IMMIGRATION OF SKILLED WORKERS TO CANADA: THE UNDER-UTILIZED POTENTIAL

by

Aarij Bashir
B.Sc. (Economics) Lahore University of Management Sciences, 2009

RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF ARTS

In the
School for International Studies
Faculty of Arts and Social Sciences

SIMON FRASER UNIVERSITY

Summer 2011

APPROVAL

Name: **Aarij Bashir**

Degree: **Master of Arts in International Studies**

Title of Research Project: Immigration of skilled workers to Canada: The under-utilized potential

Supervisory Committee:

Chair: **Dr. John Harriss**
Professor of International Studies

Alvaro Pereira
Senior Supervisor
Associate Professor of International Studies

Tamir Moustafa
Supervisor
Associate Professor of International Studies

Date Approved: AUG 2 4 2011

ABSTRACT

The immigration policy of Canada has been very effective in attracting highly skilled immigrants, resulting in an increase in educational attainment levels of successive entering immigrant cohorts. However, due to lack of recognition of foreign credentials and work experience, the utilization of the immigrants' skills remains below its potential. This results in a substantial number of highly skilled immigrants working in occupations that are completely unrelated to their previous education and training.

Even when skilled immigrants are able to get their credentials and work experience recognized, they face a wage penalty compared to similarly qualified native-born workers. This differential in the relative earnings of immigrants reflects the discounted market value of credentials and experience gained abroad by immigrants. The lower market value of skills earned abroad is explained by differences in education quality of immigrants depending on where they received their highest degree.

Keywords: skilled immigrants, wage differentials, occupational mismatch, lack of recognition, foreign credentials, education quality

ACKNOWLEDGEMENTS

First, I would like to thank the School of International Studies at Simon Fraser University for providing me with funding for this program, without which I would not have been able to pursue my graduate studies at SFU. I would specially like to thank my supervisor, Alvaro Pereira, for his support and guidance throughout the program, and Dominique Gross, for her informative lectures and guidance on the subject of immigration in Canada. I would also like to thank John Harriss, for his valuable feedback on my assignments, which enabled to me improve my research and writing skills. Special thanks to Ellen Yap for helping me throughout this program with everything directly and indirectly related to the program.

Second, I would like to thank my parents, for always providing support to me in every phase of life, my wife, for believing in me and supporting me in every endeavour, and my sister, for helping me selflessly.

Finally, I am extremely grateful to all my friends in this program, who provided comfort and support during the entire year. A special thanks to Kevin, Zannat, Hikari, Shahbaz and Miel for being such wonderful friends and making my stay in Vancouver truly memorable.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

1: INTRODUCTION

Immigration is widely acknowledged as being an impetus for economic growth in countries with high capital to labour ratio. Being one the most developed countries in the world, immigration has played a vital part in the success of Canada. The immigration policy of Canada has been widely appreciated for its success in attracting skilled immigrants, resulting in making Canada the country with the highest per capita immigration rate in the world. According to the latest figures from 2006 Census, there were about 6 million foreign born citizens in Canada's total population of 32 million, making the share of immigrants slightly under 20%. This is a fairly conservative estimate of ethnic diversity in Canada, as this does not include the children of immigrants born inside Canada.

Canada has traditionally been a magnet for attracting immigrants. Immigrants arriving in the early half of twentieth century primarily originated from Europe. The Canadian economy, at that time, was growing quickly compared to European economies, which were suffering from the negative economic effects of the war. A significant portion of the European immigrants comprised of people displaced by the war, who were then attracted towards Canada due to plentiful job opportunities provided by an expanding economy. In 1960s, Canada formalized its process of admitting immigrants by introducing a point based system, which was focused primarily on education and language skills of

applicants. The Canadian immigration policy has revolved around the main theme of "family reunification and economic contribution" (Boyd & Vickers, 2000). The number of immigrants allowed to settle in Canada fluctuated between 1970s and 1990s. However, in 1989, a target of admitting 250,000 immigrants annually was set by the government, which was revised in 2001 by increasing the immigration target to 310,000 per annum (Francis, 2002).

With the advent of twenty-first century, economic activity in developed countries, including Canada, shifted from manufacturing to knowledge-based sectors. To supplement the growth of a knowledge-based economy in Canada, the focus of the government shifted towards creating a highly educated work force. Similarly, in 1993, the immigrant selection criteria was modified with the aim to attract more highly educated applicants. While Canada always attracted immigrants in the skilled class, in 1993, the selection procedure for immigrants was changed by assigning more weight to education of the prospective immigrants. This move towards requiring higher educational attainment resulted in an increase in the number of immigrants coming to Canada in the skilled class, which was offset by a decrease in immigrants in the family class. In 1992, immigrants under skilled class, also known as economic immigrants, comprised 29% of the total landed immigrants. In 2003, the share of skilled immigrants rose to 56% (Picot, Hou, & Coulombe, 2007).

The profile of immigrants entering Canada has changed over time. While the earlier immigrant cohorts originated primarily from Europe and the US, their relative share has declined in the recent decades. Since 1950s, the proportion of

immigrants coming to Canada from developing countries has increased considerably, with substantial numbers coming from South Asia and East Asia. Out of total landed immigrants arriving between 2001 and 2006, 14% belonged to China, making it the top immigrant source country for Canada. India, Philippines and Pakistan were next in ranking of top source countries, with shares of 11.6%, 7% and 5.2% respectively during the same period. Together, these four countries accounted for about 38% of the total immigrant population (Chui, Tran, & Maheux, 2007), and about half of the total skilled immigrants coming to Canada between 2001 and 2008 (CIC, 2009). With an increase in overall immigration numbers from developing countries to Canada, the proportion of highly skilled professionals from developing countries also increased. In 2008, there were 73,303 people coming to Canada as economic immigrants from Asia alone, compared with 34,617 admitted to Canada in the family class from the same region (CIC, 2009). These figures provide support to the effectiveness of Canadian immigration policy in attracting highly educated and skilled immigrants.

Given the improving educational attainment levels of the incoming immigrants since late 1990s, one would expect the skilled immigrants to integrate very quickly and smoothly into the Canadian labour market. However, the labour market experience of immigrants tells a different story altogether. Despite being selected for their skills and experience, the skilled immigrants find it increasingly difficult to get employed in jobs that fully utilize their skills. The struggle immigrants face in the labour market due to lack of recognition of their qualification and work experience has been a cause for concern among

Canadian policy circles. While Canada attracts the best minds, the under-utilization of their skills leads to a sub-optimal outcome, both for Canada, and for the immigrants themselves.

This paper aims to explore the difficulties skilled immigrants face in the Canadian labour market, which is measured by: (a) the mismatch between their qualifications and occupations, (b) the wage penalty faced by immigrants compared to native born workers with similar levels of education and experience, and finally, (c) the chronic low-income that is prevalent among immigrant families. As the level of education of entering cohorts has been increasing steadily, their outcomes, as measured by labour market participation rate and skill utilization, have been deteriorating.

In addition, the paper looks at the possible causes of skill underutilization among immigrants. The paper reviews the existing literature on the credit given to lack of recognition of foreign education and work experience of skilled professionals in explaining poor labour market outcomes for skilled immigrants, and analyzes the extent of accuracy of this claim by looking at the complications immigrants face in getting their credentials accredited. Keeping in mind the principle of labour productivity captured by market wage rate, there are also other factors which play an important part in devaluing the market worth of immigrant's skills. Since the focus of Canadian immigration policy has been to attract highly educated workers, the paper investigates the differences in quality of education received by immigrants in their home countries, and explores the role education

quality plays in explaining the wage differentials between skilled immigrants and native-born workers.

The main argument in this paper is that there are differences in the quality of education between immigrants from developing countries and native-born workers. While these differences partially translate into the earnings gap between the two groups, there are still barriers to recognition of foreign credentials, which results in an under-utilisation of their skills.

2: INCENTIVES FOR IMMIGRATION AND THE CANADIAN POINT SYSTEM

Canada's immigration policy can be best described as an approach focused on the model of achieving economic growth by increasing the local endowment of "human capital" (Hawthorne, 2007). There seems to be a consensus in Canada, and in other popular immigrant host countries like United States, Australia and New Zealand, that immigration plays an important part in a country's economic growth. The human capital approach emphasizes on the quality of labour force, judged by education, as an important factor of production; highly educated labour force is essential for continued economic growth in today's knowledge-based global economy. From this perspective, investing in the education of labour force is an investment in human capital of the country. However, in a country like Canada with low population growth rate, immigration of highly educated workers is often seen as an alternative way of achieving the goal of increasing the human capital of the country (Reitz, 2007a).

According to the "simon principle", immigration is beneficial to a country as long as the immigrants make a net positive contribution to the host country's economy (DeVoretz, 2006). By attracting skilled immigrants through its point system, Canada, in a way, imports the human capital from other countries, without having to make the necessary investment in generating that human capital. The economic benefit of attracting skilled workers has been the primary motivation behind Canada's immigration policy. The immigration policy has been

structured according to the projected Canadian labour market needs, by estimating the number of people required every year in order to benefit the economy, and the preference for workers with education and skills in demand (Francis, 2002; Reitz, 2007a).

From the perspective of immigrants, the decision to emigrate is explained by the willingness of people to move to areas with better economic opportunities. Labour mobility from one region to another, whether domestic or international, is encouraged by differentials in wages between the two regions. In terms of emigration, people take into account the opportunity cost associated with moving to another country, and the costs of moving, and weigh them against their expectations of increased wage in the host country (Simmons, 2010). Hence, crucial to the emigration decision making process is the individual's expectations about improved economic opportunities and a better quality of life abroad, which becomes part of their individual utility maximisation function.

When immigrants are highly educated and belong to developing countries, their expectations about better employment opportunities are even greater. According to Simmons (2010), skilled professionals in developing countries have a stronger motivation to immigrate to a developed country, like Canada, where they can get a higher worth of their skills and education. At the same, these skilled professionals are also more likely to satisfy the point-based immigration requirements of Canada. In addition, the weak and unstable economies of poor countries also act as a major push factor for emigration. Hence, it comes as no

surprise that the recent immigrant cohorts included a significant share of skilled workers from developing countries.

From the point of view of a household, labour migration is also a way of diversifying the family's revenue stream (Simmons, 2010). Immigration is viewed as an insurance mechanism for households to minimise the risk associated with specialization of the entire household in a single occupation. This is particularly true for agricultural-based rural households, where the gains from the agricultural activity are shared among all household members. Sending a member of the household to work in the city insures them from the risk associated with having a bad yield. This concept, nonetheless, is also relevant to transnational labour mobility providing insurance against idiosyncratic weaknesses of the economy in source countries.

Family ties are also very important in explaining international migratory flows. Once an individual makes the decision to emigrate, the next step in the decision making process is to choose a destination country. People, in general, prefer to move to areas where they already have existing family members, as it reduces the transaction costs associated with settlement of immigrants in a new country. The family reunification has been an important component of the Canadian immigration policy. According to Picot et al. (2007), family class immigrants find it easier to establish in Canada as they often have support from an already economically established sponsor.

The immigrant remittances provide an additional stream of income for their families still living in source countries, and for developing countries like Pakistan, India and Philippines, remittances have traditionally constituted a major share in their national income. As DeVoretz (2006) notes that in 2001, remittances from United Stated, Saudi Arabia and Germany amounted to $73 billion. By 2002, the immigrant remittances accounted for 42% of total foreign direct investment in developing countries (DeVoretz, 2006).

3: CANADIAN IMMIGRATION POINT SYSTEM

Canada's immigration point system has received wide appreciation for attracting the best minds to the country. The point system has evolved according to the labour market needs arising from different stages of Canada's economic development. There is a consensus among Canadian policy makers that immigrants coming under family reunification category had weak contributions towards the Canadian economy (Simmons, 2010). Since the family class immigrants are not screened based on the point system, a significant proportion have low educational levels.

In the early 1990s, the immigration policy was changed to increase the number of skilled class immigrants, while reducing the proportion of immigrants in the family class. The new selection procedure focused primarily on the educational qualifications of the immigrants, which was reflected in a substantial increase in the number of points awarded to formal education (Simmons, 2010). As Reitz (2007) notes, "in the current rating system, ... , a person with a BA, fluent in English and with two years of experience, under 50, and with no job, but whose spouse has a BA, passes, but by only one point. Take away the spouse with the BA, and more points are needed from another factor – such as graduate education or an arranged job" (p. 10).

From 1996 onwards, annual immigration targets were set to increase the proportion of skilled and economic immigrants to about 60% (Simmons, 2010).

The change in points system was extremely effective in attracting skilled individuals, as the relative share of immigrants coming under skilled class increased from 28.8% in 1992, to 51.0% in 2004 (Picot et al., 2007).

The focus on education in the point system resulted in a dramatic increase in the level of education among immigrants landing in 1990s and 2000s (Bonikowska, Hou, & Picot, 2011; Galarneau & Morissette, 2009; Grant & Nadin, 2007; Houle & Yssaad, 2010; Picot et al., 2007; Simmons, 2010). Almost all the principal applicants immigrating to Canada as skilled workers were in possession of a university degree. In the 2005 immigrant cohort, 51% of immigrants had a bachelors degree, 29% held a masters degree, and 5% were PhDs (Simmons, 2010). The effectiveness of Canadian point system in attracting the highly educated individuals can also be assessed by the indirect effect it had on family class immigrants, who are not screened for their education levels. As the number of university educated skilled immigrants increased, the proportion of family class immigrants with a university degree also increased (Simmons, 2010).

Despite rapid expansion in the education levels of native-born citizens in Canada, the education levels among skilled immigrants were considerably higher than their domestic counterparts (Reitz, 2007a). Among the domestic population in 2006, only 19% men and 23% women had university degrees. In contrast, among the entering immigrant cohort during the same period, including the refugees and family class immigrants, the proportion of men with university degrees was 58% and the proportion for females was 49% (Galarneau & Morissette, 2009). At another level of comparison of education between the two

groups, 166,000 students graduated with a bachelor's degree in Canada, and 4200 earned doctoral degrees in 2000. During the same year, the number of incoming permanent residents comprised of 77,500 graduates and 3200 PhDs, despite the fact that immigration only accounted for less than 1% of total Canadian population in 2000 (Hiebert, 2006). In comparison to United States, where proportion of university graduates in total population increased from 30% in 1981 to 35% in 2006, the share of graduates in Canada increased from 25% to 55% during the same period (Bonikowska et al., 2011). A significant portion of this relative increase in education of total population was due to increased numbers, and better educational profiles, of skilled immigrants entering Canada.

In light of the evidence of educational attainments of skilled immigrants, it would be expected that the skilled workers should have no problems integrating into the labour force and reaping better economic opportunities than the Canadian-born workers. The reality, however, provides a complete opposite picture. The skilled immigrants, chosen on the basis of their education and skills, find it increasingly difficult to find jobs relevant to their qualifications. Bauder (2003) refers to this phenomenon of skill under-utilisation of highly educated immigrants as "brain abuse". The difficulties highly educated immigrants face in the labour market is often associated with a lack of recognition of their foreign credentials and work experience by Canadian employers (Girard, 2007; Guilfoyle, 2007; Kondro, 2004; Li, 2001; Marshall, 2004; Maynard, 2007).

While lack of recognition of foreign credentials is an important issue in itself, which is discussed later in this paper, there is also a gap between the

Canadian point system and the actual outcomes of immigrants in the labour market. When highly skilled individuals apply for immigration to Canada, the widely heralded point system awards majority points for the foreign education and work experience of applicants. The emphasis of Canadian immigration policy on education and experience provides an implicit message to the applicants that their skills are in demand, and their credentials would not only be recognized, but also valued, by the employers and professional bodies in Canada (Mildon, 2005; Morrow, 2007; Reitz, 2001; Richard, 2000; Thompson, 2007; Van Ngo, 2006; Walker, 2007).

The Canadian point system increases the expectations of potential immigrants about future job prospects in Canada, which they internalize in their utility maximisation function when making the decision of permanently immigrating to Canada. However, after they arrive in Canada, they realize that their foreign qualifications and work experience are not recognized, and are in fact heavily discounted by the employers and regulatory professional bodies. As a result, these highly educated professionals find themselves taking up menial jobs or facing a wage penalty vis-a-vis their level of skills.

The discrepancy between the Canadian immigration point system, which values the skills and experience of highly educated professionals, and the labour market reality in Canada, where employers place a preference on Canadian education and experience, is the major source of difficulties skilled immigrants face in the Canadian employment market (Grant & Nadin, 2007; Walsworth, 2010). Due to limited success of highly educated professionals in finding

employment in alignment with their qualifications, about 5% of total immigrants emigrate from Canada within the first 10 years (Hamel, 2004).

The rate of emigration, combined with discrepancy between their expectations built up by the admission criteria and the employment experiences of immigrants, shows that had the immigrants been better informed about the requirements of the labour market in Canada, a significant number of highly educated professionals would not have made the decision to leave their home countries. However, this does not mean that the point system has been ineffective. On the contrary, the point system has been very successful from the supply-side point of view by attracting the most skilled workers. The issue of skill under-utilization, on the other hand, continues to remain a concern associated with the labour market demand by Canadian employers and regulatory bodies.

