Employment Probability of Visible Minority Immigrants by Generational Status in Canada: Circa 2016

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Abstract

Using 2016 census data, employment odds for visible minority immigrants in Canada are compared with non-visible minority immigrants. Intergenerational comparisons of employment outcomes are made as one would expect second and third generation immigrants to be less prone to labour market barriers than first generations. Estimates based on a logistic regression of employment probability model reveal lower employment odds for four out of ten visible minority groups in comparison with non-visible minority immigrants in all three generations. For first and second generations the results were mixed, but lower employment probabilities faced third generations in all groups of visible minorities with the exception of Japanese. A lack of proficiency in official languages (English or French) lowers the prospects of finding employment for all groups. Post- secondary education is associated with an increased probability of employment, even though using information on location of education newly available in the 2016 census it is estimated that education acquired outside of Canada has a weaker association with employment. Post-immigration labour market experience is more strongly associated with employment than pre-immigration experience.

Keywords: Visible minority; South Asian; Immigrants; Employment; Human capital

I. Introduction

Labour market integration of newcomers and their future generations are important for Canada to successfully compete for talent with other immigrant receiving countries such as the United States, Australia, and New Zealand. In this paper, we explore employment probability of visible minority immigrants, who continue to dominate immigrant inflows in immigrant receiving countries, relative to their nonvisible minority immigrant counterparts in Canada.

Canada is a large immigrant-receiving country where immigrants represent approximately 21 percent of the total population. For the two decades after 1945, most immigrants came from Western Europe. Policy at that time gave preference to admitting immigrants from countries culturally similar to Canada. However, since mid-1960s, selection criteria shifted from country-of-origin preferences to emphasize human capital requirements in local labour markets, humanitarian concerns and family reunifications. As a result, changes to the source country composition of immigrants began in the early 1970s and resulted in an increasing share of visible minorities in the Canadian population.[i]

The 1986 Canadian census recorded a visible minority composition of population at 6.3 percent. By 1996, this composition had risen to 11.2 percent, 16.2 percent in 2006 and 22.3 percent in 2016.[ii] South Asians now comprise the largest visible minority group in Canada, about one-fourth of the total visible minority population of nearly 7.7 million in 2016, and 5.6 percent of the total Canadian population. Chinese and Blacks were the second and third largest visible minority groups, respectively (Statistics Canada, 2016). The composition of visible minorities in the population is expected to grow further in the future as they make up a larger percentage of current annual immigrant inflows (Statistics Canada, 2017).

The growth of visible minorities in the Canadian population has generated interest among researchers to study their labour market outcomes, which can inform public policy aimed at their settlement and integration in the Canadian society. In 2002, almost one in four visible minority workers reported that they had experienced racial harassment or discrimination in the workplace (Hum and Simpson, 1999; Pendakur and Pendakur, 2002). Other studies reported measures of employment, number of weeks worked during the year, and acquisition in better paying jobs for visible minorities are poorer when compared with the rest of Canadians. Access to job opportunities, upward mobility, earnings and income have also been poorer (Banerjee, Reitz and Orepoulos, 2018; Pendakur *et.al*., 2000; Pendakur and Pendakur, 2002; Jackson,2001).

The present study differs from the previous studies in at least two important ways. First, it provides a comparison of the employment probabilities of visible minorities with non-visible minorities after controlling various human capital and demographic variables. Previous studies have mostly focused on earning disparities, as for example, Skuterud (2010). Second, the study also provides an intergenerational comparison of employment probabilities, which betters our understanding of whether differential treatment of these groups is pervasive. Canadian immigration policy has placed a strong focus on long-term economic and social outcomes and hence it is important to investigate if immigrants face any difficulties in labour market assimilation which prevent their long-term economic integration, and in turn, also impacts their social integration. Chen and Hou (2019) analyze the adjusted employment rates only for the second- generation visible minority groups using 2016 census data.

For the first generation, we also study the impacts of obtaining a post-secondary education in Canada versus outside of Canada and of their potential labour market

experience in Canada versus outside of Canada.[iii]

Section II presents the theoretical framework for the study while Section III models the employment probability of an individual using some demographic and human capital predictors. Rationale for including each independent variable in the model and description of sample is discussed in Section IV which is followed by a discussion of their descriptive statistics in Section V. Section VI discusses the results of employment probability model by converting the impact of each variable into odds ratios. Section VII presents a summary and concludes the study.

