

- Of Ages and Wages -

Assessing the impact of Age at immigration on earnings

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Introduction

In recent years, policy studies have been able to shed some light on an age-old issue in Canada; that of new immigrants facing a number of difficulties in their attempt to successfully integrate into Canadian society. A major trial faced by these individuals specifically traces back to their partaking in the Canadian economy and labour market.

Arriving in Canada at a later age and stage in life is often associated to more negative outcomes in terms of annual earnings through wages and salaries. Only a minority of researchers have paused to study the effects of immigrants' generational status on their economic integration into society (see for example: Abbott, 1992; Boyd, 2005, 2008; Skuterud, 2010; Friedberg, 1992; Green and Worswick, 2006; Bleakley and Chin, 2004; Bonikowska and Feng, 2011; Chiswick, 1978; Yinghua, 2012; Aydemir, Chen and Corak, 2005; Frenette and Morissette, 2003; Hum and Simpson, 2004, 2011; Li, 2003; Palameta, 2007; Picot, Garnett, Hou, 2003; OECD, 2010; Zhou, 1997; Bucklaschuk, 2011; Skuterud, 2010; Boyd, 2005,2008; Aydemir & Sweetman, 2006) and even fewer have looked at the outcomes for various age at arrival groups within each generational cohort (see: Abbott and Beach, 1993; Aslund, Bohlmark & Nordstrom-Skans, 2006; Beck at al., 2012; Corak & Delahousse, 2009; Delahousse, 2009; Gonzales, 2003;

Schaafsma & Sweetman, 2001). Having surveyed a decade's worth of data information ranging between years 1986 and 1996, Schaafsma and Sweetman (2001) explain that younger cohorts of newcomers receive 15% more return on their education and professional training in comparison to older cohorts of newcomers. The dominant message within this body of literature stresses that the positive correlation between an earlier age at arrival and economic integration is mostly due to the fact that younger immigrants' education and work experience were achieved in Canada, as opposed to their older immigrant counterparts whose education and professional experience were earned elsewhere. In addition, the same literature stresses that levels of language proficiency and acculturation into society are predictors of successful economic integration, and that these levels are positively correlated with lower ages at arrival.

This major research paper examines the economic integration in terms of wages and salaries of immigrants in Canada by measuring earnings gaps between immigrant men and women and their Canadian-born counterparts. More specifically, it assesses the bearing that age at immigration has on incomes. It also examines the effects of other equally important factors, such as newcomers' visible minority status, their city and area of settlement, their knowledge of official languages, and their ethnic background, on eventual earnings. This paper

bases its result discussion on a broad literature review of studies related to the topic of immigrants' economic integration mainly within a Canadian context, as well as on an independent statistical analysis of data drawn from the 2006 Canada Census survey. Finally, this study will look at the latest Canadian immigration policy amendment – section 2 of the Immigration and Refugee Protection Regulations (IRPR) – as it relates to younger immigrants' future in Canada, in order to inspect whether research and data support or refute its proposal that bringing in younger immigrants greatly impacts their ability to economically integrate into Canadian society.

This research question is not a vacuous one, since a general consensus has been reached that failure to successfully incorporate newcomers into the economy and labour market could generate negative socio-economic consequences, including higher welfare dependency and unemployment rates, deteriorating physical and mental health, high levels of poverty and perpetual life in low-income enclaves, as well as an overall exclusion of these newcomers from Canadian society. More often than not, this is attributable to insufficient knowledge of at least one of the two official languages; to a limited number of years spent participating in Canadian society through education or professional

training; to labour market discrimination against visible minorities and genders; and to a delayed age at immigration.

This paper reviews academic literature on variables influencing mainly economic integration outcomes for immigrants in the Canadian labour market and economy. The impact of one's stage and age at arrival is of primary interest to this study, but the implications of other significant variables, including, but not limited to, one's visible minority status, official language proficiency, age, gender, and education are taken into consideration in this study.

1) The major research paper's literature review component consists of 5 sections, namely a conceptualization of the terms integration and age at arrival and a reasoning behind the given groupings of age at arrival cohorts, an overview of individual indicators of economic integration, as well as literature findings related to the primary and secondary variables explaining economic integration outcomes for the various age cohorts and generations of immigrants in Canada.

2) In the second part of this MRP, I test these ideas using the 2006 public use Census micro dataset with a goal toward assessing the impact of age at immigration on earnings.

3) A final summary of this major research paper's findings on the links between all explanatory variables and their consequences on economic integration is outlined in the results section, and is followed by a broad discussion on policy implications and recommendations.

4) Tables outlining descriptive characteristics and certain regression results for the variables employed in this study can be found in the Annex segment preceding bibliographical references.

1. Literature review

The literature review component of this study commenced with a compilation of a preliminary annotated bibliography based on governmental and non-governmental sources, such as departmental (federal) and NGO policy reports, academic journals, masters and doctoral theses, conference and presentation materials. This allowed me to identify some of the most common themes arising in research about immigrants' integration into Canadian society, namely the economic aspect of their integration. This major theme and a broad summary of related studies led me to highlight the lead indicators for such integration, including labour market participation and more specifically earnings and wages.

The statistical analysis component of this major research paper enabled me to identify the direction of the relationship between lead quantitative variables (i.e. age and life stage at arrival, visible minority and generational status, level of education, etc.) and their influence on the target outcome variable (earnings from log of wages and salaries).

1.1 (Economic) Integration

The majority of studies refer to either employability or annual earnings and salaries when assessing the economic integration of non-natives (Hum and Simpson, 2004; Palameta, 2007; Picot, 2008; Hiebert, 2009; Schaafsma & Sweetman, 2010; Boyd, 2008; Bucklaschuk, 2011; Aslund, Bohlmark, & Nordstrom-Skans, 2009; Chiswick, 1978; Galabuzi, 2006; Battu, McDonald, & Zenou, 2007, etc). In general, taking into account the many differences between immigrants and their Canadian-born counterparts, such as discrepancies in academic attainment and professional training and experience, economic integration can be translated into the rate at which the earnings of immigrants converge to those of their Canadian-born counterparts because of perceived gains in human capital through prolonged periods of residency in Canada (Chiswick, 1978). In other words, once immigrants' average earnings have reached parity with those of their Canadian-born counterparts, we can refer to this phenomenon as economic integration. Economic integration can therefore be defined simply by

our inability to differentiate between the two groups – immigrants and Canadian-born – based on their incomes and salaries solely.

Overall, Hou and Picot (2003) found that, although newcomers often earn significantly less than their Canadian-born counterparts upon entry into Canada, they agree with Aydemir and Skuterud (2004) that with time this gap shrinks considerably. It appears that, following at least a decade of residency in Canada, the initial earnings gap between newcomers and the Canadian-born drops sizably, and can even surpass that of the native-born (Abbott 1992, Abott and Beach 1993). According to Frenette and Morissette (2003), as well Picot and Piranio (2012), at arrival immigrants earn about 40% less than their Canadian-born counterparts, but that rate drops to 22% after ten to fifteen years of residency in the host country.

Hum and Simpson (2004) also support the hypothesis that the “initial entry effect” fades with a considerable number of years spent in the host country, but add that other important factors, such as the province and city of settlement, and individual characteristics, such as age, gender, language proficiency, ethnic origin and visible minority status, and generational cohort among other things, influence immigrants’ integration into the Canadian economy and labour force.

As it relates to the experience of the various age at arrival cohorts within the 1.5-generation who integrated into Canadian society at an early age – being educated and having earned work experience in Canada and often surpassing educational and professional attainments of the Canadian-born–, the expectation holds that their earnings ought to be at-par or higher than those of their Canadian-born counterparts. In other words, having lived for most of their life in Canada and having attained higher levels of education and professional training in that same host country, their earnings are expected to reach or surpass parity to those of their Canadian-born counterparts as they enter the labour force.

1.2 Age at arrival and Age/Cohort groupings

The “half-generation”, “first generation established immigrants”, “dependent children”, or “1.5-generation” describe foreign-born youths who arrived in their host country before age 12, and who “came of age” in that country, representing roughly 5.8% of the Canadian population (Aydemir, Chen, Corak, 2005), as compared to the second- and third-plus generation cohorts, who were born in Canada (Rumbaut, 2004). In this study, the 1.5-generation refers to children arriving in Canada before age 15, since this particular age represents the cut-off line for optimal acculturation and integration, but data analysis will go as far as to consider cohorts up to and over age 20, since this provides a more detailed look at the relationship between age at arrival and earnings. This group

can be further broken down into sub-groups such as “early childhood” cohorts who arrived before entering school (0-4 years of age), “mid-childhood” cohorts who had some elementary schooling in their country of origin (5-9 years of age) (Rumbaut 2004, p.1167, amended) and “late childhood” cohorts who received some elementary and/or high school schooling and cultural imprints in their country of origin (10-14 years of age).

