

Labour Force Participation of
Visible Minority Immigrants in Nova
Scotia: Circa 2006

By

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Definitions

Labour Force – all those individuals who are either employed in the work force, or are not employed but are actively seeking work.

Labour Force Participation Rate – percentage of working age population 15 and above which is in the labour force.

Immigrants – foreign-born persons who are, or have ever been, landed immigrants in Canada. A landed immigrant is a person who has been granted the right to live in Canada permanently by immigration authorities.

Non Immigrants – persons who are Canadian citizens by birth. Although most Canadian citizens by birth were born in Canada, a small number were born outside Canada to Canadian parents.

Visible Minority – persons, other than Aboriginal peoples, who are non-Caucasian in race or non white in color.

INTRODUCTION

The purpose of this study is to analyze the Labour Force Participation Rates (LFPR) of visible minority immigrants in Nova Scotia and provide their comparisons with non immigrants. This paper first provides a description of the Nova Scotian population based on immigrant status and gender. Next, the labour force participation rates of overall immigrants are examined and compared with non-immigrants. Finally, the labour force participation rates of visible minority immigrants are analyzed. To provide a meaningful comparison with non-immigrants, the immigrant's labour force participation rates are adjusted for their difference in age distribution with non-immigrants and are analyzed separately for males and females. Data from 2006 Canadian population census are analyzed.¹

LFPR of immigrants in Nova Scotia is of particular interest because in recent years, the province has experienced an increase in its immigrant inflows. This increase is attributed to recent policy and community initiatives adopted in the province to attract and retain immigrants. The need for adopting these initiatives was felt due to the decline in provincial population growth rate and an aging population. Economists and population planners argue that population growth decline and population aging can have serious economic consequences such as a decline in investments due to shrinking markets, labour shortages, a lower allocation of federal transfers, etc. (Government of Nova Scotia, 2005). LFPR is an important indicator of economic performance of individuals in a population group. By analyzing LFPR, we will be able to broadly assess immigrants' impact on provincial economy and if immigrants can help meet labour shortages in the province. It is expected that immigrants will have a different LFPR because they have a larger, immeasurable drive to participate in the work force than non immigrants. The decision to leave one's country of birth in order to resettle in another is a human capital investment, where the individual seeks better economic opportunities. This choice to

¹ All tables in this paper are based on Census based tables published by Statistics Canada on the StatCan website. Data in those tables are based on a 20% random sample of Census respondents. Sample observations were projected to represent the entire population by using Census weights. Based on this sample in this paper, there were 708745 non immigrants aged 15+ and 47850 immigrants aged 15+ (reflected in Table D) in Nova Scotia at the time of the 2006 Census.

immigrate creates both a financial and psychological cost on the individual, and in order to recoup these costs, the immigrant may want to stay in the labour force longer than a non immigrant. New immigrants also tend to be young (between 25 and 35 years of age), and are therefore able to stay in the labour force and reap the benefits of their immigration decision by working for a long time after arriving in their country of destination.

NATIONAL HISTORIC TRENDS IN CANADIAN IMMIGRATION

Canadian immigration policy has changed several times since the 19th century. In the early years of Confederation, officials were concerned with attracting American and European immigrants to develop the agricultural sector, which at that point in time was the largest sector of the economy. This policy persisted for many years, especially when the Prairie Provinces joined the country. The vast majority of immigrants who came to Canada during that time were from Britain and the United States, with fewer individuals/families coming from the rest of Northern and Western Europe. Immigration inflows dropped between 1914-1918 and the Great Depression, when high unemployment levels and deep economic recession, caused heavier restrictions to be put in place on the admission of immigrants. Periods where the country experienced relative prosperity caused certain admission restrictions to be relaxed. It was between the First and Second World Wars that the policy of sponsored immigration, and visas were introduced. After World War II, there was renewed interest in increasing the population growth rate through immigration, by allowing residents to sponsor family members and reaching out to those people who had been displaced overseas because of the war. Preference was given to those coming from Britain, Ireland, France and America, although individuals/families from the rest of Europe were also considered.

During the 1960s, significant changes in the workforce caused a shift in the skills required by workers. This resulted in immigration policy shifting to focus on those individuals who had certain educational backgrounds and labour market skill, in order to meet the shortage of workers who could work in professional, technical and skill-based

occupations. This resulted in certain educational requirements which would-be immigrants were expected to meet in order to be considered for entrance into the country. The discriminatory factors of immigration policies as per the 1910 Immigration Act, which restricted immigration from African, Asian and Middle Eastern countries, were dropped in 1967. The “point system” for unsponsored immigrants was introduced, where the individual’s educational background, occupational skill, age, proficiency in English/French, demand for his/her occupation in Canada and prearranged employment were awarded points. More importance was given to education levels, experience, training and capability. Also, the “nominated immigrant” class was established, which relaxed the requirements of language proficiency and arranged employment for those immigrants who were nominated by relatives living in Canada. However, nominated immigrants still had to qualify under the point system for educational background and occupational skill, as well as other personal characteristics.

In the 1970s a new Act was passed into law which divided immigrants into three groups; the family class, which allowed residents to sponsor many different relatives; the Convention refugees, for those immigrants who faced possible harm in their home countries; and the independent/other immigrant class, which was the only class to be subjected to the point system. It was also during this time that target levels of immigration were set, which the country would try to achieve in certain periods, due to regional demographic and labour market considerations. However, the recession and high levels of unemployment in the late 1970s and early 1980s caused immigration policies to change yet again, becoming more restrictive and even deducting points for those potential immigrants who had no pre-established job position. Because of these factors, the number of immigrants who were accepted into the country dropped significantly. By 1985-87, policy makers became concerned that the natural population growth rate of the country was declining, and there were fears that if this trend were to continue, the national population could decline in absolute terms. It was also in this period of time that statistics showed an aging trend in the population. Concern was raised that this aging trend would in the near future increase the burden on the productive labour

force to support and provide social services such as health care and pensions to an expanding number of non-working elderly citizens.

