Jobs commensurate with their skills? Selected workers and skilled job access in Québec

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The authors bear sole responsibility for the analysis and interpretation of the data in this document.

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Background

The analysis presented here stems from the report distributed in 2004[1] that used essentially basic desciptions to convey the results of a survey conducted in March 2002 of a representative sample of 2,000 worker class immigrants. These immigrants had been admitted to Québec between January 1997 and June 2000 after being screened by a selection grid introduced in the fall of 1996. The general aim of this survey was to get an overall idea of the labour market integration success of immigrants who had entered Québec after the adoption of the new grid.

This longitudinal retrospective survey collected information on all respondents' periods of employment and non-employment since arrival. These data were also matched with the data in these respondents' permanent residence application files and federal entry permits. The initial sample included principal applicants ("heads of households") from all worker selection programs as well as the spouses of these applicants if they had indicated a desire to hold a job. The initial report described the respondents' situation at two stages: during their initial integration period (first job, jobless period preceding first job) and at the time of the interview in March 2002 (employed or non-employed).

In the secondary analyses summarized below, the sample was reduced to principal applicants only, and the live-in caregivers category was excluded since it is not really being subjected to the selection process.[2]

Aim of secondary analyses

The objective this time was to use multivariate regression analyses to identify the factors most likely to predict successful job integration. The indicators used to measure this success were speed of first job access and speed of access to a job of equal or greater skill than the individual's education up to the time of immigration ("skilled job"). The sets of factors used in the regressions were initially those evidenced by the score on the selection grid and then an expanded range including personal characteristics as reflected by points scored on the selection grid or found elsewhere (administrative records, survey responses), events that occurred before or after immigration and contextual factors likely to have impacted individual integration. More simply put, these analyses aimed to determine whether an immigrant's better score on any factor on the selection grid translates into quicker and more successful job integration. They also aimed to identify the other factors likely to impact this process: these may be characteristics exclusive to every immigrant (age, sex,

[1] *L'insertion en emploi des travailleurs admis au Québec en vertu de la grille de sélection de 1996* (Jean-François Godin, under the direction of Gérard Pinsonneault), available in two parts on the Department's Web site:[http://www.micc.gouv.qc.ca].

[2] The secondary analyses for which the results are presented here are based therefore on 1 541 respondents.

education, knowledge of French, etc.), personal initiatives (courses, diploma assessment, etc.), contextual factors (economic situation) or mixed factors (origin as reflected by the reaction of the host society).

Overview of access to employment and skilled employment

After three months' residence, 50% of respondents had found a first job. By the end of the total period observed (about five years), the overall likelihood of a first job being found was 91%. With respect to skilled jobs, the 50% threshold was crossed after a year and the final likelihood after five years would be 68%.

If we consider all the jobs held by respondents throughout this period, we find that the likelihood of being employed over time reaches 70% after one year's residence and exceeds 80% after four years.[3] Over time, the proportion of these respondents in skilled jobs increases gradually from two thirds after one year to almost three quarters after four years.

The predictive potential of the selection grid…

In two regression analyses, one dealing with speed of first job access and the other with speed of skilled job access, the impact of the score for each criterion on the selection grid was reviewed: level of knowledge of French and English, age, education (schooling, postsecondary studies in French, preferred educational background, second specialty), work experience, adaptability (personal suitability, motivation, knowledge of Québec, relative or friend, prior visit), the presence of a spouse and children and the spouse's level of French. The selection program (occupation in demand, employability, assured job or exemption) and anticipated occupation (major group) were taken into account.

… on first job access

Very briefly, the results of the first analysis[4] show that the respondents most likely to find initial jobs quickly had scores on the selection grid indicating one or another or a combination of the following possibilities:

- they had already visited Québec, especially those who had come to work or study;
- they had completed a doctorate;
- they expected to work in the personal services field;
- they had a good command of French or English;
- they had an assured job offer or exemption.

According to this initial analysis, the results obtained by respondents for the other selection grid criteria would have no impact on speed of first job access.

[3] Beyond the 4th year of residence, the number of observable respondents drops quickly and the data become volatile.
[4] The explanatory power of this regression is fairly modest: 13% of variations (according to the pseudo R^2 calculation) would be caused by the variables included in the analysis. Since the selection grid takes only some individual characteristics into account, this low percentage is understandable. Moreover, it is comparable to the one reported by a study on the federal grid in the 1990s (see note 43 in the initial report cited above).