4: EVIDENCE FROM IMMIGRANTS LABOUR MARKET OUTCOMES

Despite the impressive number of highly educated individuals Canada attracts every year, there has been a persistent skills shortage in Canada (Sas & DeVoretz, 2008). When immigrants are unable to realize the potential of their skills in terms of adequate employment, the expectations of both Canada and the immigrants themselves remain unmet (Picot et al., 2007). This produces a lose-lose situation which benefits neither Canada nor the entering immigrants with high levels of education. Even though there have been efforts by the government to increase the employability of entering immigrants, the difficulties faced by skilled immigrants in the Canadian labour market continue to remain (Truong, 2008).

Reitz (2007b) points out that "entering the labour market is one of the hardest tasks for all immigrants" (p. 17). In 2001, there were as many as 550,000 foreign qualified individuals whose credentials were not recognized in Canada (Tomlinson, 2001). To translate the magnitude of skill underutilization, studies estimate an annual loss of between $4.1 billion and $5.9 billion to the Canadian economy, with lack of recognition of recent immigrants accounting for three-fourths of this estimate (Janigan, 2003; Reitz, 2007b).

In order to provide further evidence on the magnitude of immigrants' skill under-utilization, the labour market experiences of immigrants provide three

different ways of investigation into this issue. First, the differences between immigrants' occupations, before and after moving to Canada, provide a snapshot of the number of highly educated immigrants working in occupations that are below their level of skills. Second, the earnings gap between skilled immigrants and their Canadian counterparts, with similar education and experience levels, supplies further evidence of skill under-utilisation of immigrants as measured through lower market value attached to their qualifications and foreign work experience. Third, the chronic low income among immigrants provides an estimate of downward social mobility faced by immigrant families when they move to Canada. These three dimensions of estimating immigrant skill under-utilisation are further discussed below.

4.1 Discrepancy between skills and occupations of immigrants

The primary reason of an immigration policy, which rewards education and skills of applicants, is to augment the domestic labour force by bringing in talented people whose skills are in demand. Despite the fact that Canada has been facing shortage of skilled people in quite a few fields, a significant number of skilled immigrants are working in occupations that require low levels of education, making these skilled professionals over-qualified for the work they end up doing in Canada (Basran, 1998). Even though there was significant increase in the education levels of skilled immigrants, the proportion of skilled workers employed in knowledge based jobs was higher in 1981 than it was in late 1990s and 2000s (Reitz, 2005).

Based on the data on immigrants' occupations before they moved to Canada, Grant (2007) identifies that most immigrants qualifying through skilled class were working in knowledge-based sectors in their source countries, including natural and applied sciences, medicine, business and finance. According to the employment statistics in 2008, about 67% of the total recent immigrants, including family class and refugees, were working in occupations that did not require any kind of formal education. The corresponding rate for established immigrants and Canadian born workers was 55% and 40% respectively, despite the fact that the former groups (both recent and established immigrants) overall had higher level of education compared to native Canadians (Houle & Yssaad, 2010). The situation was worse for immigrants between the ages of 25 and 54, as 42.1% of immigrants found themselves working in jobs for which they were over-qualified, compared to only 28.1% native-born Canadians in the same age range (Gilmore & Petit, 2008; Gilmore, 2009).

The above-mentioned statistics are provided for immigrants from all categories, including the ones who entered Canada before the immigrant policy was changed to increase points awarded for education. In order to better understand the occupational choices of skilled immigrants, the focus should be on immigrants with university degrees compared to Canadian graduates. According to figure published in 2006, a significant number of recent skilled immigrants were still undertaking jobs that did not fully utilize their skills or match their field of employment before they came to Canada. The proportion of recent skilled immigrants with a university degree working in jobs that did not match

their education was 28% for men and 40% for women. In contrast, only 10% of native-born men and 12% women graduates were employed in low skill sector (Galarneau & Morissette, 2009).

The mismatch rate between education and employment outcomes of immigrants is affected by the field of study and the source country of immigrants. Immigrants with academic training in engineering and computer sciences had lower mismatch in 2001 (17% for men and 26% for women) compared with graduates from social sciences and humanities (39% for men and 45% for women) (Galarneau, 2004). In addition, immigrants, with education in fields that constituted a regulated profession in Canada, especially medicine, had higher mismatch rates compared to their Canadian counterparts. In 2006, 76% foreign educated professionals trained in regulated professions were unable to find employment in their field of study, compared with only 38% of Canadian born professionals (Zietsma, 2010).

The discrepancy rate for skilled professionals coming from South Asia and South East Asia, which represent the top source countries and account for as much as half of the total immigrants admitted to Canada annually, was particularly high (Reitz, 2011). Among skilled immigrants from South Asia and South East Asia, who had at least a bachelors degree, the mismatch rate between their skills and their employment in Canada was as high as 48% for men and 61% for women (Galarneau, 2004). According to Reitz (2005), even when professionals originating from minority immigrant source countries were able to access employment in their field of study, they were less likely to be

promoted to higher level managerial jobs compared to Canadians with similar skills and experience.

4.2 Chronic low income among immigrants

The first few years of immigrants tend to be the most difficult ones in terms of economic integration. As the immigrants settle in a new place, it takes them time to get used to the life in a new country and find employment. During the first few years, immigrants are likely to face lower income levels until they integrate fully into the labour market. With the drastic increase in the educational attainments of entering cohorts, one would expect highly skilled immigrants to be more successful in finding employment compared to their family class counterparts. However, studies suggest that a significant number of skilled immigrants have witnessed downward social mobility after moving to Canada (Basran, 1998). The incidence of low-income among newly arriving immigrants is surprisingly two to three times higher compared with domestic citizens, and they are more likely to experience low income persistently (Palameta, 2004).

The poverty rate among recent immigrants has been rising gradually over time. Among successive cohorts of immigrants in their first five years, the poverty rate increased from 24.6% in 1980 (which was 1.44 more than non-immigrants) to 35.8% in 2000 (which was 2.29 times more than non-immigrants) (Hiebert, 2006; Picot & Sweetman, 2005). The proportion of immigrants working at the minimum hourly wage compared to Canadian citizens provides another dimension to measure the prevalence of low income among immigrants. In 2008,

there were 1.8 times more immigrants earning the minimum wage compared with non-immigrants. The situation was worse for recent immigrants, most of who were highly educated and were admitted to Canada as skilled professionals. Among the immigrants arriving in the last five years working at minimum wage, the numbers are 3 times than Canadian-born workers (Gilmore, 2009).

Paradoxically, highly educated immigrants entering Canada under skilled class were more likely than their family class counterparts to be in the low-income immediately after their arrival in Canada. In addition, they were also more likely to have low incomes during the first five years after immigration (Picot et al., 2007). This, at first, seems counter-intuitive, as it should be relatively easier for skilled professionals to find better employment opportunities. However, the fact that immigrants coming to Canada under family class, as dependents and spouses, already have well-settled and economically established sponsors, which reduces their likelihood of entering poverty upon their arrival.

The proportion of highly educated and skilled immigrants classified as chronically poor also increased substantially from 1990s to 2000s. According to Picot et al. (2007), the share of university educated immigrants having low levels of income increased from 13% in early 1990s to 41% in late 1990s. When measured in terms of probability, the likelihood of skilled immigrants entering poverty has increased and their likelihood of exiting chronic low-income levels has fallen. Despite the fact that there was significant increase in the level of education among immigrants entering after late 1990s, the change in educational characteristics of entering immigrants in 2003 reduced probability of entering low

income by only 2.3%, which is negligible in relation to the magnitude of increase in number of university-graduated immigrants (Picot et al., 2007). Successive immigrant cohorts also witnessed a rise in inequality and volatility of immigrant earnings (Ostrovsky, 2008), and decline in the in terms of wealth distribution among immigrants compared with Canadian-born citizens (Zhang, 2003).

4.3 Earnings Disparity

Another dimension to look at the skill under-utilization of highly educated immigrants is through the wage differentials relative to native-born workers that exist in the labour market. It has been highlighted in several studies that the earnings rate between skilled immigrants and Canadian-born work force differs significantly (Aydemir & Skuterud, 2004; Frenette & Morissette, 2003; Galarneau & Morissette, 2009; Pendakur & Pendakur, 2011; Pendakur, 2007; Reitz, 2007b; Reitz, 2007c; Galarneau & Morissette, 2009). From a theoretical point of view, immigrants would face some form of under employment when they first arrive in Canada. This is due to their unfamiliarity with the Canadian labour market, employer's recruitment system, lack of professional networking and the time it takes for them to adjust to Canadian employment standards. In this regard, the initial wage differentials that skilled immigrants face should converge to the market wage rate of Canadian citizens with similar characteristics over time as the skilled immigrants acculturate to labour market conditions in Canada.

However, this is not the case. The differences between the earnings of immigrants compared with native-born workers, with similar levels of qualification

and training, have been accentuating over time. In 2008, Canadian-born employees earned an average of $23.72 per hour, while the same rate for immigrants was $21.44, despite the fact that the latter group has been proven to possess higher human capital (Gilmore, 2009). The situation of university-educated immigrants working in knowledge-based professions is slightly better, as they earn 12% to 16% less compared to Canadian-born workers with same level of education. For immigrants working in occupations in the low skills sector, the wage differential is between 25% and 34% compared with similarly skilled Canadians (Reitz, 2005). According to a study of foreign-trained nurses in Canada, there is strong evidence that the wages of immigrant nurses are significantly lower than their Canadian counter-parts (Buhr, 2010).

In addition to wage differentials, immigrants also face a penalty when it comes to employer provided non-wage befits. While most immigrants working in the low skill sector do not have access to non-wage benefits, others working in skilled and semi-skilled professions face differential access to employer benefits relative to Canadian-born workers. In 2005, only 28.4% of immigrants were enrolled in employer sponsored pension plans and insurance coverage. Access to similar benefits for Canadian citizens was, on average, 8.6% higher as 37% employees had access to employer provided pension plans and insurance coverage. In addition, Canadian citizens on average were entitled to 15.4 days of vacation per annum, compared to 14.2 vacation days immigrants received on average (Gilmore, 2009).

The earnings gap has increased more prominently for immigrants coming from non-traditional source countries, especially among Chinese, Arabs and South East Asian immigrant cohorts (Pendakur, 2007). While all minority immigrant groups have faced deterioration in their earning over time, in 1996, immigrants coming from the Middle East, China and South East Asia had earnings comparable to British immigrants, which were slightly lower compared to the earnings of citizens. By 2006, the gap between the earnings of different ethnic groups widened dramatically. The earnings differential faced by Chinese immigrants increased to 8%, followed by a 13% differential for Arab immigrants, and significantly, the earnings differential faced by immigrants from South East Asia reached 30% (Pendakur & Pendakur, 2011). The differences in earning continue to follow a divergent pattern, as the recent immigrants continue to face larger wage differentials.

While the earnings gap between immigrants and Canadian-born workers has increased over time, the earnings of recent immigrants also show a pattern of deterioration when compared with the earlier immigrant cohorts. The immigrant cohorts arriving after 1990, when the skill-based point system was amended to increase the intake of highly educated workers, had lower relative earnings than previous immigrant cohorts (Chui & Zietsma, 2003). Immigrants landing in 1990s had at least a 10% lower employment success rate and 20% lower relative earnings compared with the immigrant cohorts arriving in 1970s (Reitz, 2007c). According to another estimate of gradual deterioration in the earnings of successive immigrant cohorts, the earnings of recent immigrants

entering in 1990s and 2000s were 56% lower compared to immigrant cohort landing in 1960s (Aydemir & Skuterud, 2004).

In addition, there has been a continual decline in the earnings of entering immigrant cohorts in comparison to domestic-born citizens. In 1970s, the average immigrant earnings were 13% less compared with Canadian-born workers. By 1980, the earnings gap increased to 25%, and deteriorated further in 1990s to a rate of 45%. In 2005, the relative wage gap between Canadian-born and immigrants had increased to 67% (Bonikowska et al., 2011; Reitz, 2007c).

4.4 Labour market outcomes and the immigration point system

Based on the evidence on deteriorating labour market outcomes of successive immigrant cohorts, the conclusion about the ineffectiveness of Canadian labour market in utilizing the potential of immigrants seems plausible. However, most of the evidence provided in the literature revolves around looking at wage differentials faced by immigrant workers as a whole. The quality of human capital brought by immigrants varies considerably according to the immigrant class, and even among the skilled class, the point system applies primarily to the principle applicants and not their spouse and dependents. Hence, it is imperative to isolate the economic outcomes of recent highly educated immigrants, entering Canada under skilled class, to assess the effectiveness of the immigration point system.

The persistent deterioration in immigrants' welfare is a matter of great concern. Nevertheless, some studies have shown that this decline in relative earnings of immigrants can be explained partially by the macro-economic conditions prevalent in Canada in late 1990s and early 2000s (Frenette & Morissette, 2003; Green & Worswick, 2004; Picot & Sweetman, 2005). There has been a general decline in the success rates of new entrants in the Canadian labour market (Picot & Sweetman, 2005). Even native-born labour force entrants have faced deteriorating relative earnings. Similarly, some portion of the decline in relative earnings of immigrants can be explained by the fact that the labour market treats all immigrants as new entrants, regardless of their age and experience. In addition, the Information Technology bust in 2001 also contributed significantly to this trend of increasing earnings gap, as a significant number of skilled immigrants arriving in late 1990s and early 2000s were IT professionals (Green & Worswick, 2004).

Emphasising on the relative success of highly educated immigrants, Hiebert (2006) recognizes that principal applicants in skilled class have better employment outcomes compared with immigrants coming as spouses, dependents and refugees. The pace of the catch-up of their earnings to the average Canadian-born wages is much higher, as male principle applicant skilled workers catch-up rate is 5 years, and the same rate for females is about 2 years (Hiebert, 2006). This supports the argument that even though immigrants face difficulties integrating into the labour market, the skilled workers are more successful compared with immigrants entering under other categories.

The economic integration of immigrants is also affected by the area where they choose to settle. The flow of recent immigrants has increasingly been towards large cities, as most of the immigrants are highly concentrated in three big Canadian cities: Toronto, Montreal and Vancouver. While settling in a big city does provide plentiful economic opportunities to skilled immigrants, their employment success rate in large metropolitan areas has remained low.

The initial earnings gap between immigrants and domestic-born workers in large metropolitan areas is 37%, which reduces slowly over time. The earnings gap reduces to 22% in the fourth year, and does not fall below 10% before at least twelve years. In contrast, immigrants have been relatively very successful in small urban and rural areas. When immigrants choose to reside in small urban areas, their initial wage disadvantage is only 14%. Immigrants are also able to catch up quickly in small urban areas, as by the fourth year, they earn 2% more on average compared with their Canadian counterparts, and after eleventh year, the wage differential is likely to favour immigrants by making their earnings 18% higher than native-born workers (Bernard, 2008).

The better economic integration of immigrants in smaller areas can be explained through the market mechanisms of labour supply. Since the supply of highly educated workers is relatively high in big cities like Toronto, Montreal and Vancouver, the immigrants find it difficult to find jobs that reward their skills optimally. This is primarily due to the perceived lower market value of their skills and qualifications in the eyes of the employers, and a relatively elastic supply of skilled labour in big cities. In contrast, the availability of skilled labour is low in

smaller areas to begin with, and coupled with relatively inelastic supply of skilled labour, the market value of immigrants' skills is higher than what it would be in large urban areas. This hypothesis is corroborated by the figures of 2001 Census, according to which about 30% of adult population living in the largest urban cities of Toronto, Montreal and Vancouver, have university degrees. In contrast, the proportion of people with university degrees is only 16% in smaller cities.

In comparison with adult landed immigrants, the labour market outcomes of immigrants' children, who were either born in Canada or arrived at a very young age, are comparable to, and in some cases even better, than native-born citizens (Picot & Hou, 2011). This is because young immigrants have more time to catch-up with the earnings of native-born citizens (Picot & Sweetman, 2005). In addition, a review of existing literature also confirmed that children of highly educated immigrants tend to have high levels of education, irrespective of their parent's success or failure in the labour market (Reitz, 2007a).

Based on the relative success of highly educated immigrants in the labour market, and the positive correlation between the education levels of immigrants and their children, it is apparent that the Canadian point system has been extremely effective in increasing its human capital compared to other countries. In 2006, 55% of new Canadian immigrants between the ages of 25 and 54 had a university degree, compared with only 35% graduate immigrants in the US (Bonikowska et al., 2011).

Among the top immigrant destination countries, including the US and Australia, Canada continues to attract the highest number of immigrants on per capita basis. The Canadian point system makes it relatively easy for skilled professionals to become permanent residents compared with Australian immigration policy. The Australian point system restricts the entry of skilled professionals by requiring them to get pre-migration credential screening, from respective professional and regulatory bodies in Australia (Hawthorne, 2007).

In addition, prospective immigration applicants are also required to show language proficiency by taking the International English Language Testing System (IELTS) exam before they apply. On the other hand, the Canadian point system does not have any such requirements, making it attractive and less costly for highly educated professionals. By increasing the proportion of highly education immigrants, the Canadian point system is in effect working towards reducing the disparity between native-born workers and immigrants.

5: THE ROLE OF FOREIGN CREDENTIALS AND WORK EXPERIENCE

In order to understand the difficulties skilled immigrants face in their economic assimilation in Canada, various studies have focused on the type of human capital, specifically foreign credentials and work experience, skilled immigrants bring with them. Employment in highly skilled professions requires high levels of education and experience in the field of study relevant to that particular profession, in addition to immigrants' knowledge of English or French (Thompson, 2000).

