

Open Hearts and Open Access for Immigrant Professionals:

**A Case Study of Chinese Immigrant Engineers
in the Greater Vancouver region, British Columbia, Canada**

by

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ABSTRACT

Successful economic integration benefits both recent skilled immigrants and Canada. Researchers have indicated that human capital, social capital and gender all affect the economic integration of skilled immigrants. Few studies, however, examine the association between post-immigration human capital development and occupational attainment. Little is known about how professional regulatory bodies, immigration services agencies and educational institutions affect the development of social capital once individuals have arrived at their immigration destination. There is also limited knowledge about how female skilled immigrants overcome dual barriers as “immigrants” and “females” to achieve occupational attainment.

In this dissertation I draw on data collected through interviews on the employment experiences of 23 Chinese-Canadian immigrant engineers who live in Vancouver, Canada. My findings indicate that human capital is not static; rather it undergoes continuous development in response to changes in the skills deemed important from one labor market to another. Financial support from Canadian governments is needed in order to raise the economic returns of post-immigration human capital. I also find that institutional involvement helps Chinese-Canadian immigrant engineers acquire social capital. The coordination between key stakeholders will facilitate economic integration of skilled immigrants. Finally, my study indicates that female Chinese-Canadian immigrant engineers actively forge and mobilize social resources in order to successfully develop their careers in Canada.

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List of Acronyms

APEGBC: The Association of Professional Engineers and Geoscientists of B. C.

BCSAP: B.C. Student Assistance Program

CCBIS: Canada China Building Industry Society

CCPE: Canadian Council of Professional Engineers

CCSD: Canadian Council on Social Development

CIC: Citizenship and Immigration Canada

CMES: The Chinese Mechanical Engineering Society

ESL: English as Second Language

HRSDC: Human Resources and Social Development Canada

FCR: Foreign Credential Recognition

PEng: Professional Engineer

S.U.C.C.E.S.S.: United Chinese Community Enrichment Services Society

Acknowledgement

Three years ago, when I was in Japan on my research program, I was taken to the Omitsu dela, a temple in Kyoto. One of its tourist attractions was a long underground tunnel. I walked on tip-toe in the darkness until at last I saw an extremely dim light and a statue of Buddha at the end of the tunnel. To walk in the dark tunnel implied that you would find your way out as long as you had light inside your heart. My journey to a doctoral degree at UBC has been like my journey in the temple tunnel. This dissertation has been a long time pursuit but meant eventually seeing light as a result of my years at UBC. It is my pleasure that I now have the opportunity of expressing my gratitude to the following people.

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DEDICATION

This dissertation is lovingly dedicated to my family and Hong, who provided inspiration and gave me the courage to pursue this study.

Chapter One

Introduction

I) Rolling out the welcome mat to new members of Canada

The Inviting Gesture and its Outcome

Canada received 235,824 immigrants in 2004 and 262,236 in 2005, in accordance with the immigration policy that has been in place for over three decades. Canada's generally open immigration policy over these decades has been a response to a number of issues, not the least of which is an ageing society. The continuing wave of immigration to Canada includes a growing number of skilled immigrants destined for the Canadian labor market. Among these immigrants, the proportion of professionals (Skill A, categorized by National Occupational Classification, means occupations requiring at least university education¹) was 58 percent in 2004, reflecting the high level over the past 15 years (CIC, 2005).

Highly Skilled Immigrants at the Door

Increasing numbers of immigrants arrive in Canada with their rich human capital. They often relate that they have been rejected by the Canadian business

¹ See National Occupational Classification at Human Resources and Skills Development Canada site, <http://www23.hrdc-drhc.gc.ca/2001/e/generic/welcome.shtml>.

world due to a “lack of Canadian experience” (Naoumov, 2005:7; Sharma, 2005:7). According to a study done by an Ottawa-based social policy think tank based upon Census data for 1981 to 1996 on recent immigrants, there is a progressive trend toward lower rates of labor force participation and lower levels of earnings among immigrants compared to the Canadian-born population (Beauchesne, 2002:A6). An immigrant told the *New York Times*, “The most mobile workers in the world come to Canada and find themselves immobilized” (Krauss, 2005). Many Chinese skilled immigrants complain that “Canada is a country where I encounter enormous hardship (*Jia’nada, jiannan da*)” (Lin, 2003:8).

Skilled immigrants with strong educational and professional backgrounds have shown striking downward mobility in the Canadian labor market. The unemployment of recent immigrants a half a year after they had arrived was 26 percent, three times that of the Canadian-born population, according to Statistics Canada², (Hiebert, 2006: 24). It seems that “under-utilization” or “deskilling” is enduring among recent skilled immigrants. Many barriers are believed to contribute to the “under-utilization” of recent immigrant professionals, such as uncompetitive language command (both English and French), a “lack of Canadian experience,” non-recognition of foreign credentials, protectionism of professional organizations, and implicit employment inequality. To a great extent, the government’s vision of

² Hiebert quoted from the “Longitudinal Survey of Immigrants to Canada” that was released in 2005 by Statistics Canada.

welcoming more skilled immigrants “is not necessarily getting translated into the marketplace,” and local employers try to avoid hiring immigrants without Canadian experience (Noorani, 2005). Joe Volpe, the former Minister of Citizenship and Immigration, criticizes the “arcane infrastructure of professional organizations that essentially militate against the immediate integration of these highly skilled immigrants” (Krauss, 2005). It seems to be a dilemma for the Canadian immigration scheme. On the one hand, Canada seems constantly to lack appropriate jobs to accommodate new immigrants; on the other hand, it is imperative for Canada to absorb more immigrants due to a growing reliance on them as a source to rejuvenate an ageing population. It is a dilemma for recent skilled immigrants as well: whether they have achieved economic success or not, they are questioned by their Canadian-born counterparts: if they succeed, they are criticized for taking away jobs from the Canadian-born population; if they fail, they are blamed for abusing the welfare system.

To respond to the employment difficulties of recent skilled immigrants, an “Internationally Trained Workers Initiative” was launched in April 2005 by the Canadian federal government. Credential recognition has been considered the biggest hurdle for skilled immigrants who obtained their qualifications outside of Canada. Therefore, the major step of this governmental initiative was the Foreign Credential Recognition (FCR) Program that aimed to enhance the assessment of foreign-obtained qualifications (Citizenship & Immigration Canada, 2005). It is a

positive initiative, though the effects cannot be adequately evaluated within such a short period of time. In addition, negotiations between the federal and provincial governments, and coordination between governmental agencies and professional associations, both contribute to complicating the situation.

Regardless of governmental initiatives, the skill-mismatch or under-utilization of recent skilled immigrants remains critical. Under such circumstances, immigration specialists warn that social cohesion and Canadian immigration programs may suffer due to “the deteriorating employment situation” (Krauss, 2005). The broader population perceives the dramatic growth of the recent immigrant population differently. A poll conducted in February 2002 showed that half of the respondents believed Canada accepts too many immigrants. Moreover, 61 percent perceived that immigrants from Western Europe contributed more to the Canadian economy (McKenzie, 2002 March 18: A4). The poll raises a question about the integration of subsequent new arrivals into Canadian society, particularly recent visible minority immigrants from non-traditional sources such as China. Although Chinese immigration to Canada can be dated from 1858, the time of the British Columbia gold rush, the massive arrivals of highly skilled immigrants are quite recent.

The odyssey: a history of Chinese immigration to Canada

A brief review of Chinese immigration to Canada will help us understand the distinctive characteristics of recent Chinese immigrants, and new challenges they are facing.

The literature on the Chinese in Canada has documented an ongoing transformation of Chinese communities over time. Chinese immigration to Canada since the 1860s was an outcome of “‘pull’ from without” and “‘push’ from within,” (Wickberg, 1982:6) i.e., to pursue a better life in Canada while fleeing from chaotic social and economic conditions in China. Most Chinese immigrants were from Guangdong province and sought to earn a living in the northward trek along the Fraser River and into the Cariboo region. At that time, most immigrants were male, of rural origin, primarily from South China, particularly the western regions of the Pearl River delta in Guangdong province. They were coolies or worked in small businesses run by Chinese merchants. Unfortunately, Chinese immigration was severely compromised by the “head tax” first imposed by the Canadian federal government in 1886 as a mechanism to limit immigration. The initial tax of \$50.00 grew to \$100.00 in 1900 and \$500.00 in 1903. Although contributing handsomely to Dominion revenue, the head tax did not limit the numbers of Chinese entering, although it did limit women and children, resulting in highly unbalanced Chinese communities. Finally, in 1923, the Chinese were simply excluded from entry to

Canada. As a result, Chinese communities continued to be demographically unbalanced as families were permanently divided. The Chinese population declined as Chinese migration virtually ceased until the repeal of the Act in 1947, when family reunification, with some restrictions, was allowed to resume. This discriminatory policy was not fully eliminated until 1967. It was followed by a surge of Chinese immigration.

The open immigration policy since 1967 has attracted waves of immigration to Canada from Hong Kong, Taiwan, Southeast Asia, and, after 1975, from Mainland China once again. The new surge of immigrants of Chinese origin has contributed to the drastic growth of the Chinese population from 300,000 in 1981 to over one million, or 3.5 percent of Canada's total population by 2001, the largest visible minority group in Canada. In the country's highest Chinese concentration, Richmond in the Greater Vancouver region, four out of ten residents are Chinese. The newly arrived Chinese population has also helped the Chinese population to nearly double their rate of university education to 18 percent of the population in Canada. Moreover, Chinese represented roughly 22 percent of the growth in the labor force in the 1990s. The rapid growth of Chinese immigration is also reflected in the wide range of occupations of Chinese immigrants in Canada. According to the Census data in 2001, approximately 16 percent were in the natural and applied science field, twice of that for the general Canadian population; 13 percent were in management occupations; about 20 percent were in professional fields such as

business, finance, and administrative occupations (Chui, Tran, & Flanders, 2005:27-28).

Many Chinese immigrants have made their careers a success in their new homeland. For example, Claudia Ng PEng (Professional Engineer), was born in China and came to study in Canada as an international student. She is currently CEO of a Wireless internet provider FatPort in Vancouver (Rogers, 2003). Wendy Wei Yuan, an immigrant from Beijing, became a rising star by seeking the Liberal Party of Canada nomination in Vancouver Kingsway in May 2006.³ On October 21, 2006, *The Vancouver Sun*, the prominent local newspaper, profiled 100 outstanding Chinese Canadians who have made a significant contribution in their respective fields in B.C. To name a few from Mainland China here: George Lian, president of the Canada-China Business Association, (his organization helps Canadian businesses connect with Chinese counterparts), Dr. Victor Ling, known internationally for his discoveries in cancer research, and Engineering PhD Lawrence Gu, director of the British Columbia Institute of Technology's international business services, who hosts Canada's first Confucius Institute, welcomed by local business owners or executives for its language and business

³ See <http://www.wendyyuan.ca/index.asp?id=eng&pid=news>. Wendy Yuan announced that she would seek to be elected as MP for Vancouver Kingsway in May 2006. Date retrieved August 18, 2006.

courses (Leung, Scott, & Zacharias, 2006). They show a new image of Chinese immigrants in the past decade.

Since the 1980s, immigrants from Hong Kong, Mainland China, and Taiwan have been the leading source of Canadian immigrants; among this new wave was the pronounced surge of Hong Kong immigrants after the signing of the Sino-British Agreement, immigration which, ironically, declined precipitously after the Chinese resumption of sovereignty in 1997. Over the past six years, however, the number of immigrants from Mainland China has assumed predominance. One consequence of Chinese immigration in the post-1960s has been, as Johnson comments: "the Chinese 'tile' in the mosaic...larger than it was, [and] internally more differentiated..." (1994:135). The once homogenous Chinese community has become physically dispersed and more heterogeneous. Moreover, there is a significant subgroup difference between immigrants from Hong Kong, Taiwan, and Mainland China, which has affected their respective economic outcomes (Guo and DeVoretz, 2005) after their immigration to Canada.

Despite the subgroup differences, the commonality is that a number of newcomers of Chinese origin were well-educated and came with professional background and exceptionally high skills. They have, therefore, designed their lives in Canada differently when compared to earlier generations of Chinese immigrants. They not only expect to have a better life more than mere survival, but also aim to

boost their careers in this new home. Nevertheless, according to Peter Li (1998), they continue to manifest many linguistic and social characteristics typical of first-generation immigrants due to heavy reliance on recent Chinese immigrants as the source of population increase. As a result, Chinese Canadians still face obstacles in demanding greater equality in today's Canadian society.

Looking back at the history of Chinese immigration to Canada, although significant changes have taken place, it is possible to note some ironic contrasts: the head tax on the early Chinese immigrants would not be redressed until June 22, 2006 set against the landing fees for newly arrived immigrants under all categories, which would not be cut by half from \$975 to \$490 until May 3rd 2006; the tempting lure of the gold rush around the Fraser River and work opportunities with the Canadian Pacific Railway (CPR) set against the rhetoric of a looming labor shortage in Canada for a knowledge-based economy; the large proportion of less educated manual labor a century ago set against the growing number of contemporary skilled professionals who have a better education and are rich in human capital, and so on. It might be too premature to typify the transformation of immigrants to Canada over the past 150 years; nonetheless, the comparisons here narrate and perpetuate negotiation, friction, adjustment, and interaction between the immigrants and their new society.

On June 22, 2006, Prime Minister of Canada Stephen Harper, representing Canadians and the Government of Canada, offered a full apology to Chinese

Canadians for the head tax and humiliating legislation of exclusion imposed on the earlier Chinese immigrants, a group of people “who only sought to build a better life.”⁴ Prime Minister Harper closed his speech by stating: “We have the collective responsibility to build a country based firmly on the notion of equality of opportunity, regardless of one’s race and ethnic origin.”⁵ It took a century before Chinese head tax payers for six decades were offered redress by the Canadian government. Considering the employment difficulty of recent skilled Chinese immigrants, we cannot help asking how long it will take them to be fully embraced by the Canadian labor market and appropriately matched with positions commensurate with their pre-immigration educational attainment and work experience.

Beyond anecdotal evidence, little is known about the daily experience of skilled Chinese immigrants in job searching and their integration into the Canadian labor force. What we know is that the established local labor market seems to be hesitant to provide these highly skilled immigrants access to their professionally trained fields. In addition, the Canadian governments seem to take for granted that the Canadian labor market can absorb newly arrived skilled immigrants and that recent skilled immigrants can be self-sufficient in finding appropriate jobs which match their knowledge and skill. I therefore chose to look at the employment

⁴ See Prime Minister Stephen Harper’s speech on redressing the Chinese head tax on June 22, 2006. *Mingpao Daily*. Monday, July 3, 2006. Page A1.

⁵ *ibid*

experiences of recent Chinese skilled immigrants in the Greater Vancouver region from a specific occupation category, the engineering sector, to analyse human capital factors that may affect their occupational mobility after immigration. Data were collected regarding their reactions to policy initiatives, settlement and career services, and how they interact with and contribute to the improvement of these three aspects.

I will first briefly present my research interest from which the primary research method derives. I will then discuss my research experience based on different stages of my research, going through an ethical review, identifying potential respondents and initiating contacts, as well as scheduling interviews. I believe my experiences will not only help my future research but will also contribute to the design and implementation of other similar research. I will provide descriptive details about the characteristics of my informants at the end of the chapter, including their educational attainments, gender, professional fields of training and current employment situations.

II) Charting the research

What piqued my interest in immigrant professionals?

Growing up in the capital city of Inner Mongolia, the People's Republic of China (the PRC, also Mainland China), I derived my primary impression of

“migration” from “intra-migration” within the Inner Mongolian Nationality Autonomous Region. People were extremely restricted from moving from one place to another due to the household registration (*hukou*) system. Only those who had received higher education and were believed to have exceptional skills would be accepted by the capital city if they were from a smaller city or a rural area in Inner Mongolia. I grew up with the belief that only people possessing a good education would be more mobile. I then left the “peripheral” area of the country to pursue higher education in Beijing, the capital of China. In the first half of the 1990s, “emigration” had not yet become common; however, there was exceptional excitement among university students around me to go abroad. Perhaps China had been closed to the outside world too long so that a lot of people had strong desires to pursue more opportunities overseas. I also knew that it would take lots of money to prepare for the English tests and go through the complicated process to move away from our own country. By 1997, I frequently overheard words such as “emigration,” “immigration,” Canada, Australia, and New Zealand. When I was studying in Hong Kong after 1998, I saw Hong Kong emigrant students come back to Hong Kong to continue their studies. I also knew quite a few friends with engineering backgrounds who were busy preparing their immigration documents for Canada. I can recall that some of my acquaintances were quite confident when they got higher scores for immigration admission and positive feedback from flourishing immigration agencies. Like others, I was instilled with the belief that Canada is a

huge country with many job vacancies to be filled by immigrants with advanced knowledge and professional experience. I also learned that there was an extremely strict selection system as developed by the Canadian government to assess the eligibility of "skilled immigrants," and that it also took a long time to go through the entire highly competitive process. Later on, it seemed that the fever of immigration to Canada had passed from Hong Kong entrepreneurial immigrants to Mainland Chinese who possessed higher education and exceptional skills. Many people in the late 1990s, who knew the word "immigration," including me, believed that Chinese skilled immigrants with both engineering training and work experience in China would have greater potential to pursue an upwardly mobile career path in Canada. This was because people from science or applied science fields were most likely to be exempt from interviews and examinations because of their strong professional background.

The extraordinary mobility among these people immediately inspired me to conduct research in this regard after completing my M. Phil. program in Hong Kong. I noticed that many returned Hong Kong immigrants reminisced about their better career opportunities and economic attainments in China although they had to face employment difficulties in Canada; however, shortly after they returned to Hong Kong for a better occupational arrangement, they started reminiscing about the fresh air, vast green land and poetic landscape in Canada. I became interested in the dilemma that returned Chinese immigrants had to deal with. I found economic

reasons excluded these immigrant professionals from pursuing an upward career path causing them to leave Canada, whereas it was non-economic reasons that forced them to leave their families in Canada or move from the desired new home to the place of origin. Furthermore, I was eager to discover what kind of social change would be brought through this dynamic global movement of highly skilled people. Recalling the traumatic memories of earlier Chinese immigrants to North America, I wondered what differences in post-immigration integration there would be when the “new generation” of professional Chinese immigrants arrived in one of the most popular destinations, Canada. Would they be able to unfold a picture of splendid career development in Canada, a country eager to rapidly increase its stock of human capital in the 21st Century? I chose to come to Vancouver to find out answers to my questions, a city that seemed to attract many skilled Chinese immigrants.

My academic training was gained from interdisciplinary initiatives in universities both in China and Hong Kong. I am strongly interested in individual experiences, oral history, and identity in different socio-cultural contexts. My four years’ stay in Vancouver has enriched my perspective in looking at immigrant communities and their issues. I was intrigued to know what happened after these highly skilled immigrants had moved to Canada, as they were motivated to find a lucrative position in the local labor market. I wished to examine whether or not skilled immigrants could pursue career development in the fields of their expertise.

I wished to know if immigrants with their Chinese education and Chinese work experience could readily find work within their areas of professional expertise. In order to shed light on these issues, I decided to focus on recent Chinese immigrant engineers and their micro-level employment experiences in the local labor market of Greater Vancouver, B.C.

Research agenda

The study involved the collection and analysis of both historical and contemporary materials on Chinese immigration to Canada. The investigation focused on Chinese immigrant engineers who became permanent residents of Canada in or after 1996 to the present. The purpose was to look at their occupational mobility and economic performance throughout their post-migration period. Data regarding skilled immigrants in general, and in particular, Chinese skilled immigrants and Chinese immigrant engineers in Greater Vancouver, were abstracted from census data and raw CIC landed immigrant data in order to understand the macro-level, socio-economic context. Qualitative data have been collected through in-depth, semi-structured, and open-ended interviews. Twenty three Chinese immigrant engineers living in the Greater Vancouver region were interviewed in two contexts: individual and organizational. The former were interviewed through face-to-face tape-recorded interviews of all questions, with one exception; the latter were interviewed through phone interviews on specific

questions. The interviews were focused on the job-seeking experiences of Chinese immigrant engineers in Greater Vancouver since 1996 in order to obtain personal stories. I seek to address the experiences of recent Chinese immigrant engineers in finding an appropriate place in the local labor market by examining three major issues:

1. The professional job-seeking experiences of recent Chinese immigrant engineers and their experiences in human capital development during the post-immigration period;
2. The way recent Chinese immigrant engineers seek to rebuild social capital in the local labor market, including how they expand both private and institutional social networks to achieve upward occupational mobility;
3. Personal reflections on how they place themselves in the nexus of local employers, professional associations, and immigrant services.

This is sociological research with policy implications. By interviewing new members of Canadian society, I gathered opinions from recent Chinese immigrant engineers regarding Canadian immigrant settlement policies and barriers they experienced in terms of returning to their professional field, and in acquiring new human and social capital during the post-immigration period. This study directly links human capital and its influence on the occupational attainment of recent

Chinese immigrant engineers by looking at human capital as an ongoing developed substance. Unlike many studies that concern the payoff of human capital accumulated before immigration, this study draws particular attention to the possible adjustment of human capital after immigration and measures how the response of human capital in a spatial dimension affects the labor market integration of a particular occupational group.

Methods

A combined research method will enhance our understanding of sociological queries. Generally, Canadian census data and CIC landed immigrants data provide the fundamental contextual information as to where Chinese immigrant engineers are situated. Furthermore, a qualitative historical methodology has been adopted to explore personal reactions, experiences, and interactions within certain contexts by different cohorts and by individuals in different stages of the post-immigration period from 1996 to 2005. The data have been collected from a variety of sources: secondary literature of Chinese immigrant studies; governmental policies regarding immigration and settlement; newspapers and magazines circulating in the Chinese community, wider immigrant communities, and the general public, such as the *Canadian Immigrant Magazine* and the *National Post*; relevant TV news, especially news from the Multi-vision Television (Channel M); the local immigrants' internet

forums, for example, Vancouver Chineseweb and Vansky; and, most importantly, semi-structured interviews.

Close interaction through interviews helps develop trust between interviewers and respondents. Conversations may deepen and new issues may surface while interviews continue. Semi-structured interviews, on the one hand, can frame the conversation so that it will not diverge from the main objective of the interviewer; on the other hand, it gives high flexibility and autonomy for respondents to disclose their nuanced experiences. I was trained in both folklore and cultural anthropology, and I am aware that there is invaluable information derived from oral history. In addition, my “insider” perspective gives me some advantage in establishing mutual trust with my Chinese respondents. Nevertheless, qualitative methods are often criticized for the limitation of being subjectively biased or less representative for the smaller sample size. I understand it is very hard to achieve a balance between these two traditions, so I hope at least to contribute something towards understanding the big puzzle of these kinds of sociological queries.

An outline of chapters

In Chapter One, I sketch a general picture of the Canadian immigration program with particular attention to skilled immigrants recruited on an economic-needs basis. I then introduce why and how I am interested in the

economic issue of recent skilled immigrants. A brief introduction of the theoretical approach and the dissertation layout are provided afterwards.

In Chapter Two, I review the relevant literature to provide the theoretical and empirical foundations of my research. A wide range of secondary literature is addressed in terms of the Canadian immigration program, Chinese immigration to Canada, summary research regarding economic aspects of skilled immigration to Canada, and the backdrop of an interlocked theoretical framework of human capital and social capital.

In Chapter Three, I briefly outline the transformation of Chinese immigration to Canada and the recent trends in Chinese professional immigration to Canada by employing longitudinal data of Citizenship and Immigration Canada (CIC). I draw attention to recent Chinese immigrant engineers by highlighting the “deskilling” issue.

In Chapter Four, I compare the professional engineering accreditation systems in China and Canada, and highlight the roles that different professional organizations play to directly influence the occupational outcomes of recent Chinese immigrant engineers.

In Chapter Five, I discuss the research design and profiles of my informants. I adopt semi-structured interviews as the primary technique of data collection. By interviewing individual immigrant professionals, the investigation is expected to reveal the dynamics of occupational mobility among recent skilled immigrants and

provide solid cases with practical policy implications. Meanwhile, I elaborate upon the profiles of my respondents, including their background in China, gender and age, education and occupational fields, qualifications earned in China, language levels and length of professional experience, as well as providing a summary.

In Chapter Six, I outline the employment experience/situation of my respondents in Greater Vancouver. The focus of this chapter is on how to help newly arrived immigrant professionals translate their non-Canadian human capital into the local labor market. The chapter also addresses other factors that shape the different employment experiences of Chinese immigrant engineers, such as information access, foreign credential recognition, and settlement services in the local labor market.

In Chapter Seven, I discuss how recent Chinese immigrant engineers regain social capital, in particular, two types of social resources that these highly skilled Chinese rely on. One is indirect social capital, i.e., private social capital; the other is institutional social resources, good platforms to help expand the social capital of recent Chinese immigrant engineers.

In Chapter Eight, I focus on how gender is involved in the post-migration integration of recent Chinese immigrant engineers. I bring forward the stories of my respondents, as well as those of the newly emerged Chinese engineering society in the building industry (CCBIS), so as to add neglected gender perspectives. CCBIS

is good evidence to show the efforts of Chinese female immigrant engineers in mobilizing social resources to pursue their collective goals.

A summary of concluding remarks will be provided in Chapter Nine.

In March 2006, Statistics Canada released a research report on return and onward migration among working age men. Despite its gender bias, the report estimated the out-migration rate in Canada as nearly 35 percent among young working age male immigrants within 20 years after their arrival. About six out of ten leave Canada within the first year of arrival (Aydemir & Robinson, 2006:21). The findings suggest that Canada is threatened by another “brain drain” after its temporary “brain gain” from immigrant source countries. Ironically, while the highly mobile immigrants leave after their brief stay in Canada, the Canadian government keeps setting ambitious annual plans to recruit more immigrants to fulfill its demographical objective, disregarding the serious “deskilling” or “mismatch” of recent skilled immigrants in the Canadian labor market. There is a metaphor that describes the encounter of newly arrived skilled immigrants as flies on a glass, for they can only see a promising future but cannot find a way to achieve their life goals. It might be politically correct to blame the inability of the Canadian government, the protectionism of local employers and professional organizations, and individual factors regarding the skilled immigrants who arrived in the past ten years. However, this study seeks to understand the issue through the nexus of

human and social capital challenges faced by recent skilled immigrants, and calls for collaborative efforts to mitigate any negative consequence deriving from the issue.

Chapter Two

A Review of the Literature

The most recent decade has featured a tremendous movement of people from country to country, resulting in transfers of cultural values, and different types of capital, such as human capital, (knowledge and skills); financial capital (goods and money); as well as social capital, as reflected in social networks and associated information flows.

Canada receives a large number of immigrants every year. Though established Canadian society was traditionally built and renewed by white settlers from European countries, the 1970s became demarcated in light of the source of immigrants, and surges of people from developing or nontraditional sources, such as Asia. In light of massive immigration, Canadian immigration policies and practices have sparked public debates and discussions. The low mortality rate and declining fertility rate in Canada provide sufficient rationale to increase immigration, which paved the way for the 1960s' selection point system to assess independent economic immigrants with an array of criteria (Campbell, 2000; Wickberg, 1982).

By 1978, however, when the new *Immigration Act* came into effect, family reunification was given first priority. It has been observed that the policy makers were pressed to increase the number of independent immigrants to offset the humanitarian admission of family reunification immigrants with less reference to abilities. With rising unemployment at the beginning of the 1980s, the entry of independent skilled immigrants was frozen until a restrictive list of occupations was applied with the premise of preserving jobs for Canadians. While government policy and practices created an inviting atmosphere for new immigrants with rich human capital and financial capital, it seems that Canadian public opinion was concerned with a variety of social issues, such as employment, welfare, and safety (Campbell, 2000; Abu-Laban, 1998; Green and Green, 2004; Guo and DeVoretz, 2005). The fluctuating immigration levels and type of immigrants who are allowed to enter suggest that immigration policy and practices in Canada have been partially designated to serve economic ends while fulfilling demographic objectives. Considering this, immigration in Canada has largely become an economic issue (DeVoretz, 1995).

When public debates center on “the benefits” or “the losses” to Canadian society as a result of immigration, where recent immigrants are to be placed in the scenario is unclear. When the entry tickets were sold to incoming immigrants, particularly independent skilled immigrants, it is not clear that there was an integrated plan to help them parlay their skills, realize their economic potential and

benefit both themselves and Canadian society. If we look at the economic issues surrounding the waves of skilled immigrants to Canada, such as their labor market performance and economic integration, we can possibly facilitate positive changes in Canadian immigration policy and practices, and more importantly, we can contribute to identifying the needs of recent immigrants in order to strengthen their economic performance really to benefit Canada.

With this objective, this chapter is situated at the intersection of three bodies of literature to examine the employment experience of recent Chinese immigrant engineers in the Greater Vancouver region in Canada. Considering their theoretical importance, the human capital and social capital frameworks will be critically reviewed to facilitate comprehension of the possible trajectories of post-immigration development in human capital and social capital, and the effects on the economic outcomes of recent skilled immigrants. In addition, gender issues will be addressed which, to a lesser extent, influence the occupational mobility of Chinese immigrant engineers when they negotiate access to their profession of training.

I) Theorizing Human Capital

It is a well known fact that there is low transferability of knowledge and skills that recent skilled immigrants gained outside Canada into the Canadian labor market. For this reason, many studies take a stance against the conventional analysis

accepting the economic return of investments made in knowledge and skill, one's human capital (Zong, 1998; Li, 1998, 2003; Kazemipur, & Halli, 2001; Kazemipur, 2004). These studies only look at how pre-immigration human capital influences immigrants' economic integration; few studies have connected the economic return of skilled immigrants with their post-immigration human capital development, so little attention has been paid to the dynamic of human capital, in particular how the post-immigration development in human capital has affected the economic outcome of recent skilled immigrants. In addition, studies on the human-capital-investment model only highlight the direct link between investment in human capital and its impact on earning differentials, rather than the actual development of human capital itself. Therefore, my study attempts to open a new vista in research related to post-immigration economic integration through examining the overlooked dimension of human capital theory.

Human capital: conceptualization in a longitudinal perspective

It was Schultz who first stated that "quality components as skill, knowledge, and similar attributes that affect particular human capabilities to do productive work" (1971: 43) are a form of capital, called human capital. This kind of particular capital carried by a human being is expected to achieve economic return through "deliberate investment" (1971: 24). Schultz's proposition explicates how "an investment in people.... improves their capabilities and thereby increases the future

earning of people” (1971: 56), which indicates the correlation between the stocks of human capital and earning differentials, i.e., the more human capital a human being has, the higher income it will yield over the human being’s life time, the so called “human-capital-based-earning model”. Mazumdar and Paul (1991) pointed out that “human capital” is qualitatively a substance that represents the skills, capacities, and abilities possessed by an individual; and it is quantitatively embodied as accumulated knowledge and skills through formal and informal academic and technical training, which is called “human capital formation”.

Acknowledging that investment of education, training, time and money will be paid off in the future by better earning differentials and higher productivity, Becker further differentiated general and specific training to reveal a new dimension of “the relation between job skills and labor turnover” (1975:2; 1993). “Specific training” is training that can hardly be used by other business competitors, and is paid for by employers (Becker, 1975); whereas it is people who expect to get higher incomes who pay the cost of general training. By looking at “on-the-job-training” in particular, the significance of Becker’s categorization is that he is concerned more with the investment sources and their associated economic outcomes, i.e., who should pay and where the return will go.

Clearly, the accumulation of human capital, the distinctive features of general and specific training, and their corresponding investments, as well as the linkage between acquisition of skills and capabilities with the increase of earning

and economic productivity, all create many different facets of human capital formation. In short, the literature on “human capital” not only conceptualizes it as a static stock of educational attainments, skills, work experiences, and individual physical conditions, but also implies a dynamic process of formation of such a distinctive capital (Becker, 1975; Kwon, Zuiker, & Bauer, 2004).

Contemporary theorizations of human capital have related the quantity of utilizable human capital with the quantity and duration of education. Based upon a Marxian definition of capital, the conceptualization highlights the added value of human capital and its nature as private assets of laborers (Becker, 1964 and 1993; Johnson, 1960; Lin, et. al, 2001; Schultz, 1961). How well the return can be generated by human capital is determined by the degree of education, which is an expected outcome of guaranteed investment that foresees the potential of socio-economic return. The positive policy implication of the conceptualization above lies in its significance for public policy, especially public policy for education, in order to achieve long-term economic growth for the society.