To counteract this trend, it was suggested that immigration should be pursued more intensely, and that a greater emphasis should be placed on the potential economic impact the resulting influx of immigrants could have on the labour force and the economy. As a result, a stable increase in the number of immigrants was seen through the late 1980's and early 1990s, with a reduction in the number of immigrants being accepted in the family class, but more seen in the independent/other immigrant class. A more long-term approach and the need for more skilled labour were persistent during the 1990s. By 2002, the Immigration Act of the 1970s was replaced. More points were awarded to those who were fluent in one of the country's two languages, and changes were made to the age and skilled workers categories in order to entice young, bilingual and highly educated workers to the country.

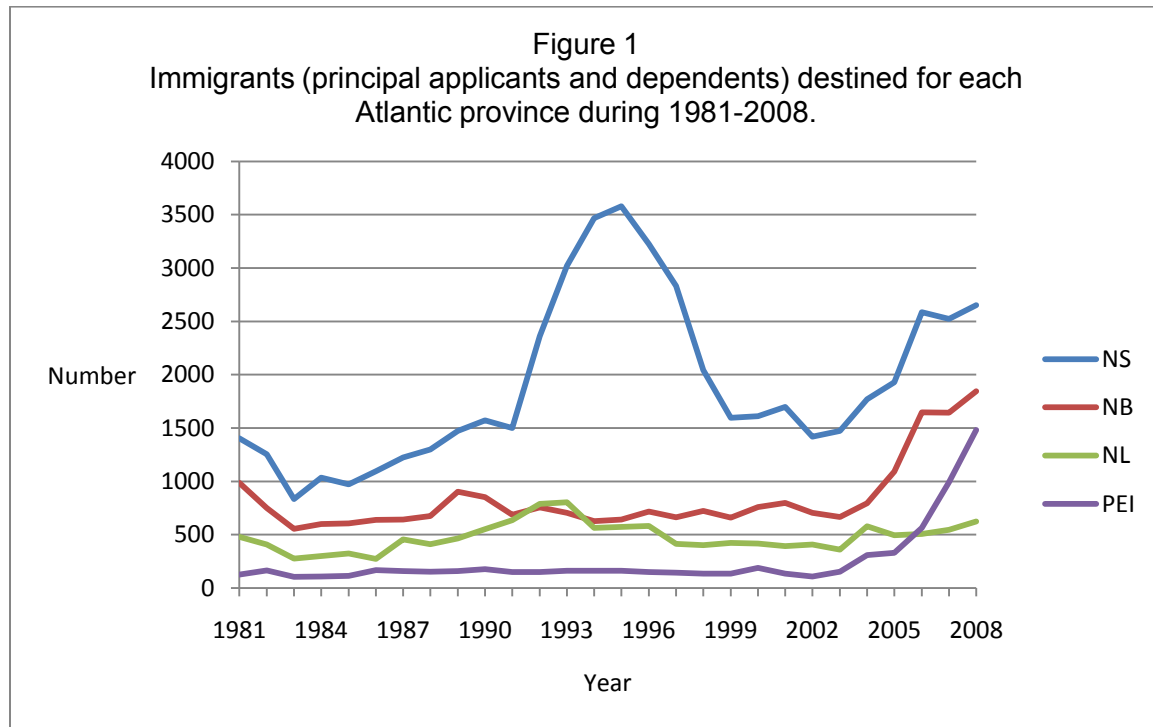
PROVINCIAL IMMIGRATION TRENDS²

Most immigrants entering Canada go to Central and Western Canada where greater job opportunities exist, and where others of the same immigrant community reside. In 2005, 53.6% of all incoming immigrants settled in Ontario. British Columbia and Quebec received 17.1% and 16.5% of all immigrants, respectively. Of all immigrants who arrived in the country in 2005, only 0.7% settled in Nova Scotia. An additional 0.7% settled in the remaining Atlantic Provinces. Ontario, British Columbia and Quebec have adopted successful strategies that integrate and aid newcomers in pursuing economic opportunities. For example, the "Bridges Program" in Ontario helps new comers find jobs in their fields. The populations of these regions have a greater proportion of immigrants than the population of Atlantic Canada. Because of a declining population growth rate³, provinces in Atlantic Canada are now also seeking to attract and retain more immigrants to the region by promoting strong educational opportunities in the region, and

² Most of this section references Genevieve, 2007.

³ A declining population growth rate is a result of a decrease in the natural population growth rate and net out migration.

by providing incentives for work in rural areas. Each province is now a signatory to the Provincial Nominee Program (PNP), under which it can “nominate” an immigrant based on its own labour market needs. Since 2003, the number of immigrants arriving in each Atlantic province has been steadily rising, as shown in Figure 1.



Source: Citizenship and Immigration Canada (CIC), Facts and Figures, various issues.

Among all four provinces, Nova Scotia has consistently attracted the greatest number of immigrants. This number increased sharply from 1991 to 1995, before falling back down to its natural level from 1995 to 1999, in the aftermath of the first Gulf War and political changes in Eastern Europe. Prince Edward Island attracted the lowest number of immigrants coming to the region between 1981 and 2005 (less than 500 immigrants every year), before increasing in 2006 and onwards. However, all four provinces show a general increase in the number of immigrants arriving from 2003 onwards. This new trend reflects provincial initiatives adopted at government and community levels to attract and retain immigrants in the region, such as the PNP mentioned earlier. For Nova Scotia, a breakdown of the provincial population by immigrants and non immigrants in 2006 is given below.

