

IS THE GLASS HALF EMPTY OR HALF FULL?
OBSTACLES AND OPPORTUNITIES THAT
HIGHLY EDUCATED IMMIGRANTS ENCOUNTER IN THE
SEGMENTED CANADIAN LABOUR MARKET

by

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ABSTRACT

This dissertation challenges the worth of a university degree in the segmented Canadian labour market by revealing systemic patterns of differential return to education due to social structural factors (e.g., gender, age, visible minority, immigrant status) and available capital (e.g., human, cultural, social, symbolic capital). The portrayal of *obstacles* raised in the Canadian labour market and *opportunities* for further education offered by the post-secondary system defines two dimensions of the social space in which knowledge workers unfold their life course trajectories. This is also the social space in which highly educated immigrants who arrived in Canada in the early 2000s compete for social positions. The dissertation is based on four empirical studies, which employ large-scale survey data to analyze employment and further education participation by university educated adults in relation to individual, situational and dispositional factors. The analysis of findings engages Bourdieu's sociological framework to examine the process through which human capital available to university graduates is transformed over life course, and the critical problem of the devaluation of foreign human capital in the Canadian labour market. The analysis considers the role of non-human capitals to explain issues with immigrants' employment and participation in post-secondary education in Canada. The main argument is grounded in life course research and recognizes that the transformation of human capital occurs through the strategic actions of a socially situated *bounded agency* which is capable to adjust to changes in the social context. I put forward the idea that the notion of *habitus* as a generative structure of practical action is essential to understanding the manifestation of bounded agency during life course transitions. I argue that one's *habitus*, viewed as implicit knowledge built over life course, could be the most unique resource available to recent highly educated immigrants to help them overcome the many obstacles raised by the Canadian social structures in their journey to integration. Meanwhile, the Canadian society must improve the view on highly educated immigrants and recognize their value as global knowledge workers and messengers of other cultures: they are a viable resource, creating 'opportunities' for learning in workplaces, educational institutions and communities.

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DEDICATION

To my wonderful children and grandchildren,

Enjoy your journeys through life

CO-AUTHORSHIP STATEMENT

I hereby declare that this dissertation incorporates material that is a result of joint research, as follows:

1. Chapter 2: **Exploring the relationship between educational credentials and the earnings of immigrants.** This paper was published in 2005 in *Canadian Studies in Population*: it was co-authored with Dr. Robert Sweet.

- We collaborated on the identification and design of the research paper;
- I was responsible for performing the data analyses;
- We collaborated on manuscript preparation;
- I had a primary responsibility for the final content and for completing the revisions requested by the editor.

2. Chapter 3: **The Labour market value of liberal arts and applied education programs: Evidence from British Columbia.** This paper was published in 2006 in *The Canadian Journal of Higher Education*: it was co-authored with Drs. Colleen Hawkey, Hans Schuetze and Victor Glickman.

- I had a significant contribution in the identification and design of the research paper;
- I was responsible for performing the data analyses;
- I had a major contribution for manuscript preparation;
- I had a primary responsibility for the final content and for completing the revisions requested by the editor.

I certify that I have properly acknowledged the contribution of other researchers to the publications included in this dissertation, and that I obtained permission from my co-authors to include the above materials in my dissertation.

1 INTRODUCTION

1.1 Preamble

Identifying a research question is the result of a process in which the researcher is often involved through a personal narrative. My research interest in the worth of a university degree in the Canadian labour market is certainly related to my experience as an adult immigrant to Canada. My effort to integrate in Canada has been very pragmatic in scope with a major focus on my career. I have been very open to understanding the Canadian way of life and to finding my place in the new home country by adjusting my cultural values. Although I did not experience significant conflicts of social or cultural norms, I acknowledge that the integration process could be more complex for other immigrants.

I arrived to Canada in mid 1990s as a skilled physicist with a doctoral degree and many years of work experience, most of them in university teaching and research. I have always thought that these were positive assets that would allow for a rapid integration. I soon realized that I also had liabilities related to my age and country of origin, and being a woman working in a male-dominated field. I believe now that the latter two aspects created the most significant obstacles to continuing my scientific path in academia. First, except for a couple of years of research done abroad in Western Europe and the United States, my work experience was limited to Romania, the country where I grew up and where I obtained my educational credentials. Lacking a professional network recognized by Canadian physicists was an impediment to continuation in the field. Overall, it soon became clear to me that Canadian employers were not familiar with the Eastern European educational and/or occupational systems: that, I perceived as a potential threat to my continuing career in physics. Second, in many developed countries, including Canada, physical science is a field in which women struggle to overcome more barriers than their male counterparts and, as a result, are obviously under-represented (see, e.g. Glover, 2000). Many women scientists who immigrate to Canada -especially from non-Anglophone countries- experience similar difficulties in continuing in their fields (Fowler & Adamuti-Trache, 2002).

As a result, like many other first-generation immigrants, I had the desire to work hard and I was ready to redesign my career. Since I have recognized from the beginning that immigrating to Canada was the most challenging event of my life, I (somehow) consciously started to strategize

my actions in order to make my Canadian journey as successful and enjoyable as possible. Soon after arrival, my first job with the Faculty of Education at the University of British Columbia was the event that marked a crucial change in my career path. It helped me to understand that besides being a physicist, I have also been a practitioner in the field of higher education; that *adult and higher education* is a field of research that is no less interesting than physics; and that in Canada, an adult can engage in education while continuing to work. As a result, I decided to start graduate studies in the field of education (Adamuti-Trache, Braendel, Long, & Mitchell, 2001), and for the past ten years, my journey as an immigrant and a professional has continued along a combined work and learning pathway.

This journey has not been without challenges. Like many immigrants, I have to find ways to fit the pieces of the puzzle together in order to make my past and current experience meaningful to Canadian employers. Like many Canadian women, I am affected by the structuration of the labour market, which places tougher barriers to women's career growth. Like many Canadian professionals, I have to function in a complex labour market configured by groups of power and controlled by institutional structures that raise additional barriers in some occupations. Like many adult learners, I also have to handle parental obligations which are a blessing but also a constraint when making bold educational and career decisions. However, although I have experienced obstacles, I consider that the Canadian system has also offered me opportunities. The decision-making process and developing my ability to consciously reflect upon the life course choices that I made during the last ten years have been the most challenging and exciting part of my journey as immigrant.

As a researcher in higher education, I am now taking this opportunity to examine how other individuals with similar level of education (i.e., university degrees) distinguish between obstacles and opportunities, how they make choices while being constrained by social structural factors and institutional structures and to what extent past experiences and dispositions support them to reach specific goals during their own life course. I acknowledge that social contexts and global markets pose challenges to *all* highly educated workers who either enter the labour market or make educational and/or employment changes throughout life courses in an effort to optimize the value of their university degrees. However, my own experience and that of others suggest that obstacles are higher for recent university-educated immigrants to Canada who struggle to define

their professional identity while building a life for themselves and their families in a new home country. I trust this dissertation will contribute to an understanding of the optimism with which highly educated immigrants engage in education and/or career pathways in Canada, trying, on one hand, to make sense of the social context through a newcomer's eyes; and on the other hand, to reveal to employers and colleagues that their foreign experiences are valuable resources that can equally contribute to the Canadian economy, culture and society.

1.2 Purpose of the study

The following steps illustrate the manner through which I have come to state the problem raised in this dissertation.

Step 1. Research and practice show that highly educated immigrants to Canada experience difficulties in the labour market and that many adult immigrants turn to post-secondary education as a strategy to support their integration in the labour force.

We often hear that immigrants come to Canada for a better life. Everyone relies on particular strengths to succeed in the new home country. Some have economic capital (wealth) and others have social capital (networks). But most immigrants who have arrived since 1990s have relied on their human capital (education). These highly educated individuals become conscious of the potential value of their foreign human capital when they go through the immigration selection process that assesses years of schooling and credentials, culture (i.e., knowledge of two official languages) and years of work experience. After being scrutinized on criteria that emphasize human capital, educated immigrants begin to believe even more in the worth of their education, which is the key to a successful immigration application to Canada.

After arrival, immigrants gradually discover that their foreign human capital is not likely to be recognized in the Canadian labour market: this translates into poor earnings and difficulty in finding desirable jobs. Current research documents that foreign human capital is becoming less valued in the Canadian labour market than it was decades ago (Aydemir & Skuterud, 2004), a situation that is often attributed to the changing characteristics of recent immigrants who come from non-Anglophone or non-Francophone countries. Picot (2004) argues that perhaps the quality of education in some countries is not comparable to Canada, recent immigrants

experience language barriers, or discrimination is more prevalent among immigrants who arrive from these non-traditional source countries such as those in Eastern Europe, Asia or Africa. However, Li (2003) also points to possible flaws in the immigrant selection policy, which imposes criteria that do not reflect the capacity of immigrants to integrate in the labour market and to catch up with the earnings of native-born Canadians.

Anecdotal evidence indicates that most highly educated adult immigrants expect to continue careers in their prior occupations. Exposed to employers' reluctance to recognize their foreign credentials and/or work experience, and beginning to understand the reality of the competitive Canadian labour market, newcomers come to interpret their lack of success in the labour market as being related to their non-Canadian credentials. Immigrants weigh their choices: some may accept jobs below their qualification and others seek recognition of foreign credentials. Other immigrants embrace a pragmatic strategy, and, rather than struggling to convince employers of the specificity and value of their foreign human capital, they decide to pursue further education in Canada. They also receive advice from within their immigrant community that obtaining a Canadian credential would add credibility to their prior education and possibly expand (and diversify) their range of employment opportunities. There is no doubt that adult immigrants who continue education after arrival are also aware of the characteristics of the Canadian post-secondary education (PSE) system (i.e., open to adult education, diverse, affordable). Depending on specific life course circumstances and availability of family and personal resources, adult immigrants may adopt combined work and learning strategies.

There is clear evidence that large proportions of educated immigrants, regardless of age, decide to pursue Canadian education, seeing this as a good step toward minimizing differences between them and the native-born Canadians. This evidence struck me after examining results from the Longitudinal Survey of Immigrants to Canada that show that about two-thirds of new immigrants interviewed in 2000 had plans to take education or training at the time of arrival (Statistics Canada, 2005). This tells me that my own decision to obtain additional graduate education and similar situations that I know about from other immigrants are not isolated cases. The decision to obtain more education is not necessarily related to the need to overcome unemployment or the inability to earn a decent income. In many cases, these decisions are driven by feelings of frustration that professional growth has been interrupted or delayed in Canada, as opposed to

what highly educated immigrants would have expected, based on career accomplishments that they attained in their native countries.

Many researchers assert that immigrant human capital is not wisely used in Canada. Bauder (2003) describes the situation of recent immigration to Canada as “brain abuse” that devaluates the institutionalized cultural capital of immigrants; Hiebert (2006, p.41) calls on the new discourse around “failure and wasted human capital”. However, in order to understand the causes that hinder the socio-economic integration of immigrants, it is realistic to situate the immigrant story in the context of the Canadian labour market: this is dominated by competition for jobs, credential inflation and structural inequalities affecting all knowledge workers.

Step 2. Research and practice also show that Canadian-educated knowledge workers are affected by labour market structural inequalities and many university graduates remain engaged in education while transitioning to work.

One can invest in human capital by acquiring education. Since typical knowledge workers have university education, it is assumed that such individuals made a significant investment in their human capital. It is not surprising that a major debate on human capital that engages economists, sociologists and educators concerns the return to university education (e.g., earnings).

Differential earnings are an indicator that the Canadian labour market is structured in terms of how workers with similar qualifications are treated by employers. Research on this topic points to at least two factors for differential earnings obtained by university graduates: social structural factors and field of study (see, e.g., Finnie, 2001; Lin, Sweet, & Anisef, 2003). First, social structural factors account for existing inequities in the labour market that lead to gender wage gaps (Fortin & Huberman, 2002a) and the effect of race and ethnicity on earnings (Kunz, Milan, & Schetagne, 2000). Second, field of study differentiates human capital through the utility value in the labour market as perceived by employers (Brown, 2001; Lavoie & Roy, 1998).

Moreover, some workers have poor return to education because they accumulate attributes that carry a negative value in the Canadian labour market. For instance, immigrant status brings an additional dimension to the social structuration of the labour market; it also intersects with other social factors such as gender, age or ethnicity to create specific social identity markers. As noted

by Frideres, “immigrants operate like signs carrying bundles of conflicting meanings” (2002, p.1). As a result, the social identity markers have an impact on immigrants’ self concept, determine their behaviours and influence their integration into society. Similarly, one can describe the labour market structuration through ‘identity’ markers defined by characteristics of human capital. For instance, research shows that those immigrants who acquired education in Canada perform better in the labour market than those educated outside Canada (Sweetman & McBride, 2004); graduates who completed applied education programs have better labour market outcomes compared to those who completed liberal arts education programs (Adamuti-Trache & Sweet, 2005; Lin, Sweet, & Anisef, 2003). These examples reveal a segmented labour market in which knowledge workers strive to optimize their investments in university education.

While we often hear that today’s Canadian society is making the transition toward a knowledge economy that requires a highly skilled workforce, this does not translate into an abundance of jobs that reward university education. There is a clear discrepancy between supply and demand that leads to an apparently inefficient use of human capital in the labour market. As noted by Livingstone, “it is the relative withering of good jobs with decent pay that is the central problem creating the education-jobs gap” (1999, p.164). However, since well-paid workers have higher levels of education, there is an assumption that education “gives the learner the opportunity to acquire relevant and diverse knowledge, competencies, and skills for a complex social environment and labour market” (Council of Ministers of Education Canada, 1999, p.7). As a result, individuals believe that higher levels of education and a diverse portfolio of skills will help maintain their competitiveness. There is evidence that knowledge workers enter into this competition for ‘good’ jobs in Canada by considerably engaging in further education (Allen & Vaillancourt, 2004; Finnie, 2001; Peters, 2004).

Step 3: Statement of the problem

While obstacles embedded in the Canadian labour market determine a differential return to university education for highly educated immigrants and Canadian-educated workers, individuals differently mobilize their personal agency to take advantage of existing opportunities in the Canadian post-secondary system.

In this dissertation I will examine (constraining) obstacles within the Canadian labour market

and (liberating/facilitating) opportunities within the Canadian post-secondary system experienced by university graduates in their journeys as knowledge workers in early 2000s. These are individuals who made large investments in education over their life course, who have been active in fields of practice that enriched their human capital and seemingly widened occupational and life choices, who likely have personal attributes (e.g., ability, determination, motivation) that give human agency increased capability to challenge the objective structures.

The particular interest of my dissertation is on recent university-educated immigrants. However, I acknowledge that their entry points into the labour market need to be contextualized within a broader understanding of the economic and social conditions of today's Canadian society, conditions that also impact on university graduates from Canadian institutions. Therefore, I use data on returns to education by the Canadian-educated graduates to portray the social space and the structure of the labour market in which highly educated newcomers are expected to compete.

I maintain that, while constrained by social structural factors (e.g., gender, age, immigrant status, visible minority status) and institutional structures (e.g., labour market, education, marriage, parenthood), individual agents have some freedom to strategize their actions when seeking better returns on investments. This is an expression of human agency that describes the capacity of human subjects to engage in social action and to make life choices. I adopt the notion of *bounded agency* that conveys the idea of a socially situated agency that allows individual agents to consciously adjust to changing social contexts and thus to interact with the social structures throughout their life course. An important aspect in the decision-making process is the human agency's capacity to understand the social context, to evaluate resources and to adopt strategies to convert and/or enhance assets in order to optimize desired outcomes. For instance, educated workers who understand the changing nature of the labour market remain active learners over their life course and continue to enrich their education and career pathways. By accumulating education, work experience and skills through their interactions with various structures (i.e., labour market or educational institutions), individuals expand and/or convert available resources.

In this dissertation, I put forward the idea that the source of a bounded agency is *habitus*: that is, a system of durable dispositions and implicit knowledge shaped by one's history, present circumstances and future goals. The capacity of a bounded agency to adjust to the social context

is related to habitus because “the practices produced by the habitus [are] the strategy-generating principle enabling agents to cope with unforeseen and ever-changing situations” (Bourdieu, 1977, p.72). Therefore, the notion of habitus as a generative structure of practical action is essential to understanding the manifestation of bounded agency during life events such as migration to a new country. Immigration is a significant turning point that affects all dimensions of one’s life: it engages an immigrant’s human capacity in an attempt to negotiate pre-migration capital investments with new institutional structures that do not necessarily recognize these assets. As a strategy, highly educated immigrants who understand the reality of the Canadian labour market may choose to acquire credentials in the host country.

1.3 Background to the problem

This section contains facts, figures and policies that constitute the background issues related to immigration, the Canadian post-secondary system and labour market. Except some historical trends, I selected information based on 2001 Census data that portray the Canadian context in the period that is relevant to my study: 1997-2005. I will first introduce recent trends on immigration to Canada, which point to the effect of selection policies that emphasize the importance of human capital. Second, I will discuss some patterns in higher education and in the choice of field of study with focus on gender differences. Third, I will present evidence on earning gaps and participation in the labour market by gender, age, immigrant status and visible minority groups.

1.3.1 Immigrants to Canada

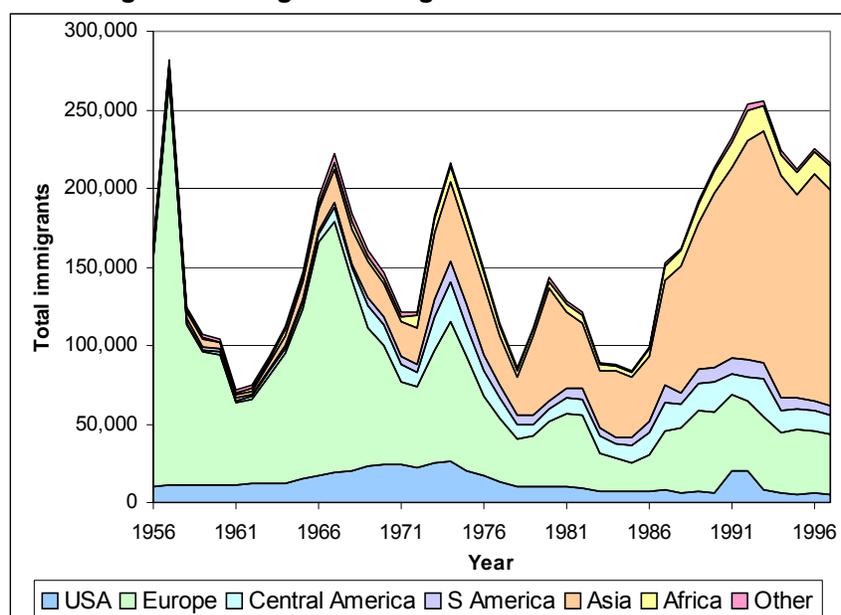
Since early 1990s, 200-250,000 immigrants have arrived in Canada every year. Demographic growth and labour force supply are the most important reasons for the active Canadian immigration policy. By 2016, 16% of Canada’s population will be over age 65; by 2030, immigration will account for 100% of Canadian population growth (Institute for Research and Innovation in Sustainability, 2003; Statistics Canada, 2006a). If immigration accounted for 70% of net labour force growth in the first half of the 1990s, by 2011, it is expected to account for all net labour force growth (Human Resources and Social Development Canada, 2002).

Immigrants are accepted to Canada under three main categories. The economic class that includes skilled workers, business immigrants and provincial nominees covers up to 60% of all

new arrivals (Library of Parliament, 2004). These capital-rich immigrants are expected to bring to Canada flexible and transferable skill sets (human capital) as well as investments (economic capital). The immigration program also has a social component to facilitate family reunification (25%) and a humanitarian component to offer protection to refugees (15%). Fifty-five percent of the immigrants interviewed for the Longitudinal Survey of Immigrants to Canada (LSIC) who arrived in 2000-2001, had a university education; this proportion was 69% among those aged 25 to 44, compared to 22% of all Canadians in same age group (Statistics Canada, 2003a).

Over the last decades, one important characteristics of the immigrant population is the change in source country, with an increasing number of newcomers coming from non-Anglophone regions of the world (Figure 1.1).¹ As a result, about 43% of Canada’s population in 2006 had an origin other than Aboriginal, British or French.

Figure 1.1: Origin of immigrants to Canada 1956-1997



Source: Citizenship and Immigration Canada data (*The Sustainability Report / Institute for Research and Innovation in Sustainability, IRIS, 2003*)

Fluency in one of Canada’s official languages, prior linkages to Canada, and especially level of education are identified as key determinants in the successful integration of recent immigrants (Human Resources and Social Development Canada, 2002). Using 2006 Census information, Mata (2008) also illustrates that there is significant variability in labour market activity levels (e.g., employment rates) by the place (country) of post-secondary education completion. For

instance, his data show that regardless of the period of arrival, those who completed PSE in Germany, France, the United States and the United Kingdom had higher activity levels compared to immigrants from Pakistan, China and South Korea. Those who possess non-Western education are somewhat disadvantaged in the Canadian labour market.

Because in recent years the economic immigrants have not been as successfully integrated in the labour market as was hoped, the human capital approach that governs the immigration policy has been questioned (Tolley, 2003). Many claim that the immigrant settlement will continue to be compromised until recognition of foreign credentials and training are solved and employers become more willing to hire new immigrants (Bauder, 2003; Li, 2008). For instance, Li estimated that only 59% of China-born university-educated immigrants who arrived in Canada between 1991 and 2000 were in the labour market in 2001. Moreover, 21% to 33 % of those employed experienced a devaluation of the worth of their higher education.

Recent LSIC data show that two years after arrival, only 63% of immigrants aged 25 to 44 (prime working age) were employed compared to 81% of the native-born Canadians (Statistics Canada, 2003b). Less than half of those employed found jobs in their intended occupation – the one for which they were accepted under the Federal Skilled Worker (Professional) Immigration class. To provide for their families, many educated adult immigrants are forced to join labour market segments that are not compatible with their level of education. Daily news describing PhD graduates driving a taxi or working at McDonald's reflect a reality that makes an illogic contrast to forecasts of shortages of qualified people in knowledge occupations. Earnings are in particular unexpectedly poor for those who arrived since the 1990s (Frenette & Morissette, 2003; Morissette, Ostrovsky, & Picot, 2004; Worswick, 2004). In 2004, four years after their arrival in Canada, 22% of economic immigrants interviewed for LSIC were disappointed with the lack of employment opportunities (Schellenberg & Maheux, 2007).

This situation clearly suggests that in the competition for jobs, immigrants have difficulty in negotiating their foreign credentials. Canadian employers show reservation in hiring immigrants due to lack of institutionalized means to assess their skills (Reitz, 2005) or simply inability to evaluate a résumé with little or no Canadian work experience. As a result, highly educated immigrants cannot practice in their field(s) of expertise, and become even less competitive over

time: this makes it impossible to overcome the so-called “transferability gap” that is expected to occur at migration (Hawthorne, 2007). As noted by Li (2008), significant waste occurs when transferring immigrant human capital. It is, therefore, not sufficient to design a selection policy to screen human capital: there is need to strengthen “integration policies so that immigrants with credentials can be properly incorporated into the economy of Canada” (p.239).

The logic of the human capital argument is also on the minds of educated immigrants who interpret the Canadian immigration policy as a guarantee that their talents are needed, will be recognized and will be adequately rewarded. Hiebert (2006) contends that expectations are not fulfilled because “immigrants bring capital and skills into the country but do not compete on an even footing for desirable jobs” (p.46). It is not surprising that many immigrants decide to continue formal education in order to avoid the downgrading of their occupational status. Since about two-thirds of newcomers interviewed for LSIC had such plans at arrival (Statistics Canada, 2005), it is possible that immigrants attach certain symbolic value to obtaining a Canadian credential.

1.3.2 Canada’s knowledge workers

To better understand the diminishing relevance of immigrants’ non-Canadian education in the labour market, it is not sufficient to look only at the characteristics of recent immigrants (e.g., level of education, source country); one has to analyze the post-secondary trends, specifically the gains in the educational attainment of the Canadian population.² Since the 1970s, there has been a dramatic expansion of the Canadian post-secondary system and an increase in the importance given by employers to post-secondary education (PSE). As a result, recent immigrants “encounter a much different degree of labour market competition not because of deficiencies in their human capital, but in step with the improvement in the human capital of Canadian-born workers” (Hiebert, 2006, p.42). For instance, Reitz (2001a) contrasts the 1981 and 1996 Census data showing that 12% and 17% of Canadian-born men, compared to 20% and 29% of immigrant men who arrived within 5 years of each census date, had university education. The corresponding percentages were 10% and 18% for Canadian-born women and 14% and 26% for immigrant women. Although immigrants who arrived in the 1990s were more educated than

in the past, and though they continue to be more educated than their Canadian-born counterparts, the increasing number of Canadians with higher education intensifies the competition for jobs.

The number of university graduates in Canada grew by more than one million between the early 1990s and 2001, which led to 23% of the population aged 25 to 64 having completed university studies (Statistics Canada, 2003c). Also, over 1 million people aged 25 to 64, which represents 7% of the working age population, had qualifications above the bachelor level in 2001. In addition, about 21% of the Canadian working-age population obtained college credentials. When college and university education were combined, Canada ranked first in the world.

The skill profile of qualified Canadians reflects a response to the technological and business demands of the 1990s. Other than education, which was the most popular field of study in 2001 (14% of all university graduates 25 years and over), degrees in engineering (9%), business and commerce (8%) and financial management (6%) were prevalent. The same tendency was visible among male immigrants – “one out of every three men who immigrated in the 1990s with post-secondary credentials had trained in a technology-related field of study such as engineering or computer science and applied mathematics at the university level, or electronic technologies at the college or trade level” (Statistics Canada, 2003c, p.15). This shows a clear trend toward both the training in Canada and the recruitment through immigration of individuals who possess technical and business skills that are in great demand in today’s knowledge-based economy.

In 2001, almost half of all university graduates aged 25 and over were women. They made up 52% of all those with a bachelor’s or first professional degree, but they represented just 44% of those with a master’s degree and 27% of those with an earned doctorate (Statistics Canada, 2006b). Age plays a significant role in differentiating educational attainment of women and men. Among those 45 to 64, women (15%) were less likely than men (19%) to have university education. These proportions were totally reversed for younger women – those aged 25 to 44 showing slightly higher rates of university completion (23%) than men (21%). Among those aged 20 to 24 in 2001, 14% of women, compared with 8% of men were university graduates. Foreign-born women were better educated than their native-born counterparts – in 2001, 18% of all foreign-born females aged 15 and over have completed university education, as compared to 14% of their native-born counterparts. However, since the majority of female immigrants come

to Canada as spouses and dependants, or as family class immigrants, and only about one in ten arrive as skilled worker principal applicants, they have less education compared to male immigrants of whom 24% possessed university degrees in 2001.

Although participation by women in higher education has increased dramatically since the 1980s, analysis of Statistics Canada data in the late 1980s revealed that their participation was concentrated in the female-traditional fields of social work, nursing and household science (Breslauer & Gordon, 1989). Through analysis of Statistics Canada data from 1972 to 1995, Gadalla (2001) demonstrated that little progress has been made to substantially increase enrolments by women in undergraduate and graduate mathematics, engineering and computer science programs. The greatest increase was observed in engineering but has occurred only at the undergraduate level. For instance, as of 1995, the likelihood of women studying engineering decreased from one fifth at the undergraduate level to only one tenth at the doctoral level. The increased participation in engineering by women, which is usually seen as a spectacular success, did not change much the gender balance: the field remains male-dominated (Andres & Adamuti-Trache, 2007). Completion rates show similar patterns, women being largely represented in social sciences, education and humanities (Figure 1.2a and 1.2b from Andres & Adamuti-Trache, 2006).

Figure 1.2a: Bachelor and first professional degrees, 1987-2002 (Females)

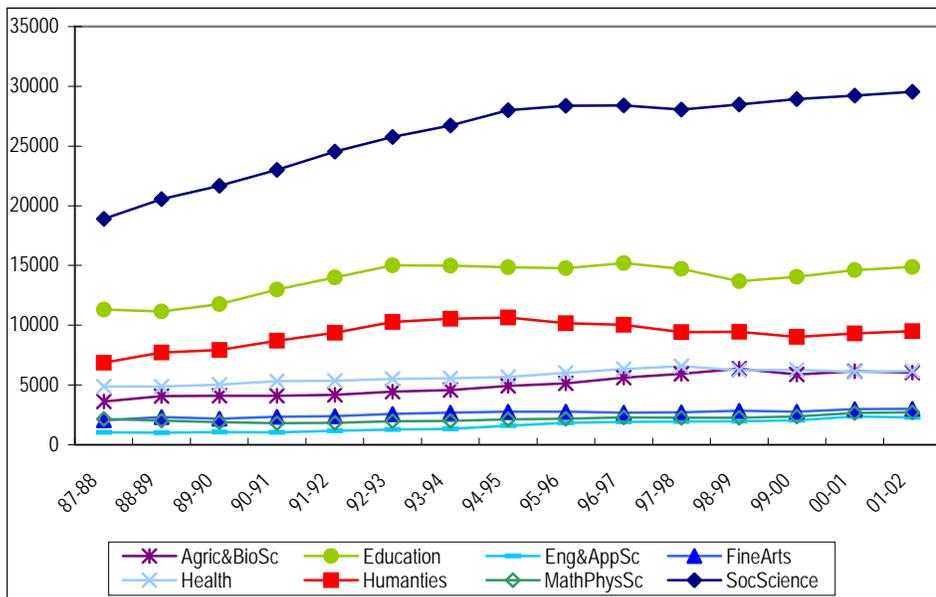
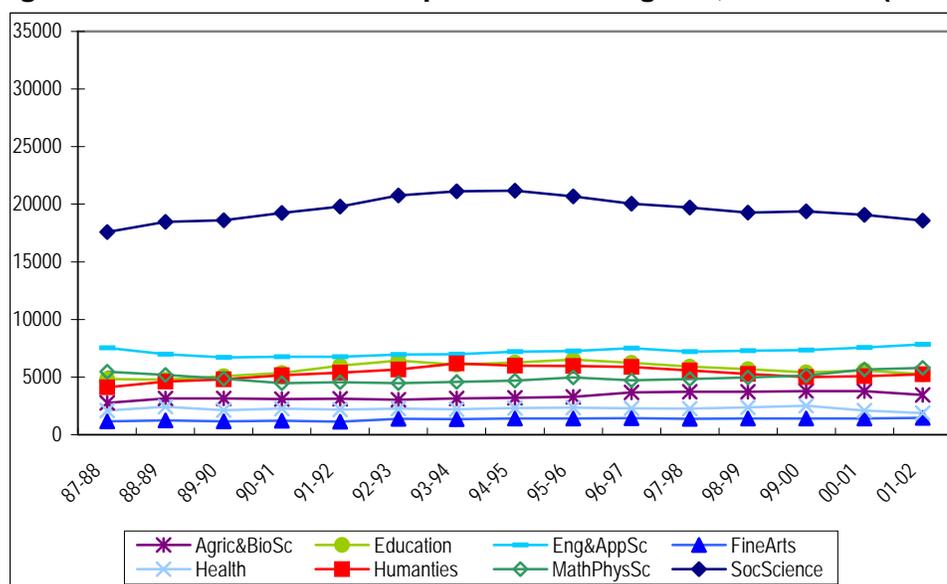


Figure 1.2b: Bachelor and first professional degrees, 1987-2002 (Males)



Source: Statistics Canada - University degrees (undergraduate level) awarded in Canada by Classification of Instructional Programs (CIP) and sex (1979-1999, Education in Canada reports; 1999-2003, Special tabulation, unpublished data).

One desirable impact of immigration is to improve the gender composition of fields of study in Canadian universities and consequently the composition of male-traditional occupations by recruiting female immigrants with expertise in these fields. This seems to be possible because about 17% of recent female immigrants had post-secondary degrees in business, commerce or financial management and another 9% studied computer science and applied mathematics or engineering (Statistics Canada, 2003c). However, considering that both immigrant status and gender are factors that link to economic disadvantage in the labour market (e.g., occupational mismatch, underemployment), it is unlikely that this anticipated improvement in the gender representations in these occupations would take effect.

Definitely, the trend over the past decades has been an improved access to PSE for all Canadians due to the expansion of the PSE system, the openness of PSE institutions to accept a diverse student population and their willingness to accommodate non-traditional learners who combine education and work (Canadian Council on Learning, 2006). Better access to PSE has created an opportunity to close some educational attainment gaps. However, data presented in the following section indicate that gender, age, immigrant and visible minority status remain social structural factors that differentiate the labour market outcomes of equally qualified individuals.

1.3.3 Canadian labour market

As an effect of globalization and the changing nature of work, all workers are confronted with a labour market in which jobs are less secure, career paths often need to be reshaped, boundaries between occupations are less defined and skills need to be continuously upgraded (Beck, 1992; Brown, 1999, 2001; Finnie, 2001; Rubenson & Schuetze, 2000; Shanahan, 2000; Walters, 2004). On one hand, it is a positive effect that free market competition creates incentives for the continual upgrading of workers' skills. On the other hand, as Cruikshank points out, "the polarization of work into 'good jobs' and 'bad jobs' is transforming our society" (2001, p.64) by deepening economic and social inequalities. Others bring a 'queuing' perspective that suggests that labour markets consist of 'labour queues' (i.e., all possible workers in a queue to fill a particular job) and 'job queues' (i.e., all possible jobs available to a worker). Both employers and workers rank the queues, so the most wanted jobs go to the most wanted workers, and vice versa (Reskin, 2001). Job segregation is manifested when labour queues become socially structured by groups in conflict (e.g., men vs. women, youth vs. elders, Canadian-born vs. immigrants). For instance, immigrants are in a disadvantaged position in the labour market when employers do not recognize their foreign human capital and place them at the bottom of the job queues. Queuing might be contextual, depending on local and global economic situations that may give most workers a hard time to find adequate jobs. However, trends show that some groups of workers are systematically placed at the bottom of the job queues – a sign of persistent social inequities.

Even for workers with similar qualifications, differences in securing 'good jobs' are noticeable. Among university graduates, human capital factors (e.g., field of study) and various social structural factors (e.g., gender, age, immigrant status, ethnicity) lead to differential outcomes that correspond to different positions in the labour queue. In this section, I present empirical evidence that gender, field of study, age, immigrant status and visible minority affect the labour market outcomes of university graduates.

Gender issues. Bourdieu (1988) draws attention to the structure of power that is reproduced within the higher education field and extended into society. Similarly, Davies and Guppy state that higher education disciplines "are unequal with respect to power, prestige, and economic payoffs" (1997, p.1419). One can expect that gender differences in higher education have an

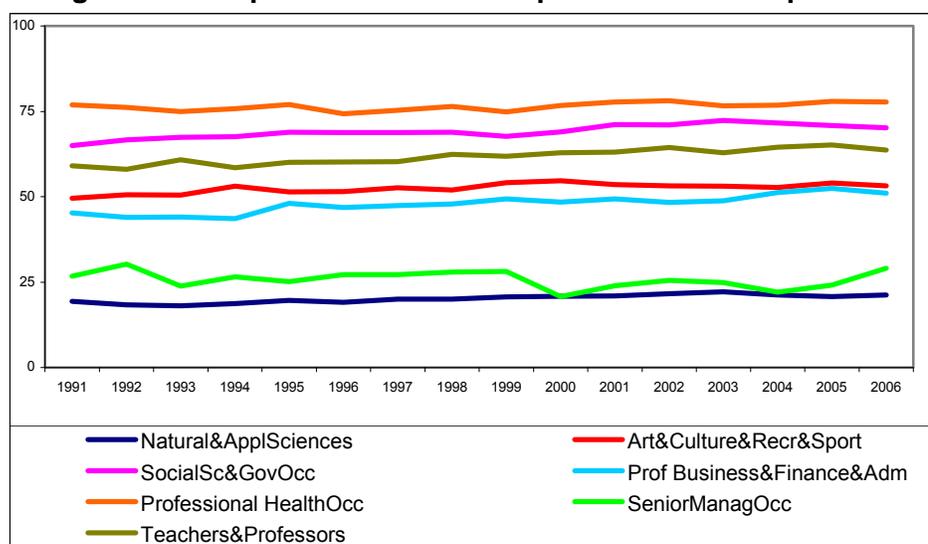
impact on how men and women are represented in the associated occupations that subsequently has an effect on their earning potential (Adamuti-Trache, 2006; Andres & Adamuti-Trache, 2007). Further structuring of the labour market means that some fields of study, many in which women are under-represented, offer better employment opportunities, enhanced job stability and higher earnings to graduates (Allen, Harris, & Butlin, 2003; Finnie, 2001).

A major issue discussed in the literature is that the Canadian labour market is marked by gender-based occupational segregation and gender wage differentials that are structurally and politically generated (Charles & Grusky, 2004; Fortin & Huberman, 2002b; Shannon & Kidd, 2001). Occupational segregation by gender is perceived as a negative feature of the labour market because it obstructs the contribution of a diverse population to growing knowledge in various fields of practice. The suggestive image of “occupational ghettos” proposed by Charles and Grusky (2004) to describe the American labour market discloses the logics behind the two dimensions of the segregation regime: vertical and horizontal segregation. The idea of vertical segregation is based on the logic of “male primacy,” which places women into subordinate occupations within both the manual and non-manual sectors. Horizontal segregation is maintained through a logic of “gender essentialism” that presumes that women excel in person-oriented occupations while men succeed in more technical occupations. Both aspects of gender segregation contribute to maintain the gender wage gap and to keep women in less prestigious positions, while the horizontal segregation has the persistent effect of polarizing the two sexes based on an occupational stereotyping premise. Similar conclusions are drawn by Fortin and Huberman (2002b), who found that in Canada, since the 1990s, “segregation along vertical lines has narrowed and improved steadily, in large part following increases in women’s educational attainment” (p.S34). They also acknowledge that substantial increase in women’s participation in non-traditional professional occupations has improved the gender wage gap.

However, Figure 1.3 shows that the proportion of women in professional occupations has been practically unchanged in the past fifteen years (1991-2006). The data for 2006 show women’s overrepresentation in health (78%), social science and government occupations (70%) and teaching (64%). Women are underrepresented in senior management occupations (29%) and natural and applied sciences (21%) that usually receive better remuneration. Gender parity is

achieved in arts and culture, and professional business and finances occupations (53% and 51%, respectively).

Figure 1.3: Proportion of women in professional occupations

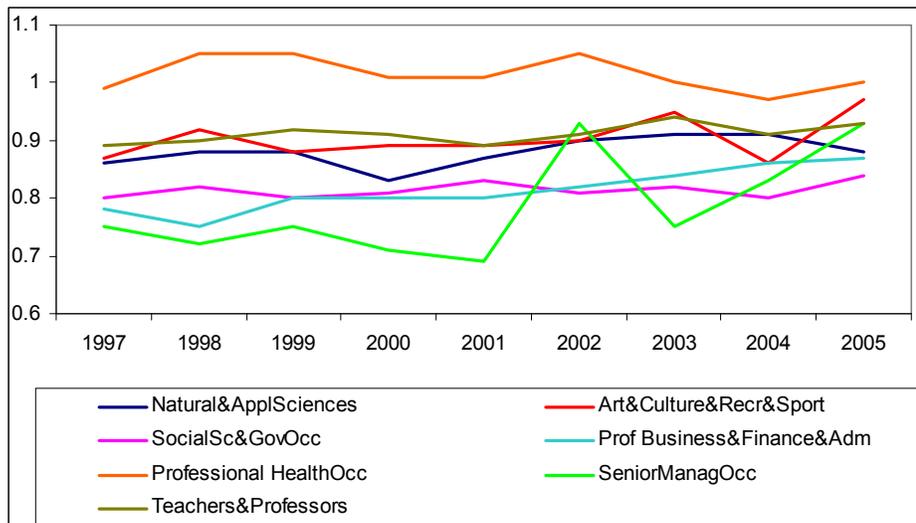


Source: Statistics Canada, Labour Force Survey (CANSIM tables 282-0009)

In a gender wage gap projection exercise, Shannon and Kidd (2001) predicted that a gender gap would still exist in Canada by 2031. Various scenarios consider the growing educational attainment by women in the nineties, changes in wage structure, increase in work experience and demographic projections of age-sex structure. However, under the assumption that wage structure remains unchanged, there is no scenario to predict the elimination of gender wage gaps. This suggests that an increase in women’s education is not sufficient to eliminate gender inequity, which is resistant in specific occupational areas.

For instance, Figure 1.4 shows the gender wage gap values for the active labour force, aged 25 to 54, in professional occupations between 1997 and 2005. Occupations like business, finance and administration as well as senior management occupations retain, on average, quite significant gender wage gaps (.81 and .78, respectively). The gender wage gap is also large in social sciences and government occupations (average .81). Closer to gender parity are the natural and applied sciences occupations (average .88), followed by teaching occupations (average .91), and arts, culture, recreation and sports (average .92). The averaged values show that only professional health occupations have reached and slightly surpassed the wage parity (average 1.01).

Figure 1.4: Gender wage gap in professional occupations



Source: Statistics Canada, Labour Force Survey (CANSIM tables 282-0070)

Gender wage inequity occurs as soon as individuals enter the labour market. In 2000, the five best paid occupations (between \$50-60,000 per year working full-time, full year) held by young men (aged 25 to 29) with university degrees were electrical engineers, mechanical engineers, computer and information systems, sales marketing and advertising managers, financial and investment analysts (Statistics Canada, 2003d, p.32). In these occupations, women made between 82-90% of males' income, except mechanical engineering where the gap was closing (98.7%). The best five incomes of the occupations held by women were at a much lower level (\$35-46,000 per year). Only in three of these occupations (i.e., sales marketing and advertising managers, computer and information systems, registered nurses) women made over \$40,000 per year.

Age issues. The aging workforce contributes to the changing profile of the labour force. With baby-boomers closer to retirement, there are relatively small young cohorts to replace them and some sectors like health, education and trades may experience shortages (Statistics Canada, 2003e). Also, Census data show that older age groups have made the most significant gains in earnings, especially for those with higher education. Table 1.1, based on Census data (Statistics Canada, 2003d, p.33), shows that the earnings of university graduates fell for almost all age and gender groups between 1980 and 1990, but rose differentially between 1990 and 2000. Over the last two decades, women gained overall advantages, although they did not attain wage parity with men. People younger than 30 experienced an overall earning decline for both men and

women. In the second decade, the highest peaks for men happened at about age 40, while those for women happened at about age 50. These results show that, periods of economic stagnation and recession have different impacts on workers, and that earning differentials, at the same level of qualification, are still determined by age and gender.

Table 1.1:
Percentage change in average earnings (holders of university degrees, working full-time full-year)

Age groups	Men, 1980-1990	Men, 1990-2000	Women, 1980-1990	Women, 1990-2000
25 to 29 years	-5.7	5.5	-2.4	-.6
30 to 34 year	-2.6	4.0	-1.7	1.0
35 to 39 years	-4.1	6.8	1.5	4.3
40 to 44 years	-5.1	9.2	2.7	5.8
45 to 49 years	-4.4	3.0	2.1	7.3
50 to 54 year	-3.0	-0.4	-1.8	6.3
55 to 59 years	1.3	3.0	-3.4	7.3

Source: *Statistics Canada (Catalogue no. 96F0030XIE2001013), Earnings of Canadians*

Kapsalis, Morissette, and Picot (1999) also found a decline in relative earnings among younger and older workers between the early 1980s and the mid-1990s, as well as an increasing wage gap by age. They associated the earning gaps with the increased level of education of older workers that makes the relative education premium previously enjoyed by younger workers to disappear. A second explanation relies on a self-selection effect of younger individuals who choose to pursue advanced university studies (which put younger workers as a group at a disadvantage in the earning structures). Others associate the better outcomes obtained by mature university graduates with a more pragmatic perspective on education, one that is better harmonized with individuals' work experience during and after completion of studies (Maslove, Fischer, & O'Heron, 1998).

Immigrant status issues. Starting in the early 1980s, the employment rates and earnings have deteriorated significantly for immigrants, due in part to changes in source country composition that may have led to problems of credential recognition and lack of fluency in one of the two official languages of Canada. "Recent immigrants earn substantially less than their Canadian-born counterparts even after 10 years in the country. This is true for both those immigrants with low levels of education, as well as those with a university degree" (Statistics Canada, 2003d, p.5). The economic downfalls experienced by some Canadian workers are amplified for

immigrants. “The difficulties facing recent immigrants from 1991 to 1996 were similar to those experienced by youths. Both groups were new entrants to a difficult labour market” (Statistics Canada, 2003e, p.12). Table 1.2, based on Census data (Statistics Canada, 2003d, p.36) shows that after 10 years in Canada, university-educated immigrants gradually increase their income by about 50%. However, by that time, immigrants who arrived in Canada from 1990 to 1999 earn only 71% (male) and 79% (female) of their Canadian counterparts’ earnings. It is interesting to remark that a gender wage gap is also visible among immigrants: earnings of female immigrants are at about two-thirds of the earnings obtained by their male counterparts.

Table 1.2: Average earnings (\$) of recent immigrants ^a (holders of university degrees, aged 25 to 54) by number of years in Canada

Years in Canada	Men, 1990	Men, 2000	Women, 1990	Women, 2000
1 year	33,673	31,460	21,059	19,829
2 years	37,895	37,397	24,356	23,066
3 years	42,010	40,011	27,808	24,731
4 years	42,116	42,627	27,681	26,348
5 years	45,873	44,054	27,724	28,739
6 years	48,443	45,773	28,741	29,616
7 years	50,385	45,795	28,905	28,387
8 years	54,439	44,361	32,193	30,193
9 years	54,426	46,151	32,015	30,948
10 years	52,060	47,522	32,522	32,473
Average earnings Canadian-born	60,375	66,520	37,235	41,062

Source: *Statistics Canada (Catalogue no. 96F0030XIE2001013), Earnings of Canadians*

^a Immigrants who arrived in Canada from 1980 to 1989 and from 1990 to 1999.

Highly educated Canadian-born workers enjoy better employment and incomes, while the immigrant educational advantage is not always translated to better labour market outcomes (Hiebert, 2003). Although immigrants who arrived in the 1990s were more educated than native-born Canadians and had expertise in occupations which are generally well remunerated in Canada, they either did not work in their fields of expertise or they had lower-paid positions. For instance, many immigrants who arrived to Canada in early 2000s had science and technology degrees, but did not work in the field of natural and applied sciences. LSIC data show that 39% of the male immigrants worked, before arrival, in natural and applied occupations and only 19% found jobs in the same occupational group 6 months after arrival in Canada (Statistics Canada, 2003a). Skill under-utilization (Reitz, 2001b) and overqualification (Li, Gervais, & Duval, 2006)

are common characteristics of highly educated immigrants' employment. Overall, statistics show that the Canadian labour market is marked by occupational differences and earning gaps, and that immigrant status is an additional factor that augments social inequity.

Visible minority issues. Data from the 2006 Census show that between 2001 and 2006, the growth rate for the visible minority population was 27.2%, five times higher than the 5.4% increase for the total population (Statistics Canada, 2008). Meanwhile, employment rate and average income remain low for most ethnic groups. This is, in part, a result of the barriers to economic integration experienced by all newcomers, although some argue that the negative returns are a result of discrimination in the labour market (Pendakur & Pendakur, 1996).

Table 1.3, compiled from Statistics Canada tabulations (2006c), shows the number of Canadians who held a university certificate or degree in the year preceding the 2001 and 2006 Censuses, as well as their average incomes. Data are presented by visible minority status and separately for the first five largest visible minority groups. Data show that average incomes are clearly lower for all visible minority groups, although there is some variation among ethnic groups. Except for Filipinos, there is a noticeable income decrease over time for all visible minority groups. The most pronounced decrease in income is noticeable for the South Asian and Arab ethnic groups. Not in the list are Koreans, with the lowest average income of \$27,440.

Table 1.3: Total number and average income in 2005 \$ (holders of university certificates or degrees)

Visible minority status	2000		2005	
	Total	Average income (\$)	Total	Average income (\$)
Total population	3,629,990	57,110	4,587,930	58,770
Not visible minority	2,945,490	60,910	3,526,180	64,500
Visible minority	684,500	40,750	1,061,750	39,740
Chinese	217,910	41,940	324,480	41,790
South Asia	167,830	42,330	275,050	40,820
Filipino	70,900	34,850	103,600	35,240
Black	58,040	41,500	85,470	41,380
Arab ^a	39,610	38,390	65,960	36,870

Source: Statistics Canada, 2006 Census of Population, Statistics Canada Cat no. 97-563-XCB2006007.

^a Only data for the first 5 largest visible minority groups are shown in the table.

Moreover, within each ethnic subpopulation, other income discrepancies are noticeable in the Statistics Canada tabulations. For instance, Korean women holders of university credentials had an average income of \$21,330 in 2005. This confirms the idea developed by Frideres (2002) that the intersection between various dimensions of identity affects immigrants' experiences in the host country. When immigrants enter Canada, they have to confront the social markers already established in the host society and find their ways within a new social landscape. For instance, being a young, white, male from an English- or French-speaking country has a positive value and salience in society compared to being an older female of visible minority and having a different language heritage. This suggests that although some obstacles are anticipated during newcomers' settlement, some immigrants may encounter more difficulties than others.

1.3.4 Background summary

It is clear that recent immigration trends are quite different than decades ago, so different factors may affect the integration of a culturally diverse immigrant population that includes many highly educated workers. Based on the empirical evidence (i.e., statistics and research on social structures) presented in this section, it should not be surprising that the economic integration of recent immigrants is challenging. First, there is tough competition for good jobs due to the increase in the educational attainment of Canadians. Also, the Canadian post-secondary institutions have intensified their efforts to prepare male and female graduates in fields that were expected to experience shortage such as health, education, science and engineering. Second, there is clear segmentation of the Canadian labour market, related to level of education, field of study, gender, age and visible minority status. Immigrant status appears to add to existing social structural inequities inherent in the Canadian labour market, thereby making it more difficult for immigrants to compete for good jobs. For instance, data show that even after 10 years in Canada, university-educated immigrants continue to experience poor outcomes, which suggests the presence of systemic inequity.

However, I would argue that the immigrant identity is singular compared to other social factors such as gender or age that are socially constructed, because immigrant identity may actually carry some fundamental differences. Immigrants may have lived in completely different economic, cultural, social and political environments, and most of them enter the Canadian

society with little or no knowledge of its rules. Therefore, understanding immigrants' economic integration in the labour market requires more than comparing of outcomes such as earnings and occupational performance with their Canadian-born counterparts. Research should more thoroughly examine the ways in which recent educated-immigrants engage in the competition for jobs in Canada and the nature of differences that lead to the disadvantages faced by immigrants in the labour market. It is important to understand which difficulties are associated with the negotiation of foreign human capital. This process is certainly difficult because most employers do not have the expertise to weigh foreign credentials and work experience, have little knowledge of the organization of other labour markets, or simply do not believe that immigrants will fit in their workplace culture. The formal recognition of credentials by Canadian professional organizations and licensing bodies is a necessary, but not sufficient condition to convince employers to hire highly educated immigrants.

It is undeniable that most recent immigrants have to overcome language, cultural and social barriers when entering new workplaces and communities in Canada. For some immigrants, structural barriers lead to marginalization. For others, the high level of personal agency that was manifested when they made a crucial decision like immigration for themselves and for their families could be again activated to overcome obstacles to integration. To give an example, I use an account on Irish migration to the United States in the 1980s by the professional élite emigrants – a group that was less forced to migrate due to economic constraints and was under no duress to leave or to stay in Ireland (Corcoran, 2003). The author identifies some characteristics of the process of migration: the decision to migrate tends to be more reflexive, immigrants prefer to make their way in the host society as individuals without advertising their ethnic origin, they manifest flexible subjectivities at work and leisure, and they enjoy a high degree of personal agency in terms of life plans and career choices. Corcoran believes that members of the professional élite “embody many of the attributes associated with modern individualization. Rich in cultural capital and attuned to information and communication structures, they apply themselves assiduously to the task of self-fulfillment. For many, this results in a reflexive reinvention of the self” (p.314).

The example above suggests that one can expect high levels of personal agency among the highly educated immigrants to Canada. The nature of agency among recent immigrants is

different that among native-born Canadians because immigrant agency encounters the additional task of understanding a new social, political and cultural context – a context which is perceived through the eyes of a newcomer and always in relation to prior experiences. During this process, immigrant agency gradually adjusts to the social context of the host country and learns to take advantage of existing opportunity structures.

1.4 Theoretical framework

The empirical evidence illustrates the state of exclusion and/or limited labour market success for some groups of university graduates, including recent immigrants. The prediction of human capital theory that educational attainment is an indicator of labour market outcomes is clearly problematic, especially for newcomers to Canada. To understand the connection between post-secondary education (PSE) and the labour market (LM), and processes that hinder or favour a successful PSE-LM transition, I will review several perspectives proposed in the literature.

These issues are discussed in the literature, particularly within human capital theory. Critical perspectives on the economics of education show the limitations of the human capital concept: other labour market theories derived from human capital are proposed in the literature. In this section I will first present a critical review of human capital and main labour market theories that employ the notion of human capital, and I will discuss their limitations in understanding the immigrant human capital.

Next, I will propose an alternative perspective that emphasizes the role of human agency within a life course framework. I argue that a broad sociological approach may better capture the complexity of human capital transformation during life course events such as immigration, and account for a dynamic relationship between structure and agency. A crucial aspect of any life course transition is the agent's exposure to changing economic and social situations that require a responsive agency. Bourdieu's sociological theory of capital, field, practice and habitus, as well as other approaches to the integration of personal agency in life course theories will be presented. In particular, the notions of practice and habitus serve to inform on specific processes through which agents' actions transform their human capital.