Although many researchers look at human capital from a variety of perspectives, up to the mid-90s, the formation of human capital seemed to only take place in domestic scenarios where educational attainment directly contributed to the productivity increase or economic growth (Schultz, 1971; Becker, 1975; Mazumdar and Paul, 1991; Lynch, 1994). For example, under the context of a rapid transformation in technology in the US throughout the 1990s, Lynch compared US

firms with their main competitors in Europe and Japan, and criticized the underinvestment of the US firms by examining work place skill accumulation and its impact on earnings and labor mobility. She furthered Becker's categorization of "general" and "specific" training by indicating that on-the-job-training was likely to be firm-specific training acquired by college students in a few industrial sectors, which led to a strong increase in their salary and upward occupational mobility. Off-the-job-training, however, represented general training, which might result in the higher mobility of individuals who paid for general training for themselves, and so tended to receive higher remuneration. One of her contributions is that the theoretical model of human capital started looking at the skill development of "new entrants" (Lynch,1994:134) into the labor market and their labor mobility. Her findings highlight the necessity of "retraining of workers" in the workplace due to the "changes in the skill requirement of workers" (Lynch, 1994:129). Agreeing with Lynch's suggestion on post-school training, Doeringer (1994) addressed the importance of the workplace training system and the need fully to understand the work mechanisms of this system. It is noteworthy that he advocated partnerships between key stakeholders, such as business, government and labour, in order to achieve productivity growth. Similarly, while worrying about the competitiveness of the US, Stokes (2006) criticized inadequate investment in human capital in industry, suggesting that employers avoid the costs because they are afraid that their trained employees would leave to work for their competitors; therefore, he

suggested that cost be spread across the economy through tax credits. One relevant study about Canada was done by Gilbert (2002) looking at the Survey of Labor and Income Dynamics (SLID) from 1993 to 1997 to examine the relationship between human capital and labor market transition in Canada. Gilbert indicated that individuals with more human capital displayed stronger attachment to the labour market, observed through fewer spells of unemployment and non-participation in the labor market. Clearly, there is a lack of attention to the formation of human capital in the context of globalization, where people with exceptional skills frequently move from one labor market to another in different countries, especially significant when we look at the recent skilled immigrants to Canada who have had to adapt to a different labor market with their foreign gained human capital.

Human capital: a theoretical switch from “earning” to investment

By taking into account a variety of controlling factors, many studies have moved away from a linear trajectory of the human-capital-based-earnings model. A series of variables were incorporated to illustrate characteristics of human capital investment and its possible consequences: “human capital investment is often not a voluntary and almost never an individual choice” (Tomaskovic-Devey et al., 2005:61). In other words, any return on human capital investment is a consequence of joint efforts and multi-stakeholders’ social process. By looking at the earning inequality across individuals, the researchers underlined the importance of

exploring both “individual career trajectories and the “social mechanisms that produce them” through both “longitudinal data on career processes” and “workplace dynamics” (Tomaskovic-Devey et al., 2005:86). Over time, the rapid development of the labor market and its changing requirements have implied a complicated process for people to acquire, accumulate, and invest human capital, as well as gain a reasonable return from it (Borghans & Heijke, 2005). Moreover, the increased uncertainty in the labor market and the non-linear trajectory of development further back up the rationale to guarantee the investment in human capital.

In short, it seems that scholarly attention has shifted from a human-capital-based-earnings model to one of investment behaviour and outcomes. However, most studies cited above concern only people who are internal to a labor market, and “migration” merely refers to workers’ movement from one job to another in the same labor market. With increasing transnational movement of labor and human capital, it is interesting to investigate the causality between human capital and economic outcome on a spatial dimension.

Kwon, Zuiker, and Bauer employed the US 1990 Census of Population and Housing Public Use Microdata Sample (PUMS) to examine the poverty issue of Asian immigrants in the earlier 1990s against a backdrop of two theoretical models, namely, a human capital earning model and an acculturation model. A set of demographic and human capital variables, including educational attainment, number of weeks worked in 1989, and physical health status were controlled to

measure the economic well-being of the households. The study discovered that high levels of human capital and acculturation reduced the odds of Asian householders living below the official poverty cut off line, regardless of their citizenship status.

Despite insignificant effect on the economic performance of immigrants, citizenship status as country-of-birth group was used by Wanner to examine how immigrant class composition affected earnings and earnings growth of immigrants for the long term. The data he deployed is the Landing Information Data System (LIDS) from 1980 to 1995. His findings indicate that entry class may influence earnings differentials at the beginning of immigration, but over time the earnings differentials are believed to converge for non skilled-based and skilled-based immigrants, since the former may experience difficulty in further investing in their human capital, whereas the latter have strong motivation to acquire human capital to be competitive (Wanner, 2003). Likewise, Akbari measured the immigrant “quality” of Canada from 1956 to 1994 by using landing documents and census data. He disagreed that the entry differentials in educational human capital were responsible for the declining economic performance of Canadian immigrants post-1967. In other words, there must have been other reasons accounting for the unsatisfying economic performance of Canadian immigrants (Akbari, 1999).

It seems that for the cases above, human capital only represents variables at the disposal of researchers in assessing the Canadian immigration policy, and

provides a rationale to decide admission criteria. How does human capital stock influence the economic well-being of recent immigrants to Canada compared with the non-immigrant population? Kazemipur and Halli utilized the Individual Public Use Micro File (PUMF) of the Canada 1991 census to investigate the chances of poverty for two groups. They displayed multivariable models including human capital, assimilation, and structural factors to validate their hypothesis. Although education has a more pronounced effect in reducing the chances of poverty, educational attainment is found to benefit non-immigrants more than immigrants, for immigrants cannot fully translate their education into incomes and socioeconomic status in Canada (2001). By looking at LIDS (Landed Immigrant Data System) and tax data of 1981 and 2000, Wang and Lo (2004) had roughly similar findings as Kazemipur and Halli in terms of the earnings disparity between recent Chinese immigrants and the general Canadian population. They have to face tough obstacles to fully transfer their human capital to the Canadian labor market, despite increased human capital being embodied in educational attainment and proficiency in English. Chiswick, Lee, and Miller's study (2003) sketches a "U" shaped pattern of occupational mobility of immigrants to Australia by using the Longitudinal Survey of Immigrants to Australia (LSIA). By comparing the last regular pre-immigration occupation, the occupation of the first job in the destination, and the occupational attainment in the first few years after immigration, they pointed out that immigrants are likely to experience a drop in occupational status,

and the decline is steepest for the higher-skilled if comparing their first job in the destination and the last job they had before immigration. Over time, there is improvement of occupational status while the residence duration increases in Australia. The invaluable contribution of Chiswick, Lee, and Miller is that they made it clear that across national boundaries there may be a lack of perfect transferability of human capital skills and the lack of post-migration investments.

Human capital: why it does not work for recent immigrants to Canada

Critiques on the theoretical stance of human capital come from both theoretical contention and empirical evidence, seeming to go against the conventional neo-economic analysis of human capital in the case of recent skilled immigrants to Canada. A range of factors have been identified to explain why the higher human capital of recent skilled immigrants cannot get the expected returns in the Canadian labor market.

Many studies regarding Canadian immigrants seem to have proved that their human capital is drastically devalued and can hardly bring economic returns in the Canadian labor market. For example, when Lary and Luk addressed the critical “status dislocation” (1994:50) of the Hong Kong immigrants in Toronto, they indicated:

Finding a job is one thing, finding satisfactory employment commensurate with one’s qualifications and experience is another; and being able to

continue with and to advance one's pre-migration career is yet another matter...(1994:151).

Zong found that almost half of the respondents in his study had lower social status in non professional jobs or had never worked in Canada (2003). Moreover, immigrants were found to earn less and experience "new poverty" (Kazemipur and Halli, 2001) compared with their Canadian-born counterparts. The poverty among recent immigrants was double the Canadian rate, and the immigrants' annual wages and salaries were one-third less than those of other Canadians. (Smith & Jackson, 2002, DeVoretz, 2005).

Likewise, Green and Green from the standpoint of economists questioned the rationale that immigration generates economic growth. They argued that long term economic benefits that Canada expects to gain from the higher human capital of skilled immigrants will be offset by short term costs in a poor labor market, while job losses are common among newly arrived immigrants (Green & Green, 2004). Bouchard (1998) further pointed out that the present investment in education in general might not bring any return to labor and other key stakeholders due to unpredictability of the labor market. In other words, "quantity and duration of education/training" and associated "better skills" might not realize their values in the labor market.

Immigration researchers, people who least favor economic consideration of the immigration scheme in Canada, firstly attribute racial inequality to the devalued

human capital of recent skilled immigrants to Canada. The racial inequality reflects on both Canadian immigration policies and immigrants' experience in the Canadian labor market. For example, Abu-Laban posits that the increasing emphasis on the economic worth of immigration has reasserted the inequality of race, gender, and class bias of the Canadian immigration program (Abu-Laban, 1998). Knowles (1997) documents the lingering racial/ethnic inequality that hinders the developmental opportunity of newcomers in Canada, even though official racism seemingly came to a halt while multiculturalism was underway.

Peter Li views the devalued human capital of recent skilled immigrants as a form of economic penalty stemming from racial inequality. He demonstrates that market discrimination because of "racial" markers is the fundamental reason hampering economic inclusion of visible minority immigrants in Canadian society (1998; 2003). In some sense, the thesis of "racial/ethnic inequality" has been predominant in explaining the economic exclusion that recent immigrants have experienced.

To find appropriate jobs in the Canadian labor market which reflects the knowledge and skills of recent skilled immigrants is indeed an issue with strong economic implications. It is arguably a waste that highly educated and professionally trained immigrants languish in mismatched jobs or are even unemployed. As a result, both immigrants themselves and Canada cannot receive the economic return that could be generated by the higher human capital stock of

recent skilled immigrants. While too many studies focus on how pre-immigration human capital led to the economic penalties imposed on recent skilled immigrants after immigration, less attention has been paid to how the possible adjustments of human capital during the post-immigration period could possibly affect economic consequence.

I was first enlightened by the “U” shape model of Chiswick, Lee, and Miller (2003), for they connected human capital development with its consequential occupational mobility in the host society. With a backdrop of “assimilation theory”, they observed an initial downward and subsequent upward occupational mobility of skilled immigrants with the increase of local specific knowledge, aside from the increase of residential duration. In addition, many immigration studies (Kwon, Zuiker, & Bauer, 2004; Wanner, 2003, Akabli, 1999) have more or less touched upon how post-immigration acquired human capital could possibly determine the economic well being of recent immigrants. Nevertheless, I found studies in this regard far from enough to shed light on the association between post-immigration human capital and its economic outcomes. Secondly, “region-of-origin-specific human capital” (Thompson, 2000) also stimulated my interest in recent Chinese immigrant engineers to Canada. Thompson stresses the importance of the role that region-of-origin-specific human capital plays in the course of labor force integration by drawing our attention to the largest proportion of immigrant engineers coming from a single-source country, China. According to his study, the proportion of

Chinese immigrants intending to work as engineers in Canada, (all specialties combined, e.g., electrical and electronics engineering, civil engineering, etc.) was 39 percent in 2000, the highest among all immigration source countries. Therefore, I sought to look into the employment experiences of Chinese immigrant engineers in the engineering sector of the Canadian job market. I believe qualitative methods cannot only detect the individuals' employment experiences over a long time span, but also incorporate cohort effects since the late 1990s. The findings from my study are expected to provide practical solutions to tackling a variety of problems surrounding the economic integration of recent Chinese immigrant professionals.

Human capital: a slight revision

I would argue that the process of human capital accumulation is dynamic and constantly undergoing development over time and at different labor market. Many studies merely look at the accumulated human capital of recent immigrants at or before the time of immigration, which certainly overlooked the post-immigration adaptation of human capital. Human capital is not a once and for all accomplishment; it has to “adjust to changing job opportunities” (Sweetland, 1996:349). Along with the relocation of immigrants themselves, their human capital also has to be relocated and adapted to specific labor market conditions where the human capital can or cannot fully translate.

In my study, human capital refers to knowledge and skills both accumulated and continually acquired; it develops both temporally and spatially; it develops through individual investment, and more importantly, through a social process within which public supports plays an indispensable part; the supposed large return could be “monetary as well as non monetary, private as well as social” (Mazumdar and Paul, 1991:2). Clearly, the accumulation of human capital, the distinctive features of general and specific training and their corresponding investments, as well as the linkage between acquisition of skills and capabilities with the increase of earning and economic productivity, all of these have unfolded many different interfaces of the formatting mechanism of a special form of capital, human capital.

II) Conceptualizing Social Capital

As for recent immigrants, newcomers do experience a higher extent of “capital deficit” (Coleman, 1990:302). It is also hard to establish a complete and efficient social network from which they can obtain information, support, and other resources to facilitate their actions. This particular form of resources is “social capital”.

Social Capital: definition and measurement

Social capital is defined by social relations and its instrumental function, which is likely to lead to possible socio-economic returns (Bourdieu, 1985; Coleman, 1988). It also emerges from civic participation and political engagement (Putman, 1993). Social capital is embodied by a variety of social relations, “connections or “networks”, and the norms of reciprocity arising from within. Essential indicators of social capital are considered to be trustworthiness, information flow, and civic norms. The distinctive characteristic of social capital as a by-product of social relations makes it readily accessible to social actors. In this case, it acts to be both a public and private good (Bourdieu & Wacquant, 1992:119; Putnam, 2000: 19; Halpern, 2001: 6, 2005:2).

Despite the fact that there are many key indicators describing social capital, there has been a lot of discussion of the ambiguity of its conceptualization. The critique is reflected in the lack of “conceptual clarity” (Harper, 2001: 6) in the measurement of social capital and less consideration of “theoretical specificity” (Harper, 2001: 12) in different cultural contexts, because the conceptualization is mainly based upon “secondary analysis of existing data source” (Harper, 2001: 13). To ask individuals about their participation in a wide range of civic and political activities was adopted by Putnam to measure the level of social capital (Putnam, 2000; Harper, 2001: 14). In other words, the level of social capital in the public

sphere is simply based upon aggregated civic involvement of individuals in it.

Therefore, Harper argues that “the difference between compositional (individual) and contextual (place) measurement” (2001:14) makes the measurement of social capital inaccurate.

Looking at the dimensions of individuals and communities, social capital is a very important resource that connects people by “linking,” “bonding”, and “bridging” (Halpern, 2005:25-26; Putnam, 1995). The “trustworthiness”, information flow, and “reciprocity” embedded in the “interaction” and “connection” between social actors manifests the function of social capital, i.e., the function that leads to possible socio-economic returns (Coleman, 1988, 1990). It is generally perceived that if social resource is purposefully utilized, it may facilitate people’s actions in gaining economic attainment through informal or formal, and/or direct or indirect channels. There has been long term scholarly attention to the theoretical association between the stock of social capital and associated economic outcomes (Coleman, 1988, 1990; Halpern, 2005; Lin et al., 2001; Putnam, 1995, 2000). For example, access to diverse resources enables individuals to enhance the volume of information and proliferate opportunities, such as possibility of employment and change of status attainment (Lin, 1999; Coleman, 1988).

Social capital: seeking its proliferation in a new home

By networking with others, it is believed that individuals can increase social

capital, and gain further socio-economic attainments. Likewise, social capital is also implied to have high value for groups and communities, especially for ethnic communities in a different socio-economic environment. Looking at the social capital enacted within the immigrant communities in the US, Portes and Sensenbrenner (1993) pointed out that stronger co-ethnic bonds usually resulted from the confrontation between immigrant groups and the host society. The stronger the in-group solidarity, the higher the level of social capital is. The social capital of this kind always stems from non-material resources which can affect the collective goal-seeking in the host society and lead to some material consequences for the immigrant communities over the long-term. However, there are also some downsides of the particular form of co-ethnic social capital. By examining both positive and negative effects of this particular form of social capital, Portes and Sensenbrenner expected that the growing immigration-research literature would offer a rich source for an unbiased view of social capital, building upon empirical knowledge.

Portes and Sensenbrenner's study demonstrates the indispensable role that social capital plays for immigrants in accomplishing economic goals in the host societies (1993). Immigrants are likely to lose the meaningful social positions they had prior to immigration; therefore, they tend to make great effort through direct or indirect ways to move towards commensurate status after the relocation. Based upon pre-immigration contacts, quickly to regain and expand co-ethnic and

cross-ethnic social networks, one has to get involved in a variety of community group activities in the host society (Marger, 2001:440). While social networks are being diversified and expanded, social capital emerges when information is being shared between social actors (Coleman, 1988:s104). Throughout the post-migration period, both spontaneously or deliberately forged “new” social capital will help find more opportunities and benefit the newcomers’ socio-economic wellbeing. In this sense, social capital could be more important than human capital, especially when human capital displays lower transferability after physical relocation.

Emphasis on institutional resources

Many immigration studies have identified the process of social capital acquisition as mainly individual initiated, and sometimes ethnic segregated from the host societies (Coleman, 1988, 1990; Halpern, 2005; Lin et al., 2001; Putnam, 1995, 2000; Portes and Sensenbrenner, 1993; Marger, 2001). Portes criticized that many studies have over-stretched individual motivation, ability, and joining or grouping behavior to obtain social capital, while less attention was paid to the availability of social resources (1998). Meanwhile, limited studies have been conducted regarding the interaction between individuals and a range of institutional social resources, which I believe can reach more people and extend the foundation of social capital to a wider scope in order to facilitate social actors to achieve their anticipated socio-economic attainment.

As to recent Chinese immigrants in Canada, I believe that social capital not only emerges between persons, but between persons and institutions. The latter can help individuals who seek to accumulate social capital to cast a much wider net for information and other social resources. For example, recent immigrants may only expand their social networks in the host society in a limited scope; while the agency effect may enable institutional social resources to reach out further and provide a wider training ground to diversify social capital. Institutions in this regard include immigrant services, educational institutions, and professional associations, obviously less studied in social capital literature. I will try to shed some light on this issue in chapter seven.

III) Gender makes differences

Gender issues: women in family, paid labor force and social development

Through a gendered lens, studies have examined household labor division and its associated domestic power disparity between men and women. Derne (1994) provided an example with respect to how men gained power by controlling women to sustain patriarchy in families. With their substantial economic contributions to their families and an increased economic awareness after immigrating to the US, Korean immigrant wives started negotiating with their husbands to change the

unequal traditional division of domestic labor as a way to confront male dominance (Lim, 1997).

Research has found that women are likely to be confined to home or a subordinate, low paid, pink-collar sector, an outstanding occupational gender segregation (Kemp, 1994). They are globally placed in a disadvantaged gender role relative to their male counterparts in the economy. Mikkola revealed how females in the academic and engineering field are paid less than their male counterparts, and also lack “decision-making power” (Mikkola, 2005: 8-9). Studies regarding the Latino (Hondagneu-sotelo and Ernestine, 1997) and Filipina domestic workers (Cheng, 2004) demonstrated how they were disadvantaged by a series of asymmetrical power relations in gender, race, and class differentiations in a transnational setting.

Are females merely powerless subjects? Admittedly, some occupational choices remain traditionally gendered; however, females are found to be more likely than males to aspire to pursue the highest status occupations. (Feliciano & Rumbaut, 2005). Green and Cohen have also seen women’s involvement in small business as a way to empower themselves (1995). Similarly, Chiang indicated that Hong Kong small business female entrepreneurs are motivated to start their own business in order to achieve “autonomy and independence, increased self-confidence and self-worth, personal challenge, economic necessity, and monetary gain” (Chiang 2001: 44). The portrayed image of a passive and disadvantaged female immigrant

does reflect the reality; nevertheless, more studies are needed to investigate other facets of gender, in particular, how gender and social capital influence each other.

Female skilled immigrants in Canada: gendered disadvantage and stereotype?

Many studies suggest that there is a clear gender bias embedded in the immigration policy and practices of Canada. Male skilled workers are more likely than females come as principal applicants. Therefore, female immigrants are discursively excluded from the national economy by being portrayed as the “dependents” of “male independent economic agents” (Thobani, 2000), for example, female immigrants who intended to become engineers in Canada have fallen from 40 percent in the 1980s to 20 percent in the 1990s (Couton, 2002). Gender orientation along with the Canadian immigration scheme further marginalizes immigrant females as “Canada’s other women” and “minor players” (Bannerji, 2000:30). In other words, “racialization of womanhood and femininity” (Cheng, 2004:61) is always at issue.

A drop in occupational status has been observed as a result of immigration among female skilled immigrants to Canada, despite their educational attainment and professional backgrounds. Many female skilled workers have to play triple roles in their families: a subordinate breadwinner, an unpaid homemaker, and a child-care provider; therefore, their “power and status inside and outside the home actually deteriorated after they immigrated to Canada” (Man, 1996:292). To some

extent, the parenting responsibilities challenge these female immigrants and prevent them from seeking more educational and career opportunities. Clearly, female immigrants, especially female skilled immigrants, have long been portrayed as passive, powerless, and oppressed subjects. Moreover, many may show a “general ignorance and unconsciousness” of their “disadvantaged positions as women” (Chiang, 2001: 137). It seems that some specific gender dimension should be explored to fully comprehend the complexity of gender meaning in different contexts, for example, how do female skilled immigrants face their post-immigration employment difficulty? Do they act similarly or differently from their male counterparts?

Bridging gender and social capital

The linkage between gender and social capital was initially identified by Putnam (1995). He stated that there was a decline in organizational involvement and social capital stock among women in the paid labor force. Later, he slightly changed his standpoint by acknowledging that women typically spend more time in association activities. It is the status differential of gender that may well account for gendered social capital. As it was noted, “organizational membership remains segmented by sex,” and “in many countries certain types of organizations remain disproportionately male...” (Norris & Inglehart, 2006:74). In the social capital

literature, there is also a continuity of male bias, even when gender was used as a controlling variable (Chiswick, Lee, and Miller, 2003).

Many recent studies, however, have noticed the correlation between social capital and gender (Silvey & Elmhirst, 2003). To some extent, gender plays an indispensable role in determining social capital level, occupational mobility, and economic attainment. A study on gendered social capital has revealed that connection, trust, and collective actions are significantly increased when women join gender neutral organizations and/or women's organizations (Westermann, Ashby, and Pretty, 2005). To look at women only organizations, research has found that there are more collaborative activities in those organizations than in gender-neutral organizations (Foster & Meinhard, 2005). Although many studies have drawn our attention to the correlation of gender and collective action in different contexts, little is known about how female skilled immigrants nurture and mobilize social capital and overcome post-immigration deskilling and the drop of their overall economic status after immigration. I will try to contribute to the understanding of the issue.

IV) A brief literature review

There is increasing literature concerned with how the Canadian governments deal with the underutilization/deskilling of recent highly skilled immigrants. Many

studies have suggested the role that human capital, social capital, and gender play respectively in affecting the economic outcomes of recent skilled immigrants to Canada. However, few studies have connected the economic return of skilled immigrants with their post-immigration human capital development. Likewise, little attention has been paid to the depth and width of support offered by a range of Canadian institutions, such as professional regulatory bodies, educational institutions, immigration services, and local employers, and their effects on the social capital acquisition of recent skilled immigrants. In addition, the male preference of the Canadian skilled immigration scheme has resulted in a salient under-representation of female skilled immigrants in the Canadian economic scenario, as well as in studies concerning immigrant integration.

In this dissertation, I aim to sketch the employment trajectory of recent Chinese immigrant engineers by incorporating human capital, social capital, and gender perspectives in terms of the economic integration of skilled immigrants in Vancouver, Canada. The findings are expected to provide insight into the under-examined perspectives emerging in previous research regarding the economic integration of recent skilled immigrants.

Chapter Three

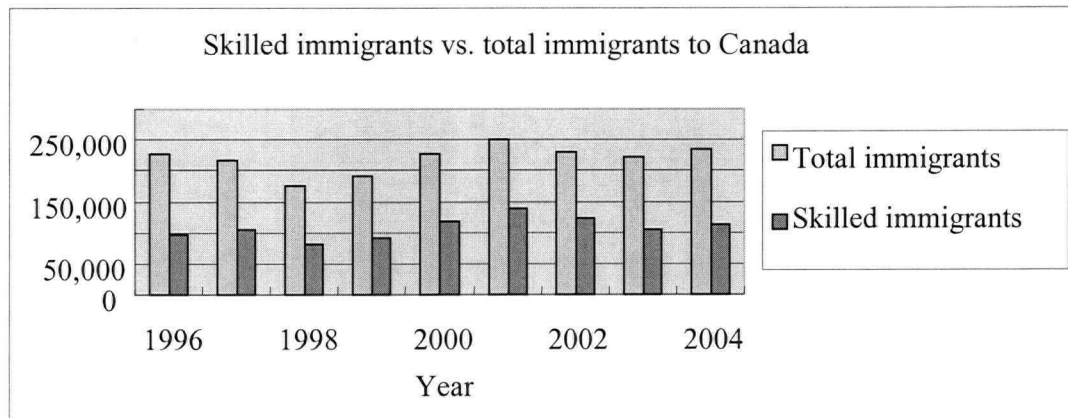
“Brain Gain” or “Brain Waste:” Canada’s Dilemma

I) Historical Highlights of Canada’s Demographical Plan

Numbers and Figures

According to the most recent data released by Citizenship and Immigration Canada (CIC, 2005b), Canada received 262,236 immigrants in 2005, a seven percent increase compared to mid-year of 2004. Compared to 2004, it is noticeable that there is a 28 percent increase for the economic class, whereas there is a 21 percent decrease for the family class and a seven percent decrease in refugee landing mid-year of 2005. With a 27 percent increase in mid-2005, skilled immigrants (principal applicants, their spouses, and dependents) account for 84 percent of the total economic immigrants and 53 percent of total immigrants to Canada in the first half of 2005. Apparently, skilled immigrants have been a primary source of Canada’s immigration, comprising 50 percent of the annual immigration intake since 1996, as shown by the following figure:

Figure 1. A comparative chart of skilled immigrants and all immigrants to Canada, 1996-2004 (CIC, 2004)⁶



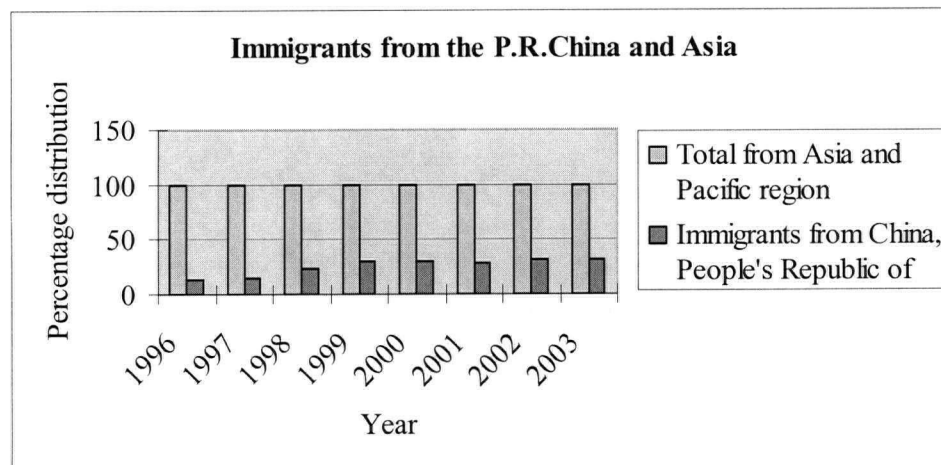
It seems that the objectives of the Canadian immigration scheme are two-fold. First, Canada's immigration gives more weight to the economic contribution of incoming immigrants, although immigrant admission on a humanitarian basis is always on the agenda; second, highly skilled and professional immigrants are expected to stabilize the human capital pool in the Canadian labor force in a rapidly aging society. While more immigrants arrive in Canada, it is encouraging that over half of recent economic immigrants possessed Bachelor's degrees before coming to Canada. People with Bachelor's degrees increased in all categories. At the same time, the number of Master and Doctoral degree holders has steadily increased. Moreover, almost one-third of immigrants 15 years or older with clearly identified labor market intention can be classified as Skill A or professional immigrants,

⁶ My own calculation based upon the statistics.

whose occupations required university education. It demonstrates the economic potential and skill pool of recent immigrants to the Canadian labor market. (CIC, 2005 b)

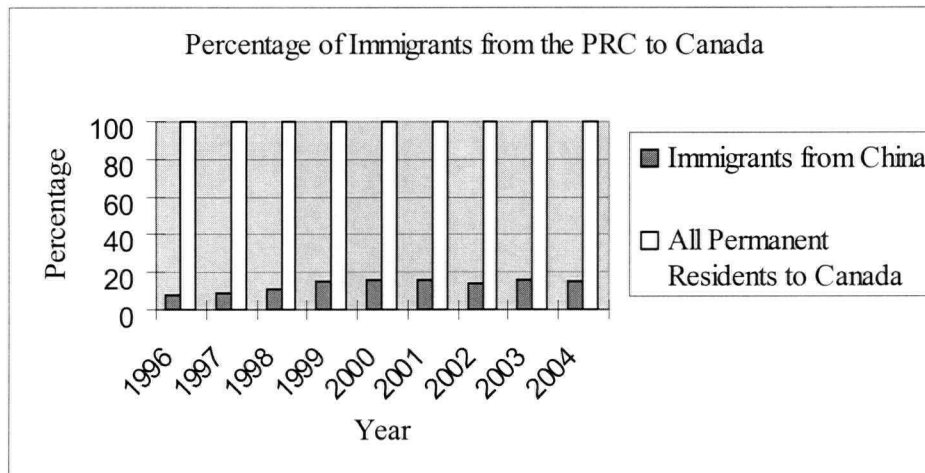
Among the economic-oriented landings from 1996 to 2004, it has been found that the immigrants of economic class from Asian and Pacific countries are the primary source of both economic immigrants to Canada and immigrants in general, fluctuating around 50 percent. As the leading source of Canadian immigrants, Asian immigrants possessing Bachelor's degrees account for one-third of total Asian immigrants to Canada. According to the data released by CIC in 2005, from 1996 to 2004, the number of immigrants from the PRC (Mainland China) has steadily increased among all permanent residents from Asia, as well as all permanent residents to Canada, as shown in the following figures:

Figure 2. Percentage distribution of immigrants from the PRC and Asia (CIC, 2004)⁷



⁷ My calculation based on the CIC statistics.

Figure 3. Percentage distribution of immigrants from the PRC and all immigrants to Canada (CIC, 2005)



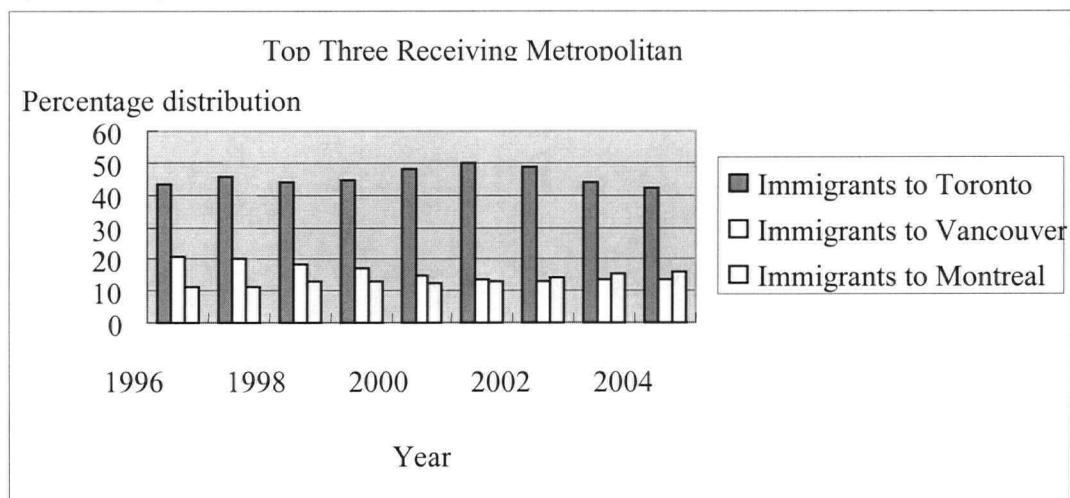
As a consequence, Mainland China rose from third place in 1997 and 1998 to first place over the next seven years among the top immigrant source countries of Canada. In 2005, 42,291 immigrants from Mainland China arrived in Canada (CIC, 2005 a).

The Settlement Pattern of Recent Immigrants to Canada

Among the vast number of recent immigrants, a dominant number chose to settle in Ontario, Quebec, and British Columbia (B.C.). On average, the proportions of immigrants who have arrived in these three provinces from 1996 to 2004 are: 53.1 percent, 18.8 percent, and 15.7 percent, respectively. Only a small percentage of immigrants chose to live in other provinces. Correspondingly, three major

metropolitan regions, Toronto, Montreal, and Vancouver, have become the most favorable destinations for recent immigrants (CIC, 2005 a). On average, Vancouver is the second largest destination for recent immigrants with 13 percent compared to 42 percent received by Toronto and 11 percent received by Montreal, as shown in the following figure:

Figure 4. Percentage distribution of immigrants to three major metropolitan areas (CIC, 2005)⁸



As shown in CIC statistics (2005a), economic immigrants are found to prevail over other categories in the three major metropolitan areas. Almost 60 percent of immigrants to Ontario are in the economic class; over 50 percent of immigrants to Quebec are economic immigrants; and B.C. has the highest proportion of economic

⁸ *ibid.*

immigrants with over 62 percent on average from 1996 to 2004. Interestingly, almost two-thirds of immigrants to B.C. are immigrants from Asian and Pacific countries. In other words, B.C. has the highest percentage of Asian immigrants, especially Asian immigrants in the economic class and skilled immigration categories. However, as mentioned in Chapter Two, many studies have found that recent immigrants have encountered a lot of barriers while establishing themselves in Canada. The following case study will focus on foreign-trained immigrant engineers, in particular, Chinese immigrant engineers.

