot and Hou 2011a). According to the authors, the difference in performance among second generation minorities is largely attributed to the variation in returns to education among ethnic groups and to the high educational attainment among females. Reitz, Zhang and Hawkins (2011) also find similar results for second generation Chinese and South East Asians doing better than second generation blacks and other visible minorities not just in Canada but also in the US and Australia. The authors attribute the success of second generation Chinese and South East Asians to higher educational attainment and the higher likelihood of them being employed in a professional or managerial position. Superior educational success of Asians has been attributed to factors such as broad ethnic capital, perceived discrimination which drives them to work harder and also some factors which are cultural such as obligations to one's parents (Abada, Hou and Ram 2009). Ethnicity is a factor which affects the economic performance of second generation as those of Asian descent perform better than other minority groups.

Similar studies have also been carried out on the economic performance of the children of immigrants relative to the children of native born in immigrant-recipient countries such as the United States (Picot and Hou 2011a; Aydemir and Sweetman 2007), Sweden (Dan-Olof and Ekberg, 2003) and in other Organization of Economic Co-operation and Development (OECD) countries (OECD, 2010). The general results indicate that second generation immigrants perform better or are at par with the children of natives in countries such as the United States, Australia and New Zealand whilst mainly the reverse occurs in most European OECD (OECD, 2010)². For example, Card (2005) reports that second generation Americans earn 8% higher than third generation Americans whilst Dan-Olof and Ekberg (2003) observes that second generation males whose parents are of Non-European background have earnings 17 percent lower than the children of natives (third generation Swedes). De Matos (2010) also using a more detailed survey dataset (TIES) observed that second generation immigrants of Moroccan, Turkish and ex-Yugoslavian descent in fifteen major cities in Europe earned between 3%-11% less than their native born counterparts when no factors were controlled for³. The author further found that once education has been accounted for, the earnings gap between the second and third generation decreased significantly.

The difference in economic performance between second and third generation immigrants in most European countries and those in North America can be attributed to the difference in the level of educational attainment by the second generation immigrants. For

² It is important to note that outcomes experienced in European OECD countries are not uniform and in some countries, for example Switzerland, second generation immigrants also perform better than children of natives.

³ For more details on the TIES dataset and on the study see OECD (2010).

example, Picot and Hou (2011a) find that years of education is a significant determinant of the earnings advantage between the second generation and third generation in both Canada and the United states whilst the OECD (2010) finds significantly lower educational attainment levels among children of immigrants than among children of natives. Other factors such as discrimination (OECD, 2010), less educated first generation immigrants (parents) (OECD,2010) and weak socioeconomic background (Heath, Rothon and Kilpi, 2008) also account for some of the disparity in performance in both continents.

With education being a significant determinant of labour market performance and accounting for a significant portion of the positive earnings gap, it is imperative to provide a brief review of the existing literature on the educational gap between the second generation and third generation Canadians⁴. According to most studies, even when one controls for ethnicity, second generation Canadians record superior educational outcomes compared to third generation Canadians (Picot and Hou, 2011b). For example, Aydemir and Sweetman (2007) using the 2001 census data, report that 37.8% of the second generation has a bachelors or higher degree as opposed to 31.8% of the third generation Canadians. These results are also similar to those observed in other studies; of which some of these studies employed other datasets such as the SLID and ethnic diversity survey (Picot and Hou, 2011b). The superior levels of educational performance by second generation Canadians is largely attributed to factors such as higher parental education (Boyd 2002; Aydemir and Sweetman, 2007), high parental expectations (Finnie and Mueller, 2010), ethnic capital and location (Picot and Hou, 2011b). For example, Aydemir

⁴ Picot and Hou (2011b) provides a thorough review of educational outcomes of second generation Canadians relative to third generation Canadians.

and Sweetman (2007) report that about half of the educational attainment gap between second and third generation is explained by the fact that second generation Canadians have more highly educated parents. With the Canadian economy becoming more of a knowledge based economy, it is not surprising that better educated individuals are in a position to receive higher wages thus to a certain extent explaining the higher wages for the second generation.

Quite a number of sociological studies (Portez, Fernandez-Kelly and Haller, 2009; Boyd, 2008; Reitz, Zhang and Hawkins, 2011) have also been written on the socioeconomic outcomes of second generation individuals relative to the first generation individuals and third generation individuals in Canada and the US. Theories such as the “segmented assimilation models” and “the success orientation models” have mainly been used to explain the outcomes of second generation individuals relative to third generation individuals especially with regards to minorities. The segmented assimilation theory deals with the fact that children of immigrants especially minorities do not fully integrate into society due to factors such as discrimination, poor parental background and bad cultural influences such as street gangs (Portez, Fernandez-Kelly and Haller, 2009). This theory has mainly been invoked in explaining the outcomes of Hispanics and Mexicans in the U.S (Portez, Fernandez-Kelly and Haller 2009) whilst there is weak support for the theory among Afro-Caribbeans in Canada (Reitz, Zhang and Hawkins 2011)⁵. The “success orientation model” (Boyd and Greico 1998) on the other hand defines the second generation as overachievers relative to the third generation and first generation as they are

⁵ The “segmented assimilation model” is mainly used in studies pertaining to the US and hardly holds for Canada. For more information see Portez, Fernandez-Kelly and Haller (2009).

more likely to have higher educational and labour market aspirations (Boyd, 2008). The theory also assumes that the drive to succeed by the second generation is mainly instilled by the parents who communicate those high expectations and that these expectations are however not communicated to the third or higher generation. Although caution has been expressed by critics with regards to the success of the theory due to the increase in the diversity of the Canadian population, Borg (2008) uses 2001 Canadian census data to support the theory as second generation Canadians overachieve relative to the third generation Canadians when education and labour market characteristics are compared. The success model appears to best describe the performance of second generation citizens in high immigrant receiving countries such as Canada, US and Australia as opposed to those in other OECD countries.