Throughout the greater part of literature on this subject, the aforementioned sub-groups within the 1.5-generation are often lumped together with their second- or sometimes first-generation counterparts. Although it can be said that these sub-groups and cohorts have certain characteristics and experiences in common – a certain collective immigration memory perhaps–, I contend that lumping them together homogenizes and devalues their unique characteristics and experiences. This flawed practice can often generate obstacles when attempting to study in a more detailed and profound manner the major consequences these slight differences in age and life stage at arrival could make on one’s integration into a given society and its labour market. For the purpose of this major research paper, such sub-groups will remain distinct from one-another and shall be analyzed separately to better assess their individual bearing on immigrants’ ability to integrate into the Canadian labour market and economy.

1.3 Individual Indicators of Economic Integration

As stated, this major research paper will assess various age at arrival cohorts' economic integration as the clearest form of societal adaptation. Due to the limitations of the short-form Canadian 2006 Population Census survey, within the scope of this research paper, integration will be defined in terms of a log of salaries and wages attained by various age at arrival immigrant cohorts in comparison to their Canadian-born counterparts. A satisfactory economic achievement is believed to be an essential factor contributing to the overall integration of immigrants in Canada.

1.4 Study Findings: Primary Variable

Certain authors point to two principal factors contributing to a more successful integration of immigrant children into the economy as opposed to their older counterparts: their ability to easily absorb Canadian culture and master at least one of the two official languages, as well as their increased likelihood of receiving local education and training at-par with Canadian standards and job requirements (Chaafsma and Sweetman, 2001; Aydemir and Skuterud, 2004; Boissoneault, 2009; Bernard, 2008; Palameta, 2007; Zietsma, 2010). Both of these factors are closely linked to the children's age at arrival to Canada, hence the importance of not only their generational status at immigration, but also of their respective age group within that broader generational cohort.

It becomes apparent through these studies that, in comparison to the first generation of immigrants and to immigrants arriving at a later stage in life, younger immigrants' prospects of integration into the Canadian labour force increase as a result of their lower age at arrival and longer time of stay in Canada (Chaafsma and Sweetman, 2001; Zietsma 2007; Akbari, 2011; Xue, 2007; Palameta, 2007; Hum and Simpson, 2004; Aydemir, Chen, and Corak, 2005; Zimmerman, 2007; Constant and Zimmerman, 2008). Other authors such as Hou and Picot (2011) take this theory further than simply attesting that low-income rates fall as new immigrants acquire Canadian experience and education. They would add that, in addition to signs of a quicker "catch-up" effect among younger as opposed to older newcomers resulting in comparable incomes, there are signs that younger immigrants are bound to reach parity with and indistinguishable incomes from the Canadian-born, and eventually surpass the latter in terms of both educational attainment and annual earnings.

1.5 Literature Findings: Secondary Variables

1.5.1. Area and City of Settlement (CMAs)

For many newcomers the largest metropolises in the country (Toronto, Vancouver, and Montreal) constitute the first point of entry into Canada and the first point of contact with Canadian society. Albeit the widespread belief that

those larger cities provide immigrants with more employment and higher income opportunities, some studies point to an opposite reality (Federation of Canadian Municipalities, 2009; Bernard, 2008; Zietsma, 2010; Hiebert, 2009; Desjardins and Cornelson, 2006; King, 2009; Plante, 2010).

Naturally, in many cases, higher immigrant earnings were associated with settlement in provinces and regions exuding higher economic growth (Plante, 2010). In other instances, higher earnings were associated with proficiency in the province's main language, such as to enable immigrants who master either French or English to easily find employment in smaller and more homogenous areas and cities (Bernard, 2008). Also, as Zietsma (2010) explains, due to provinces' right to regulate certain professions independently of the federal government, older cohorts of immigrants encountered most difficulties in transferring their foreign educational and work experiences in Quebec and British Columbia. Additionally, those older cohorts of immigrants settling in the Atlantic provinces fared better than the rest in terms of finding employment opportunities and earning higher wages, duly in part because provinces such as New Brunswick relaxed their foreign credentials recognition system, making it easier for certain professionals and skilled workers to transfer their qualifications (Plante, 2010).

Although one's city or region of settlement may appear to yield a significant impact on eventual employability and earnings, this effect erodes with lower ages at arrival. Boudarbat, Boulet, and Zhu (2010) explain that generally newcomers who immigrate to Quebec, – a province where proficiency in French is a crucial factor for economic integration – face more obstacles in earning wages equivalent to those of immigrants and native-born persons residing in other provinces, but that arriving at a very young age reduces the chances of this happening. In fact, according to their research, younger newcomer cohorts reach parity with their young Canadian-born counterparts almost immediately after entering the labour market, whereas the older immigrant counterparts face the issue of lower entry-level wages that can be mainly remedied with longer residency time in Canada, regardless of the province, region, or city of settlement.

1.5.2. Educational attainment

As was stated earlier, foreign credentials earned by older age at arrival cohorts may in fact hamper immigrants' abilities to successfully integrate into the Canadian labour market and economy, due in part to negative opinions held by born-Canadians about newcomers' foreign credentials and educational and work experiences (Palameta, 2007; Zietsma, 2010). Increasing with higher levels of education, the unemployment gap between newcomers and their Canadian-born counterparts is most apparent when comparing foreign to native Canadian

university degrees for certain professions (Zietsma, 2010). In fact, Zietsma sheds additional light onto this significant discrepancy by asserting that the unemployment rate rises to 7% for immigrants holding foreign degrees, as opposed to 4.2% for those holding and having earned Canadian degrees (Zietsma, 2010; p.16-17).

When looking at how men and women of various ethnic backgrounds fare when compared to their Canadian-born counterparts in terms of returns on higher (university+) education, McDonald and Worswick (2010) explain that male cases of South-Asian ethnic origin fared the best, followed by those of European (Caucasian), Black and Chinese ethnic origins. As for equally educated (university+) female cases, the authors found that those of European (Caucasian) and Black ethnic origins fared much better (an overall 20% differential) in comparison to those of Chinese and South-Asian origins (McDonald & Worswick, 2010; p.121-122).

1.5.3. Language Proficiency

Language proficiency in either of the two official Canadian languages can have a strong positive effect on employability and earnings of immigrants (Aydemir and Skuterud, 2004). In fact, lacking language proficiency is strongly correlated with immigrants' inability to find stable long-term

employment, with a great number of such individuals facing part-time, short-term, and random work, rather than building careers (Brunner, Hyndman, and Friesen, 2011). Bonikowska (2008) further explains that language proficiency closely depends on one's professional and educational training, age at arrival, and years of residency in Canada, and highly correlates with one's income, whereby those immigrants who arrived later in life with higher levels of foreign education and work experience suffered a blow to their eventual earnings.

Similar to Boissonneault's (2009) findings, the importance of language proficiency is primordial for immigrants' economic integration across Canada, and regional language proficiency may be even more important depending on the province and area of settlement (Béland, 2008). Failing to master the French language while residing and aiming to work in Quebec or New Brunswick for example, and the English language almost everywhere else in Canada, could be almost fatal for one's employment prospects and possible earnings.

1.5.4 Ethnicity and Visible Minority Status

As was previously outlined, the colour of newcomers' skin as well as other noticeable aspects of their physical appearance and ethnic identity will be taken into consideration when conducting this research, since they may indeed play a crucial role in attracting discriminatory practices and behaviours on the part of the

Canadian-born Caucasian majority (predominantly of European descent) and creating barriers to any future employment opportunities and overall integration of immigrants into the economy (Lafontant, 2009; Labelle, Field, and Icart, 2007; Christofides and Swidinsky, 1994).

Ethnic identity “is developed, displayed, manipulated, or ignored in accordance with the demands of a particular situation” (Ruble, 1989, p. 401). It can also strongly guide economic behaviour of both the potential employee and employer (Zimmerman, 2007; Hathiyani, 2007). Periodically, economists look at the concept of identity as an important factor in predicting their labour market performance and probable earnings. One’s identity is primarily defined in this case by their visible minority status, ethnicity, and gender.

It is posited that ethnic identity and identity as dictated by additional characteristics mentioned previously could considerably affect the performance of immigrants in Canada’s economy (Constant and Zimmerman, 2009; Christofides and Swidinsky, 1994; Galabuzi, 2006; Hou, F. and S. Coulombe, 2010, Pendakur and Pendakur, 2011). This is to say that a person’s identity may indeed play a role in their and their potential employers’ behaviour within the labour market. For instance, one’s identity may guide one’s choices and attitudes in terms of the type

of employment they pursue and the way they go about looking for new employment opportunities. It could also influence an employer's choices in terms of the type of employee they wish to hire based on their preferences in ways of ethnicity, age, gender, etc.