II) The Bumpy Road of Economic Integration

Mapping the Foreign-Trained Engineers in Canada

A substantial demand for new skills has emerged in Canada since the 1990s. As much as 17.6 percent is in the engineering labor force in a broad range of sectors, such as civil engineering, mechanical engineering, electrical engineering, electronics and chemical engineering, as well as other industrial and manufacturing sectors, listed within the National Occupational Classification (NOC) by Human Resources and Skills Development Canada (HRSDC). By 2002, the number of engineers in the Canadian labor force was 190,000 with a steady increase of 51,000 engineers per year. On average, the growth rate is 4.3 percent, according to a report by the Canadian Council of Professional Engineers (CCPE, 2003). The rising

demand for an engineering labor force underscores the objective of the Canadian immigration scheme to gain highly skilled immigrants for the competitiveness of the skilled pool in the country.

Engineering is the top field among recent skilled immigrants, one out of five male immigrants received an engineering degree outside Canada, and 5.3 percent of female immigrants hold engineering degrees as well. In total, they account for 44.5 percent of individuals who hold engineering degrees in Canada (CCPE, 2003). In 2000, for example, the number of engineering degrees granted by Canadian universities was 10,000. Some 15,000 skilled immigrants declared that they were engineers and intended to work as engineers in Canada - 50 percent more than the domestic supply (Couton, 2002:171).

The national unemployment rate of engineers is relatively low if compared to most other occupational groups in the Canadian labor market, although the engineering unemployment situation at provincial or territorial levels may vary. Neither does it reflect the underemployment of discouraged job seekers, particularly those who are foreign-trained immigrant engineers. The promising engineering profession in Canada does not welcome immigrant professionals despite an increasing demand for engineers. Thus, this well-trained labor force is frequently excluded from its desired profession.

Generally speaking, the employment situation of recent highly skilled immigrants is worrisome, and a substantial number of these immigrants are working

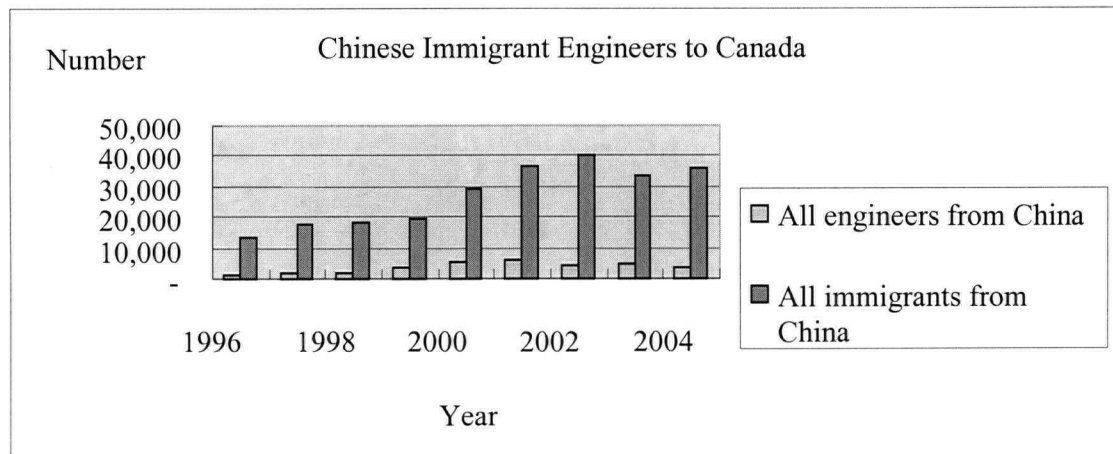
in low-paying and low-skill jobs. As a result, there is a large earning gap between recent skilled immigrants and the Canadian-born population. Moreover, a large proportion of recent immigrants are living under the cut-off line of poverty in Canada. Though there are insufficient data at present, given its larger proportion of recent highly skilled immigrants, the employment outlook of foreign-trained immigrant engineers is predictable. The foreign-trained immigrant engineers not only form a large group needing to be licensed, but also a large proportion of highly skilled workers are excluded from many technical positions in the Canadian engineering field.

To respond to the issue, CIC and HRSDC organized a focus group of foreign-trained immigrant engineers in Ontario on March 7, 2002. The focus group set out to discuss the difficulties these immigrant engineers experienced in attempting to secure engineering positions in Canada. They reported that they had received economic penalties in accessing the Canadian engineering field as foreign-trained professionals. Without fair access to their occupation of training, they could not meet the key requirement to become Professional Engineers (PEng) in Canada, i.e., one year of Canadian work experience under the supervision of a licensed Canadian PEng. It is absolutely a "catch-22" situation, which makes the economic integration of immigrant professionals more difficult.

As mentioned, the numbers of Chinese immigrants and skilled immigrants have both been ranked in first place in the past seven years among all immigrants

and skilled immigrants to Canada. Likewise, Chinese immigrant engineers also assume first place among all foreign-trained engineers to enter Canada in the past few years.

Figure 5. The ratio of Chinese immigrant engineers among Chinese immigrants⁹ (Based on LIDS)

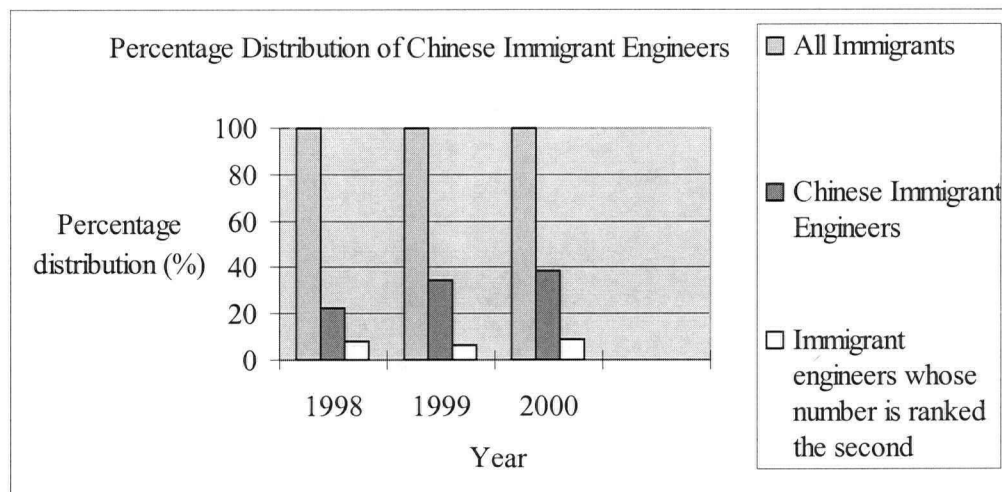


A dramatic increase of Chinese immigrant engineers occurred in 2000, which accounted for one-third of the total number of foreign-trained engineers to Canada that year. Looking at the period from 1998 to 2000, Chinese immigrant engineers were three-to-four-fold greater than the second ranked country. The CIC data only collect the number of immigrants intending to work as engineers in Canada, while CCPE and other provincial or territorial mandate bodies only count those who apply to be licensed in Canada. As a consequence, there are no data readily available

⁹ The data were extracted from the “Landed Immigrant Data System (LIDS)” by a special request to Citizenship and Immigration Canada (CIC). Without Professor Dan Hiebert’s help, the data could not have been accessed.

regarding the employment integration of recent foreign-trained immigrant engineers, and Chinese immigrant engineers, in particular. Nonetheless, it is clear that it is not easy for highly skilled Chinese from a non traditional immigrant source country to find desirable employment in the Canadian labor market.

Figure 6. Percentage distribution of Chinese immigrant engineers: a comparison (CIC, 2005)¹⁰



To address this issue, HRSDC announced funding of \$215,000 in 2002 to the CCPE to help in removing the barriers of foreign credential recognition and help foreign-trained engineers access their profession of training in Canada (CCPE, 2003). Entitled, “From Consideration to Integration” (FCI), the project began in 2003 and was expected to integrate foreign-trained engineers efficiently without compromising public safety. The phase-I funding was provided for the HRDC

¹⁰ My calculation based upon the CIC statistics.

Labor Market Partnership Program (LMP) to identify the challenge of foreign credential recognition. In phases II and III, labor force adjustments will be made to improve the integration needs of foreign-trained engineers to put their expertise to use. There are no final data available to examine whether the project has fulfilled its commitment. However, there are still increasing complaints from recent immigrant engineers regarding deskilling in the Canadian labor market.

Tracking Down Immigrant Engineers in Vancouver, B.C.

A high number of immigrant engineers choose to settle in Greater Vancouver and British Columbia (B.C.) each year. For example, one in four new arrivals to B.C. intended to seek a job in the natural sciences and engineering field during the period from 1990 to 1999, within which a significant number were engineers.

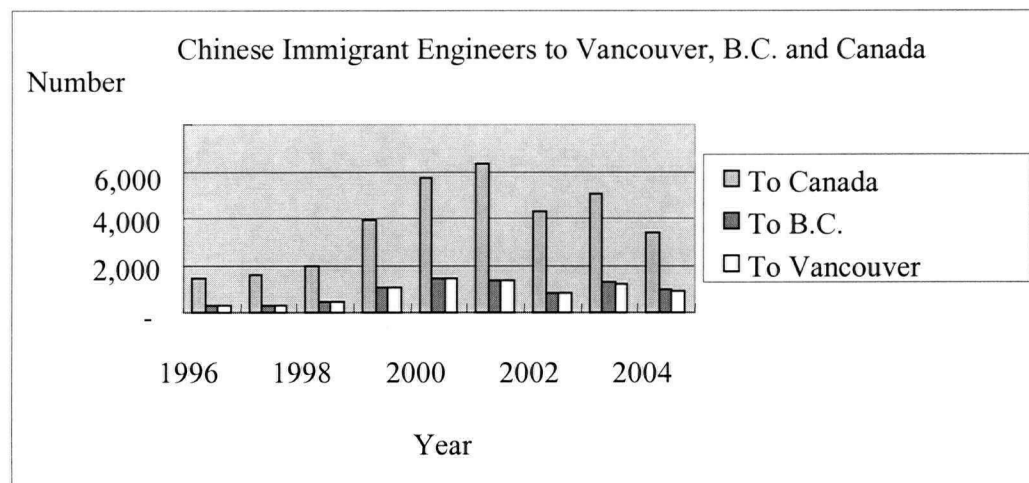
Twenty-four percent of the total number of immigrants arrived during the period.

Table 1. Annual average of B.C. immigrants (landed from 1990 to 1999) by selected intending occupations, BC Statistics Immigrant Highlights, 2000)

Professional Title	Number
System Analysts & Computer Professionals	4,482
Electrical Engineer	1,762
Civil Engineer	1,342
Mechanical Engineer	1,259
Total immigrants arrived	36,470
Percentage of engineers	24 percent

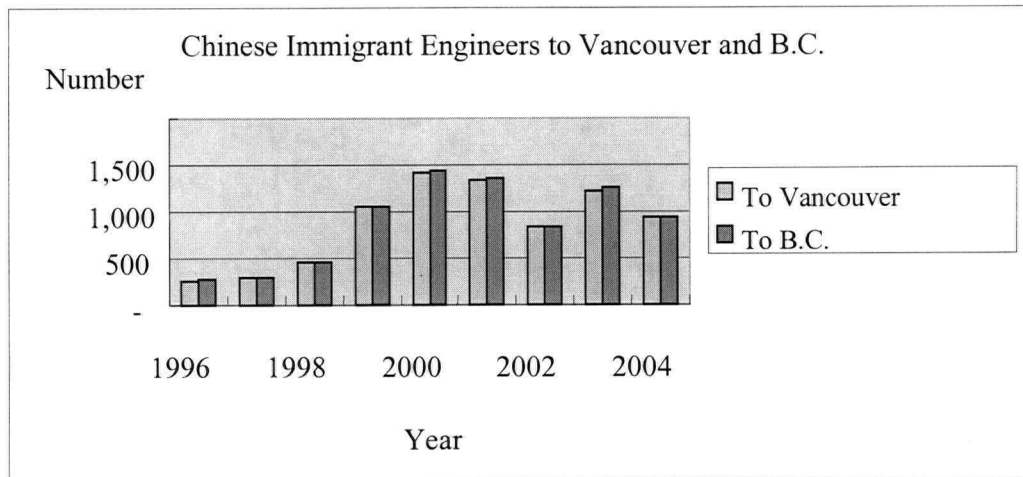
In 2000, the proportion of engineering immigrants increased to one-third of all skilled immigrants to B.C. Looking at the Figure below, we can find that most foreign- trained engineers in B.C. have chosen to settle in metropolitan Vancouver. However, there is little opportunity for them to find meaningful engineering positions and contribute their full potential to the local economy.

Figure 7. A comparison of Chinese immigrant engineers to Vancouver, B.C. and Canada (Based on LIDS)¹¹



¹¹ The data were extracted from the "Landed Immigrant Data System (LIDS)" by a special request to Citizenship and Immigration Canada (CIC).

Figure 8. A close-up of Chinese immigrant engineers to Vancouver and B.C. (CIC, 2005 a)¹²



As one of the initiatives across the nation, the Association of Professional Engineers and Geoscientists of B.C. (APEGBC), the provincial regulatory body of engineering licensure, worked with the provincial government and CCPE for a customized project, a “Pilot” between spring 2001 and summer 2003. The project aimed to help foreign-trained engineers to get local work experience to practise in the engineering profession in B.C. The program, however, was only tailored for 20 people, who could receive free skills assessments, customized training, and job-matching services. Moreover, it was only a one-time research project and no more participants will be accepted. Despite such a large number of newly arrived immigrant engineers, only 20 were being assisted. Nonetheless, APEGBC has

¹² My calculation based upon the CIC statistics.

18,500 members and is the third largest professional body in B.C.¹³ The result of the “Pilot” project has not been released to the public; neither is it known whether it helped its participants successfully find their place in the local engineering labor force.

III) Canadian Employers as Gatekeepers

Though there is a rising demand for engineers, it seems that Canadian employers have not been ready to take advantage of the well-trained skill pool of immigrant engineers. CCPE conducted interviews with 21 Canadian employers across the country. It turned out that many factors made employers hire Canadian-born engineers as their first choice. Other than concerns regarding proficiency in English (or French) among these newly arrived immigrant professionals, Canadian employers are reluctant to retrain immigrant engineers, who lack Canadian work experience or degrees from accredited Canadian universities, as well as familiarity with the business language of engineers in Canada. The employers, especially employers from small companies (with less than 50 people), declared that to train foreign professionals is time consuming and costly while they would receive little benefit (Canadian Council of Professional Engineers, 2003). It is ironic that many immigrant engineers are eager to integrate into the

¹³ See CCPE official website: <http://www.ccpe.ca/fc2i/c/index.cfm>.

Canadian labor force when there are fewer Canadian employers who are willing to hire immigrant professionals.

In short, the “brain gain” derived from recent immigrant engineers is seeming to turn into a “brain waste” in Canada; therefore, it is imperative to come up with solutions for this large number of immigrant professionals to enable them to access their profession. This thesis will examine the employment issues of recent Chinese immigrant engineers from a human capital perspective, and suggest approaches that can facilitate the occupational mobility of these highly skilled people.

Chapter Four

Gearing up to be a Professional Engineer in Canada

My study focuses on recent Chinese skilled immigrants from a specific occupational category, the engineering sector. All my respondents were registered engineers in China at the intermediate or senior level, who had successfully established their careers before coming to Canada. However, the majority are still seeking to return to their specialized fields and be licensed as Professional Engineers (PEng) in Canada. Why is it so difficult for recent Chinese immigrant engineers to obtain professional qualifications in Canada? What sustained those few who have become licensed in Canada? It is necessary to provide some information about professional accreditation mechanisms in both Canada and China. Doing so may help us come up with more practical solutions to the employment and licensing difficulties of recent Chinese immigrant engineers.

This chapter will start with a brief introduction of the Chinese licensing system for engineers. The engineering licensing system in Canada and the operation of the licensing body in B.C. will be juxtaposed with China's practices to show how the two systems operate, what the differences and commonalities are, and how to improve the current programs to facilitate the skill transferability of recent Chinese

immigrant engineers. In addition, the chapter will analyze the available programs for engineering immigrants in Greater Vancouver.

I) Engineer Licensing in China

While the engineering professional regulatory bodies are actively engaged in reaching recognition with other countries, including member countries of APEC, many Canadian studies still identify the lack of foreign credential recognition as a primary reason for downward occupational mobility among immigrant professionals. It seems that China, the leading source of immigrant engineers to Canada, has been slow to be included in the initiative from the Canadian side of engineering regulatory institutions. Is there any unreconciled difference between the engineering licensing systems in the two countries? It might prove helpful to juxtapose the Chinese engineer licensure system with the Canadian system to find possibilities of upgrading Chinese immigrant engineers to Canadian engineering standards.

The engineer licensing system in China is operated in line with different disciplines in the engineering field. Some traditional engineering sectors have a long history of training and licensing Chinese engineers although there are some engineering sectors that did not launch their licensing systems until the 1990s.

Therefore, the maturity and sophistication of the engineer licensing programs in China varies greatly with respect to different sectors.

The Chinese Mechanical Engineering Society (CMES), a national professional organization founded in 1936, is a good example. CMES has over 180,000 individual members and 4,000 corporate members. Under the national licensing body, there is a network of provincial agencies to accredit the technical qualifications of engineering candidates based upon peer assessment, ranging from mechanical (junior) engineers and professional engineers, to senior mechanical engineers. Licensed mechanical engineers are required to renew their registration every three years to ensure their competency. CMES has a few accreditation programs that are internationally recognized¹⁴.

Interestingly, the licensing organ for construction engineers is unrelated to that in any other engineering field. There are three levels of licensing bodies, namely, national, provincial or autonomous region, or municipal building engineer associations. The provincial and municipal licensing bodies can license registered architectural engineers—Tier two (junior) and evaluate the application materials of all candidates. Registered architectural engineers—Tier one and structural engineers are being licensed directly by the national licensing organization. For all registered engineers, their licensing information, certificate number, and validation period are

¹⁴ See the webpage of the Chinese Mechanical Engineering Society, www.cmcs.org/cmcs/index.jsp. Retrieved on February 25, 2006.

publicized online so that the public and employers can verify the validity of an engineering service provider¹⁵.

One thing to note is that to pass professional exams, including those testing ethical conduct and English, is indispensable for all licensed engineers regardless of their engineering sector in China. For all Chinese registered engineers, continuing education is one of the indispensable requirements designed to ensure quality and competency. Periodically being reviewed, registered Chinese engineers can always upgrade their knowledge and skill to ensure that they have a good command of cutting-edge technology.

Different from the traditional engineering sectors mentioned above, some engineering sectors have adopted international accreditation systems¹⁶. For example, Chinese computer professionals may add credits to their professional qualifications by obtaining some internationally recognized certificates issued by well-known companies, such as Microsoft and Cisco, or other internationally recognized professional organizations. For example, many software engineers write the CSEP-Certified Software Engineering Professional Exam to gain credentials from the Institute of Electrical and Electronics Engineers (IEEE) in the USA.

¹⁵ See the Chinese Building Industry Society, <http://www.zgjzy.org/guild/sites/ccia/default.asp>. Retrieved on March 3, 2006.

¹⁶ See China Association of Science and Technology, <http://www.cast.org.cn/n435777/index.html>. Retrieved on March 5, 2006.

Despite the tradition of licensing variations in different sectors of the engineering field in China, the system keeps improving to meet international standards. Compared to the Canadian engineer licensing programs, those in China exhibit some differences in practice and licensing structure, but now tend to move closer to international standards. China is also a member country of APEC, which implies that both Canada and China have lots of space to work on a bilateral agreement regarding engineering accreditation. The mutual recognition between Canada and the USA, as well as other countries within the British system, has been more balanced in the past ten years, despite the great number of immigrant engineers in Canada from countries such as China, India and Pakistan, who have arrived and waited for access to credentials in their well-trained positions. The mechanism of the Canadian licensing system does prevent recent Chinese immigrant engineers from integrating themselves into the Canadian engineering workforce, though there appears to be a high demand for engineering professionals in many parts of Canada.

Chinese immigrant engineers face the penalty that their professional qualifications and technical skills in China become obsolete while they are denied access to the engineering profession in Canada. In other words, there is a high risk that these individual engineers will be left out in both countries. This issue has not been addressed with due attention, and certainly there is no initiative to establish a

bilateral agreement in this regard between Canada and China, or between Canadian engineering licensing bodies and Chinese organizations regulating engineers.

Increasing number of Chinese immigrant engineers to Canada may pose a challenge to the engineering regulatory bodies in the two countries to improve mutual understanding, information exchange, and future collaborations.

II) To Be a Professional Engineer (PEng) in Canada

CCPE: Canadian National Organization for Professional Engineers

In Canada, engineering is a self-regulated profession, which means professional power is retained by the “independent practice” (Johnson, 1972: 24) of experts in the profession to “legally restrict who can practice” (Derber et al., 1990:110) and “control its supply and application” (Corfield, 1995:245). The use of the title “Engineer,” or to be precise, “Professional Engineer (PEng),” is therefore restrictive and subject to the *Engineering Act*, since a PEng can approve and sign engineering drafts and other documents relating to engineering projects.¹⁷

The professional governing organization at the national level is the Canadian Council of Professional Engineers (CCPE), a national regulatory body for 160,000 registered Professional Engineers across the country. The registered engineers are

¹⁷ See www.apeg.bc.ca/aboutus.html.

not, however, licensed to practise engineering work by CCPE. CCPE is only responsible for ensuring consistency of engineering license procedures. The provincial and territorial governments authorize professional regulatory bodies to license engineers in their jurisdictions, so it is professional practice self-governance, and thirteen provincial or territorial licensing bodies¹⁸ are autonomous in licensing Canadian engineers. Each provincial or territorial association is responsible for ensuring the quality of local candidates and admitting them into the engineering profession, a typical representation of “loosely coupling system” (Weick, 1976), under which individuals have to adjust to the local context. There is less coordination across the provincial boundaries. Moreover, the regulatory bodies in some provinces or territories also govern employers who offer engineering services to the public by mandating the engineering licenses of their employees.

To become a licensed PEng, a candidate must first have met residential

¹⁸ Association of Professional Engineers and Geoscientists of British Columbia (APEGBC); Association of Professional Engineers, Geologists and Geophysicists of Alberta (APEGGA); Association of Professional Engineers and Geoscientists of the Province of Manitoba (APEGM); Association of Professional Engineers and Geoscientists of New Brunswick (APEGNB); Association of Professional Engineers and Geoscientists of Saskatchewan (APEGS); Association of Professional Engineers of Nova Scotia (APENS); Association of Professional Engineers of Prince Edward Island (APEPEI); Association of Professional Engineers of Yukon (APEY); Association of Professional Engineers, Geologists and Geophysicists of the Northwest Territories (NAPEGG); Ordre des ingénieurs du Québec (OIQ); Professional Engineers and Geoscientists Newfoundland and Labrador (PEG-NL); Professional Engineers Ontario (PEO).

requirements, have become a permanent resident of Canada, or a Canadian citizen. Nobody can apply for licensure and be licensed before immigrating to Canada, unless she wants to settle in Ontario or Quebec where engineering immigrants are allowed to begin their application for engineering licenses from their countries of origin.¹⁹ Furthermore, educational attainment is essential for being licensed as a Canadian PEng. An engineering degree from an accredited engineering program is a prerequisite for any candidate who wants to be a licensed engineer in Canada. Similarly, an engineering degree from an engineering program recognized by Canada is required when an immigrant engineer applies for her practicing license in Canada. Besides fulfilling the requirements of residency and education, a certain amount of work experience under the direct supervision of a local PEng is indispensable for all PEng candidates; to be specific, three to four years for Canadian engineering graduates, and one year for engineering immigrants with more than three years' hands-on experience outside of Canada. From this requirement, we can see that engineering work experience outside of Canada is recognized, as long as foreign-trained engineers can find work under the direction of a registered Canadian PEng in Canada; in other words, the license depends on cooperation from employers in order to help foreign trained engineers to get accustomed to Canadian engineering norms. The application process winds up with

¹⁹ The licensing process can begin in the country where an immigrant comes from if the candidate chooses to settle in Ontario or Quebec. The licensing bodies are Professional Engineers Ontario or Ordre des ingénieurs du Québec, respectively. www.ccpe.ca. March 3, 2006.

professional exams, such as “engineering practice,” “engineering ethics,” as well as “engineering law and liability.” The latter is mandatory for all PEng applicants. The lengthy licensing procedure is believed to ensure the competency of Canadian engineers, guarantees public safety, and benefits Canadian employers.

A licensed engineer in Canada, nowadays, is very mobile, since CCPE allows its registered members to offer engineering services across Canada by switching membership from one province or territory to another with ease, although that happened not long ago. Moreover, the CCPE has been engaged in promoting the accountability of the Canadian engineering licensing system and getting the Canadian PEng recognized internationally to permit global mobility. Compared to the mobility of a Canadian PEng, their recent immigrant counterparts, are rather immobile. They encounter many barriers when they seek to be licensed and practise their professions in Canada, due to the non-transferability of their professional credentials and work experiences obtained outside Canada.

We might well look at the educational requirements first. A recognized engineering degree from a Canadian accredited program is required when applying for an engineering practice license in Canada. The Canadian engineering accreditation program is operated by the Canadian Engineering Accreditation Board (CEAB), which assesses the knowledge and program competency of an engineering program offered in Canada and accredits it based upon periodical reviews. Individuals who graduate from accredited programs in Canada are eligible for entry

into the engineering profession, as approved by different provincial or territorial licensing bodies. CEAB mainly accredits engineering programs in Canada, with a few exceptions in the countries with bilateral agreements to recognize engineering credentials. In this way, the knowledge and skills gained under the Canadian context are prioritized and placed at the highest hierarchy of knowledge and skill levels through “organizational power.” (Collins, 1979:24) Thus, many immigrant engineers are disadvantaged in the negotiation with the professional authority for professional entry due to the non-accredited foreign engineering programs where they were trained. Despite the fact that CEAB merely accredits engineering programs in Canada, CCPE still extends its institutional power over the admission of foreign-trained engineers to Canada and the Canadian engineering profession.

CCPE used to play an indispensable role in determining whether an immigrant engineer could be admitted to Canada. Every immigration applicant with an engineering background had to request an assessment report from CCPE to certify that CCPE recognized the engineering education and work experience of the candidate. All respondents for this study reported that they had applied for this document from CCPE, which awarded them the highest points in the point selection system and the exemption from an interview by Citizenship and Immigration Canada (CIC). Many also took for granted that the document would guarantee access to the Canadian engineering labor force, although CCPE deliberately noted that the document would not guarantee an engineering job. Unfortunately, these

immigrant engineers did not realize the cruel reality until they landed in Canada.

After arriving in Canada, they were surprised to find the document was no longer valid for the provincial or territorial engineer licensing bodies, certainly not for local employers.

As a self-governing professional institution, CCPE has an accreditation practice uncoordinated with that of its provincial or territorial licensing bodies and its practice is unrelated to any other educational accreditation operation in Canada. There is insufficient rationale and a lack of systematic measurements to accredit foreign engineering programs. For example, an immigrant engineer might be recognized for his engineering education by an accredited Canadian engineering program and so be admitted into the program, but his engineering education would continue to be questioned by CCPE until he graduated from a Canadian engineering program. Moreover, CCPE has no bilateral agreements with engineering regulatory bodies in other countries other than with the US and UK. As a result, the contradictory practice has hindered the recognition of rich human capital brought in by recent immigrant engineers. If there is no consistency between the CCPE and its provincial or territorial licensing bodies, as well as with other educational accreditation systems, it is likely that the government may dedicate resources to solve the non-recognition of foreign credentials without achieving any substantial progress.

Other than the educational requirement, CCPE mandates all PEng applicants to fulfill engineering experience requirement under the mentorship of a licensed PEng. The mentorship aims to enhance both the technical “know-how” skills and some non technical skills, such as those related to communication and management. Depending on the province or territory where the license is to be granted, the mentorship could range from one to four years. Immigrant engineers with more than three years’ work experience outside Canada could fulfill the requirement by working only one year under the supervision of a PEng. It is interesting that CCPE seems to have recognized the merits of immigrant engineers partially by shortening the mentorship for those with more than three years’ non-Canadian work experience. Nevertheless, the one-year mentorship turns out to be the biggest obstacle for recent immigrant engineers, because they find it hard to access the Canadian engineering labor market. Many believe that non recognition of foreign credentials is the primary impediment that many immigrant engineers have to face; however, I argue that the first and foremost barrier for many is to gain mentored work experience in Canada. Ironically, on the one hand, PEng mentored work experience is rigorously demanded by many provincial or territorial engineer licensing bodies; on the other hand, a number of immigrant engineers can by no means access an engineering job in local labor markets. While CCPE and its provincial or territorial licensing bodies boast of the education quality and competent technical skills of their licensed Professional Engineers, it seems that the commitment of CCPE and its provincial or

territorial bodies is unbalanced, for a mechanism is lacking which would facilitate the transformation of a PEng candidate toward a PEng. More efforts were observed to train those who have already been licensed, while fewer efforts were put into helping immigrant engineers who were trying to access the field and prepare themselves to be PEng in Canada.

The Relationship between CCPE and CIC

As already mentioned, CCPE joined CIC in determining the eligibility of engineering immigrants. Before March 31st 2003, all skilled immigrants intending to become engineers in Canada had to get their education credentials and work experiences assessed by CEAB/CCPE through a program called Initial Assessment (IA), which compared foreign engineering programs with Canadian ones and issued reports deeming the foreign program as “acceptable” or “unacceptable.” The assessment report was considered to facilitate CIC in determining the likelihood of admitting the applicants as skilled immigrants to Canada.²⁰ Based upon its assessment, CIC visa officers could judge whether to issue an immigrant visa to a skilled immigrant applicant or not. The CCPE’s intervention in the decision making as to immigrant admissions reflects the extension of professional control (Collins,

²⁰ The new *Immigrants and Refugee Protection Act* took effect in July 2002, which removed the specific labor market requirement and switched to admit immigrants who could demonstrate some general ability, such as language and adaptation. Before that, any immigration applicant who aimed to becoming an engineer in Canada had to get a testimonial from CCPE to accredit their engineering education received outside Canada. www.ccpe.ca. March 3, 2006.

1979:24) in the “political realm,” (Collins, 1979:159) where, as Collins comments, “technology merely sets part of the stage for the whole environment of organizational power struggles.” (Collins, 1979:159)

Being conducted by CCPE/CEAB, in some sense, the assessment has both advantages and disadvantages for immigrant engineers. The advantage is that it helps engineering immigrants gain credits and exempts them from an immigration interview which many other immigrants may fear to go through. More or less, the assessment process provided a snapshot of the engineer licensing system in Canada; thus, skilled immigrants intending to become engineers in Canada could begin to familiarize themselves with their future professional organization prior to arrival. Nonetheless, the disadvantages are obvious. Many engineering immigrants were misled by the assessment to expect successful job placements after entering Canada. During the interviews with my respondents, they constantly told me they were frustrated by the CCPE assessment, which provided them little help in terms of employment opportunities.

In response to increasing complaints, the CCPE assessment was changed from mandatory to optional over the past two years. Under such a condition, there is also an advantage and a disadvantage for prospective engineering immigrants. The advantage is that the Canadian immigration system no longer judges immigration applicants based upon their professions and perceived contributions to the Canadian economy; the disadvantage is that it disconnects prospective immigrants from their

future professional organizations. Therefore, it seems that those with a strong desire to practise the engineering profession have to take a longer time and more effort to access Canadian professional licensing bodies, as well as their field of expertise in Canada.

Although the CCPE assessment for immigration eligibility was questioned by many studies for acting as a “gatekeeper” over the profession, from the standpoint of CCPE, the assessment was claimed to ensure Canadian standards and help prospective immigrants to do self-assessment. (CCPE, 2006) Since the assessment became optional, CCPE is no longer fully engaged in assessing the professional qualifications of immigrant engineers. To proactively monitor current and prospective engineering service providers, CCPE is still seeking to renew its partnership with CIC. However, it remains a question how the partnership between CIC and CCPE can be of any assistance to new engineering immigrants, how the collaboration between CIC and CCPE can help the local labor market embrace internationally-trained immigrant engineers rather than stop them at the door, and how can the collaboration extend its influence to provincial and territorial regulatory bodies in order to deliver stronger help to recent immigrants attempting to enter the local engineering sector of the labor market.

I once had a telephone conversation with an executive of APEGBC, the provincial engineering association in B.C. I was told that there were no people or resource designated in APEGBC to provide mentorship to recent immigrant

engineers in the province.²¹ It seems that CCPE and its provincial or territorial regulatory bodies should have been aware of the striking “brain waste” of recent engineering immigrants and should have engaged to mentor them, rather than stepping back and closing up professional access for new members of the society.