In summary, a review of the literature on the economic performance of second generation Canadians relative to third generation Canadians reveals the former having a superior educational performance and positive wage advantage relative to the latter. Various quantitative and qualitative factors such as, higher levels of educational attainment and the advantage of living in cities, parental influences and culture account for the better economic performance of second generation immigrants. The performance of second generation individuals relative to third generation individuals differs by immigrant recipient country (unlike in North-America and Australia, second generation individuals perform more poorly than third generation individuals in Europe) and also by ethnicity.

3. Data

| Variables | Total | | | Males | | | Females | | |
|-----------------------------|---------|---------|--------|---------|---------|--------|---------|---------|--------|
| | 2nd gen | 3rd gen | Diff | 2nd gen | 3rd gen | Diff | 2nd gen | 3rd gen | Diff |
| <i>Wages</i> | | | | | | | | | |
| Hourly Wage | 25.88 | 23.51 | 2.37 | 28.41 | 25.79 | 2.62 | 22.60 | 20.51 | 2.09 |
| Log of Hourly Wage | 3.02 | 2.93 | 0.08 | 3.08 | 3.01 | 0.07 | 2.93 | 2.83 | 0.10 |
| <i>Education</i> | | | | | | | | | |
| No Certif. (%) | 7.26 | 11.98 | -4.72 | 8.72 | 14.30 | -5.58 | 5.38 | 8.94 | -3.56 |
| High School (%) | 24.76 | 26.29 | -1.53 | 25.32 | 25.85 | -0.53 | 24.03 | 26.87 | -2.83 |
| College/Trade (%) | 34.83 | 38.16 | -3.33 | 35.81 | 39.17 | -3.36 | 33.56 | 36.84 | -3.28 |
| Some University/diploma (%) | 4.42 | 4.00 | 0.42 | 3.82 | 3.25 | 0.58 | 5.20 | 4.99 | 0.21 |
| Bachelors (%) | 22.32 | 15.47 | 6.86 | 19.97 | 13.41 | 6.57 | 25.37 | 18.18 | 7.20 |
| Masters/PhD (%) | 6.41 | 4.10 | 2.31 | 6.36 | 4.03 | 2.34 | 6.46 | 4.19 | 2.27 |
| <i>Years of Experience</i> | | | | | | | | | |
| Experience ^b | 21.44 | 23.07 | -1.63 | 21.35 | 22.92 | -1.57 | 21.56 | 23.27 | -1.71 |
| <i>Marital status</i> | | | | | | | | | |
| Married (%) | 51.40 | 47.86 | 3.54 | 54.19 | 49.85 | 4.34 | 47.76 | 45.24 | 2.52 |
| <i>Language</i> | | | | | | | | | |
| English (%) | 80.94 | 59.51 | 21.43 | 82.70 | 60.25 | 22.45 | 78.65 | 58.54 | 20.11 |
| Bilingual (%) | 17.97 | 23.78 | -5.81 | 16.34 | 23.72 | -7.38 | 20.09 | 23.86 | -3.77 |
| French (%) | 1.03 | 16.69 | -15.66 | 0.91 | 16.01 | -15.10 | 1.19 | 17.58 | -16.39 |
| No fluency (%) | 0.05 | 0.02 | 0.04 | 0.05 | 0.02 | 0.03 | 0.07 | 0.02 | 0.05 |
| <i>Location</i> | | | | | | | | | |
| Ontario (%) | 52.11 | 30.12 | 21.98 | 51.88 | 29.87 | 22.01 | 52.41 | 30.46 | 21.95 |
| British Columbia (%) | 16.89 | 9.46 | 7.44 | 17.17 | 9.79 | 7.38 | 16.53 | 9.02 | 7.51 |
| Quebec (%) | 10.32 | 31.60 | -21.28 | 10.07 | 31.56 | -21.50 | 10.65 | 31.64 | -20.99 |
| Prairies (%) | 17.99 | 18.99 | -0.99 | 18.28 | 19.34 | -1.07 | 17.63 | 18.52 | -0.90 |
| Northern Canada (%) | 0.28 | 0.41 | -0.13 | 0.26 | 0.37 | -0.11 | 0.29 | 0.45 | -0.16 |
| Atlantic (%) | 2.41 | 9.43 | -7.02 | 2.34 | 9.06 | -6.72 | 2.50 | 9.91 | -7.41 |
| CMA (%) | 80.88 | 61.41 | 19.47 | 80.11 | 60.41 | 19.70 | 81.89 | 62.73 | 19.16 |
| <i>Race</i> | | | | | | | | | |
| White (%) | 88.92 | 99.50 | -10.58 | 89.21 | 99.52 | -10.31 | 88.53 | 99.47 | -10.93 |
| Black (%) | 2.28 | 0.24 | 2.04 | 2.17 | 0.22 | 1.95 | 2.42 | 0.28 | 2.15 |
| Chinese/East Asia (%) | 3.77 | 0.20 | 3.57 | 3.68 | 0.20 | 3.48 | 3.88 | 0.19 | 3.69 |
| South/S.E Asia (%) | 3.76 | 0.04 | 3.72 | 3.63 | 0.04 | 3.59 | 3.92 | 0.04 | 3.89 |
| Latin America (%) | 0.35 | 0.01 | 0.34 | 0.35 | 0.01 | 0.34 | 0.35 | 0.01 | 0.34 |
| West Asia/Arab (%) | 0.43 | 0.01 | 0.42 | 0.48 | 0.01 | 0.47 | 0.36 | 0.01 | 0.36 |
| Multiple minorities (%) | 0.50 | 0.01 | 0.49 | 0.48 | 0.01 | 0.47 | 0.52 | 0.01 | 0.51 |
| No of Observations | 34,785 | 152,244 | | 19,644 | 86,444 | | 15,141 | 65,800 | |