Labelle, Field, and Icart (2007) found that, amongst all visible minority groups, Blacks and Arabs were discriminated the most in the Canadian labour market in terms of labour force participation, wages and salaries, regardless of their education attainment and professional training. Arabs predominantly experienced this barrier when residing in the province of Quebec, whereas Blacks experienced it throughout Canada (Labelle, Field, and Icart, 2007; Guliani, 2010; Pendakur and Pendakur, 2002).

Ethnic identity can also cross the line beyond one's physical appearance. It could also include the ethnic character of one's name (first and last). In fact, it has been demonstrated through a social experiment, that a name could greatly jeopardize a person's employment prospects and consequently their earnings (Hathiyani, 2007). The study concluded that resumes labeled with either an Indian, Pakistani, or Chinese name were discriminated against by the sheer fact

that the rate at which employers contacted these resume holders was significantly lower in comparison to their Anglo-Saxon counterparts (Hathiyani, 2007).

Although the negative correlation between ethnic names and job prospects and earnings seemed significant, the effect of this variable on a newcomer's performance in the Canadian labour market depreciated with time. In fact, it is worth noting that an augmentation in human capital and work experience gained in Canada can positively influence the chances of being contacted for a job interview for a newcomer holding an obviously ethnic name. (Hathiyani, 2007; Gulian, 2010).

Such theories that incorporate the identity factor, under the broader human capital umbrella and into the study of labour economics, aim to comprehend the reasoning behind differentials in education, wages, and labour market integration between immigrants and their Canadian-born counterparts. They also tend to explain the nuances within the ways in which various individuals and groups cope with the apparent differences between their own and the mainstream identity in hopes of improving their economic success in the labour market. Unfortunately, as some authors point out (Battu, McDonald and Zenou, 2007), certain individuals choose to abide mainly by their own culture's and identity's guidelines and

expectations at the expense of a better understanding and adoption of the mainstream culture and identity, which serves to penalize them in terms of labour market participation and eventual earnings.

Negby and Rodin (2007) provide additional clarity on the issue of integration through adoption of the mainstream identity, and Chiswick (2009) demonstrates with more detail how labour market outcomes are linked to one's human capital as defined by ethnic identity. Negby and Rodin (2007) point to the fact that, regardless of the strong attachment an individual develops to an ethnic or minority identity, it is the strength of their attachment to the mainstream culture and their ability to reconcile both that will ultimately dictate that person's success or failure to integrate in the labour market. Similarly, Chiswick (2009) proposes that a country's policies ought to foster diversity expressed through unity by discouraging segregation and promoting reconciliation of different cultures in order to generate the greatest benefits for society, including both its majority and minority groups.

1.5.5. Gender

Gender-specific analyses reveal that not only do men and women fare differently when assessing the returns on their higher and host-country education, but also in terms of employment and earnings when compared to their native-born

counterparts. In fact, it has been concluded that the earnings and unemployment gaps between newcomer and Canadian-born women is narrower than that between their male counterparts, but that newcomer men fare overall better in comparison to newcomer women when looking at employment rates (Xue, 2006, 2008; Zietsma, 2007; Akbari, 2011; McDonald and Worswick, 2010, etc.).

Xue (2006) explains that male immigrants' unemployment rates stood at 32%, as opposed to female immigrants' unemployment rates that rose to 52%. The author adds that this trend persists even after four years of residency in Canada. Even though female immigrants' employment rates escalated faster than those of male immigrants after a four-year residency period in Canada their overall employment rates were lower than that of their male counterparts (Xue, 2008a). Male immigrants' employment rates rose by 16 percentage points to 84%, whereas female immigrants' employment rates rose by 25 percentage points and still managed to lag behind at 77% (Xue, 2008a; p.11). In 2005, on average when holding a university degree, female immigrants earned \$12,365 less than their immigrant male counterparts, and almost \$14,000 less than Canadian-born females (Income and Earnings Highlight Tables, 2006 Census Dataset).

In terms of similar experiences witnessed by various age at arrival cohorts of immigrants within the 1.5-generation, Zietsma (2007) points out that these individuals actually fared similarly bad when compared to their older immigrant counterparts, experiencing much higher rates of unemployment compared to the Canadian-born population. According to Akbari (2011), women take home less than men in terms of earnings across all immigrant age groups. These facts serve to show that gender and age may indeed play prominent roles in increasing earnings shortcomings for both male and female immigrants when compared to their native-born counterparts.

1.5.6. Long-term residency, Age at arrival and Human Capital buildup in Canada

Palameta (2007) reports that, following an upward slope, on average immigrants require a decade or more in terms of residency in Canada to witness any significant change in their earnings, such as major jumps in salary echelons and income parity with their Canadian-born counterparts. Not only does extended residency in a host country positively affect immigrants' earnings, it can also help them overcome obstacles in scouting out employment opportunities and more rapidly entering the labour market. Xue (2007) proposes that the proportion of immigrants facing challenges finding employment drops regularly as their residency in Canada lengthens, dropping from 50%, to 40%, to 29% following a

six month, two-year, and four-year respective residency period in Canada (Xue, 2007; p.3).

Palameta (2007) cites, among other factors, insufficient knowledge of at least one of the official Canadian languages, limited Canadian professional experience, and a lack of Canadian-based education – all closely correlated with immigrants' age at arrival – as the most prominent culprits in creating employment barriers for immigrants.

In fact, the returns on host-country-based education and work experience among older age at arrival cohorts of newcomers have become a cornerstone for understanding how these individuals could and ought to deal with labour market discrimination in order to improve their economic integration and earnings. Oftentimes, immigrants arriving in their host country (in this case, Canada) begin their economic life as a blank-slate, since the bulk of their foreign education and professional qualifications are discredited, or they have none in case of dependent children of immigrants. Many of them begin or return to school in their host country, and some eventually pursue additional training in order to achieve comparable earnings to those they held in their home country and to those held by their native-born counterparts.

It has been concluded that long-term residency in a host country is narrowly linked to a buildup of human capital through gains in education, work experience, and language proficiency, and therefore arriving at a younger age increases non-natives' chances of climbing the salary echelons and eventually catching-up to their native-born counterparts (Hum and Simpson, 2004; Aydemir, Chen, and Corak, 2005); Zimmerman, 2007; Constant and Zimmerman, 2008).

In accordance with the Mincerian human capital framework¹, Chiswick (2009) speculates that newcomers' earnings are altogether lower than those of their native-born counterparts at the moment of settlement into their host country, even though they arrive holding comparable if not superior educational and professional experience, because the latter is non-transferrable in many cases and can rarely migrate with them to their host country. Although their credentials are comparable to their younger immigrant counterparts – non-existent or greatly devalued – their catch-up capacities are relatively lower, since they experience additional obstacles in terms of acculturation and language proficiency

¹ The Chiswick-Mincer specification of the human capital earnings function relates present net earnings in year t after schooling to all previous investments in human capital, minus any current investment. Let k_0 be the fraction of potential earnings initially invested in post-school training (at $t = 0$) and assume that k_t declines linearly over time such that $k_t = k_0(1 - t/T)$, T being the number of years of positive net investment (Hirsch, 1978). In other words, the human capital theory (Mincer, 1974; Becker, 1991) posits that investment in, among other things, education and labour market experience (in this case within the Canadian context of course) positively correlates with earnings and labour market productivity. Consequentially, since discrepancies in earnings are a result of discrepancies in human capital buildup (in one's host country), surely newcomers could increase their earnings and reach parity with their Canadian-born counterparts if they spent a longer time in their host country and increased their human capital via academic and professional training.

attainment. Constant and Zimmerman (2008) add that having foreign credentials may actually further hurt immigrants and generate a sizeable negative correlation with their eventual incomes. Thus arriving in childhood could prove to benefit them.

Although returns to education and professional experience in a host country may vary by ethnicity, visible minority status, and other individual characteristics (Aydemir, Chen, and Corak, 2005), improved returns can generally be attributed to a prolonged period of residency in one's host country, often serving as a steppingstone to producing greater earnings over time in both absolute and relative terms in reference to the Canadian-born population (Hum and Simpson, 2004).

Moreover, Schaafsma & Sweetman (2001) also report a link between length of residency based on age at immigration and earnings in Canada, and emphasize the many problems associated with downplaying the importance of the effect of one's age at arrival on eventual wages and salaries, as has been done in the past. Bringing-in older cohorts of immigrants may hamper their economic integration, as well as Canada's economic growth. Similar studies have been conducted in Sweden (Aslund, Bohlmark, and Nordstrom-Skans, 2009) and have come to an identical conclusion: that age at arrival substantially affects immigrant youths'

economic integration, generating a greater negative correlation with earnings especially for immigrant youths of certain ethnic backgrounds arriving at a later age.

2. Statistical and Research Framework

2.1 Research Problems

This major research paper addresses certain questions regarding the economic integration of immigrants' dependent children between the ages of 0 to 19 and dependent young adults over age 20. The questions at-hand intend to elucidate certain intricacies of integration in today's Canadian society, particularly in its economy, which I will assume are in part linked to a person's age at arrival and individual characteristics, including, but not limited to, their ethnic background and visible minority status.