… and access to a job commensurate with education

The results of the second analysis[5] indicate that the respondents most likely to access a skilled job quickly had obtained selection scores reflecting one or another or a combination of the following situations:

- they had doctorates;
- they had visited Québec before, especially to work or study;
- they expected to work in the personal services field;
- they had a preferred educational background;
- they had completed postsecondary studies in French;
- they were in the occupations in demand program or had an assured job offer or exemption;
- they were aged 30 and under.

The predictive potential of an expanded range of factors …

Two other and more complex series of analyses with the same aims (speed of first job access and speed of skilled job access) took an expanded range of variables into account: the characteristics already listed as evidenced by the results achieved on the selection grid, the other characteristics from administrative data and survey responses (sex, real age, extent of bilingualism, field of study, skill level of pre-immigration employment), respondent initiatives before or after immigration (courses taken, foreign credentials assessment application, job search, acceptance of an underskilled job), region of origin and the economic situation.[6]

… on first job access

As far as first job access is concerned, the respondents most likely to find an initial job quickly are, in order, those who:

- came from Western Europe or the United States;
- had visited Québec prior to immigration;
- completed a French course after entry;
- had specialized technical training;
- had doctorates;
- had held skilled jobs rated “0” for management or “A” for university prior to immigration;
- expected to work in the personal services field.

[5] The explanatory power of this regression is somewhat more marked that that of its predecessor: 16% of variations could be attributable to the grid variables. This “progress” is reassuring since the grid is intended less to favour not so much those individuals who find any job quickly but, rather, those who quickly find a job that matches their skills.

[6] When our analyses go beyond the variables from the selection grid to incorporate the other sets of variables, the explanatory power of the models as expressed by the overall chi2 is significantly and systematically increased. The analysis including all of the variables would explain almost 25% of the variations in first job access and more than 34% in skilled job access.

However, these analysis results show significantly slower first job access for respondents who:

- came from Western Asia or the Middle East, the Maghreb, East Asia and Oceania, Africa outside the Maghreb and Eastern Europe (including the former USSR);
- had studied health sciences, humanities and social sciences, exact sciences or had a general arts, sports and recreation background;
- did not have doctorates, especially if they had a graduate degree or had not completed their secondary education;
- were taking non-language courses;
- had never been employed prior to immigration;
- expected to work in the "life sciences and architecture" and "physics and engineering" fields and the "primary and secondary, trades and transportation" and "health, law, social sciences and education" sectors.

… and access to a job commensurate with education

- The analysis conducted with the same wide range of variables shows that the respondents most likely to find skilled jobs quickly are those who:
- had not begun by taking an underskilled job that did not match their education;
- came from Western Europe or the United States;
- had doctorates;
- had held jobs with a university requirement prior to immigration;
- had completed specialized technical training;
- had completed a French course or another kind of course since arriving;
- had taken steps to find a job prior to immigration.

The respondents slowest to find skilled jobs are those who:

- began by accepting jobs for which they were overtrained;
- came from Western Asia and the Middle East, the Maghreb, East Asia and Oceania and, to a lesser extent, the Americas (non-US), Eastern Europe (including the former USSR) and Africa outside the Maghreb;
- had no doctorates, especially those with undergraduate and graduate degrees;
- had never been employed prior to immigration;
- had studied certain fields, especially health and humanities and social sciences.

The effect of origin by period

To further qualify the diagnosis, two analyses of a different kind took all the variables just cited into account but used a method that breaks down the effect of certain variables into separate periods.

The main result of these special analyses is that the impact of origin, at least for certain groups, disappears with time, which the authors feel makes it possible to rule out the assumption that these groups are victims of discrimination: beyond the 18th month of residence, speed of skilled job access for respondents from the Maghreb and Eastern Europe (including the former USSR) no longer differs significantly from that of respondents from Western Europe and the United States, a group with the best performance in this regard.

Permanence of requalification

The analyses also show requalification as a stable phenomenon: the likelihood of obtaining an underskilled job after holding a skilled job is only 12% over five years.

Discussion, conclusions

For the respondents observed, first job access was relatively quick and generalized (50% likelihood after three months' residence and 91% after five years). Skilled job access commensurate with education was slower but also fairly generalized (50% after a year and almost 69% after five years). Although the type of data available (placing all jobs calling for university degrees in a single skill category for lack of a better coding system) certainly had the effect of overvaluing the requalification phenomenon, its opposite, radical dequalification, lacks the weight that it is sometimes given. Moreover, this requalification seems stable: the likelihood of the "requalified" experiencing "relapse" is only 12% over the period.