II. Theoretical framework

Differences in employment potential of visible minority immigrants from their non-visible minority counterparts can be explained in the light of employers' normative judgement of the productivity of workers belonging to visible minority groups. Visible minority immigrants in western countries generally originate in source countries that are more distant from their host countries as compared to those of non-visible minorities. Differences in cultural practices, languages used at work and in economic and institutional framework widen as geographic distance between countries increases. Hence, there are weaker social and economic ties of western host countries with source countries of visible minority immigrants. Employers in an immigrant's host country generally lack knowledge of a distant sending country's educational system and the quality of professional training that is offered. The cost of acquiring this knowledge can be substantial to potential employers especially if a worker is needed on an urgent basis. In some highly specialized jobs, such as those in the areas of accounting, engineering and health care, newcomers from distant countries may be viewed to possess less intensive "country- specific" human capital. Hence, a lack of knowledge of the quality of the source country's training quality, a possible language gap, and the employers' perception of lower intensity of newcomers in "country-specific" human capital cause an employer in the host country to discount the human

capital of first-generation visible minority immigrants and prefer hiring a non-visible minority immigrant or native-born worker.

So what about the second and third generations of visible minority workers who are born and raised in the host country? They possess host country-specific human capital, quality of which is known with ease. Hence, if differential treatment is observed in their cases, despite likely having the same pre-market preparation as rest of the population, it can be attributed to employers' normative judgement of the productivity of visible minority workers or racial discrimination. Becker (1971) argues that by treating workers of equal productivity differentially employers may take a cut in their economic profit in return for higher individual utility or satisfaction.

The second and third generations could also have differences in their educational experiences resulting from the parents' preferences to limit their children's interactions with other cultures or due to differential treatment by their teachers and peers at school. These experiences could affect their motivation to participate in the labour force.

The normative judgement argument (statistical discrimination) can also be applied to differential treatment of the first-generation immigrants (racial discrimination) but to disentangle this effect from employers' attitude towards risk can be complex. The effect of differential treatment based on normative judgement can also be passed on to future generations thereby affecting their motivation and labour market productivity.[iv] Banerjee (2008) found that established immigrants in Canada are more likely to perceive discrimination in the workplace than recent immigrants.

While the above discussion focuses primarily on the employers' differential treatment of visible minorities, there is also a possibility of customers' differential treatment (customer discrimination) that self employed visible minorities may face for reasons of risk aversion and lack of information about newcomers.

III. Empirical Model and estimation method

The employment probabilities of a worker depend on a set of demographic variables, human capital variables, and visible minority status. Hence, to study the impact of an immigrant's visible minority status, it is important to control for other determinants of employment. These are entered in a cumulative logistic model of employment probability which is specified below:

$$Y = b_0 + b_i \sum X_i + b_j \sum X_j + b_k \sum X_k + U$$

The dummy dependent variable in the logistic equation is specified to capture the probability of employment of an individual. The independent variables are divided into 3 sets, X_i, representing demographic variables; X_j, representing human capital variables, and X_k representing visible minority status identified for each of the ten groups considered in this study. A complete list of variables used in this analysis is in Table 1. With the exception of age, age at immigration and years since immigration, all independent variables are dummy variables with values zero and one. Their rationale, and the specification of dummy dependent variable, will be discussed in the next section.

Besides the above, a set of dummy variables was introduced in the model to control for provincial fixed effects. These may control for size of provincial economy, institutional and political environments, educational systems, etc. The reference group for comparison of the visible minority population is non-visible minority immigrants. Finally, a random error term U is added to the model.

[Insert table 1 here]

The results of the logistic model are converted into odds ratios. An odds ratio represents the constant effect of a predictor X, on the likelihood that an outcome will occur and hence is easier to interpret than the direct probability estimates from the model.

IV. Data used and rationale for the variables used in the logistic model

To estimate the logistic model, micro-data based on a 25 percent sample of the Canadian population drawn from the 2016 census of Canada are used. Access to these data was obtained through the Atlantic Research Data Centre (Halifax) and Research Data Centre (Winnipeg), for which the regular protocols established by Statistics Canada were followed. Only weighted results are released by the Research Data Centres (RDC) and there is also a minimum limit on variable frequencies for their data to be released.[v]

In the 2016 Canadian population census, the characteristics of each generation of immigrants reflect the origins of various waves of immigrants who settled in Canada over time. All labour market information is for 2015. Individuals aged 25-65 living outside the three northern territories (Yukon, Nunavut and the Northwest Territories) are considered. Non-permanent residents are not included in this study

The dummy dependent variable in the logistic model takes on a value of 1 if the individual is a full-time paid employee or is self employed. Hence the probability of employment of this individual is compared with a person who may be unemployed, unpaid worker, not in the labour force or a part-time employee. The rationale for each of the independent variables follows next.