This alternative conceptual framework has the scope to interpret how highly educated immigrants engage with the Canadian labour market, post-secondary system and other social structures during their settlement. However, I believe that the transition from education to work by (young) Canadian-educated university graduates who may engage for the first time in the competition for skilled jobs presents some parallels to the transitions experienced by recent immigrants. In general, the changing nature of work in knowledge economies places an increasing pressure on *all* knowledge workers to remain alert to societal changes and to strategize their social actions.

1.4.1 Human capital

Capital is the most fundamental concept in classical economic theory. It was originally related to financial wealth, which is traditionally reproduced through the capitalist mode of production. The accumulation of capital is the result of investments that generate more capital. Economists have also used the notion of capital in a broader sense that includes human capital, which is generated through investment in one's education and training. Therefore, human capital is a form of capital intrinsic to the person, an asset that individuals use to gain employment and earnings. A recent OECD document emphasized that human capital includes "knowledge, skills, competencies and other attributes embodied in individuals that are relevant to economic activity" (Organisation for Economic Co-operation and Development, 1998, p.9) which points to the link between this concept and the labour market. This form of capital and the economics of education are central to understanding the economic development of knowledge-based societies. I will summarize main aspects of human capital theory (HCT), critical perspectives of its assumptions, and relevant labour market theories that offer alternative views of how workers engage in economic activities.

Human capital theory. Schultz (1961) introduced the term human capital from an economic perspective by observing the much faster rates at which this form of capital was produced in Western societies by comparison to conventional (nonhuman) capital. He recognized that skills and knowledge have become a form of capital yielding a return over a long period. Both society and individuals contribute to this "deliberate investment" in human capital, making any unwise use or deterioration of human capital a significant loss. However, human capital defined in terms

of skills, qualifications or length of schooling is essentially an individual asset that, according to Schultz, would create personal advantage in the labour market and increase worker's earnings. In 1964, Becker (see, e.g., 1993) reinforces the link between HCT and the classical theory of capital by comparing human capital to "physical means of production": one can invest in human capital (via education, training, medical care) and his/her income should reflect the rate of return on human capital owned. He views human capital as a stock of assets, which allows the owner to receive a flow of income, like interest earned. Forty years later, Putnam (2000) also recognizes human capital (i.e., skills, abilities, knowledge) as an individual property.

Return to education is central to the human capital theory but equally important is the relevance of education to economic productivity. Mincer (1989) attached significant value to job training that involves firms' investments in human capital to respond to technological change and to increase productivity, and found significant positive effects of job training on wages. This might concur with Livingstone's view (1997) that economic reforms that involve workplaces are required to keep viable the human capital prediction that more education leads to higher earnings, and that education is relevant to productivity.

The notion of human capital is enriched by Lin's perspective (2001) that human capital theory is in fact a deviation from the classical theory of capital because the social relations governing the markets are fundamentally different. While the classical theory of capital is based on the assumption that laborers are replaceable commodities, in fact, 'laborers' become 'capitalists' who are able to acquire human capital by investing in education. He calls human capital theory a 'neo-capital' theory because of the different role of social relations in the market. As a result, due to the dual role of the individual, Lin expects a fit between human capital supply and demand in the market, because "it is the laborer, instead of the manager or capitalist, who is rewarded for or deprived of the price and value of labor power. If labor's value is low, for example, this is due to a lack in human capital rather than the expropriation of surplus value or capital by the capitalist" (p.13). This approach places responsibility but also blame on workers who do not find ways to enhance their human capital. However, Lin recognizes the importance of social structure to differentiate access to resources, and the role of social capital to enhance the individual's status and, through this, economic earnings.

Critical perspectives on HCT. Most critical views challenge the assumptions of human capital theory that portray a perfect labour market, in which education, training and skills can be measured in a straightforward way, and in which increased human capital leads to higher earnings. A major challenge is that the operationalization of human capital is not simple: first, because “educational attainment is not synonymous with acquired competence” and second, because “earnings at best constitute only a poor proxy measure of productivity” (Tuijnman, 2000, p.408). Measuring human capital in terms of productivity and observed output of work is challenging. As a result, frequent operationalization of human capital by economists continue to be years of schooling, credentials or work experience indicators (Ferrer & Riddell, 2002; Mincer, 1974; Morissette, Ostrovsky, & Picot, 2004). Many recommend that more direct measurement of competencies should complement the information based on credentials acquired or number of years of schooling. For instance, Green and Riddell (2001) have a broader view on the relationship between education, experience and labour market outcomes such as employment and earnings, and argue that not only educational attainment but also literacy skills exert a substantial causal effect on earnings.

Other critics of the human capital theory challenge the main assumption that education can be related linearly to earnings, and point to inconsistencies on how ‘demand’ and ‘supply’ operate in the labour market. In this context, the central idea of demand is that industrial and technological developments require more highly skilled workers and lessen the need for workers with only basic skills. Supply factors in this context correspond to the increase in the number of workers due, for instance, to immigration or to the rise of the number of women in the labour market. Human capital theory is based on the assumption that there is some harmony between these two components and that workers and employers engage in a demand-supply negotiation of wages that maintains a linear relationship between educational attainment and earnings – when, in reality, the relationship is more complex. Brown (2001) is skeptical about the validity of a ‘demand side’ of the human capital theory (which is based on a linear model of technological progression from low to high skilled work following the sequence: “technological change → education and training → high skills → high wages”) and the American slogan “the more you learn the more you earn”. He noted that although it is true that earnings reflect education, the differential increase in income that would support the human capital theory is mainly due to the decline in the earning power of those with less education rather than higher rewards for workers’

educational attainment. The assumption that investment in human capital will create its own demand because employers will upgrade their skills base to absorb the qualified labour force is inadequate, “as it ignores the complexities of the empirical world in which many factors, including existing management practices, attitudes to women, or industrial relations, shape the skill content of particular jobs” (p.17). Kivinen and Ahola (1999) contend that the human capital theory correctly predicts the association between education and earnings, but incorrectly interprets employment as matchmaking between demand and supply. They affirm that human capital theory cannot explain “how individuals with specific educational backgrounds actually end up in different occupations” (p.194).

An attempt to develop more realistic variations on human capital theory has led to credential-screening theories that emphasize the mechanisms through which educational credentials are recognized in imperfect markets. Bills (2003) examines theories that address the issue of employability by recognizing that employers use *screening* mechanisms to overcome imperfect information about the qualities of individuals, while job seekers use the *signaling* capacity of their qualifications, abilities and length of schooling to convince employers to hire them. Thus people do not pursue education to become more productive, but to obtain credentials that signal that they are competitive for some jobs. Weiss (1995) views these credential-screening models as an extension of human capital theory and uses the term *sorting* to explain how (uninformed) employers and (informed) job seekers make their moves in trying to maximize profit. While human capital theory emphasizes ‘learning’, measured as time spent in school or on job-training, as the correlate to wages, Weiss argue that ‘schooling’ as an anticipated measure of productivity is part of the hiring process. In a credential society, workers’ knowledge, skills and abilities are standardized to offer employers a set of norms to allow some assessment of workers.

Credentialism offers a quite realistic model of the relationship between education and work by recognizing that educational credentials are instrumental toward facilitating access to privileged positions and higher incomes (Bills, 2004). Two effects of educational credentialism are recognized in the job market. The first is the ‘sheepskin effect’, also known as credential effect, so-called because the nonlinear effect of education on earnings is evocative of the relevance of a completed degree that will boost an employee’s earnings much more than increasing the number of years of schooling (Ferrer & Riddell, 2002). A completed credential has a signaling effect

because employers differentiate between 'drop-outs' and 'completers' with an equal number of years of education. The second effect is the 'credential inflation' which is related to the expansion of higher education that has been driven by the importance given to educational credentials in the job market (Collins, 2002). Essentially, employers demand more education from employees for performing same work. Similarly, workers experience underemployment when the job market is poor compared to the pool of formal educational qualifications (Livingstone, 1997) – for instance, workers have higher educational credentials than required by their work or have more knowledge than is required to perform the job. Undoubtedly, the mismatch between job and education challenges the validity of human capital theory.

Nevertheless, many predict that employers start to view diplomas and degrees with skepticism, considering problems related to credential inflation, motivation for education, and employability skills. Kivinen and Ahola (1999) give a suggestive description of the social mechanisms of the graduate labour market, which connects the educational system (i.e., formal qualifications) to the world of work (i.e., hierarchies and divisions of labour). While a degree is “a key that unlocks doors”, the actual hiring opportunities show that graduates are “trapped between the excessive supply of educated labour and a shortage of demand for that labour” (p.197).

Another criticism of human capital theory concerns its individualistic approach that assumes that people make purposeful rational choices to invest in their education in order to obtain better returns, when, in reality, individuals' actions are constrained by various social factors. The reality is that individuals with different access to resources invest differently in education, and workers may have monetary or nonmonetary preferences (e.g., job satisfaction, prestige) that impact their choice. Human capital theory basically ignores the effect of social structure on the decision-making process involved in investment in education. However, education is an agent of social reproduction and the impact of social structure on acquiring human capital cannot be disregarded. Collins (1979) characterizes the United States' system of higher education as a projection of the American values that embrace individualism and free-market competition instead of training people for occupational success: historically, higher education in the United States was not driven by knowledge ideals, but by the desire of middle class and elite groups to secure high status positions for their children. This point is reminiscent of Bourdieu and Passeron's (1977) concept of arbitrary power, which socializes students into the middle class

values of competition and achievement symbolized by the acquisition of educational qualifications. The dominant social groups use credentials to promise meritocratic advancement, while, in reality, the credentialist system favours those who possess the cultural capital to succeed in school and therefore maintains the control of an 'elite' over higher status occupations (Bills, 2003; Collins, 1979).

In particular, labour market theories on the segmentation of the labour force account for social inequities that arise from working in specific markets. In a segmented labour market, jobs are organized by segments of industrial and occupational distributions. Higher status jobs that are better rewarded (i.e., working conditions, wages and promotional opportunities) are only accessible by certain social groups; there is little opportunity for others to cross (discriminatory) barriers. In the early 1970s, Reich, Gordon, and Edwards (1973) identified four such segments: segmentation into primary and second markets (i.e., the so-called dual labor market) differentiated by stability characteristics; segmentation within the primary sector, essentially between independent and subordinated jobs; segmentation by race within the above distinct segments; segmentation by sex, usually in gender-traditional occupations. Meanwhile, firms are segmenting their internal labour markets. As stated by Reich et al., labour market segmentation arose and is perpetuated because it is *functional* in the sense that it facilitates the operation of institutions, it establishes and maintains vertical job ladders and it legitimizes social inequalities. These features have not disappeared from current labour markets, but they have embraced new forms, as demonstrated by Hudson (2007), who describes that the dual labour market in America (i.e., polarization between good and bad jobs) is controlled by nonstandard work arrangements (i.e., temporary, part-time, contract or on-call jobs) and non-citizen status rather than just traditional social factors (e.g., sex, race).

Bauder (2001) reveals other forms of segmentation and argues that "social inequalities are also constructed inside the labor market, and stigma is attached to workers after, and because, they join a labor market segment" (p.46). His study draws attention to supply-side processes in the segmentation of labor markets in which workers are spatially entrapped to places that offer fewer economic opportunities (e.g., housing market that leads to residential segregation). Another type of segmentation occurs in the knowledge economy, when workers are differentiated not only by the amount and educational attainment, but also by their occupations. In particular, 'knowledge

occupations' (e.g., professional, management, technical occupations) are ranked higher in the labour force (Baldwin & Beakstead, 2003). Finally, segmentation theories are viewed as explanatory in the study of gender differences in labour market outcomes caused by under-representation by women in occupations that are better rewarded (Beakstead & Vinodrai, 2003; Fortin & Huberman, 2002a; 2002b; Shannon & Kidd, 2001). Essentially, these theories acknowledge that increasing educational attainments by women have changed the gender distribution in most sectors of the labour market but a wage gap still exists because of vertical and horizontal occupational segregation (Charles & Grusky, 2004).

Other labour market theories. Some analyze the education–work transition by focusing on employability. Brown, Hesketh and Williams (2003) challenge the human capital theory, which assumes that return on education is directly related to knowledge and skills acquired through education and training. They define employability “as the relative chances of acquiring and maintaining different kinds of employment” (p.111) in a market over-saturated with job seekers who fulfill the requirements of a specific job. The authors suggest that the positional competition between credentials and jobs in the United Kingdom is controlled by two tendencies: the “rigging” of the market for credentials (i.e., the attempt to control the market through influencing the competition process, like the practice of formal examinations) and the “ranking” of individuals in the market (i.e., the way job seekers ‘package’ their personal qualities and prospective employers link applicants’ personal qualities to potential productivity). Lin, Sweet, Anisef, and Schuetze (2000) examine how employability skills possessed, acquired and utilized by university graduates appear to translate into better employment in the Canadian labour market; they found a net advantage to skills utilization by graduates from vocational education programs compared to liberal arts graduates. Graduates from vocational education programs are also more efficient in signaling their qualifications and abilities to impress potential employers (Lin, Sweet, & Anisef, 2003). To resolve the discrepancy between higher education and the labour market in terms of graduate recruitment and employment, Teichler and Kehm (1995) propose a more dynamic relationship. On one hand, the higher education system should adapt educational policies to respond to the needs of the labour market and employment demands. On the other hand, higher education should exert more “push effects” on the employment system by preparing graduates to become active agents of change in the labour market and to exert some control on the demand side of the labour market.

Although it is recognized that human capital theory is possibly flawed because it promotes linear causal models to explain one's capacity to succeed in the labour market, the human capital concept is still instrumental and economists strive to find appropriate indicators to reveal relationships between education and labour market outcomes. There are also many attempts to use the human capital concept in relation to other forms of capital (e.g., social capital) or social structural factors. However, to my knowledge, there is not much recognition of aspects related to the transferability of human capital between labour markets, although these issues are inevitable, considering the increasing mobility of knowledge workers in global markets. In Canada, the increasing number of highly educated immigrants and the pressing issues regarding the poor utilization of their skills make clear the need to develop the notion of *foreign (immigrant) human capital*, without assuming that the creation, accumulation or conversion of this capital follows the *domestic human capital* model. For instance, the screening and signaling processes are likely to take place differently for newcomers looking for jobs, in view of employers' lack of information about foreign education systems and labour markets and/or immigrants' lack of knowledge regarding local hiring protocols and limited ability to present their education and experience in a 'package' that impresses Canadian employers.

Summary. While the critical perspective of human capital theory has much to offer, I want to draw attention to three important aspects which are relevant to my study, but which are missing from the debate around human capital.

- a) There are different forms of capital that highly educated immigrants can activate in order to enhance the value of their human capital. While human capital theories acknowledge the role of social capital, less attention is paid to other forms of capital like symbolic and cultural capital. It is essential to recognize that immigrant human capital is not the only asset available to newcomers, and all forms of capital (Bourdieu, 1997) may be employed by immigrants in an attempt to revive their human capital in a new social context.
- b) Human capital theories do not explicitly account for the means that allow for human capital accumulation and transformation over life course. Especially during life course transitions, individuals may be in situations where the exchange value of their assets is diminished (e.g., immigrants undergo a discounting of their human capital). I argue that Bourdieu's unified

sociological framework lays the foundation for an examination of the manner in which knowledge workers, in particular immigrants, engage in practice in specific fields (i.e., post-secondary education, labour market) in order to transform their human capital.

- c) Some immigrants succeed better than others in integrating into Canadian society. In order to understand how some individuals negotiate their situations and/or strategize their practice (actions), it is important to adopt a framework that allows for personal agency to become aware of the Canadian social context and then to manifest itself through activating capital (assets) in specific fields of practice. I contend that a sociological perspective that integrates the essence of Bourdieu's *habitus* viewed as a generative structure of practical action as well as the role of a socially situated *bounded agency* over life course would be suitable in guiding the discussion.

1.4.2 A sociological perspective

There are several reasons to employ a Bourdieusian framework in my study. Bourdieu's sociological theory brings a complementary view to economic theories that are based on human capital and that focus primarily on employment and earnings as indicators of the return on investment in a university education. His system of thought contains notions that cover both objective and subjective grounds, allows for the manifestation of structures and agency, and offers a suitable conceptualization of various social issues. Moreover, by bringing together the concepts of capital, practice, field and habitus, this framework can be used as a basis to discuss the transformation of capital at turning points during one's life course. Habitus as a system of patterns of thought and behaviour initially formed through socialization within family and further acquired through experience is less likely to depreciate during workers' migration, and can play a role in activating agency to strategize the transformation and adjustment of immigrant human capital. In this section I will present elements of Bourdieu's theory with an emphasis on:

- the relation between the theories of capital and field;
- other forms of capital relevant to the study; and
- the instrumental role of habitus in mobilizing agency.

By recognizing that habitus is crucial in any practical activity that operates capital in a field, Bourdieu confers an active role to human agency in carrying out actions in a specific social space. However, his perspective on the relationship between structure and agency needs to be complemented by approaches that a) explicitly account for the occurrence of change over life course, b) single out the role of personal agency, which is the key concept in making decisions at specific points during the life course, and c) recognize that habitus is essential in mobilizing human agency. For instance, immigrant habitus as a system of implicit knowledge, dispositions, perceptions, beliefs and values is still bound to the country of origin and to the structures within which it was developed. There is no doubt that what differentiates the immigrant and Canadian-born workers is the implicit (tacit) knowledge that they possess (Sternberg, 1998). Therefore, to succeed in the host country, immigrants have to adjust to the social context and acquire the tacit knowledge of the new cultural environment: likened to developing a ‘secondary’ habitus. The enriched habitus can be effective in mobilizing the immigrant personal agency to make decisions and to engage in practical actions in the host country.

Next, I will present empirical and theoretical research that draws attention to agency in relation to structures and social contexts, and that highlights the transformational role of agency during the life course. I will discuss:

- selected aspects of the agency/structure debate;
- various perspectives on life course agency and bounded agency; and
- the notion of strategy as the capacity of human agency to pursue life goals.

The literature review is structured around Bourdieu’s sociological theory, though it presents further contributions that expand the concepts and, moreover, explicitly locate the notion of agency in a life course perspective. I consider agency to be the central concept of the proposed theoretical framework because it can be operationalized in my study. However, I maintain that the underpinning concept in understanding how agency operates is Bourdieu’s habitus viewed as a generative structure of practical action.

Capital and field. Bourdieu (1997) describes capital as accumulated labour that individuals can appropriate for their own benefit to engage in “the games of society”; each type of capital is a valid source of power. He acknowledges that it takes time to accumulate capital, which then

becomes “a force inscribed in objective and subjective structures.... It is what makes the games of society.... [It] is a force inscribed in the objectivity of things so that everything is not equally possible and impossible” (p.46). Bourdieu initially distinguishes between three types of capital: economic capital that gives command over economic resources; social capital that activates resources based on group membership, relationships, social connections and obligations; and cultural capital acquired from parents who transfer to children the attitudes and knowledge that make them comfortable in the educational system, and leads to further advantage in obtaining a higher status in society through educational credentials. Given the unique feature of capital as a source of power, various forms of capital may be exchanged like currency. Cultural and social capitals are crucial in relation to the sociology of education because cultural capital is a key mechanism that activates educational investments, while social capital gives individual credit in society through their membership to social networks (Andres, 1994; Bourdieu, 1983; 1988; Bourdieu & Passeron, 1973). Bourdieu (1984; 1998) finally acknowledges symbolic capital as a disguised form of capital that is recognized as legitimate competence, authority or distinction on specific matters. Clearly, not all forms of capital are available to all agents and the significance of different forms of capital is bounded to social contexts. Thus, immigrants experience barriers to employment after arrival to Canada because employers neither recognize nor value their foreign credentials.

Social space is divided in fields that consist of structures of social relations which are characterized by the struggle for positions: individuals or groups are engaged in this struggle when trying to establish what defines valuable and legitimate capital within a space (Bourdieu, 1993). Capital is field-specific because “the structure of the field, i.e., the space of positions [is homologous to] the structure of the distribution of the capital of specific properties which governs success in the field and the winning of the external or specific profits...which are at stake in the field” (Bourdieu, 1983, p.312). The differential possession of capitals generates specific social structures that demarcate agents’ positions in the social topography of the field in which they compete (Bourdieu, 1984; Martin, 2003; Savage, Warde, & Devine, 2005). The more privileged groups legitimize the process to hold power in that field, which leads to social stratification. For instance, all knowledge workers -but especially the immigrants- are affected by the structuration of the labour market that is a result of the distribution of various forms of capital, and, therefore, power in the field.

Social capital. Social capital is a sociological concept that defines an advantage created by a person's location in a structure of relationships. Bourdieu (1997) defines social capital as an “aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition” (p.51). By fulfilling their social obligations, group members contribute to create a “collectivity-owned” capital and, in return, each member is entitled to some credit. Bourdieu places the source of social capital in social connections – the ‘know-who’ is a valuable resource and social capital is instrumental in accessing privileged, powerful positions. Lin (2001) associates investment in social relations with expected returns in the marketplace (e.g., career attainment and advancement). In contrast, Coleman (1988) adopts a functional approach to social capital: he points to aspects of social structure that facilitate the actions of actors within the structure. He also associates social capital with notions of trust and social norms to define one’s belonging to a community, similar to Putnam (2000), who focuses on association membership. This results in social networks and social trust that build some level of “civicness”, or a sense of civic community in towns, cities and countries. Portes (1998) notes that Coleman included in the social capital concept the mechanisms that generate it (e.g., network, reciprocity expectations, trust, social norms), the consequences of possessing it (e.g., privileged access to information) and the social organization that allows for both sources and effects to materialize (e.g., group membership).

My interest in using this concept is to suggest that information channels represent one form of social capital which is essential for graduates entering the world of work and vital for immigrants building their lives in a new country. Group membership is also relevant to the accumulation of capital by knowledge workers, especially immigrants, who start to reshape professional networks and advance their careers in Canada. Equally relevant are the notion of trust that is enhanced through social practice and the assimilation of social norms. The need to build social capital is valid for any field of practice as the only way to overcome social and professional exclusion.

Cultural capital. Of all forms of capital, cultural capital is perhaps the most popular in educational research. It underlines family background as the most influential factor of individual educational success, from early childhood learning to post-secondary education (especially completion thereof) and beyond. Cultural capital is a well-elaborated concept in Bourdieu’s

theory (1997) and is comprised of three subtypes: objectified, embodied and institutionalized capitals. The objectified cultural capital refers to cultural goods, such as works of art, that are owned and can be transmitted physically -like economic capital- but that also have a symbolic meaning by facilitating the embodiment of cultural capital and creating an aesthetic disposition and a sense of distinction (Bourdieu, 1984). The embodied type of cultural capital is the result of socialization within family; it is created and transferred over time, like linguistic capital or artistic taste or love of learning. This form of capital results from developing the cultural resources (e.g., behaviour, habits) to appreciate (the dominant) culture, and it is also recognized in the formation of primary habitus. It is essential in the appropriation and use of objectified capital and the development of the institutionalized cultural capital (Dumais, 2002; Moore, 2004); the latter consists of institutional recognition of the embodied cultural capital held by an individual who successfully converted it via the educational system into academic credentials.

Because of its role in cultural and social reproduction (Bourdieu & Passeron, 1973), cultural capital is seen to hold a deterministic connotation and those who advocate the primacy of agency over social structures tend to diminish its importance. The reason is that the educational system endorses the dominant culture by validating the normative rules that recognize a specific cultural capital (e.g., academic education is valued by middle and upper class families) and thus contributes to the reproduction and legitimization of social inequalities that are accumulated during one's life (Andres, 1994). Rewards are mainly measured in relation to the labour market, where the final conversion of cultural capital to economic capital guarantees a monetary value for an institutional level of achievement. Those who are not members of the dominant culture are at a disadvantage when it comes to receiving cultural information and building cultural capital, so they encounter overt or covert social exclusion (Robbins, 2005). An interesting question is whether newcomers who belong to cultures that differ from the host culture are in danger of becoming socially excluded because they lack the tacit cultural knowledge of the normative rules governing the Canadian society, and to what extent this has an impact on their economic integration.

The main reason to introduce embodied cultural capital to analyze the journeys of university graduates, especially immigrants, is because this form of capital is the most intimately related to the way human agency would engage in learning over the life course. Embodied cultural capital

makes an impact on one's primary habitus (dispositions) produced during childhood. Since cultural capital produces durable effects on individuals, at least some elements of cultural capital can endure life course transitions such as immigration, and can regain value in new social contexts. I argue that for immigrants, embodied cultural capital is a valuable asset they carry to the new home country.

Symbolic capital. Immigrant human capital is a valuable asset, but only if employers recognize it. Other forms of capital, such as social and symbolic capitals also depend on recognition from the outside world. Bourdieu describes symbolic capital as the amount of honour, prestige, the right to be listened to, etc., possessed by a person with regards to structures that confer “reputation for competence and an image of respectability” (1984, p.191). Consequently, it is a source of power that becomes essential to individual agents trying to secure social positions. Symbolic capital is different than one's cultural or social capital being related to the way that other social agents perceive his/her social position based on some hierarchical schemes or “collective expectations” (Bourdieu, 1998). Symbolic capital can be also a group property characteristic of all members of a group. It can be used as a collective strategy to conserve or to increase power or as an individual strategy to join groups which possess symbolic capital. For instance, Bourdieu (1988) related the prestige and recognition acquired by university professors in the French higher education system of the late sixties to possession of symbolic capital. Lin (2001) does not differentiate symbolic capital from social capital, but he uses similar terms such as recognition, prestige and esteem to capture the idea that assets can be possessed and differentiated by groups and individuals. “A group can build, maintain, or lose reputation. Likewise, within a group, individuals acquire, attain, or suffer different levels of reputation or ill repute” (p.158).

I was first acquainted with this concept in relation to research on gender inequities in academia and male-dominated occupations. Glover (2000) employs the term *reputational capital*, specified originally by King (1994) as a form of cultural capital. The concept seeks to explain why women and men with science degrees and comparable human capital (i.e., doctoral qualifications at prestigious universities) progress at different speeds in scientific careers (i.e., women work in less prestigious fields, tend to be in less secure positions, are promoted more slowly). King regards the reputational capital as being created as a result of “a social process involving friends,

colleagues, competitors ... who are also involved in a process of judgment about an individual's work, as well as their 'whole professional persona'" (p.130). In this symbolic space of power, women scientists have more difficulty in gaining an authoritative voice.

The example of women in science-related occupations can be easily extended to interpret why other 'outsider' groups (e.g., immigrants) may have lower chances of success in professional fields in which *reputation* (e.g., the recognition of human capital, size of social network) matters. For instance, immigrant human capital may hold no symbolic value in social contexts (spaces) structured by relations and rules that disregard it. As a result, immigrants cannot use their human capital. One explanation is the enormous and often hidden role that symbolic capital has in mediating the conversion of all other forms of capital. Since professions are fields rich in capital, the dominant social groups have the power to decide who can enter the field by imposing the rules of the dominant culture. The fact that many highly educated immigrants decide to obtain Canadian credentials suggests that they believe this will add symbolic value to their human capital. These practical actions follow Bourdieu's reasoning: "when one knows that symbolic capital is credit... a kind of advance, a credence, that only the group's belief can grant those who give it the best symbolic and material guarantees, it can be seen that the exhibition of symbolic capital (which is always very expensive in material terms) is one of the mechanisms which (no doubt universally) make capital go to capital" (1990, p.120).

Practice and habitus. While capital and field shape the structures of the society, practice and habitus form agency. Bourdieu's theory of practice emphasizes the role of field-specific habitus that is constituted during practice in the field and it serves practical functions. Positions in a field of practice are the result of the combined effect of *habitus* shaped by one's social trajectory, and positions in a field of distributions of capital. Habitus consists of:

Systems of durable, transposable dispositions, structured structures predisposed to function as structuring structure, that is, as principles which generate and organize practices and representations... the dispositions [are] durably inculcated by the possibilities and impossibilities, freedoms and necessities, opportunities and prohibitions inscribed in the objective conditions ... dispositions [are] objectively compatible with these conditions and in a sense pre-adapted to their demands (Bourdieu, 1990, p.53-54).

Activation and conversion of *capital* (resources) is possible only when agents exert their *habitus* (dispositions) through *practice* (actions) in a *field* (multi-dimensional space of positions). Andres (1994) explains the formula that defines the concepts central to Bourdieu's sociology (1984), **[(*habitus*)(*capital*)] + *field* = *practice*** as if *practice* (actions) is an outcome of a relationship between *capital* (resources), *habitus* (dispositions) and *field* (multi-dimensional space of positions). However, it is important to point out that Bourdieu attributed a higher role to practice since he explicitly used terms like “practice-unifying” and “practice-generating” principle, or “unity hidden under the diversity and multiplicity of the set of practices performed in fields” (1984, p.101). This suggests that practice in a field (i.e., action and interaction) is the unifying factor, rather than merely an effect, and that only practice allows agents to gain and/or convert capital. For instance, the Canadian post-secondary system or the labour markets consist in structures of social relations (fields of practice) in which individual habitus predisposes agents toward practical action to compete for better positions by skillfully mobilizing capital associated with credentials, occupational prestige or social networks.

Bourdieu's habitus also includes one's practical knowledge of the social world, a series of classificatory schemes of perception and appreciation that are shared by the agents in a given social formation (1984). This tacit (implicit) knowledge consists often of habits, language, norms and culture of a specific social context. Habitus as tacit knowledge is embodied by the social agents and gives them “the feel for the game” when envisaging strategies and taking action.

The concept of habitus has often led to controversial interpretations. As Mahar, Harker, and Wilkes (1990) explain, habitus is created within objective structures (e.g., family, community, higher education) and through personal history and experiences, it includes one's knowledge and understandings of the world, so it is a dynamic concept that changes when the individual changes positions within fields. Still, the authors believe that habitus is subject to various constraints on agency, like it is influenced by the habitus of socializing agents (e.g., family, school) or by the change of objective conditions. The authors finally agree that subjectivism and objectivism are reconciled in Bourdieu's theory of social research by bridging habitus (i.e., subjective concept) and field (i.e., objective structure) via practice. Bourdieu (1990) maintains that habitus offers a durable form of freedom, not a form of determinism – it allows for some struggle and changes by

the human agency because it is through the work of habitus that practice (agency in action) is linked with capital and field (structure). Elsewhere, Bourdieu explains:

Habitus is not the fate that some people read into it. Being the product of history, it is an *open system of dispositions* that is constantly subjected to experiences, and therefore constantly affected by them in a way that either reinforces or modifies its structures. It is durable, but not eternal. [However] there is a probability, inscribed in the social destiny associated with definite social conditions, that experiences will confirm habitus, because most people are statistically bound to encounter circumstances that tend to agree with those that originally fashioned their habitus (Bourdieu & Wacquant, 1992, p.133).

Bourdieu (1990) assigns a temporal dimension to habitus by linking the agent's present practice to his/her dispositions toward the future. He also talks about the hysteresis of habitus, which describes a condition in which habitus is out of time or place: this is often because a person or people changed positions and their habitus is no longer appropriate. Later, it is stated that, "in habitus the past, the present and the future intersect and interpenetrate one another" (Bourdieu & Wacquant, 1992, p.22). Referring to the durability of habitus, Bourdieu explained the notion as a product of history:

In all the cases where dispositions encounter conditions (including fields) different from those in which they were constructed and assembled, there is a *dialectical confrontation* between habitus, as structured structure, and objective structures. In this confrontation, habitus operates as a structuring structure able to selectively perceive and to transform the objective structure according to its own structure while, at the same time, being re-structured, transformed in its makeup by the pressure of the objective structure. This means, that in rapidly changing societies, habitus changes constantly, continuously, but within the limits inherent in its originary structure... (Bourdieu, 2005, p.46).

This description suggests that exposure to (new) social contexts may re-structure habitus and thus enrich one's embodied cultural capital that may be subsequently converted into other forms of capital. For instance, dispositions for learning are acquired over time and have a lasting effect that supports adults to engage in academic work later in life. Lifelong learners find motivation for learning in internal or external sources (e.g., self-improvement or job requirements), but they cannot succeed without possessing learning dispositions and effective study habits.

Lizardo argues that "habitus is seen simply as a passive perceptual and classificatory faculty or ... the embodied habitus is simply seen as the docile clay where society leaves its stamp" (2004,

p.380). Instead, he asserts that habitus should be recognized as an objective structure in itself because of its active role of *generative structure of practical action*. Without recognizing that “the practices produced by the habitus [are] the strategy-generating principle enabling agents to cope with unforeseen and ever-changing situations” (Bourdieu, 1977, p.72) the whole idea of practical action cannot even be understood. Habitus is also called a structuring structure because “it acts as a reservoir of meanings and recipes for action assigned by, produced by and synchronized with the fields that provided them to habitus in the first place, and which in turn habitus tends to reproduce through its action” (Widick, 2004, p.199).

In my study, I adopt this active meaning of habitus as “the structuring mechanism that operates from within agents” (Bourdieu & Wacquant, 1992, p.18). Habitus includes tacit (implicit) knowledge of the social world that is, to some extent, related to classificatory schemes inherited from the family as well as acquired through experience and interaction with school, community, church, other institutions and fields of practice. Habitus also includes embodied (internalized) dispositions toward the world: it is an intrinsic quality that supports the agent over life course in relation to education, work, culture or everyday life. For my study, it is relevant to recognize that habitus is a generative structure of practical action that has an infinite capacity to be re-structured (within some limits), when social agents encounter changing conditions over life course. For instance, when exposed to the social context of the host country, immigrant habitus may be re-structured by gradually and selectively acquiring the implicit (tacit) knowledge of the new culture (Sternberg, 1998).

Agency and Structure. I will further discuss agency in relation to social contexts and structures and highlight the transformational role of agency during the life course. While agency represents the capacity of human beings to engage in practical action (i.e., using available resources in fields of practice), structure describes the context in which action takes place (i.e., institutions, norms, relationships). The structure/agency debate revolves around the question of whether social structure or human agency should be given predominance over life course. While structuralism emphasizes that social agents are inherently socialized and their behaviour is entirely determined by various structures, other sociological theories attempt to establish under which conditions social agents gain freedom and make choices.

As noted by Bourdieu, social structure introduces “the notion of the rule which can refer indifferently to the regularity immanent in practices ... [or] the model constructed by science to account for it, or the norm consciously posited and respected by the agents” (1990, p.37). He acknowledges that although the actions of social agents are informed and shaped by social structures, these actions may influence social structures through practice in specific fields.

Giddens (1979; 1984) formulates a model of reflexive, knowledgeable agents who understand society’s institutions, can justify their actions and assume the consequences of their social action. He also sees social reproduction as a practical activity, but describes social structures as both “enabling and constraining”, consisting in “rules and resources” that define both a virtual and an actual space for social action. In his structuration theory, Giddens uses the notion of “duality of structure” to suggest that the rules and resources of a social system are both the medium (conditions) and outcome of social activities during which agents, through reflexive practices, produce and reproduce the social structures. The view of a duality of structure is also adopted by Sewell (1992) who replaces “rules” that imply formally stated prescriptions or norms with “schemas”, procedures that can be generalized to new situations by a resourceful agent. Sewell supports that “agents are empowered by structures, both by the knowledge of cultural schemas that enables them to mobilize resources and by the access to resources that enables them to enact schemas” (p.27). He also views structure as being dynamic and evolving through the action of resourceful agency.

Human agency has the capability to impact and/or adjust to structures. Beck (1992) put forward that an “individualized individual”, defined as the central unit of social life, has emerged during the transition from industrial society (i.e., modern societal structure developed after the industrial revolution) to “risk society” (i.e., modern society that develops ways to respond to risk). For Beck, risk is “a systematic way of dealing with hazards and insecurities induced and introduced by modernization itself” (p.21). However, he emphasizes that risks are the result of individual decisions. Beck’s individual is less bound by social norms and values or by traditional forms of collective identities such as social class, so he learns to live in the modern world by allowing desire and necessity to be economically active. Beck suggests that social class categories, which confer particular identities to individuals can be restructured by economic boundaries. This

argument is known as the *individualization thesis* (i.e., the individual is accountable for both success and failure of his/her social actions).

More recently, Rudd and Evans (1998) proposed the notion of *structured individualization*, rooted in Beck's individualization thesis and in life course theory, to illustrate that life course pathways of young people in the UK who are experiencing school-to-work transition were shaped by the combined effect of structure and agency. Although young people in the study demonstrated agency because they valued individual effort and were confident that independent pathways through further education and into work could be shaped by hard work and personal attributes, agents continued to be aware of the system and the effect of economic structures. Anisef and Axelrod (2001) used the notion of structured individualization to explain how structural forces affected the life pathways of Canadian youth, but they also acknowledged the role of agency and individual traits in making choices. Youth who articulated their life goals were particularly capable of avoiding the constraining effects of social structures and to find ways to navigate their life courses: this highlights the significant role of agency in one's life.

A theoretical framework portraying the agency/structure relationship in a temporal perspective was proposed by Emirbayer and Mische (1998). The authors define agency as "the temporally constructed engagement by actors of different structural environments ... which, through the interplay of habit, imagination and judgment, both reproduces and transforms those structures in interactive response to the problems posed by changing historical situations" (p.970). This definition is reminiscent of both Bourdieu's notion of habitus and Giddens's reflexive agency. In this temporal framework, agents adopt a "relational pragmatics" perspective, centered on their engagement (or disengagement) with social environments that are structured by their actions but are flexible enough to accommodate change. Essentially, Emirbayer and Mische employ a life course perspective by seeing the individual agents as simultaneously aware of and actively engaged by patterns and situations from the past, present and future; as well, the individual agents are seen as being capable of shifting these perspectives in order to mediate the structuring contexts in which they unfold social action.

Life course agency. One idea that seems to emerge from the agency-structure debate is the usefulness of looking at this relationship from a life course perspective. Clearly, the supremacy

of one or the other of these two (opposite) tendencies changes over life course. The concept of *life course agency* is particularly relevant to my dissertation because it reinforces the idea that individual has the capacity to formulate and to pursue life plans adequate to a specific moment (Hitlin & Elder, 2007). The notion is useful in understanding how individuals manifest agency by adopting strategies and making decisions at turning points during life course. Transition points are primarily characterized by instability and change. In these particular circumstances, the agents extend their attention to past experiences, current conditions and future goals in order to make decisions – a temporal dimension that is the essence of life course agency and is also reminiscent of Bourdieu’s habitus. The life course agency does not only include a situated form of action with long-term implications, but also a self-reflective belief about an agent’s ability to attain long-term goals, a belief that is rooted in previous experiences, dispositions and behaviours acquired throughout the agent’s life course.

There are differences between research on life course agency and life course research. Hitlin and Elder pointed that life course scholars document transitions and turning points in others’ lives “after the fact”, while research on life course agency maintains the focus on individual and his/her capacity to plan the future. Thus, individuals become "active agents in shaping their biographies—within a myriad of constraints, of course—but people differ in their ability to successfully implement these strategies” (2007, p.183). Similarly, Heinz and Krüger acknowledge that, “by introducing agency into life-course equation, we take into account that macro-structures do not determine the shape of life courses, but individuals contribute to it by being active agents of their biography” (2001, p.41), ideas that are reminiscent of Giddens’ “reflexive agent” and of Sewell’s “resourceful agent”.

Bounded agency. Since “personal agency and social change are not always harmonious” (Shanahan & Hood, 2000, p.123), social change may induce modifications in institutions, organizations, small groups and interpersonal relationships that complicate the ability of the life course agency to make decisions. Thus, the agency must consciously understand the changing social context. The need for continuous social awareness is part of living with a culture of uncertainty in a highly differentiated complex society. To account for the manner in which people attempt to maintain control over their lives by adjusting their dispositions and, therefore, their actions to changes in social contexts and personal circumstances, Shanahan and Hood

introduced the term *bounded agency*. In their theoretical study, this concept illustrates the dynamic interplay between personal agency (i.e., individual capacity to formulate and pursue goals), group-based strategies (e.g., set up by close relationships, like family and school), and macrostructural context (i.e., structured pathways of education, work and family) that governs the transition from adolescence to adulthood. They showed that in a social landscape that opens more viable options to individuals, there is an increasing probability of the differentiation of life histories, compared to historical periods involving fewer available options, when the state and institutions restricted the range of pathways and assigned individuals into pathways.

Evans (2007) offers an interesting perspective in which she locates various theories of structure and agency in a conceptual schema that is based on structure-agency, internal-external control (struggling with social forces), and social reproduction-conversion dimensions. The empirical grounded concept of bounded agency describes a life course agency that embodies subjective perceptions of the structure that has to be negotiated, and of the social landscapes that agents need to navigate. Evans states that “bounded agency is *socially situated agency* [italics added], influenced but not determined by environments and emphasizing internalized frames of reference as well as external actions” (p.93). This notion is reminiscent of Bourdieu’s habitus. Evans asserts that while structured individualization places more emphasis on external structures, bounded agency shifts the focus onto “individuals as actors” by placing emphasis on internal processes. Evans also noted that the bounded agency concept offers a way to understand people’s experiences in changing social landscapes because it emphasizes the manner in which past habits and future opportunities relate to the present moment.

Most studies on life course agency and bounded agency are focused on adolescents and youth in school-to-work transition. However, Rubenson and Desjardins (2009) offer a different perspective when employing the notion of bounded agency to understanding barriers to adult education participation. Dispositional factors are known to be crucial in modeling adult participation. Rubenson and Desjardins emphasize that dispositions toward education are influenced by the social context, and are a result of adults’ social experiences. The bounded agency that controls choices and actions, thus enabling participation in education, takes into account the interaction between structural barriers and individual dispositions.

In essence, human agency describes the capacity for human beings to exert social action and make choices. However, choices depend on individual assets accumulated through education, experiences and skills throughout life course, and are influenced by specific life course circumstances. There is no doubt that agency could be constrained by obstacles raised by social structure and changes in social contexts. However, the role of a bounded agency is to identify opportunities by understanding the social (changing) context. The notion of bounded agency is particularly useful for my study because of the explicit focus on the interaction between agents and social context.

Agency and strategy. The notion of *strategy* appears in various instances in Bourdieu sociological theory. Strategy as a planning tool for social action empowers the agent and thus attenuates the determinism that many attach to Bourdieu theoretical framework. Strategy is particularly useful in relation to the topic of this dissertation regarding capital-rich individuals who are expected to efficiently activate their capital in order to establish or optimize positions in the social space (e.g., the labour market).

In one instance, this term appears in Bourdieu's metaphor of players in a card game which he uses to explain how agents plan their marriage strategies to guarantee the social reproduction of power relations (1977). He compares the matrimonial game with "a card game, in which the outcome depends partly on the deal, the cards held (their value itself being defined by the rules of the game, characteristic of the social formation in question), and partly on the players' skill" (p.58). Bourdieu argues that individual positions in a social space are not deterministically established because what finally matters is that the agent knows the rules of the game and adopts effective strategies to take advantage of the 'hand dealt' (capital). In a later study, it is acknowledged that the card game metaphor is not perfect because it implies that the game has some definite rules, when in fact the reality is more complicated (Lamaison & Bourdieu, 1986).

One difficulty is that strategy, like habitus, depends on the field of practice. For instance, habitus as implicit knowledge may be useful in specific social spaces. Knowing the history of the field is an important part of the game (Bourdieu, 1993), because "through the practical knowledge of the principles of the game that is *tacitly* [italics added] required for new entrants the whole history of the game, the whole past of the game, is present in each act of the game" (p.74). Obviously, new

players are disadvantaged because it takes time and continuing practice to acquire implicit (tacit) knowledge and habitus to operate in a field and then strategize social actions. The notion of strategy is still powerful, because it reinforces the idea that outcomes do not depend solely on assets. Individual agent gains more freedom for decision and social action because habitus and field are connected through practice.

DiMaggio offers another interesting approach on agency and strategy when discussing that Bourdieu's theory is usually portrayed as determinist because his social space is structured by the distribution of capital, and governed by capital reproduction, which maintains cultural and social reproduction and thus supports a hierarchy of social classes. DiMaggio (1979) argues that in Bourdieu's universe there are no classes-for-themselves, but "aggregates of optimizers, united by habitus, pursuing parallel strategies toward similar, but not collective, ends." (p.1470). Although DiMaggio acknowledges that Bourdieu's notions of capital, capital reproduction and class reveal a Marxist influence, he maintains that "the members of Bourdieu's classes are strategists, not strugglers, engaging in practices, not praxis; families, not classes, are the agents of conflict" (p.1470). For instance, in the field of education and cultural reproduction, conflict occurs even within the dominant class, between sectors which are rich in economic capital (e.g., heads of industry and commerce) and sectors which are rich in cultural capital (e.g., professionals, engineers, teachers). Members of the upper wealthy class convert a portion of their economic capital into "credentialed cultural capital" by ensuring that they and their children attend prestigious schools and universities. On the contrary, members of less wealthy groups are more dependent on cultural capital and their class habitus to acquire their own success and to guarantee the success of their children. This contrast shows that each social group strategizes the use of available resources, and that the chosen strategies depend on what appears to be valued in a given social context. For instance, in the case of highly educated immigrants to Canada, a reliable asset could be their embodied cultural capital (e.g., linguistic and cultural skills) but also habitus as implicit knowledge, patterns of thought, dispositions and behaviours.

Summary. I believe that a theoretical framework based on the notions of capital, agency and habitus is appropriate to guide the discussion and interpret the research findings of my analysis. First, Bourdieu's sociological theory provides the fundamental concepts to guide the discussion of capital transformation over life course because this theory indicates the scope of social action

(i.e., secure positions in the social space), the resources (i.e., various forms of capital), and the process (i.e., practice in specific fields). In particular, social and symbolic capital can be employed to understand how the structuration of labour markets is manifested in relation to various social factors. For highly educated immigrants, embodied cultural capital and habitus are perhaps the most useful in analyzing how agency can be mobilized toward social action because their effects are more durable and transferable during the migration to the host country.

Second, the notion of *bounded agency* is useful to understand how agents observe new social circumstances, identify ‘windows of opportunities’ for their employment and/or further education before engaging in social actions. This is particularly relevant to immigrants who learn to ‘read’ the Canadian social context and acquire tacit knowledge that restructure their habitus. When strategizing further actions, the bounded agency relies on the intrinsic reservoir of dispositions, implicit knowledge and capabilities that constitutes the individual habitus. Although this process must be different for university graduates of Canadian institutions who have more knowledge of the Canadian social context, I believe that an adjustment of dispositions and behaviours due to the exposure to existing opportunity structures available in the labour market and trends observed within society at large occurs in both situations. The generative structure of practical action that is embedded in one’s *habitus* supports the *agency* in becoming *bounded* by the new (or changing) social context and in making informed decisions after assessing situations and planning strategies.

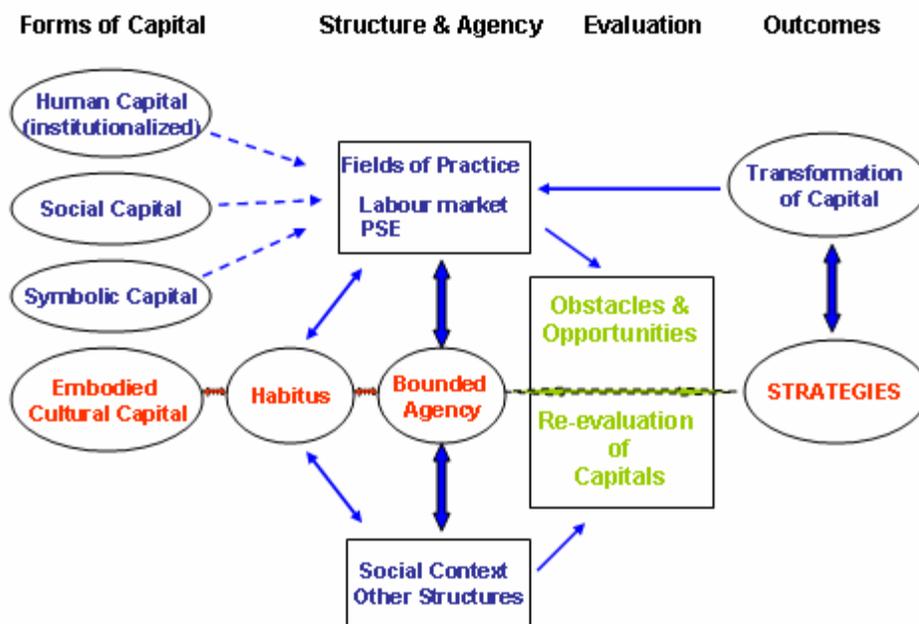
1.4.3 Proposed conceptual framework

My first thought when planning this research was just to study the socio-economic integration of highly educated immigrants arrived to Canada in the early 2000s. The empirical evidence, however, regarding barriers to acceptance of their human capital by Canadian employers pointed that such study requires a better understanding of the Canadian social and institutional structures that comprise the social context in which immigrants’ integration takes place. On one side, social context directly influences, through its structures, the outcomes of immigrants’ integration, and on the other side social context shapes immigrants’ beliefs and behaviours by restructuring their habitus. The relative success or failure of immigrants’ socio-economic integration cannot be

evaluated without situating their journeys in the landscape describing the mainstream group – the Canadian-educated university graduates with whom immigrants compete in the labour market.

Although my dissertation has primarily the scope of an empirical analysis (i.e., to examine evidence of a social phenomenon), developing a conceptual framework to interpret the results provides additional insights in understanding individuals’ motivation to engage in specific work and education pathways aiming for a continual transformation of their human capital. Figure 1.5 shows a graphic model that attempts to theorize the dynamic interaction between structures and agency during which agency becomes more socially situated. As a result, bounded agency can be more effective in making decisions and adopting strategies that, presumably, lead to a transformation of capital (particularly human capital). I will point to the four levels of a model that could explain the process in which are engaged immigrants or, in general, individuals who experience life course transitions involving utilization and transformation of human capital. This is essentially a *life course agency model*: anchored in the past, responding to the present and envisaging the future.

Figure 1.5 Life course agency model



Forms of capital (assets). In a first stage, I consider as assets traditional forms of capital that individuals possess when engaging with the social context (e.g., highly educated newcomers

entering the Canadian society). *Human capital* is the crucial asset in relation to fields like labour market or post-secondary system: it is the pivotal concept concerning the return to university education relevant to this study. Human capital embedded in educational credentials (i.e., defined by level of education, type of program or field of study, origin of education) and in individual acquisition of work experience over life course is an instrumental concept to describe the terms on which workers compete for jobs in the labour market. In the model, human capital consists in objective institutionalized measures that give some official recognition to educational credentials, work experience, professional expertise – the typical description of qualifications included in a résumé that knowledge workers use to acquire positions in the labour market, and to engage in further education in the post-secondary system.

In the process of operating the human capital in the labour market, individuals can make use of social network (i.e., *social capital*) and/or attach symbolic meanings to assets (i.e., *symbolic capital*). Such examples are social capital that accounts for membership in professional groups or symbolic capital that accounts for having obtained a degree at a prestigious institution or having worked in a highly-ranked workplace. Workers signal information about these forms of capital to impress employers, and employers overtly or covertly become aware of these forms of capital when screening job seekers. For instance, recognition of foreign credentials in the labour market or post-secondary system depends on country/region where credentials were obtained and this quality of foreign credentials makes a substantial difference in the manner in which newcomers to Canada succeed to compete in the labour market.

The agents also possess a less visible form of capital: *embodied cultural capital*, which has a very complex nature. It consists of individual socialization characteristics and behaviours that were built over time, often within family and community, which give agents the ability to function in familiar milieus. It is often related to the primary habitus (dispositions). Embodied cultural capital has no formal recognition in the labour market or post-secondary system.

In an ideal situation, all these assets should be a) connected, to ensure a functional utilization in the social space (e.g., labour market), and b) matched to the norms imposed by a social context. However, during major life course transitions, like immigration, or when first entering the labour market as knowledge workers, individuals attempt to engage with various structures (either

labour market or PSE or both) by ‘displaying’ their attributes (most likely a résumé) that are not always valued by those who evaluate them. Also, some forms of capital may be totally missing for recent immigrants (e.g., social capital) or for Canadian-educated graduates (e.g., the lack of symbolic value of a degree granted by a less prestigious institution).

When agents attempt to participate in a field of practice like the labour market or the post-secondary system, the institutionalized human capital is the most likely to be negotiated. Although this life course agency model will focus on the transformation of human capital, which is the most likely to control the competition of knowledge workers in the labour market, a process involving the manifestation of agency during life course transitions is expected to affect all forms of capital in one’s possession.

Structure and agency. At the second level, I include the social space in which these assets are operated by agency. This stage allows for a negotiation between structure and agency that leads to shaping a *bounded agency* capable of assimilating information about the social context. I believe that there are two major ways in which structure impacts agency that are relevant to the study, and their effect depends on the interaction between agency and various societal structures.

First, agents who are already active in some fields are informed by the practice in these fields that shapes their field-specific habitus. Of interest in this study are the Canadian labour market and post-secondary system (fields) which are characterized by practices in which knowledge workers (might) engage in order to obtain economic benefits or new credentials. When individuals engage in a specific practice, they build or enhance field-specific habitus. Practice in these fields leads to direct outcomes (e.g., those who participate in the labour market earn an income) or will lead to outcomes through the mediation of a *bounded agency*. Overall, practical action leads to an enrichment and diversification of one’s habitus and strengthens the relationship between structure (i.e., social context with institutions and norms) and agency.