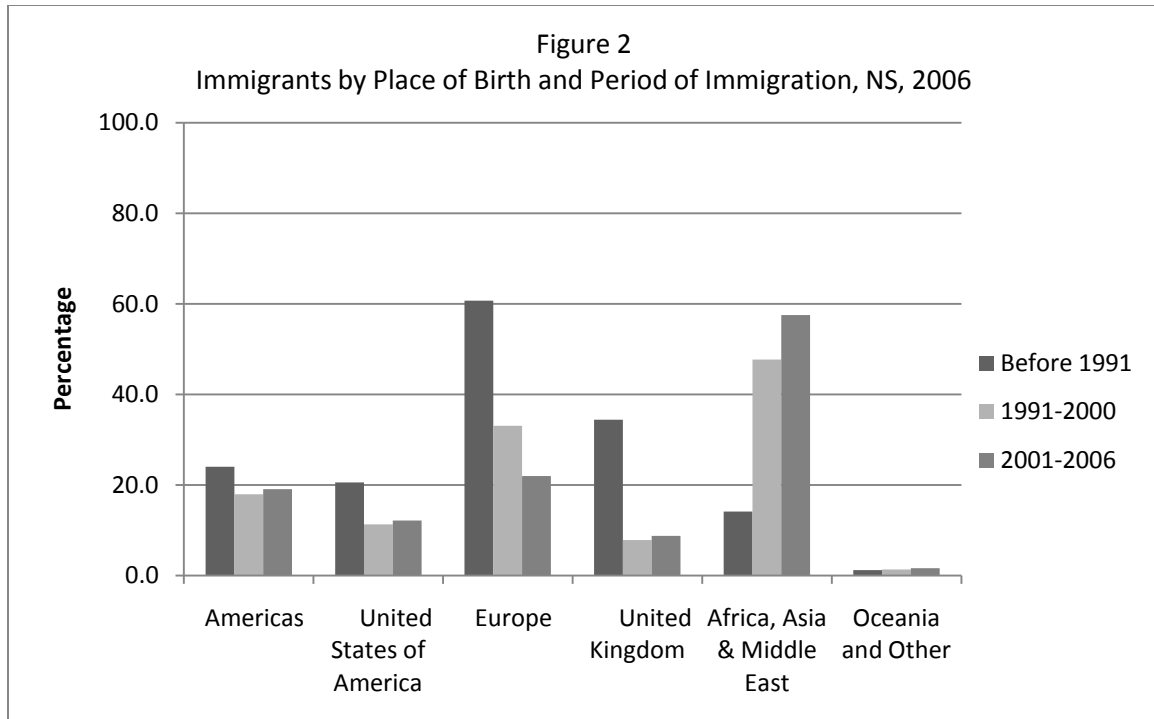
Immigrant status	Male		Female		Total	
	Number	%	Number	%	Number	%
Total	435570	100.00	467520	100	903090	100.00
Non-immigrants	412430	94.69	442070	94.56	854500	94.62
Immigrants	21330	4.90	23860	5.10	45190	5.00

Source: Statistics Canada - 2006 Census. Catalogue Number 97-557-XCB2006013. Totals may not add up due to a small number of non-permanent residents.

Based on the 2006 census, there were about 45 000 immigrants living in Nova Scotia, which was about 5% of the population. Of the total number of immigrants, there are 2530 more females than males. Among non immigrants, there are 29 640 more females than males.

Appendix Table A shows that approximately half of the immigrants residing in Nova Scotia came from Europe. European immigrants were almost equally split between males and females. Little more than half of these European immigrants came from the United Kingdom (25.80% of the total immigrant population, and 51.7% of the European immigrant population). The second largest immigrant population in Nova Scotia was of those who came from Asia and the Middle East (at 21.94% of the total immigrant population). These Asian and Middle Eastern immigrants were mostly from West Central Asia, Eastern Asia (China, Hong Kong, others) and the Middle East. Immigrants from the United States of America constitute 17.6% of the total immigrant population. The greatest gender difference is observed for American immigrants.

The data presented in Table A is on overall stock of immigrants as of 2006. As discussed in the section on national historic trends, the source country of immigrants has changed since the 1970s. This change became more noticeable in Atlantic Canada since the early 1990s, as reflected in Table B (see appendix). The following chart summarizes the trends.



Source: Statistics Canada - 2006 Census. Catalogue Number 97-557-XCB2006007.

The proportion of American immigrants arriving in Nova Scotia has decreased since 1991 and has remained relatively fixed since then. Of the immigrants who arrived before 1991, the highest proportion was from Europe (at 60.7% of immigrants who arrived before 1991). This group shows a trend similar to that of the American group. The proportion of European immigrants among all immigrants who arrived in later periods also decreased by about 50%. The number of immigrants who came from Africa, Asia and the Middle East increased the most after 1991, and their percentage in total inflows quadrupled. Among immigrants who had arrived after 2001, this group made up 44.7% of the total. In sum, the source country mix of immigrants arriving in the province has shifted from the US and Europe to countries of Asia and the Middle East.

DETERMINANTS OF LABOR FORCE PARTICIPATION

Kaufman and Hotchkiss (2003) provide a review of literature on labour force participation by individuals and households. The following summary is based mostly on their review.

1) Labour/Leisure preferences – An individual faces a tradeoff between work and leisure. Work provides income which generates utility, but leisure also generates utility. An individual chooses a combination of leisure and income which maximizes utility. The choice of this combination will change with any change in wage rate (also viewed as price of leisure), individual's taste for leisure time, and non labour income. Assuming leisure to be a normal good, an increase in non labour income will increase demand for leisure, thus reducing the desire to work. It is possible that non labour income can increase to a point where the individual decides to drop out of the labour force completely. Changes in non labour income show a pure income effect. If the market wage rate were to increase, then if the person was originally in the labour force, an increase in the wage rate will either increase or decrease the number of hours he/she works (Keeley (1981), Powell (1997)), based on the magnitude of the income and substitution effects. If a person was originally not in the labour force, an increase in the market wage rate will increase the probability that the person will enter the labour force. An individual's *reservation wage* is the minimum wage that the person is willing to paid in order to enter the labour force. When the market wage is lower than the person's reservation wage, the individual chooses to remain out of the labour market because the cost of giving up an extra hour of leisure is more than the benefit received from working at the market wage rate. Therefore, in order for a person to enter the labour force, the market wage rate must be greater than the reservation wage rate.

An extension of the labour/leisure choice model is the model of household labour supply. Pioneering work in regards to this model has been done by Mincer (1962), followed by Shapiro and Shaw (1984), and Fortin and Lacroix (1997). In a household setting, decisions regarding labour force participation are made jointly by household members. Both, or individual members in a household can either choose market work, non-market work and leisure. The objective is to maximize collective utility of the household by efficiently allocating the time available to each member. An increase in non-labour income of any member will increase the household's utility, and cause the number of hours worked for at least one member to decrease, because the collective demand for

leisure increases. The change in wage rate of one member not only changes his/her hours of work, but also that of other members.