If the Canadian point system effectively screens and selects people based on their superior levels of human capital, the immigrants should take relatively less time in catching up to the wage levels of Canadian-born citizens. However, this is not a visible pattern in the labour market outcomes among recent skilled immigrants. According to one theory, the human capital brought by skilled immigrants might not be readily transferable in the Canadian context, which makes the immigrants face a transitionary period before they can make their human capital more specific to the labour market needs in Canada (DeVoretz, 2006). Even then, the catch up time of skilled immigrants should be considerably shorter, but that is not the case.

According to the human capital theory, workers differ in terms of productivity based on the human capital they posses. Individuals accumulate

human capital by investing in education, and augmenting their skills through training and work experience. Individuals with higher levels of education and experience have higher human capital compared to workers with lower levels of education and work experience. In that case, the earnings of individuals reflect the market worth of their human capital (Buzdugan & Halli, 2009). Nonetheless, the empirical evidence, in support of the effectiveness of human capital approach of Canadian immigration policy, remains limited due to the increasing difficulties faced by highly educated immigrants in translating their human capital into higher earnings. The component of earnings deficit faced by immigrants compared to native-born workers, occurring due to skill under-utilization, is estimated to be around $2.4 billion per annum, and the part played pay inequity between equally skilled immigrants and Canadians amounts to $12.6 billion annually (Reitz, 2001).

From a theoretical point of view, the inferior labour market outcomes of immigrants can be explained by looking at the labour market mechanisms of valuing their human capital. The market value of foreign credentials and work experience of immigrants, in the eyes of employers, is a function of the actual skills possessed by immigrants and the information employers have to assess those skills. If the employers have perfect information about the skills of workers acquired outside Canada, as reflected by their education and work experience, then the wage differential between immigrants and native workers would reflect the differences in the quality of human capital between the two groups. On the other hand, in case of imperfect information among Canadian employers about

the skills and qualifications of foreign trained immigrants, the wage differentials would, in part, reflect the inability of employers to assess the true value of immigrant's human capital, making them discount the foreign credentials and experience of immigrants.

While the problem of lack of recognition of foreign credentials exists among all groups of highly educated immigrants, the situation is worse for internationally educated professionals in regulated occupations like medicine, dentistry and engineering. A significant number of upper-segment occupations are strictly regulated by self-regulatory professional bodies (Bauder, 2003). Acting like monopolies, these professional bodies use tough accreditation processes, which result in limited access of immigrants to these professions. A significant proportion of doctors and engineers end up driving taxis or working as security guards due to lack of recognition of their foreign credentials (Boyd & Thomas, 2001; Gray, 2005; Reitz, 2011).

The performance of immigrants in the health sector, which is one of most stringently regulated profession in Canada, has been particularly worse, despite the persistent shortage of physicians in Canada (Dauphinee, 2007). More than 5000 physicians, who were working as doctors in their home countries before emigrating, are driving taxis or mopping the floors, as they are unable to get the license to practice due to the protectionist accreditation policies of College of Surgeons and Physicians (Francis, 2002). If their skills are utilized optimally, the number of immigrant doctors has the potential to increase the availability of physicians by at least 16% (Boyd & Schellenberg, 2007).

While the demand for physicians has increased considerably over the last two decades due to ageing population, the employment mismatch rate in the health sector showed an overall increase between 1991 and 2001. The mismatch rate rose from 16% in 1991 to 26% in 2001 for men, and increase from 28% to 36% for women during the same time period (Galarneau, 2004). Among native-born citizens who studied medicine, about 90% were working as doctors. The corresponding rate for immigrants with educational background in medicine was 55%, and a significant proportion of immigrant doctors, 33%, were working in occupations completely unrelated to medicine or health (Boyd & Schellenberg, 2007).

The first hurdle in the accreditation process of foreign trained doctors is to pass the Medical Council of Canada's Evaluating Exam (MCCEE), which screens doctors based on their theoretical knowledge of medicine. While the exam is not considered to be easy, a substantial number of foreign trained physicians are able to pass the exam. Once they clear the MCCEE, foreign trained doctors are required to complete two years of postgraduate training in a Canadian university in order to become eligible to write their licensing examinations. For internationally educated doctors who want to practice as specialists, the residency requirement increases to five years before they can become eligible for the appropriate certification exams (Boyd & Schellenberg, 2007).

While these accreditation requirements completely neglect the foreign training and experience of practicing medicine, a significant proportion of immigrant doctors is willing to spend time, effort and money to get the

accreditation by College of Surgeons and Physicians of Canada. However, there is a huge discrepancy between the residency spots available in Canadian medical schools for foreign trained doctors and the number of physician who clear the MCCEE exam (Boyd & Schellenberg, 2007; Thompson, 2000). In 1996, there were only 24 residency spots available in Ontario for more than 500 internationally trained physicians who had passed the qualifying exam (Basran, 1998). Even though the number of immigrant doctors who cleared the MCCEE increased to at least 600 in early 2000s, the residency spots available to them stayed limited at 25 (Francis, 2002; O'Meara, 2004).

The licensing requirements also vary depending on the origin of medical professionals. Doctors immigrating from United States, United Kingdom, New Zealand, Australia and South Africa are not subject to mandatory residency requirements of College of Surgeons and Physicians. Once they clear the evaluating exams, they can start their clinical practice immediately (Thompson, 2000). In contrast, doctors from other regions find it increasingly difficult to get residency placements, despite clearing the same exam and showing similar aptitude. However, the chances of qualifying for residency spots for foreign trained doctors were higher when they received their medical training from developed countries, irrespective of their country of origin (Lalonde, 2010). For example, doctors from India with a medical degree from United Kingdom are substantially more successful in securing residency placements compared with Indian doctors trained domestically.

5.1 The role of foreign credentials

Immigrants often find it difficult to succeed in getting jobs in accordance with skills due to the widespread problem of non-recognition of international credentials, both by the employers and by licensing bodies in regulated professions (Walters, 2006). Even though the immigrants under the skilled category are selected on the basis of their education, the labour market outcomes of those immigrants are not much different than the unskilled immigrants (Picot et al., 2007). Even when immigrants are able to get their credentials accredited and obtain license to practice in regulated fields, they still face hurdles in getting jobs, as employers perceive the foreign qualification of immigrants being of a lesser quality despite the fact that they have the license to practice (Reitz, 2001). For immigrants who manage to get jobs in regulated professions, the opportunities for promotions and professional advancement to upper level management and decision making positions are lower compared with their Canadian-educated counterparts (Reitz, 2005).

Given the employer's bias against foreign educated professionals, one can make a case for ethnic discrimination in applicant selection (Bauder, 2003; Vu, 2004). While there might be some form of ethnic discrimination faced by the immigrants in the labour market, that topic is beyond the scope of this paper. In addition, the current literature suggests that a significant portion of the problems faced by immigrants, in accessing employment opportunities, can be explained by lack of Canadian education. When skilled immigrants apply for jobs, their

credentials are severely discounted by the employers, and candidates with Canadian qualifications are preferred over foreign educated applicants (Li, 2001; Oreopoulos, 2009; Stevens, 2004). Even among the immigrants, those who studied in Canada had better employment outcomes compared to immigrants who were educated abroad (Zietsma, 2010). For the immigrant cohort arriving in 2008, out of 76% people who possessed foreign credentials, only 56% of those were considered compatible with Canadian standards of education, and only 19% received some recognition of their credentials (Suto, 2009).

During the first four years after immigrants arrive in Canada, only 28% are able to get their credentials recognized, however, skilled worker principle applicants had a better credential recognition rate of 38% (Houle & Yssaad, 2010). Houle & Yssaad (2010) also finds that immigrants with a university degree had better credential recognition rate, of 31%, compared with immigrants without a university degree (20%). Due to the pervasive non-recognition of foreign credentials, at least 20% of immigrants, who already have university degrees, attend school after arriving in Canada in order to gain credentials which are valued more in the labour market (Gilmore & Petit, 2008).

The inferior labour market outcomes of immigrants can also be understood by the fact that when employers short-list qualified candidates from a pool of job applicants, most skilled immigrants are vetted out based on their foreign credentials. In a field experiment, the interview call back rates for candidates with Canadian education were three times higher than call back rates for foreign educated candidates (Oreopoulos, 2009). From the perspective of

employers, in most cases, they are unable to assess the worth of foreign qualifications due to their limited resources and lack of information. In a survey administered to the employers, about 40% acknowledged that they vet out applicants with foreign credentials because of their inability to assess their education (Owen, 2007).

As identified by Lalonde (2010), "given uncertainty about the standard of training in university Y in country X, stereotypes about country X more broadly may be applied to judge the target" (p. 44). The pre-conceived notions of employers make it more difficult for skilled immigrants coming from developing countries. Based on the perception of the poor countries in general, the credentials earned in third world countries are perceived to be "deficient" and "inferior" by employers (Andersson, 2009; Guo & Anderson, 2005; Guo, 2007; Guo, 2009).

In summarizing the literature on estimates of wage premiums associated with foreign and domestic school, Reitz (2001) concludes that an additional year of foreign schooling yields wage premiums of about 2% to 5% lower than an additional year of Canadian schooling. However, the claim there are lower returns to foreign schooling has been proven to be flawed by later studies (Aydemir & Skuterud, 2004; Picot & Sweetman, 2005; Riddell, 2008).

Ayedemir & Skuterud (2004) compare returns to years of schooling separately for immigrants and Canadian born citizens, and identify that the difference in returns to additional years of schooling between the two groups,

when compared within their own groups, is only 0.3% lower for foreign educated immigrants. Immigrants with a foreign university degree earn 26% more than immigrants without a degree, and the immigrants with a Canadian degree witness a 35% increase in their earnings. In contrast, Canadians with a university degree earn only 19% more compared with Canadians without a degree (Aydemir & Skuterud, 2004).

Ayedemir & Skuterud (2004) indicate in their findings that "higher returns to credentials for immigrants shows that having a degree is much more important for an immigrant than a Canadian person.....The point is that immigrants with given amounts of education earn substantially less than comparable Canadian-born, but having a credential significantly reduces this gap" (p. 13). Riddel (2008) also confirms that returns to foreign education among immigrations within the same source country have not deteriorated. Their estimated bachelor's degree "sheep-skin effect" – the effect of degree completion on income without taking years of schooling into account – is about 9% for Canadian-born men and 14% for foreign educated immigrant men (Riddell, 2008).

The evidence in the literature suggests that even though foreign educated professionals face problems in getting their credentials recognized, their deteriorating incomes and the increasing earnings gap faced by immigrants is not because of their foreign credentials. Immigrants with university degrees have better labour market outcomes compared to unskilled immigrants, which supports the argument in favour of Canadian point system in attracting the highly skilled professionals from abroad. However, it is evident that when immigrants'

education is defined in terms of number of years, the returns are lower, but when university degree completion is used as a proxy for human capital, the foreign graduates are performing much better in labour markets than non-graduates.

5.2 The role of foreign experience

Similar to foreign credentials, experienced immigrants face difficulty in getting their foreign work experience recognised in Canada, as employers tend to give preference to work experience obtained within Canada (Walters, 2006). The work experience and training immigrants get abroad is not always recognized by their employers (Aydemir & Skuterud, 2004; Galarneau, 2004; Green & Worswick, 2004; Picot & Sweetman, 2005; Riddell, 2008). This produces a paradoxical situation, especially for skilled professionals, where immigrants are unable to access employment in their field because of lack of Canadian work experience, and being unable to find work in their field in Canada, they are unable to accumulate relevant Canadian work experience needed for professional jobs (Basran, 1998; Gray, 2005).

The situation of recognition of foreign work experience, nonetheless, is better than the recognition of foreign credentials. About 39% of skilled immigrants are able to get acknowledgement for the professional experience acquired outside Canada within four years after landing, compared to 29% who manage to get their credentials recognized during their first four years (Houle & Yssaad, 2010). Houle & Yssaad (2010) explain that employers consider work experience to be more tangible and practical for the job, and hence the recognition rate is

higher for work experience than foreign credentials. It is also interesting to notice that, in a field experiment conducted by Oreopoulos (2009), the interview call rates for foreign educated professionals, having about 4 to 6 years work experience acquired in Canada, were not different from interview call rates of native-born candidates with similar work experience. This pattern is also observed in the study by Buzdugan & Halli (2009), which highlights the point that Canadian work experience, or lack thereof, is more important than foreign credentials in explaining the differences in labour market experiences between immigrants and native-born workers.

After establishing that Canadian work experience is a dominant explanatory factor in immigrant employment outcomes needs, the effect of having foreign work experience needs further investigation. The studies focusing on the effects of foreign work experience on immigrant earnings conclude consensually that returns to foreign work experience are on a decline, which explains a significant portion of continued deterioration in immigrant earnings (Aydemir & Skuterud, 2004; Ferrer, Green, & Riddell, 2006; Frenette & Morissette, 2003; Picot & Sweetman, 2005; Riddell, 2008). Ayedemir & Skuterud (2004) find that at least one third of the decline in earnings of immigrants is explained by the discounting of their foreign work experience, with the employer's discount rate increasing over time. In addition, they find that this continuous decline in returns for foreign experience was only attributable to immigrants originating from non-traditional source countries, including countries from South Asia and South East Asia.

An additional year of foreign work experience only brings about 1.4% return compared to 5.7% return for Canadian work experience (Aydemir & Skuterud, 2004). For Canadian-born mid-career level professionals, an additional year of work experience is associated with a 3.6% return for men and a slightly lower return for women. In contrast, immigrant males with similar career levels get only 1% return for each additional year of work experience, and for immigrant females the returns are negligible (Riddell, 2008). For skilled immigrants with university degrees, having professional experience from abroad actually results in negative returns, as the earnings of immigrants, who were fresh university graduates, were found to higher than immigrants with foreign work experience (Ferrer et al., 2006). Based on the evidence provided in the literature, it can be concluded that failing returns to foreign work experience is a significant factor in understanding the decline in labour market outcomes for skilled immigrants.

6: THE ROLE OF EDUCATION QUALITY AND COUNTRY OF ORIGIN

The literature on immigrant earnings and foreign credentials shows that earning disparity between Canadian-born workers and immigrants also varies depending of the source country of immigrants (Aydemir & Skuterud, 2004; Galarneau & Morissette, 2009). When foreign credentials of immigrants are evaluated, the degrees of some immigrant groups are not considered to be equivalent to Canadian standards, which forces immigrants to upgrade their skills by going back to school after they arrive.

In order to explore the reasons for earnings differential among immigrants based on their source countries, it is important to highlight that immigrants' country of origin only provides a proxy for unobservable differences in the market value of skills of people from different regions. While estimating the effects of education and degrees on immigrant earnings, it is assumed that the quality of education, and hence the skills of the labour, are equal across all immigrants. However, it is a well known fact that education quality differs across countries, and typically, the quality of education system in developed countries is superior to the one in developing countries.

Among the top universities in the world, more than 90% universities belong to the most developed regions, including North America, West Europe, Japan and Australia (Hawthorne, 2007). At the same time, immigrants from

United States, United Kingdom and West Europe earn 20% more than other groups of immigrants (Ferrer et al., 2006). The evidence suggests that the variation in earnings among immigrants, from different ethnic groups, roughly correspond to the level of economic development in their source countries (Hiebert, 2006).

If education quality really differs among immigrants depending on the country where received their education, then some portion of credential discounting, on the part of employers, will be justified (Walsworth, 2010). Focusing on countries of post-secondary education of immigrants, Mata (2008) estimates immigrant's quality of education by comparing the countries of post-secondary education with unemployment rates of immigrants from respective countries. The findings indicate that when immigrants are educated in developing countries, like Pakistan and China, unemployment rates for them are at least 12% lower compared to other immigrant groups. In contrast, immigrants who complete their highest education in developed countries had labour market outcomes not substantially different from Canadian-educated workers (Mata, 2008).

A high correlation between labour market participation rates and immigrants country of education might be misleading, as the estimated effect might also include country specific differences, like language proficiency, among different immigrant groups. As noted previously in this paper, Canadian educated workers, including the children of immigrants who arrived at a young age, have better earnings that immigrants. Nevertheless, to establish the link between

country specific quality of education and immigrants' labour market outcomes, several studies focus on comparison of cognitive skills between immigrants and Canadian educated workers and their earnings (Bonikowska, Green, & Riddell, 2008; Ferrer et al., 2006; Sweetman & McBride, 2004; Sweetman, 2004).

The results of international assessment of quality of education across different countries clearly show that there is widespread disparity between the assessment scores of students from different national schooling systems (Sweetman, 2004). This brings attention to the fact that even though the credentials received across countries might be the same, they are not necessarily equivalent to the Canadian, and other developed countries', credentials. When considering the test scores of cognitive skills between immigrants with degrees from foreign universities and Canadian graduates, the average literacy score of immigrants is 60 points lower than their Canadian counterparts (Ferrer et al., 2006). The cognitive skills scores of male immigrants, on average, are 9% to 12% lower than Canadian males, and the scores of female immigrants are 11% to 16% lower than their Canadian counterparts (Bonikowska et al., 2008).