Age is used as a proxy for potential post-schooling labour market

experience, reflecting on-the-job training, as used in earlier literature (for example, Mincer, 1974). This variable is used for the second and third generations and is considered to be both a demographic and human capital variable.[vi] It is also included in quadratic form assuming diminishing returns to training investment by the individual as he/she gets older. For the first generation, the age variable is broken down into two components: age at immigration (AIM) and years since immigration (YSM). This division will be discussed later in this section.

It is now established in the literature that women in Canada receive differential treatment in labour markets (for example, Drolet, 2001). Hence, in this employment probability model, a dummy variable is introduced to identify males from females to control for differences in employment between men and women.

Marital status has an impact on job prospects. Traditionally, there has been a division of work between men and women in a household. Women specialized in household work while men in market work. However, in present times, increased labour force participation of women has resulted in increased participation of men in household production (Cerroto and Cifre, 2018). This means both men and women could sacrifice paid work to meet family obligations, although to less extent for men on average.

A dummy variable representing the presence of children aged five and under living in a household is also included in the model. Galinsky, Bond and Friedman (1996) identified parent employees to have significantly higher levels of conflict between work and family/personal life than non-parents. According to Duxbury and Higgins (2008), the parental responsibilities of working couples generate work-family conflict. Since they have more demands and less control over their time, parents with younger children face more difficulties balancing work and family activities than individuals with no children. They may want to spend more

time on childcare, which can affect the prospect of finding a job. On the other hand, they may also want to participate in the labour force to bring more resources for raising their children.[vii]

Human capital theory emphasizes the role of education in promoting employment. Schultz (1971) argued that education could promote employment and also increase employment incomes by improving people's ability to acquire and decode information and use productive characteristics of other inputs in dynamic economic conditions. As was discussed in the theoretical framework section, a lack of knowledge of the quality of source country's human capital, and the employers' perception of lower intensity of newcomers in "country-specific" human capital may cause an employer in the host country to discount the human capital of first- generation visible minority immigrants and prefer hiring a non-visible minority over them. However, in recent years Canada has been moving towards a 'two-step" immigration selection, where an individual is admitted first on a temporary basis for example as an international student or a temporary foreign worker, and then pathways are being created for the transition to permanent status (Crossman, Fou and Picot, 2021).[viii] This suggests that many first-generation newcomers (especially recent arrivals) may have Canadian-specific human capital. In their study, based on five Canadian censuses (1981-2001), Abdurrahman and Skuterud (2005) analyze the entry earnings of immigrants who arrived during 1966-2000. They distinguish between their foreign and Canadian education and experience by considering their age at immigration and years since immigration. They conclude that the returns to immigrants' education were substantially lower than for native-born Canadians regardless of where the education was obtained - Canada or in a foreign country. At the same time, employers valued immigrants' foreign experience lower than the experience they acquired in Canadian labor markets. The authors of this study were forced

to use age at immigration to attempt to differentiate human capital acquired by immigrants inside and outside of Canada because information on location of study and labour market experience were not available in the census data available to them. Information on the location where a respondent obtained their post-secondary diploma, certificate or degree is now available in the census data.[ix] The present study benefits from this information by including two dummy variables: one denotes if the post-secondary education was obtained outside Canada and the other denotes if it was obtained in Canada. Thus, the reference group is of those who did not acquire a post-secondary education.

Related to the above is the division of labour market experience of first-generation immigrants into pre- and post-immigration. This division accounts for any barriers in transferability of on-the-job skills acquired prior to immigration. For this purpose, we consider the age at immigration to reflect labour market experience prior to immigration and years since migration to reflect purely skills acquired on the job after immigration. This is done using the following decomposition of the Age variable:

$$\text{Age} = \text{AIM} + \text{YSM}$$

where AIM is Age at Immigration, YSM is the Years Since Migration. Thus, we also have:

$$\text{Age-squared} = \text{AIM-squared} + \text{YSM-squared} + 2(\text{AIM})(\text{YSM}).$$

It is understood that some pre-immigration experience may have been acquired in Canada, if an individual's year of arrival in Canada was earlier than the year of obtaining immigrant status.[x] During this period of stay as temporary residents, such persons have limited access to jobs in Canada and hence their ability to acquire Canadian-specific human capital is limited.[xi] The impact of

experience gained in this period on post-immigration employment should appear in the last interaction term. However, we cannot delineate the effect of pre-arrival experience (foreign experience) from post-arrival, but pre-immigration, experience.[xii]

Based on the above mathematical decomposition of Age variable, the following variables replace the Age and Age-squared variables in the logistic model for first generation immigrants: AIM, YSM, AIM-squared, YSM-squared, 2(AIM) (YSM). The pre- and post-immigration marginal impacts of labour market experiences are calculated by converting the corresponding logistic coefficients into odd ratios.