2) Gender – Until the 1950's, labour force participation rate of women was low largely because of the social norm that once married, a woman was expected to work in the household. Since the 1960's, changes in the wages offered in the market, anti-discriminatory programs, and changes in social attitudes have caused a steady increase in the labour force participation rates for females. Interestingly, the last 50 years have seen a decrease in the labour force participation rate for males. Labour force participation rates are different for males and females for many reasons. These include:

- a) Traditionally, women take greater household responsibility and also spend more time in caring for children and elderly household members. This will affect the time they spend in the labour force. However, recent changes in social attitudes towards women's work and also availability of household aids (e.g. microwave oven, washing machines, etc.) have allowed women to spend more time in market work, thereby increasing their LFPR.
- b) Fertility – women usually take some time off from the labour force during their fertile age, which affects their LFPR. This has been confirmed in an empirical study by Carrasco (2001).
- c) Discrimination – if women feel they will be discriminated against in the work force, they become “discouraged” and do not participate in the labour force.

3) Age⁴ – Data on many countries (US, Canada, etc.) suggest that as an individual ages, labour force participation increases, and then drops after reaching a peak during ages 45-54. After reaching the age of 55, many individuals drop out of the labour force either due to job requirements (mandatory retirement) or due to biological and other reasons. This is observed even though wages are higher. Perhaps the cost of substituting leisure for labour for leisure is much higher for younger individuals than for older ones. This means

⁴ The discussion in this section is consistent with the theory on life cycle allocation of time.

that an individual has a greater incentive to work between the ages of 15 and 44 than later in life.

4) Education – as the years of education increase, the probability of labour force participation also increases. This is for several reasons. First, education is regarded by individuals as an investment in the sense that the immediate costs of attaining education will be recovered later in life in higher earnings in a higher job position. Second, wages have been shown to rise as years of education rise, thereby increasing the opportunity cost of leisure. Finally, education may change an individual's perception on the value of home work compared to market work.

In sum, many economic and demographic factors influence an individual's participation in the labour force. Hence, to analyze differences in LFPR across population groups, one must control for these factors for each population. Due to data and time constraints, this paper only controls for age and gender differences, which many economists (such as McLaughlin, 1985) view to be the main factors that cause LFPR to be different across demographic groups.

LABOUR FORCE PARTICIPATION RATES OF IMMIGRANTS

Based on the discussion in the previous section, the labour force participation rates can be expected to be different between immigrants and non-immigrants if, compared to non-immigrants, immigrants have a different age and/or gender distribution, have different education levels, have different motivation levels, different preferences for work and leisure, and because of discrimination towards immigrants. These are some main determinants of differences in LFPRs of the two populations. This study controls for the effects of age and gender.

The following table provides data on the labour force participation rates (LFPR) of immigrant and non-immigrant males and females in Nova Scotia from the 2006 census.

	Immigrants	Non-immigrants	Total Population
Males	65.4	68.4	68.1
Females	51.6	58.7	58.2

Source: Statistics Canada - 2006 Census. Catalogue no. 97-562-XCB2006017.

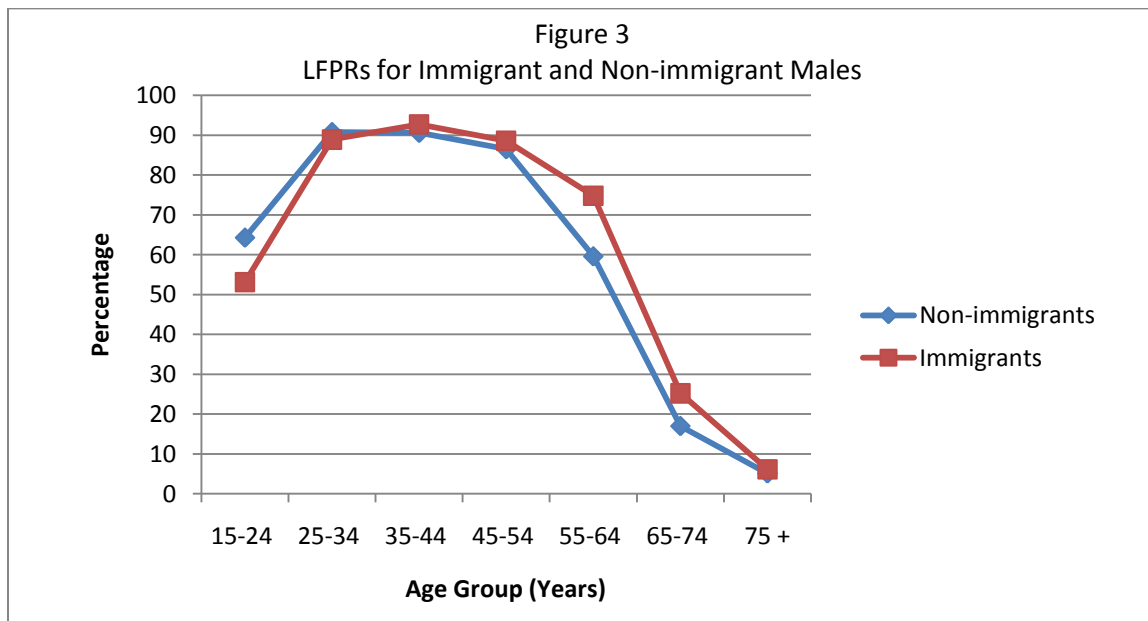
For both immigrant and non-immigrant females, LFPR are lower than for males. However, there is a greater difference observed between the male and female immigrant LFPR's than between the non-immigrant male and female LFPR's. There is a difference of almost 10 percentage points between the LFPR's for immigrant males and immigrant females. However, a comparison of LFPR's of immigrants, as reported above, with non-immigrants can be misleading because of differences in demographic characteristics of immigrants. We have accounted for gender differences in the above Table. As mentioned previously, another important factor that can affect the LFPR in a population group is the age distribution of its members. The LFPRs for male immigrants who are under 45 are lower than their non-immigrant counterparts (see Figure 3 below), while female immigrants continue to have lower LFPR than their non-immigrant counterparts until they reach age 54. There are also a smaller proportion of immigrants who are under 45 than non immigrants (Appendix Table D). Since the LFPR declines at older age, these differences in age distribution and in age distribution of LFPR between immigrants and non-immigrants warrant an adjustment in immigrants' LFPR. Based on Clogg's (1978) method, an "age-adjusted" LFPR for immigrant males and females is provided in Table 3. This adjusted LFPR indicates what the LFPRs for immigrants would look like if their age distributions were the same as of non immigrants'.