1) Does age arrival have an impact on economic integration? Assuming that one's age at arrival mostly impacts one's economic integration into Canadian society, this paper will attempt to examine which age at arrival cohorts are most at risk of lagging behind in the integration process. For the purpose of this study, research will be delineated so as to include the following age at arrival cohorts: 0 to 4, 5 to 9, 10 to 14, 15 to 19, and 20+ years of age (early childhood, mid-childhood, late childhood, teenage years, and early adulthood; see: Rumbaut,

2004), allowing us to assess how age at immigration affects earnings in a non-linear fashion. According to Schaafsma and Sweetman (2001), this segmented theory holds true, since their findings show that newcomers arriving after puberty up to the moment they reach early adulthood earn considerably and increasingly less than those arriving at a younger age.

Furthermore, using the log of salaries and wages to assess the relationship between age at arrival and earnings of immigrants in Canada shows significant albeit uneven coefficients between cohorts. In this case, treating age at immigration as a single linear variable would not adequately represent the relationship between economic integration and age at arrival. (Boyd, 2008 amended; Reitz, Zhang and Hawkins, 2009).

2) How do individual characteristics such as education, visible minority status and ethnicity, age, level, and official language proficiency affect immigrants' economic integration? A number of authors agree that visible minority status and ethnicity may negatively correlate with earnings and integration into the economy (see Pendakur and Pendakur, 1998, 2011, 2013; Boyd, 2005, 2008; Galabuzi, 2006; Christofides & Swidinsky, 1994; Constant & Zimmerman, 2008, 2009; Chiswick, 2009; Reitz Zhang, & Hawkins, 2009), since,

as Lafontant (2009) explains, the colour of one's skin may incite discriminatory practices upon arrival to the host country in terms of recognition of newcomers' work experiences and educational attainments; and it could also cause, as Labelle, Field and Icart (2007) underline, an obstacle to employment, higher entrance salaries, and promotions, at the hands of future employers.

Additionally, certain authors posit that regardless of previous educational attainments, arriving in Canada at a younger age and consequently receiving a specifically Canadian education and professional training very positively correlates with earnings in the labour market (Preston, 2010; Schaafsma and Sweetman, 2001; Aydemir, Chen, Corak, 2005; Rumbaut, 2004, etc.). Others include language proficiency to the list of main predictors for immigrant earnings, positing that earnings positively correlate with knowledge of official languages especially in certain provinces and regions across Canada (see: Béland, 2008; Bernard, 2008; Bleakley & Chin, 2004)

2.2. Data and Methodology

2.2.1. Data sources

This major research paper relies on other studies grounded in the fields of immigration and economic policy research, as well as sociology; on related studies that use former and most recent 2006 population census data; and on the 2006 public use Census micro dataset itself. Using a dataset that contains long-

form records collected by Statistics Canada through the 2006 census survey, I will evaluate the extent of economic integration for various age at arrival cohorts of immigrants. The population census has been administered every five years and collects information about a vast and representative sample (20%) of private households across Canada. Since the 2011 population census micro dataset is not yet available for research, the 2006 public use Census micro dataset may in fact be the most reliable source of information about socio-economic and personal characteristics of the Canadian population, such as individuals' participation in the labour market and ethno-cultural backgrounds. Additionally, do in part to the now optional nature of the population Census survey, to the unavailability of the 2011 Census micro dataset, and to ever-changing trends in immigrants' earnings, there is no surety that the results will be comparable to those of future studies.

This study bases its analysis on data provided through questions related to socio-demographic features such as ethnic background; minority, immigration, and generation status; age at arrival; highest level of education attained; city of residence; annual income from wages and salaries before taxes; and gender. All data is at the individual-level.

The Canada 2006 Population Census provides information for a sample of 844,476 individuals. Tailoring to the precise aim of this major research paper, the sample was narrowed down to include individuals working for wages and salaries, 20 to 64 years of age inclusively, not having attended school during the year preceding the census survey, speaking at least one of the official languages, not belonging to an aboriginal group, and holding at least a permanent residency status in Canada for a total of 295,920 cases. In the third and last regression model, this number drops to 289,188 because of unidentified ethnicity.

2.2.3. Dependent variables

The analysis used for this major research paper considers one dependent variable as the main indicator of integration, namely a log of wages and salaries. The choice of evaluating earnings from wages and salaries seems the most justifiable choice for a dependent variable, since “(t)he wage labour market is the largest sector of Canada’s labour force, comprising 87% of all working men and 93% of working women age 20 to 64 (1991 Census PUMF, Pendakur and Pendakur, 1998; p.522).

Although integration is a complex concept that lacks a universally accepted definition, measuring economic success to evaluate how immigrants converge to the average performance of the native-born is a good start to measuring the

former's integration into society. Furthermore, economic success can also be seen as a prerequisite to measuring other indicators of integration that often directly depend on earnings, such as immigrants' sense of belonging to Canada or participation in their community.

For the purpose of this research paper, economic success takes precedence over other indicators, as the main measure for integration into Canadian society, since it is most easily quantifiable and statistically measurable. Wilkinson and Pickett (2009) in their book "The Spirit Level: Why Greater Equality Makes Societies Stronger" draw the interesting conclusion that more equal societies (less economic disparity, as calculated via the Gini coefficient) lead to more cohesive societies, hence the utmost importance of successful economic integration of immigrants in Canada. Analyzing the various age at arrival cohorts' most recent economic standing sheds light on how immigrants of this unique generation compare to and if they feel at-par with their native-born Canadian counterparts, as well as on how this affects their feeling of belonging towards Canada and dictates whether or not they will eventually develop deeper roots in Canadian society. A cohesive society is the projection of an equal society, and the concept of cohesion can be a tool for ensuring the realization of key socio-economic policies aimed at generating a fully functioning multi-ethnic society. Considering the results

presented in this study and in related literature, it can be assumed that government policies are in need of some significant evaluation.

2.2.4. Independent variables

Crucial independent variables that will be part of regression analyses include: age at arrival (5 dummy variables: age 0-4, 5-9, 10-14, 15-19, and 20+; with people born in Canada being the comparison variable), visible minority status (1 dummy variable: visible minority; with white Caucasians being the comparison variable), ethnic background (18 dummy variables: various logical ethnic origin groupings; with Canadians of British and French origins being the comparison variable), knowledge of official languages (2 dummy variables: speaking only French and Bilingual; with those speaking only English being the comparison group), length of residency in Canada (1 new variable derived from subtracting year of immigration from the 2006 year of the Census survey), highest level of education attained (2 dummy variables: Some post-secondary education and University degree or higher; with those holding a high school diploma or less being the comparison variable), and city of settlement (5 dummy variables: Vancouver, Toronto, Other Large CMAs, Smaller CMAs, Smallest CMAs, and Other Insignificant CMAs; with those residing in Toronto being the comparison group).

Evidently, having immigrated to Canada at a very early age, certain variables will not be considered in evaluating these individuals' economic integration into the labour market, mostly because they do not apply to their reality as adults having arrived in Canada as dependent immigrant children, and having lived in Canadian society for most of their life: foreign education and work credentials, as well as immigration class, since they will have completed most of their schooling and work training in Canada; and region and country of origin, since their integration will mostly be influenced by their memory of life in Canada and on memories received from their parents about their country of origin.

2.2.2. Statistical Models

Models 1, 2, and 3 showcase regression results for which the dependent variable is a log of income from salaries and wages, and for which controls include age at immigration and a series of other independent variables associated with individual characteristics (city of settlement, knowledge of official languages, education levels, visible minority status, length of residency in Canada, and ethnic background).

Model 1 mainly assesses the relationship between Canadian immigrants' age at arrival and their earnings controlling for age, education and immigrant status. This model examines the overall effect that specific age categories (0-4, 5-

9, 10-14, 15-19, 20+ compared to people born in Canada) have on incomes, and if arriving at a younger age results in higher relative earnings for immigrants.

Model 2 adds controls for time spent in the country and visible minority status. It examines whether income differentials between immigrants and their Canadian-born counterparts are attributable to any of the aforementioned characteristics, and if these characteristics in any way mediate the relationship between age at immigration and incomes.

Finally, the third regression (Model 3) replaces visible minority status with ethnic background characteristics allowing us to assess differentials for specific ethnic groups as compared to those reporting majority origins (Canadian, British or French). Each model is significant at a $\text{Prob} > F = 0.0000$, thus rejecting the possibility of a null hypothesis with very high confidence.

The direction of the relationship between the explanatory and dependent variables will be described in terms of “positive” or “negative”, “significant” or “insignificant”. A “positive” direction of a relationship will indicate that, as the value of independent explanatory variables increases, an immigrant’s economic integration improves, whereas a “negative” direction of a relationship will

indicate that, as the value of the independent explanatory variables decreases, an immigrant's economic integration outcome worsens. The strength of the relationship will solely be based on the p value for each variable, whereby any p value below 0.05 will be considered conclusive and significant, and relative strength will be determined not only by statistical conclusions, but also by consensual examples and evidence found in related studies.