The evidence presented above suggests that immigrants, on average, have lower cognitive skills than Canadian educated workers. The empirical evidence on returns to cognitive skills, as measured by the test scores of immigrants and native-born citizens, suggests that there is no discrimination in returns to cognitive skills between immigrants and natives (Bonikowska et al., 2008; Ferrer et al., 2006). As a matter of fact, while immigrant women have the

similar returns to cognitive skills, immigrant men, on the other hand, face higher returns to cognitive skills when compared with Canadian-born men. An increase of 100 points on the cognitive skills tests translates into 24% earnings gain for Canadian-born men, and for immigrant men, the same level of increase in cognitive skills yields a return of 37% (Bonikowska et al., 2008). This evidence suggests that immigrant men receive a 1.54 times higher rate of return on their cognitive skills compared to similarly capable Canadian men. Based on these figures, if immigrants had the same level of average cognitive and literacy skills as Canadian born workers, the earnings between the two groups would reduce by 13% to 20% (Bonikowska et al., 2008; Ferrer et al., 2006)..

7: CONCLUSION

Immigration in Canada has played a significant part in the economic progress of the country. In today's knowledge based economy, Canada is striving to attract the best minds from around the world, and its points system reflects that. However, while at one end the immigration policy has been very effective in providing a highly educated immigrant labour force intake, their integration into the labour market has been far from smooth.

Lack of recognition of foreign credentials and work experience, combined with difficult and complex accreditation requirements in regulated professions, is making it increasingly difficult for foreign educated immigrants to find jobs that match their skills set. A significant number of engineers and doctors are working in occupations that make no use of their skills, like driving taxis or mopping floors. In addition, immigrants also face a wage differential compared similarly qualified Canadian-born citizens, which has lead to chronic low income levels among recent entering cohorts of immigrants.

The under-utilization of immigrants' skills is a big concern among policy circles in Canada, as it creates a lose-lose situation for both, the immigrants, and the Canadian economy. The skilled immigrants are unable to realize their potential and translate their qualifications into representative earnings, and

Canada, on the other hand, is not benefitting from less than optimal contributions skilled immigrants are currently making towards the Canadian economy.

This aim of this paper was to explore the magnitude of the problem of skill under-utilization among highly educated immigrants in Canada, and identify the main reasons for the huge waste of immigrants' potential. The labour market outcomes display a significantly high mismatch rate between the qualifications and occupations of immigrants. In addition, the wage differential between immigrants and similarly qualified native-born workers has increased perpetually, and the economic conditions of skilled immigrants are continuously deteriorating as a significant number of skilled professionals have very low levels of income.

In exploring the possible reasons for less than optimal labour market outcomes for skilled immigrants, the role played by foreign credentials, foreign work experience, and educational quality, in explaining the observed differences between immigrants and native-born workers, was discussed in this paper. Based on the empirical evidence provided in the literature, it is observed that lack of recognition of credentials does not play a significant role, as returns to foreign credentials have not been deteriorating for immigrants. However, the returns to foreign work experience have been declining for immigrants, and account for as much as one-third of the earning differences observed in the labour market between immigrants and native-born Canadians.

The differential treatment of immigrants in the labour market is also related with the education quality of immigrants, as determined by the quality of

schooling system in their source countries. Immigrants, on average, register lower cognitive and literacy skills compared with Canadian-educated workers. Nevertheless, there is no evidence of differential returns to cognitive skills between immigrants and native-born workers. Hence, it is concluded that about one-fifth of the relative wage differential faced by immigrants can be explained by lower education quality among immigrants from developing countries.

The main aim of this paper was to assess the effectiveness of Canadian points system, which attracts highly qualified immigrants from around the world. Despite the differences in the quality of education among immigrants from difference countries, the returns on cognitive skills are 50% percent higher for immigrants compared to Canadian-educated citizens. In addition, immigrants entering Canada in the skilled class have, on average, better labour market outcomes compared to family class and refugee class immigrants. Skilled immigrants also have faster convergence rates with the incomes of native-born workers, and when skilled immigrants choose to settle in small and rural areas, they even witness a wage premium compared with Canadian-workers. Finally, the high education levels of skilled immigrants also creates positive externalities, which are observed by the indirect effect it has on increased education attainment levels of family class immigrants, and better educational outcomes of their children.

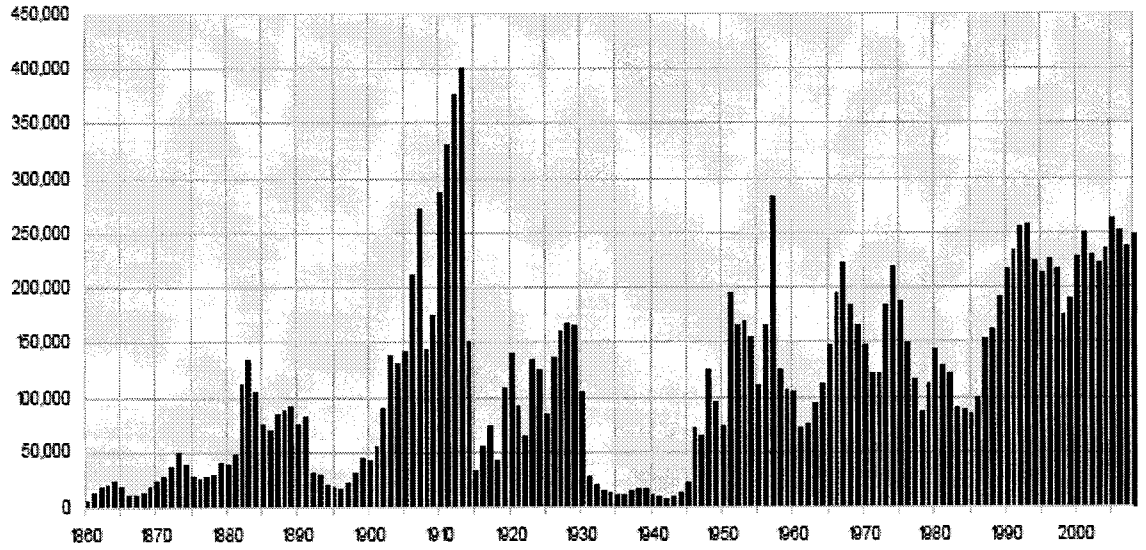
Based on the positive experiences of skilled immigrants, the paper concludes that the Canadian point system has been very effective in attracting highly educated immigrants, and is, in actuality, helping to reduce the labour

market differentials immigrants, as a whole, face in Canada. The policy of attracting highly skilled workers is proving to be extremely beneficial for Canada. However, there is a need for increases focus by the government on improving the accreditation mechanisms in the labour market to make optimal use of immigrants' skills.

8: APPENDIX

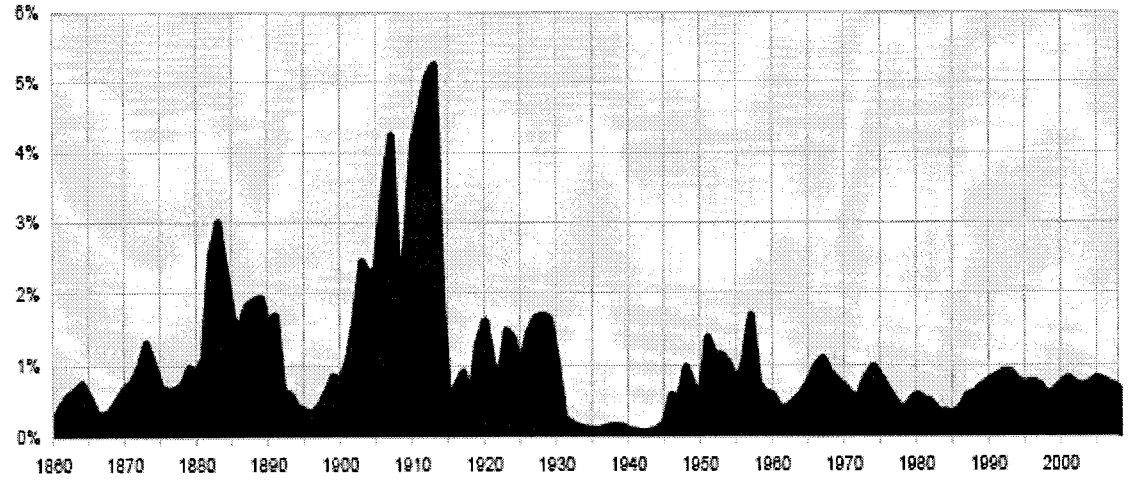
8.1 Figures

Figure 1: Permanent Residents in Canada 1860-2008



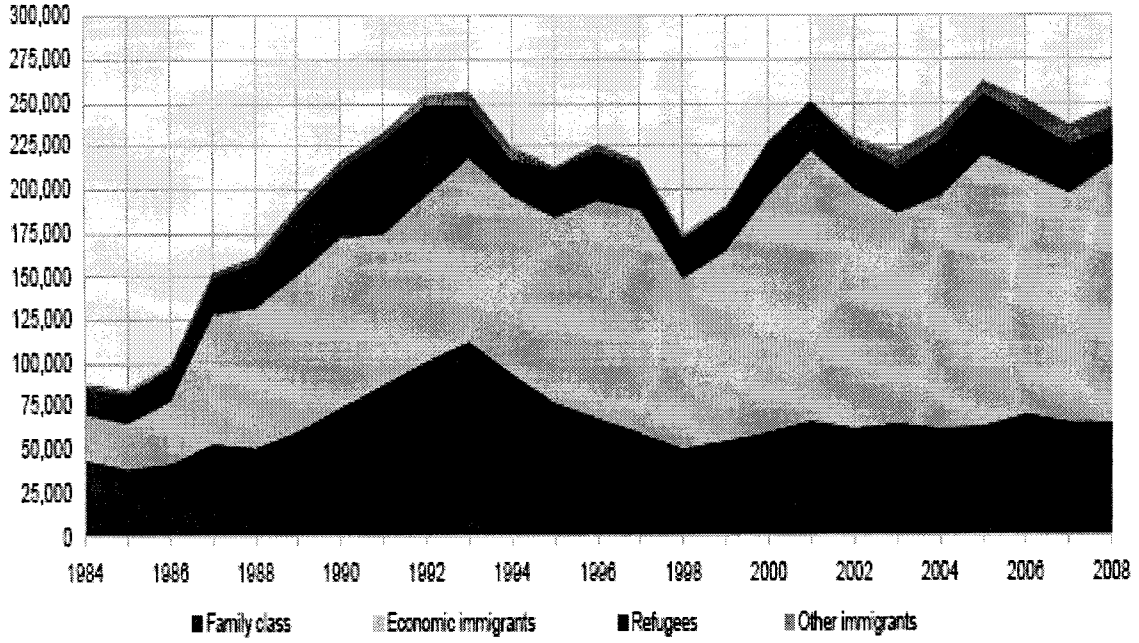
Source: CIC, Facts and Figures (2008)

Figure 2: Permanent Residents in Canada as a percentage of population 1860-2008



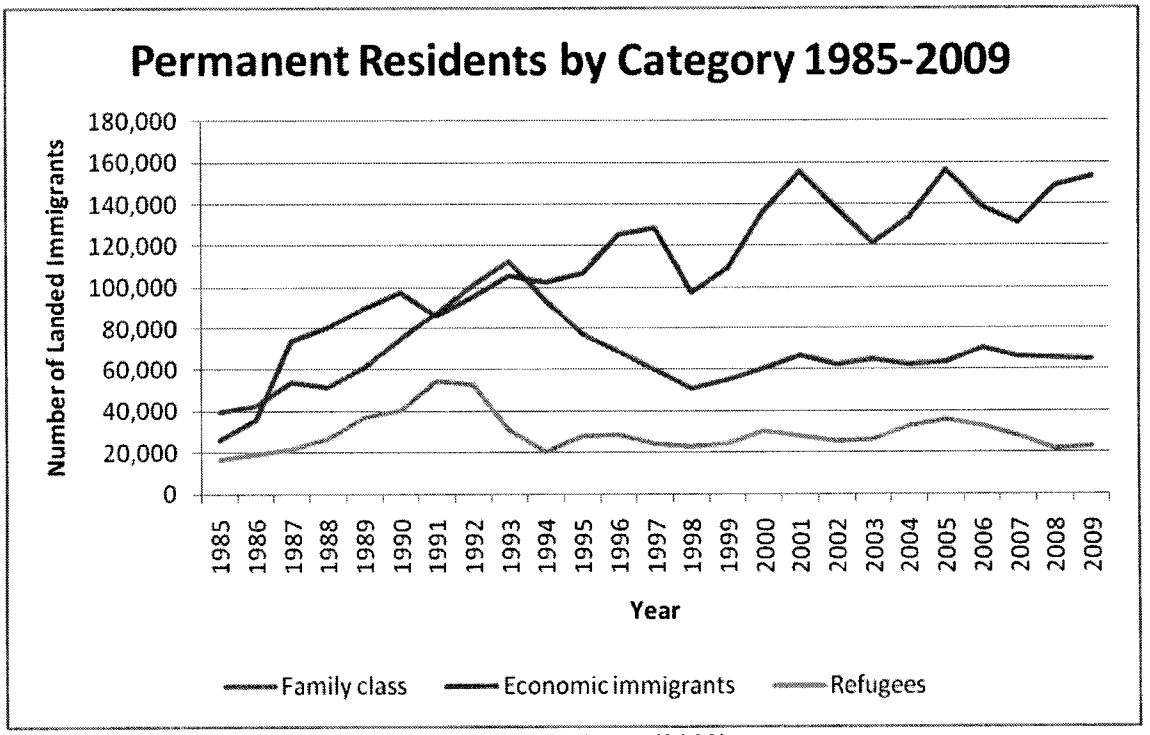
Source: CIC, Facts and Figures (2008)

Figure 3: Permanent residents in Canada by category 1984-2008



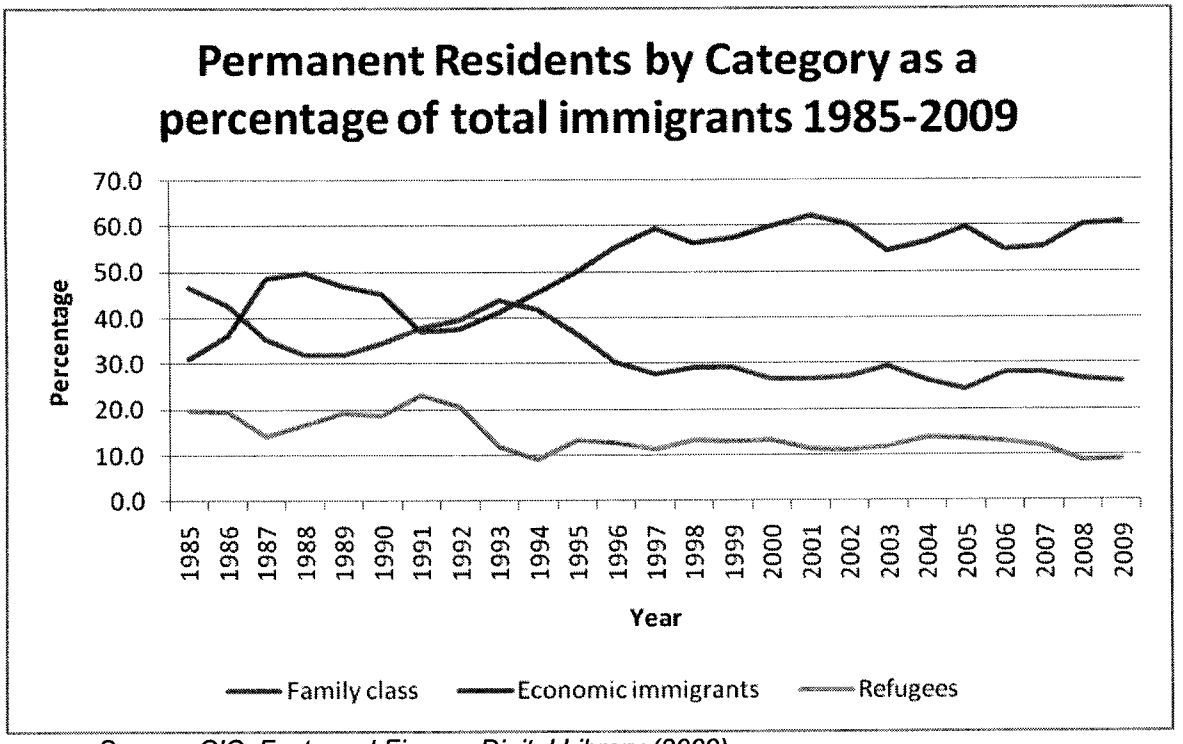
Source: CIC, Facts and Figures (2008)