Second, all agents, even those who are not active in the labour market or post-secondary institutions, can be influenced by the social context by assimilating information on social structures and institutions, social inequities and power structure, cultural differences and practices, which is part of being/becoming an active citizen. Particularly in the case of immigrants, the social context may have a stronger effect on agency through the acquisition of

tacit knowledge and the restructuring of one's habitus. The stronger effect is also due to the novelty of information, and by being assimilated through a comparative lens that continuously contrasts the Canadian social context with contexts from immigrants' home countries.

Nevertheless, especially for immigrants who do not have the chance to become involved with the labour market and education after arrival, I hypothesize that there are still ways in which their *bounded agency* can be shaped through interaction with other structures.

The argument of this dissertation is that agency is important in navigating social spaces and taking action especially at turning points or life course transitions (e.g., immigration). I believe the concept of *bounded agency* is the most appropriate to employ because it accounts for the interaction with the Canadian social context and/or fields of practice which gives agents the opportunity to assimilate information, adjust dispositions, evaluate resources and make choices.

At the boundary between capital, and structure and agency, I include habitus as implicit knowledge and patterns of thought, dispositions and behaviours acquired over life course. In the diagram, I suggest that embodied cultural capital and habitus that are intimately related to agency through past history, present action, and future plans, become essential in shaping the nature of agency. These two properties are like a sort of 'potential energy' that is stored by an individual, and I believe that they have the most important effect in mobilizing agency toward social action. While other forms of capital may not be available for use in fields of practice (as suggested in the figure above through the use of dashed lines) if the agents do not have access to the fields (e.g., if they are unemployed), embodied cultural capital and habitus are still reliable elements that shape the response of human agency to social structures at any time during life course. As suggested in the diagram, similar to agency, habitus can be re-structured through its interaction with the structures of external fields.

Evaluation. In the diagram, I indicated this third stage in a light colour (green) because it would be difficult to produce evidence in my study that this evaluation stage occurred. However, this stage illustrates that bounded agency engages in an evaluation of both objective and subjective grounds as part of planning and making informed decisions. The objective grounds consist in examining structures of *obstacles* and *opportunities* to which university graduates (Canadian-educated and immigrants) are exposed while navigating the labour market and post-

secondary system, as well as in understanding social trends and current circumstances. The more subjective grounds are a result of individual reflection and the evaluation (or re-evaluation) of resources (capitals) required to engage in social action. Although subjective in nature, I think that the re-evaluation of capital possessions and personal dispositions (e.g., habitus) depends on the understanding of the social context. This evaluation stage must be a precursor to planning, making decisions and finally adopting strategies.

Outcomes. During the negotiation between structures and the *bounded agency*, obstacles and opportunities are recognized and resources/assets are re-evaluated so that the agent is capable of developing *strategies* and making choices to engage in fields of practice that would presumably lead to a transformation of capital as a final desirable outcome. Although I acknowledge in the model that other forms of capital are enriched through this process, I will frequently refer to human capital because of its importance to knowledge workers. This transformed human capital incorporates new acquired institutionalized features (e.g., formal and non-formal education or training), but also social feedback that was attached to it by the action of bounded agency. As a result, the transformed human capital might stand a better chance of being recognized by Canadian employers. It is also expected that a circular process will continue because the *bounded agency* remains alert to changes in the social environment.

In summary, a model that incorporates the effect of social context on human agency offers an instrumental framework with which to assess how university graduates cope with obstacles and use opportunities to maximize the return to education. I hypothesize that a vast majority of university graduates navigate the labour market landscape by continuously developing their human capital through various forms of post-secondary education. Other forms of capital (e.g., cultural, social and symbolic capital) may be instrumental, and each social group (i.e., men, women, older workers, immigrants) may face different opportunities to access resources and interact with structures. In particular, highly educated immigrants possess capital, but they need to shape it into a form that is familiar to Canadian employers, reason why immigrants may attach a symbolic and not only a practical value to obtaining Canadian post-secondary education. The model can be also used to understand the action of a *bounded agency* in rapidly changing knowledge economies and the idea of a learner-worker identity. This is essentially a *life course agency model* focused on the transformation of (human) capital. It takes into account the effect

of social context that influences both the process and the ability of agency to control it. I maintain that one's habitus is the underpinning concept that represents the structuring structure of the entire process of bounded agency activation.

1.5 Research method

1.5.1 Research theme

This dissertation challenges the worth of a university degree in the segmented Canadian labour market by examining obstacles and opportunities within the labour market and post-secondary system that are experienced by university graduates in their journeys as knowledge workers in early 2000s. A particular social group of interest are recent highly educated immigrants whose entry into the labour market is contextualized within the broader economic, educational and social situation of today's Canadian society. To address the research goal, I conducted secondary analyzes presented in four empirical studies (Chapters 2 to 5). The main assumptions and points for discussion will be introduced at the beginning of the Concluding chapter that offers an interpretation of findings presented in the empirical studies within the frame provided by the conceptual model (Chapter 1).

1.5.2 Empirical studies

Data for analysis consist in research findings of four empirical studies that document how university graduates, in particular foreign educated immigrants, navigate the labour market and/or continue to utilize the post-secondary system in early 2000s. The findings presented in the four manuscript chapters cover the research theme. However, if necessary, other publications or unpublished results based on same databases and obtained by the researcher will be presented.

Two of the studies essentially demonstrate that the Canadian labour market is not free of social inequities. This condition becomes critical for the economy and society because it may obstruct the participation of all talented knowledge workers. In particular, the waste of human potential is unfair to highly educated immigrants who came to Canada on the grounds of their abilities.

While some attribute this situation to possible deficiencies in immigrant human capital, language barriers or discrimination, my account recognizes the realities of the Canadian labour market in which both Canadian-educated and foreign-educated individuals with similar level of formal

education compete for jobs. Studies 1 and 2 set up the stage for the analysis by revealing aspects of the differential outcomes in the Canadian labour market by university graduates.

1. Adamuti-Trache, M., & Sweet, R. (2005). Exploring the relationship between educational credentials and the earnings of immigrants. *Canadian Studies in Population*, 32(2), 177-201.
2. Adamuti-Trache, M., Hawkey, C., Schuetze, H. G., & Glickman, V. (2006). The Labour market value of liberal arts and applied education programs: Evidence from British Columbia. *The Canadian Journal of Higher Education*, 36(2), 49-75.

The next two studies promote the idea that the concept of knowledge economy is associated to continuing involvement in education. The decision to continue formal, non-formal or informal education reflects a strategy that today's workers employ to fulfill career and life goals – job advancement, skills upgrading, personal growth or joy of learning. Yet, labour market theories based on human capital follow a static approach to measure social and economic effects, and do not explicitly include the continuing education component that accounts for the human capital development. A multi-dimensional perspective is particularly relevant to understand the socio-economic integration of newcomers to Canada. In this process, further education could be one strategy that allows the transformation of immigrant human capital by adding knowledge and skill value, but most of all allowing for immigrants' interaction with the social context. Studies 3 and 4 introduce evidence of the learner-worker notion and PSE pathway choices, examine correlates and antecedents of further education and reflect on the role of agency over life course.

3. Adamuti-Trache, M. (2008). Further education pathways of Canadian university graduates. *Journal of Adult and Continuing Education*, 14(2), 147-167.
4. Adamuti-Trache, M. (under review). First four years in Canada: Post-secondary education pathways of highly educated immigrants. Manuscript submitted for publication.

1.5.3 Database characteristics

The above four studies have several common grounds that contribute to the unity of the analysis of findings assembled in this dissertation. All studies are based on databases which are suitable to portray the Canadian social context (i.e., institutional structures and the social stratification) in which university graduates (Canadian-born and immigrants) built their lives in the late 1990s and early 2000s. These data help the researcher in drawing complementary perspectives on the

education and work dimensions of adult graduates' lives, as well as major changes in life circumstances like marriage and parenthood.

Another commonality of the studies mentioned above is that they employ secondary data analyses of large-scale databases that are representative of the population. For instance, I employed three national datasets based on surveys administered by Statistics Canada: Ethnic Diversity Survey (EDS), National Graduate Survey (NGS) and Longitudinal Survey of Immigrants to Canada (LSIC), as well as one provincial dataset based on surveys conducted by The University Presidents' Council of British Columbia (for more details see Appendix A). Some of these datasets have longitudinal designs based on surveys conducted at two or three times, and thus allow the researcher to examine change over time in respondents' labour market and further education situations.

1.5.4 Sample characteristics

The four studies have a common target population – working-age adults who have completed at least a bachelor's degree as their highest level of education. The age range and educational attainment profiles of research samples are quite similar. The EDS sample (Study 1/Chapter 2) includes respondents 25 to 64 years of age, with either a bachelor's or a graduate degree regardless of the date when the degree was completed. The origin of highest university degree is taken into account. The NGS sample (Study 3/Chapter 4) has a similar age range and respondents obtained a bachelor's or a graduate degree as their highest level of education, although this might not necessarily be the post-secondary credential completed in year 2000. For the LSIC sample (Study 4/Chapter 5), the age range is more restricted (25 to 49 year olds) to reflect the current immigration point-system policy that takes away points for applicants older than 49 years. The age restriction takes into account that the workforce integration of newcomers who are 50 years old or above is more difficult; as well, it is less likely that they will engage in further education, so their inclusion in the analysis would skew the results. For the LSIC respondents, all levels of university education obtained outside Canada are considered. Only the TUPC sample (Study 2/Chapter 3) that includes baccalaureate graduates has no age restriction, but respondents have very specific educational profiles in terms of level of education, date and origin of degree completed (for more details see Appendix B).

1.5.5 Statistical methods and research designs

Statistical methods used in the four studies are adequate to the corresponding research designs. Analysis is mainly based on multivariate techniques used to exploit the complex nature of the large-scale datasets. In the first study (Chapter 2), the main analysis consists of developing an earning model that uses Ordinary Least Squares (OLS) regression. It also employs analysis of variance (factorial ANOVA) to compare earnings by various factors. The second study (Chapter 3) is entirely based on descriptive statistics. It makes, however, a more explicit use of the available longitudinal database by contrasting employment and further education status, as well as earnings over time. In the last two studies (Chapter 4 and 5), the main analysis consists of developing multinomial logistic regression models for choice of PSE pathways. It also employs bivariate analyses (chi-square tests of association between categorical variables) to contrast PSE pathway profiles. All studies contain some comparative designs by demographic factors (i.e., gender, age, visible minority, immigrant status), origin of education, type of academic program completed, further education pathways, or time since graduation.

Research samples employed in the four studies are quite large and have diverse demographic composition that allows for interesting research designs. The selection of variables to create further education profiles (e.g., respondents who engage in a specific form of further education) is carefully designed to ensure large enough subgroups hence the analysis yields reliable results (Appendix B). However, results of the multivariate analysis need to be interpreted with caution for categories that had relatively low numbers of respondents.

1.5.6 Limitations, delimitations and issues related to the research analysis

The main limitation of the dissertation consists in having to restrict the research analysis to findings included in the four studies. To address follow-up questions that may emerge naturally during the write-up of the dissertation, I perform additional analyses based on these same databases. If not possible, I specify the issues related to data availability or analysis limitations.

A delimitation of my research consists in the selection of respondents who completed university education, and not all post-secondary graduates. First, not all databases employed in this research would allow for a more extensive analysis. Second, the scope of my dissertation is to address

issues related to highly educated workers. One reason to consider only university graduates is to ensure that the research samples contain homogenous groups of workers in terms of human and social capital who would presumably experience similar obstacles and have comparable access to opportunities. Another reason is that, in the case of recent immigrants, the sample of respondents with prior college level education was not large enough to conduct some of the analyses.

A methodological issue is related to the data used to describe some of the concepts employed in the model. Most research in the area of agency is based on biographical data that reveal individuals' perceptions of barriers and challenges raised by social structures, reflections on their journeys and strategies that they adopt to overcome some of these challenges. My research is based entirely on survey data in which I look for evidence of agency by identifying questions that target individual perceptions, dispositions, intentions and behaviours related to practice in specific fields. In support of my approach, I argue that by collecting information from large groups, the representativeness of study findings is improved. However, I acknowledge that many questions about the decision-making process cannot be answered (e.g., how a specific decision was made). Actually, Clausen (1993) pointed out that "it is important to draw on both qualitative and quantitative data if we are to understand the influences on the lives of persons who have lived through a particular slice of American history" (p.43). The author suggests that case histories give a better sense of human lives—and the manner in which individuals interpret situations that they encounter—than do statistical tables. However, a systematic testing of hypotheses emerging from the study of life histories requires statistical data. As a strategy for integrating quantitative and qualitative data for explaining continuity and change over life course, Laub and Sampson (1998) propose to first employ statistics to identify patterns and relationships among variables supporting a theoretical model; and, next, to perform a qualitative analysis of the life history records of a subset of cases to examine whether other factors explain the divergence of subjects' behaviours compared to group characteristics. Obviously, my dissertation is limited to the first task: to examine patterns and relationships among variables, and to propose a theoretical lens through which to interpret research findings. In the concluding chapter, I will reflect on future research possibilities.

Regardless of the limitation imposed by the use of survey data, I look for evidence of a bounded agency by identifying survey questions that target individual perceptions, dispositions, intentions

and behaviours which appear to be shaped as a response to external stimuli in fields of practice. While behavioural outcomes are clearly associated with agency (action), there is a challenge in explaining whether dispositions reflect habitus or bounded agency. To differentiate the two concepts in terms of dispositional factors, I suggest that it is possible to distinguish between embodied, internalized dispositions (habitus), which are developed over life course, and contextual, externalized dispositions, which are a response to the social context (bounded agency). I argue that the information that can be extracted from survey data gives access to the layer of externalized dispositions and can be used to operationalize agency: it could become more challenging to explain whether that information reflects habitus. For instance, recent immigrants may give a positive response about the importance of pursuing Canadian education that essentially reflects their dispositions toward continuing studies in the context of their status as newcomers. The reason behind a positive attitude toward pursuing education is contextual: the immigrant may not have a job; he/she may believe that Canadian institutions offer a good quality education; he/she may have found that education is valued in Canada. Although immigrant responses may reflect a more internalized belief of the importance of education in general that would reflect their habitus, only follow-up questions that can be posed in an interview or an examination of individual life histories would supply the missing information. Therefore, in my analysis, I will not attempt to quantify habitus. However, I maintain that both concepts are necessary in my dissertation. I will search for evidence of bounded agency in the survey data and I will only use the notion of habitus to offer some theoretical interpretations of findings. Habitus, as a generative structure of practical action, can be an important resource for immigrants who may have difficulties activating various capital assets, therefore it worth engaging the concept in this discussion.

Notes

¹ Starting with 1998, data reported by Canadian Immigration Citizenship were differently aggregated by source areas and could not be included in the chart.

² Except some historical trends, I selected information based on 2001 Census data that portray the Canadian context in the period that is relevant to my study: 1997-2005.

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2 EXPLORING THE RELATIONSHIP BETWEEN EDUCATIONAL CREDENTIALS AND THE EARNINGS OF IMMIGRANTS¹

2.1 Introduction

Immigration has become an important source of highly skilled labour for the knowledge-based sectors of Canada's economy. Immigration policy since the 1990s has emphasized newcomers' education that contributes up to 25% of the point-based selection scale in choosing among candidates. This resulted in a significantly higher level of educational attainment among recent immigrants as compared to those from previous immigration waves. "In 2001, 46% of immigrants aged 25 to 54 who arrived from 1996 to 2000 held at least a bachelor's degree, compared with only 23% of the same age group who arrived from 1986 to 1990" (Statistics Canada, 2003a, p.86).

A selective immigration system, then, responds to Canada's need for highly skilled workers educated to the post-secondary level. However, from a policy perspective, it not only is necessary to find and attract well-educated immigrants, it also is necessary to integrate them quickly and efficiently into the workforce in order that their skills may be effectively utilized in advancing the goals of the economy and society. The task of integration has proven more difficult than many expected. For instance, in 2001, the employment rate of 25- to 54-year-olds was only 69% among recent university-educated immigrants (i.e., those who immigrated from 1996 to 2000) as compared to 90% for native-born (Statistics Canada, 2003a).

Recent immigrants with university degrees earned about 31% less than their Canadian-born counterparts, whether or not they worked in highly or lower skilled jobs. For instance, in management, "men aged 25 to 54 who immigrated during the 1990s, and held a university degree, earned between 50 and 60 cents for every dollar earned by their Canadian born counterparts" (Statistics Canada, 2003b, p.13). Employment discrepancies and earning gaps experienced by immigrants who arrived in the latest decade are maintained over longer periods of time as compared to previous waves of immigration. Whether or not this is related to changing demands of the Canadian labour market or to increased competition with an

¹ A version of this chapter has been published. Adamuti-Trache, M. & Sweet, R. (2005). Exploring the relationship between educational credentials and the earnings of immigrants. *Canadian Studies in Population*, 32(2), 177-201.

increasingly well-educated Canadian-born population is subject to debate. The assessment of the Conference Board of Canada concludes that “Immigrants have lower incomes due to transition difficulties; insufficient working knowledge of English and French; inadequate recognition of their educational credentials; and, possibly, discrimination” (2004, p.15). On the other hand, Reitz (2000), Picot (2004) and others have pointed to the increasing levels of post-secondary participation among the native-born as a source of credential competition in the labour market. This more competitive environment then affects immigrants’ ability to negotiate the worth of their credentials when seeking employment and to gain recognition of their skills once employed. Labour market opportunities for immigrants are, however, constrained by other factors. These include not only individual differences such as language competence and relevant work experience but also social structural biases. For example, the Canadian labour market remains highly gendered as well as ethnically and racially biased. As Li (2001) observes, individual differences and social structures often combine to limit the utility of immigrants’ educational credentials. The existing research on the labour market experiences of immigrants typically examines the relationship between earnings and educational level – measured as years of schooling, or college diploma versus university degree. Among university graduates, however, the labour market value of their credentials can be evaluated along at least three dimensions: level, country of origin, and field of study (Anisef, Sweet, & Frempong, 2002). How these dimensions relate to earnings and are differentially affected by individual differences and the social organization of the labour market are issues that need further examination.

The purpose of this study is to provide a more detailed assessment of the relationship between immigrant post-secondary credentials and labour market outcomes. The study employs data obtained from the 2002 Ethnic Diversity Survey (EDS) which sampled some 43,000 individuals who had responded to the long form of the 2001 Census, to extend and elaborate previous research that examined the relationship between the credentials and earnings of university graduates. At the same time, important individual differences and social structural variations in the labour market can be considered in qualifying this relationship. The analysis is guided by the following questions:

- How do the social structures of gender and visible minority status and individual differences in language competence and work experience qualify the relationship

between educational (university) credentials and the earnings of immigrants and non-immigrants?

- Are there differences by gender and visible minority status in immigrants' earnings based on their educational credentials, controlling for individual differences?

2.2 Background

Previous research directed toward understanding the earnings gap between immigrants and native-born Canadians, has adopted different theoretical stances. Broadly, these comprise human capital theory, social structural theory, and social capital theory.

Human capital theory assumes that investment in education is rewarded by increased earnings and improved working conditions. The demands for a highly-educated workforce have raised the education premium, and university education receives particular recognition in the labour market (Baldwin & Beakstead, 2003; Lavoie & Roy, 1998). Between 1991 and 2000, university graduates registered a 3-6% lower unemployment rate and up to 50% higher average earnings as compared to all educational levels groups (Statistics Canada, 2003c; 2003d). And, in general, higher levels of education are associated with enhanced earnings (Allen, Harris, & Butlin, 2003; Finnie, 2001; Heisz, 2003; Morissette, Ostrowsky, & Picot, 2004). Human capital theory represents a useful framework within which to examine the effects of educational credentials, work experience, and language skills on labour market success. It is, however, unable to provide a comprehensive account of earnings inequalities in general and immigrant and native-born earnings differentials in particular (Li, 2003). Other social and structural characteristics of the labour market impinge on the relationship between educational credentials and earnings (Beach & Worswick, 1993; Kunz, Milan, & Schetagne, 2000).

2.2.1 Social structures

Hiebert (1997), for example, argues that labour markets are never neutral and the value of an individual's credential is distorted by gender, social class, race, and nativity. While social structures constrain and limit the value of immigrant educational credentials there remains some scope for individual agency in the process of negotiating the worth of one's educational credentials. Social context in this instance involves dimensions of identity, attachment and trust

among immigrant groups and between immigrants and members of the host society (Kunz, 2003). Anisef, Sweet, and Frempong (2002) note the possession of cultural capital is equally important. This includes familiarity with local labour market conditions and the understanding of social codes and modes of interacting in achieving job search and career advancement goals. This study is built on a human capital argument and explores the role of social structures in the negotiation of credentials in the labour market.

Research that documents the experiences of immigrants in the Canadian labour market emphasizes the continuing decline in earnings of high skilled immigrants through that decade and how the earnings gap reflects the complex intersection of social structural features (Boyd, 1992; Davies & Guppy, 1998). Immigrants enter a labour market that is already gendered and systemically biased (racist). Access to and success in well-remunerated occupations is overtly or covertly controlled by social structural features (Anisef, Sweet, & Frempong, 2002; Finnie, 2001). Jobs that are worth more in the current labour market are more likely to be open to privileged social groups. For instance, in knowledge-based occupations for which the rate of growth doubled between 1971 and 1996 and wages were more competitive (e.g., professional, management and technical groups), women's participation shows a growth factor of only 1.3 as compared to 2.3 for their male counterparts (Beakstead & Vinodrai, 2003).

It is frequently argued that immigrants' earnings in the Canadian labour market are lower than native-born Canadians because of the lower market value attached to their educational qualifications, and not necessarily due to a lack of mechanisms for the formal recognition of credentials. Li (2001) explores the market worth of foreign credentials and whether immigrants with Canadian degrees have earning parity with Canadian-born degree holders. He uses 1996 Census data and compares groups differentiated by gender, visible minority status, and nativity/age at immigration. His study suggests that gender, race, immigrant status, and type of credentials create multiple sources of inequality. These combine to marginalize some groups more than others. For example, immigrant women of visible minority origin are particularly disadvantaged.

While such social structures obviously constrain immigrant integration, employers nevertheless do take into account the human capital and personal characteristics of their current and potential

employees. Work experience gained in the Canadian labour market and official language proficiency (English or French) are individual factors that make credentials more attractive. However, on average, immigrant graduates are less well remunerated than native-born graduates who possess equivalent educational qualifications and are unlikely to have their earnings converge with the income levels of native-born Canadians (Frenette & Morissette, 2003; Picot & Hou, 2003). Attempts to explain these disparities have met with limited success for reasons associated with the specification of the credentials themselves and an inability to identify the salient social structural factors and individual differences that qualify this relationship.

2.2.2 Individual differences

Language Competence. Immigration policies throughout the 1990's assigned up to 24% of the point-based selection scale to language proficiency, which is perhaps essential giving the changing characteristics of recent immigrants who are less likely of being English-speaking groups. As Picot (2004) points out, the shift in source origins and home language may have contributed to the increasing earnings gap between immigrants and the native-born Canadians. Even if language barriers are essential to social and economic integration, there is no clear evidence of their relationship to education, although (English or French) language skills are more likely found among those with higher levels of education. Competence in one of Canada's official languages as well as one (or more) other language confers all the benefits of bilingualism. Where English or French is the language of the workplace, lacking skill in either of these languages is a distinct handicap.

Work Experience. The immigration policy of 1990 assigned up to 21% of the point-based selection scale to at least 4 years of work experience in sectors recognized by the National Occupational Classification (NOC). Aydemir and Skuterud (2004) used the microdata files of the Canadian Censuses between 1981 and 2001 to look at earnings for immigrants and Canadian-born males, 18 to 54 year old, and employed on a full-year, full-time basis. Years of labour market experience were considered together with years of schooling, cohort period, years since immigration. About one-third of the overall deterioration in the entry earnings of immigrants was explained by the absence or lack of relevance of foreign labour market experience. This is more pronounced for immigrants from non-traditional source countries. Reitz

(2001) shows that immigrants receive lower earnings premiums for work experience as compared to Canadian born, due largely to pay inequality within occupations (i.e., difficulties ascending the earnings ladder of particular firms) rather than non-recognition of qualification entering high-skilled occupation.

2.2.3 Educational credentials

Reitz (2005) recently reviewed policy issues related to credential recognition and skills under-utilization by immigrants and concluded that despite rising educational credentials among recent immigrants and high levels of fluency in one official language, immigrants' employment and earnings continue to decline. Reitz argued that problems in the education-work relationship are caused not by the inadequate skill levels of immigrants, but rather by the way they are recognized and utilized in Canadian workplaces. Earnings trends differ by occupation and are associated with different human resource practices. Immigrants are, for example, more successful in professions where more rigorous credential-assessment practices have been implemented. Reitz nevertheless suggests that the skill-assessment process is constrained by institutional procedures that are too complex and overlapping. The author recommends institutional change to reduce and rationalize the myriad of employers, licensing bodies, unions, post-secondary institutions, and credential evaluation providers involved in the skills assessment process.

While institutional changes in the recognition and utilization of immigrants' knowledge and skills are needed, their implementation requires a better understanding of the nature of post-secondary credentials and their functioning in the Canadian labour market. To adequately discuss the education-work relationship, it is necessary to define education credentials (as assessed by employers) beyond merely the counting of 'years of schooling' (Ferrer & Riddell, 2004). In the case of post-secondary graduates, at least three dimensions are relevant: origin, or the country in which the degree was obtained; educational level, typically involving a distinction between college and university credential or, among university graduates, a distinction between baccalaureate and graduate degrees; and field of study, contrasting liberal arts and vocational or professional fields. Few studies have considered all three dimensions of immigrants' credentials in predicting earnings (Anisef, Sweet, & Frempong, 2003; Sweetman & McBride, 2004).

Origin of education. The country in which the degree was obtained has an impact on how quickly and effectively immigrants integrate in the labour market. Thompson (2000) advances the hypothesis that if immigrants cannot find employment appropriate to their education, skills and experience this can be explained either by a lower level or quality of their education or by the partial compensation that employers give to their credentials. Although there was a substantial increase of the number of highly educated immigrants between 1990 and 1999 (45% as compared to 20%), there also was a change in the composition of immigrants by country of origin. Increasingly, immigrants came from developing nations with post-secondary systems that often possessed fewer resources. In any case, Canadian employers were reluctant to recognize their credentials. The region where one's education was obtained matters: preferential employment is given to credentials obtained in Canada, Northern Europe and the United States.

Educational level. As indicated, most studies differentiate levels of education by years of schooling (Ferrer & Riddell, 2004). Sweetman and McBride (2004) predicted earnings by level of education as well as other features of post-secondary credentials possessed by college and university graduates. Three educational levels (college or trades certificate, Bachelor's or Master's degree) were considered in their analysis and showed clear differences in earnings. In this study the relationship between immigrants' earnings and their level of education paralleled that found in previous comparisons of earnings of college and university graduates conducted with non-immigrant groups (Allen, 1998).

Field of study (FOS). Few studies of credentials have considered field of study (FOS) although this gives an indication of the type of skill possessed by immigrants and their occupational preferences (Anisef, Sweet, & Frempong, 2003; Boothby, 2000; Finnie, 2001). It also allows one to understand which skills are easily transferable to the Canadian labour market; or which type of knowledge is relevant to the new Canadian knowledge economy. In Sweetman and McBride's (2004) study, for instance, the distribution by field of study shows that female and also male Canadian-born groups are very likely to have a teaching degree while immigrants are much more likely to be in engineering and applied sciences, or in math, physical sciences and medicine: "In general, female immigrants are more likely to enter 'traditionally male', and higher paying, disciplines that are science or math related than are Canadian-born females" (p. 48). Their findings show that FOS explained 14% of the variance in earnings between Canadian-

born and immigrant groups. These results are similar to those of Anisef, Frempong, and Sweet (2002) who used earlier 1996 Census data.

2.3 Method

2.3.1 Objectives

The purpose of this study is to provide a more accurate assessment of the relationship between immigrant post-secondary credentials and earnings controlling for the social structures of gender and visible minority status and individual differences in language competence and work experience. Respondents who possess a university degree (obtained in Canada or elsewhere) comprise the research sample. Fields of study are classified in liberal arts and applied following Lin, Sweet, and Anisef's (2003) scheme. We begin the analysis by constructing separate profiles of respondents who possess university degrees. These profiles are based on gender, visible minority and immigrant vs. non-immigrant variables – the individual differences of primary interest in the study. This leads to 8 main groups for which other background, educational and employment information will be displayed. We next model the (log) earnings of immigrants and native-born using OLS regression, to assess the relative importance of structural, individual and educational factors in determining earnings for those respondents who earned income in 2001 through employment. Finally, we examine differences in immigrants' earnings in relation to their credential origin, level, and field of study.

2.3.2 Data

The data employed in the study were drawn from the 2002 Ethnic Diversity Survey (EDS) conducted by Statistics Canada in 2001. The EDS contains data from the 2001 Census that add information on respondents' education and employment in 2000. The specific Census data used in this paper refer to post-secondary programs. This allows the identification of respondents' minor and major fields of study according to Statistics Canada classification. Based on the minor fields of study, we aggregate academic programs of university degree holders into two categories: liberal arts and applied fields.²

2.3.3 Sample

The working sample was defined based on the following criteria:

- respondents who were Canadian born or landed immigrant
- respondents who possess a university degree (based on EDS survey).
- respondents who clearly declared their major field of study (Census survey).
- respondents between 25-64 years of age (i.e., expected to be active in the labour market)
- respondents who declared employment as their main source of income and reported earnings.

This selection ensures that the analysis focuses on those who tested the value of their credentials in the labour market. Rescaled weights are computed from the cross-sectional survey weights to correctly estimate proportions in the population. The research sample for the analysis consisted of 5320 cases. Basic demographic characteristics of the research sample are as follows:

- The proportion of women in the research sample is 48%.
- It contains 28% immigrants, as compared to 21% in the EDS sample. This difference is mainly due to the larger proportion of university graduates within immigrant group.
- Average age is 41 years.
- Nineteen per cent of respondents declared they belonged to a visible minority group, as compared to 12% only in the whole EDS sample.

2.3.4 Variables

The variables selected to build profiles and examine the basis for earnings differences are immigrant status, visible minority status, and gender. The individual difference components of the profiles comprise an index of Canadian work experience and an index of workplace language disadvantage.

Age and age of arrival are typically employed as proxies for immigrants' Canadian work experience. Because our sample was restricted to university graduates and an age range of 25-64 years, we constructed a measure of Canadian work experience that employed neither of these variables directly but rather incorporated both in an index of relevant Canadian work experience.

Specifically, we defined Canadian work experience as current age less 25 regardless of immigrant status, which is in agreement with other research that uses age as a proxy for work experience of university graduates. However, for immigrants older than 25, Canadian work experience is defined as the difference between their age and age at arrival. For this group, a positive association between age and work experience is not to be expected as older immigrants who have arrived relatively recently are likely to encounter considerable difficulty in securing well-paid jobs (Anisef, Sweet, & Frempong, 2003). A squared term for work experience was used in modeling earnings (Reitz, 2001).

We also constructed a ‘language disadvantage scale’ that indicates whether the language at work (English or French) is different from the language spoken in the home. We assume this index describes the required degree of adjustment an individual must make to the communicative demands and, more broadly, the social conditions of the workplace. Immigrants whose home language is neither English nor French find this adjustment more difficult than those who are fluent in the language of the workplace. Complete workplace and home-language consistency is indicated by a ratio of 0; at the other extreme, a lack of proficiency in the language of workplace is indicated by 1.

The different dimensions of educational credentials are indicated by origin of education – we specifically distinguish between education obtained in Canada, United States or Great Britain, Europe and Other countries. Level of education distinguishes the undergraduate from graduate degree, and field of study is categorized as either liberal arts or applied studies.

2.4 Findings

We first compared the Canadian-born and immigrant groups, followed by an analysis within the immigrant groups differentiated by gender and visible minority status. Results are presented according to Statistics Canada data requirements.³

2.4.1 Profiles of Respondents

In Table 2.1 we present descriptive statistics of individual difference variables across groups defined by immigrant status, visible minority status, and gender.

Table 2.1: Profiles of respondents by immigrant status, visible minority and gender

Immigrant status	Visible Minority	Canadian Born				Immigrant			
		No		Yes		No		Yes	
Gender	Gender	Male	Female	Male	Female	Male	Female	Male	Female
INDIVIDUAL									
Age	Mean	41	40	35	32	47	44	42	40
	(SD)	(10)	(9)	(9)	(7)	(10)	(9)	(10)	(9)
Age at arrival	Mean	NA	NA	NA	NA	23	22	27	24
	(SD)					(14)	(13)	(12)	(10)
Language disadvantage	N	300	470	30	40	220	180	440	290
	(%)	(16)	(26)	(53)	(54)	(63)	(65)	(84)	(85)
EDUCATION									
Canadian Education	N	1770	1820	50	60	160	130	190	140
	(%)	(96)	(98)	(90)	(92)	(46)	(45)	(37)	(41)
Highest level	Undergraduate	N	1520	1590	50	60	260	200	400
		(%)	(83)	(86)	(86)	(88)	(72)	(71)	(76)
	Graduate	N	320	260	10	10	100	80	130
		(%)	(17)	(14)	(16)	(14)	(28)	(29)	(24)
Program type	Liberal arts	N	520	550	20	30	100	100	100
		(%)	(28)	(30)	(33)	(45)	(27)	(36)	(19)
	Applied	N	1320	1310	40	40	260	180	420
		(%)	(72)	(71)	(67)	(55)	(73)	(64)	(81)
EARNINGS									
	Mean	74630	49340	69660	43420	76070	48090	54130	39620
	(SD)	(61170)	(32460)	(60970)	(23280)	(54460)	(43090)	(42450)	(27970)
Research sample		1840	1860	60	70	350	280	520	340
(N=5320)									

The average age of the research sample is 41, while that of Canadian-born visible minority groups is between 32 and 35. The immigrant non-minority groups average about 45 years old. Age at arrival has an average of 22 and 26, for non-minority and visible minority immigrants, respectively. The proportion of those who use different languages at home and work is quite variable, ranging from 16% for the Canadian born non-minority males to 85% for immigrant visible minority females.

The educational variables selected for this analysis are: origin of highest university degree, level of highest degree and type of degree (liberal arts or applied). Canadian credentials are expected to be more readily accepted in the labour market, which, of course, benefits over 97% of the

Canadian-born respondents. While 46% of the non-minority immigrant groups possess Canadian education, only 38% of visible minority immigrants have this advantage, which may result from the more recent arrival of the latter group. Overall, larger proportions of immigrants (26%) as compared to the Canadian-born (16%) possess graduate degrees. The distribution of respondents across field of study is more uniform with the largest proportion of graduates of applied programs among the male visible-minority immigrants (81%) and the lowest proportion among the female non-minority immigrants (55%).

The last characteristic in Table 2.1 shows the total income that respondents obtained through employment. Differences between Canadian-born and immigrants are negligible for the non-minority groups, but become quite large for visible-minority immigrants who also happen to have higher proportions of foreign educated graduates.

2.4.2 Immigrant and non-immigrant comparison of earnings

We performed OLS regression analysis to predict earnings (natural log) by the set of variables previously discussed primarily to assess the effect of credentials when controlling for immigrant and visible minority status, gender, Canadian work experience, and language disadvantage. Table 2.2 shows results for the analysis of predicted earnings developed in 3 steps. The Model I summary shows that 9% of the variability in earnings is explained by individual factors, and all are statistically significant. Earnings disadvantages are associated with immigrant status, and especially with minority status and gender. Females earn significantly less than males. The language workplace advantage and Canadian work experience predictors introduced in Model II raise the explained variability in outcome to 16%. Their effects on earnings show that more years of Canadian work experience leads to increased earnings. For those speaking different languages at home and work there is a significant earnings penalty. The full model introduces the set of credentials predictors. The proportion of variability in earnings explained is slightly increased to 18%. As expected, origin of education matters indicating that foreign education is valued less in the labour market, especially if the degree was obtained in Europe or Other countries (which are primarily non-English or French speaking). Graduate degrees are better rewarded in the labour market, which may give some advantage to those immigrant groups with larger numbers of graduate degrees. Degrees in applied fields of study have a better income

return, which would advantage males generally but especially male immigrants. When controlled by individual and work-related variables, all three dimensions of educational credentials account for earnings.

Table 2.2: Regression model

Variables in the equation	Unstandardized coefficients [standard errors]		
	Model 1	Model 2	Model 3
(Constant)	11.031** [.016]	10.615** [.028]	10.511** [.032]
Immigrant status (No=0; Yes=1)	-.084* [.029]	-.021 [.030]	.039 [.035]
Visible minority (No=0; Yes=1)	-.222** [.034]	-.084* [.033]	-.020 [.038]
Gender (Male=0; Female=1)	-.424** [.020]	-.409** [.020]	-.400** [.020]
Canadian work experience (years)		.056** [.004]	.053** [.004]
Squared Canadian work experience		-.001** [.000]	-.001** [.000]
Language disadvantage (No=0; Yes=1)		-.178** [.024]	-.159** [.024]
Origin of education (Canada=ref)			
USA/UK			-.014 [.046]
Europe			-.174* [.058]
Others			-.314** [.044]
Highest level of education (Undergrad = 0; Graduate=1)			.172** [.026]
Program type (Liberal=0; Applied=1)			.133** [.022]
Model summaries & ANOVA tests	R ² _{adj} = 0.089 F= 174.5 **	R ² _{adj} = 0.160 F= 169.3**	R ² _{adj} = 0.179 F= 106.4 **

* p<0.05 **p<0.01

^a Sample size: N=5320

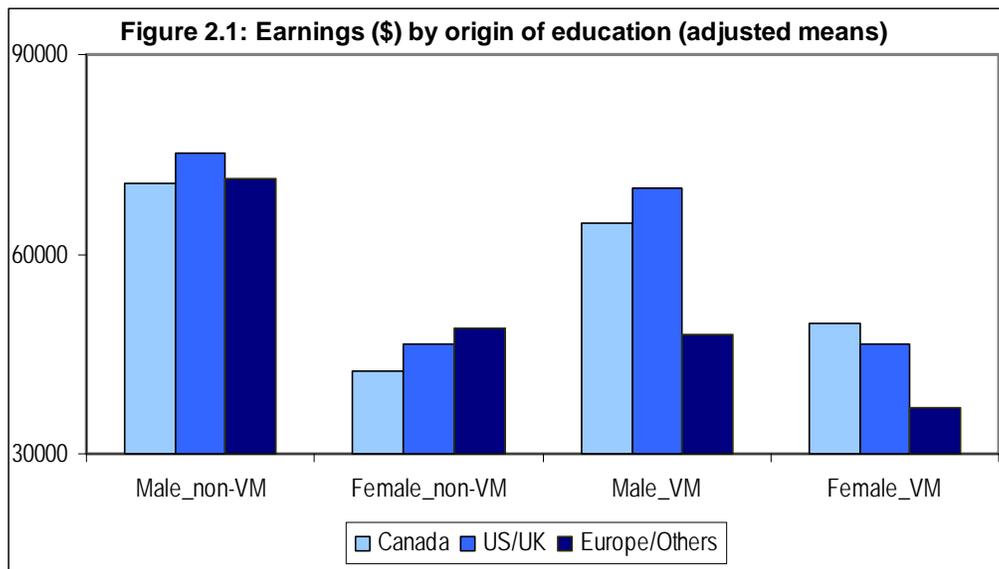
While visible-minority status and to some extent immigrant status have less effect in further modeling steps, gender remains a strong predictor of earnings. And the effects of both Canadian work experience and language (dis)advantage remain stable. This is consistent with other studies of the Canadian labour market that indicate the presence of distinct gender biases. When controlled for these factors, the effect on earnings of educational credentials is modest. Nevertheless, there is sufficient variability in their relationship to earnings to indicate that the labour market experience of immigrants is influenced by features of their educational credentials.

2.4.3 Immigrant education and earnings

In this section we will examine in greater detail the earnings of immigrants in relation to the three dimensions of their educational credentials. The previous analysis has shown that earnings vary by social structural factors (gender and visible-minority status) and that work and language related factors are significant determinants of earnings. Therefore, we control for work

experience and language competence in comparing earnings of the four immigrant groups differentiated by visible minority status and gender. Tables C1 to C3 in the Appendix C contain the observed earnings for the four immigrant groups by origin of education, educational level and field of study, and ANOVA statistics of main effects (e.g., group and origin of education).

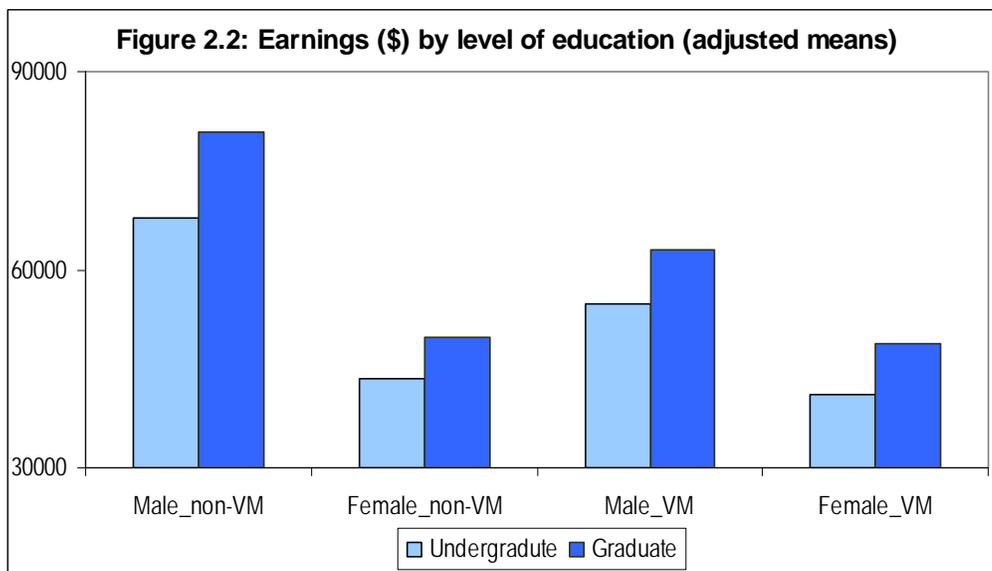
Origin of education. Because the distribution of immigrants across the four categories of origin of education (Canada, US & UK, Europe, Other) did not have sufficient numbers in some cells (e.g. small numbers of visible-minority immigrants from Europe), for the purpose of this analysis, groups that obtained education in Europe and Other countries are aggregated. As Figure 2.1 shows, earnings for an education received in the United States or Great Britain is not significantly different than earnings for a Canadian education.



After adjusting for years of Canadian work experience and language advantage, the main effects of the gender-minority and origin of education factors remained significant (Table C1). This is mainly due to the male and female visible minority groups educated in non-English speaking countries who earn substantially less than those educated in Canada. While women educated in Canada have comparable earnings irrespective of minority status, differences in earnings up to 20% are noticed for men. The most advantaged immigrants in the labour market are men from non-minority groups, either educated in Canada, United States or Great Britain. The less

advantaged are women from visible minority groups, especially when educated in non-Anglophone countries.

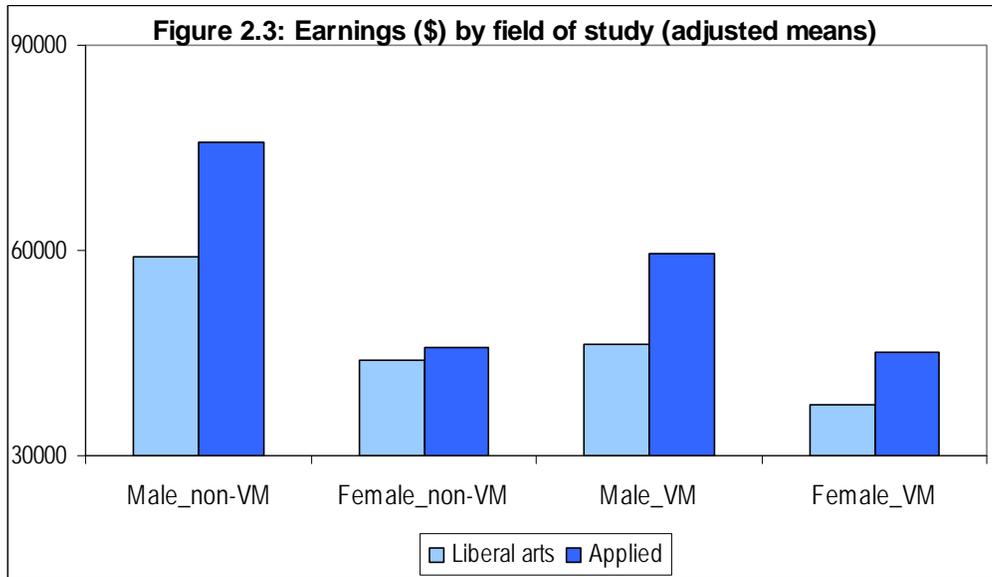
Highest level of education. Observed earnings by level of university education are shown in Figure 2.2. As expected, graduate education results in significantly higher income for all groups (about 20% more). This premium is somewhat lower for visible minority women, for whom earnings obtained by those possessing undergraduate degrees are the lowest of any group. For those with graduate degrees higher earnings are achieved by all four gender and visible-minority status groups.



After adjusting for Canadian work experience and language advantage the main effects of gender-minority and level of education factors remained significant (Table C2). While women with similar qualifications have similar earnings, irrespective of minority status, significant differences exist between the two male groups.

Field of study. Consistent with previous studies (e.g. Lin, Sweet, & Anisef, 2003) the analysis of earnings shows that applied degrees are associated with higher or equal income levels for all groups. Figure 2.3 shows earnings differences between liberal arts and applied fields are greater (about 25%) for the minority groups, both women and men. Within each field, differences by

gender and visible minority status are pronounced. Belonging to a visible minority group leads to lower earnings, especially for female liberal arts graduates.



After controlling for years of Canadian work experience and language advantage, the main effects of gender-minority group and field of study factors remained significant (Table C3). On average, women have similar earnings, irrespective of minority status, but significant differences are noticed between non-minority and minority male groups. Overall, it appears that an education premium can be achieved along three dimensions, with earnings advantage resulting from either a Canadian, American or British education, and from possessing graduate degrees in applied fields. Education received in non-Anglophone countries is largely discounted, especially at the undergraduate, liberal arts field.

2.5 Summary and discussion

The main finding of this paper is that social categories (gender, immigrant status and visible minority) account for the largest proportion of variation in earnings for university degrees holders. Other significant factors influencing earnings are more contextual, like years of Canadian work experience and language proficiency. When comparing Canadian born with immigrants, the negotiation of credentials in the labour market is significantly determined by origin of education, level of education and field of study. Earnings advantages are created for

holders of graduate degrees in applied fields who obtained their education in Canada or an English-speaking country.

The typical earnings ratio of 65 cents earned by women for every dollar earned by men is observed for various groups of immigrants independent of their educational credentials. Since clear income disparities also can be observed for Canadian born women it implies that gender inequity in earnings is a persistent labour market issue; and one that is amplified for immigrant women. Foreign education is still penalized for visible minority immigrants and women. However, minority groups holding graduate and/or applied degrees approach earnings parity more readily than those with undergraduate liberal arts degrees. The 'immigrant adjustment' period for these individuals may be shorter. These findings nevertheless indicate that the Canadian labour market remains gendered and systemically biased. Gender, race, and ethnicity are still barriers to full economic integration. That immigrant status often intersects with these features obviously worsens individual integration opportunities. Further research is needed to separate the effects of the various sources of bias.

Worswick (2004) argues that since transferability of foreign education into the Canadian labour market is not operating and work experience in the home country is not valued by Canadian employers, a Canadian immigration policy that places major emphasis on human capital needs to be revised. Tolley (2003) analyzes the research on immigration selection criteria and notes that language proficiency appears to be the most reliable determinant of economic integration. Tolley supports a shift in the Immigration policy from the human capital system toward occupation-based criteria (e.g., Australian system) and suggests that comparative research of economic outcomes of immigrants selected under different systems would be illuminating. Our findings reinforce the importance of language competence. While education is a strong factor that differentiates economic outcomes within the immigrant group, foreign education and foreign work experience, especially from non-anglophone or francophone source countries does not bring comparable earnings.

It is not uncommon that immigrants are forced to abandon their previous credentials and to consider new avenues in the Canadian educational system and the labour market in order to secure stable, well-remunerated employment. Going back to school, working in jobs that do not

match their educational training or work experience, doing multiple jobs, and changing careers are common ways in which immigrants better their position in the Canadian labour market. Even if these pathways to economic integration are not new in the history of immigration, the fact that highly educated newcomers – who have been accepted to Canada because of their skills and education – have to follow such inefficient routes to satisfactory employment leads to an overall economic loss for both individuals and the Canadian society.

The response may be a modification to the immigration selection criteria as suggested by Worswick (2004), Tolley (2003) and others. However, it may be equally useful to examine the processes of social capital acquisition and its role in engaging human capital. While the present study reveals existing and persistent earnings inequalities among highly educated immigrants, the findings also show that some groups of immigrants are quite successful in negotiating their educational credentials in the labour market, at times exceeding earnings levels of the Canadian born. Future research might usefully explore the means by which these groups engage in the social processes of job-finding and career development.

Notes

² Additional analysis at the level of major fields of study would be desirable. However, low counts for some of the design groups introduce large errors.

³ Counts are rounded to the nearest tens and proportions to the nearest unit. Means (and standard deviations) are rounded to the nearest unit, while measures of earnings are rounded to the nearest tens.

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3 THE LABOUR MARKET VALUE OF LIBERAL ARTS AND APPLIED EDUCATION PROGRAMS: EVIDENCE FROM BRITISH COLUMBIA¹

3.1 Introduction

As shown in the report *Education in Canada: Raising the standard* (Statistics Canada, 2003a), Canada has become a world leader in education. “Indeed, the 2001 Census marked the first time that a majority of the working-age population had post-secondary credentials” (p.10), and 23% of the active population were university degree holders. Over the last decade, the number of post-secondary graduates increased by 51% at the university level, 48% at the community college level, while growth in trades was only 13%. The proportion of university graduates among women aged 25 and over has grown from 14% in 1991 to 20% in 2001. Also, 2001 Census data show that among working-age university graduates, the largest proportion obtained degrees in education, engineering, business and commerce, and financial management. The orientation toward specific fields of study is due to the increased demand for related occupations in the labour market and is reflected in more stable and well rewarded jobs.

Even though employment rates are high for all university graduates, there are differences by field of study. Analyses based on the National Graduates Survey of the 1990 cohort (Finnie, 2001) show that unemployment rates vary between 1% for graduates (male and female) in Engineering to 6% for graduates (male only) in Social Sciences or 8% for graduates (female only) of Fine Arts and Humanities programs. Five years after graduation, average earnings vary by field of study and gender, from \$88,900 for Medical professions (male) to \$31,400 for Fine Arts and Humanities (female). Finnie notes that graduates from applied fields tend to perform better on objective measures of career success (e.g., employment and earnings) as compared to those in liberal arts fields. However, since their overall evaluation of academic program and job satisfaction are rated high by graduates from liberal arts fields, Finnie concludes that more than just objective measures of labour market outcomes determine why graduates embark on specific university programs.

¹ A version of this chapter has been published. Adamuti-Trache, M., Hawkey, C., Schuetze, H. G., & Glickman, V. (2006). The Labour market value of liberal arts and applied education programs: Evidence from British Columbia. *The Canadian Journal of Higher Education*, 36(2), 49-75.

Drawing on the *field of study* argument made by several authors, our study aims to discuss differences and similarities in labour market participation for liberal arts and applied education program graduates of the British Columbia Class of '96, one and five years after graduation. We argue that professional attainment and career success need to be analyzed from a broad perspective that includes not only the objective measures of graduates' outcomes in the labour market, but also graduates' views about their educational and career goals. Satisfaction with their university education, as compared to their educational goals and expected economic benefits, provides an individual perspective of how students approach their involvement in post-secondary education. Rather than providing a comprehensive analysis of graduates' labour market outcomes, this paper explores patterns of change in some relevant measures (e.g., employment status and earnings) and introduces an individual perspective to describing career attainment.

3.2 Review of literature and theoretical framework

If Canadians view university as the major institution for advanced preparation of the workforce, an optimal match between university education and the requirements of the labour market increases the employability, earnings, and job satisfaction of graduates and thus maximizes their rate of return to education. If there is indeed a good match, graduates become integrated rapidly into the labour market, perform well in their jobs, and make full use of knowledge and skills accumulated during their studies (Brown, 2001a, 2001b; Heijke & Muysken, 2000). In this case, graduates have the feeling that educational goals and expectations have been reached, and their work situation can ensure full professional and social integration. As such, the efficacy of university programs fulfils both individual and societal needs.

Many analysts acknowledge that occupations relying mostly on technology and requiring specialized skills and competencies are highly valued in knowledge economies (Lavoie & Roy, 1998) and are likely to be rewarding for individuals. However, Davenport (2002) draws attention to the fact that "Canadian companies are looking for graduates with the ability to communicate clearly both orally and verbally, work effectively in teams, think critically and creatively, solve problems, and exercise leadership" (p.46). Graham (2002) points out that the notion of "wealth creation" grants the privilege of usefulness to applied activities, although "all serious intellectual inquiry can be declared valuable in terms of wealth-creation" (p.29). This broader definition of

wealth creation becomes even more valid in knowledge-based economies. Axelrod (2002) maintains that workers are expected now to be problem solvers in addition to possessing specific skills and competencies. He acknowledges that a market-driven economy will continuously favour the development and expansion of vocational programs that can immediately respond to the demands of a global economy. However, the liberal education tradition that contributes to the well-rounded preparation of graduates should be enhanced through the development of stronger general education programs offered to all university students, since “the university must not be permitted to raze its own intellectual and cultural foundations” (Axelrod, Anisef, & Lin, 2001, p.76).