	Immigrants		Non-immigrants
	UNADJUSTED	ADJUSTED	
Males	65.4	70.19	68.4
Females	51.6	57.63	58.7

Source: Statistics Canada - 2006 Census. Catalogue no. 97-562-XCB2006017.

Note: The adjusted rates are calculated by multiplying the participation rate for each immigrant age group by the percentage of non immigrant individuals in that age group, summing these results and then dividing by 100. This method of adjusting for age differences is also used by McLaughlin (1985).

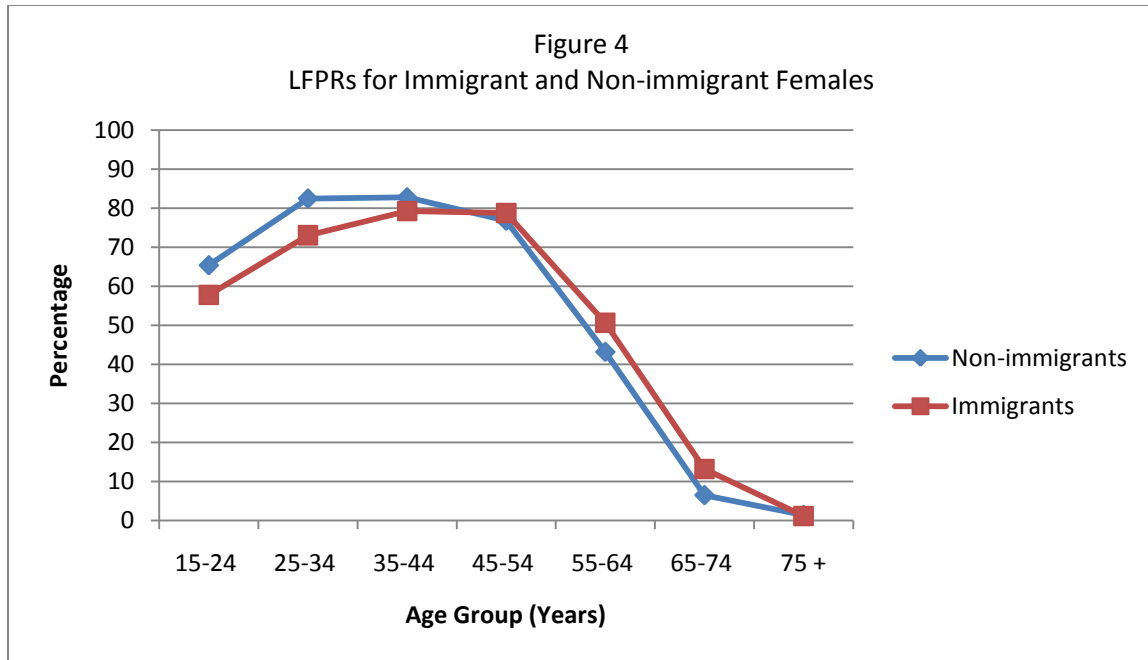
The age adjusted LFPR for immigrant males is higher than the actual ones. This means that the probability of an immigrant male being in the labour force is higher than that for a non-immigrant male of the same age. This result is observed because significantly higher proportions of immigrant males stay in the labour force after age 55, than non-immigrants, as is also seen in the figure below⁵.



Source: Statistics Canada - 2006 Census. Catalogue Number 97-562-XCB2006013.

In case of immigrant females, the adjusted LFPR is much closer to the LFPR for non-immigrant females. The increase in the adjusted LFPR over the actual for females is greater than the increase seen for males. Only slightly higher proportions of immigrant females stay in the labour force after age 55 than do non-immigrant females. Age distributions of LFPR for immigrant and non-immigrant females are provided in Figure 4.

⁵ The pattern shown in Figures 3 and 4 are consistent with the life cycle theory as discussed in an earlier section.



Source: Statistics Canada - 2006 Census. Catalogue Number 97-562-XCB2006013.

Although the LFPR of immigrant women older than 55 is higher than that of non-immigrants of the same age, this higher LFPR does not offset their lower LFPR at younger ages. Hence, a randomly selected immigrant woman will have a lower LFPR than that of a non-immigrant woman of the same age.

Earlier, various determinants of LFPR, and their effect on the LFPR of various population groups were discussed. This paper has accounted for two such major differences; those of age and gender. The resulting age-adjusted LFPR for males and females are more stable than the unadjusted ones. While there are other characteristics that can further explain the differences in participation rates between immigrants and non-immigrants (previously discussed), this age standardizing technique has probably eliminated the most important difference. In sum, the results show that immigrants stay in the labour force longer than non-immigrants do. When more data are available, further calculations can be made by controlling for other determinants.

LABOUR FORCE PARTICIPATION OF IMMIGRANTS BY PERIOD OF IMMIGRATION

At the time of arrival, an average immigrant is younger than an average non-immigrant. Hence, it is expected that the labour force participation rates for immigrants will be higher than that of non-immigrants in the initial years of their arrival in Canada. It is also expected that the LFPR for immigrants will rise with their duration of stay and fall after reaching a peak as they get older. These predictions of life cycle theory of labour force participation are reflected in the following table, which shows that an immigrant's LFPR falls below that of a non-immigrant only after he/she stayed for at least 15 years in the country.

Table 4: Labour Force Participation Rates for the Immigrant Population 15 years and up, by Period of Immigration and Gender, Nova Scotia, 2006				
Period of arrival	Unadjusted		Adjusted	
	Males	Females	Males	Females
2001-2006	72	58.2	73.09631	64.23696
1996-2000	75.3	64.9	77.67116	55.04517
1991-1995	79.6	65	70.20782	57.23901
Before 1991	61.1	47.5	63.31632	46.01096

Source: Statistics Canada, 2006 Census of Population, Statistics Canada catalogue no. 97-562-XCB2006017.