3. Summary of findings and Policy Discussion

3.1 Findings

Overall, results suggest that age at immigration is important in assessing earnings differentials for immigrants (see for example Schaafsma and Sweetman, 2001). Furthermore, age at immigration appears to have a more noticeable impact on earnings gaps for women than for men.

However, when controls for visible minority status are added, men suffer larger penalties on their earnings in comparison to their female immigrant counterparts (see for example Pendakur and Pendakur 1998, 2002). Overall, these findings support the mainstream literature that claims earnings gaps between immigrants and native-born persons decrease considerably over time (see for example Palameta, 2007; Chiswick, 1978; Hou and Picot, 2003; Aydemir and Skuterud, 2004; Hum and Simpson, 2004). However, it appears that after

adjusting for length of residency, both female and male immigrants do not seem to be entirely able to eliminate the negative effects their age at immigration has on their earnings, hence refuting theories that posit that earnings gaps can be fully eliminated and native-born persons' incomes surpassed following a ten year stay in the country (see for example Abbott 1992, Abott and Beach 1993; Boudarbat & Zhu, 2011). Also, as previous research has pointed out (see for example Hou and Picot 2011; Palameta, 2007; Zietsma, 2010) higher levels of education have the capacity to reduce earnings penalties, although these effects will largely depend on where a person has received their education and degree, and since this analysis does not examine that aspect its results will therefore not be discussed in more detail. Additionally, although minor for the most part, in accordance to related study findings, language proficiency has a significant effect on immigrants' earnings (see for example Boissonneault, 2009; Brunner, Hyndman, and Friesen, 2011; Bonikowska, 2008), but data shows that being bilingual does not greatly reduce income gaps, and speaking only French as opposed to only English warrants even greater penalties especially in the case of male immigrants (see Boudarbat, Boulet, and Zhu 2010).

3.1.1 Model 1 – Partial Regression results

Table 1: Model 1
Partial Regression Results for Log of salaries and wages as affected by Age at immigration (Females N = 144 469) (Males N = 151 451).

Variable	Log of salaries and wages			
	Females		Males	
	Coeff.	Sig.	Coeff.	Sig.
Age at immigration				
(Canadian born)				
0 to 4 years	0.04	0.12	-0.06	0.01
5 to 9 years	-0.01	0.63	-0.07	0.00
10 to 14 years	-0.10	0.00	-0.10	0.00
15 to 19 years	-0.14	0.00	-0.17	0.00
20+ years	-0.38	0.00	-0.32	0.00
Education level (high school or less)				
Some post sec.	0.29	0.00	0.26	0.00
University or more	0.68	0.00	0.53	0.00
Knowledge of Off. Languages (English only)				
French Only	-0.12	0.00	-0.20	0.00
Bilingual	0.06	0.00	-0.06	0.00
Model Sig.	0.000**		0.000**	
Model R ²	0.09		0.1	
	*** p<.001	**p < .010	*p < .050	

Note: Comparison groups identified in parentheses. Model also includes controls for age.

Model 1 presents regression coefficient estimates from log earnings for men and women. When controlling for individual characteristics, such as age, levels of education, knowledge of official languages, and city of residence, it is apparent that age at immigration has an overall statistically significant, yet modest, bearing on earnings. What is more, women's incomes are more likely to be affected by their age at arrival and penalties on their earnings appear to be higher than on those of their male counterparts. In both cases, the greater the males' and females' age at arrival to

Canada is, the greater their earnings penalties are. The coefficient for arriving at or after age 20 is -0.38 for women and -0.32 for men compared to their Canadian-born counterparts. This suggests that earnings penalties are greater than those maintained by literature (see Frenette and Morissette, 2003; Picot and Piranio, 2012). Speaking only French as opposed to speaking only English increases penalties on earnings for women and men by 12% and 20% respectively, whereas bilingualism appears to correspondingly benefit women and penalize men by 6% in each case. Large penalties experienced by being unilingual French can largely be attributed to obstacles emanating from settling and working for wages in the province of Quebec (see for example Béland, 2008; Boudarbat, 2011; Boudarbat, Boulet, and Zhu, 2010; Labelle, Field, and Icart, 2007; Guliani, 2010).

3.1.2 Model 2 – Partial Regression results

Table 2: Model 2
 Partial Regression Results for Log of salaries and wages as affected by Age at immigration (Females N = 144 469) (Males N = 151 451).

Variable	Log of salaries and wages			
	Females		Males	
	Coeff.	Sig.	Coeff.	Sig.
Age at immigration (Canadian born)				
0 to 4 years	-0.24	0.00	-0.27	0.00
5 to 9 years	-0.28	0.00	-0.25	0.00
10 to 14 years	-0.31	0.00	-0.20	0.00
15 to 19 years	-0.32	0.00	-0.22	0.00
20+ years	-0.42	0.00	-0.25	0.00
Education level (high school or less)				
Some post sec.	0.29	0.00	0.25	0.00
University or more	0.69	0.00	0.55	0.00
Visible minority status (white Caucasian)				

Visible minority (yes)	-0.07	0.00	-0.25	0.00
Knowledge of Off. Languages (English only)				
French Only	-0.12	0.00	-0.20	0.00
Bilingual	0.05	0.00	-0.07	0.00
Years in Canada (assessed in 10 th year)	0.03	0.00	0.03	0.00
Model Sig.	0.000**		0.000**	
Model R ²	0.09		0.11	
	*** p<.001	**p < .010	*p < .050	

Note: Comparison groups identified in parentheses. Model also includes controls for city of residence, age, and years in Canada squared.

Model 2 builds on the findings of Model 1 by further controlling for additional individual characteristics, such as one's visible minority status and length of residency in Canada, and finds that age at arrival plays a significantly greater role in determining earnings in the second model than it did in the first. Interestingly enough, when adjusting for these new variables, penalties on earnings caused by age at immigration for both men and women rise, except for in the case of immigrant males arriving in Canada at age 20 or older. In fact, although the increase in earnings is not expected to be substantial, the penalty is reduced by 7%, falling from a -0.32 % to -0.25 earnings differential for immigrant men in comparison to their Canadian-born counterparts. Furthermore, in line with literature, results show that residing in Canada for a minimum of ten years yields substantially positive effects on earnings (30% increase) (Hum and Simpson, 2004; Aydemir, Chen, and Corak, 2005; Zimmerman, 2007; Constant and Zimmerman, 2008), although it still fails to play a large enough role in order to

entirely eradicate earnings gaps between newcomer men and women and their Canadian-born counterparts (see Chiswick's 2009 theory on catch-up effects). Discrimination in the workforce on the part of employers may be to blame for greater earnings penalties for visible minorities, but since it is quite difficult to test this fact empirically, this MRP's statistical analyses shall solely serve to support a speculative claim. When assessing visible minority earnings in Canada, one can deduce from data that indeed the colour of one's skin affects earnings (see for example Pendakur and Pendakur, 1998,2002; Lafontant, 2009; Labelle, Field, and Icart, 2007; Zimmerman, 2007; Constant and Zimmerman, 2009). In fact, if a woman or man identifies as a visible minority, they earn on average 7% and 25% less, respectively, when compared to their white Caucasian counterparts. Age at immigration continues to be important. For instance, when compared to persons born in Canada, men arriving at ages 0 to 4 or 20+ have a coefficient of about -.50, as compared to their female counterparts who have coefficients of -.31 and -.49 respectively for those same ages at arrival cohorts.

3.1.3 Model 3 – Partial Regression results

Table 3: Model 3

Partial Regression Results for Log of salaries and wages as affected by Age at immigration (Females N = 141 104) (Males N = 148 084).

Variable	Log of salaries and wages			
	Females		Males	
	Coeff.	Sig.	Coeff.	Sig.
Age at immigration				
(Canadian born)				
0 to 4 years	-0.24	0.00	-0.28	0.00
5 to 9 years	-0.29	0.00	-0.26	0.00
10 to 14 years	-0.32	0.00	-0.22	0.00
15 to 19 years	-0.31	0.00	-0.23	0.00
20+ years	-0.41	0.00	-0.25	0.00
Education level				
(high school or less)				
Some post sec.	0.29	0.00	0.25	0.00
University or more	0.70	0.00	0.55	0.00
Years in Canada (assessed in 10 th year)				
	0.03	0.00	0.03	0.00
Ethnicity (British or French origin)				
German	0.02	0.34	0.04	0.05
Polish	0.05	0.17	0.06	0.07
Dutch	0.01	0.83	0.13	0.00
Portuguese	-0.02	0.62	0.00	0.88
Italian	-0.01	0.77	-0.01	0.51
Ukrainian	0.02	0.57	0.05	0.07
West&East European	-0.01	0.83	0.06	0.13
East European	0.03	0.50	-0.03	0.31
South European	-0.06	0.05	-0.12	0.00
Jewish	-0.16	0.01	0.06	0.29
West Asian & Arab	-0.21	0.00	-0.35	0.00
South Asian	-0.14	0.00	-0.23	0.00
Chinese	-0.03	0.13	-0.23	0.00
East Asian	-0.05	0.19	-0.28	0.00
Filipino	0.01	0.73	-0.19	0.00
Black	-0.06	0.03	-0.29	0.00
Latin American	-0.24	0.00	-0.25	0.00
Other	-0.03	0.01	-0.05	0.00
Model Sig.	0.000**		0.000**	
Model R ²	0.09		0.11	
*** p<.001	**p < .010	*p < .050		

Note: Comparison groups identified in parentheses. Model also includes controls for city of residence, age, years in Canada squared, and knowledge of official languages.