The transition from higher education to the labour market is a major challenge for graduates, post-secondary institutions, and the labour market itself. In the end, the success of this transition stage depends on the employability of graduates. Brown, Hesketh, and Williams (2003) view the employability of graduates from a dual perspective. Its *absolute* dimension refers to skills and knowledge that graduates possess and are able to utilize to meet employers’ requirements. From a *relative* perspective, “our definition of employability has recognised that it is possible to be employable but not be in employment. This is intended to highlight the fact that graduate employability is primarily about the relative chances of finding and maintaining jobs as knowledge workers” (p.122). The law of supply and demand for jobs within the labour market, the specificity of credentials possessed by graduates, as well as opportunities for further education, determine the patterns of employment and school participation among graduates. The authors show that the ability of graduates to capitalize on their credentials by obtaining a good “ranking” in the labour market has to be viewed in conjunction with the “rigging” of the market for credentials.

Pitcher and Purcell (1998) explored the graduate labour market by interviewing UK final year undergraduate students in various fields to determine what expectations graduates-to-be have about future employment. The authors found that more than one third of students, especially male students, were confident and willing to move directly into employment related to their longer-term careers. Authors note that this pragmatic tendency was higher among students from vocational programs. Meanwhile, those from liberal arts education programs anticipated temporary jobs, although higher proportions of these respondents were already enrolled in

further studies at the graduate level as a means of raising their qualifications and increasing employability. Pragmatic attitudes toward employment were also manifested by mature students who seemed to have more instrumental employment-related reasons to complete university degrees. Maslove, Fischer, and O’Heron (1998) indicate that mature students may benefit from additional work experience accumulated before or during studies that leads to a more profitable use of their bachelor degrees.

Lin, Sweet, Anisef, and Schuetze (2000) suggest that transition success in the labour market is related to the type of university program. They analyze how employability skills possessed, acquired, and utilized are rated by graduates and to what extent they appear to be translated into better employment. Significant differences between the liberal arts and vocational education graduates are found only in terms of skills utilization. Lin, Sweet, and Anisef (2003) advanced two possible explanations: “workplace affords liberal graduates few opportunities to engage their skills” or “employers fail to make the best use of talents possessed by liberal graduates” (p.73). Their findings suggest that possession of a university credential is not by itself a passport to stable and well-rewarded employment and the choice of field of study is risky. This study is in agreement with the theoretical framework developed by Brown et al. (2003) that describes graduate employability as a *relative* notion, which is shaped by concrete circumstances in the labour market. Yet, researchers need to explore more thoroughly the reasons why liberal education graduates are more vulnerable to labour market’s fluctuations and for how long after university graduation they appear to hold less secure jobs than do graduates from applied programs.

In Canada, the National Graduate Surveys (NGS) conducted by Statistics Canada is an important database of labour market outcomes for several cohorts of post-secondary graduates. The existing follow-up surveys carried out two and five years after graduation are suited for longitudinal analysis. Comparisons of outcomes among cohorts also permit the analysis of results within the context of changing conditions in the labour market. Several educational studies addressing the topic of labour market outcomes, university accountability, and post-secondary graduates’ profiles have been based on an analysis of NGS data (Allen, Harris, & Butlin, 2003; Finnie, 2001; Lin et al., 2000; Lin et al., 2003). For instance, Allen et al. (2003) present a favourable profile of young Canadian graduates who went straight from high school to

post-secondary education. The authors compare the labour market outcomes and transition to work for bachelor and community college graduates of the 1995 cohort to the outcomes of previous cohorts of graduates. They show that community college and especially university education pays off in long-term dividends leading to a better chance for non-university graduates to secure permanent employment, and for university graduates to find jobs matched to their level of education and receive better earnings. Finnie (2001) shows that unemployment rates of university graduates of the 1990 cohort decrease over time. Their jobs appear to follow quite stable patterns, with large proportions of full-time employment and good job-to-education matching.

However, the above studies show that there are differences in earnings by gender and field of study. Even if, in some fields, women's wages have shown dramatic increases over the years (Easton, 2002; Finnie, 2001), in all fields, women's earnings are behind those of their male colleagues. For both community college and university graduates, the best paid disciplines are engineering and applied sciences, while arts and humanities are situated at the lower end of the scale (Allen et al., 2003; Finnie, 2001). Research consistently shows that professional occupations that require applied education, like engineering, health, law, business and commerce, lead to higher incomes than most arts and science occupations based on a liberal education (Lin et al., 2000). Similarly, in a study of labour market outcomes comparing Canadian born with immigrants, Adamuti-Trache and Sweet (2005) demonstrate that "the negotiation of credentials in the labour market is significantly determined by origin of education, level of education and field of study. Earnings advantages are created for holders of graduate degrees in applied fields who obtained their education in Canada or an English-speaking country" (p.194).

This earnings difference fuels debate over the value and usefulness of applied (vocational) versus liberal traditions in education. Axelrod (2002) argues that "obtaining a job and earning a reasonable income is, of course, a significant part of this [labour market] experience. So, too, is being inquisitive, informed, and engaged in the life of the mind and of one's community" (p.85). Individuals recognize that often intellectual rewards have compensatory effects in less financially rewarding occupations. However, from a societal, pragmatic perspective, large differences in income between fields can create an imbalance in the optimal production and

utilization of human capital. The tendency among BC high school graduates to enrol in academic programs that can lead to high-income occupations is evident in the higher admission grade requirements for engineering, science, business and commerce programs, as compared to arts. Further, for science undergraduates, the competition for admission to medical school is higher than the competition for majors in the natural sciences. The existing situation of graduates' earnings in the labour market influences the young generation of university students who strive for the opportunity to train in those occupations that appear to be more secure and better rewarded financially.

3.3 Data collection and research design

In addition to the National Graduate Surveys conducted by Statistics Canada, several provinces conduct their own graduate surveys. One example is the survey of baccalaureate graduates from British Columbia's public universities conducted by The University Presidents' Council of British Columbia (TUPC). Another example is the census survey of university graduates conducted every two years province-wide across Québec by Ministère de l'Éducation (2003).

The annual TUPC surveys of baccalaureate graduates of BC public universities allow for a comprehensive and accurate study of BC university graduates. Since 1995, follow-up surveys have been administered one and five years after graduation. These surveys contain information on post-secondary academic programs and completed degrees. Graduates answer questions about their educational and career aspirations and expectations, post-secondary educational attainment, as well as attitudes toward and beliefs about education and work. They express their level of satisfaction with the education received and comment on programs, course availability, and skills development. Also, graduates describe their current employment status, occupation and earnings, and the extent to which their education relates to job demands.

As shown by earlier analyses on the BC University Baccalaureate Graduate Surveys (Hawkey & Lee, 1999; Sudmant, Greenall, Lambert-Maberly, & Dumaresq, 2003), most graduates regard their integration into the labour market as a gradual process, combining work with the search for better jobs while pursuing additional education. Field of study appears to be a significant factor in determining employment rates and salaries. Graduates from applied fields perform better in

the labour market than those from liberal arts programs, although a comparison between the two-year and five-year follow-ups reveals an increase of earnings for all graduates.

The current paper entails the use of data from the 1997 and 2001 surveys of 1996 graduates of the three major public universities in British Columbia.² The analysis covers baccalaureate graduates from The University of British Columbia, Simon Fraser University and University of Victoria who clearly indicated their program of study and type of degree. Since the University of Northern BC was only founded in the early 1990s, and had a small number of graduates in 1996 and a limited number of academic programs, it was omitted from this study. The fifth university in BC, Royal Roads University, was established in 1995 and did not have any graduates at the time of the surveys. In this paper, we look at outcomes of undergraduate university education distinguishing between liberal arts and applied programs. The study addresses the following research questions:

- What is the employment situation of graduates from liberal arts and applied programs one year and five years after graduation? How well does each group fare in the labour market in terms of employment and income? Are they enrolled in further education?
- How do liberal arts education graduates define their initial educational goals and university expectations in comparison to graduates of applied programs?
- Are there gender and age differences in graduates' labour market outcomes? Do these group differences change over time?

The three established universities offer a large number of academic programs, which are grouped in the TUPC database according to the Classification of Instructional Programs (CIP) coding scheme (Table 3.1). For the purpose of this study, academic programs are aggregated into liberal arts and applied programs following the work of Lin et al. (2000), which was done at the level of each individual academic program based on academic curriculum.³ Liberal arts programs are mostly arts and science, while applied programs include professional fields like education, engineering, health, law and business. This paper focuses on a longitudinal analysis of various measures of graduates' labour market outcomes,⁴ as well as graduates' views of university

education as reflected by their educational goals and the reasons for enrolling in further education, reported one and five years after graduation.

3.3.1 Research sample

The longitudinal research sample was obtained by merging data collected from two follow-up surveys (1997 and 2001). For each survey, attempts were made to reach all 8,613 graduates identified for surveying, with a response rate of 72% in 1997 and 63% in 2001 (Hawkey & Lee, 1999; Sudmant et al., 2003). The longitudinal sample that includes only those who answered both surveys has 4,065 respondents, representing about 47% of the 1996 graduates of the Class of '96. The 1997 and 2001 sample distributions by institution, gender, age, and type of program are very similar to the longitudinal sample, which indicates a stability of the demographic composition of samples over time.

Table 3.1: Distribution of research sample by type of program and gender

Type of Program ^a	Program (CIP)	Male		Female		All	
		N	%	N	%	N	%
Liberal Arts programs	<i>Fine Arts</i>	39	5	100	8	139	7
	<i>Social Sciences</i>	379	49	602	47	981	47
	<i>Humanities</i>	102	13	369	29	471	23
	<i>Life Sciences</i>	178	23	181	14	359	17
	<i>Physical Sciences</i>	84	11	44	3	128	6
	Total	782	100	1296	100	2078	100
Applied programs	<i>Computing Science</i>	71	9	15	1	86	4
	<i>Engineering</i>	149	19	29	2	178	9
	<i>Education</i>	187	24	543	45	730	37
	<i>Law</i>	46	6	34	3	80	4
	<i>Health Professions</i>	43	6	225	19	268	14
	<i>Fitness, Kinesiology</i>	59	8	68	6	127	6
	<i>Business</i>	157	20	124	10	281	14
	<i>Natural Resources</i>	44	6	33	3	77	4
	<i>Social Sciences</i> ^b	12	2	99	8	111	6
	<i>Humanities</i> ^b	7	1	17	1	24	1
	<i>Life Sciences</i> ^b	5	1	20	2	25	1
Total	780	100	1207	100	1987	100	
Total research sample		1562		2503		4065	

^a Classification by type of program follows the methodology of Lin et al. (2000)

^b See Note 2.

As shown in Table 3.1, the sample has a larger proportion of women (62%) than men (38%), and an almost even distribution of graduates in liberal arts programs (51%) and applied programs (49%). Within the liberal arts programs, the largest group was enrolled in Social Sciences (47%), followed by the Humanities (23%) and the Life Sciences (17%), while fewer students were enrolled in Fine Arts (7%) and Physical Sciences (6%). There is an overrepresentation of men in Life and Physical Sciences (34% men as compared to 17% women), and of women in the Humanities (29% women as compared to 13% men). Within applied education programs, the largest group was enrolled in Education (37%), followed by Business (14%), Health (14%) and Engineering (9%), while the remaining fields enrolled about 26% graduates. There is an overrepresentation of men in Engineering (19% men as compared to 2% women) and Business (20% men as compared to 10% women), while women are overrepresented in Education (45% women as compared to 24% men) and Health (19% women as compared to 6% men).

Table 3.2 presents the sample distribution by gender and age at the time of graduation, for liberal arts and applied programs. The average age of the sample was approximately 28 due to the large proportion (56%) of non-traditional graduates (25 years of age or older). It is also noticeable that the age patterns are largely different by type of program, with more traditional age students (less than 25 years old) in liberal arts programs (52%) compared to applied programs (36%). The age difference can be explained in part because applied programs such as law or education require the completion of a bachelor degree, or several years of undergraduate instruction prior to the professional program. Although it is problematic to equate longer programs with more education, one can expect that graduates of professional programs will benefit from better employment outcomes (Walters, 2004).

Table 3.2: Distribution of research sample by type of program, gender and age

Age groups	Liberal Arts programs						Applied programs					
	Male		Female		All		Male		Female		All	
	N	%	N	%	N	%	N	%	N	%	N	%
24 or less	392	50	695	54	1087	52	286	37	424	35	710	36
Between 25-29	288	37	352	27	640	31	335	43	403	33	738	37
Between 30-39	67	9	129	10	196	9	104	13	201	17	305	15
40+	35	5	120	9	155	8	55	7	179	15	234	12
Total	782		1296		2078		780		1207		1987	

Within each type of program, the age distribution is different by gender, especially for older age groups. For the liberal arts programs, a slightly larger participation rate of women over 40 is noticeable. This is accentuated for the applied programs, in which 32% of female graduates are over 30 years old and 15% of women are over 40 at the time of graduation. Higher university participation rates by women over 40 at the time of graduation may be explained by the fact that women are more likely to study part-time or return to study after having raised children, thereby taking longer to graduate (Andres & Carpenter, 1997). In Table 3.2, the four age groups with at least 5% representation were presented in order to draw attention to the age diversity of the student body. In the following analysis, the latter three groups are aggregated, and we will only distinguish between traditional (less than 25 years old at the time of graduation) and non-traditional (25 years of age or older) baccalaureate graduates.

3.4 Study findings

First, we present longitudinal findings on labour market outcomes (employment and earnings) by program type, gender, and age. In defining the current status of graduates, we consider both employment situation and participation in formal education. Next, we contrast educational goals and goal attainment as described one year after graduation by type of program and age. Finally, we compare graduates' views about continuing further education by type of program.

3.4.1 Transition from school to work and continuing studies over time

The survey data show complex patterns of employment and participation in further education.⁵ Graduates were employed full-time or part-time, or were not-employed, while continuing or not continuing various forms of study (hereafter referred to as 'school' ⁶). Graduates who gave clear answers regarding their employment and continuing education were included for this part of the analysis (N=3,990), and classified under six employment-school categories. In Appendix D, we present detailed distributions of graduates across employment and school status categories by type of program, age and gender in Table D1 (one year after graduation) and Table D2 (five years after graduation). Elements of these two tables will be used to demonstrate differences in employment and school status by type of program (Table 3.3), gender (Table 3.4), and age (Table 3.5) at both survey times and to compare changes over the years.

Employment status by type of program. As Table 3.3 shows, larger proportions of graduates from applied programs (over 90%) compared to liberal arts programs (76% in 1997 and 84% in 2001) were employed. The proportion of graduates continuing their education (either while employed or not-employed) was 42% for liberal arts graduates and only 17% for graduates from applied programs in 1997, indicating that the former sought additional qualifications beyond their first degrees. Meanwhile, more graduates from applied programs (80% versus 53% from liberal arts programs) were employed, full-time or part-time, and not enrolled in formal education in 1997.

These differences are attenuated in 2001, when the number of graduates from applied programs enrolled in various forms of further education increased (from 17% to 25%) and the proportion of those employed and not in school decreased from 80% to 69%. By comparison, the proportion of liberal arts graduates employed and not in school increased from 53% to 59%. Whereas graduates from applied programs participated in the labour market sooner but returned in greater numbers to further education within five years after graduation, liberal arts graduates continued their education for longer periods of time and integrated later into the labour market. This is consistent with Giles (2002) who demonstrated that even if holders of liberal arts degrees have more difficulty with school-to-work transition in terms of employment, skills they accumulated have a “greater longevity.”

There are noteworthy differences among graduates who were not in the labour market and were not going to school (the not-employed groups). In this category, the proportion of liberal arts graduates remained steady (6% in 1997 and 7% in 2001), while the proportion of graduates from applied programs increased from 3% in 1997 to 6% in 2001. For the latter group, the increase was due to female respondents 25 years of age or older at the time of graduation. Over 60% of not-employed women in this age group reported they were not in the labour market for family reasons (maternity leave, caring for children, family obligations). Therefore, the large proportions of graduates not-employed and not in school do not correspond to involuntary unemployment rates. In 2001, the unemployment rate (due to layoffs, losing or quitting a job, not finding a job) was about 3% for liberal arts graduates and 2% for applied programs graduates.

Table 3.3: Employment status and participation in further education by type of program

Employment and education categories	One year after graduation						Five years after graduation					
	Liberal Arts		Applied		N	%	Liberal Arts		Applied		N	%
	N	%	N	%			N	%	N	%		
<i>FT employ & No School</i>	803	40	1181	60	1984	50	1043	51	1211	61	2254	56
<i>PT employ & No School</i>	258	13	381	20	639	16	167	8	147	8	314	8
<i>FT employ & School</i>	220	11	150	8	370	9	380	19	376	19	756	19
<i>PT employ & School</i>	273	13	101	5	374	9	129	6	50	3	179	4
<i>Not-employed & School</i>	366	18	81	4	447	11	177	9	56	3	233	6
<i>Not-employed & No School</i>	115	6	61	3	176	4	139	7	115	6	254	6
Total	2035	100	1955	100	3990	100	2035	100	1955	100	3990	100

Table 3.4: Employment status and participation in further education by gender

Employment and education categories	One year after graduation						Five years after graduation							
	N	Male		Female		N	%	N	Male		Female		N	%
		%	N	%	N				%	N	%			
<i>FT employ & No School</i>	865	56	1119	46	1984	50	969	63	1285	53	2254	56		
<i>PT employ & No School</i>	142	9	497	20	639	16	56	4	258	11	314	8		
<i>FT employ & School</i>	151	10	219	9	370	9	297	19	459	19	756	19		
<i>PT employ & School</i>	128	8	246	10	374	9	51	3	128	5	179	4		
<i>Not-employed & School</i>	198	13	249	10	447	11	113	7	120	5	233	6		
<i>Not-employed & No School</i>	61	4	115	5	176	4	59	4	195	8	254	6		
Total	1545	100	2445	100	3990	100	1545	100	2445	100	3990	100		

Gender differences in employment. Although women and men had comparable rates of employment, men were more likely than women to hold full-time jobs (Table 3.4). In 1997, 66% of men and 55% of women had full-time jobs, while in 2001, 82% of men and 72% of women were employed in full-time positions. At both survey times, there were insignificant gender differences in the group continuing with formal education or in the not employed group. Survey responses showed that while non-participation by women in the labour market was mostly explained by family obligations, larger proportions of men (over 50%) than women (about 20%) did not work in 2001 due to layoffs, losing, or quitting a job or not finding a job.

Age differences in employment. Since there is a noticeable relationship between age of respondents and the type of program from which they graduate (i.e., 53% of graduates in liberal arts programs were under 25 years of age, only 36% of graduates from applied programs were in this group), age differences in employment-school status follow the patterns of differences by program type. As a result, the younger group showed a delayed but growing integration in the labour market and large participation in further education that decreased over time. The older group showed immediate integration in the labour market and steady and slight increase in participation in further education.

Giles (2002) used the Survey of Labour and Income Dynamics to analyze the duration of unemployment for university graduates in liberal arts and applied programs. He found that young graduates in the humanities and social sciences had a more “difficult transition into the labour market than their applied programs counterparts” (p.22). There are differences between Giles’s classification of programs and the one used in our study: we include education among applied programs but keep biological and physical sciences among liberal arts programs. Regardless, our data also show that age combined with type of program make the younger graduates in liberal arts programs appear less integrated into the labour market, essentially due to the fact that large proportions of liberal arts graduates continue their studies. However, our longitudinal data allow us to determine whether age differences are maintained over time.

Table 3.5: Employment status and participation in further education by age groups

Employment and education categories	One year after graduation						Five years after graduation					
	Age < 25		Age > 25		N	All %	Age < 25		Age > 25		N	All %
	N	%	N	%			N	%	N	%		
<i>FT employ & No School</i>	808	46	1176	53	1984	50	985	56	1269	57	2254	56
<i>PT employ & No School</i>	214	12	425	19	639	16	103	6	211	10	314	8
<i>FT employ & School</i>	195	11	175	8	370	9	371	21	385	17	756	19
<i>PT employ & School</i>	202	11	172	10	374	9	92	5	87	4	179	4
<i>Not-employed & School</i>	281	16	166	7	447	11	138	8	95	4	233	6
<i>Not-employed & No School</i>	74	4	102	5	176	4	85	5	169	8	254	6
Total	1774	100	2216	100	3990	100	1774	100	2216	100	3990	100

Table 3.5 shows that one year after graduation, the younger group was slightly less likely to be employed in a full-time job (57%) compared to the older group (61%). This situation was reversed five years after graduation, when 77% of the younger respondents as compared to 74% of the older respondents held full-time jobs. Overall, the proportion of the not-employed group was constant over time for the older group (12%), while decreasing from 20% to 13% for the younger group. Proportions of those attending school were not very different over time: in 1997, about 38% of the younger graduates as compared to 25% of the older graduates were involved in some type of continuing education. In 2001, the younger group decreased its school participation to 34% while the older group continued education in an unchanged proportion of 25%. It is interesting to note the large proportion (17%) of the older respondents who continued their education while holding full-time jobs. Overall, five years after graduation, differences by age in the three categories (employment, not-employment and school participation) were diminished.

Earnings. To compare median incomes over time, we consider only respondents who worked full-time and were not participating in further education. The 1997 reported total income was converted to 2001 dollars. As reported in Table 3.6, graduates increased their median earnings by more than 23% over five years, which suggests that more graduates moved into better paying jobs as a result of increased credentials or experience.

Type of program	One year after graduation				Five years after graduation			
	Age <25		Age >25		Age <25		Age >25	
	Male	Femal	Male	Femal	Male	Femal	Male	Femal
Liberal Arts programs								
<i>Time*Age*Gender</i>	31,500	31,500	37,800	35,700	47,000	41,700	46,000	42,700
<i>Time*Age</i>	31,500		36,800		43,000		44,000	
<i>Time</i>	33,600				43,200			
Applied programs								
<i>Time*Age*Gender</i>	42,000	36,800	42,000	38,900	60,000	45,000	55,000	47,000
<i>Time*Age</i>	37,800		39,900		51,500		50,000	
<i>Time</i>	39,900				50,000			
All programs	37,800				46,700			

^a Income is provided in 2001 BC dollars.

There are significant income differences among age and gender groups at each moment in time. For instance, one year after graduation, older graduates obtained significantly higher incomes

than younger graduates, namely 17% and 6% for the liberal arts and applied programs graduates, respectively. Five years after graduation, this difference was only about 2% for liberal arts programs graduates, and was reversed for graduates of applied programs with younger graduates earning more. We can conclude that age is not the most relevant factor regarding income: five years after graduation, median income of all graduates working full-time and not attending formal studies is very homogeneous across age groups.

Gender differences are visible in a number of areas. One year after graduation, men earned more than women: these differences were as large as 14% for the graduates from applied programs for those less than 25 years of age, while female and male liberal arts graduates, irrespective of age, had more comparable incomes. Five years after graduation, gender differences in median income became even more pronounced across all program types and age groups, and were as high as 8% and 13% for the older and younger liberal arts graduates, respectively, and up to 17% and 33% for the older and younger graduates from applied programs, respectively. We conclude that gender remains a systemic factor differentiating respondents' median income over time. Our findings are in agreement with Finnie's study (2001) that shows that gender earnings gap is likely to grow over time.

3.4.2 Educational goals and further education

In the previous section we presented the profiles of British Columbia university graduates of the Class of '96 from a labour market perspective. As shown, the type of program from which respondents graduated, combined with age and gender, have large impacts on their employment status, participation in further education, non-employment rates, and earnings.

The question we address in this section is whether differences observed in the labour market between graduates from liberal arts and applied programs are a reflection of individual attitudes toward education and work. Two measures are available for analysis. One year after graduation, graduates indicated their initial educational goals when they started the baccalaureate degree and the extent to which their goals were attained. Five years after graduation, graduates reported the reason to be enrolled at that time in further education and where did they enrol.

Educational goals in 1997. Multiple answers were recoded into three major goal groups: job-oriented goals (getting a better job, acquiring job skills), general goals (obtaining a baccalaureate degree, qualifying for a graduate program, broadening knowledge), less defined goals (pleasing parents/family, having no explicit personal goal). Since the focus of this study is to find how well graduates are prepared to succeed in the labour market, when multiple answers occurred (about 25% of the sample), priority was given to the job-oriented goals.

Table 3.7 shows the distribution of initial educational goals and level of goals attainment as reported in 1997 by program type and age. Gender differences are less significant and are not presented. As expected, graduates of applied programs had more job-oriented goals (70%) when deciding to pursue university education as compared to liberal arts graduates (50%) who expressed a higher interest in broadening knowledge in a specific field. Not unexpectedly, students wanted to acquire skills that would lead to employment and more than two thirds of all graduates felt they attained their goals. About 13% and 8% of liberal arts graduates and graduates from applied programs, respectively, had no clear goals about university education. A large proportion of graduates from applied programs (79%) felt that their goals had been completely or mostly attained, while only 63% of liberal arts graduates felt the same. There are no significant age differences in setting educational goals, although older graduates had more job-oriented goals. Only 66% of the younger graduates felt they attained their goals in comparison to 75% of the older graduates.

	Liberal Arts programs			Applied programs		
	Age <25 %	Age > 25 %	All %	Age <25 %	Age > 25 %	All %
Job oriented goals	50	51	50	65	72	70
General goals	36	38	37	27	21	23
Less defined goals	14	11	13	9	7	8
Goals attainment (mostly or completely)	60	65	63	73	82	79

Reasons to participate in formal education within five years after graduation. The employment and school profiles presented in Table 3.3 suggest that for large numbers of respondents formal education continued after completing undergraduate university education.

Overall, about 30% of all respondents in the sample indicated they enrolled in some form of education one year after graduation, and about 29% were enrolled in further education five years after graduation. Increased participation in further education between 1997 and 2001 was observed for graduates from applied programs. Five years after receiving a baccalaureate degree, about 25% of these graduates continued with some form of further education, this rate increasing from 17% in 1997. The reverse phenomenon was observed for the liberal arts programs graduates; the proportion enrolled in formal education was larger in 1997 (almost 42%) and decreased to 34% four years later.

Where and why were respondents enrolled in further education? Within five years after graduating with a baccalaureate degree, almost 90% of graduates took some additional education or training. About 10% of graduates indicated more than one form of education or training, but for the purpose of this paper we analyzed only the main response and only by type of program.

Table 3.8 shows that, for both groups, but especially for the applied programs graduates, the most frequently identified reason to continue education and training was career and employment related. Other reasons were to continue to further degree studies, and to experience intellectual challenges. Pursuing a new bachelor degree appeared to be a reason for liberal arts graduates, who were also substantially enrolled in graduate studies.

Main reason to enrol in further education and where?		Liberal Arts programs		Applied programs	
		N	%	N	%
Reason	<i>Pursue another Bachelor degree</i>	173	9	57	3
	<i>Pursue Masters studies</i>	218	12	181	10
	<i>Pursue Doctoral studies</i>	77	4	18	1
	<i>Career/job/employment related</i>	1103	58	1149	65
	<i>Challenge myself intellectually</i>	153	8	162	9
	<i>Required by employer</i>	41	2	66	4
	<i>Other</i>	120	6	115	7
Where	<i>University</i>	1117	59	669	38
	<i>College, university college, institutes</i>	384	20	253	14
	<i>Private institutions</i>	119	6	157	9
	<i>Professional associations</i>	91	5	245	14
	<i>Employer</i>	107	6	333	19

Respondents were most likely to engage in further education at the university level (49%), with the largest enrolment coming from liberal arts programs graduates. As shown in Table 3.8, community colleges and other public post-secondary institutions were a second preferred option (or perhaps sole opportunity) for liberal arts graduates (20% versus 14% for applied programs), while graduates from applied programs also enrolled in training offered by employer, professional associations and private training institutions (42% versus 17% for liberal arts programs).

3.5 Discussion of findings

There is a net change in the labour market outcomes (i.e., employment status and earnings) of baccalaureate graduates of the Class of '96 over the years, with large differences by the type of program, and less influence of age and gender. About one third of graduates continued to be involved in formal education at both survey times, a result that supports previous findings that job demands become more dynamic in the knowledge-based economy and require frequent updating, adaptation, and continual learning (Rubenson & Schuetze, 2000; Schuetze, 2000).

There were larger proportions of graduates from applied programs who were employed and not in school at both survey times. This gap decreased over time since liberal arts graduates, who continued studies since 1996 in large proportion, finished their education, while a large number of graduates from applied programs pursued further education after 1996. The unemployment rate in 2001 (layoffs, losing or quitting jobs, not finding jobs) was about 3% for liberal arts graduates and 2% for graduates from applied programs. These rates are slightly below the British Columbia rate of unemployment for university graduates (4%) in 2000 (Statistics Canada, 2003b).

Men are more likely than women to hold full-time instead of part-time jobs at both survey times, and this finding is in agreement with Finnie's analysis (2001) of the NGS 1990 cohort. While female graduates from the 1990 cohort show a steady rate of part-time employment over time, in the case of the BC Class of '96, the rate of part-time employment among women is clearly decreasing and follows similar patterns to that of their male counterparts.

The distribution of graduates by age groups matches their distribution by type of program, since most young respondents were holders of liberal arts degrees (53%) rather than applied degrees (36%). Consequently, the proportion of full-time employed who did not participate in further studies was visibly higher for older graduates as compared to young graduates. Young graduates were also more likely to be unemployed, since in their case, reasons for not working were more related to difficulty in finding jobs. However, age differences were not as significant for this sample as emphasized in the literature (Maslove et al., 1998).

Graduates' earnings and income differences by program of study, gender and age were the most discussed labour market outcomes (Allen et al., 2003; Finnie, 2001; Giles, 2002; Heisz, 2003; Maslove et al., 1998; Walters, 2004) obtained using either cross-sectional or longitudinal samples of NGS surveys. For the BC Class of '96, study findings showed a quite promising overall increase of 23% in median earnings in 2001 as compared to 1997; yet, income levels indicated large discrepancies by type of program, gender and somehow age at both survey times.

There was a consistent difference in earnings between the liberal arts and graduates from applied programs in our study. The salary gap decreased from 1997 to 2001, but only from 19% to 16%, which suggests that with this rate of change, it would take another 15 years to reach equal levels. Similarly, Heisz (2003) looks at the earnings' distribution of BC university graduates from the cohorts of 1974 through 1996 and identifies the applied degrees of engineering, medical sciences, and commerce at the top of median earnings, and liberal arts degrees like fine arts and humanities at the bottom of the distribution. However, Heisz concluded that predicted median earnings by field of study tend to equalize eventually. He also notices that most graduates do not earn the average earnings associated with their field of study and recommends comparing the distribution of earnings instead of median values. The TUPC sample used in our study contains a number of liberal arts graduates who earned much more than the median earning of the group, but still they represent exceptions. Median earnings give a good indication of the amount earned by each group, and differences by type of program were still significantly large five years after graduation.

It is reasonable to expect that different university programs result in differences in future earnings. University programs provide different skills and competences to students that may

respond more or less effectively to employers' needs (Brown, 2001a, 2001b; Davenport, 2002; Lin, Sweet, & Anisef, 2003). Many applied programs are longer than liberal arts programs and this may lead to the assumption that "more education" deserves better financial reward. As pointed out by Walters (2004), differences in labour market outcomes are possibly related to a selection effect and a "gate-keeping" mechanism that allows some university programs to "raise the average wage and employment levels of their graduates simply by keeping their enrolment numbers low" (p.21). Discrepancy in labour market outcomes by field of study could be determined by various educational, social, political and economic factors, and this issue requires a complex analysis which is beyond the scope of this paper. Rather than making judgments regarding the economic returns on education in absolute terms for various fields of study, we used the available longitudinal data to present patterns of change in labour market outcomes.

Gender differences show consistently that men are better paid than women in similar employment situations. One year after graduation, differences as large as 14% were observed for the graduates from applied program age 24 or less. In 2001, the salary gap was even larger, reaching up to 33% differences for the same group. Not only did male salaries start at higher levels, but they experienced a larger rate of growth that, as Finnie (2001) also noted, expanded the gender salary gap.

As shown by Allen et al. (2003) the labour market climate has changed dramatically during the last two decades and this has had a large impact on unemployment rates of young adults and consequently on earnings. Their findings emphasized that the younger graduates, less than 25 years old, experienced the largest labour market transition difficulties. Maslove et al. (1998) also point out that younger graduates have to compete for jobs with older cohorts who have both credentials and work experience. Our findings demonstrate that age differences in earnings were visible in 1997, showing that older graduates have an advantage in finding more stable work and receiving higher incomes. These differences become less significant over time. In 2001, the higher income earned by males under the age of 25 as compared to their older colleagues in both liberal arts and applied programs, suggests that the labour market competition between young and older university graduates is not necessarily unfair as pointed by Maslove et al.

Our study findings show that graduates from applied program, who were more successful in obtaining higher labour market outcomes, had also been more job-oriented in setting these specific educational goals. By contrast, the liberal arts graduates showed a different pattern of goal setting. One year after graduation, their level of satisfaction with goals attainment was lower than for applied programs graduates, either because graduates were still negotiating their career opportunities or because their educational goals have not yet been attained in 1997.

3.6 Conclusion

The aim of this paper was to look solely at the economic integration of graduates in the labour market and the optimal capitalization of their university education. Graduates from liberal arts and applied programs are expected to confront the reality of a labour market where the measure of success consists in securing a stable job and attaining career satisfaction. In regard to preparing graduates for realities of the labour market, the university is less successful in the case of liberal arts graduates, who experience delayed integration and professional recognition. In contrast, labour market outcomes like employment status and income point toward a net advantage of being a graduate of an applied program. Over time, differences in labour market outcomes between liberal arts graduates and graduates from applied programs appear to diminish, since liberal arts graduates find more pragmatic ways to capitalize on their education. There is a need for more longitudinal research in order to understand how this happens and how competences developed through a liberal arts tradition are transformed into success in the labour market. Additional research will also shed more light on the aspirations and dispositions of those who choose to embark on a liberal arts or an applied program.

The study findings show that students arrive on university campuses with a variety of goals, expecting that university education will shape their knowledge, skills, and overall formation that will permit them to bring their aspirations to reality. This reality represents not only intellectual excitement, social interaction or community ideals; it also represents a labour market where success means securing a good job. On the whole, the labour market outcomes for applied and liberal graduates are satisfactory, which indicates that university education gets recognition and reward in the labour market. This information will be useful for educational planning and program choice by individual students as well as by the university in increasing the effectiveness

of career counseling centres. In recognizing that preparing graduates for employment is one of the aims of university education, examining the fit between education achievement and labour force participation encourages the university to examine and make explicit the role of labour force preparation and outcomes in university curricula.

One aim of this paper was to point out that labour market outcomes are just one dimension that describes how human capital accumulated through university education translates into good employment in a knowledge-based economy. We argue that individuals measure their professional attainment not only in economic terms, but also in setting and attaining educational and career goals, in developing and growing interest for a field of study, in achieving personal growth and enhancing social interaction. These more subjective measures are not only essential for a better understanding of the individual perspective on the return to education; they should become more thoroughly analyzed from an institutional and societal perspective as well, in order to develop adequate practice and policy for academic programs and university services.

Notes

² The 1997 survey was conducted 18 months after graduation, but will be referred to as the one year follow-up survey.

³ Based on the CIP coding scheme, program areas like Fine Arts, Humanities, Social Sciences, Life and Physical Sciences fit under the liberal arts category (i.e., general instruction curriculum), as compared to the other program areas that are applied (i.e., skill formation). However, there is no perfect mapping between the CIP coding scheme and a definition of liberal arts and applied programs based on the specificity of the academic curriculum (Lin et al., 2000). As a result, some programs from the Humanities, Social Sciences or Life Sciences fit in the liberal arts category (e.g., English, Geography, Biology) while others fit in the applied programs category (e.g., Applied Linguistics, Social Work, Dietetics).

⁴ Information on employment status and earnings was covered in detail at both survey times. Data on occupations, work sector (public/private), and other details that could have provided additional insight into graduates' labour market outcomes, were either not available or less reliable.

⁵ The term "further education" was used in the TUPC questionnaires and describes any form of education or training carried out by respondents after graduation. It has a broader meaning than "further studies," the term used by Finnie (2001) to refer only to those who completed a new diploma after graduation.

⁶ We selected the term "school" for its conventional meaning of formal structured learning.

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4 FURTHER EDUCATION PATHWAYS OF CANADIAN UNIVERSITY GRADUATES¹

4.1 Introduction

The Organisation for Economic Co-operation and Development (OECD) policy document published in 1996 brought a vision of lifelong learning for **all**, building on three principles that “place the individual at centre stage”, while “strengthening the democratic foundations of OECD societies” and “promoting economic growth and job creation” (p.87). OECD proposed an ‘economistic’ paradigm that underlines the importance of market, technology and development of human capital, and promotes “a more fluid relationship between learning and work” (p.22). Canada adopted the OECD principles of lifelong learning, and developed policies that recognize the reality of a rapidly changing economy, the long tradition of Canadian adult education and the need to serve diverse ethnic communities.

In the 2007 OECD report on education, Canada is recognized among the industrialized countries with well-developed systems of education and training, following those of Sweden, Denmark, the United States, Finland, Switzerland and the United Kingdom. Thus, in 2002, a quarter of Canadian workers aged between 25 and 64 years old participated in non-formal job-related training (OECD, 2007).² Another data source on organized learning by Canadian adults, the 2003 Adult Education and Training Survey (AETS), shows that one third of the employed adults participated in 2002 in formal job-related training (Peters, 2004).³

However, research shows that mostly highly educated workers continue to take education and training over the life course. For instance, Peters (2004) indicates that participation rates in formal job-related training were 52% for university-educated workers, compared to 38% and 18% for those with non-university education and secondary school education or less. Data support the assertion that “lifelong learning simply means those who are already highly educated are getting even more education and training (the exemplar *par excellence* of ‘the rich getting richer’)” (Myers & de Broucker, 2006, p.2). Canadian policy documents call on employers to invest more substantially in training, and recommend that both low-skilled and high-skilled

¹ A version of this chapter has been published. Adamuti-Trache, M. (2008). Further education pathways of Canadian university graduates. *Journal of Adult and Continuing Education*, 14(2), 147-167.

workers have access to workplace-related training regardless their status and prior educational attainment (HRSDC, 2002).⁴ The HRSDC policy document weighs up that the progress is slow due to the lack of a coordinated system to promote the idea of lifelong learning in the workplace.

Barriers to participation in education and training continue to be examined by researchers and policy makers, although some advise that research should also focus on “the relationship between acquired skills and the social, economic and labor market outcomes of individuals and firms” (Tuijnman & Boudard, 2001, p.47). In particular, research should thoroughly examine why skilled and highly educated people continue to invest in their education, what their choices are and whether they are satisfied with the returns to investment in education. The examination of individualized pathways of adults who engage in further (continuing) education could support Beck’s notion of individualization (1992) that describes how individuals become more and more responsible to construct their own lives.

The purpose of this paper is to analyze further education pathways chosen by adults who graduated from Canadian universities by 2000. I will employ the OECD definitions of a) formal education that includes a variety of post-secondary programs, and b) non-formal training that includes career-related courses. I will adopt a ‘learner-worker’ perspective that situates graduates’ choices in the context of their work and family lives, and in relation to graduates’ human capital as described by their post-secondary education (PSE) attributes (e.g., level of education, field of study, academic ranking). The paper draws on the argument that demand for further education and training is shaped within the context of a fast changing but uncertain knowledge economy, and workers adopt lifelong learning strategies to maximize their chances to succeed in the labour market (Livingstone, 1999; Rubenson & Schuetze, 2000).

4.2 Literature review

4.2.1 Education and training in the knowledge-based economy

In modern societies, knowledge is growing at such a pace that the formal education gained during childhood and youth is not sufficient to meet the demands of today’s knowledge society and to deal with obsolete knowledge, skills, careers and value systems. Individuals need to constantly learn over the whole life span, either for work, social or personal purposes, and to

adopt “global perspectives on knowledge, communications, and careers” (King, 1999, p.110). In a market-driven economy, lifelong learning is ultimately a way to cope with rapid changes in workplaces. Securing employment, obtaining competitive earnings, enhancing work conditions are among the reasons adults participate in continuing education and training. About eighty percent of those interviewed in the 2003 Adult Literacy and Life Skill Survey reported engaging in adult learning for job and career related motives (Rubenson, Desjardins, & Yoon, 2007).

Some are critical about using lifelong learning as the only answer to workplace changes in the knowledge economy. For instance, Cruikshank argues that adjusting to the new global economy by escalating the surplus of skilled workers and labeling unemployment as “an individual deficit problem” (1998, p.107) supports a corporate agenda. She expresses concerns that this rapid restructuring of jobs has created a highly polarized workforce that places unequal pressure on workers who are trapped in unskilled, low-paying, casual or part-time jobs (Cruikshank, 2001). Livingstone (1999) advises that the knowledge economy may become an illusory concept if one were to consider the wasted ability of large proportions of underemployed workers. Livingstone draws attention to the vulnerability of this group that is incapable of using acquired qualifications in their present jobs. Since “the equation between more education and better jobs is far from certain” the underemployed are confronted with a very legitimate question of whether it was useful “to respond to this uncertainty by pursuing yet more formal education” (p.178). Without discarding the importance of lifelong learning and continuing education, Livingstone realistically addresses the need for substantial economic reforms in addition to educational agendas.

Rubenson and Schuetze (2000) associate the demand for education and training to structural changes in knowledge-based economies that rely increasingly on high-skilled workers, organizational changes in firms that adjust their business strategies to global markets, and the growing educational attainment of the Canadian population. Indeed, in 2005, 23% of Canadians aged 25 to 64 had university education and 46% completed post-secondary education (OECD, 2007). In addition, Canada has a selective immigration policy that recruits highly educated immigrants. For instance, 55% of the immigrants who arrived in 2001 had at least a bachelor’s degree and a further 19% had at least some post-secondary education (Statistics Canada, 2005a). Newcomers manifest a large interest in continuing education – two-thirds of those who arrived in 2000-2001 planned to pursue education and training in Canada, and within two years of arrival to

Canada, 40% of immigrants aged 25 to 49 participated in formal and non-formal education other than language training (Adamuti-Trache & Sweet, 2007). Participation rate was as high as 47% for university-educated immigrants.

Recent immigrants view further education in Canada as a promising way to gain recognition of prior qualification, and hence to access a broader range of job opportunities. Canadian-educated individuals engage in further education for similar reasons. Research based on the National Graduate Surveys (NGS) (Lin, Sweet, Anisef, & Schuetze, 2000; Finnie, 2001) and provincial surveys on graduates' outcomes (Adamuti-Trache, Hawkey, Schuetze, & Glickman, 2006) demonstrated that pursuing further education was perceived as a strategy to enhance returns of investment in university education. Over 60% of the British Columbia baccalaureate graduates (Adamuti-Trache et al., 2006) reported career/job/employment reasons for continuing education.

Further education and training has become part of after-graduation paths for many university-educated Canadians. Finnie (2001) illustrates that up to 36% of Canadian graduates of the 1990 Cohort completed a new diploma by 1995. Allen and Vaillancourt (2004) claim that 41% of the bachelor's graduates of the Class of 2000 pursued further education by 2002. Similarly, Adamuti-Trache et al. (2006) found that 29% of the British Columbia 1996 Cohort of baccalaureate graduates continued further education, although participation rates differed by gender, age and type of academic program completed. There is a clear tendency for university graduates to combine employment and further studies at least within five years after graduation, which supports the notion of 'learner-worker' advanced by OECD.

4.2.2 Providers of further education and training in Canada

A crucial feature of the Canadian society that impacts individual choices toward continuing education is the expansion of the Canadian post-secondary system (i.e., universities, university colleges, community and career colleges, institutes). Post-secondary educational settings have increased and diversified their offerings; they adopted models for delivery of instruction that are more flexible and efficient; and they forcefully advocate for diversity in access and outcomes (Canadian Council on Learning, 2006). A distinct spotlight is placed on adult learners that constitute today a common clientele (Compton, Cox, & Santos Laana, 2006; Peters, 2004; Schuetze & Slovey, 2002). In particular, university continuing education refers to all forms of

continuing education offered by a university (or a university college), including not only single courses or entire programs but also single events such as presentations, conferences, workshops (Cruikshank, 2001; Kreber & Mhina, 2005). The demand for PSE is also reflected by increased participation in over 150 community colleges and institutes (Association of Canadian Community Colleges, 2006; Dennison & Gallagher, 1986; Levin, 2001) and a myriad of proprietary colleges (Sweet & Gallagher, 1999). Non-university institutions serve a diverse clientele and educational purposes – as noted by Kirby (2007) many take a utilitarian approach by offering vocational and workforce training programs that address the education and skill requirements of industry.

Universities and non-university institutions compete in the market of continuing education as viable providers of lifelong learning activities. In addition, there is a call for workplaces to step up their involvement in offering job-training and other skill upgrading for workers (Myers & de Broucker, 2006). There is evidence that especially those who missed post-secondary education opportunities could benefit from job-related training and literacy programs in the workplace. It is however unlikely that workplace contribution will become significant without developing policy levers that encourage employers to train workers. Although Canada does not have a coordinated system of continuing education and training, various educational providers contribute to enhance the range of individual choices for adult learners.

4.2.3 Individual as investor in further education

The OECD policies put forward the idea of shared responsibilities by educational institutions, workplaces, social partners, public and private sectors in building a learning society and knowledge-based economy (OECD, 1996). Clear emphasis is placed on the role of the individual as investor in his/her own education. An active individual agency is expected to show “creativity, initiative and responsiveness – attributes which contribute to self-fulfillment, higher earnings and employment, and to innovation and productivity” (OECD, 2004, p.2). The individual is expected to anticipate workplace changes, be prepared to take action, and to become a ‘learner-worker’ who combines participation in the labour force and continuing education over life course.

Since continuous and purposeful participation in various forms of education and training by adults is desirable, barriers to participation have been constantly examined in adult education

research. The traditional model of adult education participation that acknowledges individual histories and includes opportunity structures is Cross' Chain-of-Response (COR) model (1981). The model accounts for individual, situational, dispositional and institutional factors that describe opportunities and barriers to participation and/or choice. Individual factors are usually demographic variables and other factors that characterize personal status (e.g., gender, age, immigrant status, level of education). Situational factors describe life circumstances that favour or hinder participation (e.g., employment, marital status, family obligations, financial support). Dispositional factors usually include a stated purpose for participation or related reasons that stimulate the decision (e.g., learning dispositions, credential motivation). Finally, institutional factors can include the type of program or course, their duration, and the type of instruction employed. The latter factors are relevant in models that describe institutional choices (Adamuti-Trache & Sweet, 2008). The COR opportunity structures typology is considered very flexible and has been employed in studies that analyzed adults' participation in education/training or the basis of institutional choices.

An analysis of choice of further education pathways by highly educated workers, as intended in this paper, requires a distinct typology of influencing factors that can be drawn from Cross' model. Individual factors that inform on socio-demographics characteristics, and situational factors that reflect work, family and financial circumstances, are essential in a participation and/or path choice model for adults. However, highly educated workers represent a more homogeneous group with regard to education because they all demonstrated some ability to overcome participation barriers in the past. In examining their decisions to continue education as well as their educational choices, I would argue that the role of human capital (i.e., essentially PSE-related characteristics) should be made explicit. For instance, PSE factors like level of university education or major field of study are informative of the type of job (e.g., professional, managerial) and/or the occupation envisaged by respondents. Since professional communities have different cultures (i.e., norms, job requirements, practices), workers in various fields may approach continuing education differently. Recent research on educational participation has considered Bourdieu's theory of practice (1990a) that essentially relates the practice in a field (e.g., engaging in PSE, choosing a particular career) to individual's ability to access available resources and his/her possession of dispositions toward that field of practice. For instance, previous PSE experience, or a particular type of experience (e.g., taking distance education), are

crucial in making the decision to engage in further education. PSE related attributes do not inform only on the existing human capital but on human agency's ability to purposefully activate this capital. In this paper, I will employ a participation/choice framework based on Cross' model and include specific PSE related factors, to explain choices of further education pathways made by university-educated adults.

4.3 Method

4.3.1 Research questions

This study entails the use of longitudinal data from the 2002 National Graduates Survey (NGS) and the 2005 Follow-up of the Canadian post-secondary graduates in 2000. This is a national database that contains detailed information on graduates' socio-demographics, educational attainment, current employment status and further education. This paper will address the following research questions:

1. What are respondents' reasons for continuing education and training, what is the demand for specific further education pathways by 2002 and what is the level of employer's support?
2. How is choice of further education pathways associated with socio-demographic, post-secondary education (PSE) characteristics of respondents, and other situational factors?
3. Are there differences in labour market outcomes in 2005 for respondents who engaged in specific further education pathways by 2002?

4.3.2 Variables

The focal variable of the study is participation in at least one educational event between 2000 and 2002. These events consist of formal education programs 3 months or longer and career-related training courses that required at least 20 hours of participation. The 2002 programs can be differentiated by institutional providers (i.e., university and non-university) and by scope of university programs (i.e., degree or non-degree). The 'non-university' educational providers are post-secondary institutions other than university (e.g., community and career colleges, institutes).

This paper extends the Cross' participation model (1981) by introducing a typology of choice of

one of the five further education pathways:

1. **university continuing education** for (second) **degree** purpose (UCE_SD);
2. **university continuing education** for **non-degree** purpose (UCE_ND);
3. **non-university continuing education** to obtain diploma or certificate (NUCE);
4. career-related **training** (i.e., courses, workshops, seminars, tutorials) that required at least 20 hours of participation and were offered by various providers (e.g., employer, post-secondary institutions) abbreviated as TR;
5. non-participation.

There was some overlap between the course and program participation, in which case I classified the respondents as program participants. Very few respondents made more than one program choice, in which case I gave priority to university continuing education and/or degree programs.

The explanatory variables are described below and operationalized in the Appendix E (Table E1). The model will employ socio-demographic factors, PSE-related characteristics and situational factors:

1. Socio-demographic factors are antecedents of further education choices. Gender, age and immigrant status account for social structures, and parental education is a proxy for social background. The four age groups show respondents' positioning with respect to the educational system, the workforce and family formation. The younger group (25-29) follows prolonged trajectories into adulthood of the traditional 18 to 24 years old students. The two middle groups (30-39 and 40-49) are at different career and family formation stages, while the older group (50-64) enters a pre-retirement stage. Since parental education is often associated with educational attainment, it is legitimate to inquire what role it plays (if any) in further education choices.
2. PSE-related characteristics are also introduced as antecedents of further education choices. Highest level of university education and major field of study of the program completed in 2000 inform on respondent's human capital. Academic ranking in one's graduating class is a self-reported competency assessment that informs on academic ability and respondent's self-confidence. Whether respondents ever took part-time studies or engaged in distance education for the program completed in 2000 indicates respondent's

disposition toward program flexibility (by choice or if needed) in order to continue education.

3. Situational variables are essentially correlates of participation/choice of further education pathways. Main financial support for all post-secondary studies (by 2002) describes the financial burden on respondent (i.e., personal sources and loans to be paid) versus having access to non-repayable sources (i.e., family or employer support). Difficulty to pay back borrowed money could influence participation in further education that may involve cumulating more debt, so this financial variable describes essentially a situational factor. Marital status and having dependent children indicate life course circumstances that impact adults' decisions to engage in further education. Finally, employment status is a major correlate of participation and choice because it informs on resources, time availability and possible employer support.

Other variables are defined for two sub-samples:

1. Participants in further education: I will examine reasons to participate and employer's support for programs and career-related courses.
2. Full-time employed in 2005: I will examine several labour market outcomes⁵ such as job permanency, relation job-education, income and job satisfaction and median income. Outcomes will be separately analyzed by highest level of education in 2005.

4.3.3 Research sample

The research sample consists of 9,140 respondents representing over 75,000 Canadians who graduated from post-secondary institutions in 2000 and reported at least a bachelor's degree as their highest level of education. Only those who lived in Canada between 2000 and 2005 and were therefore likely to enter or re-enter the workforce have been selected. The sample includes only respondents who were aged between 25 to 64 years old at graduation, and therefore more likely to follow non-traditional learner pathways. Results are presented according to Statistics Canada data requirements.⁶

Overall, 61% of respondents had bachelor's degrees and 39% had graduate degrees. The gender distribution indicates that 57% of respondents were women and 43% were men. Age distribution

shows the largest proportion of respondents (49%) in the age group 25-29, followed by 30%, 16% and 5% of respondents aged 30-39, 40-49 and 50-64 years old, respectively.

4.4 Study findings

4.4.1 Further education opportunities

This section will discuss participation in further education from the perspective of respondents, whose decisions are influenced by barriers and opportunities in the labour market and/or post-secondary education system. I will present respondents' reasons to continue education, their choices for further education that reflect existing education and training opportunities, and discuss employer's support.