Figure 4: Change in Permanenet Residents by Category 1985-2009



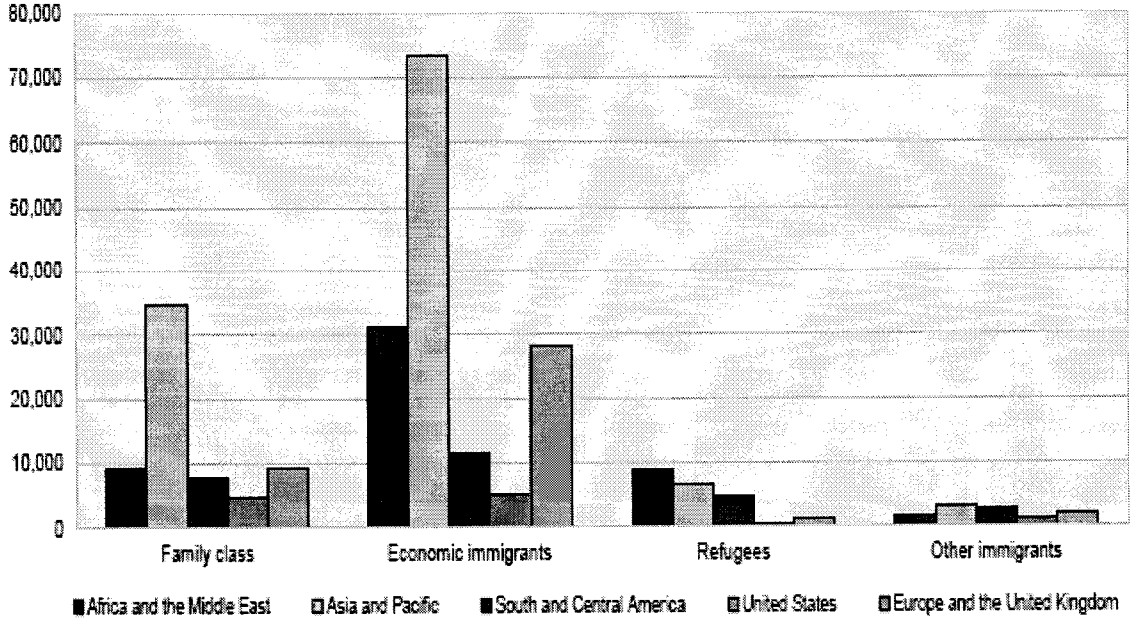
Source: CIC, Facts and Figures Digital Library (2009)

Figure 5: Permanent Residents by Category as a percentage of total Immigrants 1985-2009



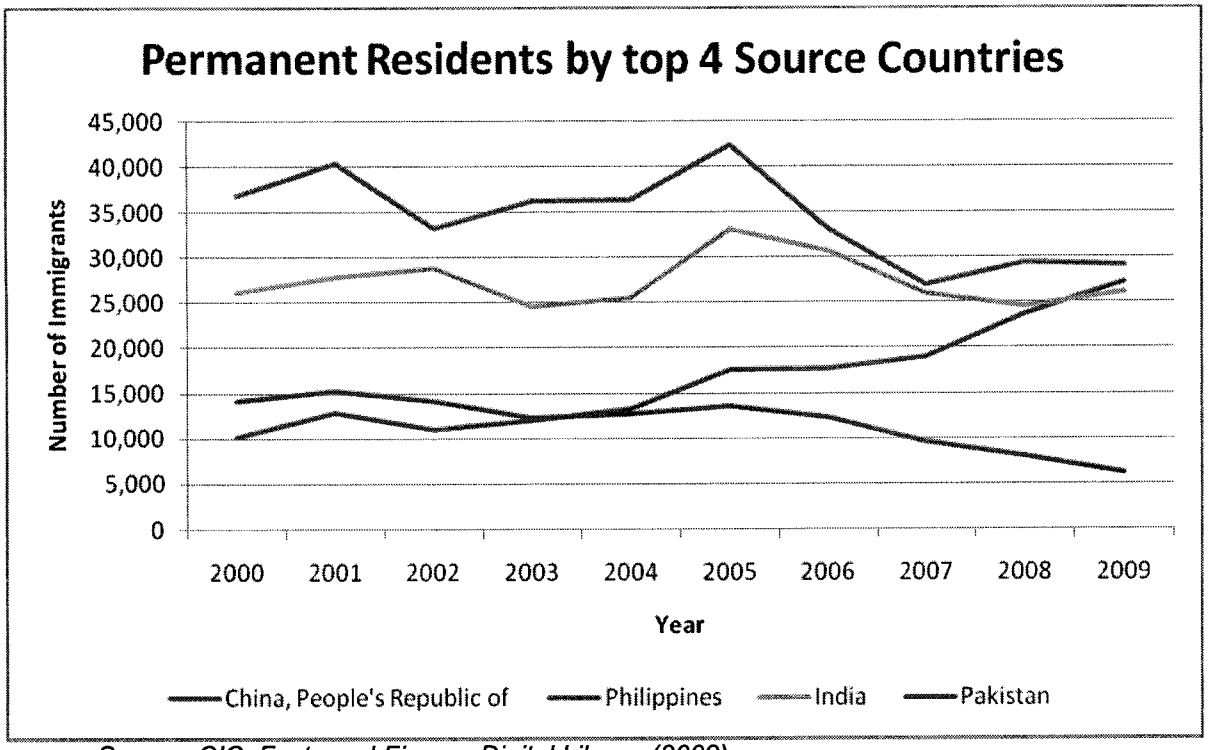
Source: CIC, Facts and Figures Digital Library (2009)

Figure 6: Permanent Residents in Canada by category and source region



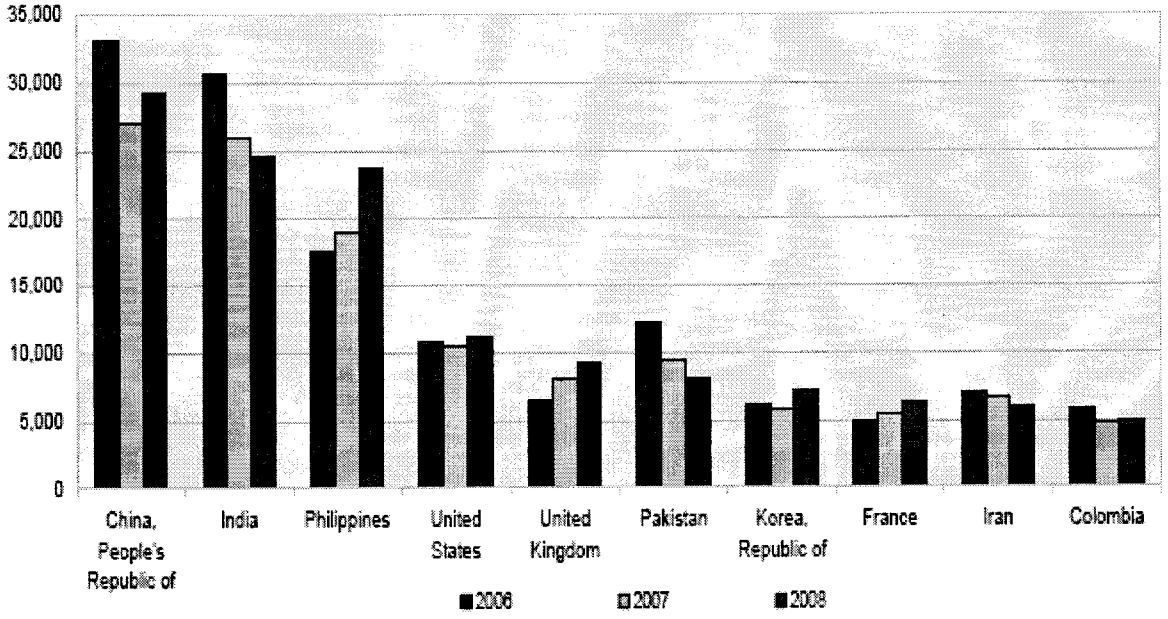
Source: CIC, Facts and Figures (2008)

Figure 7: Permanent Residents by top 4 source countries 2000-09



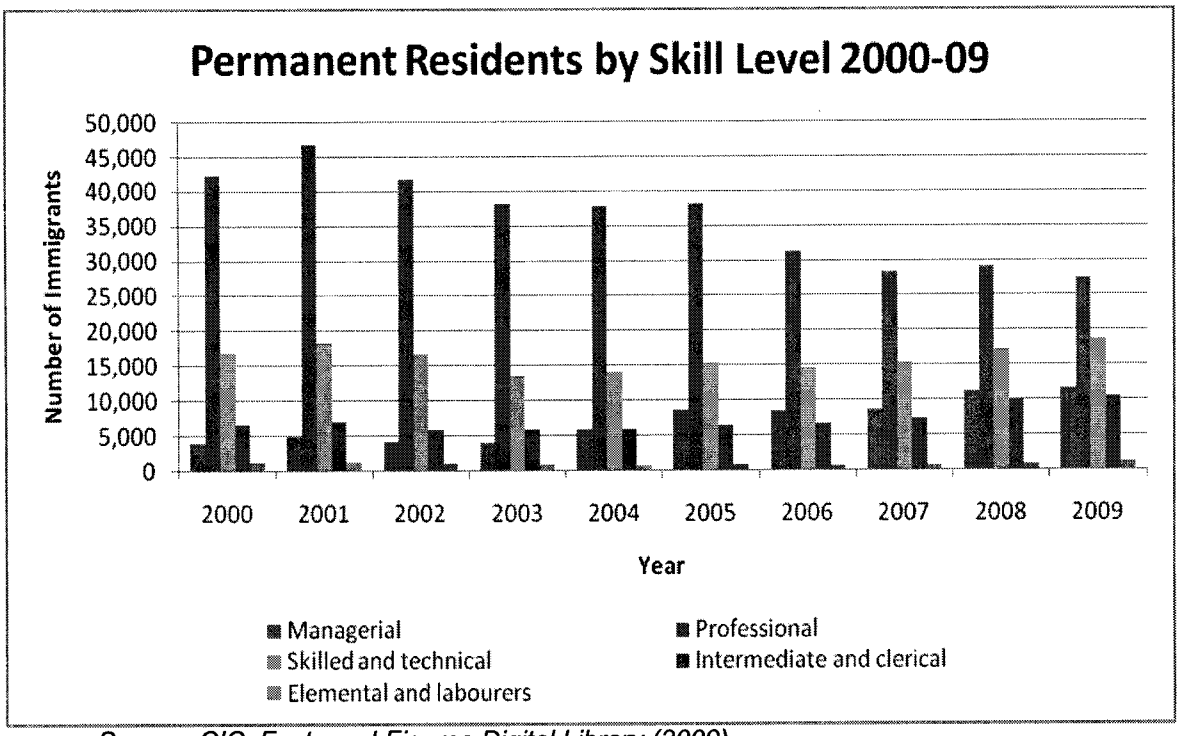
Source: CIC, Facts and Figures Digital Library (2009)

Figure 8: Permanent Residents in Canada by Top 10 source countries 2006-08



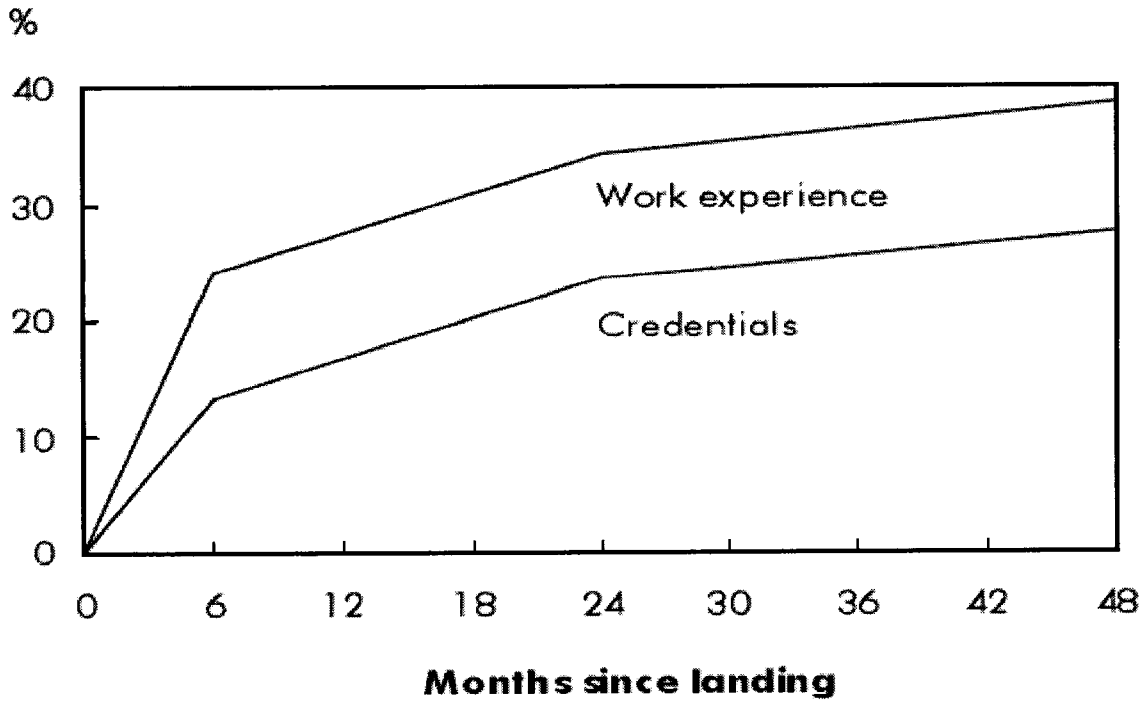
Source: CIC, Facts and Figures, 2008

Figure 9: Permanent Residents by Skill Level 2000-09



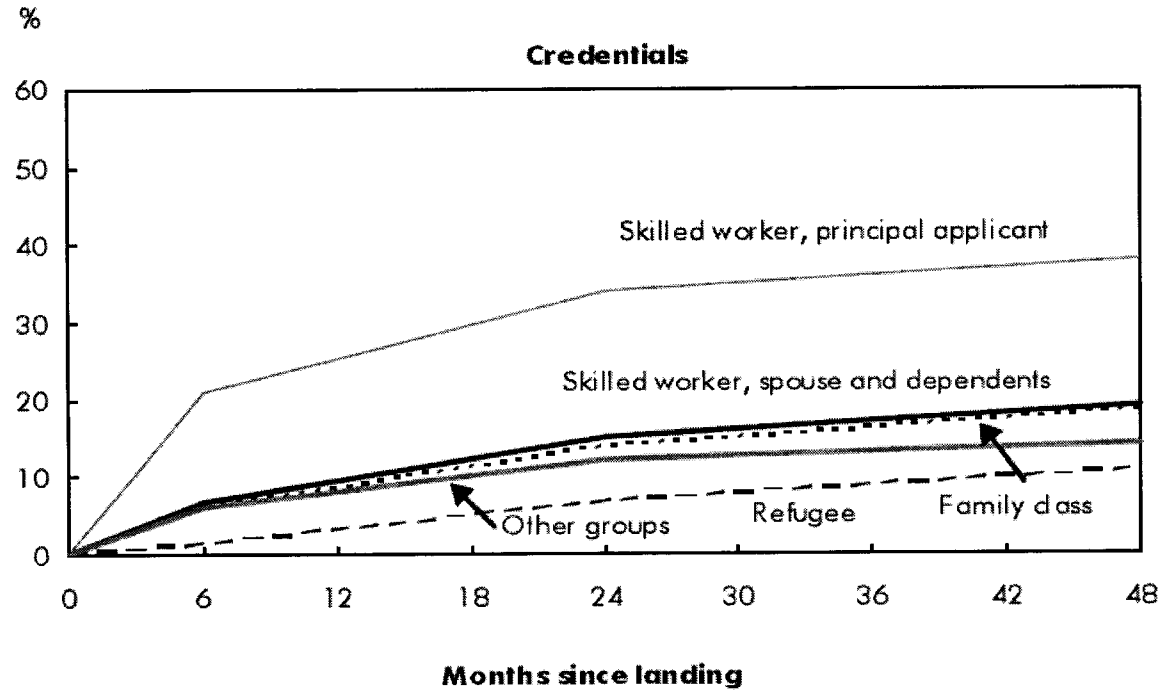
Source: CIC, Facts and Figures Digital Library (2009)

Figure 10: Probability of Recognition of Foreign Credentials and Work Experience



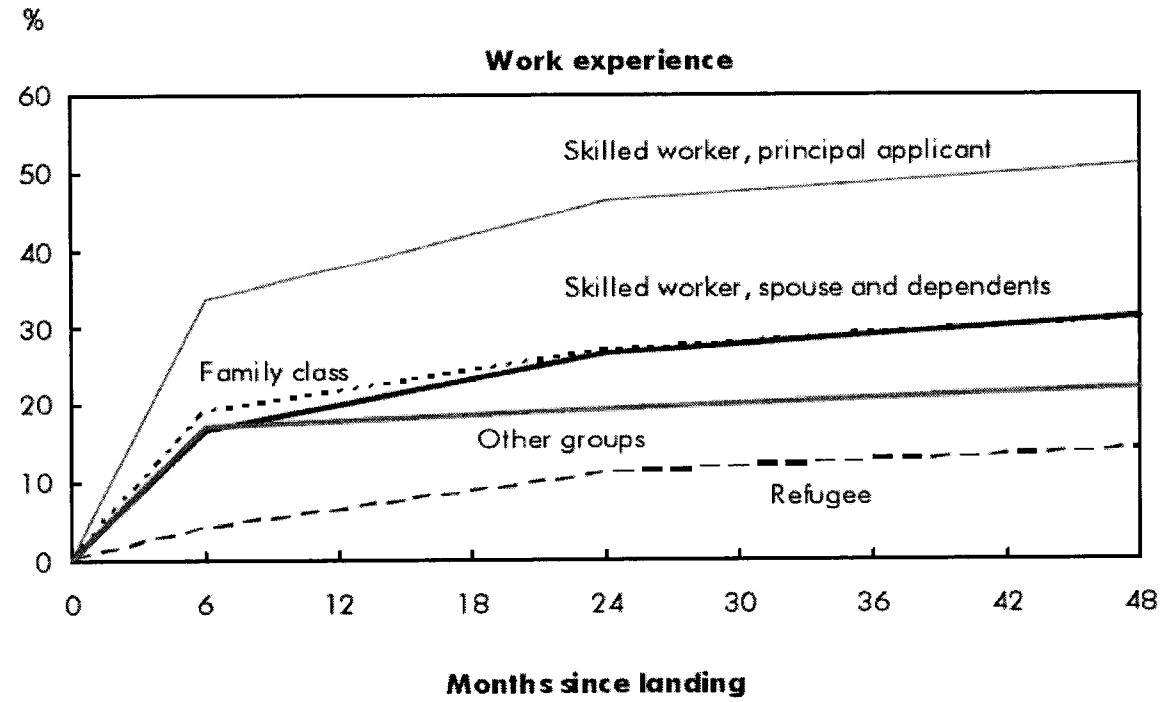
Source: Houle & Yssaad (2010)