Note: LFPR for non-immigrant males is 68.4%, and the LFPR for non-immigrant females is 58.7% (as shown in Tables 2 and 3)

LABOUR FORCE PARTICIPATION OF VISIBLE MINORITIES

One other factor that can cause LFPR to differ between immigrants and non-immigrants is the country of origin of immigrants. As was discussed earlier in this paper, source country mix of immigrants in Canada has changed from countries of Europe to countries of Asia and Africa since the introduction of "Point system" in 1967. Atlantic Canada began experiencing this change in its immigrant source countries from the early 1990s. This change in source country mix affects a labour force by changing the social and

cultural background of its members and can also affect the LFPR of its immigrant members. While one can also analyze LFPR of immigrants by their place of birth, in this paper only the LFPRs of visible minority immigrants are analyzed. As discussed in an earlier section, most immigrants who come to Canada and Nova Scotia are from Asia. Visible minorities tend to face labour market barriers, such as discrimination and their credential recognition, due to their language and cultural differences from the resident population. These barriers can in turn create a disincentive for participating in the labour force. Table 4 shows the LFPRs, both unadjusted and adjusted, of visible minority immigrants across age groups and gender, in Nova Scotia.

Looking at the trends across age groups, a significant decrease is observed from age 55 onwards for the total immigrant population. Looking at visible minorities as a whole, although the same trend of increase and decrease in LFPR is observed across age groups, the LFPRs for all visible minority immigrants aged 55 or older decreases at a slower rate than that of the total immigrant population. This means that visible minorities tend to stay in the labour force longer than the overall immigrant population.

Male and female Chinese, South Asian, Black, Filipino and Latin American have actual LFPRs which are higher than those of their non-immigrant counterparts. The highest LFPR reported for visible minority immigrant males is that of the Black community (at 80.87%), while the greatest LFPR reported for females is that of the Filipino community (at 69.39%). The Arab, West Asian, Korean and Japanese communities have actual LFPRs which are lower than those of their non-immigrant counterparts. Both West Asian males and females have the lowest LFPRs among their respective counterparts. The greatest gender difference seen in LFPRs is that in the West Asian community, where the LFPR for males is 25.41 percentage points higher than that of females.

After adjusting for differences in age distributions, the LFPR for visible minorities is reduced from 64.1% to 61.4%. Looking at the adjusted LFPR for visible minorities based on gender, the adjusted LFPR for males (69.0%) is slightly higher than that of non-immigrants (at 68.4%). The adjusted LFPR for females (53.5%) is less than the

unadjusted rate, but is still fairly close to the adjusted LFPR for females reported in Table 3. Looking across different minority groups, except for the South Asian community, the total adjusted LFPRs are all smaller than the unadjusted LFPRs. After age distribution adjustment, the South Asian community sees an increase in the LFPR from 68.1% to 71.2%. Trends across gender show that most adjusted male and female LFPR's are lower than the unadjusted male and female LFPR's. Exceptions are South Asian males, and South Asian and Latin American females.

Table 4: Labour Force Participation Rates of Visible Minority Immigrants, Nova Scotia, 2006 Census of Canada

	15-24		25-34		35-44		45-54		55-64		65-74		75 +		UNADJUSTED TOTALS*			ADJUSTED TOTALS*		
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	TOTAL	M	F	TOTAL
Overall Immigrant Population	53.1	57.8	88.9	73.1	92.7	79.3	88.6	78.8	74.8	50.7	25.2	13.2	6.1	1.2	65.4%	51.6%	58.1%	70.19%	57.63%	63.7%
Total visible minority	42.9	49.7	67.5	67.5	93.2	71.4	84.3	70.8	80.7	52.2	32.3	21.5	15.2	0	68.80%	59.19%	64.12%	69.00%	53.55%	61.47%
Chinese	31.6	50	81.2	81.2	91.2	76.8	87.1	81.6	84	66.7	20	23.1	33.3	0	74.61%	68.12%	71.32%	69.72%	60.96%	65.27%
South Asian	57.1	69.2	78.1	78.1	95.7	80.4	95.6	84.2	82.9	51.2	40	19.4	33.3	0	74.07%	61.81%	68.07%	80.15%	61.86%	71.20%
Black	66.7	45.8	88	88	100	87.5	84.2	83.3	70.6	50	50	71.4	0	0	80.87%	68.56%	74.99%	77.34%	65.61%	71.74%
Filipino	50	0	66.7	66.7	100	85.7	100	100	0	87.5	66.7	0	0	0	68.98%	69.39%	69.24%	66.19%	57.52%	60.75%
Latin American	50	100	61.5	61.5	95	62.5	100	91.7	0	100	0	0	0	0	77.07%	67.27%	71.84%	54.03%	67.90%	61.44%
Southeast Asian	33.3	0	75	75	50	66.7	83.3	57.1	90.9	0	0	0	0	0	67.43%	58.34%	63.29%	55.93%	33.72%	45.81%
Arab	38	53.1	49	49	93.7	60.7	89.7	41.9	87.2	30	0	0	0	0	61.84%	47.42%	55.50%	61.78%	38.49%	51.54%
West Asian	29.4	0	25	25	75	40	55.6	40	100	0	0	0	0	0	48.94%	23.53%	35.72%	48.88%	18.51%	33.07%
Korean	50	33.3	40	40	100	71.4	53.3	63.6	0	0	0	0	0	0	51.10%	51.59%	51.30%	42.72%	35.86%	39.92%
Japanese	0	0	0	0	0	40	0	0	0	75	0	0	0	0	0.00%	25.00%	14.29%	0.00%	18.49%	10.56%

M=Male, F = Female

Source: Based on 2006 Census of Population, Statistics Canada catalogue no. 97-562XCB2006017.

*Adjusted Totals calculated based on author's calculations as discussed in the text.

Note: No data were available for Japanese males.