Finally, Model 3 builds on findings of the two preceding Models (1 and 2), by controlling for one's ethnic background in more detail (as compared to solely visible minority status), and shows that the older one is when he or she immigrates, the lower are the predicted earnings. This finding is in broad agreement with Aslund, Bohlmark, and Nordstrom-Skans (2009). When assessing differences in women's earnings by ethnicity, it appears that those of Latin American origin fare the worst earning 24% less than those with majority origins, followed by West Asian and Arab women (21%), Jewish women (16%), and South Asian women (14%). When looking at the male population, West Asians and Arabs fare the worst and experience earnings (coefficient of -0.35), followed by Blacks (-0.29), East Asians (-0.28), and Latin Americans (-0.25). Overall, it seems that, if you are a West Asian or Arab male immigrating to Canada between ages of 0 to 4 years, you will experience the greatest penalties on incomes, thus earning about half of similarly qualified majority ethnic counterparts (see for example Labelle, Field, and Icart; 2007). Results for females are broadly similar.

3.2. Policy Discussion – Background

In 2002, the Immigration and Refugee Protection Regulation (IRPR), under the Immigration and Refugee Protection Act (IRPA), was amended to raise the age of eligible immigration for accompanying dependent children to 22 years of age, provided the child is not married at the moment of immigration to Canada.

This new regulation would also label as “dependent” children who, at the moment of immigration, rely financially on their immigrant parents and are enrolled full-time at school. This would in turn open a window of opportunity for children over 22 years of age to immigrate to Canada regardless of the economic hurdles they may face as shown throughout this major research paper. In May 2013, further amendments were tabled and implemented, whereby the age limit for dependent children was reduced to 18 years.² In fact, findings in this study support these new amendments to decrease the age limit for dependent children, estimating that a delayed age at arrival is negatively correlated with immigrants’ earnings. For instance, females arriving at age 20+ fare 18% and 10% worse than those arriving between ages 0 to 4 and 15 to 19, while males’ penalty on earnings (3%) is mostly apparent for those arriving after age 20+. Even after a ten-year stay in Canada, the penalty cannot be fully eliminated for bilingual females arriving after age 9 and bilingual males arriving after age 19.

Based primarily on information drawn from highlighted literature on the subject of economic integration of immigrants of various generations and ages at arrival in Canada, as well as on a basic statistical analysis of the correlation

² Immigration and Refugee Protection Regulations under IRPA ; Family Classes, Part 7, Division 1, as it refers to Members of group (b) a dependent child of the sponsor. Latest amendments dated July 31, 2013. (<http://laws.justice.gc.ca/eng/regulations/SOR-2002-227/page-52.html#h-72>)

between several individual characteristics and immigrants' earnings, this major research paper proposes one main policy recommendation in conjunction with Canada's plans for economic sustainability and growth. In-line with the 2012 Economic Action Plan's (CEAP, 2012) the following policy recommendation is tabled:

3.2.1 Proposed policy recommendation

(1) If success in the labour market is the primary goal of Canada's immigration program, the Government of Canada is advised to maintain its recently amended IRPR governing the age limit for accompanying dependent children of immigrants, by keeping the age limit for dependent children at 18 years of age.

3.2.2. Policy Implications

The proposed policy recommendation primarily aims to promote a more successful economic integration of the various age-at-arrival cohorts within the 1.5-generation, namely the accompanying dependent children of immigrant parents. Canada's immigration system ought to be guided by study findings that show that immigrants' earnings suffer overall lower penalties if they arrive as dependent children between the ages of 0 to 14 years, rather than as teenagers between the ages of 15 to 19 years or as young adults over the age of 20. The

recommendation's core premise lies with the idea that younger cohorts of immigrants largely attain higher rates of economic integration in Canada.

Due to the fact that these children arrive as dependents of their immigrant parents, priority admittance into the country should be given to families with infants and children between the ages of 5 to 14 years. Policies should also be amended to abolish the full-time school enrollment component of the IRPR, thus limiting the number and likelihood of older children and young adults accompanying their parents to Canada. This becomes a means of ensuring that the largest possible percentage of these children will successfully participate in the economy upon entering the labour market. These amendments ensure that Canada's immigration policies remain in line with long-term economic objectives by bringing in younger immigrants who are more likely to successfully integrate into the labour force and contribute for a longer period of time to Canada's economy.

ANNEX 1

Table 1: Variable definitions and Descriptives;

Variable	Definition/Coding	%
Dependent variable		
Income from salaries and wages		
Lowest Income	Dummy (<19,999; 1=yes, 0=no)	28.68%
Low Income	Dummy (20,000-39,999; 1=yes, 0=no)	29.46%
Middle Income	Dummy (40,000-59,999; 1=yes, 0=no)	20.93%
Upper Middle Income	Dummy (60,000-79,999; 1=yes, 0=no)	11.31%
High Income	Dummy (80,000-99,999; 1=yes, 0=no)	4.73%
Highest Income	Dummy (100,000-1,202,476; 1=yes, 0=no)	4.89%
Variable	Definition/Coding	%
Independent Variables		
Generational Status		
First Generation	Arriving as (young) adults	16.57%
1.5 Generation A	Dummy (0-4 years; 1=yes, 0=no)	1.70%
1.5 Generation B	Dummy (5-9; 1=yes, 0=no)	1.74%
1.5 Generation C	Dummy (10-14; 1=yes, 0=no)	1.76%
Second Generation	Can-born, w/both parents born outside Canada	14.84%
Third+ Generation	Can-born w/at least one parent born outside Canada	63.38%
City/Area of Settlement		
CMAToronto	Dummy (1=yes, 0=no) (<i>Ref.var.</i>)	17.27%
CMAMontreal	Dummy (1=yes, 0=no)	11.52%
CMAVancouver	Dummy (1=yes, 0=no)	6.49%
Other Large CMAs	Dummy (1=yes, 0=no)	15.47%
Smaller CMAs	Dummy (1=yes, 0=no)	13.26%
Smallest CMAs	Dummy (1=yes, 0=no)	36.01%
Education Level		
Secondary degree or less	Dummy (1=yes, 0=no) (<i>Ref.var.</i>)	38.59%
Some post secondary	Dummy (1=yes, 0=no)	38.89%
University degree or higher	Dummy (1=yes, 0=no)	22.52%
Age at Immigration/Arrival		
Canadian born	Born in Canada (<i>Ref. Var.</i>)	78.48%
Early childhood	Arrived at 0-4 years old	1.70%
Mid childhood	Arrived at 5-9 years old	1.74%
Late childhood	Arrived at 10-14 years old	1.76%
Early adulthood	Arrived at 15-19 years old	2.26%
Adulthood	Arrived at 20+ years old	14.05%

ANNEX 2

Table 1: Variable definitions and Descriptives continued;

Knowledge of Off. Languages			
English Only	Knowledge mostly of English		68.60%
French Only	Knowledge mostly of French		11.70%
Bilingual	Knowledge of Both English and French		19.64%
Gender			
Female	Dummy (1=yes, 0=no)		48.57%
Visible Minority Status			
Visible Minority	Dummy (1=yes, 0=no)		13.56%
Not a visible minority	Dummy (1=yes, 0=no)		86.44%
Ethnic Background			
Majority British/French	Reference variable		69.03%
German			2.13%
Polish			0.90%
Dutch			0.99%
Portuguese			0.96%
Italian			2.61%
Ukrainian			1.03%
West&North European			0.56%
East European			0.82%
South European			1.30%
Jewish			0.31%
Weast Asian & Arab			1.12%
South Asian			0.77%
Chinese			3.06%
East Asian			3.14%
Filipino			1.15%
Black			1.60%
Latin American			0.52%
Other			5.59%
Aboriginal			2.41%
Time spent in Canada			
Years in Canada	Time in years (range from 0 to 61)		N/A
Age			
Age range	Age in years (range from 20 to 64)		N/A

ANNEX 3

Table 4: Descriptives

Number of Males and Females by Generational Status, Visible Minority Status, and Ethnicity