Figure 11: Percentage of Recognition of Foreign Credentials by category



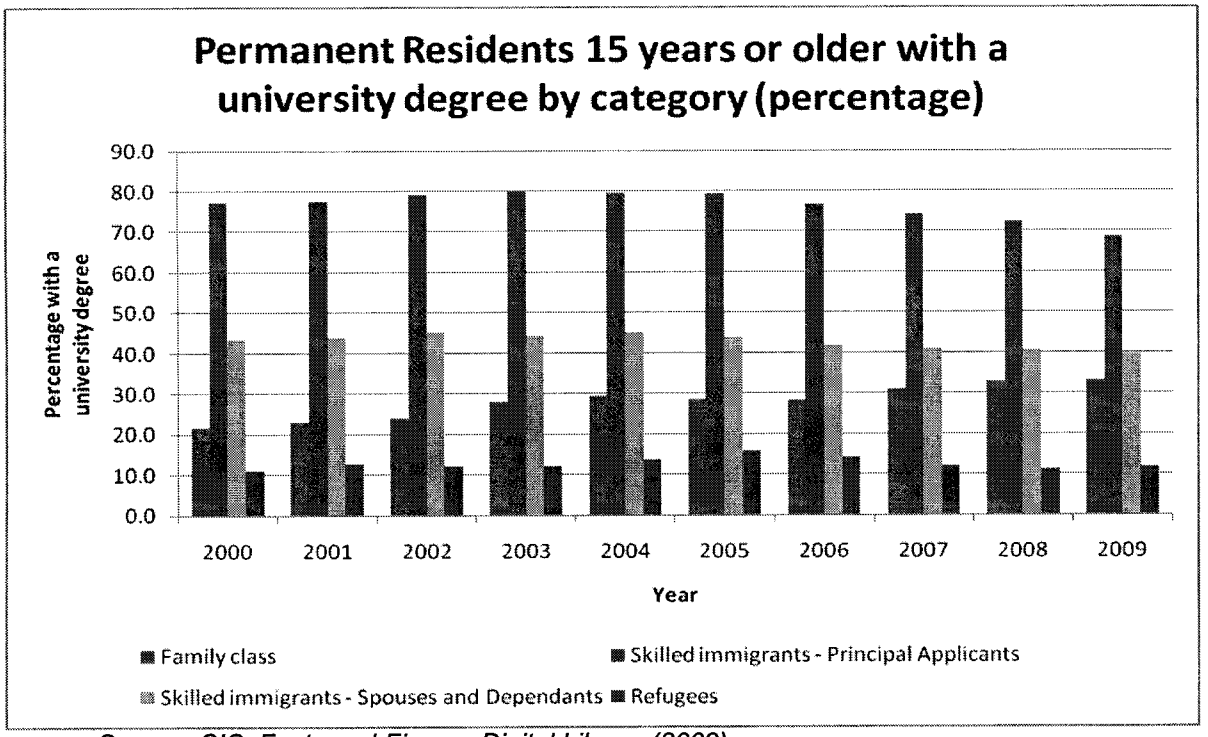
Source: Houle & Yssaad (2010)

Figure 12: Percentage of Recognition of Foreign Work Experience by category



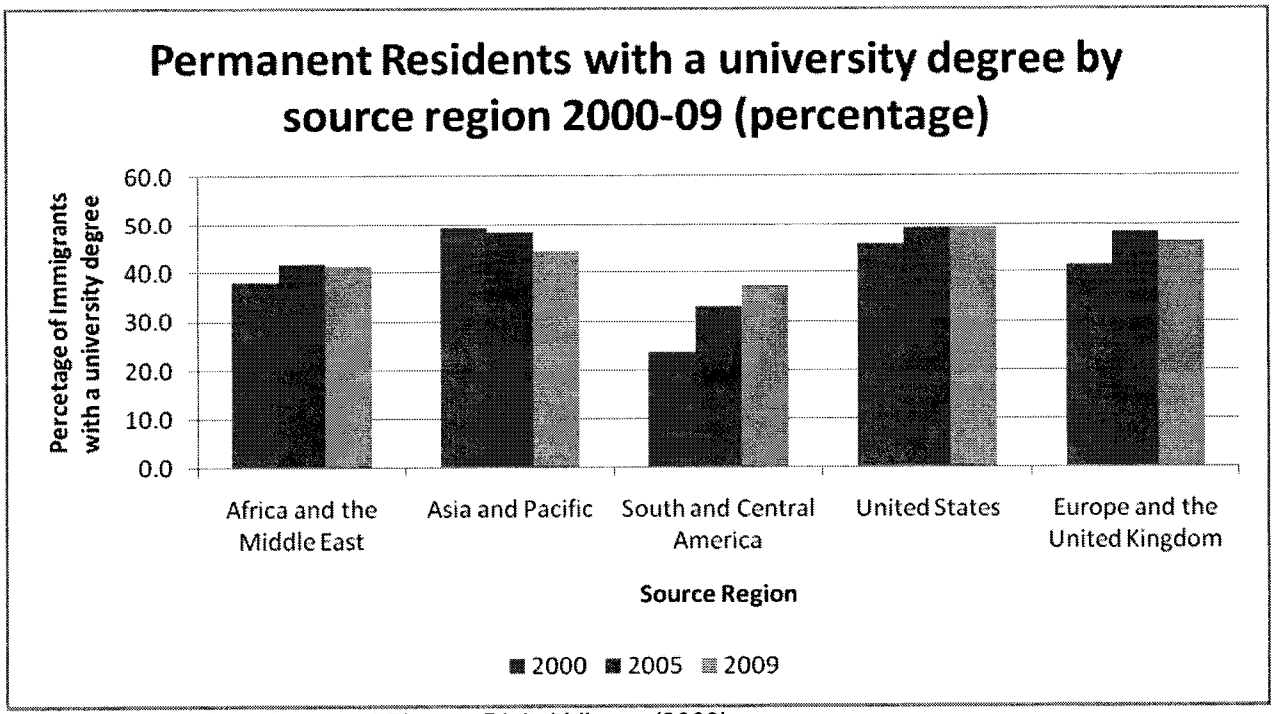
Source: Houle & Yssaad (2010)

Figure 13: Permanent Residents 15 years or older with a university degree by category 2000-09 (percentage)



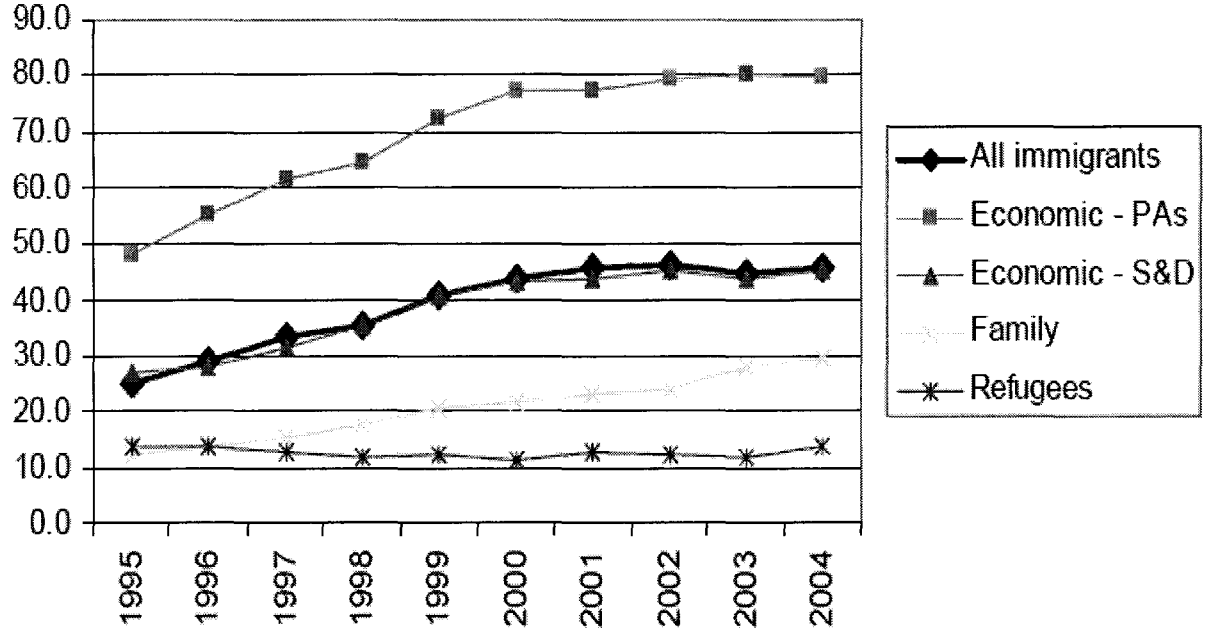
Source: CIC, Facts and Figures Digital Library (2009)

Figure 14: Permanent Residents 15 years or older with a university degree by source region 2000-09 (percentage)



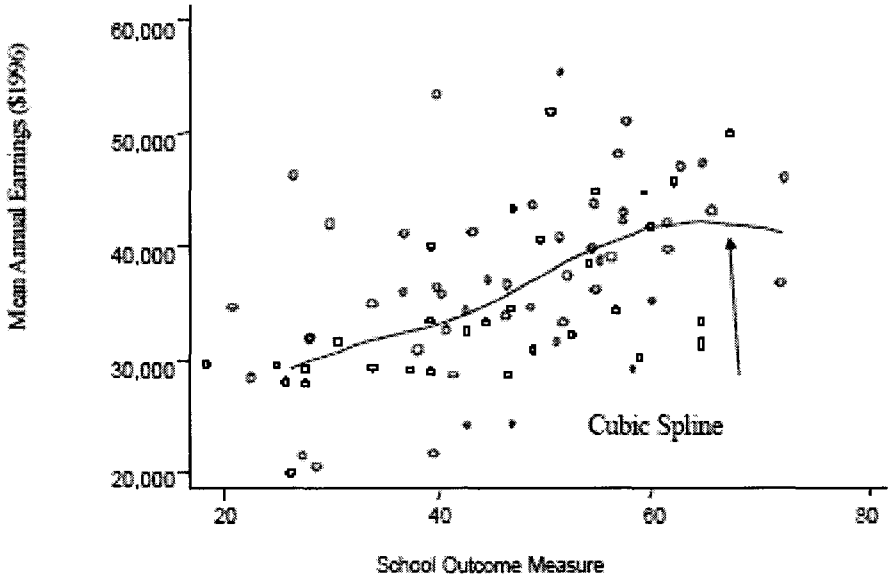
Source: CIC, Facts and Figures Digital Library (2009)

Figure 15: Landed immigrants by class with a university degree (percentage) 1995-2004



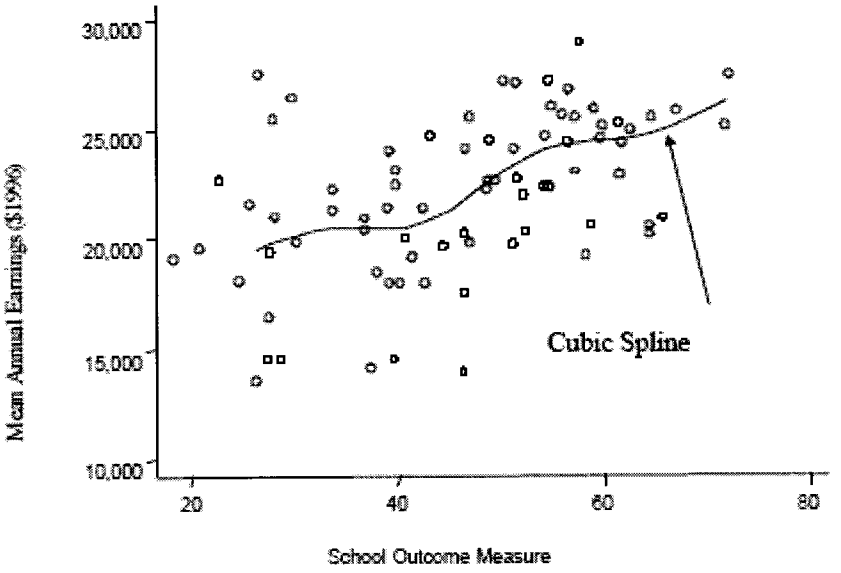
Source: Hiebert (2006)

Figure 16: Average Male Earnings and School Outcome by Source Country



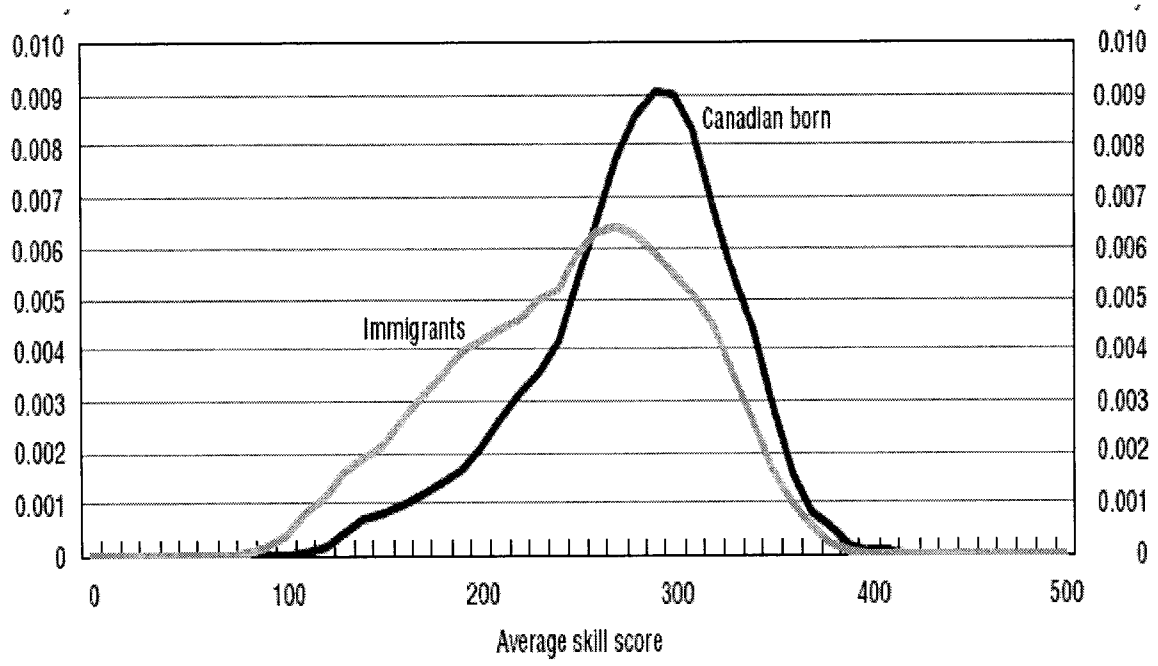
Source: Sweetman (2004)

Figure 17: Average Female Earnings and School Outcome by Source Country



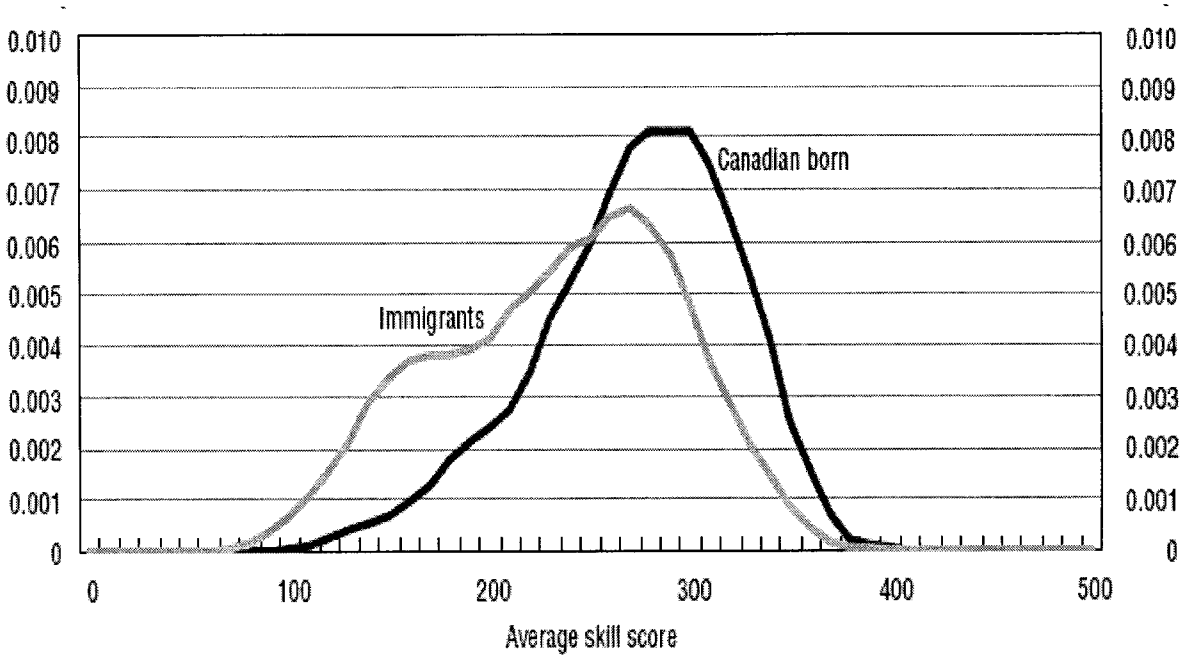
Source: Sweetman (2004)