Enabling and Disabling Global Mobility: Two Roles Played by the CCPE

As discussed in the previous section, it seems that the inconsistent assessment system steered by CCPE’s institutional power has greatly restricted the transnational mobility of immigrant engineers. Greater national mobility for Canadian engineers was not possible until the second half of 1999. Before that, PEngs had to be licensed for five consecutive years in one province or territory before regaining a PEng license when they moved to a different province or territory. Along with the improvement of national mobility for PEngs, CCPE also seeks to increase the international mobility of Canadian PEng by negotiating mutual recognition of credentials. A division called the Canadian Engineering International Board (CEIB) was established to enable licensed Canadian engineers to be more mobile and globally oriented. As a result, Canada is currently ranked the fifth largest exporter of engineering services in the world after the USA, Australia, Hong Kong, and Great Britain. Moreover, CCPE has also successfully arranged to

²¹ Based upon a telephone conversation between the author and a senior APEGBC administrator in May 2006.

establish an Engineer Register for APEC (Asia-Pacific Economic Cooperation) to encourage bilateral recognition within APEC member countries.

In contrast to the remarkable mobility of Canadian Professional Engineers on a national and global scope, increasing numbers of internationally trained engineers are being left immobile in the Canadian job market. The Canadian engineering regulatory bodies are playing two roles: one as a dedicated promoter of the global mobility of the Canadian PEng; the other is an institutional controller who is less proactive to help immigrant engineers being mobile in Canada.

Becoming a PEng for an Immigrant Engineer

As mentioned, CCPE is seeking to renew its partnership with CIC to evaluate the foreign engineering education received by immigrants who plan to work as engineers in Canada. CCPE has launched a reformed program to serve this purpose called the Engineering-International Education Assessment Program (EIEAP)²². The program is designed to compare Canadian engineering standards with foreign engineering education through transcript reviews, degree/diploma descriptions and other types of appraisals. The new assessment, retaining “sanctions over its membership,” (Johnson, 1972:30) aims to assist the provincial or territorial engineering licensing bodies to evaluate the likelihood of accepting candidates for a professional examination. In addition, the report also encloses a detailed description

²² See Engineering in Canada: Overview. http://www.ccpe.ca/e/imm_incanada_1.cfm.

of procedures regarding how to prepare to be a PEng for immigrant engineers. The EIEAP program is believed to benefit recent engineering immigrants; yet, no data show that EIEAP has linked recent engineering immigrants with their provincial or territorial licensing bodies and led to their successful acquisition of practicing licenses. The control on occupational entry is inherent, as Freidson argues: "All forms of occupational credentialing, public or private, have a critical weakness: they may be able to restrict or narrow the supply of qualified professionals...(1986:70)" in spite of their claimed intention and self-control.

The engineer licensing system in Canada actually varies greatly in provincial or territorial engineer licensing bodies, and the organizational structure is rather loose with observable "separateness" (Weick, 1976: 13) in practices. An immigrant engineer who chooses to make B.C. home is only eligible to apply for PEng status by meeting all residential, educational, and mentored work requirements. Most provincial or territorial licensing bodies do not accept the PEng application of a candidate prior to arrival, with only two exceptions, Professional Engineers Ontario and Ordre des Ingénieurs du Québec. To be a Professional Engineer in Canada, where immigrant engineers choose to live matters very much. Immigrants residing in Ontario might enjoy more mobility under different legislation of the local professional regulatory bodies. Furthermore, when a job is offered, people who have already been licensed and are engineering graduates from local universities are usually placed on higher priority.

In the province of B.C., the provincial government appoints the “Association of Professional Engineers and Geoscientists of British Columbia” (APEGBC) to administrate the licensing issues. It is noted that immigrant engineers experience many difficulties to access their profession of training. I will discuss the licensing practice of APEGBC in the following section.

III) The Closest Distance: APEGBC

When I read *Innovation*, a professional Journal published by APEGBC, a job-seeking advertisement from a Chinese immigrant engineer caught my attention.

CIVIL EIT seeks full-time position in civil engineering. Previous experience in road, sewer, water, storm, grading and erosion control design. Proficient in computer applications (ACAD, LDD, MS Office, several hydrologic and backwater softwares, etc. Excellent technical and problem-solving skills; fluent in English and Chinese; willing to travel. Entry-level positions for transportation and structural are also welcome. Reply to Box xxxx.
(Association of Professional Engineers and Geoscientists of B.C., 2002:22)

The job seeker was a Chinese Civil EIT (Engineering-in-Training) and one of the lucky recent immigrant engineers who was somewhere towards becoming a fully licensed PEng. Many recent Chinese immigrant engineers in B.C., however, remain excluded from the profession. Among twenty three people I interviewed, only one is close to being a PEng in B.C., aside from one who got his professional

qualification in Ontario. Therefore, many do not have access for on-the-job-training so they can accumulate practical experience afterward in the engineering sector of the local labor market.

How can we help this well-trained immigrant engineering workforce? There have been a few initiatives, but they have not yielded positive results. One of the programs was called the Pilot Project²³. From spring 2001 to late summer 2003, APEGBC partnered with CIC to deliver a special one-time-only program for internationally trained engineers, which was designated to identify and reduce barriers for engineering immigrants entering the engineering profession in BC. (CCPE, 2003) With strict selection, twenty foreign-trained engineers were recruited for the short-term program. Feedback, however, attributed barriers to personal factors, such as communication skills in English and/or French, positive personality, personal outlook, résumé and cover letter writing, and the willingness to move to work locations. A list of “must know” was offered to the participants and the wider community of immigrant engineers, though some items are ambiguous. For example, immigrant engineers were advised that they should not assume they could return to the engineering profession through drafting or other technical jobs, though CCPE made it clear that engineering immigrants could join an “engineering team” to do technical jobs, such as drafting, technician and technologist positions, actually the only possibility for one to get mentored work experience under a registered

²³ See <http://www.apeg.bc.ca/intreng/pilot-int-train-eng.html>.

PEng before they themselves would be licensed. Without working in these subordinate technical positions, it would be extremely difficult for foreign-trained immigrants to gain related work experience in engineering services.

Meanwhile, a Self-Assessment Tool was announced that intended to help foreign-trained engineers decide whether they were eligible for PEng status.(CCPE, 2003) In fact, many immigrant engineers are eligible to apply, if they could fulfill the requirement of one year mentored work experience. In the report for the Pilot Program, ABEGBC also advised candidates to stay with a company for at least three to five years due to the employers' investments in on-the-job training. Yet, without being offered an engineering job, how could immigrant engineers demonstrate their loyalty to Canadian employers? Since it was a one-time-only program involving only twenty immigrant engineers, it is hard to judge how representative the program was and how much it might have helped immigrant engineers.

Although standing very high with power and prestige within the profession, APEGBC only provides us with a list of barriers that are individual rather than structural. Notably, all identified barriers seem to have nothing to do with APEGBC itself or its inherent institutionalism. Moreover, while many recent immigrant engineers are eager to obtain the opportunity of "professional" mentorship, APEGBC re-directs them to a few main regional immigration service organizations, such as S.U.C.C.E.S.S., MOSAIC, the Immigrant Service Society (ISS), etc. As a

matter of fact, these immigration services only provide extensive services to assist all immigrants under different categories. They do not have any expertise regarding industrial fields or regulated professions. My subjects told me that all these general immigrant service organizations lack experience in dealing with immigrant professionals. As a result, they have to rely on APEGBC, the professional organization for engineers in B.C., and they are still eager to obtain assistance to adapt their Chinese credentials to the Canadian engineering labour force.

APEGBC is under a social obligation to help build the Canadian labor force; however, it retains “occupational power” (Collins, 1979:49) rather than bridging the increasing number of immigrant engineers. Its socially constructed professional norms and patterns make its particular monopoly possible. As a result, it is likely to profoundly influence employers to locate qualified labor due to rigidly defined institutional signals and professional norms.

What APEGBC did for recently arrived immigrant engineers is not proportional in terms of the number of foreign-trained engineers in B.C. and the growing demand for engineers in many sectors of the local labor market. It seems that foreign credentials are a big issue for immigrant engineers, but access to the engineering profession with the requirement to work under a Canadian registered PEng is actually the most common difficulty reported by the Chinese immigrant engineers I interviewed.

Therefore, this study calls for initiatives from CCPE and its provincial licensing bodies, and also the Canadian governments at different levels, to help immigrant engineers in two ways: first, to keep consistency of professional entry standards among provincial or territorial licensing bodies; second, and more importantly, to launch new programs that can engage all stakeholders in order to provide mentorship for immigrant PEng candidates by collaborating with local employers. In so doing, new immigrant engineers might be able to prepare themselves to meet the requirements of the Canadian engineering workforce. For instance, CCPE should work with Canadian engineering businesses to hire immigrant engineers to fill entry-level positions and also be part of an engineering team, such as a drafter, technician, technologist or engineer. This could be a good start for highly skilled immigrant engineers in gaining Canadian experience in their trained field, taking an upward career path, and contributing to the Canadian economy.

Chapter Five

Research Design and the Profile of Respondents

With a new *Immigration and Refugee Protection Act* (IRPA) taking effect on June 28, 2002, the point system was adjusted to emphasize general adaptive abilities of applicants rather than favoring applicants of particular occupations. Nevertheless, highly skilled immigrant professionals, with their educational attainments, technical skills and solid work experience, were believed able to establish themselves more successfully in Canada. For example, among the “Skill A” immigrant professionals, classified by the National Occupational Classification (NOC), one-third intended to be engineers in Canada, including many Chinese immigrant engineers, the leading source of highly skilled immigrants to Canada.

My study is about the employment negotiations of recent Chinese immigrant engineers in finding a desired space in the local job market of the Greater Vancouver. The investigation of this particular group could be a springboard to explore how the Canadian labor market can make full use of transnational human capital, as most studies cited in the literature review looked at human capital in a rather broad range of occupations with less of scrutiny on a specific job category. Second, by interviewing individual immigrant professionals in a qualitative setting rather than solely relying on quantitative data, the investigation can reveal the

dynamics of occupational mobility among recent skilled immigrants by taking account of some previously unexplained variables. For example, educational attainment will be looked at in both temporal and spatial dimensions; therefore, my study will be able to provide solid cases with practical policy implications. Bringing these together, a more up-to-date grasp of how Canadian society integrates recent immigrants, particularly highly skilled newcomers, can be accomplished.

I) Research Design

Research Method

Although I chose a qualitative approach to examine the “occupational mismatch” of recent Chinese immigrant engineers, I believe that a combined research method, including both extensive statistical and intensive personal accounts, will enhance our understanding of sociological issues. The Canadian census data and other local statistics provided in Chapter Three have established a fundamental context where recent Chinese immigrant engineers are situated. In this chapter, using qualitative methods, personal experiences, occupational negotiations, and labor market outcomes of a group of Chinese engineering immigrants in the course of their economic integration will be successively presented. The primary data were collected through semi-structured interviews. Open-ended interviews were the primary technique of data collection and analysis. Twenty interviews,

including one focus group, were conducted from September to December, 2005. Three much shorter telephone interviews were conducted separately to gain understanding of what motivated four female engineers to run for election to the board of governors of a self-initiated Chinese building engineers association, namely, Canada China Building Industry Society (CCBIS).

Research Design

The respondents in my investigation are recent immigrants living in Greater Vancouver, who emigrated from Mainland China in or after 1996. They were engineers prior to immigration and have lived in Canada for ten years or less. They were all admitted under the skilled-worker category and intended to work as engineers, or at least in the engineering field in which they were trained in China. They have actively looked for employment opportunities in fields related to their original engineering occupations.

The purpose of looking at Chinese immigrant engineers who landed since 1996 is twofold. First, occupations within the natural and applied science fields, such as engineering work, are perceived to be more transferable than other professional occupations, since immigrants from the aforementioned fields earn more credits under the point system of immigrant selection. On the other hand, the skill level of the engineering occupation is placed at the top of the hierarchy, second only to the highest “managerial” level, which is believed to be more beneficial to

the Canadian economy than lower status occupations. Nevertheless, as reported, there appears to be less transferability of pre-immigration skills among those at the top of the skill hierarchy, while downward occupational mobility is common among recent skilled immigrants when their last pre-immigration jobs are compared with early post-immigration jobs (Chiswick et al., 2003). Therefore, looking at the duration of the downward occupational mobility among engineering immigrants to find factors that could help an upward occupational curve happen earlier is very important. Focusing on Chinese engineering immigrants can provide a meaningful case in terms of the occupational mobility of recent skilled immigration.

This study includes engineers from both traditional disciplines, such as civil engineering, electrical engineering, and mechanical engineering, but also from new high-tech sectors, such as computer or information technology (IT) engineers, much less regulated by local professional licensing organizations. Second, the time frame from 1996 onwards covers two censuses in Canada and also reflects the period when the People's Republic of China became the leading source country of Canadian immigration.

My target was to recruit sixteen Chinese immigrant engineers when I submitted my application for ethical review to the Research Office at the University of British Columbia (UBC). At that time, I had no access to some primary datasets of Canadian immigrants, such as the Landed Immigrants Database (LIDS) or Longitudinal Survey of Immigrants to Canada (LSIC), so I did not have a complete

picture of the actual arrivals of Chinese immigrant engineers to Greater Vancouver, B.C. and Canada respectively. I compared the number of subjects for a variety of qualitative studies and consulted with a local voluntary association, the Canada China Building Industry Society (CCBIS), for the normal attendance rate at the latter's social events. Then, I established a goal of sixteen Chinese immigrant engineers with no intention of pursuing representativeness.

I planned to recruit my respondents with the help of CCBIS and one of their contacts in a well-known, non-profit immigrant service organization, S.U.C.C.E.S.S. (United Chinese Community Enrichment Services Society) in Vancouver. I also planned to post recruitment information with my personal contacts actively involved in professional associations, continuing programs, and Chinese churches, as well as those working in Chinese supermarkets and grocery stores, where I believed there were a significant number of Chinese skilled immigrants. Meanwhile, by sending out email or mail to my own contacts, I aimed at gaining referrals for more extensive connections. With no financial assistance for my research at all, I tried to mobilize the known resources to snowball a sample as diversified as possible.

Open-ended Interview

My research seeks to reveal personal experiences of recent Chinese immigrant engineers in negotiating their places in the labor market of Greater

Vancouver and the corresponding labor market outcomes. To maintain consistency of timeline and locality influences, my sample was confined to Chinese immigrant engineers who had emigrated from mainland China, and landed in 1996 or later, and who had chosen to establish themselves in Greater Vancouver at the time of the interviews. The rationale of focusing on Greater Vancouver was, to take into account the dwelling patterns and general occupational mobility within the area. That is, the immigrants might have lived in Richmond, but worked in downtown Vancouver; they may have lived in the Vancouver Eastside but worked in Burnaby. The housing arrangement was always made by rental rather than purchase, which made these new arrivals highly mobile within the region. Therefore, I chose to focus on recent Chinese immigrant engineers in Greater Vancouver rather than on a fairly small community or municipal area.

The interviews are semi-structured with 45 questions in four sections: first, recent employment experience and other relevant activities; second, social support; thirdly, access to information; lastly, wrap-up and supplementary remarks. Both the English and Chinese version of interview questions can be found at appendix C. Eighteen interviews were conducted in person, four by telephone, and one by email, since the respondent was too busy to find time for a face-to-face interview, so he chose to write everything down. Four telephone interviews were conducted to obtain the accounts of four female engineers mainly concerning their motivation to take up executive positions with CCBIS, the Canada China Building Industry

Society. These four interviews were short in length and recorded by hand before transcription. All taped interviews lasted from an hour to an hour and half. All respondents were asked to complete a written questionnaire so I could collect demographic information, but only one of the four telephone interviewees returned the questionnaire.

For those who agreed to take part in the study, a private, tape-recorded interview of approximately an hour to an hour and half in length was conducted at times and locations of their choosing. The interviews were designed to cover specific aspects of their experiences in seeking professional employment in Greater Vancouver. The language of the interviews was primarily Mandarin, now that most informants can speak fluent Mandarin. Mandarin with a strong accent, such as Cantonese, or the Shanghai, Sichuan, or Shaanxi dialect, could be accommodated. All interviews were recorded and given an identification number so that they could be referred to by number only and all participants would remain anonymous. Audiotapes were all transcribed into a computer to be analyzed.

Locating Potential Participants

Almost one year before the actual interviews began, I started to spread information and explore my own contacts for any possible matches of respondents. I had short-listed five people by October 2004. Other than that, my perception was that I would locate most, if not all, respondents as a participatory ethnographer

through a variety of activities organized by S.U.C.C.E.S.S., the well-known immigrant services provider in the local Chinese community. I learned that they offer mentorship to immigrant professionals through a special program called "Job Mentoring." However, I was not allowed to initiate contact with these members unless I had completed "institutionalization" (Wong, 1998:187) as part of the research ethical review, eventually approved by mid-August, 2005.

I saw one of my acquaintances acting as spokesman of CCBIS on a Channel M, Multi-vision Television program in Vancouver. I became aware that CCBIS was a voluntary organization initiated by a few immigrant engineers primarily from mainland China, and they often organized seminars and workshops for Chinese immigrant engineers. My acquaintance agreed to give me ten minutes to outline briefly my research project to the CCBIS members during their seminars or workshops, enabling me to approach my potential subjects while participating in those seminars and workshops.

In the first three weeks, I interviewed only the first three informants with whom I had personal ties. With help from the Chinese Students and Scholars Association (CSSA) at UBC, I got one more respondent. Then I was stuck because no more respondents came forward although I had posted recruitment notices where Chinese very often go, such as at the Business Training Institute of S.U.C.E.S.S, BCIT, and Chinese supermarkets. On the evening of September 20, 2005, I learned from Channel M that there would be a job fair for building engineers at the

Vancouver Central Library. Though it was exclusively for building engineers, I believed it would be a good opportunity to communicate my ideas to some potential respondents. I was not surprised that there were many engineers outside the building industry seeking places in the local labor market, and the seminar room was packed with immigrant building engineers. Roughly two-thirds were recent Chinese immigrant engineers.

I talked with approximately forty job seekers and located seventeen Chinese immigrant engineers during the afternoon. To my knowledge, none of the job seekers whom I talked with received a job offer from the job fair, but it had turned out to be a golden opportunity for me to locate my research sample. After our conversations and reading through the cover letter of my investigation, all of them left me their contact phone numbers, emails, and even home addresses. Despite some who were unwilling to become involved, most people stopped and listened to my research ideas and observed my method of approach. If it had been a job fair that lasted longer than an afternoon or I had had a co-researcher with me, I would have located more Chinese immigrant engineers.

My unique experience of finding research participants made me interrogate the power interplay between “researchers” and “the researched” in a different way. A reiteration of the qualitative literature involves nothing an asymmetry between the “powerful researcher” and the “powerless research participants” potentially jeopardizing the rights of the latter and also the reciprocal relationships. A

“powerful researcher” is always characterized as a person on the top of the power hierarchy in comparison with research participants who are seen as vulnerable, disadvantaged, and likely to be exploited. Therefore, we were always warned not to subjugate our subjects through our research. To respect the confidentiality of research participants, I was strongly encouraged to initiate the first contact by writing by disseminating cover letters and contact information to potential participants rather than by phone or by personal contact. Then I was supposed to wait until those potential participants got in touch with me if they were interested in taking part in the research. After waiting for one month, my anxiety was intensified since I had not been able to find more participants other than three or four. Attending the job fair in Vancouver Central Library was my attempt to deal with the “methodological tension” (Sykes, 2001:13).

Looking at the power dynamics of researchers and research participants in the initial period of research, I think that “researchers” are sometimes likely to feel powerless too, due to indifference and refusal from the target population, often resulting in anxiety and uncertainty as to being able to find a significant number of qualified informants. In the initial period of qualitative research, the ethical codes that guarantee the participants’ right to not be approached is a restriction on the mobility of researchers. Researchers are portrayed as a group of people sitting still waiting for informants to come by, but the power of “silence” remains if potential informants cannot see any beneficial consequences of disclosing their stories. It

seems that tension exists between the concept of a perceived “powerful researcher” and the “powerless researcher,” the latter was desperately waiting for a “generous offer of one hour” from any potential informant. Once they had agreed to participate in my research, I started “self-interrogation” (Achebe, 2002:19) of my position in the power dynamic. My awareness of the power dynamics between “researcher” and “the researched” set a tone for the relationship between my research participants and me. I showed my openness and availability to them; in return, I was rewarded by their enthusiasm in speaking, sharing and even writing down their post-immigration experiences for my reference.

My sample ended up being comprised of a small proportion of friends’ referrals and an even smaller proportion of snowball participants, while the majority was found at the job fair taking place in downtown Vancouver in late September 2005. In general, the refusal rate of my sample was much lower than I expected. Among the participants whom I found at the job fair, over 90 percent were willing to participate. A few recent arrivals told me that they were too busy, but would like to leave me with their contact information for any quick question in the future. It was encouraging that quite a few participants whom I solicited from the job fair were willing to help me get more respondents if I needed.

It seems to me that the initial friend’s referrals did not go very well. Firstly, my friends often made “administrator’s decisions” (Wong, 1998:190) for me regarding who should be chosen. I did not find that the interviewees they solicited

were ineligible for my research until I approached them. Secondly, the language of the interview had not been clarified, which scared away a few potential respondents. A friend told me that one of his friends who met the criteria declined for fear of having to answer lengthy questions in English, given that the English version of the recruitment information appeared first when they opened the documents. I can recall that some of them always wanted to discuss with me whether the language of interview would be Mandarin. Speaking a well-known language or talking to a person they felt comfortable with was a very important determinant for their participation.

Reflecting on my research experience, I think that my “insider” status did offer me an advantage in establishing trustworthy relationships with my subjects. A critical view of research methods always reminds us to be aware of “the appropriation of the informants’ private emotions or stories by the research, and the dominant position of the researcher in presentation and representation of the researched” (Hsiung, 1996:133). However, as mentioned, there is a far more complex power relationship between “researcher” and “the researched,” rather than just a dichotomized conceptualization of a “powerful vs. powerless” paradigm.

I also noticed that my perception of the subjects made me prioritize those respondents who were very willing to tell their stories. When I came back with two pages of email and telephone numbers of potential respondents, I started with those who were really enthusiastic to participate in my research. To my surprise, they

appeared to be slightly different from when I first met them. During the interviews, these respondents always overextended their stories, which might not be what I wanted to hear in order to probe their labor market outcome. Thus, I had to lead interviewees by “manipulating” them subtly in frame the interviews, while reminding myself of the ethical dilemma of “the power and exploitation that may arise during research” (Wong, 1998:180). I found that the hesitant respondents turned out to be more helpful, as they had stories to tell, and did not withhold them as they did at first contact, but interestingly, those who were eager to disclose their stories were not the most suitable respondents, whereas those who thought over the project before showing their willingness to participate had a much clearer picture of what they wanted to do than those who agreed to participate without hesitation. In short, my perceptions as a researcher did more or less affect my practices in the investigation, a valuable learning experience for my future studies.

Interview Logistic

I typically called one or two weeks beforehand to set up an appointment, as most respondents wanted to find a mutually convenient time and location. I offered them a place at UBC to be interviewed; however, most chose to let me go to their home or a public space near their home. Approximately half preferred their own home for the taped interviews, while the rest wanted to meet me in a public venue. Starbucks was always a good meeting venue even though the background was a bit

noisy. I always accommodated their requests and met them in a Starbucks, where I could treat them to a cup of coffee and do the interview. A few car owners offered to chauffeur me to the nearest bus stop or sky-train station, some walked with me to the nearest transportation, and two shared their post-immigration journals with me and authorized me to use them as necessary.

My Protocol for Interviews

The interviews were run from September to December of 2005. Throughout the interviews, I noticed that female engineers always had difficulty finding time for an interview due to their heavier parenting duties. It is notable that family relocation is not only a big challenge for the highly skilled themselves, but also for their children brought to Canada at different ages. A few couples sent their children back to China to live with grandparents while they struggled in Canada at low-paying jobs. When I interviewed them, I found that my subjects spent a lot of time and money in helping their teenage children adapt to the Canadian curricula.

I adhered to standard procedures and used to bring with me two copies of the consent form, a tape recorder, notepads, and the questions. As all participants had the recruitment information, I supposed that they had my contact information for any enquiry regarding the research. After a short introduction, I would take out the consent forms to explain the purpose and procedures of the interview, the principle of confidentiality, and their right to withdraw at any time without any

consequence to them. Many of them would smile and sign the forms as soon as I finished the explanation. Around 60 percent thought they would not have to keep a copy of the consent form, so they only signed one in order to save my copies. The rest wanted to keep one for their own records, and I would highlight the contact information of my supervisor, myself, and the UBC Research Office. Once they signed the consent form, I would give them a form for demographic information. I noticed that quite a few were not able to spell "bachelor" correctly in the education blank. I used to explain the reason that I had to tape record the interview, and most of them readily accepted tape recording. Only one respondent's wife was somewhat agitated to see her husband being recorded. Nonetheless, she agreed when I further explained that the tapes would be preserved in a safe place and only authorized persons would be able to access them. The interviews, of course, were all conducted in Mandarin.

With a prepared questionnaire, I always started with the informant's experience of the most recent job-hunts and interviews. Males were easy to guide through the questions, while females wanted to provide some additional information, which required me to guide the flow of conversation. Males were likely to prefer a private interview without interruption from children if they were present, while the females could not free themselves from their parenting duties even while they were being interviewed. My curiosity about their employment issues had put me in a very delicate position, but all of the respondents were very cooperative and eager to be

interviewed by a graduate researcher who shared something in common with them. They were frank enough as they always shared with me their family stories, such as their troubles with spouses after immigration, and the pain of splitting their children between two countries. These experiences certainly expanded my knowledge of these new members of Canadian society. I always asked myself how I could help them in one way or another to avoid exploitative relationships. Their openness and cooperation indicated to me that they hoped that my publications would be noticed by policy makers, so that the problems they addressed would possibly be solved. In other words, I wonder whether they placed themselves in immigration at the top of a power hierarchy so that they could conceptualize being heard by policy makers. It is no doubt an interesting perception for all researchers to see our subjects eager to resort to appropriate channels to voice their concerns.

II) The Profiles of the Informants

Profile of the Respondents

A description of demographic characteristics follows. Twenty-three Chinese immigrant engineers, including ten females, were interviewed to obtain their personal stories. They were interviewed in two categories, twenty were interviewed with a full set of questions, and three went through a short telephone interview as to their motivations in running in the election for the new executives for CCBIS. Therefore, only the information for the 20 was used to chart the trajectory of

employment experiences of recent Chinese immigrant engineers. Ten respondents were found through "snowballing" and personal ties, while the rest were located at a building industry job fair co-sponsored by Vancouver Central College and AutoCAD in the Vancouver Central Library on September 21, 2005. Seventeen potential respondents were identified at the job fair, and thirteen agreed to participate in the research.

All males and two females I interviewed were principal applicants under the skilled worker category. On average, the respondents' duration in Canada was three years. The longest was seven years, and the shortest was two months. In general, they were middle-aged, all below 50. Two were single, one divorced, and the rest married.

Over half had school age children either in Canada or China, depending on the age of their children at the time of their immigration approval and their own economic situation in Canada. Five lived alone and two lived with one child each. Among those living alone, four were separated from their spouses since employment difficulties had forced their spouses to return to China in order to support financially the rest of the family in a rather pricy metropolitan region in Canada. Those who lived with family usually raised a smaller one with a single child, except one subject who had two daughters. I began thinking that the employment issue was just related to the subjects themselves, but ended up

believing that labor market mobility did have a strong influence on their family arrangements.

As for their education levels, three respondents had Ph.D. degrees, four had Master's degrees in engineering, and the rest had Bachelor's degrees. Eight had obtained one of their degrees or diplomas in Canada or the U.S.A., while all others had received their university education in China.

Table 2. Education level of the respondents

Education Level	Bachelor's degree	Diploma / Certificate (Canada)	Master's Degree (China)	Master's Degree (Canada/ U.S.A.)	Doctoral Degree	Doctoral Degree (Canada)
No. of Participants	13	3	1	3	1	2

This study includes engineers from the traditional disciplines, civil engineering, electrical engineering, and mechanical engineering, and non-regulated new high-tech sectors, such as computer or information technology (IT) engineers.

Table 3. Engineering sectors of the respondents

Engineering sectors	Number	Remarks
Chemical engineer	1	
Electrical engineer	1	
Textile engineer	1	
Engineering physics engineer	1	
Mechanical engineers	2	
Software (IT) engineers	2	
Architectural (design) engineers	3	2 also held the credential of structural engineer
Building engineers	12	in a variety of job positions, such as civil engineers in structure, heating/ventilation systems, budgeting, sales, and supervising/managing.

Employment Situation

Looking at their employment situation, eight were working in their profession of training, half at the entry level, half with positions approximately at the same level before coming to Canada. Among the rest, two were working on a part-time basis as general laborers in a Chinese grocery and an automobile parts factory; ten were unemployed, including three E. I. (Employment Insurance) claimants after being laid off; one was approaching the end of his Ph.D. program;

one was self-employed helping her husband; one had come to Canada at 50 and had given up to looking for a job.

Table 4. The employment situation of the respondents

Employment situation	Unemployment		General labor	Employment in professional field		Others
	With E. I.	Without E.I.		Entry level	Intermediate /advanced level	
Number of participants	3	7	2	4	4	3

Table 5. The range of annual household income of the respondents²⁴

Annual household income (Canadian dollars)	<\$15,000	=\$15,000-\$20,000	\$20,001-\$25,000	=\$25,001-35,000	>\$35,000
Number of participants	5	2	3	5	4

Conclusion and Limitation of the Data

In conclusion, downward occupational mobility is very obvious among these new members to Canada. Most were prevented from accessing their professional fields. All except one among seven working in their occupation of training obtained

²⁴ Incomplete information, because a few chose not to answer this question on the questionnaire or not to return the questionnaires.

one of their degrees or diplomas in Canada. It is very difficult for recent Chinese immigrant engineers to access their professional field without local education or training. Unemployment not only degraded labor market experience, but also broke apart many immigrant families along the Pacific Coast.

Two limitations of the study are reflected in “the subject” of choice and omission of the macro-economic context in Canada in the past ten years. First, speaking of the choice of “the subject” in this study, the job fair where I found most informants was primarily for immigrant professionals in the building industry, so that limited the diversity of the informants, despite the fact that the building industry is comprised of a wide range of engineering sectors. Similarly, the engineers who participated in this research came from both regulated and non-regulated engineering sectors in Canada. The two groups should have been treated separately for the accuracy as to occupational mobility of recent Chinese immigrant engineers. However, the number of engineers from non-regulated areas was far less than those from regulated engineering sectors monitored by national and local engineering regulatory bodies, which determined the focus of this study on recent Chinese immigrant engineers in Canada’s regulated engineering field. In general, the focus on Chinese immigrant engineers in this study somewhat limits wider application of the data. Second, this dissertation paid little attention to the macro-economic circumstances where these Chinese engineers experienced greater difficulty in returning to their fields of expertise. Though the study agrees that

immigration to Canada is an economic issue, the writer had no intention of conducting research on broader economic factors that influenced the occupational mobility of recent Chinese immigrant engineers. For example, a few informants did report that their jobless situation was somewhat a by-product of September 11 2001, for the hiring sectors in the Canadian labor market were scaled down after the 9/11. This study is a sociological work, and attempted to look closely at the micro-experience of individual informants in their career pursuits in Canada; therefore, it did not touch upon topics such as how the "warm" or "cold" Canadian labor market affected the occupational outlook of these highly skilled immigrant professionals.

Chapter Six

Foreign Human Capital: Can it be Fruitful in Canada?

To a great extent, the devaluation of the knowledge and skills of recent skilled immigrants in Canada manifests striking human capital waste among the new immigration waves. Interestingly, when we talk about the Chinese engineers' human capital being wasted, the "human capital" seems to refer to a non-renewable entity supposed to be fully transferred everywhere and at any time, but human capital is considered only to be "acceptable" or "unacceptable" in the labor market exchange. Thus, Canadian professional licensing bodies, employers and the local labor market evaluate the supply of human capital from newly arrived immigrants to be "unacceptable"; whereas immigrant professionals and immigration researchers argue that the human capital is entirely acceptable as long as their foreign credentials are recognized in Canada. Neither seems to have paid any attention to the dynamic of human capital, such as the possibility of alteration and development of human capital under different contexts. Before examining the human capital dimension of Chinese immigrant engineers, we might well give a glance at the literature of human capital and find out how the modern conceptualizations resulted

in an overlooked dimension when we look at the employment difficulties of recent highly skilled immigrants.

What inspires me still is the dynamic of human capital at the nexus of time and labor market location change. I notice that the theorization of human capital places more weight on the longitudinal dimension of human capital, whereas the theory omits the inevitable adjustment of human capital from one labor market to another in a transnational context. As already mentioned, there is less attention to human capital development per se. Moreover, many studies stop at the point of immigrants' landing when they look at how their pre-immigration human capital affects post-immigration economic outcomes. Few studies have connected the economic return of skilled immigrants with their post-immigration human capital development.