Language is another human capital variable used in the model. Proficiency in host country's language skill is an important determinant of success in labour market (Li, 2001; Chiswick and Miller, 2002, Abdurrahman and Skuterud, 2005).

An indication of the proficiency in a language is obtained if the individual uses that language for communication at home. In this study, we specify a dummy variable "does not use official languages at home" which distinguishes those who did not use any of the official languages at home from those who did.

The coefficient of each visible minority dummy variable indicates the difference in probability that a typical worker in that group is employed, relative to a non-visible minority immigrant, while controlling for demographic and human capital variables described above. Differences between the employment probabilities of a visible minority and a non-visible minority immigrant could be because of four reasons as was discussed in the theoretical section above: 1) employers' lack of information of education and training obtained in the home country of a visible minority immigrant worker 2) employers' normative judgement

of the productivity of visible minority workers 3) lack of motivation due to different pre-labour market experiences and 4) customer's differential evaluation of self-employed visible minorities. Based on the literature reviewed, there is some evidence to suggest that visible minority workers face labour market barriers in Canada where a large majority of employers are non-visible, many of whom may be biased towards them. Hence, the visible minority status variables in the employment probability model are hypothesized to show lower employment odds than for non-visible minorities.[xiii] Census data allowed inclusion of ten visible minority immigrant groups.

V. Sample statistics

The average values of regression variables, and their standard deviations, are reported by generational status of visible minorities in Table 2.

[Insert table 2 here]

Full-time paid employment rate is the lowest for first generation immigrants and very similar for the second and third generations. Second generation immigrants are the youngest in the sample. There are fewer males than females among first generation immigrants, but the gender distribution is split almost equally between men and women in the second and third generations. First generation immigrants are more likely to be legally married and third generation immigrants have the highest percentage of young children (under age 5). The percentage of immigrants who have acquired a post-secondary education is just about the same across the three generations. However, about 31 percent of first generation immigrants acquired their education in Canada and 36 percent outside of Canada. A very small percentage of second and third generations have also acquired their education outside of Canada. About 55 percent of first-

generation immigrants do not use one of the two official languages at home whereas only five percent of second-generation immigrants do not speak official languages at home and all third- generation immigrants use an official language at home which shows a language adaptation effect across generations as more visible minorities are born and grow up in Canada. An average first-generation immigrant was aged about 24 years upon immigrating and has been in Canada for about 21 years. South Asians have the highest percentage among first generations followed by Chinese, Blacks and Filipinos.

VI. Results of empirical estimation

Table 3 presents the results based on the weighted logistic model estimation. Each cell reports the odds ratio calculated from the corresponding estimated coefficient of the logistic model. The odds of employment are also provided for each of the ten visible minority groups as well as for other visible minorities and multiple visible minorities.

[Insert table 3 here]

The odd ratios associated with age and age-squared variables for the second and third generations confirm the quadratic nature of the impact of post-schooling, on-the-job training on their probabilities of employment. The marginal impact of experience is calculated as $e^{(b_1 + 2*b_2*(\text{Average Age}))}$, where b_1 is the coefficient of age while b_2 is the coefficient of ag-squared variable in the logistic model. These are found to be 0.98 and 0.96, respectively. In other words, the odds of employment fall for second and third generations for each additional year of experience, indicating that they have crossed the age at which the odds peak.[xiv]

Odds of full-time employment are higher for a male worker than a female, as

well as for the legally married persons than others. Those among first generation immigrants who have young children are less likely to be working full-time, but the odds are slightly higher for second and third generations when compared with those without young children.

A post-secondary education benefits all generations in finding employment regardless of whether they acquired their education in or outside Canada. However, having an education in Canada yields higher benefits than a foreign education in the case of first and second generations. For the third generation, there is very little difference in the benefits associated with a Canadian or a foreign education.[xv] This result is consistent with earlier results on the differences in returns to a Canadian and non-Canadian education for immigrants as found by Abdurrahman and Skuterud (2005) and Manuel and Plesca (2020).

The analysis also confirms a lack of proficiency in an official language, as proxied by the lack of its use at home, creates a disadvantage in comparison to those who are proficient, as this is true across all generations.