Notes: ^aIndividuals between the ages of 20 and 64, working full time and more than 20 hours in the reference week and 26 weeks in the year. No self-employed. ^bPotential experience is (age-18). The statistics difference is the second generation statistic less the third generation statistic Source: Authors Compilations from Statistics Canada 2006 census data

This section provides a brief description of the source of data and an overview of the variables used in this paper. The main source of data used in this paper is the 2006 Census Public Use Microdata File (PUMF), Individuals File Census of Canada. The census is carried out by Statistics Canada and is designed for the purpose of providing important socioeconomic information on Canada and its citizens. The average sample size of the PUMFI is about 3 percent of the population or 844,476 individuals and the target population are Canadian citizens and permanent residents who reside in Canada or overseas in a Canadian military base or diplomatic mission. The main reason for using the census data for this exercise is that from 2001, the census allowed respondents to be classified into generational categories of first, second and third generations which make the analysis possible⁶. Furthermore, the census provides us with a large sample size and rich socioeconomic data on the generational categories allowing us to make comparisons between the economic performances of each subgroup. Analyzing the economic performance of these subgroups allows us to make more informed contributions to the debate on the long term impact of immigration as an effective policy tool.

In order to effectively measure and assess the economic performance of the second generation relative to the third generation, I have restricted my sample to individuals who are between the ages of 20 and 64, work (full time) more than 20 hours per week and 26 weeks per year and are not self-employed (i.e. only individuals with no self-employment income are retained in the sample). Furthermore, all individuals with missing observations are also excluded from the sample. The upper age limit restriction is set to 64 in order to

⁶ In 2001, the question of “the place of birth of the respondent’s parents” was introduced allowing for individuals to be classified in generational subgroups of first, second and third generations.

abstract from issues related to retirement while the lower bound age limit is set to age 20 due to the fact that the majority of the second and third generation, between the ages of 15-19, are still in school and do not work full-time. Self-employed individuals are not included due to the fact that it is often difficult for self-employed individuals to determine their income. The imposition of these restrictions shrinks the sample size to 187,029 individuals who have a strong labor force attachment. It is important to note that although these restrictions result in a less comprehensive sample which is important for immigration policy, however, these restrictions have widely been used by many other studies which have used census data (Nadeau and Seckin, 2010; Aydemir and Sketerud, 2005).

The census classifies second generation Canadians in two categories (i) individuals born in Canada that have either parent born in Canada and (ii) Individuals born in Canada that have both parents born outside Canada. This paper defines the second generation variable as an aggregate of both groups; it assumes that if at least one parent is born outside Canada then the child is classified as a second generation. The dependent variable used in this paper is the log of the hourly wage. This variable is obtained from the census data by dividing the annual employment income by the product of the number of weeks worked in 2005 and the number of hours worked in the reference week. This paper makes use of the hourly earnings as opposed to the annual earnings because the latter does not take into account the amount of time the individual worked for. With regards to the control variables used, they mainly depict socioeconomic characteristics and are similar to those used in other studies on second generation and third generation immigrants (Picot and Hou 2011a; OECD 2010). Specifically this includes conditioning on the level of education, potential

experience, potential experience squared, marriage, CMA's, regions and visible minority groups. It is important to note that the potential experience variable is however not captured in the census data and this paper like other papers (Grenier and Nadeau, 2011) uses a proxy variable based on age. With the age variable in the census reported in categories, the mid-points are therefore selected and potential experience is proxied by (Age -18). The definition of each of the variables used in the estimation is specified in Table A1 in the Appendix.

Table 1 presents summary statistics for the second generation and the third generation Canadians in our sample (in total and by gender). The difference between the mean indicator values of the second generation and third generation are also presented in Table 1; a negative entry signifies a disadvantage for the second generation. A noticeable observation is the positive wage gap between the second generation and third generation that is the second generation Canadian on average earns 8.3% more than third generation Canadians or about \$2.37 dollars more per hour⁷. This earnings advantage is clearly observed in both males and females, it is statistically significant and similar to those observed in Hum and Simpson (2007) and Ayedemir, Chen and Corak (2005)⁸. From the rest of the statistics, I observe that second generation Canadians are more likely to be better educated than the third generation Canadians: for example, 22.3% of the second generation have a bachelor's degree as opposed to 15.5% of the third generation whilst about 6% have a masters or a PhD as opposed to about 4 percent of the third generation. Also only about 7% of the second generation do not have a high school diploma versus 12% of the third

⁷ Differences in natural log are transformed to percentages using the formula $100[\exp^{(\text{diff})}-1]$.