Variable	Females	Males
	N	N
Generational Status		
1st Generation	24,381	25,284
1.5-Generation (0-4 years)	2,653	2,851
1.5-Generation (10-14 years)	2,667	2,945
1.5-Generation (15-19 years)	2,726	2,853
2nd Generation	22,854	23,439
3+ Generation	98,274	103,493
Total	153,559	160,873
Visible Minority Status		
No	132,957	139,477
Yes	20,602	21,396
Total	153,559	160,873
Ethnicity		
Majority-White Caucasian	104,086	108,798
German	3,083	3,490
Polish	1,374	1,407
Dutch	1,401	1,658
Portuguese	1,520	1,883
Italian	3,891	4,144
Ukrainian	1,536	1,650
West&East European	776	940
East European	1,179	1,347
South European	1,732	1,842
Jewish	481	477
West Asian & Arab	1,443	1,997
South Asian	4,504	5,178
Chinese	4,641	4,808
East Asian	1,175	1,206
Filipino	2,021	1,516
Black	2,486	2,461
Latin American	751	856
Other	11,763	11,498
Total	149,843	157,156

ANNEX 4

Table 5: Descriptives

Mean of wages for Males and Females by Generational Status and Ethnicity

Variable	Females	Males
	N	N
Generational Status		
1st Generation	29,447	46,944
1.5-Generation (0-4 years)	37,756	57,792
1.5-Generation (10-14 years)	35,926	54,069
1.5-Generation (15-19 years)	32,338	47,268
2nd Generation	36,005	56,123
3+ Generation	31,696	49,986
Mean average	33,861	52,030
Ethnicity		
Majority-White Caucasian	32,374	51,289
German	31,772	54,297
Polish	33,160	58,129
Dutch	32,392	59,410
Portuguese	29,076	46,004
Italian	37,644	58,047
Ukrainian	35,170	59,715
West&East European	33,969	56,345
East European	37,249	52,991
South European	33,932	49,360
Jewish	41,938	78,110
West Asian & Arab	27,180	39,950
South Asian	26,627	42,788
Chinese	33,903	46,786
East Asian	28,630	39,901
Filipino	29,762	37,272
Black	29,188	34,670
Latin American	21,651	33,431
Other	32,556	52,040
Mean average	32,264	50,723

Bibliographical References:

Abbott, M.G. (1992). "Immigrant earnings differentials in Canada: A more general specification of age and experience effects". *Empirical Economics*. 1992. Volume 17, Issue 2. Pages 221-238

Abbott, M.G. and C.M. Beach (1993) "Immigrant Earnings Differentials and Birth-Year Effects for Men In Canada: Post-War-1972." *Canadian Journal of Economics* 26(3), Pages 505-524

Akbari, A. A. (2011) "Labour market performance of immigrants in smaller regions of western countries: Some evidence of Atlantic Canada." *International Migration and Integration*, 12, 133-154.

Aslund O. Bohlmark A. and Nordstrom-Skans O. (2009) "Age at Migration and Social Integration". IZA Institute for the Study of Labour. Discussion Paper Series. June 2009.

Aydemir, A. & Skuterud, M. (2004) "Explication de la détérioration des gains au niveau d'entrée des cohortes d'immigrants au Canada, 1996-2000." *Statistique Canada. Direction des études analytiques : documents de recherche* 2004225f.

Aydemir, A., and A. Sweetman. (2006) "First and Second Generation Immigrant Educational Attainment and Labor Market Outcomes: A Comparison of the United States and Canada". Bonn. Institute for the Study of Labor (IZA). Discussion Paper no. 2298. Pages 215-270

Aydemir, A., W.H. Chen and M. Corak. (2005) "Intergenerational Earnings Mobility Among the Children of Canadian Immigrants." *Statistics Canada Catalogue no 11F0019MIE. No. 267. Ottawa. Analytical Studies Branch Research Paper Series, no. 267.*

Battu, H., M. McDonald, and Y. Zenou (2007) "Oppositional Identities and the Labor Market." *Journal of Population Economics*, 20(3), Pages 643-667.

Beck. A. et al. (2012). "Age at Immigration and the Adult Attainments of Child Migrants to the United States." *SAGE Publications*. 2012, Vol.643 (1) Pages 134-159

Béland, P. (2008) "Langue et immigration, langue du travail : éléments d'analyse." *Conseil supérieur de la langue française du Québec*.

Bernard, A. (2008) "Les immigrants dans les régions. L'emploi et le revenu en perspective." Statistics Canada, Catalogue No. 75-001-X, Vol. 9, No. 1

Bleakley, H. and Chin A. (2004). "Language Skills and Earnings: Evidence from Childhood Immigrants". The Review of Economics and Statistics. May 2004, Vol. 86, No. 2, Pages 481-496

Bonikowska, A. and Feng H. (2011). "Reversal of Fortunes or Continued Success? Differences in Education and Earnings of Childhood Immigrants." Statistics Canada. January 2011. 11F0019M. No 330.

Bonikowska, A, Green, D.A. & Riddell, C. (2008) "Literacy and the labour market: cognitive skills and immigrant earnings." Statistics Canada. Catalogue number 89-552-M, no. 020

Boissonneault, M.A. (2009). De la survie à la vie: L'intégration des nouveaux arrivants en Outaouais. Le Jumelé, hiver, p .10. Agir pour intégrer, l'action communautaire au cœur de l'accueil des immigrants. Table de concertation des organismes au service de personnes réfugiées et immigrantes (TCRI).

Boudarbat, B. (2011). "Labour market integration of immigrants in Quebec: a comparison with Ontario and British Columbia". Project Report. CIRANO, Montreal 2011.

Boudarbat, B., Boulet, M. et Zhu, N. (2010) "Participation au marché du travail et revenus d'emploi des immigrants au Québec par rapport au reste du Canada", Nos diverses cités, numéro 7, pp. 60-66

Boyd, M. (2005). "Diverse Fortunes in Different Countries?: Earnings of White and Black Immigrant Generations in Canada and the United States". University of Toronto Press.

Boyd, M. (2008). "Variations in Socioeconomic Outcomes of Second Generation Young Adults." Canadian Diversity, 62(2): pages 20-24, and 42-46.

Brunner, L.R., Hyndman, J. & Friesen, C. (2011) "Post-IRPA GARs from Aceh: an analysis of refugee integration five years on." In D. Hiebert (edited). Our Diverse Cities. Metropolis British Columbia

Bucklaschuk, J. (2011) "A profile of economic and labour market integration among immigrants in Canada." Edmonton, Alta.: Prairie Metropolis Centre, 2011.

Chiswick, C.U. (2009) "The Economic Determinants of Ethnic Assimilation." *Journal of Population Economics*, 22(4), 859 - 880.

Chiswick, B. R. (1978). "The Effect of Americanization on the Earnings of Foreign-Born Men." *Journal of Political Economy*, 86(5), Pages 897-922

Constant, A. F. and K. F. Zimmerman (2009) "Work and Money: Payoffs by Ethnic Identity and Gender." *Research in Labor Economics* (29), Pages 3-30.

Constant, A. F., M. Kahanec and K. F. Zimmerman (2009) "Attitudes towards Immigrants, other Integration Barriers and their Veracity." *International Journal of Manpower*, 30(1/2), Pages 5-14.

Constant, A. F. and K. F. Zimmerman (2008) "Measuring Ethnic Identity and Its Impact on Economic Behavior." *Journal of the European Economic Association*. 6(2-3), Pages 424-33.

Corak, M. and I. Delahousse (2009) "Age at immigration and the education outcomes of children." Vancouver Canada, May 11, 2009, 27 pages. Paper presented to the Conference "Economics of Immigration: Children of Immigrants and Temporary Migration." Metropolis BC, Simon Fraser University, and Centre for Research and Analysis of Migration, University College London

Christofides and Swidinsky. (1994). "Wage Determination by Gender and Visible Minority Status: Evidence from the 1989 LMAS", *Canadian Public Policy*, 20(1), pages 34-51

Desjardins, D. & Cornelson, K. (2006) "Immigrant labour market outcomes in Canada: the benefits of addressing wage and employment gaps." Royal Bank of Canada: Economics Branch. Toronto.

Delahousse, I. (2009). "The Effect of Age at Immigration on Employment Income." Major Research Paper presented to the Department of Economics, University of Ottawa. April 2009.

Economic Action Plan (2012) "Jobs, Growth and Long-Term Prosperity: Building a Fast and Flexible Economic Immigration System." Government of Canada. April 2012

Federation of Canadian Municipalities. (2009) "Quality of life in Canadian communities immigration & diversity in Canadian cities and communities." Ottawa, Ont.: Federation of Canadian Municipalities.

Frenette, M. and R., Morissette. (2003) "Will They Ever Converge? Earnings of Immigrant and Canadian-born Workers over the Last Two Decades." Statistics Canada Catalogue no. 11F0019MIE - No. 215. Ottawa. Analytical Studies Branch Research Paper Series, no. 215.