Reasons to enrol in further education. About half of all university graduates have participated in further education by 2002.⁷ About 25% enrolled in post-secondary education programs and about 28% in career-related courses. Reasons to participate were diverse, but largely dominated by job-related motives. For instance, 46% of respondents were motivated in their participation as a way to get a job or find a better job; another 16% continued education in order to keep their current job, perform better on the job, or earn more money. In addition, 8% and 33% indicated the need of prerequisites for further education and self-improvement/other reasons, respectively. Overall, about 62% of those who participated in PSE programs gave a job-related motive. If we extended participation to include also those who took career-related courses (obviously job-motivated), the estimated proportion of participants entering the realm of further education and training for career and job reasons would reach about eighty percent.⁸

Further education and training between 2000 and 2002. I examine the demand for further education and training following the typology of pathways introduced in the Method section. Within 2 years after graduation, 47% of respondents were involved in further education. Twenty-four percent of respondents enrolled in post-secondary programs and 23% in career-related courses (only). About 13% of respondents pursued university degree programs (UCE_SD). Only 6% of respondents were enrolled in university non-degree programs (UCE_ND). Actually, the UCE_ND category corresponds to the typical offerings by University Continuing Education units, and it is possible that courses in non-degree programs can be counted later towards a

degree. Another 5% of respondents participated in non-university programs that are usually shorter and less expensive (Table E2, Appendix E).

Employer's support for education and training. Policy documents point out that to achieve lifelong learning for all (OECD, 1996) would require partnerships between the individual, the educational system, employers and other social partners. NGS contains information about employers' support for both programs and career-related courses taken by 2002. This includes financial support, or providing paid/unpaid time-off for training or educational leave.

About 89% of program participants (i.e., who were employed) answered the survey question regarding employer's support. The proportions of those who reported employer's support was different along each further education pathway: 26%, 43% and 41% of participants in university degree programs (UCE_SD), university non-degree programs (UCE_ND) and non-university programs (NUCE), respectively, received some employer's support. In contrast, 75% of respondents who took career-related courses benefited from employer's support. The limited support for programs shows that employers are not sufficiently engaged in partnering with workers to achieve their long-term (and more expensive) educational goals.

4.4.2 Modelling choice of further education pathways

Choice of further education pathway varies by socio-demographics attributes and respondents' PSE characteristics (i.e., educational credentials, PSE experiences) as shown in Table E2 (Appendix E), but I will forego discussion of simple associations, which will be captured in the modeling results that control for all the variables simultaneously. This section presents a multinomial regression analysis to predict the likelihood of pathway choice (UCE_SD, UCE_ND, NUCE or TR) by socio-demographic, PSE characteristics, and situational factors.

The model fits the data with a 53.7% classification accuracy rate; the Nagelkerke's R^2 coefficient indicates that 19% of the variance in the outcome is explained by the model. Likelihood ratio tests show that all independent variables except marital status contribute significantly to the full model. Table 4.1 shows the odds ratios that indicate the likelihood of making one of the four further education choices (compared to being non-participant), for each category of the predictors relative to the corresponding reference category.

Table 4.1: Multinomial regression models – Choice of further education pathways^a

Variables	Reference Categories & Levels	Odds ratios			
		UCE_ SD	UCE_ ND	NUCE	TR
Sex	Male=ref	.8*	1.7**	.9	1.0
Age	Age 25-29 =ref				
Age (1)	Age 30-39	.8*	.9	.7*	.8*
Age (2)	Age 40-49	1.1	1.4*	.6*	.7**
Age (3)	Age 50-64	.4**	1.0	.4*	.6*
Immigrant status	No=ref	1.0	1.4*	1.9**	1.3**
Parental education	No univ education=0				
Parents (1)	Univ educ – Bachelor's	1.2*	1.3*	.8	1.0
Parents (2)	Univ educ - Graduate	1.6**	1.0	1.2	.9
Highest level of prior education	Bachelor's =ref	1.0	.7**	.9	1.0
Major FOS in 2000	Education=ref				
FOS (1)	Arts	1.6*	.6	3.1**	.6*
FOS (2)	Humanities	4.3**	3.2**	2.6*	1.4*
FOS (3)	Social Sciences	4.0**	4.6**	3.9**	1.7**
FOS (4)	Business	1.9**	3.3**	4.6**	1.5**
FOS (5)	Physical Sciences	4.7**	2.3*	5.2**	1.6*
FOS (6)	Math&Comp sciences	1.6*	1.6	2.5*	1.2
FOS (7)	Engineering	1.7*	.8	1.8	1.7**
FOS (8)	Health	1.9**	1.8*	2.1*	1.5**
FOS (9)	Unspecified	1.7*	3.2**	5.4**	.8
Academic ranking in 2000	In the top 10%=ref				
Ranking (1)	Top 10-25%	.6**	1.4*	.8	.8*
Ranking (2)	Below top 25%	.4**	1.0	1.1	.8*
Part-time PSE by 2000	Never PT=0	1.2*	1.1	1.3*	.9*
Distance education by 2000	Never DE=0	1.1	1.0	1.9**	1.2*
Financing <u>all</u> PSE	Loans=ref				
Financing (1)	Personal earnings or savings	.9	.9	.9	1.1*
Financing (2)	Family/employer/awards/oth	1.0	.6*	1.4*	.7**
Employment	Yes 2002 & Yes 2005=ref				
Employment (1)	Yes 2002 & No 2005	1.3	1.2	1.3	.5**
Employment (2)	No 2002 & Yes 2005	5.1**	1.6*	1.8**	.5**
Employment (3)	No 2002 & No 2005	4.0**	.3*	.4*	.2**
Marital status 2002/2005	None of survey times=ref	1.1	1.0	.8	.9*
Dependent children 2002/2005	None of survey times=ref	.8*	1.0	.9	1.0
Likelihood ratio tests Chi-Square		1670**			
Nagelkerke R²		.19			

*p < 0.05 ; **p<0.001

^a Reference category = Non-participant

I will contrast the effect of socio-demographic, PSE and situational factors on predicting each pathway choice.

Socio-demographic factors. There is a modest variability across odds ratios for these factors. Gender significantly differentiates the two university continuing education choices: it is more likely for men to pursue degree programs and for women to enrol in non-degree programs. Age appears to be a significant predictor for all 4 pathways. While there is a consistent decrease by age in the likelihood to select non-university programs and training, patterns are more diverse for the university program choices. For instance, the age group 40 to 49 is about as likely as the age group 25 to 29 to take university degree programs, and it is 40% more likely to take university non-degree programs. The quite large participation in post-secondary education by respondents aged 40 to 49 suggests that either Canadians take advantage of PSE opportunities at older ages when they no longer have pressing family obligation or that workplace demands force them to consider further education. This could be the case for women in the age group 40 to 49.

Immigrants are overall more active participants compared to native-born Canadians, although their choices of specific pathways are quite similar. They are almost twice as likely to make non-university pathway choices, and about 30-40% more likely to choose training or university non-degree programs. Since about half of the immigrants in the sample arrived in Canada during the 1990s, it is likely that higher participation rates reflect immigrants' attempt to obtain Canadian human capital as a strategy to socio-economic integration (Adamuti-Trache & Sweet, 2007).

The relationship between parental education (as a proxy for social class) and individual educational attainment is demonstrated in the literature (Bourdieu, 1990b; Sullivan, 2001). Parents transmit capital in the form of dispositions, aspirations and behaviours that are converted into differential educational attainment and ultimately social status.

Table 4.1 shows that parental education is selectively associated with the choice of further education pathways. Respondents coming from families in which at least one parent had university education at a graduate level, were 60% more likely to engage in degree programs compared to those coming from families in which no parent was university educated. Overall, those coming from more educated backgrounds tend to utilize the post-secondary system in order to reproduce their family background. Educational aspirations built within the family contribute

to shaping adult lifelong learning pathways. The result is aligned to findings based on the International Adult Literacy Survey (Tuijnman & Boudard, 2001), which show a slight but positive affect of parent's education in a model of adult education, for Canada and Netherlands.

PSE-related characteristics. Of all variables, major field of study appears to have large variability across the 4 further education pathways. For instance, the highest likelihood of enrolment in university degree programs is noticed for those who graduated physical sciences, humanities and social sciences, all whom are more than 4 times as likely to make this choice compared to graduates from education programs. Among fields of study, education, engineering, health, and mathematics & computer sciences have the lowest odds ratios for most further education choices. Some patterns that indicate low rates of participation are similar to Finnie's findings (2001). He associated low rates of participation in some fields with good job opportunities. For the choice of training pathway, odds ratios do not vary that much: arts graduates are the least likely to engage in job training as compared to all other fields.

Academic ranking, as a measure of human capital and an indicator of ability to cope with post-secondary education is a relevant factor of choice of further education pathways. Respondents who were not situated in the top 25% of their graduating class were less likely to participate in university education for degree purpose, but were more likely to make non-university program choices. Those with lower academic ranking were likely to choose the university non-degree program option (i.e., either more general in nature or offering pre-requisites for further degree programs).

Finally, level of education and familiarity with part-time and distance education studies had some effect on the model. Recipients of bachelor's degrees in 2000 were slightly more active in continuing their studies, although differences are not spectacular and the only significant effect is noticed in their choice of non-degree programs.

Situational factors. Employment dynamics is the most relevant situational factor. Those employed in 2002 but not employed in 2005 show further education choice patterns more similar to respondents employed at both times, although they are half as likely to take job training. Those not employed in 2002 and employed in 2005 were clearly the most active in taking PSE, especially university degree programs (5 times as likely to enrol compared to those who worked

at both times). They are also 60% more likely to take non-degree programs and 80% more likely to take non-university programs compared to those employed at both times. However, their chance to take job training is reduced to half due to their limited participation in the labour market. Finally, those who did not work at any of the survey times were clearly involved in university degree programs, and very unlikely to make other path choices.

The financial PSE support factor has a moderate variability across the 4 models and is quite difficult to interpret. It is somewhat relevant that respondents who financed their education through personal earnings and savings, rather than loans or non-repayable funding, were more likely to engage in training rather than program-based education. Meanwhile, those who accessed various non-repayable sources were more likely to enrol in programs leading to credentials (i.e., university degrees or non-university diploma/certificates) rather than taking non-degree programs or training. Marital status and parenthood do not have significant impact on further education choices.

4.4.3 Labour market outcomes in 2005

Since a vast majority of participants in further education indicated job and career-related reasons, it is natural to inquire whether they reached their goals and the labour market outcomes for participants are improved compared to non-participants. A first effect of participation is the change in the highest level of education that is expected to have a direct effect on employment. If 39% of respondents had graduate degrees in 2000, this proportion increased to 40% and 43% in 2002 and 2005, respectively – a change that is not spectacular, although it is likely that many respondents were still in the process of completing their degrees. However, as previously shown, respondents participated in various forms of education and training that could benefit their jobs, and not necessarily leading to an increase in level of education. In this section, I will compare several employment/job characteristics in 2005 by choice of further education pathway, and by highest level of educational attainment in 2005 – bachelor's degree (Table 4.2a) and graduate degree (Table 4.2b).

In Tables 4.2a and 4.2b, employment status is indicated for all respondents, while for the next indicators results include only those full-time employed in 2005 as described by their labour force status in the 2005 survey reference week and the classification of the main job. Income is

based on estimated gross annual earnings in Canadian dollars for the job held during the 2005 survey reference weeks.

Table 4.2a: Job characteristics by further education pathway – Bachelor’s degree in 2005

		Non- participant	UCE_SD	UCE_ND	NUCE	TR
Employment status (%)	Full-time	77	79	79	78	88
	Part-time	12	10	10	11	8
	No employment	11	11	11	11	4
Permanent job (%)*		91	88	88	93	94
Median income* (\$)		48k	45k	50k	41k	55k
Satisfied with income (%)*		79	67	71	82	86
Satisfied with job (%)*		91	84	93	93	97
Job closely related to education (%)*		63	64	41	50	70

Table 4.2b: Job characteristics by further education pathway – Graduate degree in 2005

		Non- participant	UCE_SD	UCE_ND	NUCE	TR
Employment status (%)	Full-time	81	67	74	87	88
	Part-time	12	14	22	9	9
	No employment	7	19	3	4	4
Permanent job (%)*		88	70	89	91	93
Median income* (\$)		62k	53k	60k	53k	65k
Satisfied with income (%)*		83	76	89	88	88
Satisfied with job (%)*		93	94	97	91	94
Job closely related to education (%)*		72	66	76	51	71

* Only FT employed

The first three indicators describe more objective measures of employment. For the bachelor’s groups, there is little variation in the employment status and job permanency among the four pathways. Those who had graduate degrees in 2005 and who engaged in university degree programs (e.g., doctoral degrees) were behind in terms of labour market outcomes (e.g., 19% not employed and only 70% of the full-time employed with permanent jobs). Otherwise, the rates of no employment were particularly low for the graduates’ group compared to the bachelor’s group. There is large variability in median income, with those enrolled in credential programs (i.e., university or non-university) having the lowest incomes. For both levels of education, respondents who took job training had the best employment and job status, and highest income. This group is likely to be better positioned in the labour market, perhaps due to a better

coordination between job training and workplace needs. This group was also more likely to receive employers' support.

The last 3 indicators inform on respondents' perceptions of their jobs. With few exceptions, job satisfaction is high for all groups, showing that over 90% of respondents are satisfied (or very satisfied) with their jobs. However, only about 80% are satisfied with their income. The last indicator is particularly relevant because it shows the proportions of respondents who believed that there was a close relation between education and job. Overall, recipients of bachelors' degrees reported lower rates (63%) compared to those who had graduate degrees (70%) in matching job and education. Those engaged in non-university programs by 2002 reported among the lowest rates of job-education matching, regardless of level of education attained. They also had some of the lowest incomes, which shows that this choice of further education is associated with some precarious labour market conditions and/or more vulnerable demographic composition (women, younger respondents).

4.5 Discussion

This paper examines further education pathways of Canadian university graduates of the Class of 2000 within two years after graduation, and the extent to which participation choices affect their job situation in 2005. The study has a similar target as the 2003 Adult Education and Training Survey – adult workers aged 25 and over (Peters, 2004). As compared to the AETS sample which includes adults with any educational attainment, the current study focuses only on university graduates. Given the substantial investment in university education by individuals and society, research has been largely focused on university graduates' labour market outcomes, student debts, job-education matching (Adamuti-Trache et al, 2006; Allen & Vaillancourt, 2004; Finnie, 2001). Further education was less of a focus because overall, participation in education and training by highly educated workers is not perceived as an issue. Current study demonstrated that a) not all university graduates are similarly situated with respect to continuing education, and b) there is some variability in further education choices that affect labour market outcomes.

One purpose of the study was to illustrate the role of the post-secondary system in offering further education and training for the educated labor force. Findings show that within two years after graduation, 24% of respondents were enrolled in PSE programs and 23% took career-

related courses. The analysis shows that university remains a major provider of degree and non-degree programs. Non-university institutions are reliable providers of education and training through programs, but also courses that are more likely to offer practical and job specific know-how. Participation in non-university courses is not captured in this study due to data unavailability which also led to a relatively low proportion of respondents in the non-university continuing education pathway. Several studies have shown that a substantial number of university graduates enrol in courses and programs in community colleges and technical institutes in order to learn additional skills relevant to their employment (Brown, 2001).

Comparisons with other studies are always difficult because of data availability, unmatched sample characteristics and definition of measures. For instance, an analysis of the Class of 1995 (Adamuti-Trache & Schuetze, 2006) with a sample of bachelor's graduates 25 to 64 years of age, reported a 38% and 56% participation rates in programs and courses offered by post-secondary institutions within 2 and 5 years after graduation, respectively. A similar two and five-year analysis is not possible with the Class of 2000 due to data structure.⁹ However, the NGS 2000 data has an explicit emphasis on non-formal education, and current study findings show the relevance of job training as a further education pathway.

The analysis shows a strong indication of job-related reasons for continuing education. About 62% of those who took PSE programs within 2 years after graduation, reported career and job related motives. Prior research on the baccalaureate graduates of the 1995 Cohort (Adamuti-Trache & Schuetze, 2006) showed that respondents increased their job-related focus within 2 and 5 years after graduation; finally, about 84% of all 1995 bachelor graduates maintained that at least one PSE activity (program or course) taken within 5 years of graduation was pursued for reasons related to increasing job and career opportunities.

More than half of the respondents in this study who utilized the post-secondary system enrolled in university programs to acquire new degrees, while others took a variety of university and college programs to acquire new skills. Although most participants pursue education/training for career-related reasons, to improve job prospects or in preparation for new jobs, it is remarkable that still, over 30% of respondents indicate self-improvement reasons. This suggests that further education is an integral component of an adult life course, and workers are willing to utilize the

post-secondary system or other providers not only to maximize their chances to succeed in the labour market, but also for general purposes.

An issue of concern for both post-secondary institutions and workplaces is that only 63% of respondents with bachelor's degrees and 70% of respondents with graduate degrees reported a close relation between their job and the completed university education. It means that about one third of respondents report some job-education mismatch which roughly corresponds to the 50% reported by Livingstone (1999) as underemployed or underqualified and for whom educational attainment did not match job entry or job tasks requirements. Labour market researchers critically assess issues of underemployment by university graduates. The Survey of Labour and Income Dynamics, 1993 to 2001, show that 28% of Canadian born and 52% of immigrants experienced over-qualification (Li, Gervais, & Duval, 2006). This evidence justifies views that the emphasis on adult education currently training people for the new global economy may be manipulative (Cruikshank, 1998), giving the false impression that Canada's economic problems could be solved by increasing the number of people with educational qualifications and skills without paying closer attention to how skills are actually used by employers. Further research should explore whether this is a sign of mismatch between workplace demands and graduates' skills or between the occupational and academic program structures. Policy documents (OECD, 1996) promote the idea of partnerships and sharing responsibility for lifelong learning, so better coordination between post-secondary institutions and the corporate world is needed in order to maximize the return to university education.

Equitable access to further education and its effect on careers and jobs remain a challenge for individuals, institutions and society, in the quest to build a diverse and well-qualified workforce. Access issues raise policy concerns regarding the organizational structures and financing of this area which sometime starts with identifying what enters into the realm of further education and who should be interested in supporting it. Study findings showed that employers supported differently workers in taking programs or career-related courses.

Finally, further education indicators are essential in understanding the context of the Canadian labour market, individual economic success or life satisfaction. Frequent updates of these measures and research to interpret them in the changing socio-economic context should help

both educational providers and employers to better understand learners' motivation to engage in education and training while remaining active in the workforce. Systematic research on continuing education by Canadian-educated adults would help set up baselines for historical or international comparisons as well as comparisons within the Canadian workforce whose composition changes fast due to labour migration.

Notes

² The Organisation for Economic Co-operation and Development (OECD) differentiates 'formal' education that follows the educational ladder system and 'non-formal' education that is organized and sustained learning that takes place within and outside educational institutions but do not lead to a formal qualification. The term 'job-related' refers to activities intended for work reasons.

³ Adult Education and Training Survey (AETS) differentiates between 'formal' and 'informal' (self-directed) job-related training. The term 'formal' training describes structured learning that may receive some formal recognition, and is provided by educational institutions, employer or professional associations.

⁴ Human Resources and Social Development Canada (HRSDC).

⁵ Analysis of labour market indicators is restricted to those employed full-time to ensure comparison between employees with similar work situation when assessing the economic effects of further education.

⁶ Counts are rounded to the nearest tens and percents to the nearest unit. The analysis uses normalized weights that preserve the counts in the sample and reproduce proportions in the population.

⁷ The 2005 NGS survey contains information about participation in further education, but details on institutions are available only for completed programs. Also, NGS 2005 does not contain information on career-related courses. For the purpose of this study, only the 2002 data will be used to examine participation in further education.

⁸ This last estimation has to be treated with caution because results depend on how participation is defined. In this study, non-participants include about 26% of all respondents who took short courses (i.e., less than 20 hours) that are not identified as 'career-related'.

⁹ Comparisons are possible if one is interested only in PSE program participation within 2 years after graduation.

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5 FIRST FOUR YEARS IN CANADA: POST-SECONDARY EDUCATION PATHWAYS OF HIGHLY EDUCATED IMMIGRANTS¹

5.1 Introduction

Human capital is the key to economic growth in complex and dynamic labour markets. The increase of human capital in Canada is achieved through a growing demand for post-secondary education and a selective immigration policy (Reitz, 2007a; Riddell, 2004). In particular, Canadian immigration policy has switched its demographic purpose from “pronounced internationalisation of the newcomer population” to privileging those with “human capital, business skills and/or significant financial wealth” (Hiebert, 2006, p.40), on the premise that these immigrant groups will be easily assimilated into the work force.

The immigration policy has reached its goal of recruiting highly educated immigrants to Canada. The 2001 Census shows that 61% of the working age immigrants who arrived in the 1990s held post-secondary credentials, by comparison to approximately 48% of immigrants who arrived in the 1970s and 1980s (Statistics Canada, 2003a). Data from Citizenship and Immigration Canada’s *Facts and Figures* show that the proportion of immigrants arriving with a university degree increased from 10% in 1980, to 18% in 1990, to 44% in 2000 (Statistics Canada, 2005). Recent data from the Longitudinal Survey of Immigrants to Canada (LSIC) show that 68% of immigrants who arrived between October 2000 and September 2001 reported a degree or diploma and that 55% had university education (Statistics Canada, 2005).

Seemingly a promising source of highly skilled workers, the Canadian immigration policy is under public scrutiny due to the less effective integration of newcomers into the labour market (see, e.g., Frenette & Morissette, 2003; Picot, 2004). Discrepancies in employment, earnings and skill utilization are evident when recent immigrants are compared to native-born Canadians with similar qualification (Galarneau & Morissette, 2004; Reitz, 2001) or to immigrants who arrived through the 1960s and 1970s (Aydemir & Skuterud, 2004). Research demonstrates that among barriers to immigrant assimilation in the labour force are non-recognition of foreign credentials and the discounting of foreign work experience (Ferrer & Riddell, 2008; Reitz, 2007b). Research

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also indicates that post-secondary education (PSE) *obtained in Canada* is a particularly effective means of enhancing adult immigrants' position in the labour market (Adamuti-Trache & Sweet, 2005; Li, 2001; Sweetman & McBride, 2004). Thus, PSE participation after arrival in Canada is emerging as a *strategy* that allows adult immigrants to overcome labour market adversities.

Recent immigrants recognize the importance of obtaining a Canadian education. LSIC data show that 89% of those who immigrated in 2000 acknowledged the worth of taking further education; about two-thirds of them had educational plans at arrival, and 40% of immigrants were interested in university studies (Statistics Canada, 2005). Obtaining further education after arrival in Canada is a strategy embraced in particular by immigrants who have completed university education in their countries of origin (Adamuti-Trache & Sweet, in press; Green & Green, 1999). As Bauder (2005) suggested, "skilled and capital-rich immigrants tend to possess cultural competence that enables them to advance in the Canadian labour market" (p.81).

Understanding adult immigrants' decision-making process in embarking in PSE is an essential step toward adopting effective policies to support their full integration in the labour market. I argue that some variability in immigrant educational choices would indicate that individual *agency* struggles to find a suitable integration *strategy* in response to labour market structures that place specific value on Canadian-made human capital. This approach recognizes the capacity of the individual agent to adjust to the social context by making educational decisions that are expected to shape his/her developmental pathway. It also requires to conceptualize the life course of the highly educated immigrant as a multilevel phenomenon (Elder, 1994) and to situate immigrant life course transition in a perspective that includes past and current experiences, as well as anticipated outcomes.

Most studies on adult education look at the decision making as a dichotomy of participation versus non-participation, rather than portraying more differentiated educational choices. The purpose of this paper is to employ the Longitudinal Survey of Immigrants to Canada to examine *promptness* of PSE participation and *choice* of PSE pathways as a manifestation of immigrant agency. I will differentiate PSE choices as a typology of pathways to better reflect the various opportunities offered by the Canadian PSE system which immigrants take into account when deciding *whether*, *when* and *where* to enrol in further education. The paper will address the

following research questions:

1. What are the patterns of employment and PSE participation by adult immigrants within 6 months, 2 and 4 years after arrival in Canada?
2. What are the PSE pathways (such as institution attended and scope of program) chosen by immigrants within 4 years of arrival and what factors influence their choices?
3. How are PSE pathway profiles related to policy-relevant factors such as gender, age, language proficiency, immigration class and recognition of prior work experience?

The life course perspective adopted in this study derives from the adult education models (Cross, 1981) that incorporate social structural influences, personal situations, and the personal experiences and histories of individuals as determinants of PSE participation. The personal (work and family) situations of adult learners are accounted for in the model – but are also unique to the extent that the immigrant settlement situation differs from the non-immigrant adult’s circumstances. The paper will contribute to the research on adult immigrants in two ways:

- a) Cross’ model will be extended with the addition of immigrant-specific factors that describe culturally-distinct human capital (e.g., origin of education).
- b) The model will differentiate the participation choice as a set of PSE pathway choices rather than a dichotomy of participation versus non-participation.

5.2 Review of literature

5.2.1 The social context of recent immigration to Canada

Labour market. Most adult immigrants find some employment soon after their arrival. For instance, in 2000-2001, labour market entry data show that 44% of all newcomers found work six months after arrival (Statistics Canada, 2003b). During the first two years in Canada, 80% of immigrants aged 25 to 44 had worked in at least one job. In particular, 90% of skilled worker principal applicants were employed. However, only 48% of them found jobs in their intended occupation (Statistics Canada, 2003c). Four years after arrival, 22% of the economic immigrants

indicated lack of employment opportunities as the most important reason to dislike Canada (Schellenberg & Maheux, 2007).

Underemployment and skill under-utilization are typical issues of concern for highly educated immigrants to Canada. Many employers are not receptive to the incoming flow of highly skilled immigrants who fail to gain recognition of educational credentials and cannot offset this with evidence of foreign work experience that employers are willing to accept (Grant & Nadin, 2007; Reitz, 2005). Differential outcomes are often the result of underemployment of workers with high skill levels in low-wage jobs. During a six-year period in the late 1990s “more than one-half (52%) of recent immigrants with a university degree worked in a job requiring only high school education – almost twice the proportion of 28% among their Canadian-born counterparts” (Li, Gervais, & Duval, 2006, p.8). Since the mid 1990s, the number of low-paid workers has increased in Canada; in 2004 about 12% of these workers had university education (Larochelle-Côté & Dionne, 2009). Recent immigrants are affected the most by this situation.

The underemployment of highly educated immigrants has clear, negative effects. First, this is the primary cause of poor earnings among immigrants, for whom the education premium is on average about half the premium of native-born Canadians – each additional year of education brings about 5-7% and 2-4% greater earnings for native-born and immigrants, respectively (Reitz, 2001). Second, in knowledge occupations, competencies and skills that are not utilized quickly become depreciated. Reitz asserts that “if highly-educated professionals selected by the immigration program often end up working in jobs normally held by less-skilled persons from the native-born population, then in effect these immigrant skills are wasted” (p.350). The Canadian labour market is not welcoming for immigrants and is particularly threatening for highly educated workers.

Post-secondary education. On the other hand, over the last two decades, the Canadian PSE system has expanded and has become more inclusive of a diverse student population. Rising enrolments in the over 90 public and private universities and university colleges reflect a policy trend to mass higher education. In 2004/2005, university enrolment reached more than 1 million students, registering a 19% increase over 5 years (Statistics Canada, 2006). The increasing demand for university education is caused by the changing nature of work in the knowledge

economy. For instance, “between 1990 and 2006, jobs for university graduates doubled, whereas jobs for those who had not completed any postsecondary education declined” (Association of Universities and Colleges of Canada, 2007, p.5).

The demand for post-secondary education is also reflected in an increased participation in over 150 community colleges and institutes and a myriad of proprietary colleges (Association of Canadian Community Colleges, 2006; Adamuti-Trache & Sweet, 2008; Sweet and Gallagher, 1999). The non-university system serves a more utilitarian purpose by offering vocational and workforce training programs to address skill shortage and changing skill requirements. The economic-utilitarian focus of college programs may resonate with immigrants who struggle to find a rapid path toward economic integration.

Even more important to adult immigrants is that post-secondary institutions are forcefully advocating diversity in access and outcomes, with a distinct spotlight on adult learners that constitute a common clientele (Peters, 2004; Schuetze & Slovey, 2002). Diversification of the system, awareness of students’ needs, openness toward offering flexible programs and use of non-traditional forms of instruction, likely favour the participation of adult learners. These changes are opportune to recent adult immigrants who may try to lessen the tough scrutiny of employers by enhancing their résumé with Canadian credentials.

5.2.2 Conceptual framework

The background section suggested a dual aspect of the social context experienced by recent immigrants to Canada. On one hand, barriers are created by an unwelcoming job market, since “institutional forces obstruct the integration of foreign-trained workers into the Canadian labour market” (Reitz, 2007a, p.14) and restrict the opportunity structures available to adult immigrants. On the other hand, opportunities for education are offered by post-secondary institutions, since the structure of the Canadian post-secondary system is, to a large extent, favourable to further education and life long learning. Within a structure of opportunities and constraints, people make decisions that are rooted in personal life history, current life circumstances and individual dispositions, and that will shape their life course trajectories accordingly (Heinz, 1991).

However, the adult immigrant has to understand this social context in order to adopt an optimal strategy (i.e., consistent with his/her past and present life situations -including the reason to

immigrate- as well as future plans). The capacity of individuals to make such choices is attributed to their human agency.

Agency. The ongoing debate about the struggle between individual agency and structural and institutional barriers has led to various perspectives. For instance, Beck (1992) argues that the process of individualization that occurs in people's lives in a 'risk society' helps them to develop ways to respond to uncertainty, and to make decisions that minimize risk and maximize personal opportunities. However, others propose/employ the notion of 'structured individualization' to acknowledge that human agency operates differentially due to boundaries and limits associated with structural influences (Anisef & Axelrod, 2001; Rudd & Evans, 1998). While Beck places the individual at the centre of action to 'plan' his/her biography, Rudd and Evans sense a discrepancy between the optimism of the individual who believes he/she is in control of his/her life course and the reality of limited chances of success in the labour market for particular social groups.

Shanahan (2000) takes a 'middle road' and introduces the notion of *bounded agency* to illustrate a dynamic interplay between agency and social context that shapes the decision-making process. Particularly, Rubenson and Desjardins (2009) employed the notion of bounded agency in order to understand barriers to adult education participation. They emphasized that dispositions toward education are influenced by social context, being a result of adults' social experiences that will impact further choices. In a study on youth life course transitions, Evans asserts that, "by examining bounded agency, the focus moves from structured individualization onto individuals as actors" (2007, p.93). This is a more active type of individualization that encourages 'strategic' and 'chance-taking' approaches to life course transitions. Evans also noted that the bounded agency concept offers a way to understand people's experiences in changing social landscapes because it emphasizes the ways in which past habits and future opportunities relate to present circumstances.

Jasso (2004) makes specific reference to migration that is "quintessentially about human agency – individual moving in search of a better life – thus giving new meaning to the 'human agency' element of the life course perspective" (p.340). Indeed, immigrants live through a social change because they experience a significant life course transition that entails the risk of losing

individual control on their current situations. There is no surprise that life histories and personal dispositions that shape immigrant aspirations for a new life in the host country will also guide the decision-making process.

Strategy and practice. These notions are crucial to the understanding of how agents negotiate structural changes in an attempt to gain some control in their lives (Bourdieu, 1977). I suggest that recent immigrants' behaviour can be likened to Bourdieu's metaphor of players in a card game. Bourdieu uses the metaphor to explain how individuals maneuver marriage strategies to guarantee the social reproduction of power relations, and describes the matrimonial game as "a card game in which the outcome depends partly on the deal, the cards held (their value itself being defined by the rules of the game, characteristic of the social formation in question), and partly on the players' skill" (1977, p.58). Bourdieu argues that the social positions secured by individuals are not entirely socially determined. Although possession of various forms of capital (the nature of the hand dealt) is crucial, it is important to know the rules of the game that allow the agent to choose effective *strategies* and to make profitable capital investments. Bourdieu attributes the actions of good players to the role of *habitus*² as a sense of the game and to repetitive *practices* "which become in turn the basis of perception and appreciation of all subsequent experience" (p.78). Individual habitus (embodied dispositions acquired over the course of one's life that offer a durable form of freedom) mediates the process of capital activation (Bourdieu, 1990).

Recent immigrants are new players, joining 'the game' at some point in their lives. Confronted with structural barriers that prevent them from effectively joining the Canadian workforce of professionals, highly educated adult immigrants strategize their actions in order to open the range of possibilities to economic and social integration. Research illustrates various scenarios. Most immigrants accept jobs that are not always related to their occupation, in which they are often overqualified and underpaid (Galarneau & Morissette, 2004). Meanwhile, immigrants in professional occupations (e.g., medicine or engineering) undergo a credential assessment procedure (Girard & Bauder, 2007; Hawthorne, 2007) which often requires additional formal or non-formal education. However, as noted by Reitz (2007b), this is not an option in less-regulated occupational sectors (e.g., liberal arts or managerial occupations). Immigrants also embark in formal education and training to validate, recycle, enrich or change their occupational profiles.

This last scenario appears to be most strategically constructed along two dimensions of one's life course -work and learning- because the majority of adult immigrants remain active in the labour force while pursuing further education (Adamuti-Trache & Sweet, in press). Although an uncertain reality in which norms are not always overtly exposed makes things even more difficult for new game players, as is the case for newcomers to Canada, Bourdieu's metaphor suggests that skills and strategies can be developed *only* through participation. I argue that this is essential to immigrants' socio-economic integration.

Playing the 'Canadian education' card is not a surprising strategy for the highly educated immigrants who have the intellectual potential to effectively activate and convert human capital resources to Canadian educational capital. This paper examines the manner in which specific strategies (the choice of PSE pathways) are determined by immigrant past and current life-course circumstances, human capital and dispositions toward Canadian education through a process that is presumably shaped by an understanding of the social context in the host country.

5.3 Methodology

5.3.1 Adult education models

Adult education models offer a methodological framework with which to analyze immigrants' decision to embark on further education while continuing to work and to fulfill family roles. As acknowledged in Cross' Chain-of-Response (COR) model (1981), adult education participation is not an isolated act but is the result of life course histories and a reflection of conflicting opportunity structures. The individual makes decisions in response to both opportunities and barriers associated with the pursuit of an educational option. Cross developed a useful typology of opportunity structures consisting of situational (e.g., time and financial resources related to employment and family obligations), institutional (e.g., type of programs or courses offered, admission requirements, program constraints), and dispositional factors (e.g., attitudes, values, credential motivation, self-perceptions about one's ability as learner) that favour or hinder adult decision to participate in education and/or specific institutional choices. I will build on Cross' model to propose a typology of opportunity structures consistent with immigrant life course characteristics.

5.3.2 Data

The data employed in the study were drawn from the Longitudinal Survey of Immigrants to Canada (LSIC). The surveys were conducted by Statistics Canada and Citizenship and Immigration Canada under the Policy Research Initiative, and followed a representative sample of new immigrants and refugees aged 15 years and older, who landed from abroad between October 2000 and September 2001. The three waves of interviews were conducted after approximately six months, and again two and four years after their arrival. Wave 3 LSIC data were collected from about 7700 respondents who participated in all 3 interviews.

5.3.3 Sample

The analysis uses Wave 3 LSIC data that involve all wave interviews, but is based on a research sample of 3000 respondents selected by the following criteria:³

- respondents with a university degree obtained in their country of origin;
- respondents between 25-49 years of age at arrival in Canada;
- respondents who had never lived in Canada before applying for immigration.

The sample selection ensures that the analysis includes individuals who have more ‘equal’ chances to access available resources if they have comparable educational background (i.e., university education). The age selection targets the prime working age population (25 to 44) and extends the range to 49 in agreement with the current immigration point-system that takes away points for applicants older than 49. The minimum age of 25 ensures that immigrants possibly had some work experience prior to immigration: therefore, they are prepared to enter the Canadian workforce. Finally, only immigrants with no prior experience (e.g., education or work) in Canada are included, so that their educational decisions could be attributed to the impact of the new social context.

5.3.4 Research design

The current study makes only partial use of the longitudinal nature of LSIC data by examining employment and PSE participation status during each wave. Next, PSE choices are examined over all four years in order to ensure that subsamples are large enough for the multivariate

analysis. Similarly, various factors employed in the model are either selected at a particular survey time or averaged over the entire period depending of the substantive role that they play in the analysis. An examination of changes over time in the choice of PSE pathways through a true longitudinal analysis is beyond the scope of this study.⁴ Statistics Canada makes a series of recommendations for the analysis and presentation of LSIC data that are followed in this study.⁵

5.3.5 Variables

The outcome variable describes enrollment in at least one educational event, regardless of duration and excluding language training, within 6 months, 2 years and 4 years since arrival in Canada. Only participation in post-secondary institutions (i.e., university, community or career colleges and trade schools) will be considered to represent the type of formal education that requires financing, admission prerequisites and time commitment. Non-formal education and training provided by other institutions (e.g., employers, professional associations and adult centres) will be treated as non-participation.

First, PSE participation is described by a 4-category variable that indicates *whether* and *when* did PSE occurred (i.e., during Wave 1; Wave 2; Wave 3; not within 4 years). This classification based on the unique starting time of PSE enrolment allows examining the promptness of adult immigrants' contact with and response to PSE opportunities.

Second, PSE pathways describe a 4-category typology that indicates *whether* and *where* (i.e., institution type and program) did immigrants pursue education within 4 years of arrival:

- Non-participation – no education or non-PSE education/training;
- Recycling – those who seek further job-related education and training likely for skill upgrading, in the form of a credential in non-university institutions (e.g., community and career colleges, institutes, trade schools);
- Value Added – those who seek a university degree likely to advance their qualification in the same field of study they graduated in their country of origin; and
- Starting Anew – those who seek a university degree in a different field of study and thus are likely to change their occupation.

Determinants of participation and choice are classified as individual, immigrant-specific, situational and dispositional factors. Individual factors include demographic attributes like gender, age (i.e., 4 age groups) and visible minority status. Level of university education (i.e., bachelor's or graduate degrees) and field of study of the degree obtained prior to immigration (aggregated into 8 groups) are measures of human capital, and determinants of past experiences and pre-migration habitus that indicate immigrants' capability to participate in Canadian PSE.

Immigrant-specific factors are particularly relevant to research on immigrants to Canada (Adamuti-Trache & Sweet, in press). The world region where the highest degree was completed (i.e., 8 groups) is a factor situated at the boundary between individual and immigrant-specific factors. The 'source country' carries a cultural dimension because the access to cultural resources in the host country is affected by the degree of conformity to its culture (Reitz, 2007b) and a symbolic dimension because the level of familiarity with immigrant source countries by Canadian employers may have an effect on the recognition of their foreign credentials (Mata, 2008). Similarly, language proficiency in one of Canada's official languages is an indicator of human capital specific to immigrants. I constructed a variable that indicates the self-reported speaking abilities in one of Canada's official languages in Wave 1. The variable is based on the English scores for all provinces except Quebec, and the best of the English or French scores for Quebec respondents. The 2-category variable indicates whether the immigrant believes he/she could speak the language well or very well, or if English/French was his/her mother tongue *versus* the immigrant could speak one of Canada's official languages fairly well, poorly or not at all. The analysis also includes the immigration class (i.e., 5 categories) under which the respondent was accepted to Canada. Another variable indicates the most important reason to immigrate as reported in Wave 1 (i.e., 4 groups that specify education, family, economic and other reasons). The immigration class can be also interpreted as a situational-like factor that positions the immigrant with respect to the selection point system, while motives to immigrate indicate a dispositional-like factor.

Situational factors arise from one's life course circumstances at a given time. Several work related variables are included in the analysis. First, based on the labour force status in each wave, employment status is described by 2-category variables that indicate whether the immigrant was employed (i.e., full-time or part-time) or not employed. Employment status will

be discussed in relation to PSE participation at each wave to illustrate the extent to which adult immigrants succeed in engaging in work and learning activities soon after arrival. Second, the average number of weeks worked within 4 years since arrival will be included in the model to measure labour force participation. Third, it is anticipated that PSE participation and choice is related to the occupation that individual immigrants intend (or expect) to pursue in Canada. For instance, previous research shows that the mismatch between pre-migration occupation and current occupations is associated with PSE participation (Adamuti-Trache, 2009). Research also shows differences between ‘prior occupation’ and the ‘occupation wanted’ when the immigrant decided to come to Canada, with a clear drop in the proportion of immigrants intending to work in management or social sciences and government positions (Anisef, Sweet, & Adamuti-Trache, 2009). For the purpose of this study, it is appropriate to use the ‘occupation wanted’ as a determinant of participation since it reflects adult immigrants’ occupational expectations after being confronted with the realities of the labour market. The ten broad groups based on the Standard Occupational Classification (SOC) system, are collapsed into 6 categories to avoid small sample size when tabulated with the PSE pathways.

A factor that is anticipated to impact participation describes whether the immigrant was able to negotiate pre-migration work experience at least once within 4 years of arrival (i.e., a 3-category variable that shows whether the respondent tried and succeeded to get foreign work experience accepted; tried, but work experience was never accepted; had no prior work experience, was never employed in Canada or never tried to negotiate).

Situational factors also consist in family obligations that are expected to play a role in one’s decision to commit to post-secondary education (Cross, 1981). Marital status and having dependent children will be measured by 2-category variables that describe the status within 4 years of arrival. In addition, I constructed a measure that indicates availability of financial resources (average monthly income per household member).

Dispositional factors are related to individual attitudes about education as reported in Wave 1: importance assigned to Canadian education (i.e., 4-point Likert scale) and the type of Canadian education that immigrants believe would be useful to them (i.e., 4-category variable indicating

language training, obtaining a credential, job-related training, none/other). These two factors describe dispositions shaped by the social context.

5.4 Findings

5.4.1 Employment and PSE participation in Canada

This section focuses on two dimensions of adult immigrants' life course, employment and PSE participation, to illustrate *promptness* of PSE participation. The patterns over time show *whether* and *when* immigrants become involved with PSE education after arrival in Canada and how labour force participation and promptness of their educational actions are related.

Table 5.1 displays results of a descriptive analysis that classifies immigrants by their work-PSE participation status: across the rows, eight employment trajectories describe immigrants in and out of the labour force (Y/N) in various waves (rows), and columns indicate four PSE starting times. The table gives a representation of two dimensions of immigrants' activities by showing 32 possible employment-PSE participation situations. Each cell contains the proportion of immigrants with a specific work-PSE participation characteristic (e.g., 7.6% of all respondents were employed in all 3 waves and started PSE in Wave 2). Rows indicate from top to bottom a lessening of labour market participation (i.e., employed in all waves to none). Columns describe from left to right a delayed PSE participation (i.e., start in Wave 1 to none). Overall PSE and work participation percentages appear in the last row and column.

#	Employment			PSE	PSE	PSE	PSE	Work%
	W1	W2	W3	StartW1	StartW2	StartW3	None	
1	Y	Y	Y	3.3	7.6	4.1	24.5	39.5
2	N	Y	Y	2.9	3.9	2.0	10.9	19.7
3	Y	N	Y	0.6	2.6	0.7	2.6	6.6
4	N	N	Y	2.1	4.0	0.9	4.9	11.9
5	Y	Y	N	0.4	1.0	0.8	1.7	3.9
6	N	Y	N	0.3	0.5	0.5	1.5	2.8
7	Y	N	N	0.3	1.2	0.4	0.9	2.7
8	N	N	N	1.3	3.1	1.6	7.0	13.1
			PSE%	11.1	23.8	11.1	54.0	100

^a Research sample: N=3000

The last column shows that about 40% of immigrants were employed at all survey times, and a total of about 38% were employed at least in Wave 3, leading to 78% employed by the end of the study period (#1 to 4). This is 25% higher than employment in Wave 1, which is about 53% (#1, 3, 5, 7). However, about one in five highly educated immigrants were in a vulnerable position with respect to the labour market after 4 years of arrival (#5 to 8), and 13.1% of them were not employed at any survey time (#8).

The last row indicates that 11.1% of immigrants actively engaged in PSE in Wave 1 (i.e., 6 months after arrival), while another 23.8% and 11.1% joined as PSE participants in Waves 2 and 3, respectively. Overall, within 4 years of arrival, a total of 46% of highly educated immigrants have participated in post-secondary education in Canada.

The variability in employment-PSE participation indicates that immigrants follow individualized trajectories when engaging in work and further education in Canada. Some trajectories are largely represented (e.g., about 24.5% of immigrants were employed at all times and non-participants), while others are very improbable (less than 1% of immigrants who worked only in Wave 1 also started PSE at that time).

Table 5.1 illustrates the promptness of PSE participation in relation to employment. It is not unlikely for those employed at all survey times to enrol in PSE: about one third of respondents along trajectory #1 are PSE participants within four years of arrival. However, comparing the relative proportions of PSE participants along trajectories #1 and #2, not being employed in Wave 1 would double the likelihood of starting PSE in Wave 1. An analysis of the sequence of work-education events is beyond the scope of this study: a first step is to acknowledge that PSE participation is quite sizeable along each employment trajectory.

5.4.2 Basis of post-secondary education choices

The study further disentangles the PSE participation by using the typology proposed in the methodology section and examines *whether* and *where* (i.e., institution & program) immigrants enrol in PSE. Data show that within four years of arrival, 46% of adult immigrants participated in PSE: 29% enrolled in non-university education (recycling), 8% in university education in the same field of study (value added) and 9% in a different field of study (start anew).

Table 5.2 presents the characteristics of the research sample by showing percentages and means of variables anticipated as antecedents and correlates of PSE pathway choices over the four-year settlement period. Most categories are well represented in the sample. For instance, a minimum sample size of 50 is ensured for the refugees group, which is the least represented. However, some of these categories would have to be masked if distributions were obtained for the four PSE pathways. Consequently, results of the multinomial regression model should be treated with caution for these categories (as indicated in Table 5.3).

Table 5.2: Descriptive statistics of variables used in the model

Variable name	Categories	Percent/Mean
<u>PSE pathways</u>	Non-participant	.540
	Recycling	.290
	Value Added	.081
	Start Anew	.089
<u>Gender</u>	Male	.564
	Female	.436
<u>Age</u>	25-29	.216
	30-34	.328
	35-39	.239
	40-49	.217
<u>Visible minority</u>	No	.192
	Yes	.808
<u>Level of Education</u>	Bachelor	.666
	Graduate	.334
<u>Prior field of study</u>	Humanities/Soc&BehavSciences/Law	.162
	Education	.032
	Business	.139
	Phys&Life&Agricultural sciences	.110
	Math&Computer sciences	.104
	Engineering	.322
	Health/Fitness	.060
	Unspecified	.070
	<u>Origin of highest level of education</u>	US/UK/Oceania=ref
Western Europe		.034
Eastern Europe		.136
Central/South America		.035
Middle East		.050
East/SouthEast Asia		.397
South Asia		.232
Africa		.064
<u>Speaking official language (W1)</u>	Fairly well/ Poor/Not at all	.260
	Well/Very well/Mother tongue	.740

Variable name	Categories	Percent/Mean
<u>Immigration class</u>	Skilled workers – Principal Applicant	.579
	Skilled worker - Spouse/Dependant	.278
	Special economic group	.028
	Family	.097
	Other (refugees)	.018
<u>Reason to immigrate (W1)</u>	Education	.094
	Family	.606
	Economic	.114
	Other	.186
<u>Prior work experience accepted (within 4 years)</u>	Tried /work exp accepted	.395
	Tried/work exp not accepted	.376
	Did not try/never employed	.229
<u>Occupation wanted (W1)</u>	Management/Business/Finance/Administration	.145
	Natural and applied sciences	.358
	Health	.065
	SocialSc/Education/Government/Religion/Arts	.099
	Trade/Transp/Manuf/PrimaryInd/Sales/Service	.072
	Unknown	.261
<u>Married (within 4 years)</u>	No	.075
	Yes	.925
<u>Dependent children (within 4 years)</u>	No	.203
	Yes	.797
<u>Important to get Canadian education (W1)</u>	Scale 1-4	3.7
<u>Type of education of interest (W1)</u>	Language training	.277
	Program/degree	.350
	Job-related	.331
	Other	.042
<u>Average number of weeks worked since arrival</u>		140.1
<u>Average monthly income per household person</u>		\$1441.7

Research sample: N= 2960

This section also contains the results of a multinomial logistic regression analysis to predict the likelihood of PSE pathway choice ('recycling', 'value added' or 'start anew') taking 'non-participant' as the reference category. The model includes individual, immigrant-specific, situational and dispositional factors. The analysis is conducted in STATA using 500 bootstrap replications. The model is significant $F(132, 368) = 4.29$ ($p < 0.001$) and Table 5.3 presents the odds ratios that show how many times higher is the probability of the event compared to the probability of non-event when comparing each PSE participation pathway with the non-participant reference group.

Table 5.3: Multinomial regression models – Choice of PSE pathways ^a

Variables	Reference Categories & Levels	Odds ratio		
		Recycling	Value added	Start Anew
INDIVIDUAL				
Gender	Male=ref	1.21	.82	.80
Age	Age 25-29 =ref			
Age (1)	Age 30-34	.94	1.07	.80
Age (2)	Age 35-39	1.07	.70	.70
Age (3)	Age 40-49	.93	.48**	.35***
Visible minority	No=ref	.99	1.00	1.25
Level of prior university education	Bachelor=ref	1.11	1.57**	1.46**
Prior field of study	Hum/Soc&BehSc/Law =ref			
FOS (1)	Education ^b	.77	4.69**	.57
FOS (2)	Business	.86	2.83**	.28**
FOS (3)	Phys&Life&Agric sciences	.81	1.48	.79
FOS (4)	Math&Comp sciences	.81	1.76	.42**
FOS (5)	Engineering	1.37**	1.61	.93
FOS (6)	Health/Fitness ^b	.92	4.32**	.64
FOS (7)	Unspecified ^b	1.07	2.16	.49
IMMIGRANT-SPECIFIC				
Origin of highest level of education	US/UK/Oceania=ref			
Region (1)	Western Europe	.39*	1.62	.50
Region (2)	Eastern Europe	1.88**	1.70	1.02
Region (3)	Central/South America	1.68	2.01	2.04
Region (4)	Middle East	1.49	1.84	.35
Region (5)	East/SouthEast Asia	1.98**	1.30	1.03
Region (6)	South Asia	1.40	.89	.33**
Region (7)	Africa	2.08**	1.89	1.58
Proficiency speaking English or French (W1)	Poor=ref	.99	1.71**	2.33***
Immigration class	Skilled workers – PA =ref			
Category (1)	Skilled worker - SP/DEP	.66**	.65*	.72
Category (2)	Special economic group ^b	.25***	.16	.19
Category (3)	Family	.75	.53	.67
Category (4)	Other (refugees) ^b	.56	.21	.68
Reasons to immigrate	Education=ref			
Reason (1)	Family	1.43	.78	.76
Reason (2)	Economic	1.38	.57	.66
Reason (3)	Other	1.95**	.90	.90

Variables	Reference Categories & Levels	Odds ratio		
		Recycling	Value added	Start Anew
SITUATIONAL				
Prior work experience accepted	Tried /work exp accepted = ref			
Acceptance (1)	Tried/work exp not accepted	1.58***	1.02	1.14
Acceptance (2)	Did not try/never employed	.85	.39**	.61*
Occupation wanted	Manag/Bus/Finance/Adm = ref			
Occupation (1)	Natural and applied sciences	.77	1.61	.94
Occupation (2)	Health	1.22	.84	.40
Occupation (3)	SocSc/Educ/Gov/Religion/Arts	.54**	.79	.95
Occupation (4)	Trade/Transp/Manuf/Sales/Serv	.97	.91	.36**
Occupation (5)	Unknown	.66**	.62	.67
Average number of weeks employed	Ordinal variable	.99***	.99***	.99***
Marital status	Not married=ref	.91	.81	.95
Children in household	No=ref	.94	.37***	.72
(Ln) of average income per month per person	Ordinal variable	1.16	.81	1.12
DISPOSITIONAL				
Importance of Canadian education	Ordinal variable	1.51***	1.46**	1.16
Type of education of interest in Wave 1	Language training=ref			
Type (1)	Program/degree	2.21***	4.27***	3.21***
Type (2)	Job-related	1.73***	1.19	.94
Type (3)	Other ^b	1.77*	.85	1.08

* p<0.01; ** p<0.05; *** p<0.001

^a Reference category = Non-participant ;

^b Cautious interpretation is required due to low counts in some PSE pathways.

Individual factors. Demographic factors do not appear to contribute significantly to the model, except for an age effect that shows that likelihood of participating in a university pathway is about half for the immigrants over 40 years of age compared to the younger group. Level of prior education has a significant effect on participation/choice of the two university pathways, immigrants with graduate degrees at arrival being about 50% more likely to choose any of them.

Prior field of study is a significant predictor of choice. Engineering graduates are the most likely to choose the ‘recycling’ path. Compared to social sciences graduates, all other graduates are more likely to choose ‘value added’ pathways. Social sciences and also engineering graduates are the most likely to choose a ‘start anew’ pathway that indicates occupational change. For

engineering, a career change might be related to major employment losses in the IT sector and the large number of newcomers qualified in this field (Galarneau & Morissette, 2008).

Immigrant-specific factors. Region where the highest university degree was obtained (origin of education) shows a variety of patterns, although most significant differences occur along the ‘recycling’ pathway. For all regions except Western Europe, there is a significant chance that compared to the reference group (i.e., immigrants from English-speaking countries) immigrants from other regions will engage in a ‘recycling’ pathway. Western Europeans are more likely to enrol in a ‘value added’ pathway that is perhaps related to pursuing advanced degrees. Immigrants with degrees completed in South Asia are the least likely to engage in further university education. In addition, proficiency in speaking an official language at arrival leads to a high likelihood of enrolment in further university education.