⁸ T statistics and Standard deviation are given in table A2 in the appendix.

generation. This educational trend is also clearly observed in both males and females. Another observation is that second generations are more likely to live in Ontario or British Columbia and also in CMA; that is, almost 80% of the second generation live in a CMA whilst only about 60% percent of third generation live in CMA. The superior educational outcomes and high concentration of second generation Canadians who live in cities has been observed in virtually all of the literatures reviewed. Other statistics which are noted are: most of the second generation Canadians (about 81%) speak only English as opposed to the third generation Canadians, have fewer people (10%) residing in Quebec and speaking only French or both official languages. Finally, the second generation has a higher percentage of minorities and this is as expected as Canada's immigration policy in recent times tends to attract immigrants from Non-European countries as opposed to its earlier policy. The sampling weights provided by the 2006 census were used in obtaining the summary statistics presented in this paper.

4. Analyzing the Wage Gap--Econometric Model and Methodology

In order to analyze the average wage gap between the second generation and third generation, the recognized Blinder–Oaxaca decomposition method is used (see Blinder 1973, Oaxaca 1973). The methodology allows for the average wage gap to be decomposed into an explained component (that reflects differences in human capital components such as experience and educational attainment) and an unexplained component (that reflects

difference in returns to human capital attributes).The econometric model takes the following form:

$$W_i = X_i'\beta_i + \epsilon_i \quad i \in \{2nd\ Gen\ (a),\ 3rd\ Gen(b)\} \quad (1)$$

where W_i is the hourly wage, stated in natural log format. X_i' is a vector of observed socioeconomic characteristics correlated with wages, β_i is a vector of regression coefficients showing the return to each characteristic and ϵ_i is the error term, which is assumed to be uncorrelated with X_i . The variables included in X_i' are levels of education, experience, experience square, regions, CMA and a set of dichotomous variables for visible minorities. The difference in the population outcomes can thus be expressed as:

$$E(W_b) - E(W_a) = E(X_b)'\beta_b - E(X_a)'\beta_a \quad (2)$$

The intuition behind the Oaxaca decomposition is simply to estimate a separate wage regression for each group (as in equation (1)), take the differences between the estimated average wage for each group (as in equation (2)) and finally, manipulate the results by adding and subtracting a vector of mean characteristics X_i and its coefficients β_i in order to obtain an explained and unexplained component (as in equation (3)). Thus using the two fold decomposition to determine the contribution of group differences in predictors to the overall difference, the decomposition can thus be expressed as⁹:

$$E(W_b) - E(W_a) = [E(X_b) - E(X_a)]'\beta^* + [E(X_b)'(\beta_b - \beta^*) + E(X_a)'(\beta_a - \beta^*)] \quad (3)$$

⁹ In line with a number of economics papers, the two-fold decomposition is used in this paper. The two fold decomposition assumes that there is some non discriminatory vector, β^* that is used to determine the contribution of the differences in the predictors (Jann, 2008).

Such that the first term on the right hand side of equation (3), $[E(X_b) - E(X_a)]'\beta^*$ is usually referred to as the explained component of the wage gap, which captures the predicted difference in earnings that would arise if the 2nd generation and third generation were paid on the same basis but had different characteristics; the part of the wage gap that is attributed to differences in attributes such as experience and education. The second component on the right hand side of equation (3), $[E(X_b)'(\beta_b - \beta^*) + E(X_a)'(\beta_a - \beta^*)]$ is usually referred to as the unexplained component of the wage and it is the differential due to differences in pay structure; this can also include discrimination effects as differences in returns to human capital attributes (for example education) might be a result of discrimination.

In the literature on the Blinder-Oaxaca decomposition method, two main problems are typically encountered: the index number problem and the identification problem (Oaxaca, 1973; Oaxaca and Ransom, 1994, 1999). The index number problem is born out of the choice made when selecting the reference group used in the model, as this choice affects the result of the decomposition. By either selecting the second generation or the third generation as the reference group, the decomposition results are affected as the choice of either group results in the undervaluation of one group and an overvaluation of the other (Jann, 2008). Using the third generation as the reference group results in equation (3) being calculated as:

$$(\overline{w_b} - \overline{w_a}) = (\overline{X_b} - \overline{X_a})'\widehat{\beta_b} + X_a'(\widehat{\beta_b} - \widehat{\beta_a}) \quad (4)$$

Using the second generation results equation (3) being calculated as:

$$(\overline{w_b} - \overline{w_a}) = (\overline{X_b} - \overline{X_a})'\widehat{\beta}_a + X_b'(\widehat{\beta}_b - \widehat{\beta}_a) \quad (5)$$

To overcome the problem in this paper, I use a solution proposed by Fortin (2007) which uses the coefficients of a pooled regression over both groups as an estimate for β^* ; a group indicator is included in this pooled model (Jann, 2008)¹⁰.

The second problem raised in the literature results from the use of dichotomous variables in the model. In a bid to avoid collinearity when using dichotomous variables, one of the categories is omitted and as Oaxaca and Ransom (1999) and Jones (1984) show, this affects the results of the decomposition and the coefficients (Jann, 2008). It is important to note that the total contribution of the dichotomous variable is unaffected by the choice of the omitted variable, however the contribution made by the explained and unexplained components are affected (Jann, 2008). In overcoming this problem, I use a solution proposed by Gardeazabal and Ugidos (2004) who impose a normalization restriction on the coefficients of each set of dummy variables. Essentially what the restriction does is that it allows for the estimation of the contribution of all the individual dummies including the omitted dummy (base category)¹¹. In summary, the methodology employed by this paper consists of estimating the Blinder Oaxaca decomposition method with the addition of the pooled and categorical restrictions to solve for the index number problem and the identification problem.