The analyses highlight the impact of a few factors on success of integration: previous visits, education, certain pre- or post-immigration events and certain fields of study and anticipated occupational groups. Some of the characteristics taken into account in the selection grid thus have a measurable impact on the job integration process.

However, the result that is unquestionably the most original has to do with the role of national origin as expressed by the region of provenance. While the results of the traditional regressions indicate for all practical purposes that the region of origin significantly prejudices all respondents except for those from Western Europe and the United States (the reference group), the regression by time periods establishes that, at least for certain origin groups, the prejudicial impact is significant only in the first months after entry. This applies to the skilled job access of respondents from the Maghreb and Eastern Europe (including the former USSR). It would seem, therefore,

that we are witnessing a process of adjustment, acculturation or circumvention that is obviously slower at the outset than for the reference group but over time builds momentum comparable to that group. A plausible assumption is that immigrants from certain areas of the world, for reasons still impossible to pinpoint and no easier to quantify, need more time to get accustomed, appropriate local customs, overcome social and cultural differences and to some degree bring their behaviour into conformity with local habits and expectations. For other groups, however, the effect lasts throughout the period observed. In these cases, could it simply be that the observation period for this survey was not long enough and the acculturation process was still ongoing at interview time, or would we be looking at genuine resistance by the host society to accepting these groups for reasons connected with discrimination? Further studies using the "time pieces" method will be needed to provide a more definitive answer to this question.

Introduction[7]

The immigration flow to Canada is divided into three major components: the family component, the humanitarian component and the economic component. Québec's bilateral agreements with the Government of Canada allow it to establish and oversee the selection parameters for the last component.

The economic component involves choosing individuals destined for the job market[8] whose success potential is seen as optimal. Thus, the selected immigrants form the group most likely to contribute well and quickly to the host country's economic life. For this reason, responsibility for integration and the implementation of conditions favouring economic insertion are particularly incumbent upon the responsible government. It is vital to evaluate this group's labour market integration since we are entitled to expect very good performance and a high level of use of their occupational skills.

The approach taken in this report stresses the skill levels of jobs found in Québec compared to education levels prior to immigration to gauge the use of the selected immigrants' skill levels by the Québec labour market.

The data used were compiled by the Ministère de l'Immigration et des Communautés culturelles (MICC) for the selected worker survey (SWS). They primarily describe the immigrants' employment history since arriving in Québec using retrospective longitudinal data for this process. The second feature is the coding of each job held, using the National Occupational Classification (NOC). The NOC describes, for example, the skill level in terms of education required for each position title. This makes it possible to study job qualification or dequalification through the link between a respondent's education level and that of the jobs held throughout the period studied.

The survey data were also paired with those of the MICC selection grid for each immigrant. We can then assess the impact of what we know about the immigration applicants at the time of selection on their job integration.

Lastly, a large number of factors were added to the analyses to probe the integration and requalification process in the host society. Immigrants' personal characteristics, the immigration preparation process, settlement process, regions of origin and economic cycles are all factors to be used in analyses.

[7] We want to thank the members of the advisory committee and especially Messrs Gérard Pinsonneault and Robert Baril for their valuable advice, attentive reading and comments on earlier versions of this analysis.

[8] The economic component also includes business people (entrepreneurs, self-employed workers and investors), although the latter, chosen more for their business plans, management experience and capital, were not in the population addressed by the survey.

We will be looking at two aspects of job integration. One is speed of first job access for immigrants in Québec and the second is the requalification process, which is to say the process of obtaining initial employment that at least matches the person's level of education. For each of these aspects a wide range of characteristics will help to identify the factors associated with these immigrants' good or poor job market performance.

This study represents a double precedent. On the one hand, insufficient data had always prevented an analysis of the level and speed of requalification of a class of immigrants and an analysis of their determinants. We know, for example, the skill status of recent immigrants9 (those arrived two to six years before the 1991 and 1996 censuses) but we do not know how quickly they requalified. In other words, we can better review the central issue here: at what level and speed are the educational and occupational skills of immigrants put to use? On the other hand, never before could the respondents' Québec selection grid scores be used directly for analysing their settlement processes. This will afford us a fresh perspective on these matters.