In the case of Chinese immigrant engineers, knowledge and skill do not have to be more advanced, but certainly should be tailored to increase employability in the Canadian labor market. Therefore, I argue that labor possessing human capital should be assisted to localize or validate their skills in a new labor market, just as Chinese immigrant engineers need assistance in localizing their professional knowledge and skills to meet the Canadian industrial standards. In other words, human capital is neither a one-time- nor one-location- only entity. Human capital should be continuously developed over time and in different labor markets so that it

can be geared to the requirements of different work environments and generate returns as expected.

In the development of human capital, not only the person who possesses it should invest to develop it, but other stakeholders should take a part to optimize the human capital of the recent immigrant labor pool. For example, pre-immigration human capital brought in by recent skilled immigrants is a product of pre-migration investments by themselves and their countries of origin. Therefore, localization and accumulation of human capital would not have been possible without the engagement of other key stakeholders, such as governmental organizations, educational institutions, and prospective and current employers, when new immigrants in the engineering profession arrive in Canada. I think such an orientation is especially significant in today's Canada facing potential labor shortages and skill-mismatching for recent immigrant professionals.

This chapter will focus on the human capital of recent Chinese immigrant engineers. How do they translate their human capital into skills welcome in the local labor market? What factors affect recent Chinese immigrant engineers in developing their human capital in Canada?

I) Findings from the Respondents of this Research

Many Chinese immigrant professionals characterize their post-immigrant life as “the first year is bitter, the second year is less bitter, and you will feel sweet in the third year.” Likewise, researchers believe assimilation is always to be attributed to the acquisition of local-specific skills to the increase of residential duration in host societies. However, my study finds that residential duration in Canada is not a significant factor for Chinese immigrant engineers in easily establishing a professional job. Among the Chinese immigrant engineers I interviewed, those who have lived the longest time in Greater Vancouver continue to be excluded from their professional fields, and they merely migrate from one labor job to another with intervals of unemployment lasting five to seven years.

A structural engineer has lived in Burnaby for seven years. He had been working as a general laborer until he was laid off from a carpentry company in February 2005 (006). Likewise, another Chinese immigrant engineer who has lived in Vancouver for five years is still a machine operator in an auto-parts company (016). An engineering physics engineer came to Canada in 2003 to pursue a job in the aeronautics field (015). He assumed that Canada had to need as many engineers in the high-end technological field as did NASA (National Aeronautics and Space Administration) in the USA. Unfortunately, he found that Canada authorizes NASA to monitor its satellites and has no similar establishment. After failing to write all

companies relating to physics engineering, he took three labor jobs consecutively until being laid off by a warehouse in mid-2005.

Obviously, the increase in residence duration does not help to equip these Chinese immigrant engineers for the local labor market. In many cases, they just constantly migrate from one menial job to another, while diverging further from their profession of training. Quite a few respondents who have just arrived doubt whether the first few surviving jobs will lead them to their profession of training over time, since their earlier counterparts are still hourly laborers in spite of their longer residence in Canada. By contrast, the immigrant engineers who entered their professional fields earlier have steadily displayed a rise in their professional field. Merely a longer time of residence does not lead to the acquisition and accumulation of knowledge and skills that could meet the expectations of Canadian employers.

The tip of the iceberg: local knowledge and admission to the local labor market

Although there is a common assumption that scientific and engineering skills are highly transferable, different industrial codes are adopted by different countries. In this sense, the Canadian industrial “code” in many industrial sectors might be fairly different from that used by engineers in China. As a matter of fact, most engineers from the building industry in China were asked about familiarity with the local “building code” during their interviews with the Greater Vancouver’s employers.

A female engineer (007) answered “No” when she was asked this during an interview. In order to learn the local “building code,” she is taking a part-time course. Another Chinese immigrant engineer is working in a small building company as a structural designer and she had a rough probation period struggling with a lot of local building codes. I was told by an engineer with ten years’ experience in China that she was confused when she opened a drafting book. Showing me a building code book, she said:

Both code and practice are different in Canada. I can understand part of drafting, but not all of it. For example, they build pipes inside a wall, which was thought incorrect in China for maintenance concerns. It takes time to familiarize oneself with them, no kidding! (014)

One engineer told me that he does not know how to use some software even though he did many big projects in China over the last ten years. He said:

Why didn’t they recognize our engineer titles? It’s different. Industrial codes [in the two countries] are different. The work culture is different; requirements in the work place are different; work procedure is different. They have clearly specified duties for everyone. ... This is different, so we have to adapt. Some we can do; some we have had no experience with at all.... With our ten years’ work experience, we can just learn quickly.

The only one of my respondents, who became an Ontario Professional Engineer (PEng) two years ago, addressed the differences of the industrial codes and work place cultures in Canada and China. What can help seems to be efforts that can localize the knowledge and skills of these immigrant engineers so that they

can meet the requirements of the Canadian labor market. According to the Ontario PEng informant, however, many local employers do not want to take hiring risks because immigrant professionals may take a longer time to adapt to local industrial standards and work habits. Moreover, they are concerned with the rising cost of on-the-job training, and investment in the localization of immigrants' human capital. No employer wants to pay for employees' job training for other competitors, despite the fact that the training costs might return to their business in the long run. As mentioned, the increased duration of residence cannot help recent Chinese immigrant engineers get back to their profession of training; likewise, it remains difficult for them to be directly hired by local employers and acquire local specific knowledge and skills.

Catch 22: Local Experience Counts

A common view is that the non recognition of foreign credentials is the foremost reason for the employment difficulties of immigrant professionals. The Canadian government has recognized this barrier, and Human Resources and Skills Development Canada (HRSDC) has a special program dedicated to recognizing foreign credentials. Interestingly, nineteen of twenty three respondents of this study have little knowledge about the program, and did not feel optimistic about it. Foreign credential recognition is not going to solve the problem, they commented,

because one year's mentored professional work experience has become a "mission impossible" for them to be licensed as a PEng.

In fact, only one attempted to get his Chinese professional credentials recognized and actually went through the process of receiving a BC Professional Engineer title. He recalled:

I wanted to be recognized for my 15 years' experience as a civil engineer in China and aimed to start my career in Canada as a PEng. However, I was unable to obtain four local references,²⁵ since I could not get a job in the field to work for one year under the supervision of a licensed PEng.

Most respondents reported that they are clear about the lower possibilities for them to obtain commensurate engineering positions immediately. Hence, they are preparing to start from entry-level positions and go upward with increased local professional experience in their specialized fields. However, engineers from the building industry admit that it is far from easy to get an entry-level position as a drafter or technologist in local companies. The requirement of "one year supervised local experience" discourages these Chinese engineers from seeking recognition of their credentials. They believe that even if their credentials were recognized, local employers would also reject their job applications due to their lack of "local experience." The CCBIS (Canada China Building Industry Society) president

²⁵ He mistakenly thought that all references should be obtained in Canada. Actually, applicants are allowed to get references from China, but have to provide a reference from a local Professional Engineer under whose supervision the applicant has worked for one year by the time of application.

commented that every Chinese engineer who worked in China for ten years supervised more building projects compared to their local counterparts with the same length of employment. However, without access to their trained field, they can never meet the requirement of “one year supervised local experience” by the Association of Professional Engineers and Geoscientists of BC (APEGBC).

It is a “catch-22”: immigrant professionals need local experience to meet the requirement of APEGBC for professional membership and further job opportunities in their professional field; however, fewer local employers offer access even at the entry level, and it also takes more than courage for them to designate certain levels of investment in on-the-job-training. It is a vicious cycle, so the likelihood of better employment is much less. For policy makers and immigrant services dedicated to the post-migration development of skilled immigrants, one of their objectives should be to boost the confidence of local employers so that they will hire immigrant professionals and contribute to the development of the latter’s human capital possession.

Experienced Engineers Look Forward to Returning to Canadian Schools

A half year after my interviews with Chinese immigrant engineers, I received an email from a couple that had been practising engineers in China. The husband told me that they had just attended an English program, but had not found professional jobs in Canada. Now, they had decided to return to Canadian schools

for local training. Fortunately, a professor at UBC allowed the wife to audit an undergraduate course before she would be officially admitted by UBC. Now, both of them are preparing to meet the entrance requirements of UBC. He closed his email with this sentence:

My wife is auditing an engineering course at UBC, and to become students at UBC is our dream now. Dear friend, we hope to become your alumni at UBC. In addition, please allow me to write in Chinese, because my rusty English cannot fully express our feeling. (010, in Chinese)

This couple is not alone in employing a local school as a springboard for an appropriate positions in the local labor market. They even decided to move out of a Chinese-concentrated area to have close access school resources. English speaking opportunities and employment information were conceived to be readily available at nearby universities. Local education is expected not only to adapt their knowledge and skills to the needs of local employers, but also force them to gain non-technical skills, such as communication and writing/reporting skills. More importantly, they anticipate obtaining "local experience" through opportunities of internship or a cooperative program at Canadian educational institutions.

Almost everybody I interviewed emphasized the added-value of education and training experiences from local professional or general education institutions for upward occupational mobility, in particular industrial internship and cooperative programs. Therefore, the majority of my respondents are struggling in local schools

or struggling to get back into them. It seems that local educational institutions and various training programs have become places of refuge for recent Chinese immigrant engineers. The latter include those who are temporarily unable to meet the high requirement of English proficiency, have difficulties in pulling together financial resources, and are merely waiting to be laid off to get training funds designated for E.I. (Employment Insurance) recipients.

It is conceivably time-consuming to get a local degree, diploma or certificate in a postsecondary institution. When asked why she was so determined to go back to school rather than taking less time to get her Chinese credentials recognized, one immigrant said that she had never seen any Chinese engineer get a professional job with the help of "foreign-credential recognition".

Nobody ever succeeded, to my knowledge, so I am convinced that it would not work for me either. (014)

On the spectrum of measures for the occupational mobility of Chinese immigrant engineers: first and foremost, I find that those who have gone through training programs or degree education in North American are likely to exhibit an initial advantage in entering professional fields in comparison with those who appear to have had no local educational experiences.

Six among the eight respondents who received Canadian/ American degrees or diplomas for particular professional training have found professional jobs in

Greater Vancouver. For the other two, finding a professional job is just a time issue: the female mechanical engineer has just finished an internship and is taking a break to think about whether to start up a small business or pursue a professional job; the senior mechanical engineer in China knows that he will find a job in the industry sooner or later after he finishes his Doctoral dissertation.

The employment experience of the six who have Canadian/American educational experiences and are currently working is as follows.

One is an Ontario PEng (001). He started his engineering career from a university spin-off hi-tech company and became an Ontario PEng afterwards. He had been working in the company for almost four years until a drastic downsizing due to a financial crisis. Three weeks after he was laid off, he found a new job in a Seattle company.

A UBC graduate (016) was a successful practising engineer in China, but he failed to find an appropriate engineering job in the Canadian labor market. After working on a building team for a while, he decided to go back to a Canadian university in order to become a registered engineer in Canada. No sooner had he graduated from UBC than he found jobs awaiting him, since quite a few local human resources agencies started getting in touch with him. Now he is working as an E-I-T (Engineer-in-training), but somewhere closer to being a PEng.

The third (005) is a UBC engineering graduate now working as a Principal Engineer in a university spin-off hi-tech company. Every now and then, some

human resources agencies approach him for other possible job opportunities. As his interest is in research and development (R&D) in telecommunication, he is not pressed to get a Canadian PEng title.

Another UBC graduate (003) from Computer Science is now an IT expert in a non-IT organization, and he is taking charge of a joint technological initiative. He was very well established in his profession before immigration. He and his family lived a comfortable life and had good social status in China. But he decided to pursue a more challenging career and a brand-new life style in a foreign country, despite his parents' belief that he was "crazy" to abandon his stable and successful career in China. He landed during the gloomy economy after 9/11. To his great disappointment, he encountered unprecedented difficulties in finding a job in his field of expertise. Eventually, he decided to study further in a Canadian university to buffer the stress of unemployment. He studied for a Master's degree while building a website for e-commerce before he found a professional job.

Among six Chinese-Canadian immigrant engineers who have found professional jobs, two are female engineers. One (018) was a senior engineer in China and her post-immigration employment situation has been up and down in Vancouver. Her professional jobs did not last long until she graduated from BCIT, the premier polytechnic school in BC. It took her considerable time to overcome her initial failures in English so she could return to school again. One of her worst experiences was when she and her husband lined up the whole night for an

opportunity at English enhancing program at a community college, but could get nothing. Nevertheless, she is now moving steadily along her post-migration career path after one more year's study at BCIT. The other female (014) was a practising engineer with expertise in construction budgeting. She came to Vancouver in May 2005, and registered for a job club at an immigration services agency immediately. By interacting with her classmates in the job club, she heard lots of stories about the un-/under-employment of recent immigrant engineers. She quickly found that schooling might lead her into the professional field much quicker than taking up surviving jobs. She took courses simultaneously in a private college and adult high school while waiting for admission to BCIT. After one year's study without stopping, she found an entry level professional job in a Vancouver company in May 2006.

Except for one (001) who got a Master's degree in the USA before moving to Canada, the rest all turned to Canadian educational institutions after initial failures in professional job seeking of from six months to one year. According to them, educational experience in a Canadian institution is an added-value passport for them to be admitted into the professional field, not only because local employers offer jobs to "locally accredited papers" with less suspicion, but also because it was easier to access the professional field through an internship or cooperative programs packaged with their school programs. The prevalence of returning to school is somewhat self-explanatory, since the customized professional programs have

doubtlessly provided an opportunity for these Chinese immigrant engineers to directly interact with prospective employers, and so obtain mentored work experience under a licensed Canadian PEng. More importantly, they admitted that they did enhance many aspects of their skills and knowledge specific to the local labor market through Canadian educational institutions.

Table 6. The correlation between education obtained in North America and career prospects in Canada (Number 8)

Education		Number of respondents
Education outside North America		13
Education in North America (Canada and the USA)		8
Education in North America working in professional jobs		6
Respondent 1: Master's, USA	Ontario P. Eng., working in the USA	
Respondent 2: PhD, UBC	Principal Engineer working in a hi-tech company	
Respondent 3: Master's, UBC	BC Engineer-in-Training	
Respondent 4: Master's, UBC	IT manager in a non-IT company	
Respondent 5: Diploma, BCIT	Structural designer in an engineering firm	
Respondent 6: Diploma, private college	Entry level professional job	
Education in North America not working in professional jobs		2
Respondent 1: Diploma, private college, on vacation		
Respondent 2: PhD, UBC, working on doctoral dissertation		

Work experience at MNCs and associated global mobility

Work experience gained outside Canada is most unlikely to be accepted by local employers; however, previous experience in leading hi-tech MNCs might better facilitate Chinese immigrant engineers in transferring their experience and

credentials in order to find a job quickly, especially in non/less-regulated engineering positions. This study has noticed that there is an exception for people who ever worked in leading multi-national corporations (MNC).

One respondent (004) worked for one of the leading telecommunication multi-national corporations (MNC) as an engineer before coming to Canada. He found his first job in a smaller IT firm, which quickly led to a satisfying job in a leading IT company in Vancouver. He recalls:

I worked for the MNC, which grants certificates worldwide....So my boss in that company told me that my experience there would say a lot more than a "paper." You know, it was rather easy for us to get one of the certificates, but I was just too busy to get one. I believe that my ability is not below CCNT (Convergent Network Technologist). Actually, I should have got a CCNE (Cisco Certified Network Expert) certificate. You know, our non-Canadian credentials are not going to work here, so we have to go back to school again and participate in an internship, then write an exam afterwards for local credentials and professional membership. It's meaningless for me....

The experience of a female engineer's husband proves the advantage of working experience in MNCs. She (014) told me that her husband, a senior IT engineer in a world technology giant in China, got an engineering job offer five days after landing in Vancouver in May 2005. It is coincident that both came from MNCs that standardize and upgrade the industrial codes and equipment for the entire industry. Here, what really counts seems to be the resemblance of skills in their current positions and last ones they worked in before immigration. Both

successful cases above show an interesting phenomenon experience gained from leading MNCs might exhibit higher transferability across national borders, although the finding might not be representative and therefore, more research will be needed. Local employers are concerned more with the specific knowledge and skills of a prospective immigrant professional, which could lead to a quick catch-up if a job is being offered. It might not be “better” knowledge and skills, but knowledge and skills at an appropriate level that fit in with the local- or industry-specific context.

Looking at the profile of my respondents, except for the one who was working in a world-leading technological giant in China (004), all the rest were engineers in state-owned companies or institutes in China, while only one worked in a company run by a Chinese-Canadian entrepreneur in Shanghai (011). So the majority might not meet the specific requirements of local employers in the engineering sector, which brings out the necessity to help them localize their knowledge and skills for the Canadian labor market.

II) The half-opened door: the engineering excluded

While eight respondents in my study returned to the local engineering labor force by means of local education or re-training, over 60 percent remained out of their field of expertise, without easy access to job-related educational resources. A female engineer (021) told me that she found that the federal budget gave little or

no support for the educational and training needs of immigrant professionals.

Likewise, many immigrant professionals are eager to localize their human capital through Canadian educational institutions. For them, however, there are usually two barriers that prevent them from returning to a Canadian school. The first is their limited financial resources; the other is the contradiction between the high requirement of English proficiency in well-recognized universities or training institutions and a lack of appropriate English programs for skilled immigrants, who usually have much higher command of English than the ABC level. In short, the former underlines the importance of joint investment in transplanted human capital for the benefit of the Canadian economy; the latter reflects that a system with less flexibility and participatory enthusiasm will impede the working age immigrant workforce in rejuvenating the aging Canadian labor force.

Financial barriers to human capital development after immigration

Let's begin with the possible financial resources that recent Chinese immigrant engineers can muster. If an immigrant enrolls in a full post-secondary level course for a minimum of twelve weeks in B.C., there are Canadian student loans (including both Canadian federal student loans and British Columbia Student Assistance), study grants, and bursaries. It seems that financial resources are readily available for the educational pursuits of recent skilled immigrants. However, barriers do exist when Chinese immigrant professionals seek to increase their

employability through local education. A dispute as to student loans between a group of Chinese immigrant students and the B.C. Student Assistance Program (BCSAP) may give some idea of the barrier they are facing.

Thirty Chinese immigrant students applied for student loans from the BCSAP in June 2004 with the help of their school—a private college. When the students paid \$10,000 out of the \$14,000 loans to the college, BCSAP terminated the loans for all these Chinese immigrants because they had received university education for four years in the past. Moreover, they will no longer be eligible for funded educational opportunities. (World Journal, May 17, 2006: A1). While Chinese immigrant students become part of the skyrocketing applicants for funded educational opportunity, they might be excluded from public financial assistance for the education at the same level as they had in China.

Moreover, my respondents are also concerned with the discontinuity and insufficiency of educational funding. A few respondents told me they had used up the first-time student loan in private schools before they were eligible to be admitted by well-recognized Canadian educational institutions. After studying at a private college, most may choose to transfer to public educational institutions, where the diplomas or degrees are believed to be more prestigious. However, it is difficult for them to apply for student loans again without paying off their previous loans. For example, a female architect (012) started her study in a private school that targets skilled immigrants with a guarantee of receiving a student loan. After

one year's study, she prepared to apply for BCIT. To her disappointment, she was unable to get a student loan for the second time. Without adequate financial assistance, she is taking a course whenever she can save up the tuition for one. She said the building code course at BCIT is just too expensive to take by the time I met her. Another immigrant (014) has been supporting her education by herself. Without any prospect of a job, she is hesitant to borrow any money. She has set a time line to find an entry-level job in her profession of training by May 2006, as her money can only support her until that time. The good news is that she found an entry-level engineering job in a downtown company in May 2006 and started her probation with that company then.

With fewer financial resources, most skilled immigrants are worrying about their debts before they have a stable income to pay them off. To avoid being trapped by debt, many just take basic work for the sake of survival, which could lead them to stay away from their profession, or never make it back.

The obstacle in English programs for skilled immigrants

Apart from the lack of financial resources, the other obstacle is the contradiction between higher English requirements in many well-recognized educational institutions and a lack of appropriate advanced English programs for immigrant professionals. For example, the English Grade 12 level is a prerequisite for anybody seeking to enter recognized educational institutions, such as BCIT, a

premier school for engineering professionals.²⁶ It usually takes quite a few years for them to reach English Grade 12 level by studying in adult high school; however, there are no suitable intermediate level English programs for this group of well-educated and highly skilled engineers, other than English beginner programs. In fact, almost everybody I interviewed had passed one or two English tests to meet language requirements for immigration, such as TOEFL and/or IELTS. Two-thirds even participated in enhancing English programs taught by native English instructors before coming to Canada. However, none of the above give Chinese immigrant engineers any advantage in being easily admitted by local educational institutions, especially those that offer career education, as the British Columbia Institute of Technology (BCIT).

The language prerequisite hinders these highly skilled engineers in polishing their communication skills and gaining confidence in demonstrating their ability to help local employers. Without language enhancement in the local context, these people are further disadvantaged when they try to integrate into the local labor market.

One (013) recalled:

I attended an English program taught by a foreign teacher (before I came here). It was very expensive, but I don't think it is useful here. I am still not able to communicate at a deep level for some professional issues.

²⁶ See <http://www.bcit.ca/admission/register/>

A female civil engineer (007) had solid experience in port construction in China. She was lucky to get an interview when she sent out her first résumé to a Vancouver company calling for an intermediate and/or advanced drafter position. She said:

I was called for an interview. You know, the company is doing exactly what I did in China. By the end of the interview, however, the interviewer suggested that I should enhance my professional English. During the interview I was asked how I handled English documents with overseas partners. I answered without hesitation that we had translators in my Chinese company. I think that they expected me to be able to communicate with both junior drafters and professional engineers. English, actually, professional English is really a big hurdle.

A civil engineer (013), who worked in a building company as a frame assistant in Vancouver was the only Chinese grouped with local labor workers. Other Chinese immigrants had to work together due to their inability to communicate well in English. He said:

Don't think it is easy because it is labor work. Very often the instructions are brief. If you don't understand what someone meant, you can't even survive at the lowest level in a building company.

Other Chinese immigrant engineers also expressed similar concerns to me. With poor opportunities to upgrade their English and adapt their human capital,

these Chinese immigrant engineers feel very discouraged in pursuing career development in the local labor market.

As mentioned, there are free ESL²⁷ programs available to all immigrants; however, the level is much lower than the language capacity of Chinese immigrant engineers who were selected to enter Canada with a proven satisfactory level of English proficiency. Almost everybody in my respondents was rejected by local ESL programs after a placement test. They could go nowhere in such a context, even though they are anxious to gain some support to enhance their language skills and extend their education/training to meet the needs of the local market. To some extent, the earlier they can return to local educational institutions, the more quickly they can be equipped with local specific knowledge and skills in order to join the local labor force. It seems that neither governments nor educational institutions are proactive on this issue.

III) A brief summary

Before concluding this chapter, I want to mention a recent warning call from the Vancouver Board of Trade. The Board warned that there would be a long-term labor shortage in Vancouver's building industry by 2010. It had embarked on a six-week program to attract and train youth, such as high school graduates, to

²⁷ "English as a Second Language Programs and Services" by Ministry of Advanced Education.
http://www.aved.gov.bc.ca/esl/programs_services.htm

encourage them to obtain some basic skills in the industry.²⁸ It seems that immigrant professionals trained in the building industry outside Canada were still given less or no consideration. They would rather train young workers from the very beginning than provide shorter training and industrial access for the experienced engineering immigrants.

In some sense, we can say all local social stakeholders, including federal and provincial governments, educational institutions, professional associations, and local employers, still adhere to an uncoordinated approach to this issue. The governments assume that the relocated human capital obtained outside Canada would be in no time applied to the Canadian industrial field without appropriate investment by Canada. The governments seem to be too optimistic about utilizing foreign or immigrant individual invested human capital. They ignore the fact that human capital is not static but has to undergo continual development to adapt to different circumstances from one labor market to another. The pre-immigration human capital of recent skilled immigrants may not yield expected productivity in the Canadian labor market, where there are many distinctive norms and codes to adhere to.

Many expect just foreign credential recognition to accredit the professional qualification of these highly educated and skilled people. A complicated economic issue that requires systematic measures and joint efforts is merely translated as a

²⁸ Reported by Vancouver Multi-vision Television (Channel M) on November 11, 2005.

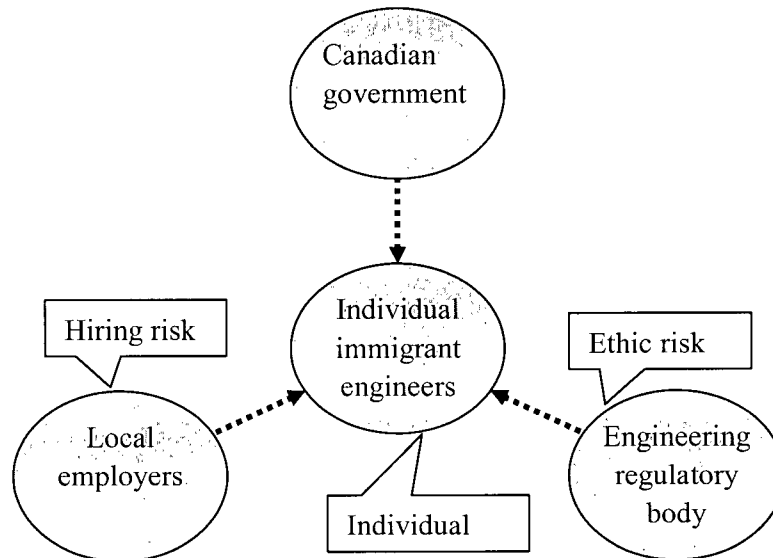
simple “paper” issue in Canada. It may still take longer than expected to hammer out a strategic plan to increase the transferability of human capital brought in by recent immigrant professionals. Recently, it is gratifying to see that a few immigrant services organizations, such as S.U.C.C.E.S.S., are trying to “add levels of language training to include courses suitable for skilled trades and professionals...” As they stated: “We’re pushing government to upgrade the level of [English instruction] so we can really help the new immigrants, particularly skilled workers, to go back to their own trades” (Penner, 2006:D8).

While the number of immigrants increases every year, the governments merely rely on local employers to absorb them. Local employers, however, cannot see any benefit in hiring immigrant professionals and try to avoid risky hiring by casting themselves as industrial gatekeepers. Similarly, APEGBC, the local professional association, has no obligation to assist newcomers by taking ethical risks. Meanwhile, APEGBC declares that they need funding from the federal and provincial governments to place people and offer mentorship programs to new engineering immigrants.²⁹

As a result, risks are being transferred to individual immigrant engineers solely, such as occupational exclusion, downgraded socio-economic status and even unemployment. The perception of “risk” and its corresponding action can be illustrated as follows:

²⁹ According to a telephone conversation on April 21, 2002.

Figure 9. A diagram of risks perceived by different stakeholders



The Chinese immigrant engineers in this study always wonder why local employers would rather hire a high school graduate than experienced engineers, and why governments would rather train high school graduates from the very beginning rather than provide a little training in professional English and local industrial standards and practices so that experienced immigrant professionals would be able to quickly fill in the looming engineering labor shortage. Ironically, they are sometimes rejected by local employers because they are “over qualified.” An architect and structural engineer (012) in China for many years has found her employment experience in Vancouver unpleasant. The same thing happened to a

senior architect (013) as well, since his project album was always returned because of “over qualification.” From another angle, this proves that human capital does not have to be advanced, but must be appropriate to the local labor market, despite the fact that is sometimes just an excuse for local employers to refuse these anxious immigrant job seekers.

How to utilize transplanted human capital and increase the employability of recent immigrant professionals should be prioritized for all stakeholders involved in labor exchange. It is certainly not proper to place all risk on individual immigrant professionals, rather, each party or stakeholder should be expected to assume responsibility. The employment difficulties of recent highly skilled Chinese immigrant engineers call for a holistic approach to localize human capital efficiently and marshal resources to avoid brain waste and reduce the risk for any single stakeholder.

As discussed at the beginning of the chapter, human capital is not an unchanged and one-time-only accomplishment; rather, it has to undergo development over time and localization in different work environments. The practices in Greater Toronto are convincing as to the necessity of localizing human capital in the local labor market. “Career Bridge” is a program sponsored by the Career Edge Organization, a social enterprise providing career-launching paid internship programs. Since the November 2003 pilot, in Greater Toronto, Career

Bridge has placed more than 500 interns and has signed up more than 160 organizations, according to Mr. Murray Coolican, Vice President, Manulife Financial Group, one of local participants willing to hire skilled immigrants.³⁰

“Career Bridge” aims to strengthen the employability of recent skilled immigrants by providing Canadian experience to them through internship positions. As of January 2007, more than 500 internationally qualified professionals have participated in Career Bridge, and more than 80% of immigrant interns who participated have secured full-time positions in their chosen careers. Likewise, the statement of Mentoring Partnership has made it clear that skilled immigrants possess education, experience, and language skills; however, “what they require are the connections and knowledge that can only be gained from real-life experience.”³¹

It highlights the significance of post-immigration human capital development among recent highly-skilled immigrants.

Moreover, other than the particular person who possesses human capital, both the government-funded educational programs and local employers are key

³⁰ Based on Mr. Murray Coolican’s speech “Brain Gains or Barrier Games? Debating Appropriate Measures for Foreign Credential Recognition” at the 9th Metropolis Conference in Toronto on March 4th, 2007. The conference was held in the Fairmont Royal York Hotel in Downtown Toronto from March 1st to March 4th. On behalf of the Manulife Financial Group, Mr. Coolican shared experience as one of the top five corporate partners in TRiEC, Toronto Region Immigrant Employment Council, a multi-stakeholder mentoring partnership program to promote the economic integration of recent skilled immigrants. I acknowledge Mr. Murray Coolican, Vice President Corporate Affairs and his assistant Leslie White for sharing with me the draft of speech and the data they used.

³¹ See the introduction to the Mentoring Partnership at www.TheMentoringPartnership.com and www.hireimmigrants.ca. Source: Mr. Murray Coolican, Vice President, Manulife Financial Group.

stakeholders, and investors in the development of human capital. If Canada intends to utilize the knowledge and skills brought in by recent immigrant professionals, different levels of government and employers in Canada have to take part in localizing transplanted human capital in order to benefit the Canadian economy.

Chapter Seven

Social Capital: From Private Assets to Public Goods

From immigration decisions to settlement arrangements, immigrants and their families are likely to interact frequently with direct and indirect resources of social connections, including relatives and friends, as well as extended social networks, such as the pertinent communities and social agencies. According to this study, immigrants to Canada may rely on their social connections to obtain information, gain support, and extend networks so as to relocate smoothly and pursue further development in their new home. Recent immigrants' social networks are always co-ethnic based and start from the most direct contacts, relatives or friends, from whom they extend their contacts to other social resources their relatives or friends consider reliable.

After they have landed in Canada, the first social resource is reported by the majority of the respondents to be a "Job Club" organized by voluntary immigrant services organizations aiming to teach basic job searching skills. Through the job club, it will be suggested that they network with people as much as they can, and in as diverse a way as they can. The purpose is to gain "social capital" by means of wider networking for any rising job opportunity. As a matter of fact, the "Job Club"

could also be a source to establish new social connections with job information flows, though people there may come roughly at the same time and nobody appears to be advantaged in local labor market. Nevertheless, a few respondents did report that the friends they made in the “Job Club” shared job information with them, which helped them to find their first few jobs in Canada successfully. To find out how social capital could influence the consequences of job searching, I would like to examine the existence and extension of “social capital” among recent immigrant engineers.

The chapter will look at not only how social capital influences immigrants’ economic performance, but also how a “social capital friendly environment” makes a positive impact on the economic integration of recent immigrant engineers. The chapter will begin with a discussion of two types of intersecting social resources that these highly skilled Chinese always rely on. One is a traditional source of social capital: individual connections including relatives, and pre-immigration and post-immigration friends; the other is extended networks such as a relevant social institution able to “facilitate action” of occupational movement (Coleman, 1988: 100), such as voluntary organizations for immigrant settlement services; educational institutions where newcomers can always expand their available networks; and professional associations which admit recent skilled immigrants to the local professional field. As mentioned in Chapter two, studies on the social capital of recent immigrants always overemphasize individual initiative, capacity,

and behavior in increasing social capital, while less attention has been paid to whether the external context of social actors facilitates gaining social capital. The last part of the chapter will bring in the individual experience of recent Chinese immigrants to demonstrate how the “availability” (Portes, 1998) of social resources affects recent Canadian immigrants in maximizing social capital.