The odds reported for first generation immigrants for age at immigration and years since migration variables also confirm their quadratic relationships to the prospects of employment in Canada. The marginal impacts of pre- and post-immigration on-the-job trainings are calculated as

$e^{(b_9 + 2*b_{10}*(\text{Average AIM}) + b_{13}*(\text{Average YSM}))}$ and

$e^{(b_{11} + 2*b_{12}*(\text{Average YSM}) + b_{13}*(\text{Average AIM}))}$, respectively,

where b_9 is the coefficient of YSM, b_{10} is the coefficient of YSM-square, b_{11} is the coefficient of AIM, b_{12} is the coefficient of AIM-square and b_{13} is the coefficient of the interaction term 2(AIM)(YSM).

Based on these two formulae, the pre-immigration odds are calculated to be 1.0175 while post- immigration odds are 1.0376. Thus, the probability of employment is higher with the acquisition of immigrant (permanent resident) status. Finally, the odds associated with the interaction term indicate the pre-immigration labour market experience does not enhance the impact of post-immigration experience, implying a lack of on-the-job skills transferability.[xvi]

In summary, the odds of being employed based on selected demographic and human capital variables are according to our predictions. We now turn to the variables that are the focus of our study, which is to analyze the estimates of employment odds in each visible minority group while controlling for their demographic and human capital characteristics. This is reflected in the odd ratios reported in Table 3 for each visible minority group.

All three generations of Arabs, Blacks, Koreans, and West Asians, have lower employment odds than their non-visible minority counterparts. First-generation South Asians have higher odds but not so for their second and third generations. The result is opposite for Chinese immigrants. For their second-generation, the odds of being a full-time paid employee are about 18 percent higher than for non-visible minority workers, while their third generation does as well as their non-visible minority counterparts. First generation Filipino workers enjoy the highest chance of being employed fulltime than any other groups of immigrants. They are most likely to be farm or domestic workers who have arrived in Canada as temporary foreign workers with pre-arranged employment. Their employment advantage over non-visible minorities disappears in the third generation. For Southeast Asians, only the first generation enjoys better odds of employment over non-visible minorities. Other visible minorities compare closely to their non-visible minority counterparts in first and second generations but not in

the third. Those of multiple visible minority origin do better only in their first generations while others face lower odds of employment compared to their reference group.

In summary, the third generation of all visible minorities face lower odds of employment in Canada than their non-visible minority counterparts. Out of the ten visible minority groups of immigrants, all three generations in four groups - Arabs, Blacks, Koreans, and West Asians – face lower odds of employment than their non-visible minority counterparts. Among the remaining six, there are some mixed results for the first and second generations. First and second generations of Arabs face the lowest employment probabilities superseded only by Latin Americans in the third generation.

VII. Summary, conclusions, and discussion of results

There is a vast diversity among visible minority immigrants in Canada based on their countries/regions of origin. They also comprise of numerous cultural, religious, and linguistic groups. Our data allowed us to compare employment probabilities for ten different visible minority groups, across three generations, when controlling for certain demographic and human capital variables. We found that all three generations in four of these groups had employment probabilities below non-visible minority immigrants. First and second generations of the rest had some mixed results, but there are lower employment probabilities for third generations in all visible minority groups despite their likely advantage over the first generation in possessing Canada's country-specific human capital.[xvii]

While there were some mixed results with respect to the demographic variables across generations of visible minorities, their employment probabilities based on a non- Canadian education were found to be lower than if the education was obtained in Canada. In case of first-generation immigrants, pre-immigration labour market

experience is also valued less by employers relative to their post-immigration experience. First generation immigrants also cannot expect to build on their pre-immigration skills by acquiring Canadian-specific skills to enhance the probability of employment. Part of this outcome is attributable to non-transferability of skills from country of origin but, for those who held a temporary resident status before becoming permanent residents, this could reflect their limited ability to acquire Canadian-specific human capital prior to obtaining permanent status.

The lower odds of being employed for visible minority immigrants, especially for most of the third generation, could be attributed to some unobservable characteristics such as ability or motivation, as well as their differential treatment by employers who may have a normative judgement of their workplace productivity. As discussed earlier in the paper, Banerjee (2008) found that established immigrants are more likely to perceive workplace discrimination than new immigrants.

Third generations of immigrants are offshoots of established immigrants. Whether the negative perceptions of established immigrants, formed because of their experiences in the workplaces are passed on to future generations, causing lower motivation among them, can be the subject of a future survey study.

The negative impact of the presence of young children in the family on employment of first-generation immigrants needs an in-depth study. Could this be due to their difficult access to childcare or due to parental preferences based on the values acquired in the country of origin? Answering this question can help public policy in raising their economic participation.