[9] See Diane Galarneau and René Morissette, "Immigrants: Settling for Less?" in Perspectives on Labour and Income, Statistics Canada, June 2004, vol 5 no 6, 6-16.

Section 1: Data and methods

1.1 Data

a) Selected worker sample

Respondents were sampled based on the admissions record and their Québec contact information was found through the records of the Régie de l'assurance maladie du Québec. A sample was made up of 1,875 respondents representative of immigrants (principal applicants and spouses destined for the labour market) belonging to the worker class, who had entered Québec between January 1997 and June (on this topic see Annex III of Godin, 2003[10]). Spouses and live-in caregivers were eliminated from the sample used for our analyses—spouses because they were not selected according to specific labour market access criteria, and caregivers because they had work permits and thus jobs in Québec before becoming permanent residents. In the end, 1541 principal applicants made up the database for this study. The subsample is representative of these principal applicants.[11]

b) Dates

The database assembled was intended to establish as accurate a picture as possible of the job integration process experienced by new workers. Various elements of information about respondents were time dated to have a dynamic integration picture. A minimum of fifteen months' residence, felt to be enough to report on the labour market integration process, was needed for inclusion in the target population. Interviews were conducted in March 2002 and respondent length of residence varied from 21 to 63 months, the average being 36 months.

c) Questionnaire data

The survey was retrospective and longitudinal. In the interview, each respondent was questioned about all the characteristics of jobs held since obtaining permanent resident status and all periods when they were jobless. Other questions were asked about courses taken, respondents' assessment of the success of their settlement and the difficulties they encountered in finding a job or accessing equivalency papers for their occupations. As for the dated data (on jobs, joblessness, courses taken, etc.), the questionnaire was precise enough to establish information to within a day.

d) Administrative data

The information gathered in the questionnaire was paired with respondents' characteristics as recorded in the department's administrative files that were basically sourced from the federal entry permit and the application for the Québec selection certificate (CSQ). These characteristics have to do with the following variables: sex, age, selection program, country of birth, level of education, knowledge of

[10] Cited above in note 1.

[11] As the text goes on, we will use the expressions "immigrant," "respondent" and "principal applicant" without distinction to denote persons included in the sample analysed, representative of the target population.

French and English and initial locality of destination. Additional matches were used to collect respondents' scores on the various selection grid criteria.

1.2 Explanatory factors studied

Let us now look at characteristics likely to affect labour market integration. To analyse access to jobs (including skilled jobs), we used blocks of variables to determine the effects of factors like personal characteristics, initiatives before and during the settlement process and the effects of regions of origin and economic cycles.

a) Selection grid characteristics

Use of the selection grid characteristics adds considerable interest to our analyses: beyond assessing the effect of the selection criteria, this also enables us to obtain more subtle measurements (e.g., level of French rather than knowledge of French) established in interviews and, above all taken before migration and not at the time of the survey. Most of the selection grid characteristics are used in the analyses to verify the grid's relative effectiveness in predicting the success of labour market integration. We considered the *scores obtained* for: level of knowledge of English and French, age, level of education, postsecondary studies in French, preferred educational background, second specialty, work experience, motivation and personal suitability. These characteristics reflect the respondent's human capital. We also considered scores for knowing Québec, having ties in Québec (friends or relatives), having visited before, having children, and the spouse's level of French. These characteristics reflect integration or the capacity for speedy integration into the networks of the host society. Also to be considered: the immigrants' selection category, i.e. having been selected for the occupation in demand program (Programme de profession en demande -P.D.Q.), employability and occupational mobility program (Programme d'employabilité et de mobilité professionnelle - P.E.M.P.) or an assured job or exemption; the field of anticipated employment, i.e. the occupation for which the immigrant was chosen; and the fact of having a spouse. The scores obtained for the spouse's other characteristics (age, experience, education) were not taken into account as they were not considered likely to have an impact on the principal applicant's job integration, although they may affect the couple's successful settlement.

Some of the scores obtained for selection criteria are expressed as proportions so that they can be compared, hence marks all range from 0 to 1 while the maximum value of these variables in the grid is not constant. The average scores obtained by applicants, expressed here as percentages for simplicity's sake (proportion X 100), vary from criterion to criterion: level of French (87.8%), age (78.4%), work experience (71.7%), personal suitability (70.9%), motivation (67.8%), education (66.1%), level of English (55.7%), spouse's level of French[12] (24%) and the presence of children (10.6%).