Figure 18: Distribution of average skills score between immigrants and Canadian-born, Males



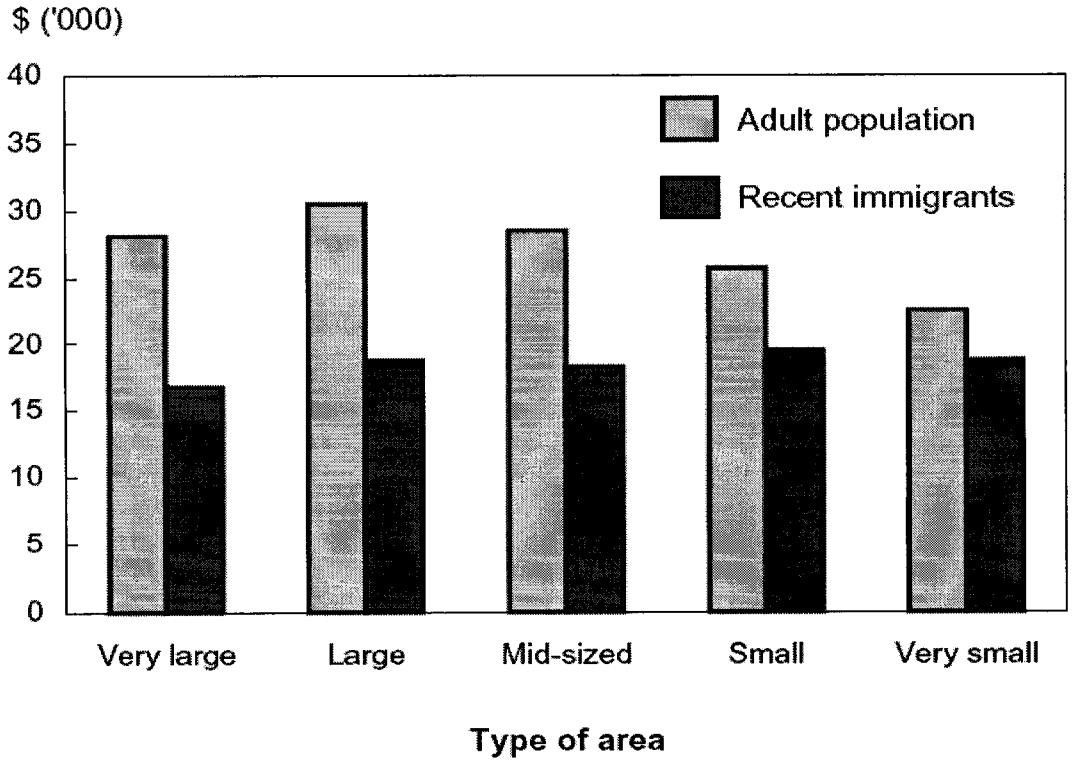
Source: Bonikowska, Green, & Riddell (2008)

Figure 19: Distribution of average skills score between immigrants and Canadian-born, Females



Source: Bonikowska, Green, & Riddell (2008)

Figure 20: Relative Wages of Immigrants by the size of area where they settle



Source: Bernard (2008)

8.2 Tables

Table 1: Permanent Residents by Category 1985-2009

Year	Family class	Economic immigrants	Refugees	Other immigrants	Total Immigrants
1985	39361	26111	16772	2101	84345
1986	42475	35841	19204	1835	99355
1987	53841	74106	21470	2666	152083
1988	51427	80219	26766	3171	161583
1989	60971	90144	36869	3567	191553
1990	74685	97933	40235	3601	216454
1991	87972	86503	54092	4248	232815
1992	101116	95801	52348	5544	254809
1993	112657	105657	30613	7751	256678
1994	94194	102310	20435	7454	224394
1995	77387	106628	28093	761	212869
1996	68359	125370	28478	3865	226073
1997	59980	128350	24308	3400	216038
1998	50896	97912	22843	2547	174198
1999	55274	109250	24397	1031	189952
2000	60616	136287	30092	460	227455
2001	66794	155720	27919	206	250640
2002	62291	137863	25115	3780	229049
2003	65117	121046	25984	9200	221348
2004	62266	133748	32687	7124	235825
2005	63364	156312	35776	6787	262241
2006	70515	138251	32499	10375	251642
2007	66242	131244	27955	11312	236754
2008	65577	149071	21860	10737	247247
2009	65200	153498	22846	10634	252179

Source: CIC, Facts and Figures Digital Library (2009)

Table 2: PR by Category (percentage) 1985-2009

Year	Family class	Economic immigrants	Refugees	Other immigrants
1985	46.7	31.0	19.9	2.5
1986	42.8	36.1	19.3	1.9
1987	35.4	48.7	14.1	1.8
1988	31.8	49.7	16.6	2.0
1989	31.8	47.1	19.3	1.9
1990	34.5	45.2	18.6	1.7
1991	37.8	37.2	23.2	1.8
1992	39.7	37.6	20.5	2.2
1993	43.9	41.2	11.9	3.0
1994	42.0	45.6	9.1	3.3
1995	36.4	50.1	13.2	0.4
1996	30.2	55.5	12.6	1.7
1997	27.8	59.4	11.3	1.6
1998	29.2	56.2	13.1	1.5
1999	29.1	57.5	12.8	0.5
2000	26.7	59.9	13.2	0.2
2001	26.7	62.1	11.1	0.1
2002	27.2	60.2	11.0	1.7
2003	29.4	54.7	11.7	4.2
2004	26.4	56.7	13.9	3.0
2005	24.2	59.6	13.6	2.6
2006	28.0	54.9	12.9	4.1
2007	28.0	55.4	11.8	4.8
2008	26.5	60.3	8.8	4.3
2009	25.9	60.9	9.1	4.2

Source: CIC, Facts and Figures Digital Library (2009)

Table 3: Skilled immigrants by source area

Year	Africa and the Middle East	Asia and Pacific	South and Central America	United States	Europe and the United Kingdom	Total Skilled Immigrants
2000	23,410	78,659	5,955	2,575	25,685	**136,287**
2001	30,706	87,727	7,475	2,240	27,553	**155,720**
2002	30,604	71,212	8,040	1,938	26,059	**137,863**
2003	25,385	62,241	7,313	1,703	24,403	**121,046**
2004	27,591	66,480	8,454	2,977	28,242	**133,748**
2005	28,650	87,740	8,205	3,804	27,912	**156,312**
2006	31,346	69,423	7,191	4,498	25,791	**138,251**
2007	28,175	62,298	9,466	4,785	26,520	**131,244**
2008	31,225	73,303	11,392	4,926	28,225	**149,071**
2009	33,873	73,156	12,392	3,695	30,382	**153,498**

Source: CIC, Facts and Figures Digital Library (2009)

Table 4: Skilled Immigrants by Region percentage 2000-09

Year	Africa and the Middle East	Asia and Pacific	South and Central America	United States	Europe and the United Kingdom
2000	17.2	57.7	4.4	1.9	18.9
2001	19.7	56.3	4.8	1.4	17.7
2002	22.2	51.7	5.8	1.4	18.9
2003	21.0	51.4	6.0	1.4	20.2
2004	20.6	49.7	6.3	2.2	21.1
2005	18.3	56.1	5.3	2.4	17.9
2006	22.7	50.2	5.2	3.3	18.7
2007	21.5	47.5	7.2	3.7	20.2
2008	21.0	49.2	7.6	3.3	18.9
2009	22.1	47.7	8.1	2.4	19.8

Source: CIC, Facts and Figures Digital Library (2009)

Table 5: Permanent Residents by Source Country 2000-09

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
China	36,749	40,365	33,305	36,251	36,429	42,292	33,079	27,013	29,337	29,049
India	26,122	27,902	28,838	24,594	25,573	33,142	30,750	26,049	24,548	26,122
Philippines	10,119	12,928	11,011	11,988	13,303	17,525	17,718	19,066	23,726	27,277
Pakistan	14,201	15,353	14,173	12,351	12,793	13,575	12,329	9,545	8,052	6,214
United States	5,828	5,909	5,294	6,013	7,507	9,263	10,943	10,449	11,216	9,723
Colombia	2,228	2,967	3,225	4,273	4,438	6,031	5,813	4,833	4,995	4,240
United Kingdom	4,649	5,360	4,724	5,199	6,062	5,864	6,541	8,129	9,243	9,566
Korea	7,639	9,608	7,334	7,089	5,337	5,819	6,178	5,866	7,246	5,864
Iran	5,616	5,746	7,889	5,651	6,063	5,502	7,073	6,663	6,010	6,065
France	4,345	4,428	3,962	4,127	5,028	5,430	4,915	5,526	6,384	7,300
Romania	4,430	5,589	5,689	5,466	5,658	4,964	4,393	3,770	2,754	1,994
Sri Lanka	5,849	5,520	4,968	4,448	4,135	4,690	4,490	3,934	4,509	4,269
United Arab Emirates	3,084	4,523	4,444	3,321	4,358	4,053	4,100	3,368	4,695	4,640
Bangladesh	2,715	3,393	2,615	1,896	2,374	3,940	3,838	2,735	2,716	1,854
Russia	3,523	4,073	3,677	3,520	3,685	3,607	2,850	2,854	2,547	2,799

Source: CIC, Facts and Figures Digital Library (2009)

Table 6: Permanent Residents by Source Country 2000-09 (Percentage)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
China	16.2	16.1	14.5	16.4	15.5	16.1	13.2	11.4	11.9	11.5
India	11.5	11.1	12.6	11.1	10.8	12.6	12.2	11.0	9.9	10.4
Philippines	4.5	5.2	4.8	5.4	5.6	6.7	7.0	8.1	9.6	10.8
Pakistan	6.2	6.1	6.2	5.6	5.4	5.2	4.9	4.0	3.3	2.5
United States	2.6	2.4	2.3	2.7	3.2	3.5	4.4	4.4	4.5	3.9
Colombia	1.0	1.2	1.4	1.9	1.9	2.3	2.3	2.0	2.0	1.7
United Kingdom	2.0	2.1	2.1	2.4	2.6	2.2	2.6	3.4	3.7	3.8
Korea	3.4	3.8	3.2	3.2	2.3	2.2	2.5	2.5	2.9	2.3
Iran	2.5	2.3	3.4	2.6	2.6	2.1	2.8	2.8	2.4	2.4
France	1.9	1.8	1.7	1.9	2.1	2.1	2.0	2.3	2.6	2.9
Romania	2.0	2.2	2.5	2.5	2.4	1.9	1.8	1.6	1.1	0.8
Sri Lanka	2.6	2.2	2.2	2.0	1.8	1.8	1.8	1.7	1.8	1.7
United Arab Emirates	1.4	1.8	1.9	1.5	1.9	1.6	1.6	1.4	1.9	1.8
Bangladesh	1.2	1.4	1.1	0.9	1.0	1.5	1.5	1.2	1.1	0.7
Russia	1.6	1.6	1.6	1.6	1.6	1.4	1.1	1.2	1.0	1.1

Source: CIC, Facts and Figures Digital Library (2009)

Table 7: Permanent Residents by Skill Level 2000-09

Year	Level 0 - Managerial	Level A - Professional	Level B - Skilled and technical	Level C - Intermediate and clerical	Level D - Elemental and labourers
2000	3,915	42,341	16,712	6,622	1,118
2001	4,873	46,704	18,248	6,931	1,152
2002	4,143	41,788	16,534	5,869	906
2003	3,944	38,191	13,473	5,767	796
2004	5,903	37,809	13,967	5,844	675
2005	8,597	38,207	15,348	6,342	833
2006	8,366	31,215	14,491	6,538	607
2007	8,610	28,412	15,269	7,247	691
2008	11,172	29,060	17,093	9,917	792
2009	11,530	27,332	18,678	10,502	1,134

Source: CIC, Facts and Figures Digital Library (2009)

Table 8: Permanent Residents 15 years of age or older by category and level of education 2000-09 (percentage)

		00	01	02	03	04	05	06	07	08	09
Family Class	Bachelor's	17.5	18.5	19.2	22.0	23.1	21.9	21.5	23.9	24.8	25.4
	Master's	3.7	3.8	4.4	5.3	5.5	5.9	6.0	6.2	7.1	6.9
	Doctorate	0.6	0.7	0.6	0.8	0.8	0.8	0.8	0.9	1.0	1.0
Skilled Class – Principle Applicants	Bachelor's	53.2	55.1	55.7	57.1	51.6	49.4	46.0	43.8	42.4	42.2
	Master's	19.8	18.5	19.7	19.4	23.5	25.6	25.5	25.2	24.9	22.0
	Doctorate	4.2	3.9	3.8	3.4	4.6	4.5	5.2	5.4	5.1	4.5
Skilled Class – Spouses Dependents	Bachelor's	34.3	35.1	35.4	35.0	33.9	32.4	29.9	29.4	29.1	28.8
	Master's	8.2	7.7	8.7	8.0	9.8	10.3	10.2	9.8	9.9	9.2
	Doctorate	0.9	1.0	1.1	1.0	1.3	1.3	1.6	1.6	1.6	1.5

Source: CIC, Facts and Figures Digital Library (2009)

Table 9: Permanent Residents 15 years or older with at least a bachelors degree by category 2000-09 (percentage)

	00	01	02	03	04	05	06	07	08	09
Family class	21.8	23.0	24.2	28.1	29.5	28.5	28.3	31.0	33.0	33.2
Skilled immigrants - Principal Applicants	77.2	77.5	79.2	80.0	79.6	79.4	76.7	74.3	72.4	68.8
Skilled immigrants - Spouses and Dependants	43.4	43.9	45.2	44.0	45.0	44.0	41.8	40.9	40.6	39.5
Refugees	11.1	12.6	12.1	12.0	13.7	15.8	14.3	12.1	11.4	11.7

Source: CIC, Facts and Figures Digital Library (2009)

Table 10: Permanent Residents 15 Years of age or older by source region and level of education (percentage)

		00	01	02	03	04	05	06	07	08	09
Africa and the Middle East	Bachelor's	29.0	30.9	33.6	31.2	29.9	29.1	29.2	27.5	28.0	27.8
	Master's	7.1	8.7	9.8	8.8	9.7	10.4	11.1	10.6	11.7	10.8
	Doctorate	2.0	2.2	2.2	2.0	2.2	2.3	2.7	2.6	2.9	2.6
Asia and Pacific	Bachelor's	36.1	38.0	35.5	35.8	34.3	33.8	30.1	31.2	32.6	32.2
	Master's	11.8	11.0	11.3	10.3	12.5	13.3	11.9	11.9	12.9	11.2
	Doctorate	1.5	1.4	1.4	1.0	1.4	1.3	1.3	1.4	1.5	1.3
South and Central America	Bachelor's	19.5	20.7	22.6	24.2	25.6	26.6	24.0	25.8	27.6	29.8
	Master's	3.4	3.7	4.8	5.4	6.1	5.7	5.2	5.5	5.7	6.6
	Doctorate	0.6	0.6	0.8	0.9	1.2	0.9	0.9	0.7	0.8	1.0
United States	Bachelor's	29.6	28.0	28.5	29.7	28.7	29.8	28.7	29.3	28.6	29.2
	Master's	12.1	11.2	11.9	11.8	13.8	13.9	14.2	16.5	16.1	14.1
	Doctorate	4.3	4.8	4.1	4.5	6.0	5.9	6.7	7.5	6.8	6.2
Europe and the United Kingdom	Bachelor's	29.9	32.8	36.6	35.4	33.6	29.9	26.9	26.1	25.3	25.9
	Master's	9.0	8.7	9.5	9.8	12.1	15.0	15.9	16.0	16.9	16.6
	Doctorate	2.7	2.9	2.8	2.7	3.3	3.6	4.0	4.2	4.2	4.0

Source: CIC, Facts and Figures Digital Library (2009)

Table 11: Permanent Residents 15 years or older with a university degree by source region (percentage)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Africa and the Middle East	38.1	41.8	45.6	42.0	41.8	41.9	42.9	40.7	42.7	41.2
Asia and Pacific	49.4	50.4	48.2	47.1	48.2	48.4	43.3	44.4	47.0	44.6
South and Central America	23.6	25.0	28.1	30.5	32.9	33.1	30.2	32.0	34.1	37.4
United States	46.0	44.0	44.5	46.0	48.6	49.5	49.5	53.2	51.5	49.5
Europe and the United Kingdom	41.6	44.5	48.9	47.9	49.0	48.5	46.7	46.3	46.3	46.5

Source: CIC, Facts and Figures Digital Library (2009)