¹⁰ Most software packages have a function which automatically pools the regression solving the problem. In Stata the pool option is used in this paper. For more details see Jann (2008).

¹¹ In Stata, this is easily done by using the categorical command.

5. Results

Table 2 presents the results of the wage regression for each generation (in total and by gender). The difference between the coefficients of the second generation and third generation are also presented in Table 2; a negative entry signifies a disadvantage for the second generation. The effect of the individual variables is mostly as expected and in line with the wage literature: wages increase as the level of education increases, for example, the third generation male with a Bachelor's holder earns a 40% premium over a third generation male with a high school diploma. Also wages increase with experience but at a diminishing rate whilst a wage premium is attached to those living in a CMA. With regards to race, it is interesting to note that holding all other factors constant, Chinese / East Asians on average earn more than white Canadians in both second and third generations: for example, holding other factors constant, a second generation Chinese Canadian is expected to earn a 4% premium over a white second generation Canadian although this is not statistically significant except for the second generation females. Blacks in both generations earn significantly less than whites: for example, holding all other factors constant, a black second generation male is expected to earn 18% less than a white second generation male and this is statistically significant. These results are similar to those obtained by Picot and Hou (2011a) and Reitz, Zhang and Hawkins (2011) as second generation Chinese and East Asians of both sexes perform better than to all the other ethnic groups.