[12] A mark of zero is given to respondents without spouses, which accounts for the low average for this characteristic.

For the criteria with binary weighting, the situation is as follows: two thirds of respondents (66.2%) scored points for postsecondary studies in French while slightly over one third (35%) scored for having a preferred educational background. Most respondents (78.6%) scored nothing for a second specialty while 6.8% had points for one year and 14.6% for two years or more. As for prior visits, nearly one quarter (23.1%) of respondents had already visited for work or study, one quarter (24.9%) had paid another kind of visit (minimum of two weeks) and 52% did not score for this criterion. Many applicants had ties with Québec (23.8% had relatives and 59.5% had friends) and points scored for knowledge of Québec were distributed equally, with one third not scoring, one third scoring 50% and one third scoring the maximum.

With regard to education as measured by the selection grid, 1% of respondents had no score for education, meaning that they had not finished secondary school, 8.7% had secondary diplomas, 24.2% had postsecondary non-university levels, 43% had undergraduate levels, 18.6% had graduate levels and 4.5% had doctorates. The anticipated employment fields for which respondents were selected are physics and engineering (20.7%), mathematics and computer science (16.6%), finance and business (15.3%), sales (13.2%), health, law, social sciences and education (10%), primary and secondary employment sectors, trades and transportation (8.9%), arts and culture (7.2%), life sciences and architecture (4.4%) and personal services and security (3.8%). The analysis shows that members of this last category have integrated very successfully. It should be stated right away that these were generally jobs as cooks and pastry makers.

Slightly more than one third of respondents (36.2%) immigrated with their spouses. Nearly two thirds (61.1%) were selected for the "employability and occupational mobility" program, just over one quarter (26.9%) for the "occupations in demand" program and 12% for an exemption or assured job.

b) Personal characteristics

To properly round out our analysis models, a second series of analyses added further variables from the questionnaire or administrative records to the selection grid characteristics already mentioned. The variables added were sex, age at immigration (also given in its quadratic form), level of bilingualism, field of study and employment level prior to immigration.

Regarding the variables not yet described, we note that nearly three quarters of immigrants are men (72.4%) and their average age is 32. Bilingualism was measured by multiplying scores for levels of English and French: the average mark was 47.6%. To conclude, the employment level prior to immigration was managerial or executive in 12.6% of cases (NOC category 0), a level requiring university study in 44.9% of cases (category A), a level indicating postsecondary study or a vocational diploma in 29.7% of cases (category B) and a level indicating secondary study or a trade apprenticeship in 12.8% of cases (categories C and D).

c) Preliminaries to immigration

In addition to immigrants' personal characteristics, it was necessary to verify whether immigration preliminaries affected job integration. So we used the questionnaire components that described the most relevant initiatives. We used enrolment in a French course (14.4% of respondents), an English course (18.1%) and another kind of course (4.8%) along with applications for degree equivalencies (26.2%), official papers (60.4%), contacts with professional agencies (16.6%) and job searches (33.6%).

d) Settlement arrangements

The dated data we collected enabled us to look at certain settlement processes. We know that 21.6% of the principal applicants took English courses during the period studied, 13.9% took French courses and 28.7% took other kinds of courses. Beyond the courses themselves, the effect of completing them was measured to more fully validate their benefits for job integration. Lastly, when we will look at access to a qualifying job, taking an underskilled job will be introduced into our analyses. For a given respondent, these variables will exhibit changes in value during settlement depending on whether or not the respondent was taking these actions at every stage in the process.

e) Regions of origin

We also took regions of origin into account. They can be used to measure, beyond all previous characteristics, both the cultural dimension and acceptance by the host society. The three biggest immigrant pools are Western Europe and the United States with 37.9% of immigrants, the Maghreb with 25.6% and Eastern Europe including the former USSR with 15.9%. The "Western Asia and Middle East" region accounts for 6.2% of immigrants, East Asia and Oceania for 5.5%, the Americas excluding the US for 4.9% and non-Maghreb Africa for 4.1%.

f) Economic cycles

As we saw at the beginning of this section, the survey was conducted retrospectively through interviews in early 2002. The respondents tried to integrate the labour market in separate economic environments. A limited number of studies has so far looked at the structural aspects of labour market integration. Given the types of analysis models used here, we could study their impact.