The result that the odds of being employed are significantly lower for those who cannot communicate fluently in English or French – Canada's official languages -

highlights the importance of public policy support in facilitating language training of new arrivals. The Canadian government provides funding for language training of new arrivals through schools, colleges, settlement sectors and community organizations. However, a recent survey-based study conducted in the province of Nova Scotia found that many new arrivals were unaware that such opportunities existed for them (Akbari, 2020). Hence, there is a need for the governments to promote the availability of language programs, and their importance, through various media channels. Many immigrants are young at the time of arrival, with a long working life ahead of them Learning the official languages of their adopted country can be an important human capital investment whose benefits they reap over a long time.

Nearly 60 percent of annual immigrant arrivals in Canada are economic immigrants who are selected, by policy, for their higher human capital, such as education and experience, than others. Despite the finding that foreign education credentials of immigrants are valued less in Canada, this study found that higher educational attainment is associated with increases in employment probabilities for the first generation of immigrants in Canadian labour market regardless of where the education was obtained. [xviii] Other studies, such as Wald and Fang (2008) have also found that immigrants with foreign education are more likely to experience skill mismatch in Canadian labour markets than native-born. More may need to be done to bring their outcomes similar to non-visible minorities. Facilitating information availability on the quality of education and training offered in source countries of visible minorities could motivate employers to pay more careful attention to their credentials. Employer driven programs that connect potential immigrants to employers prior to their arrival are potentially valuable steps in this regard.[xix] Based on the predictions Becker's (1971) personal prejudice model, employers who normatively judge the productivity of visible minority workers may miss out on workers who possess

higher ability and motivation and can add to their bottom line.[xx]

Smaller percentages of second and third generation visible minority immigrants have acquired university degrees than their first generation. The possibility that their lower participation in higher education in Canada could be the result of their perception of lower returns formed by parental experiences could be a source of endogeneity in the model which has not been addressed in this research. However, a cross section study on 33 countries (developed and developing) found that the instrumental-variable estimates of earnings and employment returns to skills are consistently larger than those found in standard least-squares estimations (Hampf, et al. 2017).[xxi] Another study that used US data found that education significantly increases re-employment rates of the unemployed (Riddell and Song, 2011).

Another limitation of the present study is that it does not control for the effect of the mild recession Canada experienced in late 2014 and early 2015. The labour market outcomes of recently arrived immigrants are often more negatively affected during recessions than those of the Canadian born and perhaps the difference between visible minority immigrants and other immigrants is similarly affected. Entering the labour market during a recession may also result in a long-lasting "scarring" effect for both immigrants and Canadian- born workers (Hou and Picot, 2022).

While COVID-19 closures significantly slowed the flows of immigration to western countries in 2020, those numbers started to rise in 2021. Studies have shown that immigrants have been disproportionately impacted by the adverse effects of COVID-19 (World Education Services, 2020). To keep Canada competitive in attracting talent in the post-pandemic era, the present article calls to investigate the exact mechanisms that lead to the barriers visible minority immigrants face in their labour market

integration and the way policy affects their outcomes.

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Endnotes

[i] According to Employment Equity Act of 1995, "visible minorities are persons, other than Aboriginal peoples, who are non-Caucasians in race or non-white in colour." https://www.tbs-sct.canada.ca/pubs_pol/hrpubs/tb_852/over01-eng.asp#:~:text=Employment Equity Act %281996%29 The new Employment Equity,private and public sector employers under federal jurisdiction.

[ii] These data are reported on "Number and proportion of visible minority population in Canada, 1981 to 2036 (statcan.gc.ca)".

[iii] The impacts of Canadian versus outside Canada education are also analyzed for the second and third generations, a very small percentages of who have acquired their education outside of Canada.

[iv] First generation immigrants are born outside Canada. Second generation immigrants are born in Canada as children of at least one parent born outside Canada and third-generation immigrants are born in Canada of parents born in Canada with at least one parent a second-generation immigrant

[v] Statistics Canada uses the weight variable COMPW2 to weigh the results it allows for release by RDCs. This is also the weight variable used for official Statistics Canada tabulations to represent the population under a study.

[vi] The standard approach, used in for example Skuterud (2010), is to include years of potential experience (i.e. age minus years of schooling minus 6), assuming the individual entered school at 6 years of age and attended school without interruption. However, we refrain from this calculation because 1) different source countries of immigrants may have different school entry age and men and women may also have interruptions in schooling due to various reasons (child labour, traditional gender roles, etc.), 2) to allow a comparison of second and third generations with the first generation for whom the age variable has been split into AIM and YSM.

[vii] Fuligni (2006) found that one of the top reasons immigrants give for coming to the United States is a desire to provide better educational and economic opportunities to their families and children. This suggests a positive impact of the presence of children on prospects of employment.