Friedberg, R.M. (1992). "The Labour Market Assimilation of Immigrants in the United States." PhD thesis: Brown University. December 1992.

Galabuzi, G.-E. (2006) "Canada's Economic Apartheid: The Social Exclusion of Racialized Groups in the New Century." Canadian Scholars' Press, 2006 – 286 pages.

Gonzales, A. (2003). "The education and wages of immigrant children: the impact of age at arrival". *Economics of Education Review*, 22 (2003), Pages 203–212

Green, David A. and Worswick C. (2006) "Immigrant earnings profiles in the presence of human capital investment: Measuring cohort and macro effects". *Labour Economics*, 2012, Vol.19 (2), Pages 241-259

Gulian, T. (2010) "L'Intégration professionnelle des immigrants: des défis persistants aux solutions novatrices." In A. Germain, F. Armand and M. McAndrew (Ed.), *Nos diverses cites: Le Québec*.

Hathiyani, A. (2007). *Immigrants de formation professionnelle en passe de devenir chauffeurs de taxis à Toronto*. In K. Graham (Ed.), *Nos diverses cites: Ontario*. Metropolis. p. 149-155

Hiebert, D. (2009) "The Economic Integration of Immigrants in Metropolitan Vancouver." *IRPP Choices* Vol. 15, no. 7, June 2009, ISSN 0711-067715 (7)

Hou, F. and S. Coulombe (2010) "Earnings gaps for Canadian-born visible minorities in the public and private sectors." *Canadian Public Policy* 36(1). Pages 29-43

Hou, F. and Picot, G. (2003) "La hausse du taux de faible revenu chez les immigrants au Canada." *Statistique Canada*. Hors-série. no. 198, Juin 2003.

- Hou, F. and Picot, G. (2011) "Seeking Success in Canada and the U.S.: The Determinants of Labour Market Outcomes Among the Children of Immigrants." Statistics Canada, March 2011, No. 331
- Hum D. and W. Simpson (1999) "Wage opportunities for visible minorities in Canada." University of Toronto Press. Canadian Public Policy Journal. Volume 25. Number 3. September 1999. Pages.379-394
- Hum D. and W. Simpson (2004) "Economic Integration of Immigrants to Canada: A Short Survey." Canadian Journal of Urban Research. Summer 2004. Volume 13. Number 1. Pages 46-62
- King, K. M. (2009) "The Geography of Immigration in Canada: Settlement, Education, Labour Activity and Occupation Profiles". Martin Prosperity Institute publication. Working Paper Series, Ontario in the Creative Age. March 2009
- Labelle, M., Field, A.-M., Icart, J.-C. (2007) "Les dimensions d'intégration des immigrants, des minorités ethnoculturelles et des groupes racisés au Québec." Document de travail. UQÀM.
- Lafontant, J. (2009) "L'intégration en emploi des immigrants francophones racisés à Winnipeg : résumé d'une étude exploratoire." In T. Carter, T. Derwing, L. Ogilvie & T. Wotherspoon (Ed.), Nos diverses cités: Région des Prairies. Metropolis. p. 131-35.
- Li, Peter S (2003) "Initial Earnings and Catch-Up Capacity of Immigrants." Canadian Public Policy 29(3). Pages 319-337
- McDonald, T. and C. Worswick (2010) "Visible Minority Status, Immigrant Status, Gender, and Earnings in Canada: A Cohort Analysis," in Canadian Immigration: Economic Evidence for a Dynamic Policy Environment (2010) T. McDonald, E. Ruddick, A. Sweetman and C. Worswick, eds.
- Negby, L. and M. Rödin (2007). "Acculturation Identity and Labor Market Outcomes." IZA Discussion Paper No. 2826.
- OECD. (2010) "Equal Opportunities? The Labour Market Integration of the Children of Immigrants." OECD Publishing, 2010 – 256 pages.
- Oreopoulos, P. (2009) "Why Do Skilled Immigrants Struggle in the Labor Market? A Field Experiment with Six Thousand Resumes." NBER Working Paper No. 15036, NBER, Cambridge, MA.

- Palameta, B. (2007) "Economic integration of immigrants' children." Perspectives – October 2007, Ottawa: Statistics Canada. Pages 5-16
- Pendakur K. & Pendakur R. (1998) "The colour of money: wage differentials across ethnic groups," Canadian Journal of Economics. Pages 518-548
- Pendakur K. & R. Pendakur (ongoing) "Colour of Money Redux: Immigrant and Ethnic Group Earnings Differential in Canada from 1991 to 2006." University of Ottawa Press.
- Pendakur K. & Pendakur R. (2002) "Language knowledge as human capital and ethnicity" International Migration Review. 36(1)
- Pendakur K. & R. Pendakur (2011) "Colour By Numbers: Minority Earnings in Canada 1996-2006." Metropolis British Columbia. CERID. May 2011. Number 11-05.
- Picot, G. and F. Hou (2003) "The Rise in Low-income Rates Among Immigrants in Canada." Dept. Statistics Canada – Analytical Studies Branch. Research Paper Series. June 2003. Catalogue Issue 11F0019MIE - Number 198.
- Picot, G. (2008) "Immigrant Economic and Social Outcomes in Canada: Research Data Development at Statistics Canada". Dept. Statistics Canada – Business and Labour Market Analysis Division. Catalogue no. 11F0019M, No. 319. December 2008.
- Picot, G., & Piraino, P. (2012) "Immigrant earnings growth: Selection bias or real progress?" Analytical Studies Branch Research Paper Series
- Plante, J. (2010) "Caractéristiques et résultats sur le marché du travail des immigrants formés à l'étranger." Statistique Canada, Catalogue no. 81-595-M, no. 84
- Preston, V. et al. (2010) "Do country of birth and level of educational attainment affect the labour market outcomes of immigrants?" Toronto Immigrant Employment Data Initiative Analytical Report 13
- Reitz, J., H. Zhang and A. Hawkins (2009) "Comparisons of the Success of Racial Minority Immigrant Offspring in the United States, Canada and Australia." Social Science Research. Volume 40, Issue 4, July 2011, Pages 1051–1066.

Ruble, B. (1989) "Ethnicity and Soviet Cities." *Soviet Studies*, 41, 401–414

Rumbaut, R.G. (2004) "Ages, Life Stages, and Generational Cohorts: Decomposing the Immigrant First and Second Generations in the United States." *International Migration Review*, Fall 2004, Vol. 38, No. 3, pages 1160-1205.

Schaafsma A. and J. Sweetman. (2001) "Immigrant Earnings: Age at immigration matters." *Canadian Journal of Economics*. Volume 34 Issue 4. Pages. 1066-1099

Skuterud, M. (2010) "The visible minority earnings gap across generations of Canadians." *Canadian Journal of Economics*. 43(3), Pages 860–881

Wilkinson R. & Pickett K. (2009) "The Spirit Level: Why Greater Equality Makes Societies Stronger." Bloomsbury Press. New York.

Xue, L. (2006) "The labour market progression of the LSIC immigrants: A perspective from the second wave of the longitudinal survey of immigrants to Canada (LSIC) – Two years after landing." *Citizenship and Immigration Canada*

Xue, L. (2007) "Portrait of an integration process: Difficulties encountered and resources relied on for newcomers in their first four years in Canada: Evidence from three waves of the longitudinal survey of immigrants to Canada (LSIC)." *Citizenship and Immigration Canada*

Xue, L. (2008) "Initial labour market outcomes: A comprehensive look at the employment experience of recent immigrants during the first four years in Canada." *Citizenship and Immigration Canada*

Xue, L. (2008) "Social capital and wages: Outcomes of recent immigrants to Canada." *Citizenship and Immigration Canada*

Yinghua, Song. (2012). "Language Proficiency and Earnings of Non-Official Language Mother Tongue Immigrants: The case of Toronto, Montreal, and Quebec City". Major Research Paper presented to the Department of Economics, University of Ottawa, December 2012.

Zhou, Min. (1997) "Growing Up American: The Challenge Confronting Immigrant Children and Children of Immigrants." *Annual Review of Sociology*. No. 23, Pages 63-95

Zietsma, D. (2007) “Les immigrants sur le marché canadien du travail en 2006: premiers résultats de l’Enquête sur la population active du Canada.” Statistique Canada. Septembre 2007. Série d’analyses de la population active immigrante

Zietsma, D. (2010) “Immigrants exerçant des professions réglementées. L’emploi et le revenu en perspective.” Statistique Canada, Vol. 11 No 2. Catalogue no. 75-001-X.

Zimmerman, K.F. (2007a) “The Economics of Migrant Ethnicity.” *Journal of Population Economics*, 20, 487-494

Zimmerman, K.F. (2007b) “Migrant Ethnic Identity: Concept and Policy Implications.” *Ekonomia*, 10(1), 1-17