| Table 2: Estimated Regression Coef. | Total | | | Males | | | Females | | |
|--------------------------------------|----------|----------|-----------|----------|----------|-----------|----------|----------|-----------|
| | Coef. | Coef. | Diff | Coef. | Coef. | Diff | Coef. | Coef. | Diff |
| Education (Ref: High School) | | | | | | | | | |
| No Certificate | -0.12 | -0.15 | 0.03 | -0.10 | -0.14 | 0.05 | -0.24 | -0.27 | 0.03 |
| | (-7.61) | (-24.26) | (1.82) | (-4.63) | (-17.95) | (2.07) | (-9.80) | (-26.53) | (1.10) |
| College/Trade | 0.13 | 0.13 | 0.01 | 0.13 | 0.11 | 0.02 | 0.13 | 0.13 | 0.00 |
| | (13.56) | (27.81) | (0.68) | (9.74) | (18.46) | (1.43) | (9.31) | (19.23) | (-0.05) |
| Some University/Diploma | 0.24 | 0.28 | -0.04 | 0.23 | 0.24 | -0.02 | 0.28 | 0.35 | -0.07 |
| | (12.51) | (29.17) | (-1.74) | (7.77) | (17.26) | (-0.55) | (11.50) | (27.60) | (-2.41) |
| Bachelors | 0.42 | 0.44 | -0.02 | 0.41 | 0.40 | 0.00 | 0.44 | 0.49 | -0.05 |
| | (37.25) | (75.39) | (-1.61) | (25.10) | (49.43) | (0.06) | (29.89) | (62.22) | (-3.11) |
| Masters/PhD | 0.52 | 0.55 | -0.03 | 0.51 | 0.49 | 0.02 | 0.52 | 0.61 | -0.09 |
| | (30.92) | (57.71) | (-1.55) | (21.45) | (38.08) | (0.70) | (23.06) | (45.00) | (-3.39) |
| Experience | | | | | | | | | |
| Experience | 0.06 | 0.05 | 0.01 | 0.06 | 0.05 | 0.01 | 0.06 | 0.05 | 0.01 |
| | (35.75) | (67.33) | (4.57) | (25.20) | (52.24) | (2.66) | (26.92) | (47.81) | (2.69) |
| Experience Square | -0.09 | -0.07 | -0.01 | -0.09 | -0.08 | -0.01 | -0.09 | -0.08 | -0.01 |
| | (-26.62) | (-50.19) | (-340.65) | (-18.99) | (-40.05) | (-175.52) | (-19.37) | (-34.59) | (-188.40) |
| Marital Status (Ref: Singles) | | | | | | | | | |
| Married | 0.15 | 0.14 | 0.01 | 0.18 | 0.18 | 0.00 | 0.07 | 0.05 | 0.02 |
| | (18.14) | (35.02) | (1.23) | (15.54) | (33.59) | (0.29) | (6.78) | (9.80) | (1.54) |
| Language (Ref: English) | | | | | | | | | |
| Bilingual | 0.00 | 0.03 | -0.03 | -0.02 | 0.02 | -0.03 | 0.03 | 0.05 | -0.02 |
| | (-0.31) | (4.25) | (-2.12) | (-1.00) | (1.73) | (-1.61) | (2.07) | (5.78) | (-0.90) |
| French | -0.06 | -0.06 | 0.00 | -0.06 | -0.05 | -0.01 | -0.02 | -0.05 | 0.03 |
| | (-1.48) | (-7.42) | (0.10) | (-0.99) | (-3.95) | (-0.21) | (-0.36) | (-4.07) | (0.60) |
| No Fluency | -0.33 | -0.07 | -0.26 | -0.13 | -0.02 | -0.10 | -0.44 | -0.04 | -0.40 |
| | (-2.04) | (-0.50) | (-1.26) | (-0.51) | (-0.13) | (-0.33) | (-2.26) | (-0.24) | (-1.48) |
| Location (Ref: Ontario) | | | | | | | | | |
| British Columbia | -0.05 | -0.03 | -0.02 | -0.04 | -0.02 | -0.02 | -0.07 | -0.05 | -0.02 |
| | (-4.45) | (-3.76) | (-1.78) | (-2.67) | (-2.11) | (-1.23) | (-4.58) | (-4.83) | (-1.09) |
| Quebec | -0.14 | -0.05 | -0.09 | -0.15 | -0.05 | -0.10 | -0.13 | -0.07 | -0.06 |
| | (-7.89) | (-6.41) | (-4.66) | (-5.98) | (-4.87) | (-3.71) | (-5.79) | (-6.75) | (-2.29) |
| Prairies | -0.08 | -0.06 | -0.01 | -0.06 | -0.04 | -0.02 | -0.10 | -0.09 | -0.01 |
| | (-7.41) | (-11.85) | (-1.25) | (-3.86) | (-5.72) | (-0.99) | (-7.39) | (-12.35) | (-0.62) |
| Northern CA | 0.21 | 0.18 | 0.04 | 0.12 | 0.17 | -0.04 | 0.34 | 0.23 | 0.11 |
| | (2.97) | (6.29) | (0.45) | (1.20) | (4.16) | (-0.37) | (3.56) | (5.96) | (1.04) |
| Atlantic | -0.21 | -0.23 | 0.02 | -0.16 | -0.23 | 0.07 | -0.26 | -0.22 | -0.04 |
| | (-8.38) | (-33.72) | (0.79) | (-4.40) | (-24.50) | (1.88) | (-7.95) | (-22.67) | (-1.25) |
| CMA | 0.11 | 0.09 | 0.02 | 0.08 | 0.08 | 0.00 | 0.15 | 0.12 | 0.03 |
| | (10.86) | (24.05) | (1.57) | (5.69) | (14.97) | (0.20) | (11.17) | (21.63) | (2.22) |
| Race (Ref: Whites) | | | | | | | | | |
| Black | -0.15 | -0.11 | -0.04 | -0.18 | -0.14 | -0.04 | -0.11 | -0.05 | -0.05 |
| | (-5.72) | (-3.00) | (-0.84) | (-4.91) | (-2.67) | (-0.70) | (-3.15) | (-1.07) | (-0.88) |
| Chinese/East-Asia | 0.04 | 0.05 | -0.01 | 0.02 | 0.08 | -0.06 | 0.08 | 0.02 | 0.06 |
| | (1.97) | (1.36) | (-0.33) | (0.56) | (1.44) | (-1.00) | (2.96) | (0.33) | (0.92) |
| South/SE Asia | 0.00 | -0.09 | 0.09 | -0.05 | -0.17 | 0.12 | 0.06 | 0.03 | 0.03 |
| | (-0.16) | (-1.01) | (0.96) | (-1.61) | (-1.35) | (0.95) | (2.27) | (0.24) | (0.22) |
| Latin America | -0.09 | -0.23 | 0.14 | -0.09 | -0.42 | 0.33 | -0.08 | 0.05 | -0.13 |
| | (-1.35) | (-0.99) | (0.59) | (-1.03) | (-1.35) | (1.01) | (-0.92) | (0.16) | (-0.38) |
| West Asia/ Arab | -0.08 | -0.05 | -0.03 | -0.10 | 0.21 | -0.31 | -0.07 | -0.51 | 0.44 |
| | (-1.40) | (-0.23) | (-0.14) | (-1.28) | (0.81) | (-1.13) | (-0.85) | (-1.52) | (1.26) |
| Multiple Minority | -0.14 | -0.12 | -0.01 | -0.21 | -0.20 | -0.02 | -0.03 | -0.03 | 0.00 |
| | (-2.56) | (-0.78) | (-0.08) | (-2.81) | (-0.92) | (-0.08) | (-0.45) | (-0.15) | (0.01) |
| Constant | 2.04 | 2.13 | -0.09 | 2.13 | 2.21 | -0.09 | 1.92 | 1.99 | -0.07 |
| | (106.91) | (248.65) | (-4.26) | (79.77) | (196.64) | (-3.02) | (73.02) | (155.32) | (-2.35) |
| No of Observations | 34,785 | 152,244 | | 19,644 | 86,444 | | 15,141 | 65,800 | |
| R Squared | 0.175 | 0.163 | | 0.171 | 0.164 | | 0.207 | 0.191 | |

Notes: Absolute T- statistics are in parentheses. The estimated return to experience squared has been multiplied by 100.

Source: Calculations from statistics Canada 2006 census

Although the effect of the individual variables is as expected, the returns to these variables in some instances differ between second and third generation Canadians. A variable of significant interest is the return to education as it is higher for third generation Canadians than it is for the second generation Canadians. For example, a second generation Canadian with a Bachelor's degree would earn 2% less than a third generation Canadian whilst a second generation Canadian with a master's degree would earn about 3% less than a third generation Canadian. The differences are however not statistically significant. Looking at the difference in returns to education in totality masks the large difference in returns with respect to females. A third generation Canadian female with a bachelor's degree enjoys a 5% premium relative to a second generation Canadian female. The premium is even higher for third generation Canadian females with a Masters as they enjoy a 9% premium relative to second generation Canadian females who also has masters. Both differences are statistically and economically significant. Second generation males and third generation males on the other hand enjoy similar returns to education: for example, a third generation male with a bachelor's degree will receive no premium relative to a second generation Canadian male. Also of note is that both groups of women have higher returns to education than both of men. This is in line with the results observed by Aydemir and Sweetman (2007). The difference in returns to education between the second generation Canadians and third generation Canadians as a whole seem to be primarily driven by the difference in returns to second generation and third generation females.