[viii] One example is the Provincial Nominee Program (PNP) which has several pathways for international students who want to acquire permanent resident status after completion of their degree.

[ix] This information was first collected in the 2006 census

[x] This could be the case if the person arrived as a non-permanent resident (for example, a visitor or on a study or work permit) before obtaining permanent resident (or immigrant) status in Canada.

[xi] There are certain other restrictions on persons with temporary resident status, such as no voting rights, which restrict their civic participation.

[xii] Census data do not include a year of arrival variable.

[xiii] The visible minority status is included separately from the demographic variables since its impact is the focus of this study while controlling for the other demographic and human capital variables.

[xiv] The current age is reported in Table 2.

[xv] Although the percentages of those with foreign education are small in second and third generations, the actual numbers are about 10,635 and 20,542 in the weighted samples.

[xvi] The reader may recall that pre-immigration experience proxies not only skills acquired before coming to Canada but also after coming to Canada in case of those who arrived as temporary residents.

[xvii] In a descriptive analysis of 2001 census data, Boyd (2006) reported mixed socioeconomic achievement of second generation young adults aged 20-29 in visible minorities. Third generations

underperformed the first and second generations.

[xviii] The impacts of Canadian versus outside Canada education is also analyzed for the second and third generations, a very small percentages of who have acquired their education outside of Canada.

[xix] Two such examples are Atlantic Immigration Program t in Atlantic Canada (Atlantic Immigration Program - Canada.ca and Entrepreneur Pilot Program in British Columbia (BC PNP Entrepreneur Regional Pilot | Immigration to BC | Moving2Canada).

[xx] Another study on Canada found large variations in socioeconomic outcomes, across second generation groups of visible minorities even after controlling for various socio-economic influences (Chen and Hou, 2019).

[xxi] That study also provides a comprehensive review of literature on endogenous bias in returns to human capital in cross section studies of earnings and employment.

Table 1: Description of independent variables in the Logistic model

Variables	Description
Demographic variables (X_i)	
Age	Current age of individual, applied in cases of second and third generations
Age Squared	To account for the quadratic effect of age
Male	= 1 if the individual is male, 0 = if the individual is female
Marital status	= 1 if the individual is legally married, 0 = otherwise
Presence of children aged 5 or under	=1 if the child is 0-5 years of age, 0 = otherwise
Human capital variables (X_j)	
Post-secondary education obtained in Canada*	= 1 if the individual obtained post-secondary education in Canada 0 = otherwise
Post-secondary education obtained outside Canada*	=1 if the individual obtained post-secondary education in Canada =0 otherwise
Does not use any official language at home	=1 if the individual does not use any official languages at home =0 otherwise
Age at Immigration (AIM)	Applied in case of first generation as a proxy for their pre-immigration labour market experience
AIM-square	Accounts for the quadratic effect of AIM
Years since immigration (YSM)	Applied in case of first generation as a proxy for their post-immigration labour market experience. Calculated as the difference between current age and age at immigration
YSM-squared	Accounts for the quadratic effect of YSM
2 (AIM)(YSM)**	Accounts for the impact of pre-immigration experience on post-immigration experience
Visible minority status (X_k)	
Visible minority status	Represented by dummy variables for Arab, Asian, Black, Chinese, Filipino, Japanese, Korean, Latin American, South Asian, Southeast Asian, West Asian, Other Visible minority and Multiple Visible Minority. The reference group is non-visible minority immigrants.

*Based on the location of study variable in the census microdata. Reference group includes all those who have not acquired a post-secondary education.
** Interaction term that follows mathematically from the decomposition of age variable into age at immigration and years since migration, as will be explained in the text.

Table 2: Summary of sample characteristics by generational status (weighted mean years for age, age at immigration and years since immigration, percentage for other variables).