Skilled worker principal applicants are the most likely to pursue education across all PSE pathways. The most pronounced differences occur when comparing skilled worker principal applicants with immigrants in the special economic class (i.e., business immigrants and provincial or territorial nominees) who are about 4 to 5 times less likely to enrol in PSE. The most dissimilar probabilities are evident for the ‘value added’ choice.

The model also includes a factor describing immigrants’ main reason to come to Canada. The rationale to examine this factor is to assess whether PSE pathway choice was related to having education-related reasons for migration. The model does not bring conclusive evidence to support this hypothesis. However, those who indicate family, economic or other reasons to immigrate are more likely to choose a ‘recycling’ pathway, which shows their more utilitarian approach to education and training. Meanwhile, those who indicated educational reasons are more likely to actually engage in university education.

Situational factors. Work-related variables are good predictors of PSE choices. Perhaps the most meaningful predictor of PSE choices is the factor that indicates whether Canadian employers accepted immigrants’ foreign work experience. Compared to the reference group of those who successfully negotiated their work experience, the less successful immigrants are about 58% more likely to engage in ‘recycling’. However, compared to the first two groups of immigrants who tried to negotiate pre-migration work experience, immigrants who were never

involved in a negotiation process are about half as likely to enrol in further university education.

The occupation wanted by the immigrant also has some impact on PSE choice. The ‘recycling’ pathway seems to be chosen by those interested in finding jobs in health, management and business, but not by those interested in social sciences occupations. The ‘value added’ pathway is of interest to immigrants looking for jobs in natural and applied sciences. Those who intended to work in health or trade occupations are not likely to pursue a ‘start anew’ pathway. Finally, there is a clear, negative relationship between being a PSE participant and the average number of weeks of employment in Canada.

Parenthood decreases the likelihood of an individual choosing a university education pathway, especially along the ‘value added’ pathway that likely corresponds to advanced studies: this suggests that time and financial constraints matter. Higher available financial resources increase the likelihood of engaging in ‘recycling’ or ‘start anew’ pathway, but not in a ‘value added’ path.

Dispositional factors. Odds ratios show that those who believed that Canadian education was important are likely to be PSE participants, and significantly more likely to engage in ‘recycling’ or ‘value added’ pathways. Finally, the credential motivation indicated in Wave 1 is a significant predictor of PSE pathway choice. Motivation to pursue a degree translates into an increased likelihood to make any PSE pathway choice, and especially to engage in university education. On the contrary, interest in job-related training directs immigrants toward a ‘recycling’ pathway. Although insignificant, it is interesting to note that a job-related focus also directs immigrants toward a ‘value added’ rather than ‘start anew’ pathway.

The multinomial regression model highlights how agency and structure interplay to predict educational behaviours, and accounts for the relative contribution of factors in predicting each PSE pathway choice. The individual and immigrant-specific predictors portray the immigrant inheritance at arrival in Canada in terms of socio-demographic characteristics (e.g., gender, age and ethnicity), human capital (e.g., level of education, field of study, knowledge of official languages, immigrant class and region where university degrees were completed) and anticipated outcomes (e.g., reason to immigrate). Situational factors introduce the effect of external structures challenging the individual agency, either related to work-related barriers or family obligations. Finally, dispositional factors are indicators of a *bounded agency*: the social context

has shaped immigrant beliefs about the Canadian education (e.g., importance and usefulness) during the initial contact with the Canadian society.

5.4.3 PSE pathway profiles

Since one aim of this study is to illustrate the significant PSE participation and diversity of pathway choices by highly educated immigrants, this section presents actual distributions across PSE pathways in relation to pre-migration and situational factors that are relevant to policy.

Gender and age. Although gender did not appear to be a significant factor in the model, gender differences are visible in the PSE pathway profiles. Table 5.4 shows that immigrant women are disadvantaged with respect to continuing university education in Canada and are more likely to remain non-participants. They are also more likely to be unemployed (Anisef, Sweet, & Adamuti-Trache, 2009) which suggests women encounter significant barriers to integration.

Table 5.4: PSE pathway choices by demographic factors (row %)

		N	Non-participant	Recycling	Value Added	Start Anew
<u>Gender</u>	Male	1690	52	29	9	10
	Female	1300	56	29	7	8
<u>Age</u>	25-29	650	49	28	11	12
	30-34	980	51	28	11	10
	35-39	720	54	32	6	9
	40-49	660	64	28	4	4

There is a clear decline in PSE participation with age. The similarity between the age groups 25-29 and 30-34 suggests that these individuals may have similar life-course circumstances that allow them to make long-term educational commitments (i.e., to engage in university education). Meanwhile, those aged 35 to 39 enrol in non-university education that is less demanding in terms of costs and time commitment. Age can become a critical factor in immigrant settlement, especially if older immigrants have poor language skills.

Language proficiency and immigration class. Language barriers create employment barriers as well as difficulties in access to further education. Table 5.5 shows large non-participation rates for those who could not speak one of Canada’s official languages. Although those experiencing language barriers in Wave 1 chose mainly non-university education, about 10% of them

succeeded in engaging in university education at some point during their first 4 years in Canada: this suggests some language improvement over time.

Table 5.5: PSE pathway choices by immigrant-specific factors (row %)

		N	Non-participant	Recycling	Value Added	Start Anew
<u>Language</u>	No	780	61	29	5	5
	Yes	2220	52	29	9	10
<u>Immigration class</u> ^a						
	Skilled workers – PA	1740	49	32	9	10
	Skilled worker SP/DEP	830	59	27	6	8
	Family	290	60	26	6	8

^aThe other 2 immigration categories are not presented due to low counts for some PSE pathways.

Table 5.5 also shows PSE choices by immigration class. It is evident that skilled worker principal applicants are the most likely to be PSE participants. This is not surprising: these are the most ‘capital-rich’ immigrants because they met the immigration selection criteria. This group is largely involved in university education (9-10%), as well as recycling (32%). They are also more likely to be employed (Anisef, Sweet, & Adamuti-Trache, 2009) which suggests this immigrant group is better prepared to overcome settlement and integration barriers.

Work-related situational factors. Table 5.6 shows that acceptance of pre-migration work experience by employers has an impact on PSE profiles. The largest participation rate (55%) is notable for immigrants who did not succeed in negotiating their foreign work experience. Immigrants who successfully negotiated foreign work experience are also engaged in PSE likely to improve their employment situation through education. However, only 27% of them chose a ‘recycling’ path, compared to 36% of those who could not negotiate work experience. Those who had a limited interaction with the labour market (i.e., did not work either before or after arrival to Canada) have the highest non-participation rate (66%).

Table 5.6: PSE pathway choices by work-related factors (row % and means)

	N	Non-participant	Recycling	Value Added	Start Anew
<u>Prior work experience</u>					
Work exp accepted	1180	56	27	9	9
Work exp not accepted	1130	45	36	10	10
Never tried or unemployed	690	66	23	5	7
Nr. weeks employment	3000	149	141	111	112
Mean income/person (\$)	3000	1450	1430	1420	1460

The 'recycling' path appears to be chosen by adult immigrants who experience more difficulties in finding 'good jobs' (i.e., high paying permanent jobs with benefits). Indeed, those engaged in a 'recycling' pathway have labour force participation quite similar to non-participants (i.e., 141 weeks compared to 149 weeks), but slightly lower financial resources. As expected, those engaged in university education have significantly lower labour force participation.

In summary, this brief analysis of PSE pathway profiles shows that immigrants respond differently to educational opportunities offered by the post-secondary system. There is significant variability in participation and choice controlled by individual and situational factors.

5.5 Conclusion

This paper contributes to the debate regarding the issue of immigrant foreign qualifications by bringing evidence that significant numbers of highly educated immigrants choose to pursue PSE after arrival in Canada in an attempt to increase the relevance and worth of the human capital accumulated in their native countries. Within 4 years of arrival, 46% of immigrants enrolled in PSE; 11% of these quickly evaluated their situation and started PSE within the first 6 months of arrival. However, adult immigrants are unlikely to engage exclusively in education and most remain active in the labour market in an effort to keep open a range of options and to improve their career opportunities. Moreover, immigrants' ability to access resources in order to sustain specific PSE pathways is influenced by individual characteristics and life-course circumstances. Study findings show that age is a crucial factor, as select PSE pathway choices are less available to older adults.

As demonstrated in this paper, obtaining education in Canada was not the main reason for migration, for most immigrants. The decision to pursue PSE was made soon after arrival: this decision was likely influenced by the labour market, which poses barriers to immigrant economic integration. In response, immigrants as individual agents took action in an attempt to minimize negative effects. This supports the argument by Heinz and Krüger (2001) that "by introducing agency into life-course equation we take into account that macro-structures do not determine the shape of life courses, but individuals contribute to it by being active agents of their biography" (p.41).

There is certainly an optimistic view that despite initial problems due to lack of recognition of their qualifications, in the long-term, highly educated immigrants will have a better chance to experience labour market success (i.e., higher employment rates and adequate earnings). There is also hope that they will become better integrated socially, and, especially, will be able to support their children in achieving high levels of education because “immigrant education is not only human capital: it is also a significant form of social capital” (Reitz, 2007a, p.11).

Using Bourdieu’s card game metaphor, one can expect immigrants’ actions and strategies to be influenced largely by local environments because immigrants play the game while learning the rules. The strong message on the utility-value of Canadian PSE credentials that emerges from the vigorous highlighting of the increasing level of education by Canadians (Statistics Canada, 2003a) and the emphasis on lifelong learning for the global economy (Peters, 2004; Rubenson, Desjardins, & Yoon, 2007) may have influenced the plans for education and training of two-thirds of new immigrants (Statistics Canada, 2005). It may also explain why those who believed in the importance of Canadian education were more likely to engage in PSE as illustrated in this study. It is a positive result that newcomers are responsive to the Canadian pro-education message, and that they take responsibility to obtain the necessary qualifications to succeed in a workplace environment that is dominated by market forces. However, immigrant actions also show disbelief that their foreign human capital will be ever recognized and fairly rewarded.

Dispositions toward education (embodied habitus) support immigrants’ involvement in PSE since highly educated immigrants are capable of navigating the Canadian PSE structures. But habitus is not related only to past practices and actions: dispositions are socially situated (Rubenson & Desjardins, 2009). The study findings illustrate that immigrants’ bounded agency is responsive to the social environment that shapes immigrants’ attitudes toward Canadian education. In an attempt to adjust to the new social context in order to reach their goals, highly educated immigrants take a pragmatic approach and respond to the Canadian social context that places value on local education and training.

Clearly, the proportions of adult immigrants on post-secondary campuses are rising. However, very rarely have immigrants been identified as a group with specific needs in post-secondary institutional policies (Canadian Council on Learning, 2007). Also, few post-secondary education

programs would recognize that many immigrants are highly-skilled workers who are in transition within global labour markets, and who should be assessed based on their unique experiential learning from both life and work experiences. To a large extent, immigrants simply benefit from change already implemented in the post-secondary institutions that have made an effort to serve a diverse clientele, including adult learners.

Adult immigrants do their share in trying to gain employment adequate to their credentials and skills. While accepting jobs below their qualification (to avoid long-term reliance on social welfare), immigrants are actively pursuing education and training in order to gain acceptance by Canadian employers and to meet workplace requirements. At the same time, they are often struggling with settlement, family obligations and health issues. It is imperative that the Canadian government take a more active role in understanding the structure of labour market obstacles faced by immigrant workers and the scarcity of job opportunities. It is also imperative that, instead of excluding immigrants from occupations for which they have qualifications and skills because they seem to be outsiders to the local culture, employers should recognize the potential of immigrants' contribution in the expansion of Canadian knowledge from a global perspective.

Notes

² As described by Bourdieu (1990), habitus comprises a complex set of structures, habits and dispositions that orient, and in some cases compel, individuals to make choices, including PSE destinations.

³ The sample reduction occurred at each level of selection. About 54% of the LSIC population had university education, about 73% were 25 to 49 years of age and about 91% had no previous contact with Canada before immigration.

⁴ Longitudinal data analysis might be restricted by the small sample size associated with some PSE pathways, especially during Wave 1.

⁵ First, LSIC has a complex sample design that requires the researcher to account for the stratification and clustering of the sample by employing bootstrap weighting procedures. Statistics Canada provides a bootstrap weights file, and the current analysis employs 500 bootstrap replicate weights. Second, results are presented according to Statistics Canada requirements (counts are rounded to the nearest tens and proportions to the nearest unit, and means and proportions are rounded to the nearest tenth).

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6 CONCLUDING CHAPTER

6.1 Summaries of the studies

The four manuscript chapters contain published papers or manuscripts that focus on issues related to obstacles and opportunities that university graduates with either foreign or Canadian human capital encounter in the Canadian labour market. In these manuscript chapters, university credentials, as an indicator of human capital, are differentiated by origin of education, level of education, field of study and type of academic program (i.e., liberal arts or applied education). Indicators such as employment status and earnings describe labour market outcomes. In all studies, educational and career attainments and further education pathways are differentiated by social structural attributes (i.e., gender, age, visible minority and immigrant status).

Chapter 2 is based on a paper published in the *Canadian Studies in Population* (2005), entitled: **Exploring the relationship between educational credentials and the earnings of immigrants.** The study uses the 2002 Ethnic Diversity Survey (EDS) to examine the relationship between educational credentials and earnings of working-age (25 to 64 years old) university graduates. University degrees are differentiated by three characteristics: origin of highest level of education (i.e., Canada, the United States or the United Kingdom, Europe, other countries), level of university education (i.e., undergraduate, graduate), and type of academic program (i.e., liberal arts, applied education programs). Socio-demographic attributes include immigrant status, gender and visible minority.

Findings show that social structural factors account for the largest proportion of variation in earnings. However, only gender remains a significant predictor of earnings when controlling for immigrant-specific factors (i.e., years of Canadian work experience, language disadvantage that compares languages spoken at home and workplace) and educational credentials (i.e., origin of education, level of education, program type). Earnings advantages are evident for holders of graduate degrees in applied fields who obtained their education in Canada or in an English-speaking country and who were not a visible minority. For immigrants, the negotiation of credentials in the labour market is related to origin of university education. Since clear income disparities are found for women, irrespective of their immigrant status, we conclude that gender inequity in earnings is a persistent labour market concern which is amplified for immigrant

women; especially those who are members of a visible minority group. This paper reveals the constraining effects of gender and visible minority status on the ability of immigrants to negotiate the value of their educational credentials in the Canadian labour market.

Chapter 3 is based on a paper published in *The Canadian Journal for the Study of Higher Education* (2006) entitled: **The labour market value of liberal arts and applied education programs: Evidence from British Columbia.** The study uses data from the survey of baccalaureate graduates of British Columbia's public universities conducted by The University Presidents' Council of British Columbia (TUPC) in 1997 and again in 2001. In this study, labour market outcomes of British Columbia graduates from liberal arts and applied education programs are contrasted by examining the Class of 1996 baccalaureate graduates one year and five years after graduation. Two social structural factors -gender and age at graduation (i.e., below and over 25 years)- are used as design variables. Employment status and earnings are indicators of labour market performance. Further education (i.e., participation and reasons) is also found to be a significant aspect of the respondents' profiles within one and five years of graduation.

This study highlights the value of liberal arts education, by arguing that the individual return to university education has to be analyzed from a multi-dimensional perspective in relation to initial educational and career goals of learners who have anticipated both intellectual challenges and economic rewards from their investment in education. Empirical data show that graduates from applied education programs establish and accomplish more focused educational and career goals, while graduates from liberal education programs establish broader educational and career goals. As a result, graduates from applied education programs experience a more rapid integration into the labour market, compared to graduates from liberal arts education programs. However, it is not uncommon for the former group to engage in further education after an initial period of participation in the labour market.

The study reveals differences in outcomes (i.e., employment, earnings) by type of university program, gender and age. Although earnings differences by program type and age either decrease or even disappear over time, earnings differences by gender are persistent and the gender wage gap increases over time. Another important finding is that within five years of graduation with a

baccalaureate degree, almost 90% of graduates took further education or training. Over 60% of these graduates indicated some career or employment-related reason for continuing education.

Chapter 4 is based on a paper published in the *Journal of Adult and Continuing Education* (2008) entitled: **Further education pathways of Canadian university graduates**. This study entails the use of longitudinal data from the 2002 National Graduates Survey and the 2005 Follow-up of the Canadian post-secondary graduates in 2000. The target group consists of graduates 25 to 64 years of age who hold at least a bachelor's degree as their highest level of education. The purpose of the study is to examine their participation in further education between 2000 and 2002, and their labour market outcomes in 2005. The study demonstrates that a) not all university graduates are similarly situated with respect to continuing education, and b) further education choices are associated with labour market outcomes.

The novelty of the paper consists of extending the Cross' adult education participation model which is based on a dichotomy (participant vs. non-participant) to a typology of further education pathway choices. Following Cross' model, which identifies antecedents and correlates of adult education participation I propose a series of socio-demographic, post-secondary and situational factors as explanatory variables of the pathway choices. The analysis shows that, altogether, about half of adult university graduates enrolled in a variety of post-secondary programs (about 24%) and career-related courses (about 23%) within two years after graduation. Some PSE programs are university-based (for degree and non-degree purposes) and others are offered by colleges and institutes (non-university programs). Demographic variables have a notable effect on further education choices. Women are less likely to pursue further (usually advanced) university degrees and more likely to engage in non-degree university programs. Compared to native-born Canadians, immigrants who graduated from Canadian institutions are more likely to engage in further education.

The analysis shows a strong indication of job-related reasons for further education. About 62% of those who took PSE programs within 2 years after graduation reported career- and job-related motives. Labour market outcomes five years after graduation were associated with respondents' choices. Those who engaged in career-related course training obtained the best outcomes. Since about 75% of these participants received employer support (compared to less than 40% of those

pursuing PSE programs), it is suggested that higher return to education/training is the result of a coordinated effort from both workers and employers. Findings are interpreted in relation to the changing nature of workplaces, which put pressure on highly educated workers to be active investors in their human capital by engaging in skill upgrading and advanced education.

Chapter 5 is based on a manuscript submitted for publication entitled: **First four years in Canada: Post-secondary education pathways of highly educated immigrants**. This is viewed as the pivotal study of this dissertation, and it will stand at the core of the discussion in the last chapter. This study is based on the Longitudinal Survey of Immigrants in Canada (LSIC) that provides extensive information on newcomers who were interviewed 6 months, 2 years and 4 years after arrival in Canada in 2000-2001. Only adult immigrants 25 to 49 years of age at arrival and who completed university education in their country of origin are included in the analysis. There are many similarities between this study and the one presented in Chapter 4, in the sense that they both emphasize two dimensions of highly skilled workers' lives: employment and education. The main focus of this study is to understand adult immigrants' decision-making process in embarking on PSE as a strategy toward full integration in the labour market. I also argue that immigrant educational choices indicate the struggle between individual agency and labour market structures that place specific value on Canadian-made human capital.

Similar to the methodology used in Study 3 (Chapter 4), I expand Cross' adult education participation model to a typology of further PSE (only) pathway choices that are differentiated by institution type (university and non-university) and scope of program (same or new university-level field of study). As determinants of participation and PSE pathway choice, I propose a series of individual, immigrant-specific, situational and dispositional factors.

The analysis shows that PSE participation by newcomers grows from 11% to 35% and 46% within 6 months, 2 years and 4 years of arrival. However, although 87% of immigrants were employed at least at one survey time, only 59% had employment at both 2 and 4 years of arrival. This suggests that the immigrant employment situation was still precarious. PSE participation at university level is significantly lower for immigrants over 40 years of age at arrival and for those with poor language ability in one of Canada's official languages. While immigrants who enrol in university education are more likely to express interest in obtaining a Canadian degree, those

enrolled in non-university education ('recycling') have more pragmatic views and are likely to be interested in both pursuing degrees and taking job-related training. Two significant determinants of pathway choices are: acceptance of prior work experience by employers and the belief of immigrants in the importance of obtaining Canadian education. Both factors carry symbolic meanings. Their relevance also illustrates that immigrants make decisions after understanding the Canadian social context and evaluating obstacles imposed by the labour market as well as opportunities offered by the post-secondary system.

The major discourse around immigration to Canada emerges from evidence that recent immigrants experience barriers in reaching full economic potential. My findings show that newcomers use existing human capital (knowledge and skills) and cultural capital (dispositions toward education) to create new forms of human capital (Canadian credentials) as a strategy to improve employment opportunities. However, their actions need to be interpreted within the broader Canadian social context that put pressure on all highly educated workers. This dissertation addresses issues situated at the intersection between labour market, credentialism and immigration.

6.2 Method

Chapter 1 has created an intellectual space in which to introduce the background to the problem, to review useful theoretical concepts and to articulate a model of agency during life course transitions that incorporates the effect of social context on human agency (Figure 1.5). Each manuscript chapter contains empirical results that address various aspects of the research theme. The task of this last chapter is to analyze, discuss and interpret the research findings by relating the manuscript chapters to each other and to the field of study. I will first employ an analytical approach that consists of analyzing findings from the four studies to illustrate the consistency of data that support three proposed assumptions. Next, I will employ a convergence approach that consists of bringing together evidence from different studies to help elaborate on the meaning of concepts included in the model and to make connections among them. This section also contains the model operationalization based on constructs and variables used in the manuscript chapters.

6.2.1 Proposed methodological approaches

Analytical approach. I propose three broad assumptions concerning the structures of the Canadian society (i.e., the labour market and post-secondary system, and the social structural factors) which play a role in the theoretical model.

Assumption 1: Knowledge workers experience differential return to university education, which is a reflection of the power structure which exists in the Canadian labour market. The type of human capital (e.g., degree characteristics, foreign capital vs. domestic capital) and social structural factors (e.g., age, gender, visible minority, immigrant status) affect labour market outcomes (e.g., employment, earnings). Some workers encounter multiple obstacles to economic integration because social and human capital markers that carry a negative value in the Canadian labour market define their identity.

Assumption 2: Although the Canadian post-secondary system provides opportunities for further education to a socially diverse adult population, social inequities in accessing education and training persist. Life course circumstances and access to resources influence not only participation in further education, but the choice of specific pathways by knowledge workers.

Assumption 3: The ‘long arm’ of the labour market influences knowledge workers to adopt job-related goals. This influence is even more evident for highly educated immigrants who are likely to engage in post-secondary education in Canada because the Canadian employers often do not recognize their foreign credentials or work experience. The structure of opportunities available in the post-secondary system may support knowledge workers in overcoming labour market obstacles by engaging in a lifelong learning (LLL) mode as ‘learners-workers’.

Convergence approach: I further engage Bourdieu’s theoretical apparatus in order to discuss two possible connections between bounded agency, habitus and forms of capital that occur at the intersection of labour market, credentialism and immigration. The second connection focuses specifically on the crucial role of habitus in immigrants’ integration in the host country.

Connection 1: Bounded agency is a socially situated agency that has the ability to explore the social context in order to make informed decisions. The evidence of bounded agency with respect to further education and the labour market should be searched in the dispositional

attributes and the educational behaviours of university graduates. Life course circumstances and available resources exert an influence on the educational choices of adult workers who may embrace further education strategies in order to enhance and/or transform their human capital.

Connection 2: The engagement of life course agency in the transformation of human capital is a more complex process for highly educated immigrants. First, this process involves other forms of capital (e.g., symbolic, social and cultural). Second, one can assume that habitus, as implicit knowledge and generative structure of practical action, plays a significant role in the formation of a socially situated bounded agency. This involves a restructuring of immigrant habitus through experiences and practices in the host country. Third, the formation and manifestation of bounded agency is a multifaceted process for immigrants who have to find their ways in a new social context by developing understandings, evaluating opportunities, adopting strategies toward integration and engaging rapidly in social action.

6.2.2 Model operationalization: Constructs and variables

The scope of this section is to operationalize the proposed *life course agency model* that accounts for the transformation of capital during life course transitions. The model (Figure 6.1) employs the concepts reviewed in Chapter 1 and the empirical data presented in the manuscript chapters.

Figure 6.1 Model operationalization

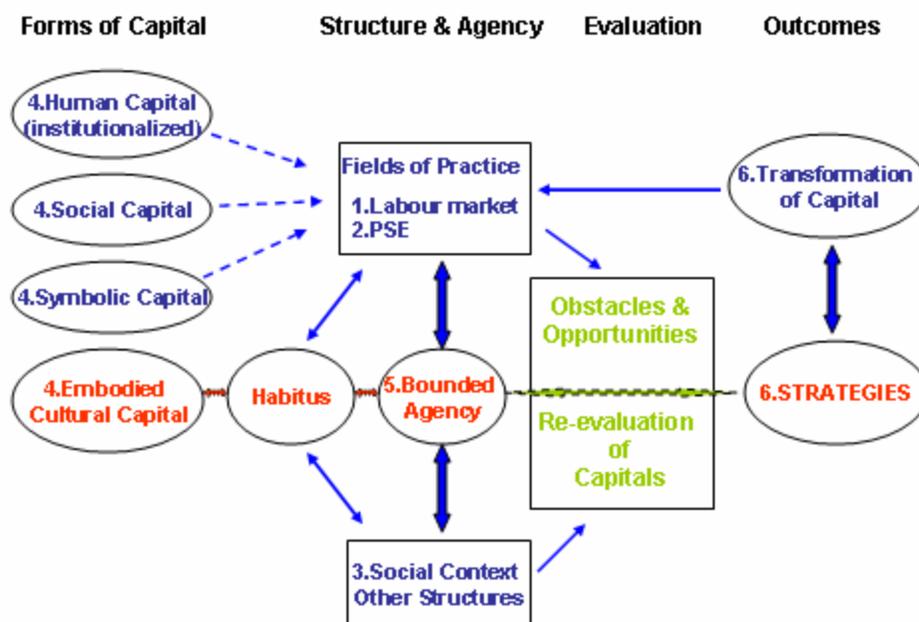


Figure 6.1 and Table 6.1 should be presented together. Each construct in Figure 6.1 is numbered to indicate its position in Table 6.1. I use the colour ‘red’ to point to the focal constructs in my analysis and the colour ‘blue’ for other constructs. Not all constructs are operationalized in the model either due to unavailable information in the manuscript chapters or lack of appropriate measures to substantiate the constructs in survey data (e.g., habitus). For instance, I indicate in ‘green’ the evaluation stage that is implied but not supported by data evidence. The table organizes the constructs proposed in the model and gives details on variables used in the empirical analyses for each manuscript chapter. Certainly, the empirical studies may not cover all possible analyses that could support the model because each study had its own purpose and/or was published before writing this dissertation. If some measures are useful to ensure the flow of the discussion, and if data were available and I (the researcher) had conducted the analyses, the corresponding information will be used in Chapter 6 and is also marked in Table 6.1.

Table 6.1: Variables and constructs – by research study					
Construct	Variables	Study 1^a (Ch 2)	Study 2^b (Ch 3)	Study 3^c (Ch 4)	Study 4^d (Ch 5)
1. Field of practice: Labour market structures	<u>Objective measures</u>				
	Employment status	√		√	√
	Employment/further education pathways		√		√
	Type of employment (FT/PT)		√	√	●
	Job permanency			√	
	Earnings/income	√	√	√	●
	Years of Canadian work experience	√			
	*Acceptance of foreign work experience				√
	<u>Subjective measures</u>				
	Satisfaction with job			√	
Satisfaction with income			√		
*Relation job-education			√		
2. Field of practice: Post-secondary education (PSE) structures	<u>Objective measures</u>				
	*Participation/choice in further education		√	√	√
	Part-time studies			√	
	Distance education studies			√	
	Financing PSE			√	
	Financial resources (income/person)				√
	Employer support of further education			√	
	<u>Subjective measures</u>				
	*Goals for initial PSE		√		
	*Reasons to take further education		√	√	●
*Type of education of interest				√	

Construct	Variables	Study 1 ^a (Ch 2)	Study 2 ^b (Ch 3)	Study 3 ^c (Ch 4)	Study 4 ^d (Ch 5)
3. Social context: Other structures	<u>Social structural factors</u>				
	Sex	√	√	√	√
	Age	√	√	√	√
	Visible minority	√			√
	Immigrant status	√		√	√
	<u>Immigrant-specific characteristics</u>				
	Immigration class				√
	Reasons to immigrate to Canada				√
	Proficiency in official languages	√			√
	Origin of education	√			√
	<u>Family situational factors</u>				
	Marriage			√	√
	Parenthood			√	√
4. Forms of capital	<u>Human capital</u>				
	Level of education	√	√	√	√
	Type of academic program	√	√		
	Field of study			√	√
	Academic ranking			√	
	<u>Social capital</u>				
	Social network (friends)				●
	<u>Embodied cultural capital</u>				
	Parental education			√	
	<u>Symbolic capital</u>				
	Origin of education	√			√
*Importance of Canadian education				√	
5. Bounded agency	*Goals for initial PSE		√		
	*Reasons to take further education		√	√	
	*Type of Canadian education of interest				√
	*Importance of Canadian education				√
	*Relation of job to education			√	
	*Acceptance of foreign work experience				√
	* PSE participation and choice		√	√	√
6. Outcomes	<u>Strategies</u>				
	Participation in further education		√	√	√
	Choice of PSE institution		√	√	√
	Choice of program/course			√	
	Choice of field of study (FOS)				√
	<u>Transformation/accumulation of capital</u>				
	Human capital			√	●

● Results obtained by the researcher, but not included in the empirical studies. * Variables used for more constructs.

^a Study 1: Exploring the relationship between educational credentials and the earnings of immigrants.

^b Study 2: The labour market value of liberal arts and applied education programs: Evidence from British Columbia.

^c Study 3: Further education pathways of Canadian university graduates.

^d Study 4: First four years in Canada: Post-secondary education pathways of highly educated immigrants.

A brief review of Table 6.1 shows that the notion of human capital is present in all studies. In addition, all studies contain information that supports various aspects of the Cross' Chain-of-Response (COR) typology (1981) which is the basis of participation and choice of educational pathways by adults (i.e., the target population of this dissertation) analyzed from a life course perspective (see detailed description in Chapters 4 and 5).

Further clarifications help the reader to understand Table 6.1. I first describe variables associated with social structures and practices that characterize the two social spaces of interest (fields of practice) in which individual agents operate (i.e., labour market and post-secondary education system). In both cases, I identify objective and subjective measures, the latter including perceptions about the practices in the field and/or the position occupied by the individual agent. For instance, objective measures that define the labour market participation include employment status and income. The subjective measures indicate how workers position themselves with respect to the field of practice and how they succeed (or do not) to transfer their human capital (i.e., education) in the labour market. As noticed in Table 6.1, the objective measures are best represented across the four studies. However, some measures, such as years of Canadian work experience or the acceptance of foreign work experience are characteristics to immigrants only.

Similarly, some objective measures that define the PSE field of practice include the financial means to support PSE and participation in part-time studies or distance education. Among the subjective measures, educational goals for initial PSE, reasons to continue education and a measure that describes the type of education of interest to newcomers (credential motivation) show how learners situate themselves with respect to this field of practice.

Not only institutions, but also the social entities that populate social spaces as well as the relationships among them, constitute social structures. I include social structural factors, immigrant-specific characteristics and other social structures relevant to the model under the 'social context' construct (Figure 6.1). Most social structural factors are identified in all empirical studies. Immigrant-specific characteristics include pre-migration indicators that are related to the immigration selection process, such as entry class and reasons to come to Canada. Others affect the post-migration stage as indicators of immigrant's ability to adjust to the host country (i.e., language proficiency and origin of education). Finally, I include two family

situational factors (i.e., marriage and parenthood) that describe life course circumstances that influence the ability of different social groups to establish their positions in the labour market or to pursue further education.

Table 6.1 also includes measures of forms of capitals. The most significant for this research is human capital as measured by educational credentials. For all studies, measures of level of education and field of study are available. In two of these studies, fields of study are aggregated into two types of programs: liberal arts and applied program education. Academic ranking is a measure of academic ability and potential career success. Available for only one study, parental education is a measure of embodied cultural capital and presumably social capital. The latter can be also measured through data on social networks (e.g., friends). More significant for the research on immigrants is the use of symbolic capital that is viewed from the perspective of immigrants as well as that of the host society. On one side, the origin of education can affect employers' attitudes toward immigrant workers, because employers may attach prestige to specific places. On the other hand, immigrants may engage in further studies in Canada because they perceive Canadian education as being important in order to gain entry into the labour force.

Finally, I identify among all previous variables those (i.e., marked with *) that can be used as evidence of *bounded agency* – a personal agency that makes informed decisions. For instance, a bounded agency would adjust to existing social structures after evaluating both structures (e.g., the relationship between job and education, acceptance of foreign work experience) and his or her own available resources (e.g., capital) and life circumstances (e.g., situational factors) by adopting specific PSE strategies – the outcomes of the life course agency model. Ideally, these strategies should lead to a transformation of one's human capital (e.g., obtaining an advanced degree or a Canadian credential), thereby changing some of the objective and subjective indicators of labour market success.

I reiterate that there are strengths and weaknesses in the way I choose to define bounded agency. The strength consists of an expected high representativeness of findings due to the use of survey data. The weakness comes from the little information available in the data that could be used to 'measure' agency and the inherent limitation to understanding process associated with the use of survey data rather than biographical data.

There are also weaknesses and strengths associated with the overall research design of the dissertation, which is built around four independent studies conducted at different times and using different datasets. I would like to draw attention to a major impediment in planning research on this topic: lack of appropriate data. To understand if immigrants and native-born Canadians with similar qualifications have comparable social actions and receive similar treatment with respect to labour market and post-secondary education would require a true comparative research design based on a common dataset with information on work and learning dimensions, as well as additional information on immigrants. To my knowledge, there is no database available to achieve this goal.¹ However, I expect that consistency of findings drawn for multiple databases should strengthen the argument and the conclusions of the dissertation.

I reiterate that the scope of my dissertation is to draw conclusions about the integration of recent immigrants to Canada: this requires that we portray first the social space in which immigrants compete for jobs, to better understand their social actions and the chances of realizing their full potential after coming to Canada. I question whether a comparative design would be flawless or would provide a better understanding of immigrants' struggle to improve their chances to success, because a comparative design may hide the fact that circumstances in which immigrants build up their lives in Canada are fundamentally different than those of Canadian-borns. The gathering of data on immigrants requires a specific framework of analysis and benchmarks.

Findings from the first three empirical studies (Chapters 2-4) allow the drawing of a portrait of the Canadian labour market and post-secondary systems in terms of practices, resources and social positions occupied by different social groups in the late 1990s and early 2000s. Research findings about highly educated immigrants who arrived in the early 2000s should be interpreted in this context. Hereafter, I will refer to each study using the Table 6.1 labels (Study 1 to 4).

6.3 Analysis of findings: Canadian structures

This is the analysis section that relates manuscript chapters to each other and to the field of adult and higher education. Findings will be also interpreted from the perspective of other fields of inquiry such as economics of education and immigrant integration. I propose to organize the analysis around the three assumptions outlined in Section 6.2.1 that emerged from the literature review presented in Chapter 1 and the conceptual model (Figure 6.1). These assumptions

essentially address issues related to the Canadian labour market and the post-secondary system as fields of practice. The analysis is mainly supported by study findings presented in Chapters 2 to 5. Other research findings based on the databases employed in this dissertation that were either published by the researcher or available through further analysis, will be included in the discussion if necessary to maintain the flow of the presentation.

6.3.1 Canadian labour market as field of practice

Assumption 1: Knowledge workers experience differential return to university education, which is a reflection of the power structure which exists in the Canadian labour market. The type of human capital (e.g., degree characteristics, foreign capital vs. domestic capital) and social structural factors (e.g., age, gender, visible minority, immigrant status) affect labour market outcomes (e.g., employment, earnings). Some workers encounter multiple obstacles to economic integration because social and human capital markers that carry a negative value in the Canadian labour market define their identity.

Access to good quality jobs differentiated among Canadian university graduates. Securing employment does not always mean holding a rewarding job. As suggested by Cruikshank (2001), the Canadian labour market is polarized into “good jobs” and “bad jobs”. The latter category consists in low-paying contingent jobs and part-time flexible work. In particular, I explore whether or not the level of university education and gender affect employment, job quality and earnings.

Study 3 contains a snapshot of labour market outcome indicators in 2005 for university graduates by level of education. Some results are summarized in Table 6.2. Except for earnings, data are presented for all respondents (whether or not they pursued further education in the first two years after university graduation). Data show that patterns of employment and job satisfaction are very similar for all holders of university degrees. Some differences in the quality of employment are related to income. Higher median incomes of respondents with graduate degrees may explain higher income satisfaction, but do not affect the level of job satisfaction. Holders of graduate degrees are also more likely to believe that their jobs and education are closely related. However, these respondents were less likely to have permanent jobs, compared to respondents with

bachelor's degrees (86% vs. 91%). This suggests that jobs requiring advanced education may be better paid but become less secure.

Table 6.2: Job characteristics by level of university education (2005)

		Bachelor's degree	Graduate degree
<u>Employment status</u>	Full-time	80	80
	Part-time	10	12
	Not employed	9	8
<u>Full-time employed</u>			
	Permanent job	91	86
	(Very) Satisfied with income ^a	79	84
	(Very) Satisfied with job ^a	93	94
	Job closely related to education	63	70
Median income (full-time employed, no further education)		\$48,000	\$62,000

^a Percentage of respondents who are satisfied or very satisfied with job/income.

Even if differences shown in Table 6.2 are not very pronounced, there is an indication that a person's level of education makes a difference in the labour market. Other research based on the NGS database that includes also a comparison with college graduates (Adamuti-Trache & Hawkey, 2008) gives even more convincing support for this statement: the median income is only \$35,000 for holder of college credentials and only 59% of the employed college graduates believe that their jobs are closely related to education.

Social structural factors have also an impact on job quality. For instance, research shows that compared to men, women are more likely to engage in involuntary part-time work (Jackson & Robinson, 2000) that offers less job security and lower earnings. Study 2 findings support such a gender trend in the type of employment secured by holders of bachelor degrees. For instance, five years after graduation, only 82% of women who were employed, compared to 92% of men, had full-time jobs. These values are comparable with data based on the 2001 Census (Frenette & Coulombe, 2007) showing that of the 25 to 29 year-old university graduates who were employed, 78% of females, compared to 85% of males, had full-time jobs. However, Study 2 also shows a significant change in full-time employment since the first survey time (one year after graduation) which is essentially due to the fact that more graduates had completed advanced degrees and were in a more stable employment situation five years later. Thus, the proportion of full-time employed grew from 64% to 82% for women and from 79% to 92% for men.

Persistent earning differences are visible among university graduates. As previously shown, earnings and level of education are closely related, which is a strong incentive for individuals to raise their level of education. However, earnings also serve to illustrate acute inequities fostered by the Canadian labour market, which demonstrate the persistence of a power structure that keeps some social groups in unprivileged positions. Research shows that human capital variables (e.g., level of education, field of study) and social structural factors (e.g., gender, age, visible minority and immigrant status) are determinants of individual earnings (Allen & Vaillancourt, 2004; Finnie, 2001; Frenette & Coulombe, 2007; Frenette & Morissette, 2003; Hansen, 2006; Statistics Canada, 2003a; Sweetman & McBride, 2004). I will discuss the effect of some of these factors based on the findings presented in the manuscript chapters.

Studies 1 and 2 address the issue of earning differences for multiple individual attributes and reveal the intersection of factors in creating large inequities among workers with comparable human capital. These analyses demonstrate that labour market structures divide individuals, who are apparently 'equal' in terms of education, into classes of 'winners' and 'losers' with respect to financial rewards.

Study 1 takes into account the effect of social structural factors and educational credentials on earnings. The regression model shows that, when controlling for all factors, the dominant explanatory variables of earnings are the three dimensions of educational credentials (i.e., level of university education, origin of education and type of academic program), gender and an indicator of language disadvantage (specifically, whether the language at work, English or French, is different from the language spoken in the home).

I will further present the earnings information based on the EDS data (Study 1), in a form that summarizes the effect of social structural factors (i.e., gender, visible minority and immigrant status) and educational credentials (i.e., level of university education, type of academic program and origin of education) in order to identify the most advantaged and disadvantaged groups of university graduates. This attempt takes on the idea of intersection of social markers in creating advantages and disadvantages in the labour market (Frideres, 2002), but extends this idea to incorporate markers of human capital. It also emphasizes that the relation between the power structure in higher education and the structure of occupational earnings maintains the gender

wage gap (Adamuti-Trache, 2006).

Using the three social structural factors and three dimensions of educational credentials, I create 48 groups defined by 8 social structural categories and 6 human capital indicators (notations are shown in detail in Table F1, Appendix F). To guide the discussion in this section, Table 6.3 contains a selection of these groups presented in descending order of average group earnings. The last 2 columns identify relevant human capital and social markers of the groups in each earnings range. Group notations contain in order: immigrant status (CB/IM), gender (F/M), visible minority status (VM/NVM), and one educational characteristic. To emphasize gender differences, I differentiate the notation of gender groups by colour (blue for male and red for female groups). A quick visual examination of Table 6.3 suggests that male groups are more likely to be placed higher on the earnings scale than female groups.

Table 6.3: Earnings scale by social and human capital markers ²

#	Mean Earnings (\$)	Social groups	Human capital markers	Social markers
1	80-90,000	IM_M_NVM_Grad; CB_M_VM_Grad; IM_M_NVM_CanEd	Graduate Canadian education	Immigrant Non-visible minority
2	70-80,000	CB_M_NVM_Grad; CB_M_NVM_Appl; IM_M_NVM_Appl;	Applied program Graduate	Canadian-born Non-visible minority
		Other 8 male groups		
3	60-70,000	Other 5 male groups		
4	50-60,000	CB_F_NVM_Grad; IM_F_NVM_Grad; CB_F_NVM_Appl; CB_F_NVM_ForeignEd; CB_F_VM_Grad;	Graduate Applied program Foreign education	Canadian-born Non-visible minority
		Other 2 male groups		
5	40-50,000	CB_M_VM_ForeignEd; IM_M_VM_ForeignEd; IM_M_VM_LibArts;	Foreign education Liberal arts program	Immigrant Visible minority
		Other 15 female groups		
6	30-40,000	CB_F_VM_ForeignEd; IM_F_VM_Underg; IM_F_VM_ForeignEd; IM_F_VM_LibArts	Undergraduate Foreign education Liberal arts program	Immigrant Visible minority

² Data not available in the manuscript chapters (additional analyses were conducted).

The first row of this table corresponds to the highest class of earnings (\$80-90,000). Males with

graduate or Canadian degrees are in this earnings range. The effect of program type (applied vs. liberal arts programs) appears in the next class of earnings (between \$70-80,000). Note that earnings discrepancy by immigrant status is not significant for men at the upper earnings scale. However, the only visible minority group are Canadian-born males with graduate education.

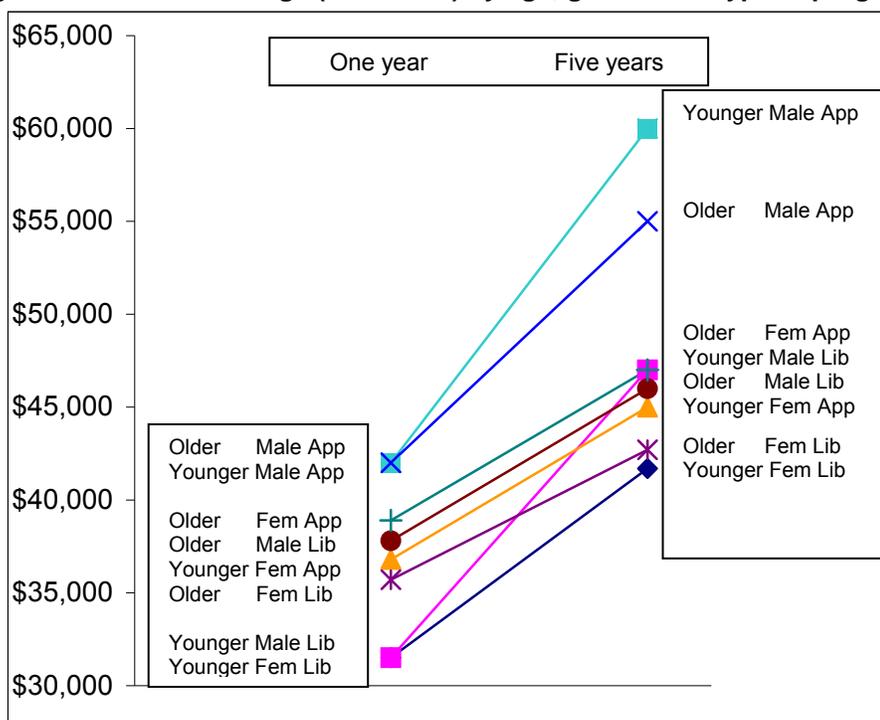
The first female group that appears on the earnings scale (between \$50-60,000) are mostly Canadian-born non-visible minority women. There is an effect of level of education, type of program and origin of education so that women obtain better earnings if they have graduate degrees in applied fields. It is important to identify the groups situated at the bottom of the earnings scale. Among men, these are most likely to be immigrants, visible minority, with liberal arts degrees, or education obtained outside Canada. The findings are similar for women, but in this case, they are penalized for having only undergraduate degrees. These results show that social markers differentiate earnings: gender and visible minority status effects are quite pronounced, and more significant than immigrant status. However, university graduates are also differentiated in the labour market by markers associated with their human capital.

A similar examination of the earnings scale can be performed with the TUPC data (Study 2) that contain age, as another demographic factor that impacts earnings. The earnings scale generated by the TUPC data shows how median earnings are affected by:

- a) social markers such as age (the younger group: 24 years old or younger; the older group: 25 years old or older, at graduation) and gender;
- b) human capital markers such as type of academic program (liberal arts vs. applied education);
- c) time since graduation (one year and five years after graduation).

Figure 6.2 indicates both the order of the 8 groups and the slope of earnings change. The points on the left indicate earnings 1 year (actually 18 months, see Study 2) after graduation and the points on the right correspond to earnings 5 years after graduation. There is an increase in earnings over time, but there is also an increase in earnings differentials. Some groups, such as younger males in both liberal arts and applied programs experience the steepest earnings increase. In addition, earnings differences by gender and type of academic program are not only maintained but are amplified over time.

Figure 6.2 Median earnings (2001 BC \$) by age, gender and type of program



Contrary to other research that points out that younger graduates are at disadvantage in the labour market because they compete for jobs with older cohorts who have both credentials and work experience (Maslove, Fischer, & O’Heron, 1998), Study 2 demonstrates that in 1997, one year after graduation, older graduates held some earnings advantage, but in 2001, five years after graduation, the situation was reversed for men in both applied and liberal arts programs. I acknowledge that this result is based on data on British Columbia graduates and thus may reflect a dynamic specific to the province. Although labour market structures and specific conditions may not be equivalent across Canada, earnings trends based on Census data show quite similar results: the increase in the university education premium between 1981 and 2001 was observed particularly among young men (age 25-35) (Morissette, Ostrovsky, & Picot, 2004).

The analysis of earnings differentials illustrates the extent to which social inequities are inherent to the segmented Canadian labour market and the fact that some social groups encounter more obstacles to success. It also shows that, based on their social characteristics and type of human capital, university graduates may evolve differently in the social space of the Canadian labour market in terms of securing better positions and accumulating greater economic capital. Recent adult immigrants occupy a special position in this social space because they have to deal

simultaneously with barriers typical to newcomers as well as many of the inequities produced by human capital and social differences inherent to the Canadian labour market.

Highly educated immigrants to Canada experience slow integration in the labour force.

Over the last quarter-century, research has persistently shown that the economic integration of new arrivals to Canada is becoming more problematic (Aydemir & Skuterud, 2004; Reitz, 2001), even though recent immigrants are highly educated and are accepted by Canadian immigration officials after a tough selection process. LSIC data show that even among the prime working age immigrants (aged 25 to 44), employment rates were only 50% and 63% within 6 months and 2 years of arrival (Statistics Canada, 2003b), and about 20% lower than the national rate over the same period of time. Lack of employment opportunities was reported by 22% of the economic immigrants as the most important reason to dislike Canada (Schellenberg & Maheux, 2007).

A comparison of labour market participation for recent immigrants and Canadian-educated graduates can be obtained from the analyses of LSIC (Study 4) and NGS (Study 3). Study 4 shows that only 59% of the highly educated immigrants were employed at both of the two latest LSIC interview times (2 years and 4 years after arrival), while Study 3 contains data on Canadian university graduates' employment over a similar period of time, suggesting employment rates in the range of 90%. However, the findings presented in the manuscript chapters do not contain explicit results on employment status. For each of the research samples, I offer a more detailed comparison of labour market participation by showing the employment status at different survey times (row %). Results, based on the analyses of same databases, are summarized in Table 6.4 (only the LSIC results were previously presented: see, e.g. Adamuti-Trache, 2008).

Table 6.4: Labour market participation by recent immigrants and Canadian-educated graduates ²

Employment status	Full-time	Part-time	Unemployed (job search)	Not in the workforce
<u>LSIC Immigrants arrived in 2000/01 (N=3000)</u>				
Wave 1: 2001/02 (6 months of arrival)	44	8	22	26
Wave 2: 2002/03 (2 years of arrival)	56	10	19	16
Wave 3: 2004/05 (4 years of arrival)	68	10	12	11
<u>NGS Canadian-educated graduates (N=9140)</u>				
Wave 1: 2002 (2 yrs of graduation)	76	11	7	6
Wave 2: 2005 (5 yrs of graduation)	80	11	4	5

² Data not available in the manuscript chapters (additional analyses were conducted).

Employment rates (full-time and part-time) among the 25 to 49 highly educated immigrants have increased from 52% to 65% and 78% in Wave 1, Wave 2 and Wave 3, respectively. Meanwhile, employment rates were 87% in 2002 and 91% in 2005 among Canadian-educated university graduates 25 to 64 years of age: note that part-time employment rates were practically steady and comparable for the two research samples. Also, around 2005, the proportion of unemployed persons looking for jobs was three times higher among immigrants than for Canadian-educated university graduates (i.e., 12% vs. 4%). Of concern is the 13% of adult immigrants who were never employed within 4 years after arrival in Canada. As noted in Table 5.1 (Study 4), only half of these immigrants were enrolled in PSE.

One explanation for the precarious employment situation of recent immigrants is the massive change in source country of immigration that started in the mid 1980s (Figure 1.1) which shows that more and more newcomers come from countries where neither English nor French are official languages (Picot, 2004). About 26% of recent immigrants interviewed for LSIC reported language barriers (Grondin, 2007). Grondin found that immigrants' ability to speak English was associated with the likelihood of obtaining a job more appropriate to their education, experience and capital. However, I suggest that the effect of language may be indirect and mediated by other correlated phenomena (e.g., participation and completion of Canadian credentials).

LSIC data contain rich information on self-reported language abilities. For instance, six months after arrival, only 69% of university graduates could speak English well or very well, or had English as their first language spoken at home, although higher percents of immigrants declared good writing (76%) and reading (84%) proficiencies in English.² Study 4 employs a measure of self-reported speaking ability in one of the official languages that shows that 74% of recent university-educated immigrants could speak, well or very well, either English (all provinces except Quebec) or one of the two official languages (Quebec). Employment and language ability are related (Anisef, Sweet, & Adamuti-Trache, 2009).³ A logistic regression model predicting employment status shows that those who reported higher proficiency in English at arrival were 41% more likely to be employed in Wave 3. They were, in addition, more likely to find jobs in occupations that require higher skill levels as measured by a scale of occupational prestige developed by Goyder and Frank (2007).

Recent immigrants: earnings and occupational attainment. One reason for the skewed immigrant earnings obtained in Study 1 is that the EDS sample includes both established and recent immigrants. The employment situation of established immigrants, especially those who arrived before the 1990s, becomes similar over time to that of Canadian born (Zietsma, 2007). On the contrary, immigrants who arrived during or after the 1990s have different labour market experiences by comparison to those who arrived in the previous decades, and it is not certain whether recent immigrants' earnings will ever converge (Frenette & Morissette, 2003).

An adverse factor is the source country of immigration, the composition of earlier cohorts of immigrants being different than more recent cohorts. The difficulty in obtaining acceptance, by employers, of their foreign education and work experience, as well language and cultural differences have a clear impact on immigrants' employment, especially in terms of finding 'good' jobs (Grondin, 2007; Human Resources and Social Development Canada, 2002; Statistics Canada, 2008). The assumption behind the Canadian immigration policy is that high levels of education can compensate for initial language and cultural barriers, and that skilled immigrants would be rapidly integrated into the labour market. This is not confirmed by statistics, which show that over recent decades, the worth of foreign credentials has declined significantly (Li, 2001; Picot, 2007; Reitz, 2001). This suggests that the top of the earnings scale in Table 6.3 is perhaps made of immigrants who arrived from 'traditional' (mainly Anglophone or Francophone) sender countries.

Meanwhile, recent immigrants with more diverse origins are struggling economically. For instance, the average incomes of all full-time employed university graduates in the LSIC sample were \$29,300 and \$36,100 after 2 and 4 years of arrival, respectively.² This clearly situates recent immigrants at the bottom of the earnings scale in the Canadian labour market. The irony is that one third of the LSIC sample are immigrants with graduate degrees, and more than 50% of them obtained degrees in applied fields of study (e.g., education, business, engineering, health), which usually lead to high incomes in the Canadian labour market.