CONCLUSION

Based on the age distribution adjustments made to the LFPRs of immigrants, it has been determined that their adjusted LFPRs are higher than the actual LFPRs. As discussed by McLaughlin (1985), this adjustment accounts for the most important factor responsible for the differences seen between the LFPRs of immigrants and non-immigrants. The adjusted rates are for immigrants who are of the same age as non-immigrants. This is because a greater proportion of immigrants stay in the labour force longer over their life cycle than non-immigrants. In labour economic literature, migration is viewed as a human capital investment. Immigrants migrate at a young age to improve their well being. By moving from his/her country of origin to another, the individual incurs both financial and psychological costs. In order to recover these costs and maximize returns on their investment, immigrants tend to remain in the labour force for a longer period of time, than do non-immigrants.

Immigrant and non-immigrant females have LFPRs which are lower than those of males. The adjusted LFPR for immigrant males is slightly higher than the LFPR for non-immigrant males. The adjusted LFPR for immigrant females is slightly less than the LFPR for non-immigrant females. The adjusted LFPR for total male immigrant visible minorities (69%) is much closer to the LFPR's reported for non-immigrant males (68.4%). However, the adjusted LFPR for female immigrant visible minorities (54%) is lower than the LFPR for non-immigrant females (59%). This could be because female immigrant visible minorities may be discouraged from entering the labour force due to perceived discrimination against women in general and visible minorities in particular. Cultural and religious reasons could also account for their lower LFPRs. A future research should explore the validity of these explanations for lower LFPR of female immigrants.

The LFPRs for immigrants (overall) are higher than of non-immigrants until at least fifteen years after arrival in Canada. This is because immigrants are generally younger than non-immigrants at the time of arrival. The LFPR for immigrants increases with their duration of stay, and after reaching a peak, falls as they get older. The rise in the initial years is attributed to an acquisition of Canada-specific human capital and knowledge of the Canadian labour market system.

All results reported are based on corrections made for the most important determinant of LFPR, i.e. age. However, further adjustments can be made within an econometric model based on marital status, size of household, etc, in order to get an even more accurate picture. Also, labour market performance of immigrants and non-immigrants could be compared to determine labour market impacts of the two groups. These investigations can be made when micro data from 2006 Canadian population census become available.

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APPENDIX

Immigrants by place of birth	Male		Female		Total	
	Number	%	Number	%	Number	%
Total	21330	100	23860	100.00	45190	100.00
United States of America	3185	14.93	4770	19.99	7955	17.60
Central America	265	1.24	225	0.94	490	1.08
Caribbean and Bermuda	535	2.51	445	1.87	980	2.17
South America	220	1.03	310	1.30	530	1.17
Europe	10805	50.66	11760	49.29	22565	49.93
Western Europe	2750	12.89	3005	12.59	5755	12.74
Eastern Europe	1095	5.13	1010	4.23	2105	4.66
Southern Europe	1050	4.92	1100	4.61	2150	4.76
Italy	285	1.34	255	1.07	540	1.19
Other Southern Europe	765	3.59	850	3.56	1615	3.57
Northern Europe	5905	27.68	6645	27.85	12550	27.77
United Kingdom	5415	25.39	6245	26.17	11660	25.80
Other Northern Europe	485	2.27	400	1.68	885	1.96
Africa	1110	5.20	1015	4.25	2125	4.70
Western Africa	205	0.96	175	0.73	380	0.84
Eastern Africa	265	1.24	230	0.96	495	1.10
Northern Africa	440	2.06	405	1.70	845	1.87
Central Africa	30	0.14	20	0.08	50	0.11
Southern Africa	165	0.77	185	0.78	350	0.77
Asia and the Middle East	4900	22.97	5015	21.02	9915	21.94
West Central Asia and the Middle East	2125	9.96	1820	7.63	3945	8.73
Eastern Asia	1225	5.74	1505	6.31	2730	6.04
China, People's Republic of	705	3.31	1030	4.32	1735	3.84
Hong Kong, Special Administrative Region	145	0.68	135	0.57	280	0.62
Other Eastern Asia	370	1.73	340	1.42	710	1.57
Southeast Asia	470	2.20	645	2.70	1115	2.47
Philippines	160	0.75	255	1.07	415	0.92
Other Southeast Asia	310	1.45	390	1.63	700	1.55
Southern Asia	1080	5.06	1035	4.34	2115	4.68
India	730	3.42	710	2.98	1440	3.19
Other Southern Asia	350	1.64	325	1.36	675	1.49
Oceania and other	315	1.48	320	1.34	635	1.41

Source: Statistics Canada - 2006 Census. Catalogue Number 97-557-XCB2006013.

Table B: Immigrants by Place of Birth and Period of Immigration, Nova Scotia, 2006 Census of Canada