I) A Revision of Social Capital

“Social capital” has long been discussed, and increasing scholarly attention is being paid to the causal relationship between social capital and its associated economic outcomes (Coleman, 1990; Halpern, 2005; Lin et al., 2001; Putnam, 1995a). Social capital is not an actual substance; instead, social capital is embodied in a variety of social connections or “networks” among social actors (Bourdieu & Wacquant, 1992:119; Halpern, 2005:2). Social capital has the potential to generate information. In this sense, social capital is not defined by itself but “by its function” (Coleman, 1988:96). The norms of “trustworthiness” and “reciprocity” (Putnam, 1995a:665) are embedded in the “interaction” and “connection” between social actors, leading to potential opportunities to benefit the pursuits of social actors. Looking at the dimensions of individuals, groups, and communities, social capital is a very important resource that connects people by “linking,” “bonding” and “bridging” (Halpern, 2005:25-26; Putnam, 1995b). It may become a meaningful

“resource” for unexpected or expected socio-economic returns. If the resource is purposefully utilized, it may facilitate people’s economic attainments in certain contexts.

Although many studies argue that social capital is being over-stretched (Portes, 1998), or it lacks “conceptual clarity” (Harper, 2001), social capital is no doubt complementary to human capital with the likelihood of influencing one’s economic status. Speaking of immigrants, new members to a society, they are likely to lose their meaningful social positions after immigration; therefore, they tend to make greater efforts to move towards commensurate status after relocation. Understandably, in order to approach commensurate socio-economic status, it is important for them to forge social capital; and more importantly, to be provided with a friendly “big environment” to extend social networks and nurture social capital. For recent skilled immigrants to Canada, accumulating social capital has become one of the few crucial factors for gaining knowledge, obtaining occupational information, and achieving socio-economic attainments.

Throughout the post-migration period, both spontaneously or deliberately generated new forms of social capital will help recent immigrants ease stress and seek more opportunities. As reported, the newly gained social capital of the respondents is often derived from their pre-immigration connections, such as family ties, relatives, and friends who have already been in the country and have influenced their immigration decisions, immigration destinations, and settlement

patterns. Based upon the pre-immigration contacts above, to regain quickly and expand both co-ethnic and cross-ethnic social networks for new immigrants is to get involved in a variety of community group activities in the host society (Marger, 2001:440). While the social network is being diversified and expanded, social capital could emerge along with information sharing between the social actors and the recent skilled immigrants in this study (Coleman, 1988:s104). Access to information enables immigrants to mobilize newly gained social resources to reach any possible socio-economic return. To be precise, access to diverse information in one's networks can proliferate opportunities, such as possibility of employment, and change of status attainment (Lin, 1999).

II) Social Capital from Multiple Sources

Social Capital as Personal Assets

As mentioned, pre-immigration connections play a role in influencing immigrants in migration decision-making, destination, and settlement patterns. For the recent Chinese immigrant engineers I interviewed, it is obvious that their pre-immigration connections in Canada were one important reason for their decision as to where to go, which city to settle in, which immigrant service organization to fall back on, and what kind of approach to adopt for job searching. Most of them made their decision

to apply for immigration when they heard other relatives or friends had gone to Canada or were in the process of applying.

Pre-immigration contacts always became their primary source of a social network when they arrived in Canada. Except for two who landed in Vancouver and were admitted by local universities, the rest chose locations where their old contacts lived, relying heavily on these pre-migration contacts as a primary source of support for airport pick-up, housing rental, a Social Insurance Number, a Care Card application, and first-time grocery shopping. More importantly, such primary contact also helped channel information about ESL programs, job-hunting, and other immigrant programs available in the local area. For example, many immigrants in this study made a blind decision to immigrate to Canada without any research prior. Very often, immigration agencies in China became a source of information, aiming to sell immigration ideas to these well-established skilled professionals. Therefore, the primary channel for true information was their existing contacts in Canada. Despite the dynamic existing in the pre-migration social network of recent Chinese skilled immigrants, it seems that these primary personal contacts may only have provided their own perspective, sometimes misleading and even hinder recent Chinese immigrant engineers in obtaining information with a broader scope and in generating social capital in a more open manner.

One respondent (003) told me that he decided to emigrate when his good friend called him frequently from Canada in early 2000. His friend arrived in

Toronto in the second part of 1999, and quickly found a well-paid job in an IT company. "Come and join us!" said his friend. He then decided to give up his lucrative senior engineering position in order to open a new vista for his career, although the decision was opposed by the whole family. However, the economic situation became stagnant in 2001, and he discovered that it was hard to find a job in Toronto upon arrival. His friend was at pains to keep a job, and another few were laid off. After being unemployed for more than half a year, he eventually made a hurried decision to return to school and moved to Vancouver after being admitted to UBC.

Another respondent (004) chose to settle in Toronto after consulting with his friends in Canada, who told him that there were more job opportunities in Toronto than anywhere else in Canada. Nevertheless, he found his first job in Vancouver after five months of vain searching in Toronto. In short, the existing pre-immigration social capital in Canada has greatly influenced the settlement patterns and job-searching practices of these recent arrivals.

Pre-immigration ties not only help immigrants decide where they will settle upon arrival, but also act as an information hub for seeking employment and other activities related to job hunting. For example, one respondent (019) told me that she usually resorts to friends before going to immigrant services organizations when it comes to judge what will benefit her career development in Canada.

Interviewer: Do you think your AUTOCAD diploma will help you find a job?

Respondent: It's easier to get a job with that particular skill.

Interviewer: Where did you get the information?

Respondent: All my friends tell me that it would be helpful, and it is valued in the labor market.

One respondent (014) recalled how she listened to her friends' suggestions in choosing a program to study after landing:

When I came, I didn't have a clear goal of what I wanted to do. I even registered for an accounting program. However, my friends warned me that accounting courses were too popular to bring a job for me, and that I would not be able to compete with those who had already had a strong accounting background.

A female engineer (012) had a similar inclination to obtain job information and advice from her pre-immigration ties in Canada.

See, I only know my landlord and an old classmate from China. Nobody else! I have no idea as to how to communicate with others. I do not trust people whom I've never stayed with. A Chinese killing another Chinese is not rare. For me, a woman with a young child, I should be more cautious in making new friends.

While heavily relying on their pre-migration contacts, the Chinese immigrant engineers in this study were reported to be confused by the ambiguous answers they were given by their old connections in Canada. Frustration was common after they found that none of their existing contacts in Canada had ever told them about the true picture for immigrant professionals in Canada. When they enquired as to the

real condition of their friends' employment situations, they were often told something like this: "Well, I think you will find out when you eventually come here..." (011, 016).

The information circulating in China is very positive. Everybody, your lawyer, your immigration agency, including your Caucasian friends, tell you that life is good in Canada. The immigrant agency just wants to earn a commission from your processing fee. Under such circumstances, real information can only come from immigrants who are already here. Nevertheless, most of our friends or relatives only want to keep silent. They are reluctant to tell others when they return to China. They feel ashamed of the truth and they only like to discuss the positive aspects of their immigration. (011)

From the respondents' accounts above, we can figure out that existing contacts in Canada have consequential influence on immigration decision-making, settlement patterns and job-search strategies of recent Chinese immigrant professionals. Yet, to rely heavily on old social connections also limits new members to Canada in exploring even bigger social networks that would benefit their occupational mobility and socio-economic integration in general. It has been proved by the immigrant engineers in this study that they did experience a hard time marshaling more social resources in the brand new environment of life and work. We can see some broadly positive effects for new immigrants who rely on their personal ties for social capital resources; nevertheless, the network is somewhat closed to these new arrivals who want to gain stronger support from "inside". For

example, many reported that they lacked social connections in their professional field, so their chances of obtaining relevant information about their profession of training were much weaker.

I have no old friends in Canada who are working in the same field as I had in China. Local people, including Chinese, are not enthusiastic. We Chinese do not unite. The Caucasians in Canada are seemingly enthusiastic when they speak to you, but actually they will not really help you. You cannot always bother them, and they are likely to say once or twice "I am sorry...." Afterwards, you will no longer call for help. Would you like to bother them? I would rather work as a laborer than make pleas to them for help (011).

Without substantial social capital, it appears to be very hard for these Chinese immigrants to advance when they pursue professional development in Canada. Apart from two informants who were already Ontario Professional Engineers (PEng) and a E.I.T. (Engineer-in-training) in B.C. respectively, only two Chinese immigrant engineers among the rest attempted to apply to become PEngs in B.C. One (006) tried but gave up before the exam, he was unable to find enough local references and none of his pre-immigration contacts were working in his field of expertise. Actually, even if he could have found a PEng as one of references, he would still have had to work under the supervision of the registered Canadian PEng for a year. The other (022) was a female senior civil engineer back in China, and now preparing her PEng application; however, she complained that the further she went in the course of the PEng application, the more questions she had to answer.

Yet, nobody was there to lend her a helping hand, including her existing contacts or staff from the APEGBC, who could not clear up her confusion through the different stages of preparation. In addition, she was bothered by the inconsistency between English and Chinese versions of guidance in applying for PEng.

Interestingly, these recent Chinese immigrant engineers also became important sources expected to offer suggestions and advice to their friends in China who planned to move to Canada. When they were asked what they would tell their friends, they responded that they usually would tell them not to expect too much, and they would not exaggerate either the advantages or disadvantages, so that their friends intending to immigrate could make their own decisions. One (013) told me:

I would tell them if they asked for my suggestions: "It really depends". If you are lucky, it would be easier to find a job here; otherwise, it will be much harder than you expect. I would also add: "It is not that easy!" When I went back, I got together with my friends, and a few were eager to emigrate, and wanted to obtain some information about Canada. They had even gotten their immigration visas by the time we met. I told them that they should prepare themselves very well.... "It is not that easy to find a professional job in Canada! Your salary is RMB 80,000 a year in China, and you live very comfortably here...." Even when I told them the truth, one said: "It doesn't matter. I would like to start washing dishes [and move to a professional job later on]. Those who have never been to the United States or Canada always think like this. They have good work in China, but they feel it would be fine to start by washing plates until they find a professional job. Many people who never have left China think the same way.

In sum, pre-immigration connections always act as the initial social resource which new Chinese immigrant engineers can rely on. It is not surprising that they can always create new connections through the existing ones. However, a mainly co-ethnic network, even expanded to a limited degree, might close the door for new comers in extracting more social capital arising from cross-ethnic networks, even preventing them from being fully embraced by the wider Canadian society.

Social Capital Embodied as Public Goods: What it is a Good about?

We discussed the heavy reliance of recent immigrants on their existing social connections in Canada and we also highlighted the limited scope of such a co-ethnic based social network. How can recent Chinese immigrant engineers effectively diversify social networks and maximize social capital? Many studies suggest that institutions or organizations could be “potential training grounds” for social actors by means of “sharing of opinions” and building “feelings of connectedness and social support” (Green & Brock, 2005:20-21). These organizational resources may serve as the foremost source and a potential ground where social capital can derive from, as proved by the Chinese immigrant engineers I interviewed. Local educational institutions, the job clubs hosted by local immigrant service organizations, a Chinese voluntary engineering organization, such as CCBIS, as well as church, all play a role in assisting newcomers to start up in the Canadian labor market. Through an interactive platform provided by immigrant service

organizations or educational institutions, even other organizational sources, social resources have considerably proliferated and more support has emerged. Though the first few jobs they get might not be professional, those who are actively engaged in a variety of pertinent organizations enter the labor market much easier and quickly.

Voluntary organizations for immigrant settlement services are an important source for new arrivals in Canada. The majority Chinese immigrant engineers whom I interviewed had sought help from immigrant services organizations at least once. These organizations include Immigrant Services Society of British Columbia (ISS), MOSAIC (a multicultural, non-profit organization for immigrant and refugee services) and United Chinese Community Enrichment Services Society (S.U.C.C.E.S.S.). All three provide employment related programs, such as job clubs, to help new immigrants customize their résumés and cover letters, as well as link them with some survival job opportunities. They also have training institutes which provide educational and training programs for new immigrants to integrate into Canadian society. Therefore, two-thirds of my respondents had taken the one-week long job club organized by these three organizations respectively. Half of them had consulted with the staff (advisor, case manager, counselors) in these three main immigrant services regarding their employment concerns. These organizations provide a good venue for recent skilled immigrants to meet new friends, and obtain

relevant information and useful feedback regarding job search in the local labor market.

An Engineering Physics engineer (015) told me that he made an acquaintance with another professional in a three-week job club offered by S.U.C.C.E.S.S. He considered this network as a stepping stone for him to return to his professional field, because his new friend had found a job after finishing the program, though the two were different in academic background and local work experience. His new friend had gotten a Doctoral degree from the United States and had many years' professional experience in Vancouver before being laid off. Nonetheless, a similar engineering field had provided them with lots of common topics to exchange, along with any job opportunity that could be relayed to him by this new contact.

One respondent (014) talked about her experience after attending the job club organized by ISS:

That program let me know how to write a cover letter and résumé; how to contact employers; how to prepare for interviews, etc. It addressed some theoretical issues before we started job hunting.

Another (002) told me his wife's experience when she looked for help from S.U.C.C.E.S.S. He said:

My wife wanted to find a job here, so we just went to S.U.C.C.E.S.S. for some job information. Since then, we have been receiving numerous job postings from the case manager in S.U.C.C.E.S.S. I may send my résumé to them later; then I will get many postings as well.

One (013) attended the job club organized by ISS and meets with his case manager periodically.

I also go to ISS, an immigrant service organization. ISS is the biggest one in town. My case manager is there and he sends me job postings every week. Then I send out my résumés every week to apply for jobs. I brought my résumé to my case manager for a critique, and he said it was fine....

In this regard, the job related programs offered by these voluntary organizations are valuable springboards for these highly skilled new arrivals to access both job information and learn local employment practices. Nevertheless, my interviews have found that these Chinese immigrant engineers are far from satisfied with what they have been offered, and they all think there is a lack of professional advising services available to them.

Social capital embodied as public goods: the downside

A couple who are both engineers have had more than ten years' work experience in China (009, 010). They were referred to different organizations for career advice, but none could give them valid information. S.U.C.C.E.S.S. and ISS could only provide general information, but lack substance for the career development of immigrant engineers. A respondent commented that the immigrant service organizations, such as S.U.C.C.E.S.S., serve all immigrants; however, the jobs they can recommend are mostly general labor work (002). What kinds of jobs

these immigrant service organizations can refer has become a gauge for new immigrant professionals in terms of quality of the services that have been provided.

One (014) respondent recalled her experience in a job club:

When I went to a job club, the advisor or counsellor pushed us really hard to find jobs. [If we found jobs], they would be able to report to the government that they had done their job. However, within two classes of at least 40 people, only two to three found professional jobs. How about the others? They just work in TNT Chinese Supermarket, in restaurants or as cashiers in grocery stores. How many people have found their professional jobs? There are few, but they have to start from the beginning, the entry-level positions. To my knowledge, they were all engineers in China, had worked ten or more years. However, they were already the luckiest.

A female mechanical engineer (019) had never gone to find help from these immigrant services organizations:

I only heard S.U.C.C.E.S.S. offers assistance, which is different from what we want. We are different. What they can introduce us to are all labor jobs, not professional jobs.

Likewise, another engineer (015) feels the same in terms of the training programs offered by these immigrant service organizations:

Their training is very general, not for any skilled immigrant in a particular profession. My friend said survival crisis made us accept whatever job was available there. When you feel survival is not hard, you should think about how to develop yourself. We should pursue our career development, now that our goal is career development not survival in Canada. I know S.U.C.C.E.S.S. has a mentoring program. I sent my résumé to them, but so far there has been nobody who is from my background. The staff is having

me wait until somebody comes up. Two years have passed; they have not contacted me yet.

Another issue that these Chinese immigrant engineers constantly addressed is that they feel they were treated differently in S.U.C.C.E.S.S., which was founded by earlier Hong Kong Chinese immigrants. They do not feel that this co-ethnic organization can offer more help, neither can it give them connections with the local industry. A civil engineer (006) went to talk with an officer from S.U.C.C.E.S.S. who was at a booth in the job fair where I met him. He said: "An officer teased me: 'You want to find a job here? No, you look like a manager!' " He felt uneasy because of the tone that the S.U.C.C.E.S.S. officer spoke to him in. He said he would never contact them again. Another female engineer (014) reported:

I went to S.U.C.C.E.S.S. in Richmond, which was managed by Hong Kong Chinese. I felt that they were not friendly to Mainland Chinese. When you ask them questions, they certainly answer but in an indifferent tone. Maybe it is because too many people need their help. They do provide some information; nevertheless, regarding professional advice, you can hardly get anything from them.

In short, a variety of programs offered by immigrant service organizations do help the first step of recent immigrants with exceptional skills, providing easy access for these newcomers in terms of labor market information, basic job searching skills, references if needed, and a more extensive network among immigrant participants and immigrants with their instructors, the latter always

considered as governmental representatives. However, both quality and depth of services cannot meet the expectation of these highly skilled engineers. Sometimes, they even doubt the credibility of these service organizations, for the hasty way of service makes them think that they are just taken as a resource for these organizations to claim money from the governments while no quality service is being provided.

Hidden value of Canadian schools for social capital

Other than personal and voluntary organizational social resources, more and more immigrants tend to pursue a local certificate or diploma which may combine both academic training and hands-on internship opportunities. Both local credential and work experiences were expected to be easily recognized by local employers. BCIT (British Columbia Institute of Technology) is the top choice for them. For example, a male engineer (013) described his plan. He wanted to take a class at BCIT, which he thought would be the most convincing proof of his command of local knowledge. With enhancement at BCIT, he believed that he would become a PEng in a few years. To avoid the long queue or higher admission requirements, they also connected with some other public, community colleges and private schools that could guarantee internship or cooperative programs. Both training in a professional education institution and internship or cooperative programs are believed to lead to a successful job in an engineering team, where one would be

able to work under a registered Canadian Professional Engineer (PEng) to learn how to be a PEng in Canada. In a word, an opportunity for an internship or co-op program is believed to provide local experience, local references, and more importantly, access to their professional field of training.

An engineer (013) who did framing work in a construction company told me that those who found professional entry-level jobs all attended local public or private schools for skill enhancement and internship opportunities. Indeed, many Chinese immigrant professionals take local schooling as a shortcut to return to their field of expertise. They certainly know what kind of social resources they would gain after completing the program. Just as a female architect (012) said:

Many people suggested to me that I should get help from teachers for a drafting job. I just felt too shy to ask for help in this matter. You know, most assignments were kept by the teachers. When you look for a job, you can present new employers with a reference from your teacher and your internship employers, or just your draft book in the company where you had your internship, and say: "These are my projects." Employers know what you are doing once they read your draft book, which is much more than any explanation.

One female engineer (018) provided me with a chronological record of her post-immigration life³²:

November 18, 2001: Landing

³² The informant wrote it in English and offered it to me as a reference. I just edited it by suppressing the name of the coffee shop.

January 2002: To study English at Britania Library
 January 15-30, 2002: Take job finding club for two weeks
 February 2002: Send resume door by door
 March-May 2002: Study English at VCC outreach
 October-December 2002: Coffee shop 7:00am -3:00pm
 Study at VCC 6:00pm-9:30pm...
 (I skip a few months)
 September 2004-June 25, 2005: Structural Drafting of Design at BCIT (10 months)
 June 1-June 24, 2005: Drop off resume door by door
 June 15, 2005: To Abbotsford for a drafting position interview,
 on the way home car accident at Surrey
 June 24, 2005: Got message from my boss
 June 25, 2005: 11:30am Interview for 40 minutes
 1:30pm Told my teacher at BCIT
 June 28 (Monday)-September 31, 2005: Draft person
 October 1, 2005-Now: Structural designer

We find from the above that she got an offer soon after she completed her program at BCIT. It is noticeable that the first person she called to share the good news was her instructor at BCIT. Clearly, we can find how skill enhancement facilitated this Chinese immigrant engineer in accessing her professional field. More importantly, we see how the local educational institution acted as an important hub for new skilled immigrants to get access to professional jobs.

Though educational institution is more open to recent Chinese immigrant engineers, not all can be admitted by the well-recognized local educational institutions, and the path to access this social resource is rather bumpy. In addition, I argue that the period of time for a degree may waste both existing the human capital of immigrant engineers and the social capital that supports the localization of human capital. Therefore, I suggest all stakeholders of the current immigration

programs take this into account when they address the employment issue of recent immigrant professionals. Some shorter and better targeted programs should be designed and delivered to these people.

Social capital resource to be activated: local professional association

If we consider individual social connections as direct resources, the aforementioned institutions or organizations have potential social resources if they can be utilized as a good platform to access or construct more social capital. Unlike other dedicated institutions, APEGBC (The Association of Professional Engineers and Geoscientists of BC), the local professional institution seems to be less proactive for the high-volume transfer of engineering human capital. It seems that APEGBC is underestimating the increasing numbers and the needs of immigrant engineers. One of my respondents (018) attended an APEGBC information session. She was told that there were twenty seats per session, three times a year. Luckily enough, she and her husband got the opportunity to participate in a session. My later telephone conversation with a senior administrator of APEGBC confirmed that APEGBC does not place any resources to mentor newly arrived immigrant engineers, despite the fact that APEGBC does provide recent Chinese immigrant engineers a Chinese version of "How to become Professional Engineers in Canada". From APEGBC side, they complain that both the federal and provincial government do not fund them to deliver services to recently arrived immigrant engineers. As

merely an advisory organization, they are seriously short of money to provide outreach services, unless new immigrants approach them. Considering the insufficient support from both immigrant settlement organizations and the local professional organizations, the Chinese immigrant engineers hope that more resources from local professional associations will be made available to facilitate their post-immigration career movement.

CCBIS (Canada China Building Industry Society), a voluntary organization of recent Chinese immigrant engineers, is still at the earliest stage of its development. In addition its non recognized position by APEGBC limits what it can offer to co-ethnic engineers. Nevertheless, CCBIS initiated contact with APEGBC for seminars, which gave a number of Chinese immigrant engineers an opportunity to learn the operations of local engineer licensing mechanisms. In short, the pressing needs from immigrant engineers call for collaboration between existing immigrant services, professional organizations, education institutions and, more importantly, the governmental agencies, to help recent immigrant professionals.

III) A brief summary

Social capital in a variety of voluntary associations in civil society, and/or social capital related to formal political institutions, is traditionally defined as social capital. Therefore, researchers have advocated “a multiplicity of ways” to

conceptualize social capital (Man, 2004). In this chapter, I tried to conceptualize social capital as of two types, institutional social capital and personal or other discursive social capital, according to what could be formed and mobilized. Both provide important platforms for sharing information, building social capital, and increasing human capital, to a lesser extent. Compared to personal ties that limit recent Chinese immigrants to a smaller social network, social capital generated from public institutions is more important to facilitate the integration of these highly skilled newcomers to Canada. Furthermore, a lot of research used to only emphasize the behaviour, motivation, and ability of individuals to join organizations, expand social connections, and eventually maximize social capital (Portes, 1998). However, the creation of social capital has a dual-directional result; it not only depends on individual initiatives, but also on the available facility and gestures of institutions. Clearly, the increasing demands from immigrant professionals have not been fully attended to in this regard. An uncoordinated structure of the concerned local institutions has resulted in “increased pressure” (Weick, 1976:13) on individual skilled immigrants to negotiate, formulate, and mobilize social capital in a new socio-economic context. To address the concerns of recent immigrant professionals, I call for coordination between the governmental agencies, immigrant services organizations, educational institutions, general and ethnic professional associations, and last but not least, local employers, to work together to provide access to a friendly employment environment. TRIEC, Toronto Region Immigrant

Employment Council, has set an example for engaging multiple stakeholders on board to enhance the economic integration of recent skilled immigrants. One of programs that TRIEC is sponsoring is called the “Mentoring Partnership”, a program aiming to match skilled immigrants with mentors: people in their field, established and connected in the Toronto workforce. At present, there are 41 corporate partners from which 1100 mentors are volunteering to assist newly arrived skilled immigrants seeking to return to their professional fields. Since February 2005, over 1440 matches have been made; more importantly, 650 skilled immigrant mentees have found full time employment in Greater Toronto.³³ From the initiatives by TRIEC, we can see how significant it is to involve institutional social resources in order to enhance the employability of recent highly skilled immigrant professionals, and help them contribute to the Canadian economy in a positive way.

³³ Please see www.TheMentoringPartnership.com. Source: Mr. Murray Coolican, Vice President in Corporate Affairs, Manulife Financial, on the 9th Metropolis Conference held from March 1st to March 4th, 2007 in Toronto.

Chapter Eight

Female Engineers: Every Little Bit Helps

The respondents for this study have reported that they always had a higher degree of anxiety in finding jobs shortly after their arrival, and female respondents were more pressed to take up whatever jobs were available to avoid extremely low financial security in the new country. Much research has demonstrated that the “economic vulnerability” of female skilled immigrants is a consequence of compound effects including “gendered and racialised institutional processes” of immigration, discrimination from Canadian employers, and of course overall labor market conditions (2004: 52).

Engineering has been a male-dominated profession, and the voices of female engineers have long been muted compared to those of their male counterparts. When I started my investigation, the percentage distribution between female and male engineers, five female Chinese immigrant engineers and twelve male engineers, whom I located at the job fair, seemed to prove that Chinese female engineers have unbalanced labor market participation. Nevertheless, five female engineers who agreed to take part in the study, plus one more I knew through their network, have revealed a different picture of highly skilled immigrant professionals.

Moreover, I found that a group of Chinese female engineers form the executive committee for a newly established voluntary engineer association. It further suggests the gender issue hidden behind the economic immigration scheme of Canada.

This chapter will first discuss the gender issue involved in the broader scheme of economic/skilled worker immigration. Afterwards, I will relate the stories of my respondents and the newly emerged Canada China Building Industry Society (CCBIS), a voluntary professional association organized by Chinese engineers from the building industry in China. To my interest, only Chinese female engineers came forward to run for election for the executive board of CCBIS, therefore, it is a team of Chinese female engineers who are leading CCBIS, a small professional association for Chinese and other immigrant professionals who intend to practice engineering in B.C.

I) Where are female skilled workers positioned?

A silenced and obscure group

When examining the gender bias embedded in the immigration policy and practices of Canada, I reviewed research revealing that female immigrants are excluded from the national economy where male skilled immigrants are destined for it (Thobani, 2000). Where are highly skilled Chinese female engineers being placed in the

national economy of Canada? I will look at these issues in this study and participate in the discussion of immigrant “deskilling” through a gender perspective.

Female engineers in my study

Before I got in touch with female engineers in the CCBIS (Canada China Building Industry Society), I had had six female engineers who took part in the first stage of my research. Coincidentally, all of them and their spouses were influenced by their colleagues or friends in terms of making the decision to emigrate from China to Canada. For example, one female engineer (012) and her husband accompanied a friend on a visit to an immigration agency, and they started thinking and decided to emigrate after being guaranteed a 100% chance of success immigration to Canada by an enthusiastic immigration agent. Therefore, except one (014), all applied for immigration with the help of immigration agencies in China.

To my interest, only one (007) out of the six came as a principal applicant because her husband had learned Russian instead of English as his second language throughout his education, and therefore his English literacy was limited at the time of their immigration application. To meet the language requirement for immigration under the skilled category, she became the principal applicant for the household, and her husband was listed as her dependent. Except for her, all of the rest came as dependents of their husbands.

Surprisingly, one female mechanical engineer (019) was not involved in the immigration application period at all throughout the three years during which her husband was enthusiastic about preparing a new life in Canada. However, her husband left Canada after failing to find an appropriate job a few months after landing. She was alone, subject to a poor economic situation as a single breadwinner and a split family in which she played a dual parenting role. Two years' physical separation eventually led them to divorce in mid 2005. For the sake of her daughter's education, the female engineer decided to stay in Canada, although she is clear about the un-/under-employment among recent Chinese skilled immigrants.

I found that all female engineers in this study have experienced a tremendous shift in terms of their economic role in their families. In China, they enjoyed the same privilege as an equal income source of their families, and they also had respected social status as well-established female professionals. However, once they entered the process of immigration to Canada, most of them became subordinate and their economic potential diminished without that being noticed. Only one among six was working in the engineering field by the time of interviews; one worked on a part-time basis in a grocery store; the other four all relied on savings or financial assistance from their husbands in China, which could be rather limited due to the shrunken value of their saving in Chinese currency after exchange to Canadian dollars. Compared with their spouses, they faced less opportunity of

career development for they had traded their career advancement for general labor jobs in Canada. Likewise, they maybe delayed gaining local education due to time-consuming and unpaid work in child care and house chores.

From the stories of female engineers above, it is obvious that immigration to Canada has complex effects on female immigrant professionals and their families. Phenomena such as family instability and downward change of their economic status were observed when I interviewed these female immigrant professionals. Apart from the change of their economic status in their families, how does immigration affect their career development? Research has found that there is a drop in occupational status as a result of immigration among female skilled immigrants, despite their educational attainment and professional backgrounds. Many female skilled workers have to play triple roles in their families: a subordinate breadwinner, an unpaid homemaker, and a child-care provider, therefore, it can be seen that their "power and status inside and outside the home actually deteriorated after they immigrated to Canada" (Man, 1996:292).

What is it like for the career pursuits of the female engineers whom I interviewed? I will present the individual experiences of the six engineers I found at the job fair and the four executive members of the CCBIS. A collective initiative of CCBIS for recent Chinese immigrant engineers will be addressed as well.

Among the six female engineers I interviewed in the first stage, three are in Canada with their families and two have one child each. Two among the remaining

engineers live with their child, and one lives alone while her husband and son are in China. See the following table:

Table 7. Female engineers and their families

Type I	Live with husband and a child	2
	Live with husband	1
Type II	Live with a child	2
	Live alone	1

One out of two female principal applicants started her job search not long ago, and is now babysitting her daughter while solely relying on her husband's Ph. D. stipend, on which they can barely make ends meet (007). Nevertheless, she is patiently waiting for any possibility of returning to her professional field in port construction. She is taking courses at BCIT to prepare herself to enter the local labor market.

I got an interview when I sent out the first résumé. I was lucky, you know. Before I hoped to wait until my daughter went to school, as she only went to day-care for three afternoons. Now, she has five afternoons in day-care, so I've got more time to apply for jobs. ...I heard that preparation is necessary. I blamed myself for the inadequate preparation [for the job interview].

I hadn't prepared well, so I didn't send out my resumes everywhere. I don't want to waste any interview. I am taking a drafting course at BCIT, computer-aided- drafting. I used that before and just want to systematically learn it while improving my listening skills and professional English. Tomorrow is the second class.

After a couple of interviews, she (007) has learned her weaknesses from the potential employer's feedback. Now, she is consciously strengthening those aspects and managing to be more competitive. She mentioned the male dominance of the engineering profession in Canada compared to the institute where she worked in China.

The number of female engineers here is much fewer than we had in China. ...In China, we all worked together and never distinguished between female or male. ...We all had to go to construction sites in China, though it wasn't easy for female engineers. An on-site engineer had to live there for two months.... Sometimes, we had frequent business trips, so we felt very bad about our children.

Her comments are rather interesting. On the one hand, this Chinese female engineer thought that there was less opportunity for female engineers in the Canadian engineering work force. In other words, Chinese female engineers might feel more pressure due to double barriers: as a new immigrant and as a female professional. On the other hand, female engineers do face the dual challenge of

being a mother and an engineer in a rather demanding profession. With less family support than they had in China, and either difficulty in finance or enrolment, many immigrant mothers choose to be child-care providers themselves. As a result, it can be foreseen that female engineers face more barriers in trying to return to their profession of expertise in Canada.

The hardship associated with immigration might destroy a family; on the other hand, the hardship might tie the family knot more tightly so that it can work to overcome post-migration difficulties. One female engineer (018) feels that she has become closer to her husband after three years' struggle with part-time jobs, child rearing, and full-time schooling at BCIT. Currently, they are both working in their professional field and they expect to apply soon for Professional Engineer in BC.

We had a tough time at the beginning. My husband took two part-time jobs during the day time, and went to class in the evening. He had been supporting the family and didn't go to BCIT until I graduated. I remember once my husband and I queued the whole night to wait for an English program. It was so cold, and we were told the next morning that they had cancelled the class.

Since both of us had worked for ten years or more in China, APEGBC should recognize our work experience. In that regard, my husband and I just need to prepare for an interview of one to two hours. They will look at what you did before asking you some questions. If you can answer all of them, it means that you are "professional" enough.

One female engineer (014) was left alone by her husband. She has gained a degree of freedom and independence, but she still feels contradictory. On one hand, she does not want to be separated with her husband for too long after hearing that many immigrants' families were broken by physical separation in two countries. On the other hand, she is eager to pursue career development in Canada. Therefore, she has set a deadline for both studying and job searching before she reunites with her family in China. She planned to go back to China and live with her family if she could not find a professional job in Canada. In May 2006, she received an offer after being trained to adapt to local industrial standards in a local college and BCIT. However, her family remains in China with no further plan to move to Canada yet:

Let's put it this way. Why do I want to finish the program as soon as possible? The money I brought with me will barely cover my study period. By that time, if I can find a job, the pressure will be relieved....As you may have known, many immigrants' families cannot be maintained...