Underemployment of workers with high education and skill levels in low-wage jobs is a major concern for recent immigrants (Reitz, 2007a). Galarneau and Morissette (2004) estimated that underemployment rates in 2001 were 27% and 42% for male and female immigrants who

recently arrived in Canada compared to 12% and 14% for male and female native-born Canadians. After arrival, many educated immigrants experience a clear drop in occupational attainment. Anisef, Sweet and Adamuti-Trache (2009)³ performed an analysis of occupations held by highly educated immigrants comparing their pre- and post-migration jobs. They used an occupational prestige scale recently proposed by Goyder and Frank (2007). The comparison shows a clear shift from professional to skilled and technical occupations after immigration to Canada. Findings illustrate that highly educated immigrants are underemployed. Data did not show a visible change in the occupational attainment within four years of arrival, although some improvement was noticeable for immigrants pursuing additional university education after arrival in Canada.

The analysis of **Assumption 1** has clearly demonstrated that human capital and social markers contribute to differential participation and attainment in the Canadian labour market. One difficulty in the assessment of labour market outcomes is due to a factor that is in essence very positive: many adult knowledge workers continue to be involved in further studies, which means that their top educational goals have not yet been met; or that other forces in operation in the labour market impact worker's decisions to remain engaged with education.

6.3.2 Canadian post-secondary education as field of practice

Assumption 2: Although the Canadian post-secondary system provides opportunities for further education to a socially diverse adult population, social inequities in accessing education and training persist. Life course circumstances and access to resources influence not only participation in further education, but the choice of specific pathways by knowledge workers.

Social structural factors, human capital, family situation impact the participation in further education by knowledge workers. The definition of further education that I use in the manuscript chapters is quite broad. It includes any formal or non-formal education that is pursued by adults who have already completed an initial stage of post-secondary studies that would normally allow them to fully engage in the labour market. In the case of university graduates holding at least a bachelor's degree, one can expect that by the time they have reached 25 years of age, most of them are ready to combine further learning (if they decide to continue)

with participation in the labour market and perhaps in other spheres of life (marriage, parenthood). Life course theorists (Elder, 1994; Heinz & Krüger, 2001) analyze these multiple dimensions of people's lives from a holistic perspective. Therefore, I believe that a broad definition of further education that includes participation in second (or third) degree programs, non-degree programs, courses or job training as part of a lifelong learning activity, is in agreement with a life course perspective.

The last three studies in my dissertation contain research insights on adult participation in further education. Since each study has a different purpose and specific research sample, even a simple inquiry on 'participation rates in further education' may not give comparable results: this is noticeable in the literature on continuing (further) education or adult education. For instance, an OECD report (2007) found that in 2002, a quarter of all Canadian workers between 25 and 64 years of age participated in non-formal job-related training. Data from the 2003 Adult Education and Training Survey (AETS) show that one third of all employed adults participated in 2002 in formal job-related training (Peters, 2004); in particular, 52% of university-educated workers were participants. Finnie (2001) demonstrated that up to 36% of the Canadian graduates of the Class of 1990 completed a new diploma by 1995. Allen and Vaillancourt (2004) showed that 41% of the bachelor's graduates of the Class of 2000 pursued further education by 2002. In a recent study about Canadian graduates who completed bachelor's degrees in 1995, Adamuti-Trache and Schuetze (2009) reported a 64% participation rate within 5 years of graduation. Although these data suggest that results depend on how researchers choose to define further education, there is evidence that at least half of the university-educated workers continue to engage in various forms of education within a short period after completing their first degree.

I will summarize results on participation rates based on two manuscript chapters (Study 3 and 4) to illustrate the effect of social structural factors, level of education, and family situation. Though Table 6.5 proposes a comparative analysis, the contrast should be done with caution due to differences between samples. The common denominator is that respondents in the two studies are adult university graduates who compete for jobs in the Canadian labour market in the early 2000s. Another commonality is that immigrants obtained their degrees prior to arrival (2000-01) and some of the Canadian graduates may also have obtained their highest level of education prior to the year 2000. Most Canadian graduates have already been employed, which is also true for

the majority of recent immigrants who have foreign work experience. However, while all recent immigrants are looking for jobs in the Canadian labour market for the first time, this is not the case of Canadian graduates, who have likely had some Canadian job experience.

Table 6.5: Participation rates in further education (PSE and non-formal education)

		Study 3 (NGS 2000)		Study 4 (LSIC)
		Within 2 years of graduation		Within 4 years of arrival
		PSE	Course training (only)	PSE
Gender	Male	24	25	48
	Female	25	22	44
Age	25-29	26	25	51
	30-34	22*	23*	49
	35-39			47
	40-49	26	19	36
	50-64	21	14	-
Visible minority	No	-	-	47
	Yes			46
Immigrant	No	24	23	-
	Yes	27	24	
Level of education	Bachelor's	25	23	46
	Graduate	22	23	47
Married	No	26	24	61
	Yes	24	23	45
Children	No	26	23	57
	Yes	22	23	43

* For the NGS sample, the values correspond to the 30 to 39-year age group.

Table 6.5 shows that there is a clear discrepancy between the PSE participation rates for Canadian graduates and for recent immigrants: almost half of the highly educated immigrants compared to about one quarter of the Canadian-educated adults engaged in PSE. It is true that participation is reported for a longer interval of time (4 years) in the case of immigrants, but one can comment that the circumstances in which the two groups make decisions are also different: the recent immigrants know less about the PSE system and have less access to financial support. Also, if the 2-year LSIC data were used, the overall PSE participation rate of 35% would still be higher than the 2-year rate of 24% for Canadian graduates, so it is fair to conclude that recent immigrants are more likely to engage in PSE. This might not be surprising, considering the lack of job opportunities and the poor quality of employment experienced by recent immigrants (as shown in Section 6.3.1). In general, the tendency of the immigrant population to engage in

further education is also visible when contrasting PSE rates for immigrants (27%) and Canadian-born (24%) who graduated from Canadian institutions (Study 3).

There is a significant participation in career-related course training by Canadian graduates (e.g., Table 6.5 shows percentages of respondents who enrolled only in career courses, 20 hours or longer, and not in PSE). This is not reported for recent immigrants in Study 4, although they also engage in non-formal education offered by professional organizations, employers, immigrant services and adult centres. For instance, Adamuti-Trache and Sweet (in press) found that within 2 years of arrival, 47% of the LSIC respondents -holders of university degrees- engaged in formal and non-formal education (excluding language training).

As a final comment, a quick inspection of data for the Canadian graduates does not show too much variability in the participation rates by various groups (e.g., PSE participation rates vary between 21% and 27%). Meanwhile, the variability among immigrant groups is significant. For example, participation rates are as low as 36% for the 40 to 49 year-olds and as high as 61% for immigrants who were not married. This suggests that social structural factors (e.g., gender and age) and situational factors (e.g., family circumstances) may significantly hinder immigrants' access to further education. Considering that, in addition, they experience barriers to integrate into the labour force, it is evident that many immigrants are under significant pressure.

Choice of further education pathways differentiated by social structures and human capital factors. In two of the manuscript chapters in this dissertation, a strong argument is proposed: in short, individuals attempt to maintain some control on their life course by not only choosing to, or not to, continue education, but through their specific choices regarding education and training. The choices made by Canadian graduates regarding further education pathways are analyzed in Study 3 while Study 4 presents the post-secondary education pathways pursued by recent immigrants. Table 6.6 shows, for each study, the choice of further education pathways by social structural factors, human capital variables and family situational factors. A comparison between the pathways in the two studies is not entirely possible: only participation in university programs (the last two columns for each study) has a common basis because the educational provider is clearly defined. Other comparisons should be made with some caution.⁴ The purpose of this section is not to contrast participation by immigrants and Canadians, but to illustrate the

range of further education (or PSE) pathways and their relation to other factors.

Table 6.6: Choice of further education and/or PSE pathways (row %)

		Study 3 ^a (NGS 2000)					Study 4 ^b (LSIC)			
		Within 2 years of graduation					Within 4 years of arrival			
		NP	TR	NUCE	UCE_SD	UCE_ND	NP	Recycling	Value Added	Start Anew
<u>Gender</u>	Male	52	25	5	14	5	52	29	9	10
	Female	54	22	5	12	8	56	29	6	8
<u>Age</u>	25-29	49	25	6	14	6	49	28	11	12
	30-34	55	23	5	11	6	51	29	9	11
	35-39*	*	*	*	*	*	53	32	6	8
	40-49	55	19	4	14	8	64	27	5	5
	50-64	64	14	3	10	8	-	-	-	-
<u>Level of education</u>										
	Bachelor	52	23	5	13	7	54	30	7	9
	Graduate	54	23	4	13	5	53	28	9	10
<u>Field of study (selected)</u>										
	Hum/Arts/SocialSc	47	20	5	19	8	60	26	3	11
	Business	52	24	7	9	8	59	28	10	4
	Physical/Life science	42	23	7	24	5	56	26	8	11
	Math/ComputerSc	57	24	5	10	5	56	23	13	10
	Engineering	53	31	3	11	2	45	35	8	11
	Health	55	26	4	9	5	50	33	Msk	Msk
<u>Married</u>	No	50	24	6	14	7	39	30	17	13
	Yes	54	23	5	13	6	55	29	7	9
<u>Children</u>	No	51	23	5	15	7	43	28	15	15
	Yes	55	23	5	11	6	57	29	6	8

* The values presented for Study 3 correspond to the age group 30-39.

^a **Study 3:** NP=Non-participation; TR=only career-related training courses; NUCE=Non-university continuing education program; UCE_SD=University continuing education – (second) degree program; UCE_ND=University continuing education – no degree program

^b **Study 4:** Recycling= Non-university continuing education; Value Added= University (same field of study); Start Anew=University (different field of study).

Data in Table 6.6 show that about half of each sample of university graduates chose not to pursue further education. However, among participants, there is significant variation in the choice of pathway with respect to the provider and scope of education and training. About 20% of each research sample continued university education, although each study focused on different aspects of further university education: second degree or non-degree programs (Study 3); and programs

in the same field of study or in a new one (Study 4). In addition, both studies reveal the relevance of further education provided by non-university institutions and/or other providers (career-related courses, Study 3).

I will briefly comment on some notable correlates of pathway choices. First, a large proportion of non-participants (64%) can be noted among recent immigrants 40 to 49 years of age, significantly greater than among Canadians of same age (55%). There is also a large discrepancy in non-participation rates between unmarried immigrants and unmarried Canadian graduates (39% vs. 50%), as well as between immigrants and Canadian graduates with no dependent children (43% vs. 51%). Apparently, more immigrants than Canadians who do not have family obligations are active in the realm of further education. Actually, immigrants without family obligations are the most active participants in university education (30%) either along a 'value added' or a 'start anew' path. This is the highest university participation rate across all categories, irrespective of study. The next highest participation rates correspond to Canadian graduates in the physical sciences (29%) and social sciences (27%).

The major field of study is associated with pathway choices for both research samples. For the Canadian-educated group, graduates of liberal arts programs (e.g., arts, humanities and social sciences; physical sciences) are more likely to engage in further (advanced) education by contrast to graduates of applied programs (e.g., business; engineering; health). This may be, in part, a result of less rewarding liberal arts-based labour market opportunities (Finnie, 2001; Giles, 2002; Heisz, 2003; Lin, Sweet, & Anisef, 2003); it may also be a result of the differences in setting and attaining educational and career goals, as well as in developing and growing interest for a field of study, as shown in Study 2 on British Columbia baccalaureate graduates. Table 6.6 confirms that Canadian graduates in physical sciences and social sciences are the most likely to engage in further university education. A different pattern is apparent for recent immigrants, for whom taking further university education in Canada is associated with being a graduate in mathematics and computers, science, engineering and health.

For Study 3, it is possible to interpret participation in both career-related course training (TR) and non-university programs (NUCE) as 'recycling' because these activities are at an educational level below a bachelor's degree (Walters, 2004).⁴ Table 6.6 shows that almost 30% of

respondents in both samples engage in ‘recycling’ pathways. The highest percentages for both samples are noted for graduates of engineering programs (i.e., 34% for Canadian graduates and 35% for immigrants). This brief comparison shows that each social group has different approaches to strategizing the use of available resources, evaluating opportunities and engaging in social action which they believe to be relevant to educational, career and personal growth.

Other factors that influence further PSE participation. Some features of the PSE practice facilitate participation by adult workers, while others do not. For instance, institutional factors such as offering part-time studies or instruction through non-traditional methods (e.g., distance education) have been proven to reduce the barriers to participation by adults (Cross, 1981). Study 3 data show a slightly higher participation in further PSE by those who had studied through distance education in the past (27%), compared to those who did not (24%) (Table E2). However, there are more significant differences in PSE participation rates due to differential access to financing.² Thus, only 21% of those who had to finance their PSE through personal earnings and savings, compared to 25% of those who could access various types of loans, and 29% of those who had access to non-repayable support from family, awards, employer and other sources decided to engage in PSE programs within 2 years of graduation. This suggests that the lack of financial resources may hinder participation in further PSE by university-educated Canadians.

Not only economic capital, but also the social and cultural capital accumulated within family impacts further PSE participation. Study 3 data show that 30% of respondents coming from families in which at least one parent had university education at a graduate level, 27% of those from families in which at least one parent had a bachelor’s degree and 23% of those coming from families in which no parent was university-educated participated in further PSE. Those coming from more educated backgrounds tend to utilize the post-secondary system in order to reproduce their family background (Bourdieu & Passeron, 1977). That educational aspirations built within the family contribute to shaping adult lifelong learning pathways was also illustrated by data from the International Adult Literacy Survey (Tuijnman & Boudard, 2001).

Recent highly educated immigrants in the LSIC sample identify the most important barriers to obtaining education and training in Canada. Table 6.7 (based on subsequent analysis of the LSIC

data²) shows the percentage of immigrants who identified specific barriers during each wave, by actual PSE participation. The number of immigrants who recognized the existence of barriers to education and training was much higher in Wave 1 (about one third of all respondents) compared to Waves 2/3 which suggests that over time, immigrants learn how to manoeuvre the system.

Table 6.7: Most important difficulty in getting education and training (column %)

	Wave 1 (N=990)		Wave 2 (N=530)		Wave 3 (N=580)	
	NonPart (N=450)	Part (N=540)	NonPart (N=240)	Part (N=300)	NonPart (N=300)	Part (N=270)
Language barriers	21	19	13	14	13	10
Obtaining information re education	26	23	11	18	9	11
Prior qualification not (yet) accepted	7	12	5	10	4	11
Not enough time	10	5	23	11	29	18
Not enough money	26	33	40	38	35	42
Other	9	7	7	10	11	7

Note: Totals correspond to those who declared having problems getting education and training during Waves 1 to 3. The immigrants who do not report barriers are either not interested in getting an education or do not face difficulties.

There is a clear shift in the barriers encountered by immigrants over time. Language and informational barriers decrease in importance, while time and financial constraints become more significant for both participants and non-participants. While ‘not enough time’ is an increasing issue for non-participants (increasing from 10% to 23% and 29% from one wave to the next), ‘not enough money’ becomes increasingly problematic for those who choose to engage in PSE (increasing from 33% to 38% and 42% from one wave to the next). A larger proportion of participants (12%) compared to non-participants (7%) reported, in Wave 1, problems with the recognition of their foreign qualifications – perhaps one reason to take education in Canada. By Wave 3, over 60% of participants and non-participants reported that either time or financial constraints posed barriers to their engaging in education or training.

The analysis of **Assumption 2** has revealed that structural social factors, family situation and some institutional factors contribute to the differential participation and choice of further education and training by university graduates. Barriers to further PSE participation are more evident for recent immigrants than for the educated Canadian respondents. For all workers, but particularly for immigrants, financial barriers appear to be crucial. This suggests that it is unlikely that adult knowledge workers have easy access to resources for continuing education

without remaining active in the workforce. Although some individuals occupy privileged positions with respect to either the labour market or further education, one can expect that the majority of adults remain active in both fields of practice.

6.3.3 Work and learning in the Canadian context

Assumption 3: The ‘long arm’ of the labour market influences knowledge workers to adopt job-related goals. This influence is even more evident for highly educated immigrants who are likely to engage in post-secondary education in Canada because the Canadian employers often do not recognize their foreign credentials or work experience. The structure of opportunities available in the post-secondary system may support knowledge workers in overcoming labour market obstacles by engaging in a lifelong learning (LLL) mode as ‘learners-workers’.

Learners have career and job-related motivations for further education. The manuscript chapters bring clear evidence that work-related goals dominate the motivation for taking further education by university graduates. This is not unexpected in a market-driven economy, where lifelong learning is the only way to cope with rapid changes in workplaces (King, 1999; Rubenson & Schuetze, 2000). For instance, about eighty percent of those interviewed in the 2003 Adult Literacy and Life Skill Survey (ALLSS) reported engaging in adult learning for job and career related motives (Rubenson, Desjardins, & Yoon, 2007) that include securing employment, obtaining competitive earnings, enhancing work conditions. Demands for vocational and workforce training programs to address skill shortage and changing skill requirements are often directed to community colleges and institutes (Dennison & Gallagher, 1986), and proprietary colleges (Adamuti-Trache & Sweet, 2008; Sweet and Gallagher, 1999). College programs have a more economic-utilitarian focus that may resonate with immigrants who struggle to find a rapid path toward economic integration.

Study 2 describes the initial educational goals of British Columbia baccalaureate graduates of the Class of 1995, goals that prompted them to engage in undergraduate studies. It shows that these goals differ by type of academic program and to some extent by age. While only 50% of those who completed liberal arts education programs were motivated to enrol in the program by job oriented goals, 70% of those who completed applied programs had job-related reasons. The older

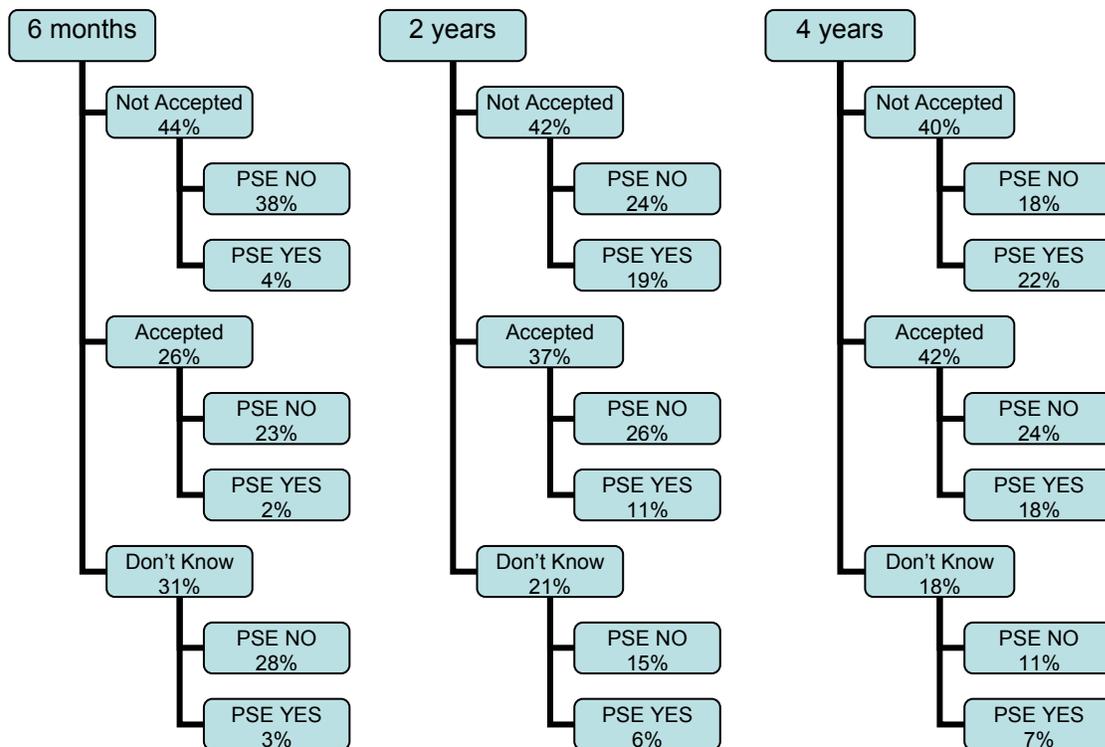
respondents established more utilitarian goals than the younger cohort. Next, over 60% of participants in further education within 5 years of graduation from the baccalaureate program indicated career/job/employment reasons. In addition, other 25% of graduates pursued advanced degrees, which indicates also a career development motivation.

Study 3 illustrates a similar pattern among the Canadian graduates in year 2000 since about 62% of those who participated in PSE programs reported a job-related motive (i.e., 46% were motivated to get a job or find a better job; 16% wanted to keep their current job, perform better on the job, or earn more money). Only 8% of participants indicated the need of prerequisites for further education (not surprising, since 40% of respondents already had advanced degrees). We should note that by extending participation to include the 23% of graduates who took career-related courses (obviously job-motivated), the estimated proportion of participants entering the realm of further education and training for career and job reasons would reach over eighty percent similar to the result obtained by Rubenson, Desjardins and Yoon (2007). This does not imply a narrow range of goals for further education. In fact, Canadian graduates are involved in more than one educational activity and for more than one motive, and at least one third of participants identified also general self-improvement reasons for pursuing education.

Although not included in Study 4, LSIC data contain information on immigrants' reasons to take further education in Canada. Similar to the Canadian-educated workers, immigrants have more than one reason to pursue education. Of those who participated in PSE within 4 years of arrival, 32% intend to obtain Canadian credentials, 23% take education and training required by employer or for obtaining recognition of their foreign credentials.² Many immigrants (64%) indicate general 'career-related' goals such as 'career advancement' or preparing for 'career change'. It is interesting to note that in the case of recent immigrants, general motives (e.g., personal development, interest, hobby) appear in very few cases, in contrast to Canadians who indicate in larger proportions such broad interests (e.g., some 14% in Study 2 and 33% in Study 3). Therefore, data on adult participation and credential motivation show that the more difficult the barriers to labour market integration of recent immigrants, the higher the PSE enrolment and the higher the proportion of participants who report work-related reasons for education.

Immigrants who experience difficulties in gaining recognition for their foreign work experience are more likely to engage in further education. There is a clear relationship between PSE participation and whether or not pre-migration work experience was accepted. Additional results, based on LSIC data² and presented in Figure 6.3, show the distribution of immigrants by the status of acceptance of foreign work experience and PSE participation at each survey time. Three categories describe ‘the acceptance of foreign work experience’: the immigrant tried to negotiate his or her foreign work experience and it was not accepted; the immigrant tried to negotiate his or her foreign work experience and it was accepted; the immigrant never tried or was not involved in the labour market. Each category is further split by PSE participation status (NO/YES). At each survey time, the sum of percentages is 100%.

Figure 6.3: Acceptance of foreign work experience by PSE participation over time ^a



^a Research sample: N=2820 (only those who worked before immigration)

First, about 40% of the LSIC respondents (of the 2820 immigrants who worked before arrival) were steadily unable to obtain recognition of their foreign work experience. Second, there is certainly an increase over time in the proportion of those whose foreign work experience was accepted, although this is true for only about one quarter of all immigrants who achieved this

without having to participate in PSE. The obvious increase in work experience acceptance is associated with an increased PSE participation. Finally, there is the group of immigrants who never tried to ‘negotiate’ their foreign work experience (the majority of them did not work in Canada). As shown in the chart, up to 7% engaged in PSE, while about 11% may have had little contact with either the labour market or the post-secondary system within 4 years of arrival.

Within a structure of labour market obstacles and PSE opportunities, university graduates engage in ‘learner-worker’ pathways. I previously talked about the notion of ‘learner-worker’ advanced by OECD (1996) and embraced by Canada and other knowledge societies. The notion supports that all workers, and especially the knowledge workers, are expected to anticipate workplace changes, and be prepared to combine participation in the labour force and continuing education over life course as to maximize their chances to succeed in a rapidly changing economy. Two of the studies in my dissertation (Study 2 and Study 4) contain evidence of the learner-worker identity and information on how this status changes over time. Table 6.8 summarizes these findings by organizing data in four employment-further education groups (I use ‘school’ to simplify the notation).

Table 6.8: Employment status and participation in further education (row %)

	Employed & School	Employed & No School	Not Employed & School	Not Employed & No School
<u>TUPC BC baccalaureate graduates (N=3990)</u>				
1997 (1 yr of graduation)	18	66	11	4
2001 (5 yrs of graduation)	23	64	6	6
<u>LSIC Immigrants arrived in 2000/01 (N=3000)</u>				
2001/02 (6 months of arrival)	4	48	7	41
2002/03 (2 years of arrival)	20	46	16	19
2004/05 (4 years of arrival)	35	43	11	11

No comparison is intended between the two sets of data presented in the table: there are differences between the two samples and the definition of further education participation in the two studies. First, the educational profiles of the two samples are different at the starting point (i.e., baccalaureate graduation and arrival in Canada, respectively). TUPC respondents are holders of bachelor’s degrees while about 33% of the LSIC respondents already have graduate degrees. Second, Study 2 (based on TUPC data) includes any education and training attended at

the time of each interview, while Study 4 (based on LSIC data²) refers to PSE participation presented cumulatively.

Table 6.8 illustrates that there is some variability in the work-learning profiles of both Canadians and recent immigrants. First, there is an increase over time in the proportion of graduates who engage in education while continuing to work. Second, although the dominant group consists of those employed and not continuing education (i.e., about two thirds of the BC graduates and almost half of recent highly educated immigrants), there is also a significantly large ‘learner-worker’ group.

The opportunity to engage in a ‘learner-worker’ path is particularly relevant to the integration of immigrants because their PSE participation is expected to have multiple effects. Besides obtaining Canadian credentials and/or upgrading skills to ease their integration in the workforce, immigrants engage, through PSE participation, in social interactions that build bridges with the host society. The ‘wider benefits of learning’ that accompany the post-secondary experience include building social capital through friendships and social networks that are formed in the classroom (Schuller, Bynner, & Feinstein, 2004). This is a long-term cumulative process and, apparently, the most-educated immigrants are more open to ‘bridging’ with the host society (Corcoran, 2003). LSIC data³ (Anisef, Sweet, & Adamuti-Trache, 2009) illustrate that it is more likely for the PSE participants, especially those enrolled in university education in Canada, to make friends outside their ethnic community and thereby to increase and diversify their social capital. An interesting question would be whether immigrants who study through distance education have the same opportunities to increase their social capital. The wider benefits of PSE participation are not sufficiently understood and recognized by researchers, institutions, the Canadian society and immigrants.

The analysis of **Assumption 3** has revealed that employment participation and continuing education can no longer be separated because significant proportions of knowledge workers are engaged in ‘learner-worker’ pathways. However, significantly higher proportions of recent immigrants engage in ‘learner-worker’ pathways and their PSE participation appears to be associated with unsuccessful negotiation of prior work experience in the Canadian labour market.

One difficulty in accounting for this dual work and learning participation (i.e., motives and sequence) is that the research was not designed from a cause-effect perspective, although some databases would allow the researcher to conduct a sequence analysis of education and employment events. As an alternative, the next section will employ the conceptual model to propose some qualitative explanations of how and why university graduates, particularly recent immigrants, make decisions for further studies.

6.4 Discussion and interpretation

6.4.1 Evidence of bounded agency for university graduates

Connection 1: Bounded agency is a socially situated agency that has the ability to explore the social context in order to make informed decisions. The evidence of bounded agency with respect to further education and the labour market should be searched in the dispositional attributes and the educational behaviours of university graduates. Life course circumstances and available resources exert an influence on the educational choices of adult workers who may embrace further education strategies in order to enhance and/or transform their human capital.

Bounded agency is essentially personal agency capable of making informed decisions that demonstrate understanding of and adjustment to the social context (Evans, 2007; Shanahan & Hood, 2000). Making decisions requires some knowledge of the structures and available resources in fields of practice and an awareness of the relationships that control these social spaces. Bounded agency is also manifested as life course agency because it implies that past habits and future opportunities are integrated with the present moment in order to take ‘strategic’ approaches to people’s experiences in changing social contexts.

To give meaning to this concept in relation to adults’ participation in the labour market and further education, I propose measures that reflect two aspects of a bounded agency (Table 6.1). First, bounded agency consists of expressed aspirations, perceptions, beliefs and dispositions that, generally, have a life course foundation and are therefore rooted in individual habitus, but are also shaped by the social context (e.g., the reality of education and work in modern societies) that the bounded agency strives to understand. These dispositions reflect the social experiences

of adults that could impact future educational decisions (Rubenson & Desjardins, 2009). I believe that this is a more reflexive aspect of bounded agency, which demonstrates that individuals are continually engaging in an evaluative process of their positions within a given social space. Second, there is the manifestation of a bounded agency which is related to practical and social actions: this indicates that individuals were involved in strategic planning and actively exerted their ability to make choices. I believe that this is an active aspect of bounded agency.

There are clear limitations to bringing direct evidence of these manifestations, using secondary analysis of survey data. The manuscript chapters contain information on educational goals, the intent to engage in education, credential motivation for further education and the perceptions of job-education relation or acceptance of foreign work experience that give some indication of **why** people might engage in further education. There are also the actual educational behaviours that describe **which** specific choices of PSE pathways are made. The underlying assumption is that, in order to make choices, the bounded agency has been engaged in an evaluation process, geared toward matching choices with personal attributes and life course circumstances. As noted in Chapter 1, a description of the entire decision-making process that also shows **how** people arrive to some decisions cannot be captured by survey data, only by biographical data. I acknowledge that this link is missing and that it is only implied in my analysis.

Following this outline, I will discuss some significant findings from the manuscript chapters that position bounded agency at the intersection of labour market and credentialism. Then, I will inquire whether there is any evidence that further education as a strategic approach adopted by bounded agency improves the returns on investment in education.

Bounded agency manifested as dispositional attributes. As proposed in Table 6.1, measurable aspects of a bounded agency should overlap with objective or subjective indicators of social practices because it is through practice that perceptions of structures can be developed and dispositions become adjusted to the social context. For instance, university graduates in Study 2 are asked about their goals for PSE and reasons for engaging in further education at a moment when they have completed their university education and could fully participate in the labour market. The majority of answers demonstrate a very practical view of reality, and, as previously emphasized, it reflects utilitarian approaches to higher education (i.e., job-related

goals). Among the British Columbia baccalaureate graduates (Study 2), those who graduated from applied programs demonstrate an even greater orientation toward goals that ensure a rapid integration into the workforce. The older graduates of applied programs are the most pragmatic in setting goals and mostly/completely attaining them (e.g., 72% had job oriented goals and 82% attained their goals). It is not surprising for these older workers to develop such focused dispositions, considering that current trends in workplaces seem to be more favourable to youth and less welcoming to those older workers who have not yet secured good jobs. For instance, data in Figure 6.2 suggest that it is not uncommon for the younger workers to surpass the elders in terms of earnings.

Recent immigrants also demonstrate bounded agency with respect to pursuing further education in Canada, as suggested in Study 4. One LSIC survey question answered by immigrants in Wave 1, six months after arrival, refers to their intentions to engage in education and training in Canada. Over two thirds of the highly educated immigrants acknowledge that they had such plans at arrival. However, when asked about their main reasons to immigrate, educational reasons were quite minor (9%) - which would be something to expect from an already educated group of adults who see themselves primarily as workers and providers for their families. The discrepancy between immigration reasons and actual educational intentions suggests that the interest in taking further education was not formulated prior to migration but was rather the result of immigrants' social and economic experiences after arrival. I would argue that many post-migration social actions of newcomers are to a large extent an expression of bounded agency, because newcomers *have* to adjust to the new social context by enriching their understanding of structures and by gradually establishing their positions in the social space of the labour market, the post-secondary system and society at large. As a result, the credential motivation spectrum differs for immigrants and Canadian graduates. In the case of highly educated immigrants (Study 4), 28% would take language training, 35% degree programs, 33% job-related training and only 4% would have other motivations (e.g., general interests) for further studies. In the case of Canadian graduates (Study 3), 62% of respondents were motivated in their participation as a way to get a job, find a better job, keep their current job, perform better on the job, or earn more money. Only 8% indicated the need of prerequisites for further studies and over 30% were motivated by self-improvement and/or other reasons.

Not only obtaining but utilizing the knowledge and skills acquired through PSE constitutes a goal by university graduates because skill utilization is part of a natural career growth process. I believe that when knowledge workers are capable of evaluating the efficiency of the human capital that they transfer from higher education to the Canadian labour market, or between foreign and local labour markets, they manifest bounded agency (i.e., understanding and evaluation) with respect to these fields of practice and the broader social context. I suggest that a measure of this evaluation process could be graduates' perception of a) job-education relation, and b) skill utilization in their jobs.

Sixty-seven percent of the Canadian graduates of the Class of 2000 who were employed full-time in 2005 (Study 3) reported a close relationship between current jobs and education, while 22% and 12% of them reported 'somewhat' and 'no relation', respectively. The discrepancy between job and education may often be caused by under-employment (jobs that are below the employee's level of education) or by occupational mismatch. Livingstone developed objective measures to compare formal education attainments and job entry requirements (1999, 2005). The author reported data from the Work and Lifelong Learning (WALL) research (2005) that show that in 2004, attainments and requirements were matched for 48% of respondents, while 34% were under-employed and 18% were under-qualified. Although the evaluation of the relationship between job and education may include more than matching a job with formal qualification, the result obtained in Study 3 (67% reporting a close relationship between job and education) is somewhat in agreement with Livingstone's attainments-requirements matching rate (48%). The lower matching rate in Livingstone's research might be caused by a sample that includes all levels of education, while the sample in Study 3 is based only on university graduates. I suggest that a quite accurate perception of job-education relation (Study 3) reflects graduates' realistic understanding of the practices and structures that govern Canadian workplaces.

Even more relevant for the discussion on bounded agency is the variability in answers about job-education relation given by respondents who chose different further education pathways. Not only does the 'close matching' rate drops from 70% for those with graduate degrees to 63% for holders of bachelor's degrees, but, when comparing those who enrolled in further degree and non-degree programs, rates are 64% and 41% for those with bachelor's degrees, and 66% and 76% for holders of graduate degrees. This shows that both employment situation and choice of

further education pathways are related to level of education: holders of graduate degrees perform better in the labour market so they can manifest broader interests for further education.

In the case of recent immigrants, underemployment and skill under-utilization are serious areas of concern. One reason is that foreign education credentials and foreign work experience are not entirely transferred in the Canadian labour market and accepted by employers (Grant & Nadin, 2007; Reitz, 2005). As a result, highly educated immigrants are often overqualified for their jobs. For instance, data from the Statistics Canada's Survey of Labour and Income Dynamics (Li, Gervais, & Duval, 2006) indicate that 52% of recent immigrants with a university degree, compared to 28% of their Canadian-born counterparts, worked in a job requiring only high school education. Analysis of LSIC data³ shows that 49% of recent immigrants who were employed 4 years after arrival believe that their qualification and skills were underused in current jobs (Anisef, Sweet, & Adamuti-Trache, 2009). There is, however, significant variability in the skill/qualification underused rates, depending on the actual choice that immigrant workers made with respect to engaging in PSE. The rate is 50% for non-participants, and 52%, 35% and 40% for immigrants engaged in 'recycling', 'value added' and 'start anew' pathways, respectively. These differences confirm that some recent highly educated immigrants are better situated than others with respect to both labour market and post-secondary education fields of practice.

Bounded agency manifested as educational behaviours. It was previously argued that the presence of a bounded agency should be explicitly searched for in the realm of social action, which represents, in this dissertation, participation in and choice of further education pathways. In fact, 'choice' is a more adequate term to describe the variability in life course pathways at particular turning points, which can be attributed to an active agency (Shanahan, 2000). Although the effect of social structural factors, institutional structures and personal resources (i.e., capital and habitus) is not ruled out, the role of a bounded agency is essential in turning obstacles into opportunities through understanding of the (changing) social context and planning of strategic action. Even Bourdieu, whose theory is too often called deterministic, stated that individual positions in the social space are not totally established because, like in a card game, the agent can adopt effective strategies to take advantage of the 'hand dealt' or capital (1977). Learning the rules of the game and the entire history of the field (Bourdieu, 1993) is somehow the essence of a bounded agency which is a "socially situated agency" (Evans, 2007).

I argue that choice of further education pathways by Canadian graduates and recent immigrants is a manifestation of bounded agency. Adult knowledge workers, who attempt to enhance or transform their human capital in order to make it more competitive in the labour market, adopt educational strategies and often manoeuvre simultaneously in the labour market and education fields of practice. The most important aspect of engaging in this process is one's ability 'to read the market of jobs' in order to understand the distribution of capital in social spaces. It is not surprising that knowledge workers as owners of human capital rely on this type of asset in order to secure better positions in the social space. They also demonstrate an understanding of a labour market marked by credentialism ideals. A significant majority of Canadian graduates (70%) and almost all recent immigrants who engaged in further education were motivated by career advancement and educational goals: this illustrates the strong association (between these two fields of practice) established in the minds of knowledge workers. This belief is transformed into practical action: almost half of the university graduates (i.e., with Canadian or foreign education) in Study 3 and Study 4 choose to pursue further education.

An analysis of choices of further education pathways presented in Table 6.6 (Section 6.3.2) reveals interesting patterns that support the notion of bounded agency and can be interpreted through a Bourdieusian lens. In particular, I will examine similarities and differences between the educational behaviours of the populations as described in Study 3 and Study 4. Apparently, immigrants mirror, with some delay, the educational behaviours of Canadian graduates: their overall participation rates within 4 years of arrival become comparable to those of Canadian graduates within 2 years of graduation. If non-formal education was included, overall participation rates by immigrants would be even higher (Adamuti-Trache & Sweet, in press). The similarity is mostly remarkable with respect to the rapidity of immigrants' response. Their actions confirm that the credentialism message is thriving in the Canadian society and that post-secondary institutions are ready to enrol most of the individuals who knock at their doors. Although immigrants' actions could be positively interpreted as a manifestation of bounded agency because they demonstrate a good 'reading' of the Canadian social context and ability to adjust to it, the efficacy of the strategy adopted (i.e., pursuing further education) is unknown. Only an improvement of labour market outcomes (e.g., occupational attainment, earnings) may confirm whether the 'further education card' was efficiently utilized in gaining capital that is recognized and rewarded in the Canadian society.

Table 6.6 (Section 6.3.2) also allows one to examine participation and choice of further education pathways at the intersection between origin of human capital (i.e., Canadian or foreign-made) and social structures or other human capital characteristics. Data do not reveal major differences in (non)participation rates by gender, age and level of education when contrasting Canadian graduates and immigrants. However, it is interesting to note the field of study effect on further education participation, and to compare the participation rates for engineering and social sciences graduates in the two studies. While 55% of the immigrant engineers pursue post-secondary education after arrival, only 47% of Canadian educated engineers continue education. On the contrary, 40% of immigrants and 53% of Canadian educated with degrees in humanities, arts and social science continue to take education/training. This suggests that immigrant engineers experience difficulties in having their foreign credentials recognized and, therefore, engage in further education; especially in colleges and institutes (i.e., 'recycling'). On the contrary, the lower participation rate by immigrants with pre-migration degrees in humanities and social sciences, and the tendency to pursue university education in a new field of study (the 'start anew' pathway) indicate that these immigrant professionals experience serious problems in finding adequate employment. Situational factors also produce differences in participation rates, especially for immigrants. The large participation rates of unmarried immigrants (61%) and of those without children (57%) are significantly higher than participation rates of immigrants with family obligations (about 45%). These differences are less pronounced for Canadian graduates who have participation rates in the range of 45-50%.

Among participants, there is also some similarity between Canadian graduates and immigrants in terms of choice of provider and scope of education and training. About 20% of each research sample continue further education at the university level: in second degree or non-degree programs (Study 3); and programs in the same field of study or in a new one (Study 4). This is not surprising for individuals who possess the academic skills required at university level. The most active group pursuing university education consists of 30% of immigrants without family obligations. Participation rates in further education provided by non-university institutions and/or other providers cannot be directly compared because Study 4 includes only formal education participation while Study 3 includes career-related course training offered by various providers. More Canadian graduates (about 23%) are involved in career-related courses which are in part supported by their employers, and only 5% engage in non-university programs. Immigrants tend

to be in large proportions (29%) engaged with the non-university system (i.e., community and career colleges, or institutes): this is certainly a route to faster and less costly skills upgrading, which would increase the chance to enter in the labour market.

Do further education strategies lead to an enhancement of human capital? The answer to this question is not straightforward. None of the analyses performed in this dissertation had the purpose or means to develop a causal model and to examine whether or not there are changes in the labour market outcomes following the completion of further education. Some of the datasets would perhaps allow for developing a sequential research design. However, obtaining reliable and meaningful results is somehow limited by the relatively short interval of time over which data are available: two or five years after graduation, and especially four years after arrival in a new country, may not be a sufficient length of time in which to measure the effects of further education pursued in the meantime.

One sensible conclusion regarding the progression through employment by university graduates is that a higher level of university education helps individuals to better achieve career goals and economic well-being. For instance, the analysis in Study 3 contains comparative data on job characteristics and income by university graduates who had either a bachelor's degree or a graduate degree as their highest level of education in 2005. On all indicators, except job permanency, respondents with graduate degrees perform better than those with bachelor's degrees. Higher levels of education lead, in general, to better labour market outcomes, as other research has confirmed (Allen & Vaillancourt, 2004; Hansen 2006). However, some of the most rewarding jobs that require advanced degrees have become less secure; this suggests that the scarcity of 'good jobs' (Cruikshank, 2001) is manifested not only at the bottom, but also at the top of the scale. This confirms that the image drawn by Jackson and Robinson (2000) of a "highly educated workforce chasing fewer and fewer jobs that actually demand high levels of qualifications" (p. 48) is accurate. Study 3 findings suggest that when highly educated Canadians find more rewarding jobs, these jobs are not likely to be permanent.

Variability at the top of the job scale is also illustrated by more pronounced differences among recipients of graduate degrees, when labour market outcomes are compared to further education pathways (Study 3). For instance, those who engaged in (advanced) degree university programs

were behind in terms of labour market outcomes: lowest proportion of permanent jobs (70%), low level of income satisfaction (76%) and one of the lowest median incomes (\$53,000). On the contrary, those who engaged in non-degree university programs had higher proportion of permanent jobs (89%), higher levels of income satisfaction (89%), and better incomes (\$60,000). Of concern are holders of graduate degrees who engaged in 'recycling' pathways. They appear to be 'trapped' in jobs that are permanent, but offer lower incomes and are less connected to education.

It is interesting to note that for both holders of bachelor's and graduate degrees, participants in job (career-related) training have the best employment status, the highest income and among the best perceptions on job fulfillment. One reason for their 'good' positions in the labour market could be the better coordination between the type of further education (career-related training) pursued and workplace needs. In addition, three quarters of these participants received employers' support, which suggests that employer and worker acted perhaps as partners in this continuing education project (Organisation for Economic Co-operation and Development, 1996).

Some critical reflections on Connection 1. This section brings together evidence to support the idea that university graduates develop quite accurate perceptions of the social spaces in which they strive to gain or strengthen positions. Dispositional attributes and educational behaviours are manifestations of a socially situated bounded agency that is actively exploring the two social spaces (i.e., labour market and post-secondary education) that are examined in this dissertation.

It is realistic to acknowledge that even the most accurate understanding of the social context does not necessarily lead to practical actions because agents still need resources with which to facilitate their interaction with the social space. As a result, individuals apply the understandings of the social context differentially when they attempt to engage in practical action. In addition, even the most strategic action does not lead with certainty to improvement in one's employment and quality of life. As a result, the fundamental question regarding the effectiveness of further education strategies in improving labour market outcomes by university graduates remains somewhat unanswered.

Although the action of making educational decisions by a bounded agency is in line with the

principle of lifelong learning (Organisation for Economic Co-operation and Development, 1996), the utilitarian reasons attached to continuing education suggest that many agents engage in this activity by mere necessity. For instance, the need to upgrade skills and enhance competencies may be related to temporary work and moving from one job to another rather than growing in an occupation and coherently enhancing human capital. The main concern is that, in a segmented labour market, some groups of workers, among which are the recent highly educated immigrants, are systemically cornered in such unfavourable positions: regardless of their level of education or involvement in further education, they continue to be trapped in 'bad' jobs (part-time, temporary, no benefits, no potential for career growth).

The data presented in this dissertation show that labour market in Canada operates as a powerful field of politics, because different social groups have different capacities to not only mobilize resources for engaging in action, but to take advantage of their actions. Systemically, members of less powerful groups (e.g., women, visible minority, immigrants) have fewer opportunities to either exert their bounded agency or to capitalize on their practical actions. Therefore, investments in education by these groups have little return and are, at least partially, wasted. Certainly, if we employ Bourdieu's apparatus at a macroeconomic level, there is perhaps no 'wastage' because "in accordance with a principle which is the equivalent of the principle of the conservation of energy, profits in one area are necessarily paid for by costs in another" (1997, p.54). However, from a sociological point of view, the waste of human capital, including individual aspirations and expectations, is a serious reason for concern because systemic patterns of 'wastage' maintain the social reproduction and have political consequences that require analysis which is beyond the scope of the present study.

There is also a concern that discrepancies between job and education that are experienced by many knowledge workers send a discouraging message regarding the usefulness of continuing education; when improvement of labour market outcomes never come up for some workers even if they engage in further education, such examples even raise questions about how accurate their 'reading of the social context,' that influenced their actions in the first place, has been. However, despite shortcomings in an efficient connection between the worlds of post-secondary education and labour market, individuals continue to believe that more education matters: this gives scope to their engagement in further education and lifelong learning. In particular, recent highly

educated immigrants expect that the acquisition of Canadian post-secondary education will place them in fair competition in the job market. The next section reveals the complexity of factors which make tougher the negotiation with the labour market for highly educated immigrants.

6.4.2 Life course agency model and the integration of immigrants

Connection 2: The engagement of life course agency in the transformation of human capital is a more complex process for highly educated immigrants. First, this process involves other forms of capital (e.g., symbolic, social and cultural). Second, one can assume that habitus, as implicit knowledge and generative structure of practical action, plays a significant role in the formation of a socially situated bounded agency. This involves a restructuring of immigrant habitus through experiences and practices in the host country. Third, the formation and manifestation of bounded agency is a multifaceted process for immigrants who have to find their ways in a new social context by developing understandings, evaluating opportunities, adopting strategies toward integration and engaging rapidly in social action.

This final discussion section focuses on aspects of participation in the two social spaces (i.e., the labour market and post-secondary education) that are specific to the highly educated immigrants who arrived in Canada in the early 2000s. These individuals are forced to engage in a strenuous and uneven competition for jobs because Canadian employers have reservations in recognizing their foreign capital; in particular, the value of their human capital. Nobody expects that transfer of human capital is easy between labour markets. Especially for knowledge workers, who need to be assessed on a package that includes institutionalized credentials as well as prior work experience and achievements, the relocation of human capital in the host country often results in significant loss. The value of foreign human capital is no longer assessed in the 'currency' of the country of origin, but needs to be reassessed within the Canadian social context and labour market.

I will first discuss issues related to the recognition of foreign human capital in Canada. I will also discuss how non-human capital notions (e.g., symbolic capital) can be employed in an analysis of the utilization and transformation of foreign human capital. As well, the notions of bounded agency and habitus need to be examined further from an immigrant perspective. I believe these

notions are particularly useful when explaining immigrants' action of pursuing Canadian post-secondary education which aims at reviving immigrant human capital in the new social context.

“The Canadian experience”. Study 4 shows that only 9% of the highly educated immigrants aged 25 to 49 come to Canada in order to advance their education. Another 11% mention economic reasons, which points to the immigrants' belief that Canada might offer employment conditions better than elsewhere. Yet another 19% of recent immigrants choose Canada for reasons such as the social and political climate. However, the majority of immigrants (61%) have plans related to starting a new family or improving the quality of life for their family, which certainly include a good economic situation. On the other hand, research shows that foreign human capital is less valued in the Canadian labour market than it was in the past – a reality that creates a disadvantage for immigrants who need good jobs in order to build (rapidly) their economic well-being and to become socially and culturally engaged in Canada. Economic integration is the main focus of adult immigrants who experienced barriers in having pre-migration work experience and credentials recognized by employers, either overtly or covertly (Ferrer & Riddell, 2008). In my dissertation, I do not address issues related to the formal recognition of foreign credentials. This process is regulated by professional organizations (e.g., in the medical or engineering fields) which established norms that immigrant and Canadian professionals alike must comply. I refer to the more hidden aspects of foreign human capital non-recognition in the labour market. This aspect is almost impossible to capture, even if the insistence of employers on hiring workers with “Canadian experience”, the difficulty in obtaining the first job after arrival and the length of time that it takes to improve the job quality indicate that highly educated immigrants enter the Canadian labour market at a much lower level than that to which they would otherwise be entitled by their (foreign) qualification and work experience. Reitz (2007b) noted that “the notorious demand for ‘Canadian experience’ by employers points to the irrelevance of occupational or professional experience gained abroad” (p.22).

Employers' reservation toward hiring recent immigrants or offering them jobs according to their qualification poses not only a significant barrier to immigrants' economic integration but also raises questions about the immigration policy. For those accepted to Canada under the skilled worker class, pre-migration work experience is a relevant aspect of a successful application (i.e.,

up to 21 points awarded for 4 years of foreign work experience) as is holding a higher level of education (i.e., up to 25 points awarded for a graduate degree). Since the largest proportions of immigrants to Canada are accepted under the skilled workers immigration class, most of these immigrants have both higher education and expertise in their fields. In Study 4, over 85% of the university graduates are admitted to Canada as skilled workers, and about 58% are principal applicants who passed the immigration scale-point selection criteria. In most immigrant families, the latter group carries the burden of economic integration in the labour force.

Trying to fix the “Canadian experience” problem, in 2008, the Canadian government implemented changes within the immigration policy to create a Canadian Experience Class immigration stream. This is a fast-track immigration route that makes the key criterion for vetting applicants either having Canadian work experience (i.e., temporary workers) or education pursued in Canada (i.e., international students). This initiative strengthens the point that Canadian employers do not easily recognize foreign education and foreign work experience. From the perspective of the majority of recent highly educated immigrants who arrived to Canada under the skilled workers class, it is not surprising that they believe that their foreign qualifications are insufficient to compete for positions in the Canadian workforce.

There is clear evidence that the work situation of immigrants is improved by the number of years lived in Canada because, in principle, this gives immigrants a chance to gain Canadian work experience by taking a variety of jobs. For instance, Study 1 findings show a positive effect on earnings due to the number of years of Canadian work experience. The available results do not allow for an explanation but possible reasons are: employers change their perceptions about the value of pre-migration foreign human capital based on immigrant job performance; employers gain trust in foreign human capital when the immigrant has some work experience in Canada; employers respond favourably to the symbolic aspect of the acquisition of Canadian human capital (PSE credentials). All immigrants acknowledge how difficult it is to get the first decent job in Canada that may act as a symbol in opening other employment avenues.

Symbolic capital and foreign education. I believe that symbolic capital is a useful notion in describing immigrants’ journeys in Canada because it reflects the way in which the process of acquaintance between the host society and newcomers actually happens. This process is not

based solely on objective experiences because a real exchange of information between the two parties would take time, so symbols play their role. Symbolic capital is a subjective notion because it ultimately consists of opinions, beliefs and interpretations about a group of people, an institution or an event which are built in ‘the eye of beholder’. Possession of symbolic capital confers power, because specific attributes (e.g., reputation, importance, recognition) are attached to an individual, a social group, an ethnic group or a nation. There are at least two aspects of symbolic capital of interest to the topic.

On one side, the way in which immigrants are perceived by employers, educational institutions, and in general by native-born Canadians is based on their country (or region) of origin. These perceptions are always the result of the information that Canadians have (or do not have) about other countries and geographical regions, about their economic and social systems. For instance, a university graduate from the United States might be preferred for a job to one from India, because Canadian employers have already hired Americans and they attach a symbol of recognition to most American degrees.

Research shows that there is a notable relationship between employment rates and the region where the highest level of post-secondary education was attained (Gilmore & Le Petit, 2008; Mata, 2008). Among recent university-educated immigrants, the highest employment rates were found for immigrants educated in the United States, Canada, and Europe by contrast to immigrants who obtained their credentials in Asia, Latin America, and Africa. Origin of education is also a significant determinant of earnings, as shown in Study 1. Table 6.3 (Section 6.3.1) shows that male immigrants with Canadian education succeed to be at the top of the earnings scale. The regression model in Study 1 shows a significant reduction of earnings for immigrants from Europe and especially from other countries, compared to those who obtained their university education in Canada, the United States or the United Kingdom. However, since the model also shows a reduction in earnings for those with some language disadvantage, the association between the region of highest education and earnings (or employment rates) illustrates that not only cultural differences but also language barriers may contribute to the differential treatment of immigrants by employers.

On the other hand, based on their experiences, newcomers form their own perceptions about the Canadian society and develop their own range of symbols. It does not take too long to realize that the Canadian system is somewhat bureaucratic and poses many formal barriers to ‘foreign credential recognition’ (e.g., engineering degrees). It is doubtful that gaining formal recognition of credentials will suddenly increase the employability of a foreign engineer. For instance, to integrate engineers from Eastern European countries that have quite good educational traditions, it may be more useful to expose them to practical work and new technologies rather than ask them to pass various licensing tests. In many situations, it might be the contextual practice in the field that divides foreign professionals from Canadian professionals, rather than the amount or type of knowledge. However, as a newcomer, after encountering a number of negative ‘credential recognition’ experiences that require time and money to obtain formal recognition of prior education, one may simply conclude that it is more effective to pursue a Canadian credential. More than anything, this credential becomes a symbol of what one needs to possess to be seriously considered for competition in the labour market.