Table 12: The relative returns of immigrants compared with native-born citizens

	Males		Females	
	(1)	(2)	(1)	(2)
A. Total relative returns: adult arrival immigrants				
High School (12)	0.52	0.41	0.52	0.56
Non-University Post-Secondary with High School (14)	0.60	0.54	0.56	0.60
University Bachelor's (16)	0.62	0.58	0.57	0.60
University Postgraduate (18)	0.77	0.74	0.67	0.73
B. Total relative returns: youth arrival immigrants				
High School (12)	0.77	0.72	0.71	0.76
Non-University Post-Secondary with High School (14)	0.82	0.78	0.71	0.74
University Bachelor's (16)	0.87	0.85	0.76	0.80
University Postgraduate (18)	0.86	0.85	0.79	0.83
C. Total relative returns by source country (3)				

	High School (12)		University Bachelor's (16)		University Postgraduate (18)	
	Male	Female	Male	Female	Male	Female
U.S./U.K.	0.75	0.70	0.76	0.76	0.84	0.94
Europe	0.40	0.42	0.60	0.50	0.65	0.50
Asia	0.55	0.32	0.62	0.35	0.79	0.52
South America	0.44	0.55	0.66	0.53	0.83	0.68
Africa	0.72	0.46	0.81	0.64	0.96	0.52

Source: Riddell (2008)

Table 13: Canada landed degree qualified immigrants by category and occupation 1991-2003 cohorts

Category	Occupation	Arrival years			Total
		1991-1996	1996-2001	2001-2003	
Economic immigrants, p.a.'	Information technology	6,909	15,940	8,788	31,635
Economic immigrants, p.a.	Engineering	13,224	42,883	29,258	85,363
Economic immigrants, p.a.	Architecture and building	4,446	10,832	6,693	21,970
Economic immigrants, p.a.	Medical studies	3,219	3,625	2,671	9,513
Economic immigrants, p.a.	Nursing	2,417	126	293	2,834
Economic immigrants, p.a.	Teacher education	3,019	2,304	2,360	7,682
Economic immigrants, p.a.	Accounting	3,560	7,113	3,473	14,145
Economic immigrants, p.a.	Rest of management/commerce	10,331	14,908	9,917	35,154
Economic immigrants, p.a.	Society and culture, creative arts	4,261	7,135	4,334	15,728
Economic immigrants, p.a.	Natural and physical sciences	5,125	13,179	6317	24,619
Economic immigrants, p.a.	Other and no occupation code	132,113	107,088	54,149	293,349
Subtotal		**188,619**	**225,127**	**128,247**	**541,992**

Source: Hawthorne (2007)

Table 14: Average employment earnings by landing cohort 1986-2001

	Total		Male		Female	
	#	Avg.	#	Avg.	#	Avg.
All immigrants						
1986-1990	314,065	29,572	166,560	34,704	147,505	23,777
1991-1995	439,200	25,201	226,540	29,840	212,660	20,259
1996-2001	474,795	21,072	262,945	25,333	211,850	15,784
Total	1,228,06	24,722	656,045	29,268	572,015	19,509
Skilled Workers PA						
1986-1990	49,240	44,845	34,330	49,120	14,910	35,001
1991-1995	62,050	42,558	42,710	47,701	20,340	32,012
1996-2001	151,625	31,482	114,570	33,532	37,055	25,143
Total	262,915,	36,598	190,610	39,440	72,305	29,108

Source: Hiebert (2006)

9: REFERENCE LIST

Andersson, P. (2009). Governing through Non/Recognition: The missing "R" in the PLAR for immigrant professionals in canada and sweden. *International Journal of Lifelong Education, 28*(4), 423-437.

Aydemir, A., & Robinson, C. (2006). *Return and onward migration among working age men.* Ottawa: Statistics Canada.

Aydemir, A., & Skuterud, M. (2004). Explaining the deteriorating entry earnings of Canada's immigrant cohorts: 1966-2000. *Statistics Canada Analytical Studies Branch Research Paper Series, 11F0019MIE No. 225*

Basran, G. S. (1998). Devaluation of foreign credentials as perceived by visible minority professional immigrants. *Canadian Ethnic Studies, 30*(2), 7.

Bauder, H. (2003). "Brain abuse", or the devaluation of immigrant labour in canada. *Antipode, 34*(4) Retrieved from http://dx.doi.org/10.1046/j.1467-8330.2003.00346.x

Bernard, A. (2008). Immigrants in the hinterlands. *Perspectives on Labour and Income, Statistics Canada, 9*(1)

Bonikowska, A., Hou, F., & Picot, G. (2011). Do highly educated immigrants perform differently in the canadian and U.S. labour markets? *Analytical Studies Branch Research Paper Series, StatsCan,* (No 329)

Bonikowska, A., Green, D. A., & Riddell, W. C. (2008). Literacy and the labour market: Cognitive skills and immigrant earnings. *International Adult Literacy Survey, Statistics Canada,* (Catalogue no. 89-552-M No. 020)

Boyd, M., & Schellenberg, G. (2007). Re-accreditation and the occupations of immigrant doctors and engineers. *Canadian Social Trends,* (84), 2.

Boyd, M., & Thomas, D. (2001). Match or mismatch? the employment of immigrant engineers in canada's labor force *Population Research and Policy Review, 20*(1), 107.

Boyd, M., & Vickers, M. (2000). 100 years of immigration in canada. *Canadian Social Trends,* (58), 2.

Buhr, K. J. (2010). Do immigrant nurses in canada see a wage penalty? an empirical study. *Business Economics, 45*(3), 210-223.

Buzdugan, R., & Halli, S. S. (2009). Labor market experiences of canadian immigrants with focus on foreign education and experience. *International Migration Review, 43*(2) Retrieved from http://dx.doi.org/10.1111/j.1747-7379.2009.00768.x

Chui, T., Tran, K., & Maheux, H. (2007). Immigration in canada: A portrait of the foreign-born census year 2006. *Statistics Canada,* (Catalogue no. 97-557-XIE)

Chui, T., & Zietsma, D. (2003). Earnings of immigrants in 1990s. *Canadian Social Trends, 70*

CIC (2008). *Facts and figures: Immigration overview permanent and temporary residents.* Ottawa: Research and Evaluation Branch, Citizenship and Immigration Canada

CIC (2009). *Facts and figures Digital Library: Immigration overview permanent and temporary residents.* Ottawa: Research and Evaluation Branch, Citizenship and Immigration Canada.

DeVoretz, D. J. (2006). Immigration policy: Methods of economic assessment. *International Migration Review, 40*(2), 390-418.

Dietz, J., Esses, V. M., Joshi, C., & Bennett-AbuAyyas, C. (March 2009). The evaluation of immigrants' credentials: The roles of accreditation, immigrant race, and evaluator biases. *Canadian Labour Market and Skills Researcher Network, Working Paper No. 18*

Dauphinee, W. D. (2007). Credentials Recognition in Medicine: History, progress and lessons. *Canadian Issues,* , 100.

Ferrer, A., Green, D. A., & Riddell, W. C. (2006). The effect of literacy on immigrant earnings. *The Journal of Human Resources, 41*(2), pp. 380-410. Retrieved from http://www.jstor.org.proxy.lib.sfu.ca/stable/40057280

Francis, D. (2002). *Immigration : The economic Case.* Toronto: Key Porter Books.

Frenette, M., & Morissette, R. (2003). Will they ever converge? earnings of immigrant and canadian-born workers over the last two decades. *Analytical Studies Branch Research Paper Series, StatsCan,* (Catalogue no. 11F0019MIE — No. 215)

Galarneau, D., & Morissette, R. (2009). Immigrants' education and required job skills. *Perspectives on Labour and Income, 21*(1), 5.

Galarneau, D. (2004). Immigrants: Settling for less? *Perspectives on Labour and Income, 16*(3), 7.

Gilmore, J. (2009). The 2008 canadian immigrant labour market: Analysis of quality of employment. *The Immigrant Labour Force Analysis Series, Statistics Canada, Catalogue no. 71-606-X, no. 5*

Gilmore, J., & Petit, C. L. (2008). The canadian ImmigrantLabour market in 2007: Analysis by region of postsecondary education. *The Immigrant Labour Force Analysis Series, Statistics Canada, Catalogue no. 71-606-X2008004*

Girard, E. R. (2007). Assimilation and exclusion of foreign trained engineers in canada: Inside a professional regulatory organization. *Antipode, 39*(1), 35-53.

Grant, P., & Nadin, S. (2007). The credentialing problems of foreign trained personnel from asia and africa intending to make their home in canada: A social psychological perspective. *Journal of International Migration and Integration, 8*(2), 141-162. doi:10.1007/s12134-007-0011-2

Gray, J. (2005). IMMIGRATION: The credentials conundrum. *Canadian Business, 78*(6), 34.

Green, D. A., & Worswick, C. (2004). Entry earnings of immigrant men in canada: The roles of labour market entry effects andReturns to foreign experience. *Paper Prepared for Citizenship and Immigration Canada,*

Guilfoyle, S. (2007). FCR in key sectors of the Economy. *Canadian Issues,* , 133.

Guo, S., & Anderson, P. (2005). Non/recognition of foreign credentials for immigrant professionals in canada and sweden: A comparative analysis. *PECRII Working Paper Series, WP04-05*

Guo, S. (2007). Tracing the Roots of Non-Recognition of Foreign Credentials. *Canadian Issues,* , 36.

Guo, S. (2009). Difference, Deficiency, and Devaluation: Tracing the Roots of Non-Recognition of Foreign Credentials for Immigrant Professionals in Canada. *The Canadian Journal for the Study of Adult Education, 22*(1), 37.

Hamel, J. (2004). Immigrants in demand: Staying or leaving? *Canadian Social Trends,* (74), 12.

Hawthorne, L. (2007). Foreign Credential Recognition and Assessment: An Introduction. *Canadian Issues,* , 3.

Hiebert, D. (2006). Beyond the polemics: The economic outcomes of canadian immigration. *Metropolis British Columbia,*Vancouver, BC, Canada:

Houle, R., & Yssaad, L. (2010). Recognition of newcomers' foreign credentials and work experience. *Perspectives on Labour and Income, 11*(9)

Janigan, M. (2003). A SCANDALOUS WASTE: Too many immigrants can't work because we refuse to accept their credentials. *Maclean's, 116*(29), 41.

Kondro, W. (2004). Credentialing body needed for foreign-trained doctors. *CMAJ : Canadian Medical Association Journal = Journal De l'Association Medicale Canadienne, 171*(5), 435-435.

Lalonde, R. N. (2010). Bias against foreign-born or foreign-trained doctors: Experimental evidence. *Medical Education, 44*(12), 1241-1247.

Li, P. S. (2001). The market worth of immigrants' educational credentials. *Canadian Public Policy / Analyse De Politiques, 27*(1), pp. 23-38. Retrieved from http://www.jstor.org.proxy.lib.sfu.ca/stable/3552371

Marshall, D. (2004). Degree accreditation in canada. *The Canadian Journal of Higher Education, 34*(2), 69.

Mata, F. (2008). Exploring linkages between the country of post-secondary education completion and labour market activity of immigrants in Canada. *Metropolis British Columbia, Centre of Excellence for Research on Immigration and Diversity,* (Working paper series no. 08-09)

Maynard, D. (2007). Foreign credential assessment Project/Projet d'évaluation des titres de compétences étrangers. *Canadian Journal of Respiratory Therapy, 43*(3), 24.

Mildon, M. (2005). Recognition of credentials for foreign-trained workers. *Law Now, 30*(1), 5.

Morrow, K. (2007). Quality Assurance in the Evaluation and Recognition of Foreign Credentials. *Canadian Issues,* , 43.

O'Meara, D. (2004). Foreign-trained physicians need residency spots. *CMAJ : Canadian Medical Association Journal = Journal De l'Association Medicale Canadienne, 170*(8), 1216-1216.

Oreopoulos, P. (2009). Why do skilled immigrants struggle in the labor market? A field experiment with six thousand résumés. *Working Paper Series Metropolis British Columbia,* (No. 09 - 03)

Ostrovsky, Y. (2008). Earnings inequality and earnings instability of immigrants in canada. *Analytical Studies Research Paper, Statistics Canada,* (No. 309)

Owen, T. (2007). International Credential Evaluation and the Labour Market Integration of Immigrants. *Canadian Issues,* , 39.

Palameta, B. (2004). Low income among immigrants and visible minorities. *Perspectives on Labour and Income, 16*(2), 32.

Pendakur, K., & Pendakur, R. (2011). Colour by numbers: Minority earnings in canada 1996–2006. *Working Paper Series Metropolis British Columbia,* (No. 11-05)

Pendakur, K. (2007). Minority earnings disparity across the distribution. *Canadian Public Policy / Analyse De Politiques, 33*(1), 41-61.

Picot, G., & Hou, F. (2011). Seeking success in canada and the united states: The determinants of labour market outcomes among the children of immigrants. *Analytical Studies Branch Research Paper Series, StatsCan,* (No. 331)

Picot, G., Hou, F., & Coulombe, S. (2007). Chronic low income and low-income dynamics among recent immigrants. *Analytical Studies Branch Research Paper Series, StatsCan,* (Catalogue no. 11F0019 No. 294)

Picot, G., & Sweetman, A. (2005). The deteriorating economic welfare of immigrants and possible causes: Update 2005. *Research Paper Series, Statistics Canada. Analytical Studies Branch, No. 262*

Reitz, J. G. (2001). Immigrant skill utilization in the canadian labour market: Implications of human capital research. *Journal of International Migration and Integration / Revue De l'Integration Et De La Migration Internationale, 2*(3), 347-378.

Reitz, J. G. (2005). *Tapping immigrants' skills: New directions for canadian immigration policy in the knowledge economy.* Montreal, QC, Canada: Institute for Research on Public Policy.

Reitz, J. G. (2007a). Closing the gaps between skilled immigration and canadian labour markets: Emerging policy issues and priorities.

Reitz, J. G. (2007b). Immigrant employment success in canada, part I: Individual and contextual causes. *Journal of International Migration and Integration / Revue De l'Integration Et De La Migration Internationale, 8*(1), 11-36.

Reitz, J. G. (2007c). Immigrant employment success in canada, part II: Understanding the decline. *Journal of International Migration and Integration / Revue De l'Integration Et De La Migration Internationale, 8*(1), 37-62.

Reitz, J. G. (2011). Taxi driver syndrome. *Literary Review of Canada, 19*(2), 20.

Richard, A. W. (2000). A matter of degree(s): Twentieth-century trends in occupational status returns to educational credentials in canada. *The Canadian Review of Sociology and Anthropology, 37*(3), 313.

Riddell, W. C. (2008). Education, credentials, and immigrant earnings. *Canadian Journal of Economics, 41*(1), 186-186.

Sas, C. A., & DeVoretz, D. J. (2008). *Managing canada's labour market needs in the 21st century.* Vancouver, BC, CAN: Asia Pacific Foundation of Canada.

Simmons, A. B. (2010). *Immigration and canada: Global and transnational perspectives.* Toronto, Ontario: Canadian Scholars' Press Inc.

Stevens, K. (2004). I am canadian: Lack of foreign credentials recognition impairs immigrants and canadian economy. *HazMat Management, 16*(3), 16.

Suto, M. (2009). Compromised careers: The occupational transition of immigration and resettlement. *Work, 32*(4), 417.

Sweetman, A. (2004). Immigrant source country educational quality and canadian labour market outcomes. *Analytical Studies Branch Research Paper Series, StatsCan, No. 234*

Sweetman, A., & McBride, S. (2004). Postsecondary field of study and the canadian labour market outcomes of immigrants and non-immigrants. *Analytical Studies Branch Research Paper Series, StatsCan,* (Catalogue no. 11F0019MIE — No. 233)

Thompson, E. N. (2000). Immigrant occupational skill outcomes & the role of region specific human capital. *Vancouver Centre of Excellence Metropolis BC, RIIM working paper series ; no. 00-04* Retrieved from http://mbc.metropolis.net/assets/uploads/files/wp/2000/wp00-04.pdf

Thompson, E. (2007). FOREIGN CREDENTIALS: THE TOOLS FOR RESEARCH. *Canadian Issues,* , 26.

Tomlinson, A. (2001). Skills and education of immigrants wasted: Report. *Canadian HR Reporter, 14*(18), 2.

Truong, L. (2008). How do organizations and social policies 'acculturate' to immigrants? accommodating skilled immigrants in Canada. *American Journal of Community Psychology, 42*(3), 343-354.

Van Ngo, H. (2006). Professional re-entry for foreign-trained immigrants. *Journal of International Migration and Integration / Revue De l'Integration Et De La Migration Internationale, 7*(1), 27-50.

Vu, U. (2004). Canada invites foreign workers but neglects them on arrival. *Canadian HR Reporter, 17*(9), 1.

Walker, J. (2007). International Approaches to Credential Assessment. *Canadian Issues,* , 21.

Walsworth, S. (2010). Admission and employment criteria discrepancies: Experiences of skilled immigrants in toronto. *Journal of International Migration and Integration / Revue De l'Integration Et De La Migration Internationale, 11*(3), 341-352.

Walters, J. (2006). *Exploring intenationally educated professionals' employability: An ontario service Provider's perspective.* Unpublished manuscript.

Zhang, X. (2003). The wealth position of immigrant families in canada. *Analytical Studies Branch Research Paper Series, StatsCan,* (Catalogue no. 11F0019MIE — No. 197)

Zietsma, D. (2010). Immigrants working in regulated occupations. *Perspectives on Labour and Income, 22*(1), 51.