Among the remaining two, however, both family life and occupational development are not pleasant. The husbands in both families left within a few months of arrival, and left them each with a child (012, 019). Two husbands could barely support their families in Canada with their rather limited salaries in China; therefore, these two female engineers had to work very hard while going to school

for some enhancement programs. The former's marriage is at stake, and the other got divorced in the fall of 2005.

One (012) told me that remote dominance and control still exist, despite the fact that her husband is not here in Vancouver. Her husband has been happy to see his wife do whatever jobs are available in Vancouver, while she still dreams of a professional job anywhere in Canada. She is upset about quarrelling with her husband on the phone, and also worrying about their growing child, who has become more and more withdrawn. The other female engineer (019) was passively led to Canada and stayed afterward according to her husband's instructions for the benefit of their daughter's education. Her sacrifice of a good job in China was not balanced by a strong bond between the couple, and her husband announced his desire to divorce after two years' separation. In consideration of her daughter's education, she decided to narrow down the geographical scope of her job searching, especially because she cannot drive, nor is she able to afford a car. To some extent, the parenting responsibilities challenge these female immigrant engineers and prevent them from seeking more educational and career opportunities (Waters, 2001:122-3).

Nonetheless, the female engineers in this study also reveal a different face from that of the power imbalance used to depict gender issues by feminist researchers. All females I interviewed in the first stage of the study view their drop

in occupational status with more positive attitudes and open minds. As mothers, they assign priority to staying with their children when they balance their children's educational needs with their occupational achievement. Meanwhile, they are more likely to prepare themselves for any unexpected opportunity of a long-term professional job in Canada, rather than move between Canada and China to be haunted by a question such as "to be or not to be". Unlike the frequently portrayed stereotype of female immigrants, these female engineers are very clear about what they want while they try to balance occupational development and parenting responsibilities. The financial backup from their husbands might explain why they are staying positive; however, I think their newly defined role as a subordinate breadwinner or an economic dependant to their husbands is more symbolic in consideration of balancing the family power relationships. While acknowledging the primary breadwinning status of their husbands, quite a few virtually support their families by taking menial jobs in grocery stores, restaurants, and garment factories. They admitted that they always pretend that they have enough money from their husband in order not to harm his self-esteem. In short, their image is rather ambiguous in the highly skilled labor market. Yet, they seem to be more persevering in pursuing upward occupational mobility in their new home.

II) Bowling alone or bowling together: a case study of CCBIS

When we discuss the position of female immigrants, “racialization of womanhood and femininity” (Cheng, 2004:61) is always at issue. However, the stereotype of female immigrant subjects was being challenged by the Chinese female engineers I interviewed before I established contact with the newly installed board of executives of CCBIS (Canada China Building Industry). All executives of this voluntary professional organization are female senior engineers from China, including three from Mainland China, one from Taiwan. Three of them met when they sought help from the Division for the Advancement of Women in Engineering and Geoscience (DAWEG) of APEGBC, the regulatory body for Professional Engineers (PEng) in B.C. After they met, they started to volunteer for CCBIS, a new professional association for recent immigrant engineers, particularly Chinese engineers in the building industry. Later on, through a few seminars organized by CCBIS, a few more female immigrant professionals participated in the organization. In December 2005, four Chinese female senior engineers were elected to the Executive Board for the 2005 to 2006 term.

On average, these four have been settled in Greater Vancouver for about two years, but they are very devoted to bridging Chinese immigrant engineers as a group (including those from Hong Kong, Taiwan, Singapore and other South East Asian countries) with the local authoritative professional organization, APEGBC. They

got involved a lot in many community activities and tried to let more people know about the great potential of these immigrant engineers. For example, they volunteered to help the former Liberal Industry Minister, current Minister of International Trade, David Emerson run for his elections. Afterward, they got a strong letter from David Emerson supporting their claim for Canadian PEng status to confront APEGBC, the gatekeeper to the engineering field in the province. Nevertheless, it took three months for APEGBC to respond to Mr. Emerson. Meanwhile, they made acquaintance with many local politicians through volunteering in their elections, and sought to gain sympathy and support so that their appeal could be heard by the governmental decision makers.

Apart from acting as a liaison between local Chinese immigrant engineers and APEGBC, CCBIS and its executive board also make efforts to connect the former with the professional organizations in China. One proposal that was put forward by the CCBIS to the Chinese government is that the Chinese engineering regulatory bodies should retain the professional qualifications of Chinese who emigrate to other countries. In so doing, they think that Chinese immigrant engineers would have more freedom to move elsewhere for their career development in a global economy. As the founder said:

I hope we will be able to participate more in the development of our society. Before, nobody came to talk to us. We didn't know what the APEGBC was either. You know, all of us who came here had experienced intensive competition, e.g., competition in China and competition with other skilled worker applicants to Canada. Eventually, we found that nobody cared about

our skilled group when we competed to come to Canada. ...We came because of our professional background, not language background, which reflects the incompatibility of Canadian policies. It's frustrating that our resourceful knowledge has not been fully utilized yet. If 200 to 300 Chinese engineers spoke together, the consequence would be absolutely different. The Chinese should change our outlook abroad. Not long ago, people referred to all Chinese migrants as businessmen. Now, even the Chinese government pays particular attention to our new overseas Chinese professionals.

We aim to become a professional society and bring the voice of Chinese engineers to the State Council of Canada.³⁴

In short, the female engineers of the CCBIS are very motivated to get in touch with the APEGBC for professional continuing study, information seminars and, in particular, the PEng application. However, CCBIS is a self-initiated professional organization; it does not have any funds to support itself. It has a donated office, but none of the executives can afford days or weeks as unpaid volunteers. The difficulty, therefore, is that APEGBC requires as an organization its own office and full-time staff; otherwise, APEGBC refuses to dialogue or commence any collaboration with CCBIS. Twice APEGBC staff was irritated when nobody could be found working in the so-called CCBIS office on a full-time basis. Thus, the collaboration between CCBIS and APEGBC has been on and off during the past years. Despite all of the difficulties they have encountered, a series of seminars were put forward to meet the rising needs of Chinese immigrant engineers through the great efforts of CCBIS. On December 2nd, 2006, they invited speakers

³⁴ Based on my telephone conversation with the founder on December 22, 2004.

from the B.C. Energy-Saving program and APEGBC to introduce rising job opportunities for Chinese immigrant engineers and discuss how to become a licensed Professional Engineer (PEng) in B.C.

When asked why they chose to serve this community, a senior female engineer from Taiwan (024) stated:

I only attend this professional organization here. I think the reasons that we four female engineers came together is:

First, I don't have living and economic pressure. You know, to volunteer takes lots of time and energy. Male engineers usually have a lot of work pressure and they know they will be able to leave for the US after three years' residence to get citizenship, or they can head back to Mainland China. So their choice put more weight on their personal freedom.

Second, as females in a male-dominant field, we experience different attitudes and expectations. So we were motivated a lot when we were in school. We always tried to achieve the most.

Third, I think females are less selfish, and they like to sacrifice and devote themselves to help others.

Most female engineers reported that they experienced a serious drop of economic status, for they earned a good salary and enjoyed respectful occupations in China. As a popular saying goes: Women hold up half of the sky in China! According to the *People's Daily*, the number of Chinese female engineers was 9.88 million- about 36.9 percent of all engineers in China by the end of the last century (*People's Daily*, 2004, November 15). Compared to female engineers in China, Canada has fewer comprising 5.5% of the total number of registered professional engineers by 1997 (CCPE, 1997). This, to some extent, demonstrates how hard it is

for female Chinese immigrant engineers to be accepted by the engineering regulatory body in Canada.

Interestingly enough, it is four female engineers who are standing up to represent the whole group of Chinese immigrant engineers in such a male-dominated field. Their negotiation of Chinese engineers' access to the Canadian engineering field and group representation in the broader Canadian society have stimulated an ambitious campaign to gain the deserved place of Chinese immigrant engineers in the economic scene of Canada, though it might take them quite a few years to achieve the goal.

As the founder of CCBIS said, if Chinese immigrant engineers could unite to appeal for acceptance of their experiences and skills by Canada, it would be more likely that the government and all its relevant organizations would respond with due attention. Every little bit will help the economic integration of Chinese immigrant engineers into the Canadian labor force. Moreover, the membership in professional associations will help transform the lives of female immigrant professionals and contribute to their career opportunities.

Chapter Nine

Retrospect and Prospects

I) Canada's demand for skilled people: in retrospect

The planned growth in the number of immigrants can be seen in demographic objectives for Canada, released annually. For example, the number of immigrants to Canada in 2006 is estimated at more than 260,000 —higher than the estimate for 2005. Since the Canadian baby boom generation is retiring and the Canadian birth rate remains low, a labor shortage has emerged in some business sectors³⁵ (Morton, September 16, 2006: F1; Andrews, October 13, 2006: F1), and it is believed that the labor shortage will intensify in ten to fifteen years and spread widely in the Canadian labor market.

Within Canada, the increase in immigrant populations in B.C. and Greater Vancouver has been substantial in the recent decade, 60 percent in the province and 80 percent in the Greater Vancouver region, compared to an increase of 39 percent in Canada as a whole. It is estimated that there will be over one million jobs

³⁵ For example, it is reported that B.C. restaurants suffered from 13 percent staff shortage in 2006. The skilled labor shortage is also observed in construction, high-tech companies, and transportation, according to a feature story "Employers sweeten the offer to lure and hold on to staff" *Vancouver Sun*. (Morton, September 16, 2006: F1; Andrews, October 13, 2006: F1).

awaiting people with skills by 2015, and immigrants are expected to make up 100 per cent of the population growth in B.C. by 2023.³⁶ Kerry Jothen, a Victoria-based human resources consultant, comments: "We desperately need skilled immigrants now and that need will intensify in the years to come" (Vancouver Sun, July 1, 2006:C8).

All the above suggest that there is a greater demand in Canada for people, especially people those destined for the local labor markets with their rich human capital, underscoring the implicit economic orientation of the Canadian immigration program. Canadian immigration is, therefore, primarily an economic issue, about how to make full use of transplanted human capital brought in by recent skilled immigrants. What should not be forgotten, however, is that the emphasis on "economic immigrants" overlooks or is not fully aware of aspects of racial or class inequality in the Canadian immigration progress (Abu-Laban, 1998). No matter what we say, the issue at present is to confront and solve the current problems that will have a profound impact on Canada's future. The labor shortage in Canada has started emerging in many fields. Currently Canada desperately needs more qualified skilled immigrants for a knowledge based economy. In order to have a strategic and

³⁶ According the speech of Patrick Wong, Minister of State for Immigration and Multicultural Services, on Feb.21,2005. http://www.cserv.gov.bc.ca/speeches/archive_speeches/wong/letters/

far-reaching plan facilitating the economic integration of recent skilled immigrants, I suggest that some aspects, such as human capital, social capital, and gender should be incorporated to examine the issues and provide insights with policy implications.

The dark side of economically oriented immigration programs

While hundreds and thousands of recent highly skilled immigrants already in Canada cannot be absorbed into the local labor market and are prepared to abandon their dreams and leave, many more are lining up to wait for a Canadian immigrant visa to find a better career and life in this welcoming land, as documented by the CTV program. The CTV program W-FIVE, on November 21st, 2005 that suggested that Canada has become a land of “broken promises” for recent highly skilled immigrants. Their decision to immigrate to Canada turns out to be “a failure of career improvement”, and these people with exceptional educational attainment and rich work experience cannot go anywhere. They are “locked out” and restricted to “dead-end jobs.” “If they are looking for people to do menial jobs, Canada should advertise what it is looking for.” “Canada is looking for slaves to do the menial jobs,” said one skilled immigrant couple to CTV who were suing the Canadian government for its false information in recruiting skilled immigrants. Ontario’s Minister of Citizenship and Immigration Michael Colle criticized the immigration system as “out of touch with the reality of the job market.... It’s like inviting someone for dinner to your home and you basically feed them crumbs and ask them

to wash dishes.” W-FIVE deliberately showed a website, <notcanada.com>, created by a group of desperate skilled immigrants which promotes a boycott of immigration to Canada. Eight reasons NOT to come to Canada are listed, and the primary one is “NO JOBS.” It is discouraging yet true that a country rolling out a welcoming carpet has become “a land of shattered dreams”, “where careers, finances and lives are destroyed.” ³⁷

With respect to a large number of Chinese-Canadian immigrant engineers, their higher economic potential for the Canadian economy is foreseeable only if this labor force at prime work age is given a ladder to access the Canadian labor market. However, the economic performance of recent skilled immigrants remains unsatisfying. They are marginalized in the Canadian labor market and distanced from the engineering sector for which they were trained in China. According to *Ming Pao Daily*, many skilled immigrants have been discouraged by the lack of occupational mobility, and over ten percent of disappointed immigrant professionals, mostly Chinese immigrants, have chosen to leave Canada (2006:A1).

There are some policy initiatives from the Canadian governments; however, none of them have been seen to make much change. Many just fragment the serious issue, so the employment situation of recent Chinese immigrant engineers, and

³⁷ The W-FIVE show by CTV can be accessed from <http://www.notcanada.com/notcanada.wmv>, and the script is at http://www.ctv.ca/servlet/ArticleNews/story/CTVNews/20051119/v5_broken_promises_051119/20051119?hub=WFive. Retrieved on September 8, 2006.

immigrant professionals at large, has not been improved significantly. The frequent succession of Ministers of Citizenship and Immigration, as well as rotation between the Liberal and Conservative Parties in the past few years, make it hard to have a far-reaching and strategic plan in terms of solving the underutilization of recent immigrant professionals. Recently, Olivia Chow, MP from the NDP (New Democratic Party) complained that the Conservative Party government betrayed their promises to set up a special agency for foreign credential recognition, and to set aside \$200 million for a bridging program and settlement services for recent skilled immigrants (Singtao Daily, Feb. 3, 2007: A11).

It is the federal government that set up the demographic objectives; however, it is provincial and municipal governments which have to meet the challenges emerging from waves of recent immigration and plays a more significant role in decision making. The negotiation of jurisdiction between the federal-provincial governments and the overemphasis on "regionalized policy making" (Peters, 1999:4) make it harder to form long-term federal-provincial cooperation and a "sufficient mechanism" (Lawson, 2005:131) to address the issue of recent skilled immigrants' underutilization. To look at Canadian employers at local levels, especially employers from small and middle organizations, the whole community has been oriented towards raw material exports, which means less leadership and coordination from government (Hayday, 2001). Moreover, with the backdrop of a non-interventionist governmental stance, professional associations like engineering

regulatory bodies are independently exerting their power through monopolizing professional membership (Johnson, 1972; Corfield, 1995). In short, the distinctive Canadian political-economic structure has resulted in divergent and incompatible policies and practices in handling the employment issue, and the failure underlines the dysfunction of “loosely coupling” (Weick, 1976) in Canadian society.

A second glimpse of the literature

A steep downward occupational mobility among recent Chinese highly skilled immigrants after immigration has been studied by many researchers (Zong, 1998; Lary and Luk, 1994; Li, 2001). Recent Chinese-Canadian immigrant engineers have constituted a larger proportion of skilled immigrants to Canada who came from Mainland China since 1996. This, as Thompson (2000) suggested, is a particular form of “region-of-origin-specific human capital” to Canada. As immigrants destined for the Canadian labor market, recent Chinese immigrant engineers have reason to be concerned about job availability and career development in the local labor market, as do prospective immigrants still in China. Moreover, many countries are now putting forward a variety of policy initiatives to attract highly skilled people, and it is therefore imperative for the Canadian governments “to be pro-active” (Guo and DeVoretz, 2005:30) in handling immigrants’ underutilization. In so doing, Canada can retain more highly skilled

immigrants for its economic competitiveness over a longer term. The skills of this immigrant labor force will erode over time if these immigrants cannot join the local labor market during their prime working years. Rather than waiting for a panacea-like solution to emerge in the future, we should figure out how to address the issue with gradual and meticulous steps.

Is racial inequality the only decisive yet invisible hand behind the scene (Smith & Jackson, 2002; Li, 1998)? Is it always correct to attribute unequal employment opportunities facing recent skilled immigrants to racial/ethnic inequality? Still, it seems virtually no effective way to solve the inequalities. Why it is so difficult to break-through a range of clearly identified “barriers” or “compounded barriers” (Zong, 1998; Geddie, 2002; Kazemipur, 2004)? Will foreign credential recognition be able to solve the employment difficulty of recent immigrant professionals all at once? It seems that the answers remain uncertain, and that none of the solutions for any single barrier would improve the whole situation. Rather than relying on quantitative data, this study has attempted to find out something that was missed by the previous research and in the Canadian settlement program.

This limitation seems clear from my study of highly skilled Chinese immigrants and their employment experiences and economic outcomes in Greater Vancouver. I would argue that some of the onus should have been borne by the Canadian governments, but it was left to other stake holders, such as professional

associations, employers in Canada, as well as recent skilled immigrants themselves as the assumption was made that this foreign trained skilled labor force would be sooner or later absorbed by the labor market itself.

In my view, to recognize foreign credentials might, to some extent, lead to a more immigrant friendly job market; however, it might not be adequate to pave the way for recent immigrant professionals to gain access their fields of expertise, unless Canadian governments at all levels are fully aware of their obligation to invest in localizing human capital which recently arrived skilled immigrants possess. Moreover, a long-term and strategic plan facilitating the knowledge and skill transfer of immigrant professionals is needed to ensure the economic inclusion of recent immigrant professionals.

II) Transforming relocated human capital: policy implications

As I have noted, several occupations in Canada will experience a severe shortage of skilled personnel due to the rapidly ageing society and lower birth rate. Engineering is one of these occupations³⁸. Ironically, many experienced immigrant engineers, in particular Chinese immigrant engineers, have been excluded from entering the engineering field in the Canadian labor market.

³⁸ According to Cantonese News, Multi-vision Television (Channel M) on February 21, 2006

Foreign credential recognition: does it work effectively?

The previous literature identified a spectrum of barriers, including but not limited to language ability, duration of residence in Canada, education and skill, foreign credential recognition, and weak immigration services, as well as lack of initiative from community and governmental levels. Foreign credential recognition is widely believed to be the most decisive factor in affecting the labor market integration of recent Chinese immigrant engineers. However, my findings suggest that the integration of recent highly skilled immigrants to the Canadian labor market is based upon the market valued human capital, including knowledge and skills fitting into the local labor market, as well as the relevant "Canadian experience".

In fact, every Chinese engineer I interviewed had to get his/her credentials assessed by the CCPE before they could be admitted to Canada under the skilled worker category. Though the accreditation above was for immigration purposes only, it represented a certain degree of recognition from the national professional organization in Canada. It suggested that these people with recognized engineering knowledge and skills by CCPE would be qualified to position themselves in the Canadian engineering labor force. Ironically, the initially decisive CCPE document became worthless after they became landed immigrants. The reality was sharply different from what they had understood before entering the country when they attempted to return to their professional fields.

It is absolutely proper to recognize foreign credentials, but the problem is whether such recognition will guide Chinese immigrant engineers into the local labor market effectively. It seems that we should test foreign credential recognition at three levels. If the Canadian government had not recognized the foreign credentials possessed by Chinese immigrant professionals, they would not have been admitted to the country. At the local employers' level, immigrants would not have faced any legal or ethnic barriers to obtaining job offers at the entry level on engineering teams for immigrant professionals, as long as they thought a skilled immigrant was qualified to perform technical duties. In light of professional engineer associations, such as APEGBC, recognizing a foreign engineer's credentials is different from granting a local practising license to her/him. In other words, foreign credential recognition would be a helpful part but not equal to accreditation with "PEng" status, because a qualified professional engineer has to demonstrate his/her analytical, coordinating, and executive ability through hands-on experience, according to APEGBC. To some extent, to recognize foreign credentials is very important, but it is not essential for becoming a Canadian PEng.

One person's experience tells that ten years' work experience outside of Canada is a demarcation in terms of how a foreign engineer is licensed by APEGBC. With ten years engineering experience in China, she (019) was exempted from all examinations that others with less than ten years' experience are obligated to write to become a Professional Engineer. She needed two things to be licensed in

BC: first, she had to have one year's work experience in engineering services under a registered PEng; second, she was required to attend an interview to explain the projects she had done both in China and Canada by detailing the difference between the industrial codes in the two countries and, the professional ethnics to which she had to adhere. Interestingly, once she had a job in engineering services, she became eligible to be a potential candidate of PEng. She skipped the process of credential recognition by sharpening her language and local specific skills through a local professional education institution, and demonstrated a more efficient path of career development in Canada.

If we look at Figure 10, it appears that foreign credential recognition only takes place at the level of a post-immigration career path for a Chinese immigrant engineer, since it is only the "paper" credential that is recognized. Therefore, its role to ensure an upward occupational mobility of immigrant engineers is somewhat doubted. Most respondents in my study face the biggest hurdle to be embraced by the Canadian labor market, which is to gain more than one year's mentored experience under a registered Canadian Professional Engineer (PEng). Without proven work experience, Canadian employers are usually reluctant to provide "access" to the engineering profession for these highly skilled immigrants. Without access to their professional field, it is extremely hard to meet the requirement of mentored engineering work experience mandated by the Canadian engineering regulatory bodies, APEGBC in B.C. It is just like a "catch-22" that needs to be

broken through. Unlike researchers who believe foreign credential recognition will make a substantial difference, I think my proposition regarding continual investment in localizing foreign gained human capital seems to provide a rationale for the economic inclusion of recent Chinese immigrant engineers. In other words, more efforts should be made to work out a strategic long-term plan that deals with the issue in a holistic fashion.

Figure 10. A diagram of the occupational mobility of Chinese immigrant engineers



Post-immigration development in human capital: it matters!

With respect to Chinese immigrant engineers, my research findings confirm that they continue to be penalized economically, but for a lack of “Canadian experience” in the engineering sector of Canadian labor market, rather than non-recognition of foreign credentials. Despite their work experiences outside Canada, the majority cannot yet find access to engineering jobs, those that are commensurate with their pre-immigration work. Thus, as an alternative, many of my respondents have to return to Canadian schools in order to arm themselves with better English, local specific industrial knowledge and skills, an acceptable Canadian degree/diploma, and in particular, the invaluable opportunity to gain access to their profession of training through internship or cooperative programs, which are all at their own costly investment in time and finance. It is their choice to return to Canadian educational institutions in response to the labor market requirements, and obtain better economic outcomes by this means of “re-training” that have been observed among my respondents. Chinese immigrant engineers who have gone through the self-initiative “re-training” have demonstrated a relatively smooth road of career development. In other words, the post-immigration development in human capital does play a key role in leading to upward occupational mobility of recent Chinese immigrant engineers. It provides insights

regarding how to measure the economic performance of the recent highly skilled by incorporating both pre- and post-immigration human capital stock.

Human capital is not static, but undergoes continuous changes in response to the changes of occupational environment. Its trajectory of development is not only in a temporal manner, where many studies pay more attention to its longitudinal development, but also in a spatial fashion to react to the geographic change of the labor market. In this sense, when we measure the economic attainment of recent skilled immigrants, we should pay more attention to the post-immigration development of human capital, rather than merely connect the human capital at the time of immigration with its economic outcomes. Many respondents of my study tell that they have initial difficulty in local industrial codes and job place communication, although they do had rich work experiences in China. Meanwhile, the respondents who have gained certain industrial experience through cooperative programs or internship in the Canadian schools are apt to be more adaptive to the Canadian labor market, and are also on the right track to pursue licensing as a PEng in Canada.

Admittedly, they do familiarize themselves with local industrial codes, improve their professional English and gain precious access to their professional field; however, the entire process of getting a Canadian degree or diploma certainly delays these engineering immigrants from entering their professional fields, where there is a greater demand for engineers these days in Canada. In addition, the costs

in pursuing Canadian education might further push them away from economic self-sufficiency, now that they have not been well established in Canada in an economic sense. Therefore, I argue that these highly skilled immigrant professionals require a more holistic and tailored approach with an expectation that governmental investment will lead to a convergence of human capital gained abroad with Canadian standards and practice.

Human Capital for Canada: No Pay, No Gain

Credential recognition has been considered the key to solving the underutilization of recent skilled immigration. In the past few years, the Canadian governments at different levels have been attempting to target credential recognition as a way to resolve this difficulty. The issue is how well it works. A government-sponsored program for internationally trained workers was launched two years ago. It includes an implementation program called the Foreign Credential Program (FCP). If the FCP was indeed resolving the problem, we would see more and more Chinese immigrant engineers finding work in their profession of training. They would also have been more readily accepted by the local professional association, APEGBC. This has not happened and the situation remains: one in which local employers in the engineering service sector would rather wait until the local engineering regulatory body has granted local credentials to these foreign trained engineers; on the other hand, the local engineering regulatory body waits to

award these skilled people a PEng title until they have obtained a minimum of one year of experience in Canadian work place. As a result, a number of Chinese immigrant engineers are still displaced, deskilled, and mismatched in the Canadian labor market.

Apart from those with Canadian education and work experience, 13 Chinese immigrant engineers I interviewed remain hard-pressed to find a professional job. There is still a long road ahead of them to become licensed by APEGBC since they have to go through a lengthy process of application. Moreover, none of them seems to have known the program of foreign credential recognition, and none of them has ever succeeded in getting their credentials recognized and still have not through the newly launched program. In this sense, we may have to question whether the governmental investment in newly arrived skilled immigrants is placed where it is most needed.

My respondents complain that there is no job related information or guidance for immigrant professionals, no funded English programs at the appropriate levels, no programs providing profession access which are not time- and money-consuming. They claim that the Canadian governments just increase employment opportunities for Canadian people who can sit in offices to deal with the employment difficulties of skilled immigrants, providing less investment that directly affects immigrants' occupational mobility. Therefore, this study calls for investment from the Canadian governments to support the post-immigration

development of human capital in order to increase the transferability of transnational human capital and benefit Canada's economy to a greater extent.

Many seem to be still unclear as to what kind of people Canada will need for a knowledge-based economy in an increasingly globalized and competitive world. For example, Roslyn Kunin, a Vancouver labor economist said:

It's hard to find a business that doesn't have a help wanted sign. We have a significant labor shortage because the economy's at capacity and we don't have enough people to do what needs to be done (*Vancouver Sun*, 2006:C8).

It seems that the labor shortage only exists in those shops or restaurants that need low-skilled and low-paid workers to do menial jobs, although the official rhetoric is to attract the brightest, most highly skilled immigrants to Canada. Reasoning along these lines, recent skilled immigrants who had excellent professional standing outside Canada could only become the most knowledgeable and skilled waiter/waitresses, shop assistants, warehouse workers and pizza deliverers, as if that is what Canada and the province of B.C. needed.

By the same token, Kunin's opinion represents how Canadian scholars view the issue of human capital: "We need skilled people who can immediately enter the work-force." To a great extent, knowledge and skills in many industrial sectors are transferable, but human capital does have its special features that are locally specific and continually developed in some aspects. To make the best utilization of human capital, Canada should think of how to facilitate the transfer of human

capital by taking part in investing, training, and upgrading the knowledge and skills introduced by its recent skilled immigrants.

I strongly suggest that human capital brought in by Chinese immigrant engineers should be transformed to the local market with all around support, particularly financial assistance, being offered by the Canadian governments at different levels. Canada can only utilize this highly skilled labor force by seriously investing in the continuing development of immigrants' human capital, and pledge to make in-depth efforts to ensure the sustainability of human capital stock in a knowledge-based economy.

One example will illustrate what is neglected when the governments offer a settlement program for new immigrants. My respondents reported that they were always over-qualified and excluded from the free ESL programs from levels one to three. What they lack is not a subsidized ESL program at the "ABC" level, but customized professional English programs that can quickly equip them to communicate effectively in the workplace. Likewise, they need more financial assistance to receive professional training to gear up to the industrial standards of the Canadian labor market. More importantly, they are calling for an integrated long-term plan that engages all concerned stakeholders in the society.

This study argues that non-recognition of foreign credentials is parallel to the inadequate English programs offered by both provincial and federal governments, as well as the lack of opportunity for these people to obtain local

experience. In other words, immigrants' English is not being improved to allow them to adapt to work place after foreign credentials are recognized. Likewise, these highly skilled immigrants do not gain any local experience to be licensed as PEngs, even if their foreign credentials are recognized. It is likely that every immigrant experiences downward occupational mobility after immigration. The curve for immigrants from countries that differ more in language, occupational requirements, and labour market structure is much steeper than for immigrants from countries similar to the destination society (Chiswick et al., 2003). It is especially significant in Canada, because Canada has been attracting immigrants from non-traditional immigration source countries in Asia rather than countries in Europe, which makes the localization of Canadian training more imperative. Therefore, this study advocates awareness of continual investments in human capital from the Canadian side, efforts to create an immigrant-friendly environment full of collaborative institutional resources, a long-term, integrated and equitable plan to benefit both recent immigrant professionals and the Canadian economy.

There is a high volume of human capital transference from recent Chinese engineers to the Canadian labor market, but many highly skilled engineers are still excluded from the Canadian workforce. To recognize foreign credentials might be the very first step in welcoming this growing foreign-trained labor force, yet there should be other long-term, joint efforts to optimize the available facilities and enhance the career development of immigrant professionals.

To conclude, this research is an effort to draw particular attention to an overlooked dimension of human capital development. I agree with Schultz in terms of his statement that human capital “adjusts to changing job opportunities” (1961:9). I argue that human capital is responsive to both temporal and geographical changes, and it should be examined on both a longitudinal and a spatial axis. The continuous development of human capital is also a “social process” (Mazumdar & Paul, 1991), therefore, it requires joint investment beyond the private investment of people who own it. In other words, human capital should be a continual process of investing, customizing, sharing, and benefiting, based upon joint initiatives from immigrants themselves and other stakeholders involved. No pay, no gain! Canada should not enjoy the end product of human capital derived from the joint investment of immigrant professionals and their countries of origin. In this sense, I believe there is much more to be done by Canadian governmental agencies, immigrant services, and professional associations. Rather than putting all resources into recognizing foreign credentials, a clear vision of investing to localize transnational human capital should be inherent in the strategic plan of economic integration of recent immigrant professionals.

II) Social capital: make it access friendly

Factors that affect social capital acquisition

As has been noted, the Chinese immigrant engineers whom I interviewed did not count non-recognition of foreign credential as the foremost issue of their lower employability. Rather, they admit the differences in industrial codes and work place practices in two countries, and they are eager to improve the English they use in the work place. They complained about the reluctance of local employers to hire with just basic training, and APEGBC's reluctance to license them without appropriate career advising and mentorship. More importantly, they resent being offered questionable information about the Canadian labor market, the nonexistence of the appropriate ESL program for immigrant professionals, limited financial assistance for localizing their knowledge and skills, as well as the disconnected and superficial approach of the Canadian governments to engage all concerned stakeholders for visible improvement.

To summarize, a lack of financial assistance for recent skilled immigrants to upgrade their skills in educational institutions, insufficient career advising services for immigrant professionals, and inadequate English programs to really help them return to their professional field, all have impeded the recently arrived immigrant professionals in attempting to overcome barriers in language and local industrial experience. These Chinese immigrant engineers require a coherent and long-term

mechanism to remedy the problems by providing consistent financial assistance by linking all pertinent parties, such as professional regulatory institutions, local employers, and professional career service organizations. They have a strong belief that they will be able join the local labor force in their trained field, as long as the Canadian government has an integrated plan to assist them in different stages of their post-immigration life in Canada.

By directly interacting with the officials from the governmental funding agencies, I found that the distribution of resources for general initial settlement and for skilled-worker integration is disproportional, and the skilled immigrants receive less attention and resources, despite the fact that the whole Canadian immigration scheme is fairly economically oriented. It seems that the neo-liberal governments have left the decision of inclusion or exclusion of skilled immigrants to Canadian businesses. As a result, a great number of immigrant professionals are left to survive on their own with little support, guidance or other necessary intervention.

Amplifying social capital

As previously mentioned, better social capital could help diversify information resources, and increase employment opportunities and economic returns. Likewise, recent immigrant engineers need to gain more social capital, share occupational information, and achieve economic returns. Immigrant service organizations, professional associations, and local training institutes are all

considered important social fields and training grounds for people's participation in and expansion of their social networks.

Controlling the hiring and accrediting process respectively, both local employers and engineering professional organizations play gatekeeper roles in determining whether a Chinese immigrant engineer can enter his/her specialized field. However, both have limited knowledge of non-Canadian industry codes and development or they are just reluctant to know more, which may lead to questionable judgment of the ability and potential of these Chinese immigrant engineers with rich human capital. Therefore, it is necessary for industry-oriented dialogues to take place between Canadian industries and Chinese industries. Industry showcases at different levels might create opportunities for immigrant professionals to directly interact with local employers and professional organizations, such as APEGBC. Doing so could help alleviate the latter's doubts and create potential matches.

The Canadian local educational institutions seem to be more proactive in delivering programs for newly arrived skilled immigrants. My direct interactions with senior administrators from BCIT and a private institution that specializes in providing training for E.I. recipients show that they have all conducted research in this regard, and are initiating some programs to assist the human capital transfer of skilled immigrants. However, it seems to me that there is less cooperation between

educational institutions with other key stakeholders, such as professional regulatory bodies and immigration services.