Study 4 contains evidence that newcomers assign high importance to obtaining further education, taking job or language training in Canada as a condition for successful integration. Thus respondents scored an average of 3.7 on a scale of 1 to 4 (i.e., from not important at all to very important). This belief is translated into early PSE participation. For instance, those who started PSE in Wave 1 (6 months of arrival) scored 3.9, while those who started later or who were non-participants within 4 years of arrival scored 3.7 and 3.6, respectively.² To reiterate, many immigrants who appear in the PSE non-participant group were actually involved in non-formal education and training, and others took language training.

Obtaining a Canadian credential has the power of a symbol in newcomers’ eye. It also illustrates the high hopes that immigrants attach to participation in education and training, and their trust that the effort to align to the norms governing the Canadian labour market and society will soon be rewarded. Some immigrants may even believe that successful completion of Canadian post-secondary education will validate their former accomplishments.

Symbolic capital and foreign work experience. I will next use the notion of symbolic capital to examine issues related to the recognition of foreign work experience by Canadian employers.

Work experience is part of one's résumé and the traditional way to prove its value is to provide good references. Nobody doubts that university-educated immigrants should be able to produce such references, either from their academic supervisors or from previous workplaces. However, in the beginning, these references will come from institutions and individuals outside Canada, and Canadian employers may have reservations regarding the legitimacy of these referees. Such a response is clearly related to the symbolic capital that foreign referees possess in the 'eye' of Canadian employers: if foreign work experience and referees' origin are associated with countries about which employers know too little or of which they have a negative opinion, the human capital embodied in one's work experience outside Canada is practically invalidated.

The lack of symbolic capital attached to one's résumé makes things more difficult for the foreign knowledge worker who may try to compensate it by pursuing Canadian PSE, which is viewed as a source of both human and symbolic capital. It is interesting to note that immigrants who are the most actively engaged in the labour market (e.g., skilled worker principal applicants) are also the most avid users of PSE likely because their interactions with employers reveal problems with the recognition of pre-migration human capital (credentials and work experience).

There is a clear relationship between PSE participation and whether or not pre-migration work experience was accepted. As illustrated in Figure 6.3 and pointed out in the analysis (Section 6.3.3), about 40% of the recent immigrants who participated in the labour market in Canada were steadily unable to obtain recognition of their foreign work experience which means they were not able to find work in their field of expertise. This is worrying, because knowledge workers must practice in their occupations to remain competitive. If they did not have this opportunity within four years of arrival, it is unlikely that their pre-migration skills would be ever reactivated (Adamuti-Trache, 2009). On the other hand, this group of immigrants affected by non-recognition of pre-migration work experience consists of the most avid PSE participants at each survey time, which suggests that immigrants try to find other ways to maintain and/or increase their competitiveness.

Not only PSE participation, but also choice of PSE pathway is related to work experience recognition. The multinomial logistic regression model in Study 4 shows that those whose work experience was accepted are the most likely to chose a 'value added' pathway. These immigrants

engage in university education in their fields of study, perhaps at graduate level, and thus they possibly increase the chances of having their credentials and skills (acquired prior to migration) as well as work experience recognized (Chiswick & Miller, 1994; Friedberg, 2000).

Although this is beyond the scope of my research, it is legitimate to ask whether or not the acceptance of foreign work experience is associated with better labour market outcomes (e.g., earnings, occupational attainment). Using the same LSIC sample, Anisef, Sweet and Adamuti-Trache (2009)³ obtained a gain of about four points in the occupational prestige of the job held in Wave 3, for those highly educated immigrants who successfully negotiated their work experience compared to those who did not. However, on average, occupational prestige scores were still low, indicating that highly educated immigrants had access to technical and skilled occupations that usually require college education or apprenticeship training. This finding suggests that even if employers accepted their prior work experience, it would not mean that immigrants obtained jobs in their occupations and/or were rewarded according to their level of education and skills. However, the above-mentioned report also shows that highly educated immigrants who engaged in university education in Canada (i.e., ‘value added’ and ‘start anew’ pathways) were the only ones who, after four years in Canada, were employed in jobs that reached at least occupational prestige scores at the bottom of the professional occupations scale. For recent waves of highly educated immigrants to Canada, it may take many years—or it may never happen—to reach better positions in the Canadian labour market.

Two brief conclusions can be drawn from employing the notion of symbolic capital. First, there is an apparent malfunction in the institutional structures of the Canadian labour market, which obstruct the integration of foreign-trained workers (Reitz, 2007a) by failing to develop any substantive means to assess, utilize and reward the foreign work experience of newcomers. Lack of “Canadian experience” and difficulty in the provision of a résumé that follows a Canadian prototype are too often used as excuses to exclude highly educated immigrants from the competition for jobs for which they are obviously qualified.

Second, highly educated immigrants who engage in PSE appear to attach value to obtaining Canadian credentials. This value is partially related to the desire to accumulate human capital, but I would argue that it has, to a large extent, a symbolic capital component. PSE participation

also contributes to enriching immigrant social capital, which is usually precarious at arrival, in terms of the social networks which are instrumental within the Canadian society. However, as Lin (2001) points out, social networks and groups build reputation and prestige, notions that capture the essence of symbolic capital. Therefore, PSE participation gives individuals a chance to become affiliated with professional and social networks that enrich one's symbolic capital.

Restructuring immigrant habitus. The discussion presented in the previous paragraphs focused on assets that recent highly educated immigrants possess at arrival, barriers experienced in the labour market, and strategies adopted to enrich and/or transform various forms of capital which are useful to integration in Canada. An inventory of assets does not give encouraging results. Many highly educated immigrants find, after arrival, that they cannot really count on pre-migration assets that are assessed by Canadian employers or professional associations, because the assessment process, overtly or covertly, is not flexible enough to account for inherent differences that exist in the global market of qualifications and experiences. While there is no surprise that Canadian employers prefer to hire individuals who 'fit' immediately into the culture of workplaces, the question is what assets (if any) or attributes can endure the transfer between labour markets, cultures and societies without being depreciated and on which the migrant knowledge worker can rely in the host country.

From a Bourdieusian perspective, a lasting attribute that resides within the individual and constitutes a significant resource at turning points during one's life is habitus: this includes dispositions and patterns of thought that are acquired through experience and practice over time. In particular, the primary habitus is a result of embodied cultural capital, which is associated with one's socialization within family. It is proven to have long-term effects on the individual's ability to navigate the educational system, obtain high educational successes and possibly engage in lifelong learning over the life course. Primary habitus is essential in shaping long-lasting dispositions toward learning. Study 3, for example, confirms that parental education that is used to operationalize the embodied cultural capital is a significant determinant of participation in further education by Canadian graduates. LSIC does not contain information on family background for the adult immigrants, but one can hypothesize that many of those who obtained university education in their country of origin possess learning dispositions to support engagement in further education in the host country.

Primary habitus is “the basis for the subsequent formation of any other habitus” (Bourdieu & Passeron, 1977, p.42). Over life course, individuals are subjected to other experiences through socialization within school or community and these contribute to the enrichment of their habitus when viewed as implicit knowledge (e.g., informal skills, habits, cultural taste, linguistic abilities and norms). For immigrants, the country of origin carries a cultural capital dimension because the access to cultural resources in the host country is affected by the degree of conformity to its culture (Reitz, 2007b): adult immigrants were exposed in their countries of origin to norms and traditions that may later influence their capability to navigate the new social context. For instance, female immigrants who come from countries where women participate in the public domain are more likely to engage in employment and/or further education activities in Canada: the inverse is true of female immigrants from countries where women’s activity is restricted to the domestic domain. However, since habitus is the result of an enduring process of restructuring, though it is expected that the prior structures of women’s habitus will be at the basis of their Canadian experience, their habitus will be partially restructured through exposure to the new social context. This exposure allows newcomers to explore the “collective” habitus of the host society, habitus that produces social practices that are “objectively harmonized” (Bourdieu, 1990, p.58) in accordance with the present moment and geographic location.

Immigrant bounded agency. The settlement process places extraordinary pressure on adult immigrants who must concurrently address problems related to finding employment and adequate housing, sending children to school, learning how to use health care and much more. With all of these demands, it is remarkable how promptly many highly educated immigrants understand the reality of a competitive Canadian labour market, access PSE information, make educational choices and engage in further education. LSIC data show that most PSE enrolments occurred within 2 years of arrival. The rapidity of making educational decisions in a new social context is strong evidence of immigrant bounded agency.

Individual habitus, which is rooted in pre-migration experiences (including PSE participation in their countries of origin), but is also restructured through exposure to the Canadian social context, is a crucial element in mobilizing the bounded agency. In addition, knowledge workers possess a field-specific habitus, which is built through practice in a particular occupation: this is (likely) related to the major field of study corresponding to the highest degree that the knowledge

worker has obtained. Each field of practice has specific institutional structures, norms and habitus so individuals make educational choices that best serve their participation in the field. For instance, the highest PSE participation rates are observed for highly educated immigrants with degrees in engineering (55%) as opposed to those from humanities and social sciences (40%). There is a clear tendency for those in social sciences to start in a new field of university education ('start anew') and for those in engineering to take non-university education ('recycling'). The latter is not surprising since many immigrant engineers come from countries with a lower technological level. Therefore, the logical decision for these engineers is to enrol in vocational programs offered by Canadian technical institutes in order to acquire technical skills. Even for those who may not find work as engineers, such training is still useful. In addition, engineering is one of the most regulated occupations in Canada and to get recognition of foreign credentials may require that engineers take some practical courses offered by colleges and institutes. This example illustrates the manner in which PSE participation and choice that are evidence of a bounded agency, are influenced by concurrent factors, including an understanding of the Canadian social context, responsiveness to norms and regulations specific to fields of practice, as well as a field-specific habitus that generates particular practical actions. Ultimately, the immigrant individual agency demonstrates the ability to access past, current and future resources in dealing with institutional structures, and to select the best available opportunities that help the individual build a better life (Jasso, 2004).

As I demonstrated in this dissertation, PSE strategies (i.e., pursuing Canadian education, making specific choices of PSE pathways) are expected to enhance immigrants' capital (i.e., human, social and symbolic capital) and to lead to a better and more rewarding utilization of their qualifications in the Canadian labour market. Although such strategies are not specific to immigrants, data show that immigrants are slightly more involved in pursuing further education and engaging in 'learner-worker' pathways. Their PSE participation has a more utilitarian goal because significantly larger proportions of highly educated immigrants than highly educated Canadians report career-related motives for further studies. As previously illustrated, recent immigrants invest in their human capital but in a manner that goes beyond the typical human capital investment associated with the accumulation of knowledge, skills and aptitudes in knowledge economies (Alexander, 1997): the symbolic and social value of their newly acquired human capital is what also matters.

I would also suggest that the patterns of adult education participation observed for recent immigrants indicate a strong ‘capital investment’ goal rather than a ‘lifelong learning’ ideal that assumes a broader perspective on learning that goes outside the economic sphere (Organisation for Economic Co-operation and Development, 1996). The main barrier to lifelong learning as broad activity has a structural/contextual nature for recent immigrants. This is not surprising, considering that immigrants go through a life course transition that requires that all of their efforts be focused, initially, on obtaining good employment and reaching decent life standards. Their civic inclusion is also postponed. It would be desirable to have immigrants involved with the community at large, doing volunteer work or engaging in leadership that would contribute to strengthen ties and build social capital. It is important, however, to recognize that the more obstacles that immigrants face in the labour market, the more difficult it becomes for them to engage fully in other areas. The failure of immigrant integration into the labour market has not only a negative effect on the economic prosperity of immigrant families, but it also delays immigrants’ involvement in the community, their ability to fulfil parental obligations, and, overall, to bring their contribution to the social cohesion of the society.

Some critical reflections on Connection 2. This section brings together concepts and issues that occur at the intersection between labour market, credentialism and immigration. A major point is to emphasize the significant role of symbolic capital in understanding the issues of immigrants’ socio-economic integration as well as the reasons behind some forms of practical action. For most recent immigrants, the lack of symbolic capital is a significant barrier in making the most of their human capital. The question is whether lack of symbolic capital is attached to some objective values of foreign human capital, or whether the symbolic connection made by employers transcends the realm of immigrant individual capital and is attached to characteristics of newcomer’s country of origin (i.e., culture, politics). Understanding this issue is essential for both immigrants and host country in order to find the best paths toward integration.

From the immigrant’s perspective, the acquisition of Canadian PSE has the power of a symbol. To some extent, newcomers adopt the tacit belief about the value of a Canadian credential which is taken for granted in the Canadian society. Bourdieu speaks of symbolic values that “ induce investments and over-investments [and] which tend, through the ensuing competition and rarity, to reinforce the well-grounded illusion that the value of symbolic goods is inscribed in the nature

of things” (1977, p.183). One can argue that, by becoming easily attracted to the ‘illusion’ of the symbolic value attached to Canadian PSE, recent highly educated immigrants become accomplices in the devaluation of their own foreign human capital.

Adult immigrants’ educational behaviours certainly demonstrate an understanding of the Canadian social context and obstacles posed by institutional structures (e.g., labour market) as well as an awareness of available opportunities (e.g., post-secondary education). This is the essence of the formation and manifestation of immigrant bounded agency that results in the adoption, by almost half of the highly educated immigrants in my study, of specific PSE strategies. I believe that immigrants’ willingness to take action and to establish some control of their lives constitutes a powerful message that goes beyond any sociological examinations of power structure and social reproduction. The fact is that, confronted with the reality of the Canadian social context, recent highly educated immigrants develop their own practices and start to define a social space based on some hybrid forms of capital and habitus.

In an ideal world, the labour market, the post-secondary system and other educational providers should work in tandem to maintain and develop the human capital of adult workers. In Bourdieu’s terms, in modern knowledge economies, the two fields of practice should be more organically linked; learner-worker pathways should be adequately recognized; and further education should lead to enhanced productivity. This connection becomes crucial for adult immigrants who enter the race to build their lives in a new country, and who cannot afford to waste time and effort. Palpable results that translate into good employment and occupational attainment are desirable. It is in their interest and the interest of Canadian economy to make sure that skills and competencies acquired in Canada are not again depreciated by lack of opportunities to practice.

The connection between ideas presented in this section is that a socially situated bounded agency is rooted in habitus - a personal faculty that structures the implicit knowledge acquired through past experiences, is continually restructured through present social experiences, has the capability to envisage the future and, thus, is generative of practical action. In Bourdieu’s terms, the restructuring of habitus is part of the process of transformation and diversification that is associated with life course events. However, since habitus can be used as a regulatory device in

social reproduction, the issue of ‘restructuring’ habitus can be quite controversial in the case of immigrants. For instance, whose habitus is reproduced when Canadian employers avoid hiring immigrants or keep them in jobs with no management and leadership roles? I argued in this dissertation that it is important to recognize that the integration and inclusion of immigrants involves an understanding of how newcomers and the host society negotiate not only the conversion of capital but some form of convergence of immigrant multiple habituses. Perhaps the convergence between individual habitus, the collective habitus acquired in the ‘old’ country and the collective habitus to which newcomers are becoming acquainted in the host country would be a more desirable model to integrate without wasting newcomers’ experiences.

6.5 Significance of the dissertation and future research

This dissertation challenges the worth of a university degree in the Canadian labour market by revealing systemic patterns of differential return to education due to social structural factors (e.g., gender, age, visible minority and immigrant status) and available capital (e.g., human, cultural, social and symbolic capital). The capital perspective offers an appropriate framework to examine the process through which the resources that are available to university graduates are negotiated over life course. The immigrant case in particular is drawing attention to the critical problem of the devaluation of foreign human capital in the Canadian labour market, and the intertwining between human and non-human capitals in negotiating labour force participation during life course transitions. My analysis demonstrates that a socially situated bounded agency adjusted to the new social context is essential in strategizing the integration process, and recognizes the role of habitus in the formation of bounded agency.

6.5.1 Relevance to the higher education field of study

The research topic is primarily situated in the field of adult and higher education because of its focus on university-educated adults whose life course trajectories unfold in two social spaces: the labour market and further education and training. Moreover, the debate on the return to university education and social inequities in the labour market is relevant to economics of education and sociology. The topic of the integration of immigrants extends over many fields of research due to the complexity of the social and economic phenomena associated with migration, life course transitions and settlement. Though each manuscript chapter has contributed new

findings to the specific research topics, in this section I will address the significance of the dissertation as a whole, at three levels: the analytical level, the theoretical level and the methodological level.

Analytical level: One challenge in the writing of this dissertation is the complexity of the topic, especially as regards bringing together for analysis the structures of two social spaces: post-secondary education and the labour market. Each of these two social spaces corresponds to specific fields of practice; this is reflected in the specific themes that draw the interest of researchers and policy makers. For instance, researchers are concerned with employment and job satisfaction to assess labour market integration, and with situational and dispositional barriers to analyze adult education. This dissertation contributes to the creation of a framework in which to integrate research themes and concepts relevant to these two social spaces.

Although the relationship between these two fields of practice has been widely acknowledged in the literature, the notion of learner-worker identity gained new meanings in relation to the ideal of lifelong learning and the reality of non-traditional learners. One contribution of this dissertation is to highlight the idea that the connection of these two fields of practice may play a crucial role in understanding the integration of highly educated immigrants.

Another analytical contribution consists in identifying that not only social markers (e.g., gender, age, visible minority and immigrant status) but also human capital markers (e.g., Canadian vs. foreign human capital, type of academic programs and origin of university education) are important determinants of the labour market integration of knowledge workers.

Theoretical level: Two of the manuscript chapters contribute to the field of adult education by extending the Cross' participation model (1981), which is based on a dichotomy of participation in adult education, to a typology of choice of further education pathways. The proposed models recognize that adults make more individualized choices in order to accommodate a wide range of life course circumstances, and to take action in response to obstacles present in the labour market and/or take advantage of existing education and training opportunities. The selection of explanatory variables is also customized in the models to fit the life course circumstances of two specific populations: Canadian university-educated adults and highly educated immigrants.

The dissertation also contributes to the field of higher education by proposing a model of life course agency focused on human capital transformation that recognizes the role of other forms of capital (e.g., symbolic capital) as essential in the labour market integration of knowledge workers, especially of recent immigrants. The model integrates the notion of bounded agency as an essential element in adopting strategies aiming at the transformation of human capital, and it proposes that bounded agency is rooted in individual habitus. The argument that immigrant habitus as implicit knowledge is continuously restructured by past, present and future experiences to support the formation of a bounded agency and to act as a generative structure of practical action can be further explored to better understand immigrants' integration in the host society.

Methodological level: A major challenge in the writing of this dissertation was in developing methodological approaches to analyze the findings presented in the manuscript chapters. The individual papers performed systematic examinations of data based on design variables such as demographics factors (e.g., gender, age, visible minority and immigrant status) and human capital attributes (e.g., type of academic programs and origin of post-secondary education). The concluding chapter represents an attempt to conduct a descriptive analysis of the research findings presented in the four manuscript chapters and to identify convergences of ideas that occur at the intersection between labour market, credentialism and immigration.

6.5.2 Implications for higher education policy and practice

Research on university graduates, including recent immigrants, which is based on information collected through survey data that are representative of the population, is useful to federal and provincial governments, post-secondary institutions, other educational providers, employers, non-governmental organizations and researchers. The results of these surveys could play a major role in the planning and development of programs that facilitate the economic integration of university graduates, and in particular assist new cohorts of highly educated immigrants to settle in Canada. In this section, I will comment on how research findings presented in this dissertation inform the higher education policy and practice: first with reference to all university graduates and next to university-educated immigrants.

University graduates

- University graduates, who constitute the majority of Canadian knowledge workers, utilize PSE for various purposes (e.g., getting advanced education, acquiring new job skills, or general interest). However, motivation for further education remains primarily defined in relation to improving graduates' employment situation. There should be some concern that a too-narrow range of goals toward further studies and/or an exclusive focus on solving short-term job-driven necessities may obstruct workers' ability to explore their human potential. In addition, there should be better awareness -on the part of PSE institutions and employers- of the need to build effective partnerships toward enhancing the relationship between education and work for university graduates. In all disciplines, post-secondary institutions can become more active in offering internships and co-op programs that connect their graduates to the labour market. Meanwhile, employers could be more creative in developing recruitment programs that include active ways to connect with potential job applicants (e.g., mentoring, coaching).
- There should be more interest by employers in getting actively involved in planning and supporting the professional growth of knowledge worker employees. Typical employer's support of those continuing their studies (e.g., paid courses or transportation, paid time off or educational leave) is helpful: the employer is actively investing (gambling) in a potential avenue for profit by supporting employees' initiatives. However, consistency in planning human capital development requires a change in institutional practices in order to stimulate the retention of good workers, to ensure their professional growth within organizations and the utilization of their competencies. Since continuing education and training is an undeniable requirement in knowledge economies, the need for employer involvement in actively supporting lifelong learning should be forcefully advocated.
- If knowledge workers must remain engaged in further studies over life course in order to respond to workplace changes, more attention should be paid to research evidence that shows differences in participation by social structural factors. Some of these factors (e.g., gender) are already markers of the differential return to university education, so lower participation in further education and training by specific social groups may worsen

existing earning and occupational gaps. For instance, this may require the development of workplace policies that ensure involvement in lifelong learning and professional development by all workers with focus on groups that systemically have unfavourable economic and labour market situation.

Immigrants

- Research findings clearly show that further post-secondary education could be a gateway to social and economic integration for recent highly educated immigrants. This appears to be a strategy adopted by immigrants who believe that it is worth pursuing Canadian education. However, no comprehensive set of policies has been put forth by the federal or provincial governments or by post-secondary institutions that would create a framework to support immigrants' PSE participation and would acknowledge it as a valuable integration strategy. Considering the individual and societal costs associated with PSE, there should be some mechanism to guide such educational initiatives, aiming at accelerating the integration process, pursued by the adult immigrants.
- A major barrier to immigrant integration is language proficiency. This is a critical issue for knowledge workers, who are more likely to be involved in activities that require a good command of one of the Canada official languages. Although opportunities to learn or improve language skills are offered in Canada by schools, community colleges, adult centres and immigration services, most of them focus on basic and intermediate skills. Attempts to offer professional language training or advanced language preparation are sporadic; this should be an ongoing concern for institutions and organizations that are involved with immigrants. If post-secondary institutions were willing to support foreign knowledge workers, they could contribute by developing adequate language programs.
- There is clear evidence that highly educated immigrants who are seeking to obtain Canadian education and training approach regularly universities and other post-secondary institutions (e.g., community and career colleges, institutes). Community colleges and institutes seem to be more active in meeting the specific needs of immigrants. For instance, there are some examples of Bridging and Transition Programs (Association of Canadian Community Colleges, 2004) designed for foreign-educated professionals (e.g.,

nursing and other health professions, engineering and technology related fields such as instrumentation, and the trades). Although ‘bridging education’ is recognized to be a responsibility of post-secondary institutions, including universities, developing a formal mechanism to find the place of bridging programs within these institutions is still seen as a project (Austin, 2008). Post-secondary institutions have to assume a more active role in supporting the foreign-educated knowledge workers who immigrated to Canada.

- Educational policies should be explicit in addressing equity aspects for recent immigrants. For instance, research findings show that gender and age differences in PSE participation are more pronounced for recent adult immigrants than for Canadian-born adults. Since employment and earning situations are already more precarious for immigrant women and older immigrants, if education and training opportunities are also limited, it is likely that these groups of immigrants have very few chances to become integrated in the Canadian society.
- Lack of “Canadian experience” appears to be a serious barrier to immigrants’ entry into the Canadian labour market, and this obstacle continues to haunt immigrants for many years after arrival. As a result, highly educated immigrants are forced to accept jobs below their qualification and skills (i.e., are underemployed) and gradually become disqualified for their occupations. Who shares responsibility? Federal and provincial governments should evaluate the economic loss that results from immigrant skill underutilization. Post-secondary institutions that claim a role in knowledge production and human development should find ways to protect and develop human capital, regardless of origin. The public and private sectors should understand the long-term economic and social implications of underemployment of knowledge workers, particularly immigrants. Ultimately, immigrants are responsible for strategizing their actions to fulfill career goals.

6.5.3 Future research

This dissertation is one of many contributions to the field of adult and higher education. It has demonstrated that the immigration of knowledge workers to Canada is a complex process that

raises many challenges for newcomers who enter an already segmented labour market. Some study findings point to future directions of research that I will mention in this section.

- For policy and practice purposes, it is important to clearly identify the specific roles of post-secondary institutions, employers and workers in the process of accumulation and transformation of human capital. Considering the societal and individual spending in education and training, especially for university-educated workers, there is a need to conduct more systematic research to better understand the return on investment in continuing education and training. Efficiency of investment in education is particularly important for the highly educated immigrants who are under pressure to integrate rapidly into Canadian society in order to fulfill their roles at workplaces, within family and community. Therefore, their time and financial resources need to be spent wisely and efficiently.
- Research on knowledge workers and return to university education has to examine more thoroughly the occupational mismatch in the Canadian labour market. This is a critical issue for all workers but it is even more severe for highly educated immigrants: because a “transferability gap” is inevitable at migration (Hawthorne, 2007), chances are higher for immigrants to be displaced from their occupations. Such analyses need to be developed within specific occupations because each field/occupation has different norms and practices. In the case of immigrants, these issues need to be put in a global perspective: the “transferability gap” depends on economic and cultural similarities/differences between Canada and immigrant country of origin.
- One important aspect of the bounded agency is that individuals become conscious of the social context and they are capable of adjusting their dispositions and behaviours to social changes experienced during life course. The case of immigrants who experience a life course transition can illustrate the manner in which individuals respond to social change and why some manifest a higher level of bounded agency. Future research should examine the social process through which newcomers accumulate information about the Canadian social context through their interaction with the education system, labour market, community, culture and society. Since ‘tacit’ knowledge, or what one needs to

know to adapt to a new environment (Sternberg, 1998) is not explicitly taught but learned through experience, the question is in what ways can the host society help immigrants to acquire tacit knowledge: in this case, that of Canadian culture. Language proficiency is certainly a factor that mediates the acquisition of tacit knowledge although many argue that overall communication skills matter and can compensate for imperfect language ability, as well as other forms of cultural awareness.

- More research is needed to analyze the socio-economic integration of knowledge workers within a theoretical framework of intersectionality to examine the ways in which socially and culturally constructed factors interact and manifest their effects on multiple levels. My research has identified some social markers that carry negative values in the Canadian labour market, but a systematic research may give a better understanding of the relative contribution of such factors. For instance, gender continues to be a significant marker of social inequity but this situation appears to be amplified for immigrants. Since human capital is a major characteristic of knowledge workers, it is important to better understand how labour market outcomes are influenced by the intersection of human capital and social attributes.
- As mentioned in the methodology section, a real contribution to understanding life course pathways, particularly during life course transitions such as immigration, is to conduct both survey and biographical research. This dissertation put forward several hypotheses about the role of bounded agency and habitus when individuals experience change in their lives that can be thoroughly examined only through narratives. This would be an interesting follow-up research that can be informed by the findings of this dissertation.

6.6 Conclusion and final remarks

In this last section, I reflect back on the research process and what I have learned during this study. Many research stages pose challenges, but the most difficult one is to assemble the findings in a coherent and disciplined flow of thoughts that support the research theme. While writing this dissertation, I was often tempted to explore new directions of inquiry which emerged during the analysis, but which were not part of the planned research objectives. This curiosity is perhaps inevitable when seeking theoretical guidance in Bourdieu's work, which portrays the

complexity of the social world and, moreover, offers tools with which to examine relationships within it. Therefore, my challenge has been to keep the analysis as focused as possible without restraining further inquiry.

What have been the main milestones during developing this study? This dissertation raises questions about obstacles embedded in the Canadian labour market structures, obstacles that materialize in differential returns to university education among knowledge workers and the fact that women, older workers, visible minorities and newcomers to Canada are often situated at the bottom of the earnings spectrum. My analysis is particularly focused on the journeys into the labour market which were experienced by highly educated immigrants who arrived in Canada in the early 2000s, at a time when the economic and social conditions were less welcoming to newcomers. Securing good employment and attaining career goals is becoming problematic for all Canadian knowledge workers, but the current reality is disturbing for highly educated immigrants who face an interruption or slowing of their careers regardless of their pre-migration accomplishments. As I have shown in my dissertation, any analysis about educational and career pathways has to deal with the complex issue of accumulation and transformation of human capital. There is no doubt that many recent immigrants possess human capital, but not all Canadian employers are willing or have the capacity to examine the nature and worth of foreign human capital. There is evidence that recent immigrants maintain their career ambitions after arrival and are not just looking for any employment, but they often have to accept jobs below their qualification in order to settle and support their families. There are signs that the value of a university degree is declining in the Canadian labour market, but there is also evidence that the decline is more visible when education is obtained in countries without an Anglophone or Francophone tradition. It is not surprising that this situation makes immigrants believe that their human capital has little chance to be recognized and/or equitably rewarded in Canada.

Some follow-up questions come up: If foreign human capital is not recognized (overtly or covertly) in Canada, what other assets can immigrants employ in their competition for Canadian jobs? What is the exchange value of these assets? As illustrated in this dissertation, Bourdieu's theory of capital offers a broad framework to explain why various forms of capital possessed by immigrants have little exchange value in Canadian social spaces. For instance, it points to a possible negative marker that symbolic capital ascribes to human capital. As well, immigrants'

precarious social capital has limited value in the Canadian labour market. By elimination, we find that highly educated immigrants, who were otherwise capital-rich individuals in their countries of origin, become capital-poor after arrival in Canada because the exchange value of their capital is insignificant. Engaging Bourdieu's theory of capital provides a powerful framework and clear terminology to account for capital assets and the whole idea of capital conversion, but it is not sufficient to entirely understand the immigrant journeys and to explain the variability observed along different life course trajectories.

Therefore, a further question would be: Why are some immigrants more successful than others in finding pathways toward integration in Canada? One's first impulse is to invoke the role of agency and to elaborate on Bourdieu's theory of practice (action) in a field, since practical action allows individuals to compete for positions. This creates a problem with newcomers who are likely to start from clear outsider positions — they are either not formally allowed to practice in these fields (e.g., medicine, engineering, teaching) or do not possess the assets that are recognized in those fields. Although it is expected that any new agent engaging in practical action goes through some difficulties, recent immigrants clearly cumulate many shortcomings which make the competition unequal. What is surely missing from newcomers' portfolio is the implicit (tacit) knowledge about the Canadian social context and culture. Possessing this type of knowledge is not just owning an asset, it is more like being engaged in a process during which agency interacts with the social structures and becomes 'bounded'. I adopted the notion of *bounded agency* (see, e.g., Shanahan & Hood, 2000) that is built on the assumption that a preliminary process of understanding and/or adjustment to a social context is inherent when change occurs in one's life. 'A socially situated bounded agency' essentially stipulates that the individual is attentive, capable of assimilating and being responsive to the social context prior to becoming engaged in practical action by adopting specific strategies. In particular, my analysis shows that both highly educated newcomers and Canadian-educated workers understand the social context and find a niche to expand and diversify their assets by taking advantage of existing opportunities in the Canadian post-secondary system. Pursuing Canadian credentials should, in principle, affect immigrants' human capital (i.e., additional qualification, skills), social capital (i.e., network) and symbolic capital (i.e., prestige, recognition). Even more, participation may help their understanding of norms and culture that, essentially, means acquiring more tacit knowledge. Bounded agency is an active concept that I operationalize as dispositions and

perceptions openly declared and as educational behaviours. Individuals, particularly immigrants, differentially mobilize their bounded agency to establish and/or negotiate their places in social spaces and fields of practice.

I want to reinforce that my particular focus on further education as a way to respond to changing conditions in the labour market and society should not be interpreted as a disregard for other ways to respond to social changes (e.g., entrepreneurial action). However, within a structure of opportunities and constraints, people make decisions that are rooted in personal life history, current life circumstances and individual dispositions (Heinz, 1991). I maintain that one way or the other, lifelong learning that includes formal, non-formal and informal education is expected to be a part of knowledge workers' pathways because these individuals have both the tools and the need to be active learners. It is important to point out that university graduates in my study chose this 'further education path' in significant numbers. Highly educated immigrants are even more engaged in this educational process because there is clear evidence that a large number of recent immigrants promptly assume the role of active investors in continuing their formal education in Canada.

The story could very well end at this point, which I believe would not offer a full understanding of newcomers' capabilities to integrate in the host country. The notion of bounded agency may be sufficient to explain practical action when agency has some history of engagement with a particular social context, so adjustment to the social context and response to social change are more intrinsically part of life course. Conversely, immigrants experience a life course disruption and a sudden contact with a new social context, and I believe that the idea of adjustment may be too often associated with an abandonment of everything they built and acquired over time. It is possible that immigrant personal agency becomes less bounded to the country of origin and gradually becomes more bounded to the Canadian context. I personally refuse to believe, however—and I wish to be right—that newcomers to Canada abandon their pre-migration life course experiences at the immigration gates. This is the reason that I again engage Bourdieu and his powerful notion of habitus to account for the hidden resources that immigrants have at their disposal during settlement in Canada.

What they have at hand is the same type of knowledge that they are missing by not having lived

in Canada: it is the implicit knowledge built up in their countries of origin or, often, through a global perspective if they have lived in various places. They all have past experiences that define who they are as individuals, and they have future plans that have perhaps contributed to their decision to immigrate to Canada. As I discussed in my dissertation, habitus as implicit knowledge is a 'structuring structure' that has generative functions of the practical action exerted by agency, and its role in mobilizing the agency cannot be discounted. Like the native-born Canadians, immigrants have also acquired habitus in their home countries through family socialization, or interaction with school and community, through practice in fields like post-secondary education and labour market, through their exposure to languages, traditions and cultures. In addition, going through the immigration process is in itself an incredible learning experience. After arrival to Canada, newcomers gradually acquire the implicit knowledge of the host society by restructuring their own habitus. Immigrants are certainly enriched by the Canadian experience, but they also maintain a broad perspective on global issues that could enhance their practical and social actions in Canada if not obstructed by structural barriers. I hope that my dissertation will contribute to approaching the issue of newcomers' integration in the Canadian labour market and society from a perspective that acknowledges that newcomers have resources beyond the traditional capital-like forms of assets to help them succeed sometime and somehow in Canada.

My dissertation expresses a particular concern about the waste and devaluation of foreign human potential that affects hundreds of thousands of recent highly educated immigrants. This situation is primarily troubling because it may have a negative long-term impact on Canada's economic growth, which relies increasingly on immigrants. But this situation is also of concern because, to some extent, skilled worker immigrants who come to Canada on the basis of their abilities are misled; their countries of origin have lost valuable human resources; and unequal treatment of workers departs from the social justice goals promoted by the Canadian society. Canada has to recognize that being the second-biggest net receiver of immigrants and attracting highly educated immigrants is not sustainable without finding ways to make the foreign human capital functional in the labour market.

I would like to make a final comment about the title of my dissertation, which suggests that knowledge workers, in particular immigrants, should respond to "obstacles" by taking advantage

of “opportunities” that are all mixed together in the social structures of our society. My dissertation makes the point that the way that individuals respond to challenge and engage in practical action is a manifestation of their active agency. What about extending this meaning to the way that Canada responds to the challenge of 21st century immigration? What about an open recognition that immigrants, as global workers and messengers of other cultures, are not a burden that creates ‘obstacles’ for the society, but a resource that creates ‘opportunities’ for learning in workplaces, educational institutions or communities. What immigrants bring with them are not only individual resources that help *them* overcome the many obstacles raised by the Canadian social structures in their journey to integration. Their individual resources may become useful resources within our society, and represent a wealth that gives us an opportunity to better integrate Canada in the world’s economy. This is simply the gift that newcomers bring at arrival to their new home country. It is up to the host country to welcome and nurture their offering.

Notes

¹ A comparative analysis could be performed with the EDS data but would not cover all aspects of the proposed research theme. As shown in Study 1/Chapter 2, the number of years in Canada matters in terms of immigrants’ integration: this makes the immigrant population quite heterogeneous in terms of economic outcomes. Also, the source country composition changed dramatically over the last decades so the ‘recent immigrant’ subpopulation has quite distinct characteristics. A selection of recent immigrants from the EDS population would drastically reduce the immigrant sample size which would make any analysis problematic.

² Data not available in the manuscript chapters, but additional analyses were conducted.

³ Findings presented in the reference: Anisef, P., Sweet, R., & Adamuti-Trache, M. (2009). *Impact of Canadian PSE on recent immigrants’ labour market outcomes*, are based on same research sample employed in Chapter 5 (Study 4) of this dissertation.

⁴ The ‘recycling’ category in Study 3 has a broader meaning than in Study 4, because any provider, not only colleges and institutes, is included. If only post-secondary institutions were considered, the training group (TR) in Study 3 would be split between non-participants (NP) and non-university participants (NUCE). Either the NP pathway rate in Study 3 is largely underestimated with respect to PSE participation or the NP pathway rate in Study 4 is somehow overestimated because it includes non-formal education offered by employers, professional organizations, adult centres, immigration services, etc.

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Appendices

Appendix A – Database characteristics

The manuscript chapters employ three national datasets based on surveys administered by Statistics Canada, and one provincial dataset based on surveys conducted by The University Presidents' Council of British Columbia (TUPC). Analyses of national databases were conducted in the Research Data Centre (RDC) at the University of British Columbia after applying for access to microdata through the Canadian Initiative on Social Statistics (CISS) program supported by Social Sciences and Humanities Research Council, Canadian Institutes of Health Research and Statistics Canada. I complied with Statistics Canada protocols of data access and statistics output vetting. The British Columbia database was obtained from TUPC and the final publication was sent to the steering committee for formal vetting before publication.

- 1) Ethnic Diversity Survey (EDS) conducted in 2002 contains a significant immigrant sub-sample who arrived in Canada at various times. It samples some 43,000 individuals who had responded to the long form of the 2001 Census. Although the scope of this survey is to understand how people's different ethnic backgrounds affect their participation in the social, economic and cultural life of Canada, and how they interpret and report their ethnicity, the survey contains a tremendous amount of information that helps examine the relationship between credentials and earnings of university graduates. The sampling also ensured that a sufficient number of persons in the categories of interest, especially immigrants, were interviewed.
- 2) The 2002 National Graduate Survey (NGS) and the 2005 Follow-up of Graduate Survey of the Class of 2000 from Canadian post-secondary institutions were designed to determine how successful the graduates were in obtaining employment in either Canada or the United States since graduation. A longitudinal database that contains information on respondents who answered both surveys is available for analysis and allows for assessing change over time regarding employment, family, student finances, further education and training. Compared to previous NGS databases (e.g., Class of 1995), the two surveys do not have the best design regarding further education because the 2005 information is quite limited and does not mirror the 2002 survey design, to allow a detailed longitudinal analysis. However, the 2002 education

data are valuable in the examination of the work-learning relationship, which constitutes one purpose of my study.

- 3) The Longitudinal Survey of Immigrants to Canada (LSIC) has a clear focus on new arrivals in 2000-2001, surveyed at 6 months, 2 years and 4 years after immigration; it was designed to provide information on how newcomers adjust to life in Canada, and what the factors are that can help or hinder their integration. Information from the 3 survey waves is included in a longitudinal database in which survey weights are adjusted to account for the quite large attrition (i.e., from 12,000 survey respondents in wave 1 to 7,700 in wave 3). However, the symmetry of information gathered in the three waves regarding language proficiency, education taken in Canada, employment and occupation, family situation, health, housing, as social interactions and perceptions of settlement make the dataset extremely valuable and reliable for various design analyses.
- 4) The University Presidents' Council of British Columbia (TUPC) surveys of the British Columbia 1996 Cohort of baccalaureate graduates were administered in 1997 (about 18 months after graduation) and in 2001 (5 years after graduation). Attempts made to reach the graduate population (about 8,600) were quite successful because the 2 surveys had response rates of 72% in 1997 and 63% in 2001. The longitudinal database contains information on employment status, occupation and earnings, and the extent to which their education relates to job, as well as data on graduates' educational and career aspirations and expectations, and further education.

Appendix B – Sample characteristics

The EDS sample contains N=5,320 respondents of whom 28% are immigrants, 19% are visible minority and 48% are women. This allows the researcher to compare some outcomes by immigrant status, visible minority and gender, but does not allow the researcher to split the sample by other attributes (Table 2.1).

The TUPC sample contains N=4,065 respondents of whom 44% are 24 years old or less, 62% are women and 51% graduated from liberal arts programs (as opposed to applied programs). This allows the researcher to contrast some job indicators, such as earnings, by type of program, age and gender (Table 3.6), although a detailed comparison is not possible for other employment indicators. It is notable that by using various demographic factors in these first two studies, one can produce a quite accurate portrait of existing social inequities in the labour market as reflected in earning gaps.

For the next two studies, the concern of the research design is to ensure large enough samples to populate the typology of further education pathways (focal variable). The NGS sample has N=9,140 respondents that are distributed across the non-participant group (47%) and the 4 participant pathways. For instance, the lowest percent in the non-university pathway (5%) still ensures a sample size of 460 respondents (Table D2).

The LSIC sample is the most critical in terms of sample size (N=3,000). For instance, not all descriptive results could be reported for the immigration class (Table 5.5). Combining groups does not always make sense (e.g., refugees cannot be combined with provincial nominees because the two immigration classes are totally different in terms of economic and job access characteristics).

Appendix C

Table C1: Earnings by Origin of education

<i>Visible Minority</i>		No		Yes	
<i>Gender</i>		Male	Female	Male	Female
Canadian educated	Mean	78960	48060	65600	47280
	(SD)	(58080)	(36860)	(39890)	(33320)
	N	160	130	190	130
United States and UK	Mean	82000	53510	66860	44240
	(SD)	(35730)	(26050)	(68100)	(19150)
	N	60	50	60	20
Europe & Other	Mean	69340	44750	43530	32280
	(SD)	(56020)	(54220)	(35600)	(22790)
	N	130	110	270	180

Main effects: Group: $F(3, 1482) = 23.02, p < 0.001$
 Origin of education: $F(2, 1482) = 3.25, p < 0.05$

Table C2: Earnings by Highest level of education

<i>Visible Minority</i>		No		Yes	
<i>Gender</i>		Male	Female	Male	Female
Undergraduate	Mean	72220	45220	51740	38290
	(SD)	(55630)	(46350)	(36790)	(27760)
	N	260	200	400	270
Graduate	Mean	85940	55040	61670	44960
	(SD)	(50270)	(33170)	(56250)	(28410)
	N	100	80	130	70

Main effects: Group: $F(3, 1486) = 3.22, p < 0.001$
 Level of education: $F(1, 1486) = 11.55, p < 0.001$

Table C3: Earnings by Field of study

<i>Visible Minority</i>		No		Yes	
<i>Gender</i>		Male	Female	Male	Female
Liberal arts	Mean	72350	47510	45030	33280
	(SD)	(47640)	(54650)	(23990)	(19850)
	N	100	100	100	100
Applied	Mean	77470	48420	56310	42300
	(SD)	(56830)	(34950)	(45530)	(30410)
	N	260	180	420	240

Main effects: Group: $F(3, 1486) = 3.60, p < 0.001$
 Field of study: $F(1, 1486) = 15.73, p < 0.001$

Appendix D

Type of program	Employment status and education	Age <25				Age > 25				All ages				All	
		Male		Female		Male		Female		Male		Female		N	%
		N	%	N	%	N	%	N	%	N	%	N	%	N	%
Liberal	<i>FT employ & No School</i>	46	12	74	11	44	11	56	9	90	12	130	10	220	11
Arts	<i>PT employ & No School</i>	57	15	110	16	43	11	63	11	100	13	173	14	273	13
	<i>FT employ & School</i>	136	35	255	37	180	47	232	40	316	41	487	39	803	40
	<i>PT employ & School</i>	27	7	85	13	40	10	106	18	67	9	191	15	258	13
	<i>Not-employed & School</i>	105	27	129	19	59	15	73	32	164	21	202	16	366	18
	<i>Not-employed & No School</i>	17	4	28	4	18	5	52	9	35	5	80	7	115	6
	TOTAL	388	100	681	100	384	100	582	100	772	100	1263	100	2035	100
Applied	<i>FT employ & No School</i>	32	11	43	10	29	6	46	6	61	8	89	8	150	8
	<i>PT employ & No School</i>	10	4	25	6	18	4	48	6	28	4	73	6	101	5
	<i>FT employ & School</i>	195	68	222	53	354	73	410	54	549	71	632	54	1181	60
	<i>PT employ & School</i>	15	5	87	21	60	12	219	29	75	10	306	26	381	20
	<i>Not-employed & School</i>	19	7	28	7	15	3	19	3	34	4	47	4	81	4
	<i>Not-employed & No School</i>	15	5	14	3	11	2	21	3	26	4	35	3	61	3
	TOTAL	286	100	419	100	487	100	763	100	773	100	1182	100	1955	100
	Research Sample	674		1100		871		1345		1545		2445		3990	

Table D2: Employment status and participation in further education by type of program, age and gender five years after graduation

Type of program	Employment status and education	Age <25				Age > 25				All ages				All	
		Male		Female		Male		Female		Male		Female			
		N	%	N	%	N	%	N	%	N	%	N	%		
Liberal	<i>FT employ & No School</i>	78	20	145	21	70	18	87	15	148	19	232	18	380	19
Arts	<i>PT employ & No School</i>	21	5	53	8	17	4	38	7	38	5	91	7	129	6
	<i>FT employ & School</i>	208	43	331	49	225	59	279	48	433	56	610	48	1043	51
	<i>PT employ & School</i>	12	3	53	8	21	6	81	14	33	4	134	11	167	8
	<i>Not-employed & School</i>	55	14	57	8	28	7	37	6	83	11	94	7	177	9
	<i>Not-employed & No School</i>	14	4	42	6	23	6	60	10	37	5	102	8	139	7
	TOTAL	388	100	681	100	384	100	582	100	772	100	1263	100	2035	100
Applied	<i>FT employ & No School</i>	55	19	93	22	94	19	134	18	149	19	227	19	376	19
	<i>PT employ & No School</i>	6	2	12	3	7	1	25	3	13	2	37	3	50	3
	<i>FT employ & School</i>	200	70	246	59	336	69	429	56	536	69	675	57	1211	61
	<i>PT employ & School</i>	6	2	32	8	17	4	92	12	23	3	124	11	147	8
	<i>Not-employed & School</i>	13	5	13	3	17	4	13	2	30	4	26	2	56	3
	<i>Not-employed & No School</i>	6	2	23	6	16	3	70	9	22	3	93	8	115	6
	TOTAL	286	100	419	100	487	100	763	100	773	100	1182	100	1955	100
Research Sample		674		1100		871		1345		1545		2445		3990	

Appendix E

Table E1: Variable list

1. Socio-demographic factors:
 - a. Gender: Male=0; Female=1.
 - b. Age (4 groups): 25 to 29; 30 to 39; 40 to 49; 50 to 64 year olds.
 - c. Immigrant status; No=0; Yes=1.
 - d. Parental education (3 groups): no parent had university education; at least one parent had bachelor's degree; at least one parent had graduate education.
 2. PSE-related characteristics:
 - a. Level of university education in 2000: Bachelor's and first professional degree=0; Graduate degree=1.
 - b. Major field of study in 2000: 10-category variable following the Classification of Instructional Programs (Statistics Canada, 2005b);
 - c. Academic ranking in one's graduating class (2000): Top 10%=0; Between 10-25%=1; Below the top 25%=2
 - d. Some part-time studies for the program completed in 2000: No=0; Yes=1.
 - e. Some distance education for the program completed in 2000: No=0; Yes=1.
 3. Situational variables:
 - a. Main financial support for all post-secondary studies (2002): Various types of loans=0; Personal earnings or savings=1; Non-repayable support from family, awards, employer, other sources=2.
 - b. Marital status (either survey time): No=0; Yes=1.
 - c. Dependent children (either survey time): No=0; Yes=1.
 - d. Employment (2002 and 2005): Yes/Yes=0; No/Yes=1; Yes/No=2; Non/No=3.
- Other variables:
- e. Reasons to participate (4 categories): get jobs or better jobs; improve job performance; educational prerequisites; self-improvement.
 - f. Employer support for programs and career-related courses (no/yes).
 - g. Employment status (2005) (FT, PT, not employed – either unemployed or not in the labour force)
 - h. Job permanency (no/yes).
 - i. Job-education closely related (not related/somehow related vs. closely related);
 - j. Income satisfaction (dissatisfied/very dissatisfied vs. satisfied/very satisfied);
 - k. Job satisfaction (dissatisfied/very dissatisfied vs. satisfied/very satisfied);
 - l. Median income.

Table E2: Choice of further education pathways between 2000 and 2002 (row %)

The first column shows the participation rates in continuing education and training (CE). Next 5 columns correspond to the five further education pathways (including non-participation). The last column indicates whether there is a significant association between the choice of further education pathway and socio-demographic factors or post-secondary characteristics.

Table E2: Choice of further education pathways between 2000 and 2002 (row %)									
	ALL	N	CE	NP	UCE_SD	UCE_ND	NUCE	TR	Sig.
		%	4320	4820	1180	590	460	2090	na
			47	53	13	6	5	23	
<u>Gender</u>	Male		48	52	14	5	5	25	
	Female		46	54	12	8	5	22	**
<u>Age</u>	25-29		51	49	14	6	6	25	
	30-39		45	55	11	6	5	23	
	40-49		45	55	14	8	4	19	**
	50-64		36	64	10	8	3	14	
<u>Immigrant</u>	No		46	54	13	6	5	23	
	Yes		51	49	13	7	7	24	**
<u>Social background (parents)</u>									
	No university education		47	53	11	7	5	24	
	Univ educ – Bachelor’s		49	51	15	8	4	23	**
	Univ educ - Graduate		50	50	19	5	6	21	
<u>Level of education in 2000</u>									
	Bachelor/1 st prof deg		48	52	13	7	5	23	**
	Above bachelor’s deg		46	54	13	5	4	23	
<u>Major FOS in 2000</u>									
	Education		34	66	7	4	2	22	
	Arts		36	64	15	2	6	12	
	Humanities		54	46	23	7	4	20	
	Social sciences		56	44	19	10	6	22	
	Business		48	52	9	8	7	24	**
	Physical sciences		58	42	24	5	7	23	
	Math&Comp sciences		43	57	10	5	5	24	
	Engineering		47	53	11	2	3	31	
	Health		45	55	9	5	4	26	
	Unspecified		43	57	10	8	10	16	
<u>Academic ranking in 2000</u>									
	In the top 10%		50	50	17	5	4	24	
	Top 10-25%		47	53	13	8	5	22	**
	Below top 25%		44	56	8	6	6	24	
<u>Some PT study by 2000</u>									
	No		48	52	13	6	5	24	**
	Yes		46	54	12	7	6	21	
<u>Some distance studies by 2000</u>									
	No		47	53	13	6	5	23	**
	Yes		50	50	12	7	8	23	

** p<0.01 ; * p<0.05 (chi-square tests)

CE = Continuing education participation; NP= Non-participation; UCE_SD = University continuing education – (second) degree program; UCE_ND = University continuing education – no degree program; NUCE = Non-university continuing education program; TR=only career-related training courses (respondents who took both programs and courses were classified as program participants).

Appendix F

Table F1: Earning scale by social and human capital structures

No.	Earnings (\$)	Groups by social and human capital factors
1	80,000-90,000	IM_M_NVM_Grad; CB_M_VM_Grad; IM_M_NVM_CanEd
2	70,000-80,000	Reference male group: CB_M_NVM_Grad ; CB_M_NVM_Appl; IM_M_NVM_Appl; CB_M_NVM_ForeignEd; CB_M_NVM_CanEd; CB_M_NVM_Underg; IM_M_NVM_ForeignEd; CB_M_VM_Appl; IM_M_NVM_LibArts; IM_M_NVM_Underg; CB_M_VM_CanEd
3	60,000-70,000	CB_M_VM_Underg; IM_M_VM_CanEd; CB_M_VM_LibArts; CB_M_NVM_LibArts; IM_M_VM_Grad
4	50,000-60,000	Reference female group: CB_F_NVM_Grad ; IM_M_VM_Appl ; IM_F_NVM_Grad; CB_F_NVM_Appl; IM_M_VM_Underg ; CB_F_NVM_ForeignEd; CB_F_VM_Grad
5	40,000-50,000	IM_F_NVM_CanEd; CB_F_NVM_CanEd; CB_M_VM_ForeignEd ; IM_F_NVM_Appl; CB_F_NVM_Underg; IM_F_NVM_LibArts; IM_M_VM_ForeignEd ; IM_F_NVM_ForeignEd; IM_F_VM_CanEd; CB_F_VM_Appl; IM_F_NVM_Underg; IM_M_VM_LibArts ; IM_F_VM_Grad; CB_F_VM_CanEd; CB_F_NVM_LibArts; CB_F_VM_Underg; IM_F_VM_Appl; CB_F_VM_LibArts
6	30,000-40,000	CB_F_VM_ForeignEd; IM_F_VM_Underg; IM_F_VM_ForeignEd; IM_F_VM_LibArts

Note:

Immigrant status (IM=immigrant; CB=Canadian-born); Gender (F=female; M=male);
Visible minority status (VM=visible minority; NVM=non-visible minority);
Level of university education (Underg=undergraduate; Grad=graduate);
Type of academic program (LibArts=liberal arts; Appl=applied programs);
Origin of education (CanEd=Canadian PSE; ForeignEd=PSE outside Canada).