Second generation Canadians enjoy a premium for living in the cities however, this advantage is only observed by second generation females and it is statistically significant.

The returns to experience is one of which the second generation Canadians enjoy a statistically significant premium over third generation Canadians who are of the same age. For example, second generation male Canadians enjoy a 0.6% premium over third generation male Canadians of the same age (calculated at the mean experience of second generation individuals). The premium is observed for both genders. With regards to the other variables such as Language and marriage, the second generation enjoys similar returns to the third generation. The differences in returns are negligible and are not statistically significant. The results in general are similar to those observed in Aydemir and Sweetman (2007).

Table 3 represents the result of the Blinder-Oaxaca decomposition of the average wage difference between second generation and the third generation Canadians (in total and by gender). The raw difference in wages of 0.081 between the second and third generation Canadians is statistically significant at the 1% level and it translates to the latter earning on average about 7.8% less than the former. From table 3, I observe that about 96.1% of this wage gap is accounted for by the differences in observable characteristics whilst 3.9% provides an insight into how the market treats these characteristics (total). In terms of gender, the picture is also similar for second generation males and females as they enjoy a positive earnings advantage for example, third generation males earn about 7% less than second generation males whilst third generation females earn about 9.5% less than second generation females. Also observed is that 86.5% of the wage gap is explained by observable characteristics for females as opposed to 109.5% for males whilst the unexplained wage gap is 13.5% for females and -9% for males.

| Table 3: Results of the decomposition | | | | | | |
|--|--------------|---------------|---------------|---------------|---------------|---------------|
| | Total | | Male | | Female | |
| | Coef. | Z-Stat | Coef. | Z-stat | Coef. | Z-stat |
| Observed Gap^a | 0.081 | 17.89 | 0.068 | 10.7 | 0.100 | 15.8 |
| Explained Gap | 0.078 | 31.42 | 0.074 | 21.64 | 0.087 | 23.4 |
| Education | 0.046 | 36.67 | 0.043 | 27.48 | 0.054 | 24.84 |
| Experience | -0.021 | -19.23 | -0.016 | -11.28 | -0.029 | -16.05 |
| Location | 0.045 | 24.98 | 0.042 | 16.99 | 0.054 | 20.49 |
| Married | 0.005 | 11.39 | 0.008 | 10.55 | 0.001 | 5.04 |
| Language | 0.009 | 5.62 | 0.006 | 2.77 | 0.006 | 3.02 |
| Race | -0.005 | -4.49 | -0.008 | -5 | -0.000 | -0.12 |
| Unexplained Gap | 0.003 | 0.7 | -0.006 | -1.03 | 0.014 | 2.21 |
| Education | 0.006 | 1.45 | 0.001 | 0.2 | 0.010 | 1.81 |
| Experience | 0.096 | 5.3 | 0.085 | 3.28 | 0.081 | 3.31 |
| Location | -0.000 | 0.05 | 0.002 | 0.11 | 0.001 | 0.05 |
| Married | -0.000 | -1.51 | -0.000 | 0.38 | -0.000 | -1.45 |
| Language | 0.066 | 1.38 | 0.032 | 0.44 | 0.093 | 1.6 |
| Race | -0.017 | -0.32 | -0.001 | -0.01 | -0.047 | -1.08 |
| Constant | -0.147 | -1.97 | -0.126 | -1.09 | -0.124 | -1.71 |

^aDifference between the log weekly earnings of Second generation Canadians and third generation Canadians.

The major reason why the wage gap is to the advantage of the second generation is that the second generation on the whole has better observed skills than their third generation counterparts. Taking a closer look at the explained component, I observe that most of the second generation's earning advantage is largely attributed to their higher educational attainment (59%) and to them living mostly in high wage cities and in the Ontario and British Columbia region (58%)¹². These results are also similar for both genders and statistically significant. The findings are not surprising, as existing literatures such Picot and Hou (2011) Aydemir and Sweetman (2007) Palameta (2007) and Hum and Simpson (2007) all show that second generation Canadians wage advantage is largely due

¹² The figures are obtained by dividing a part of the explained component (for example, education) by the total sum of the explained component.

to their superior educational performance and to them being largely located in cities. Other advantages such as the higher likelihood of the second generation being married and speaking English are largely offset by the disadvantage of race. The Unexplained gap offers a slightly more different picture as it is only statistically significant for females at the 5% percent level. Taking a closer look at the unexplained gap, I observe that both second generation males and females enjoy premium returns on work experience relative to third generation workers of the same age and these results are statistically significant at the 5% level. This result also mirrors that obtained in by Aydemir and Sweetman (2007). Also noted is that the second generation enjoys a premium for speaking English however this is not statistically significant. The returns to other skills are pretty much similar for both second generation and third generation Canadians. Overall, I observe that the second generation have superior characteristics such as superior educational attainment and living in cities, such that even though they earn similar returns to third generation Canadians, the share amount of immigrants having higher education and living in cities ensures that they have a significant earnings advantage.