Immigration services also play an indispensable role in influencing the economic integration of skilled immigrants. However, my respondents seem not to be satisfied with the services they received. They question the “quantity” rather than “quality oriented” services provided by a range of immigration services. They acknowledge substantial help from the immigration services, but they feel that many immigration services only are concerned about whether they can find a job, but not how well the job is commensurate with their knowledge and skills. In other words, immigration services only measure the quantity of immigrants whom they have helped, but not the quality of assistance they have provided to them.

All above call for governmental initiatives to put forward more supportive policies and advocate collaborations between other stakeholders, which would help recent skilled immigrants to acquire and build social capital in a more effective manner. To be precise, the government might well put forward special incentive programs to encourage local employers to hire more recent immigrant professionals through tax breaks in order to minimize the former’s hiring risks. Similarly, by means of a short-term wage subsidy for on-the-job training or access to their professional field as engineering trainees, professional associations, such as APEGBC, would be ensured of having other stakeholders on board, and therefore they would be an accountable source of referral to provide a training field for future

Canadian engineers. Under a context where all stakeholders cooperate to share any risk that might possibly emerge, immigrant professionals would take advantage of collaborative institutional social capital and therefore, transfer their human capital, both accumulated and newly gained, to the Canadian labor force.

It is certainly a big stride forward to have new programs to assist the human capital transfer of recent immigrant professionals, especially Chinese immigrant engineers in this study. However, we find that both federal and provincial government do not have a long-term and integrated plan for ten, twenty, and thirty years when Canada will need a skilled labor force the most. In August 2006, the province of B.C. announced an increase of 400 candidates for the Provincial Nominee Program (PNP) so that immigrants from certain occupations could enter Canada quickly to fill the labor shortage (Dawa Business, 2006b:A1). Meanwhile, the federal government and B.C. expect to increase the number of non-immigrant foreign labors to meet the demands of people in the local labor market (Dawa Business, 2006a:A1). Both ongoing programs may partially help improve the labor shortage, but both showed little attention to the problems that recent skilled immigrants who are already in Canada are experiencing.

In looking at the experiences of Chinese immigrant engineers closely, it is not difficult to find that hiring risk is one of the great concerns of local employers in small- or medium-size businesses when they decide to choose a local born or a foreign trained candidate. It is most likely that local employers in small and medium

companies can neither afford the on-the-job training costs, nor will foresee any benefits from the investment on foreign trained professionals. Therefore, the local employers of small- or medium-size businesses deserve some incentive policies to ensure less of a hiring risk in offering jobs to newly arrived immigrant professionals. Professional associations, such as APEGBC, as suggested by a human resource consultant, are “enabled by provincial legislations, so the provincial governments should push them to become more flexible” (Vancouver Sun, 2006:C8). In addition, immigrant professionals usually wait quite a while for the approval of permanent residence, thus customized, off-shore programs might be helpful for any prospective immigrants to prepare themselves before they actually arrive in Canada. This may save the time that an immigrant professional usually spends going through the whole thing all over again in Canada.

Social capital: positive gestures

The Good news is that the B.C. government has responded to the call from skilled immigrants by launching a new program, B.C. Skill Connect, to increase the employability of over 5,000 immigrants. A total of \$14.5 million will be invested to provide one-on-one pre-employment support including academic skills and English upgrading; and post-employment support, including on-site technical English upgrading, skills training and mentoring. The partnership includes colleges,

employer clients, and immigration service organizations. ³⁹Fortunately, engineering is one of the favoured categories of the program. Unfortunately, only four categories will be benefited, including skilled immigrants from engineering, construction, nursing, and pharmacy. For example, the government of B.C. will pay \$5,280 per person for those who have lived in Canada less than five years, have a good command of English, and have expertise in construction and/or hydro to undertake an internship in BC Hydro, a leading company and employer in B.C. “A job is precious; the worker is precious,” commented Carole Taylor, Finance Minister of BC on July 7, 2006 at the launching ceremony of this encouraging initiative reported by Channel M.

“ArriveBC” is another ongoing Skills Connect Program, funded by the B.C. Ministry of Economic Development, and jointly offered by Back in Motion and MOSAIC. However, ArriveBC only selects immigrants with an intermediate level of English language skills, who have had experience in occupations related to construction or transportation, are new to Canada within the last five years, and have had at least five years’ work experience prior to entering Canada. ⁴⁰

³⁹ “New program will help skilled immigrants find jobs.” For immediate release. Ministry of Community, Aboriginal and Women's Services. 2005MCAWS0010-000141. Feb. 12, 2005. www.gov.bc.ca.

⁴⁰ According to “ArriveBC Fast Facts” by ArriveBC. August 31, 2006.

It is reassuring that there is an increased awareness of maximizing the economic potential of these highly skilled people by investing in their human capital and helping forge social capital. However, compared with 35,000 skilled immigrants to B.C. every year, only 5,000 immigrant professionals in total from four categories will benefit from this policy initiative over the next three years. It is certainly out of touch with the orientation of current immigration programs that admit immigrants based upon general adaptive ability, such as language, rather than favoring certain occupations. In this sense, the practice itself goes backward and walks away from the theme of the immigration scheme. How do skilled immigrants other than the four prioritized groups face the newly created inequality within recent immigrants as a whole? What is the rationale for only including immigrants who arrived in Canada within five years while abandoning a lot of others who came before January 1, 2001? What kind of program do we need to fully embrace all skilled immigrants who have the potential to contribute to the Canadian economy, a program with an abrupt cut off line, or an open program providing more access? Will there be any other bridging programs available to all immigrant professionals? Should Canadian governments at both the federal and provincial level think about a systematic plan for the longer term, such as ten years, twenty years, and thirty years? All these questions should be given due attention. We certainly anticipate that more programs of this kind with far-reaching vision will be launched to help highly skilled immigrant professionals successfully find positions and utilize their

knowledge and skills to benefit their own career development and the Canadian economy when the serious labor shortage emerges.

III) Gender matters

By examining the employment experience of recent Chinese immigrant engineers in Vancouver, this study confirms some findings of the gender literature, that is, almost all female immigrant engineers experienced a drop in their economic status, and they are also overshadowed by their male counterparts whom the Canadian immigration program prefers. Other than the earning gap, power disparity, and social status noted by many studies, there is an overlooked dimension in terms of the dynamic within female highly skilled immigrants. They used to very competitive in work as respected women professionals in their country of origin in spite of commonly existing gender bias. Will they only compromise with the employment reality in Canada, or will they take steps to change their disadvantages in gender and as visible minorities in the host society? Few studies have ever investigated the issue in this regard.

Gender matters: Chinese female engineers in Canada

As mentioned in Chapter eight, female engineers constitute approximately 40 percent in the Chinese engineering labor force, although a number of female engineers in China are often promoted to managerial positions with fewer practising

duties. Regardless, they play essential roles in the country's economy and enjoy stronger decision power so that can compete with their male counterparts.

Compared with China, the percentage of Canadian female engineers in the overall engineering labor force is below 10 percent, which may explain the dual difficulties that recent Chinese female engineers experience after their immigration to Canada.

Quite a few Chinese female engineers complained to me that the gender inequality in Canadian is severer than in China. However, few decide to withdraw themselves from the Canadian labor market, but rather they keep their wits about them.

Moreover, they persist in pursuing access to their field by improving themselves in an all around manner. One explanation might be that they have got used to overcoming gender disadvantages by learning tactics in China, since China per se is a country that has deeply rooted cultural preferences for men over women.

Gender matters: CCBIS, a springboard that serves all immigrant engineers

My gender related finding suggests that gender meaning is far more complex than it appears in many studies. Rather than being shaped as an oppressed group, they see their higher awareness as allowing them to gain control of personal career development while balancing their family needs. CCBIS, Canada China Building Industry Society, is a clear example to demonstrate pursuits and efforts in this regard.

It is four Chinese female engineers who have currently assumed the leadership of the society. These four engineers, as has been indicated, were all senior engineers, the highest engineering ranking. Three are from Mainland China, one is from Taiwan, and all four served the largest scale state-owned business, and they played rather important roles in decision making for mega projects. They also mastered the most advanced technology that stands for the global industry trend, though it might not be suitable to the Canadian labor market. The organization itself experienced lots of difficulties because of personnel changes, and as a result, quite a few male engineers left. These female engineers remain there, under the same circumstances that their male counterparts could not tolerate, no financial assistance, no income, tough negotiations with APEGBC, educational institutions, and some local employers.

By extending the limited service from APEGBC, CCBIS offered more seminars regarding the engineering profession in Canada. By writing reports to introduce a Chinese engineer licensing system and demonstrate roles that they will be able to play when Canada is trying to export its engineering services worldwide, they provided important information for Canadian engineering regulatory bodies and proved their value as Chinese engineers whose country is experiencing tremendous change in infrastructural construction. By assisting educational institutions in designing customized engineering programs, they have reached rather far to help foreign trained engineers. More importantly, what they have done has

gained them a good reputation among recently arrived Chinese immigrant engineers, as well as immigrant engineers from other Asian-Pacific countries.

As new immigrants and female skilled immigrants, they are facing dual disadvantages to return to their profession of training. However, the self-driven behaviour of a group of Chinese female engineers in mobilizing social capital has demonstrated how they have altered the circumstances that disadvantage them as new immigrants and female immigrants to the host society. Moreover, it reveals an overlooked aspect of the gender dynamic in a broader transnational context.

IV) Future studies

This study revolved around the issue of Chinese immigrant engineers and their experience in seeking professional jobs in Vancouver, Canada. There are innumerable anecdotes that relate the experiences of Chinese immigrant professionals in terms of downward occupational mobility and socio-economic exclusion. It seems that the stringent pre-migration selection and lax post-migration programs have contributed to the employment difficulties of recent immigrant professionals. The purpose of this study is to call for an integrated and long-term plan with joint efforts to improve the situation of un-or under-employment among recent skilled immigration.

I find that my respondents tended to move between major cities in Canada, such as Toronto, Vancouver and Montreal, within the first two years of arrival, despite their willingness to work anywhere in Canada where jobs in their professional field are available. Therefore, my research in future will seek to discover whether the heavy strain of immigration on the large cities of Canada worsens the economic performance of recent immigrant professionals. For example, how do we measure whether local labor markets have the capacity to accommodate these new arrivals?

Many studies declare that employment inequality does exist, which explains why local employers are unlikely to hire skilled immigrants. However, this study finds that the Chinese engineer participants showed their understanding of local employers' hiring practices. They feel they were treated with respect and rewarded respectfully if an interview or a job was offered by a local Canadian employer. Interestingly, they imply that discrimination and exploitation are likely to take place between them and employers of Chinese origin. Hong Kong employers, in particular, cause them difficulties. In the near future, it would be interesting to compare the hiring styles of Canadian-born employers and earlier Chinese origin employers, as well as how the internal diversity of the Chinese community shapes the employment experiences of recent immigrant professionals. Something missing from this study, unfortunately, is the perspective and hiring practices of local

employers due to my limited time and financial resources when conducting research.

I hope to focus on this aspect in the future.

A survey in 2002 regarding recent Chinese immigrant professionals found that only twenty percent of the 1,345 participants indicated they would remain in Canada after obtaining Canadian citizenship (World Journal, 2003). The frustration of status dislocation has spurred many male Chinese immigrant professionals to return to China, a phenomenon called “inverted-flow” (*Huilu*). A few respondents in this study are currently “astronaut” (*Taikong ren*) or moving between China and Canada to keep their professional and social standing. A few female engineers and their families are negatively influenced by such kinds of family arrangements when husbands fly between two countries sacrificing for the better education and future of their children in Canada. How will such family arrangements affect the second generation? I expect to conduct research in this regard.

In Chapter Eight, I provided a brief introduction to a group of four female civil engineers and their initiative to bring the voice of Chinese engineering professionals to the Canadian government and the wider public. Through their negotiation of access to the Canadian engineering field and group representation in the broader Canadian society, they have embarked upon a meaningful campaign to gain the deserved place of Chinese immigrant engineers in Canada. How such an ethnic social organization helps recent Chinese skilled immigrants to maximize

their social resources and amplify their voice will be an interesting topic that will be extended from this study.

Rather than assume that human capital brought in by recent immigrant professionals can be immediately utilized in the Canadian scenario, this study calls for a holistic approach to look at the issue, an articulated process leading to employment opportunity and professional status, as well as joint investment to facilitate the transfer of foreign gained human capital to local labor markets. Moreover, it is a challenge to researchers, policy makers, and immigrant services to think about how to plan for the next decade of the Canadian economy in terms of labor market integration of recent skilled immigrants, which I believe will be a gauge of the success or failure of Canada's immigration policy in this century.

Postscript

From time to time, I did have ideas that flashed through my mind while I was writing my dissertation chapter by chapter, but I can hardly develop those ideas in length and depth. It seems to me that any one of these ideas seems to require more evidence deriving from other independent research projects, which would go beyond what the current Behavioral Ethical Review allowed me. However, I believe these ideas will motivate me to explore a range of new issues which I can continue to work with after the dissertation. When I was writing the conclusion to the dissertation, two issues were puzzling me, and I am wrestling to keep a balance between puzzlement and my position as a critical researcher.

I started the research indicating that the racial inequality that Chinese immigrants still experience in Canadian society occurs in a discursive and invisible form. In this sense, employment inequality is just one of the embodiments of general racial inequality existing between a White Canada and visible minority immigrants. Therefore, it plays a part in the “dislocation/deskilling” of recent immigrant professionals when they attempt to integrate themselves into the local labor market. Based upon this presumption, I designed questions to assess how recent Chinese immigrant engineers evaluated their experience with local

employers and other social actors, and to what degree they felt discrimination. I expected that a considerable number of Chinese immigrant engineers would complain that they were not being treated equally to their local born counterparts, primarily White Canadians, or Westerners (*xi ren*)⁴¹.

However, when I posed the questions to them during the interviews, none of them reported that they had experienced discrimination or unequal treatment. The most critical comments were that the whole Canadian labor market and local employers are very conservative and refuse to change due to a deeply rooted British colonial tradition. People who worked for local "*xi ren*" employers felt lucky that they could work for a good salary and be treated equally and respectfully. To work in an engineering services company owned by a "*xi ren*" boss is symbolic for it might begin their journey to formally integrate in the Canadian society. By contrast, those informants who worked for immigrant employers of Chinese origin always complained that they were poorly paid and had to work longer. Moreover, they resented the emotional bullying from their employers of Hong Kong or Taiwanese origin. They suggested that their Hong Kong and Taiwan employers insulted them in the work place by putting them in an inferior socio-economic position as newcomers with inadequate financial capital and few opportunities for economic advancement. The ethnic niche and co-ethnic linkage did not offer recent Chinese

⁴¹ Many Chinese immigrants call local white Canadians as "*xi ren*", it literally means Western people, in order to differentiate from their Oriental origin.

immigrant engineers any advantage. Frequently they longed for an opportunity to be hired by local “*xi ren*” employers. My hypothesis was shaken by the responses from my informants who offered their judgment in light of their true experiences, and I started reflecting on the causality between informants’ oral accounts and scholarly interpretation. I believe it would be accurate if I asserted that racial inequality did contribute to the employment difficulties of recent-immigrant professionals.

However, I could hardly capture any sense of grievance for discrimination or other forms of social inequality, despite the fact that my informants were unhappy in being misinformed as to the real employment situation in Canada. Nevertheless, I constantly interrogated my obligatory role as an analytical researcher expected to go beyond the surface “truth” to discover the nuanced “truth” beneath.

While my materials accumulated over the past two to three years, I never removed my eyes from any ongoing changes in the immigrant settlement programs in B.C. and Canada in general. Some local industrial sectors reported that they had become aware of “a tightening supply of talented workers” (Morton, 2006, September 16: F4). As a result, some local employers are “sweeten(ing) the offer” to “deal with a growing shortage of workers that’s expected to intensify in the coming years” (ibid). There is a five percent increase in demand for workers in engineering and technological sectors respectively. It seems that recent Chinese immigrant engineers are likely to benefit from the labor shortage, if the job market in the engineering sector remains buoyant. Meanwhile, through interactions with

local educational institutions, I observed their engagement in responsive curricular development and delivering a range of appropriate programs to recent skilled immigrants. For example, public post-secondary institutions across B.C. are offering a new course, called Communication for Engineering and Technology. The goal of the program is to enhance the social and cultural communication skills of immigrant professionals in English, so that they can realize their fullest potential in work places. In addition, financial need based funding is also available to facilitate these highly skilled immigrants in paying tuition, purchasing books and subsidizing transportation costs, according to the Minister of Advanced Education in B.C., Murrey Coell (2006, September 20: A 19). Things are turning in a better direction, although not all stake holders are involved, such as the Association of Professional Engineers and Geoscientists of B.C. (APEGBC), which determines the standards of engineering licensing.

I am delighted with all these positive changes; however, I cannot help but ask myself whether my research pursuit with policy implications that are outcome oriented turns out to be less significant than anticipated. Admittedly, there were already considerable complaints of the employment difficulties of recent skilled immigrants in the literature; I still expected that I could contribute to tackling the problem in a theoretically and empirically informed manner. Time flies, and old problems might be fully or partially solved by the time a new research is publicized, despite having set out to examine and solve the problems. I am wondering whether

many researchers experience the same pressure of committing to a responsive problem-solving research project while managing to sustain its time value.

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Appendix A

Cover Letter to informants

**An Investigation of the Experiences of Recent Chinese Immigrant Engineers in
Finding Employment in Great Vancouver**

Principle Investigator: Dr. Graham Johnson
Co-investigator: Lian Bai

Dear Madam or Sir,

Lian Bai is a Doctoral student in the Department of Anthropology and Sociology. She is doing her doctoral study on the employment experience of recent Chinese immigrant engineers.

You are invited to be a part of this study since you are a recent Chinese immigrant living in Great Vancouver who was an engineer prior to immigration to Canada, and you have lived in Canada for ten years or less. We hope that you can provide useful information about the topic we are interested in.

If you agree to take part in the study, you will be asked to participate in one private, tape-recorded interview of approximately one hour in length, conducted at times and locations of your choosing. The interviews are designed to cover specific aspects of your experience in seeking employment in Great Vancouver.

There are no risks to your health or well-being associated with this study.

If you are interested in study participation, or would like further information regarding this study, please contact:

Lian Bai
6303 N.W. Marine Dr.
Vancouver, BC V6T 1Z1
604.827.2395 (T)
604.822.6161 (F)
email: lianbai@interchange.ubc.ca

Dr. Graham Johnson
6303 N.W. Marine Dr.
Vancouver, BC V6T 1Z1
604.822.2547
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gjohnson@interchange.ubc.ca

Appendix B

Consent form

CONSENT FORM

An Investigation of the Experiences of Recent Chinese Immigrant Engineers in Finding Employment in Great Vancouver

Principal Investigator: Dr. Graham Johnson

Department of Anthropology and Sociology

604-822-2547

Co-investigator: Lian Bai, Ph.D.

Purpose:

In the coming months, Lian Bai, a PhD student from the University of British Columbia will conduct a research study for her Doctoral dissertation on 1) What is it like for recent Chinese immigrants, who were engineers in a variety of fields prior to immigration to Canada and 2) who have been in Canada for less than 10 years, to seek employment in Greater Vancouver. You are being asked to participate in this study because you are an immigrant who falls into both categories and will be able to provide Ms. Bai with useful information about the topic she is interested in.

Study Procedures:

If you agree to take part in the study, you will be asked to participate in one private, tape-recorded interview of approximately one hour in length, conducted at times and locations of your choosing. The interviews are designed to cover specific aspects of your experience in seeking employment in Vancouver.

There are no risks to your health or wellbeing associated with this study.

Confidentiality:

People who agree to be interviewed will not be identified by name. Information collected by the study will not be attributed to individuals, either verbally or in writing.

All recorded interviews will be given an identification number and will be referred to by number only. This will be done to ensure that all participants remain anonymous. Tapes will be translated, and then transcribed into a computer to be analyzed. During the transcription process, any information that can be used to identify you will be removed. The computer will be password protected that will prevent unauthorized personnel from having access to the data.

If you choose *not* to participate in the study, there will be no taped record of your discussions with the researcher(s).

You have right to withdraw from the study at any time without jeopardy.

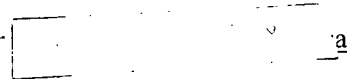
If you withdraw your consent for participation in the study before it is finished, the audiotapes of your interview to that point will be destroyed immediately.

The researcher(s) are accountable for keeping the study data safely and maintaining confidentiality. Dr. Johnson will be responsible for overseeing the safekeeping of the study data at all times. The interview tapes and transcripts will be kept for at least five years in a locked cabinet in Dr. Johnson's offices in Vancouver. When the tapes or transcripts are no longer been used for research purposes, they will be destroyed.

Information gathered from this study will be used by Lian Bai to assess the experience and challenges of seeking employment for the new Chinese skilled immigrants who have recently made Canada their home. Doctoral dissertation will be written from this project. No names or information that may be used to identify interview participants will appear in dissertation that are part of this project.

Contact for information about study:

Lian Bai will be available to meet with you at any time during the period of the study to answer questions you have about the research. She may be reached as follows:



Contact for concerns about the rights of research subject:

If you have any concerns about your treatment rights as a research participant you may contact the Research Subject Information Line in the UBC Office of Research Services at 604-822-8598.

Consent:

Participation in this study is entirely voluntary, and you may stop participating in the study at any time for any reason. If you choose, you may at any time refuse to answer any questions during the interview.

Your signature below indicates that you have received a copy of this consent form for your own record.

Your signature indicates that you consent to participate in this study.

Subject signature

date

Printed name of subject signing above

Appendix C

Interview Questions

Interview Questions (English version)

The Employment Experience of recent Chinese immigrant engineers

DRAFT

This is a study about what it is like for you to get an appropriate job that matches your qualification and previous work experience.

I. Recent experiences in job hunting or relevant activities:

- 1. Can you tell me about your employment situation, particularly about a recent time when you might have searched for a job that matches your qualification?**

Prompts: Can you think about a time you recently had job interview or job related program or promotion?

What kind of job you have you tried to apply for?

How do you evaluate the market's demand to people who have particular expertise as you? Is there considerable vacancies?

Why did you apply for this position? Can you tell me about the prospective or current employer? **Did the employer tell you why you succeeded or failed to get the position?**

How do you evaluate your skill level and qualification with respect to the local job market? Where do you think

you are more/less competitive than others? Did you feel that your credential and ability are recognized? If yes, according to what criteria they recognized it? If no, what were the reasons that they didn't recognize your credentials and previous experiences?

Probe: Can you think about the last time you had job interview?
How do you think about your employment experiences in your specialized field?

- 2. You've talked about a recent time, was that what it has been like for you since you landed in Canada as skilled/independent immigrant? Because we're interested in understanding what it is like for you to get the appropriate job, can you talk about a time when you were encouraged or frustrated for job hunting process? Can you tell me about that?**

Prompt: When you started searching jobs, what did you do first and then what do you expect to achieve? What's occupation category are you in now? How do you evaluate what you have achieved? How do you explain the discrepancy between what you expected and what you achieved?

Probe: We're interested in the way that the local employers respond to your job application. Sometimes there are differences between what the skilled immigrants believe they need and employers or wider labour market can offer them. Can you talk about if this is something you've experienced? How do you compare yourself with counterparts in the local labour market? What are your advantages? What are their advantages you don't possess, if there is any? What do you think that hinders or facilitates you find an appropriate job and integrate in local labour force.

II. Social Supports:

3. **When you need advice in an attempt to finding an appropriate job, whom do you turn to for help? What does this service organization or person do for you? What's that like for you, resorting to this service organization or person to help you?**

Prompt: Can you tell me about a time you seek for professional advice to help you find employment - whom did you call, including the government? Did they understand your situation? Did you get reasonable explanation and useful information in finding jobs? If there are 100 score for a successful employment, do

you think how much an individual should get, and how much the government/policy maker should get and how much immigrant services program should get?

Probe: Do you rely on your immigrant services, e.g. S.U.C.C.E.S.S., Chinese friends, your relatives in Canada, and other newly acquainted Canadian friends for job information and gaining job? What types of support do you get from relative/immigrant/professional services/ friend? Did the (...family, relative, immigrant/professional services, friend...) recommend/do something useful for you?

4. Can you tell me about the programs you utilized to enhance your skills?

What kind of support do you think you have received from such kind programs?

Prompt: We're interested in other programs that you have participated and what it's like for you to get the help you think you need. Can you tell me about that?

Probes: Do you provide suggestions to your friends, relatives who have similar engineer's background as you? Can you tell me about that? What do you usually suggest them in order to get a job that matches their credential and ability?

Have you got or are you getting a local degree/diploma/certificate? To what extent, do you think a local education will reward you in your career? Other than that, what other professional/continuing programs you've received or are working for to increase your competitive edge? How helpful is it?

Have you participated in ESL program sponsored by the government? What is that like? What kind of assistance have you received? To what extent, you think the ESL program may help you in obtaining appropriate job? If no, why do you think the language program is less help in finding an appropriate job? What are other supports you couldn't do without them?

III. Access to information:

- 5. Did you have access to the information regarding credential recognition, employment situation in Canada before your migration?**
- Where did you get this information? Can you tell me about your thoughts/expectation prior to migration?**

If you did not have access to the information as above, whom did you go for such kind of information before landing? Can you tell me about the information you got prior to migration?

Prompts: Did you attend any program to prepare you for migrating to Canada before the actual landing?

Why did you attend that? Do you think it have helped here in Canada?

Do you know FCP (Foreign Credential Program)? Have you attempted to get your credential recognized? Prior to immigration, how did you estimate the credential recognition and job searching experiences in Canada? Did you overhear or ask other people who had already been in Canada for employment information? What did they say or you think help you make decision to come regardless? If you were given any opportunity to move to another place where job opportunity exists, would you like to try to increase your occupational mobility? Or have you tried that? Can you tell me why the attempt succeeded or failed? There are many skilled immigrants who have gone back China, have you thought or tried that? How do you evaluate this decision if you did or are going to go back?

Do you regularly attend any community programs that you believe it would help you in accessing job information and opportunity? Do you go most, if not every local job fair? Can you tell me about these?

6. **The employment experiences and opportunity is different for different people. Can you tell me about how you would describe yourself?**

Prompt: What do you think about people who are frustrated or satisfied with their employment situation in Canada (opposite of yourself)?

7. **Getting jobs we expect may be easy and it can be difficult. What has it been like for you?**

Prompt: What has your experience of been like? Can you tell me about that?

Probe: Do you get any help at home? How did you get this help? What's your experience of getting the help in this regard been like?

8. Some people say that it's hard to get the assistance and of course job they expect. What's your experience of this been like? Why do you think this has happened?

Prompts: Have you ever felt that there were barriers to you getting what you expected? What are they? Can you tell me about it?

What do you think might be the reasons other people like you might say that there are problems getting the employment opportunity they believe they deserve?

9. Based on your experience and what you have told me, what advice would you like to pass on the government?
10. Have you ever felt that you were not treated with respect or equality when you attempt to get job or job related assistance? Can you tell me more about that?
11. If you were to speak to some applicants who are in the same background as you, what would you like them to know about and reflect on?

采访问题 (Chinese version)

中国大陆新移民在大温地区的就业经验

本研究对您获得与移民前工作领域和专业资格相称职业的经验感兴趣。

一) 最近求职经验和其他相关活动

3. 可以告诉我们您的就业情况吗？特别是最近一次您试图寻找与您专业资格相称职业的经验。

启发: 您可以回忆一下最近一次面试或从事其他和就业有关的活动是什么情况？

您试图申请过何种工作？

你面试的雇主告诉过你你在什么地方胜出而得到这个职位，或在什么地方欠缺而未得到这个职位？

就本地劳动市场而言，你怎样评价自己的技术水平和专业资格？

你认为自己在什么地方较之其他新移民或同行有优势/劣势？就

你自己看来，在本地工程师和持有国外工程师认证的移民的本质区别是什么？

您认为自己的专业资格和能力及经验得到认可了吗？如果得到认可，他们是根据什么来认可的？如果没有，因为什么原因没有得到认可呢？

为什么申请那个职位？可以谈谈您现在或即将成为雇主的公司是怎样的？

探讨： 您怎样看待自己在专业领域求职的经验？您从前或准备为自身在职场增值而投资吗？

4. 我们已经讨论了您最近的求职/工作情况。自从您登陆以后，求职是怎样的情形？我们对您如何试图在专业领域求职非常感兴趣，能否谈谈最近您有没有因求职而感到受鼓舞/挫折？

启发： 当您开始找工作的时候，您最先做什么，那样做的目的是什么？
你现在在什么领域工作？你怎样评价已经取得的成绩？怎么解释在你期望和？

探求： 我们也想知道本地雇主怎样回应您的工作申请。有时候技术移民认为他们需要的东西和雇主和市场可以提供的东西是不同的。您也有类似经历吗？
比较您和本地同行，您认为自己的优势是什么？如果有的话，不具有什么优势？

二) 社会支援

3. 当您想得到一些有关就业的建议，您通常会从哪里得到建议？什么样的组织或人会提供建议？

启发： 可以告诉我们您寻求专业咨询意见的经历吗？您给谁打了电话？
他们理解您的情况吗？您得到了有用的信息吗？

探求： 您是依靠移民服务、中国朋友、加拿大的亲戚或其他新解释的加拿大朋友帮助寻找工作吗？您可以得到什么样的帮助？如果我们把成功找到一份合适工作的努力算成 100 分，你认为个人应该在其中承担多少分数？政府/政策决策者呢？那些移民服务机构呢？

4. 可以告诉我们您参加了哪些增强能力技巧的课程/辅导？从这些辅导/课程里您得到了什么帮助？

启发： 我们对您参加的有利于寻找您专业领域内工作的辅导比较感兴趣。您能告诉我们您参加这些辅导的情形吗？

探求： 对其他和您有相同工程师背景的朋友您有什么建议吗？您能告诉我有关这方面的情况吗？您参加政府资助的 ESL 课程吗？情况是怎样的？您从哪些方面得到援助？ESL 课程可以从哪些方面增强您求职的竞争力？

三) 获取信息:

5. 移民前您知道关于加拿大海外资格学历认证的信息吗？从哪里获取这样的信息？

可以告诉我们您来加之前的期望是怎样的吗？

如果您无法获取上述信息，您从哪里获取相关信息？可以告诉我们您登陆前了解到的信息是怎样的吗？

启发： 移民登陆前您参加过一些课程做准备吗？

为什么参加上述课程？您认为对您登陆后有帮助吗？

您上过 ESL 课程吗？情况怎样？您受到过什么帮助？您认为 ESL 课程可以从何种程度上帮助您渡过语言关找到工作？如果不是，为什么你认为语言课程帮助很小？您认为什么样的支持是必不可少的呢？

你知道 FCP 吗？您试图认证自己的专业资格吗？移民以前，你怎么估计在加拿大的资格认证和求职情况的？你向那些已经在加拿大的朋友问讯过吗？是他们说的什么或您自己什么样的想法让您下定决心来的？如果有任何机会可以搬到一个有工作的地方，您愿意试试吗？如果您试过，可以告诉我为什么它成功/失败吗？您想过回流中国吗？

您定期参加一些可以增强您求职的社区辅导活动吗？

您定期参加招聘会吗？

6. 就业经验因人而异，您可以描述一下自己的情况吗？

7. 找到适合工作对有些人容易些，有些人难些，您自己情况如何？

启发： 您一向以来的经验是怎样的？

探求： 在家里可以得到一些支持帮助吗？一向如此吗？

8. 一些觉得得到帮助和求职一样难。您的经验如何？为什么这样？

启发： 您感觉自己受到很多阻碍吗？这些阻碍是什么？

您认为一些人抱怨得不到应得的工作机会的原因是什么？

9. 就您所说的情况，您对政府有什么建议？

10. 在求职或就业过程中感到没有受到尊重或平等对待吗？

11. 如果要您和一群和您背景类似的人说话，您想要他们知道什么呢？

你通常对他们在以前从事的工程领域找工作有什么建议呢？

您已经或正在修读本地学位/证书/文凭吗？您认为本地教育在何

种程度上有助于日后的职业发展？除了这些，您认为其他的继续/

专业教育会对增加您的竞争力有益吗？从那些方面可以看出来？

总体上，您如何评价自己的移民决策？您怎样测画今后自己的职业

道路？

Appendix D

Demographic Information Questionnaire

Demographic Information

Tape Code:		Name		Sex		Age	
The highest Degree				Receiving Date and place of the highest degree			
Landing time		Duration in Canada		Cities where lived in Canada			
Current job				Year at this position			
Previous job (Chronic order)							
Number of Family members		Family member and economic supports					
Annual income	Please highlight: A) <\$15,000 B) =\$15,000-\$20,000 C) = \$ 20,001-25,000 D) =\$ 25,001-35,000 E. > \$35,000						
Professional credentials held, place and year of obtaining (reverse Chronic order)							

Appendix E

Certificate of Ethical Review Approval