Variables	First Generation		Second Generation		Third Generation	
	Mean	Standard deviation	Mean	Standard deviation	Mean	Standard deviation
Full-time employed	59.00	0.49	65.00	0.47	64.00	0.47
Age (mean years)	45.05	11.27	43.76	11.59	45.89	11.91
Male	47.00	0.49	50.00	0.50	49.00	0.49
Marital status	67.00	0.46	51.00	0.49	46.00	0.49
Presence of children aged 5 and under	38.00	0.48	38.00	0.48	43.00	0.49
Postsecondary certificate, diploma, or degree in Canada	31.00	0.46	67.00	0.47	61.00	0.48
Postsecondary certificate, diploma, or degree outside Canada	36.00	0.48	2.00	0.16	1.00	0.10
Does not use any official language at home	54.00	0.49	5.00	0.21	1.00	0.05
Age at Immigration (AIM)	23.66	14.33	NA	NA	NA	NA
Years since immigration (YSM)	21.38	14.83	NA	NA	NA	NA
Arab	4.00	0.21	1.00	0.08	1.00	0.01
Black	8.00	0.28	4.00	0.19	1.00	0.05
Chinese	14.00	0.35	4.00	0.20	1.00	0.03
Filipino	7.00	0.27	1.00	0.11	1.00	0.01
Japanese	1.00	0.06	1.00	0.05	1.00	0.03
Korean	1.00	0.13	1.00	0.03	1.00	0.01
Latin American	4.00	0.21	1.00	0.08	1.00	0.01
South Asian	17.00	0.38	4.00	0.20	1.00	0.02
Southeast Asian	2.00	0.17	1.00	0.09	1.00	0.01
West Asian	3.00	0.03	1.00	0.03	1.00	0.01
Visible minority, n.i.e.*	1.00	0.01	1.00	0.07	1.00	0.01
Multiple Visible Minority	1.00	0.11	1.00	0.08	1.00	0.01

*n.i.e = not identified elsewhere. NA = Not Available (data not released by RDCs). Number of observations for the first, second and third generations are 1,059,730; 531,735 and 2,054,200 respectively.

Table 3: Odds ratio based on Logistic estimates of employment model

Variables	Generation status		
	First Generation	Second Generation	Third Generation
Age		1.2283*** (0.0021)	1.2547*** (0.0010)
Age-squared		0.9974*** (0.0000)	0.9971*** (0.0000)
Male	2.2398*** (0.0091)	1.8148*** (0.0055)	2.0151*** (0.0028)
Marital Status	1.0445*** (0.0051)	1.1596*** (0.0063)	1.0757*** (0.0032)
Presence of children 5 and under	0.9406*** (0.0043)	1.0571*** (0.0062)	1.0611*** (0.0030)
Post secondary certificate, diploma, or degree in Canada	1.8447*** (0.0098)	1.5733*** (0.0060)	1.6576*** (0.0029)
Post secondary certificate, diploma, or degree outside Canada	1.5035*** (0.0077)	1.2649*** (0.0177)	1.6342*** (0.0146)
Does not use any official language at home	0.7872*** (0.0037)	0.7209*** (0.0128)	0.4286*** (0.0272)
Age at Immigration (AIM)	1.1869*** (0.0020)		
AIM-squared	0.9977*** (0.0000)		
Years since immigration (YSM)	1.2182*** (0.0020)		
YSM-squared	0.9974*** (0.0000)		
2*AIM*YSM	0.9979*** (0.0000)		
Arab	0.5488*** (0.0053)	0.7241*** (0.0319)	0.5803*** (0.1575)
Black	0.9301*** (0.0075)	0.7684*** (0.0143)	0.6978*** (0.0258)
Chinese	0.9327*** (0.0064)	1.1872*** (0.0146)	0.9996 (0.0452)
Filipino	2.2341*** (0.0208)	1.0610*** (0.0263)	0.7391* (0.1660)
Japanese	0.6770*** (0.0207)	0.9593 (0.0505)	1.1008*** (0.0370)
Korean	0.6344*** (0.0097)	0.8586*** (0.0494)	0.6615 (0.2612)
Latin American	1.1044*** (0.0110)	0.9469* (0.0318)	0.4703*** (0.1719)
South Asian	1.0415*** (0.0066)	0.9941*** (0.0145)	0.8364*** (0.0698)

Southeast Asian	1.0897*** (0.0134)	1.0481 (0.0313)	0.7149** (0.1755)
West Asian	0.5762*** (0.0068)	0.8241*** (0.0714)	0.6712 (0.3342)
Visible minority, n.i.e.	1.0243 (0.0201)	1.0200 (0.0362)	0.5803*** (0.1365)
Multiple Visible Minority	1.0574*** (0.0184)	0.9431** (0.0317)	0.8532 (0.1007)
Pseudo R-squared	0.0764	0.0596	0.0833
No of Observation(weighted)	1,059,730	531,735	2,054,200

Note: Dependent variable is a binary variable distinguishing a full-time paid worker and self-employed from the unemployed, unpaid worker, not in the labour force or a part-time employee. Numbers in parentheses are robust weighted standard errors. A full-time visible minority immigrant is compared with a non-visible minority worker. Provincial dummies (not reported) were introduced to control for provincial fixed effects. *** P<0.01, ** P<0.05, * P<0.1.