Place of birth	Total		Period of immigration									
			Before 1991		1991-2000		1991-1995		1996-2000		2001-2006	
	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%
Total	45195	100.0	30305	100.0	7985	100.0	3540	100.0	4445	100.0	6900	100.0
Americas	10020	22.2	7270	24.0	1430	17.9	665	18.8	760	17.1	1315	19.1
North America	8020	17.7	6280	20.7	900	11.3	410	11.6	495	11.1	835	12.1
United States of America	7960	17.6	6220	20.5	900	11.3	405	11.4	495	11.1	835	12.1
Central America	490	1.1	190	0.6	220	2.8	110	3.1	105	2.4	80	1.2
Caribbean and Bermuda	980	2.2	560	1.8	230	2.9	100	2.8	125	2.8	195	2.8
South America	525	1.2	245	0.8	80	1.0	45	1.3	35	0.8	205	3.0
Europe	22565	49.9	18405	60.7	2640	33.1	1210	34.2	1430	32.2	1515	22.0
Western Europe	5760	12.7	4375	14.4	910	11.4	390	11.0	520	11.7	470	6.8
Eastern Europe	2110	4.7	1380	4.6	470	5.9	245	6.9	220	4.9	260	3.8
Northern Europe	12550	27.8	11150	36.8	715	9.0	375	10.6	340	7.6	685	9.9
United Kingdom	11665	25.8	10435	34.4	625	7.8	340	9.6	285	6.4	605	8.8
Southern Europe	2150	4.8	1505	5.0	545	6.8	195	5.5	345	7.8	105	1.5
Africa	2125	4.7	735	2.4	510	6.4	215	6.1	300	6.7	880	12.8
Western Africa	385	0.9	110	0.4	60	0.8	30	0.8	30	0.7	210	3.0
Eastern Africa	495	1.1	265	0.9	145	1.8	95	2.7	50	1.1	85	1.2
Northern Africa	845	1.9	135	0.4	230	2.9	55	1.6	175	3.9	480	7.0
Southern Africa	350	0.8	200	0.7	55	0.7	35	1.0	25	0.6	95	1.4
Asia and the Middle East	9915	21.9	3535	11.7	3300	41.3	1385	39.1	1915	43.1	3085	44.7
West Central Asia and the Middle East	3950	8.7	1100	3.6	1615	20.2	795	22.5	825	18.6	1235	17.9
Eastern Asia	2735	6.1	770	2.5	835	10.5	285	8.1	545	12.3	1135	16.4
China and special administrative regions	2020	4.5	650	2.1	610	7.6	165	4.7	445	10.0	755	10.9
China, People's Republic of	1740	3.8	465	1.5	530	6.6	115	3.2	420	9.4	740	10.7
Hong Kong, Special Administrative Region	280	0.6	190	0.6	80	1.0	50	1.4	30	0.7	15	0.2
Southeast Asia	1115	2.5	580	1.9	310	3.9	165	4.7	145	3.3	220	3.2
Southern Asia	2115	4.7	1085	3.6	540	6.8	135	3.8	400	9.0	495	7.2
India	1440	3.2	905	3.0	210	2.6	70	2.0	140	3.1	320	4.6
Pakistan	450	1.0	90	0.3	290	3.6	50	1.4	235	5.3	70	1.0
Sri Lanka	100	0.2	35	0.1	10	0.1	0	0.0	0	0.0	50	0.7
Other	125	0.3	55	0.2	30	0.4	15	0.4	25	0.6	55	0.8
Oceania	450	1.0	275	0.9	90	1.1	45	1.3	45	1.0	85	1.2
Australia	355	0.8	220	0.7	75	0.9	45	1.3	30	0.7	55	0.8
New Zealand	90	0.2	55	0.2	10	0.1	0	0.0	15	0.3	20	0.3
Other	120	0.3	80	0.3	15	0.2	15	0.4	0	0.0	25	0.4

Source: Statistics Canada, 2006 Census of Population, Statistics Canada catalogue no. 97-557-XCB2006007

Immigrants by place of birth	Male		Female		Total	
	Number	%	Number	%	Number	%
Total	21330	100	23860	100.00	45190	100.00
United States of America	3185	14.93	4770	19.99	7955	17.60
Central America	265	1.24	225	0.94	490	1.08
Caribbean and Bermuda	535	2.51	445	1.87	980	2.17
South America	220	1.03	310	1.30	530	1.17
Europe	10805	50.66	11760	49.29	22565	49.93
Western Europe	2750	12.89	3005	12.59	5755	12.74
Eastern Europe	1095	5.13	1010	4.23	2105	4.66
Southern Europe	1050	4.92	1100	4.61	2150	4.76
Italy	285	1.34	255	1.07	540	1.19
Other Southern Europe	765	3.59	850	3.56	1615	3.57
Northern Europe	5905	27.68	6645	27.85	12550	27.77
United Kingdom	5415	25.39	6245	26.17	11660	25.80
Other Northern Europe	485	2.27	400	1.68	885	1.96
Africa	1110	5.20	1015	4.25	2125	4.70
Western Africa	205	0.96	175	0.73	380	0.84
Eastern Africa	265	1.24	230	0.96	495	1.10
Northern Africa	440	2.06	405	1.70	845	1.87
Central Africa	30	0.14	20	0.08	50	0.11
Southern Africa	165	0.77	185	0.78	350	0.77
Asia and the Middle East	4900	22.97	5015	21.02	9915	21.94
West Central Asia and the Middle East	2125	9.96	1820	7.63	3945	8.73
Eastern Asia	1225	5.74	1505	6.31	2730	6.04
China, People's Republic of	705	3.31	1030	4.32	1735	3.84
Hong Kong, Special Administrative Region	145	0.68	135	0.57	280	0.62
Other Eastern Asia	370	1.73	340	1.42	710	1.57
Southeast Asia	470	2.20	645	2.70	1115	2.47
Philippines	160	0.75	255	1.07	415	0.92
Other Southeast Asia	310	1.45	390	1.63	700	1.55
Southern Asia	1080	5.06	1035	4.34	2115	4.68
India	730	3.42	710	2.98	1440	3.19
Other Southern Asia	350	1.64	325	1.36	675	1.49
Oceania and other	315	1.48	320	1.34	635	1.41

Source: Statistics Canada - 2006 Census. Catalogue Number 97-557-XCB2006013.

Table D: Age Distributions of Non-immigrants and Immigrants, by Gender, Nova Scotia, 2006 Census of Canada																
	Total		15-24		25-34		35-44		45-54		55-64		65-74		75 +	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Non-immigrants	708745	100	112750	15.9	99560	14.0	127805	18.0	139395	19.7	109470	15.4	66675	9.4	53080	7.5
Male	338180	100	57105	16.9	46785	13.8	61630	18.2	66975	19.8	53445	15.8	31500	9.3	20735	6.1
Female	370565	100	55645	15.0	52775	14.2	66175	17.9	72420	19.5	56025	15.1	35175	9.5	32345	8.7
Immigrants	47850	100	5025	10.5	5190	10.8	8235	17.2	8480	17.7	9605	20.1	5640	11.8	5680	11.9
Male	22975	100	2650	11.5	2560	11.1	3885	16.9	4000	17.4	4710	20.5	2885	12.6	2285	9.9
Female	24875	100	2370	9.5	2630	10.6	4350	17.5	4480	18.0	4890	19.7	2750	11.1	3400	13.7

Source: Statistics Canada - 2006 Census. Catalogue Number 97-557-XCB2006010.