A significant advantage in using the Blinder Oaxaca decomposition is that it allows us to measure the unexplained differentials which we can then attribute to some discriminatory effect. However a slight caveat is that the unexplained portion contains not only wage discrimination but also the effect of any omitted variables; the presence of an omitted variable will result in either an overestimation or an underestimation of the discrimination affect (Burnette, 2012). As the wage equation used in the model is highly unlikely to include all the legitimate predictors of earnings for second generation and third

generation Canadians, there is a high likelihood that some of the unexplained differential is accounted for by omitted variables. For example characteristics such as the innate ability of the second generation individuals have been shown to affect wages. Others factors which have been included especially in the sociological literature such as the drive of the parents or lack off, parental income and parental education are also omitted due to the fact that some are difficult to measure and whilst others are not included in the PUMFI datasets.

6. Conclusion

Analyzing the economic performance of the children of immigrants relative to the children of natives contributes to the discussion of the long term success of a country's immigration policy. This paper, using 2006 census data and the Blinder-Oaxaca decomposition method analyzes the economic performance of second generation Canadians relative to third generation Canadians. The Blinder-Oaxaca decomposition is used as it provides the means to identify and quantify the explained and unexplained contributions made by observed characteristics such as education and language. The results find that third generation males and females earn about 7% to 9.5% less than their second generation counterparts respectively. Furthermore, 87.5% of the female wage gap is explained by the observable characteristics whilst 13.5% is explained by the returns to those characteristics with these results being statistically significant. Second generation males have over a 100% of their wage gap explained by observable characteristics. The earnings advantage of second generation males and females is largely attributed to their higher educational attainment and the fact that they are highly concentrated in CMAs and in high wage provinces such as

British Columbia and Ontario. Also second generation Canadians earn a work experience premium over third generation Canadians of the same age.

The result of this study is generally in line with the literature on children of immigrants and natives in Canada. This study however suffers to some extent from the lack of appropriate data to test for certain factors which otherwise might affect the performance of second generation and third generation children in the existing literature. For example, the lack of availability of data relating to the parental income or the ability and the drive of immigrants would not allow us to measure what role these factors play in the success of second generation children.

The successful outcome of second generation Canadians bodes well for the long term impact of immigration; if one of the key reasons why people decide to immigrate is to have better outcomes and opportunities for their children, then they would probably have achieved one of their objectives. Furthermore with second generation immigrants having difficulty in achieving success in most European countries, understanding the reasons for their success in Canada can help contribute to the crafting of similar beneficial policies in these countries.

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Appendix

| Table A1: Variable Definitions | |
|---------------------------------------|--|
| Dependent Variable | Definitions |
| Log of Weekly wage | Log of the annual employment income divided by the number of hours worked each week |
| Independent Variables | |
| No certif. | 1= none , 0 =otherwise |
| High school Diploma | 1=high school graduation certificate, 0= otherwise (Reference group) |
| College/trade certificate | 1= trades certificates, apprenticeship certificate, college CEGEP and non university diploma, 0= otherwise |
| Uni diploma/Certif. | 1= university certificate or diploma below bachelors level, 0= otherwise |
| Bachelors | 1= bachelors degree, diploma above bachelors, 0=otherwise |
| Masters/Phd | 1=degree in medicine, veterinary medicine, dentistry, masters degree and PhD, 0=otherwise |
| Experience | Age-18 |
| Married | 1= married or common law, 0 = otherwise |
| Single | 1= divorced, separated, single and widowed 0=otherwise (reference group) |
| English | 1= English, 0= otherwise (reference group) |
| French | 1= French, 0= otherwise |
| Bilingual | 1= both French and English, 0= otherwise |
| No Fluency | 1= Neither French nor English, 0=otherwise |
| ON | 1= Ontario, 0= Otherwise (reference group) |
| Quebec | 1= Quebec, 0=otherwise |
| BC | 1= British Columbia, 0=otherwise |
| Prairies | 1= Alberta, Saskatchewan, Manitoba, 0=otherwise |
| Atlantic | 1= Newfoundland, Prince Edward Island, Nova Scotia, 0=otherwise |
| Northern Canada | 1= Northern Canada, 0= otherwise |
| CMA | 1= all CMAs 0= otherwise |
| Non CMA | 1= census agglomerations, 0=otherwise (reference group) |
| Whites | 1= non visible minority, 0= otherwise (reference group) |
| Black | 1= Black, 0=otherwise |
| Chinese/East Asia | 1= Chinese, Korean, Japanese, 0=otherwise |

| | |
|----------------|---|
| Southeast Asia | 1= South Asian, Filipino, South East Asian, 0=otherwise |
| Latin America | 1= Latin America, 0= otherwise |
| West Asia/Arab | 1= Arab, West Asian, 0=otherwise |
| Multi minority | 1=Visible minority n.i.e, multi visible minority, 0=otherwise |

| Variables | Total | | | Males | | | Females | | |
|--------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| | 2nd gen | 3rd gen | Diff | 2nd gen | 3rd gen | Diff | 2nd gen | 3rd gen | Diff |
| Hourly Wage | 25.88 (25.96) | 23.51 (21.37) | 2.37 (17.90)* | 28.41 (31.51) | 25.79 (25.46) | 2.62 (12.40)* | 22.60 (15.52) | 20.51 (13.76) | 2.09 (16.45)* |
| Log of Hourly Wage | 3.02 (0.77) | 2.93 (0.76) | 0.08 (18.00)* | 3.08 (0.81) | 3.01 (0.77) | 0.07 (11.08)* | 2.93 (0.70) | 2.83 (0.74) | 0.10 (15.26)* |
| No of Observations | 34785 | 152244 | | 19644 | 86444 | | 15141 | 65800 | |

Standard deviation in the parenthesis

*T-statistics