Economic cycles can be estimated by a number of interconnected indicators that we consolidated to increase their scope. Fassi-Fihri[13] and Godin[14] used a classic factor analysis to validate this approach in their studies. To reproduce their work we chose 15 chronological series very close to their own and available through CANSIM[15] to build synthetic factors. The 15 economic indexes we used are shown in Table 1. Monthly average temperature in Montréal was also added as a proxy of seasons.

Table 1: List of economic indexes

General performance in Canada	***Trade and development in Québec***	***Job market situation in Montréal (CMA) and Québec***
. Gross domestic product (constant 1997 $$) . Imports according to the price index (1986 and 1997) . Exports according to the price index (1986 and 1997) . TSE (Toronto stock exchange indicator)	. Retail trade . Number of housing starts . Number of commercial bankruptcies . Base pay rate increase in the public and private sectors	. Unemployment rate, Montréal . Employment rate, Montréal . Participation rate, Montréal . Help wanted index, Montréal . Population aged 15 and over, Montréal . Percentage of employment insurance recipients, Montréal . Percentage of jobs in the public sector, Québec . Percentage of jobs in the service sector, Québec

These series are taken over a long period (March 1987 to August 2004) that greatly exceeds the period covered by the survey data (January 1997 to March 2002) to clearly distinguish trend-like cycles.

Composite indexes representing economic cycles would be produced by the factor analysis as the major component. This analysis aggregates strongly correlated indexes and forms factors to represent anticipated cycles. A three-axis factor solution here is the best way of aggregating indexes. This factor structure explained 84.5% of all variances found in the series. Table 2 shows the correlated indicators.

[13] Mohamed Fassi-Fihri (2003). "L'effet de la conjoncture économique sur l'établissement des immigrants à Montréal," master's thesis, demography department, Université de Montréal, xii + 117pp. Available at this Web site: http://www.ceetum.umontreal.ca/thes_mem/Mohamed%20Fassi-Fihri.pdf

[14] Jean-François Godin (2005). "Immigrants et travail à Montréal: la dynamique de l'établissement professionnel des dix premières années," doctoral thesis, Faculté des études supérieures, Programme de sciences humaines appliquées, Université de Montréal, 256 pp. Available at this Web site: http://www.ceetum.umontreal.ca/thes_mem/These%20complete-JF%20Godin.pdf

[15] This is a database enabling us to track changes in many social and economic characteristics for the whole of Canada.

Table 2: Saturation matrix after rotation

	Factors		
Indicators	**1**	**2**	**3**
Imports to Canada	0.974	-0.043	-0.096
Population aged 15 and over, Montréal CMA	0.968	-0.170	-0.048
Gross domestic product (GDP), constant 1997 $$, Canada	0.962	0.105	0.059
Exports to Canada	0.945	0.068	-0.106
TSE 300 composite index	0.910	0.161	-0.110
Percentage of employment insurance recipients, Montréal	-0.890	-0.232	-0.085
Retail trade, Québec	0.841	0.138	0.334
Percentage of service jobs, Québec	0.592	-0.486	-0.544
Housing starts, Québec	-0.483	0.432	0.452
Help-wanted index, Montréal (1996)	-0.375	0.849	0.001
Percentage of jobs in the public sector, Québec	-0.207	-0.830	-0.167
Employment rate, Montréal	0.368	0.790	0.378
Unemployment rate, Montréal	-0.540	-0.781	-0.078
Base pay rate, Québec	-0.392	0.763	0.141
Commercial failures and liabilities, Québec	-0.338	-0.745	-0.236
Average temperature, Montréal	0.034	-0.067	0.909
Participation rate, Montréal	0.109	0.576	0.659

We note that Factor 1 consolidates performance indicators for the Canadian economy. Most of these indexes were constantly changing in the 1990s. This factor represents the long economic cycle. Factor scores are shown in Figure 1. Their value tends to grow almost constantly over time. Beyond this trend, we note small fluctuations that seem to be linked to seasonal variations unrecorded by temperature and participation rates (see Factor 3 below). We seriously hesitated to use it in survival analyses for two reasons. First, the longer an immigrant is observed the more he will see this factor as collinear with the passing of time. Second, the shorter the time an immigrant is observed the more he will see the variations as reflecting not the basic cyclical trend but rather the seasonal component of the variation. We chose to use it in our analyses while being very cautious about its meaning.

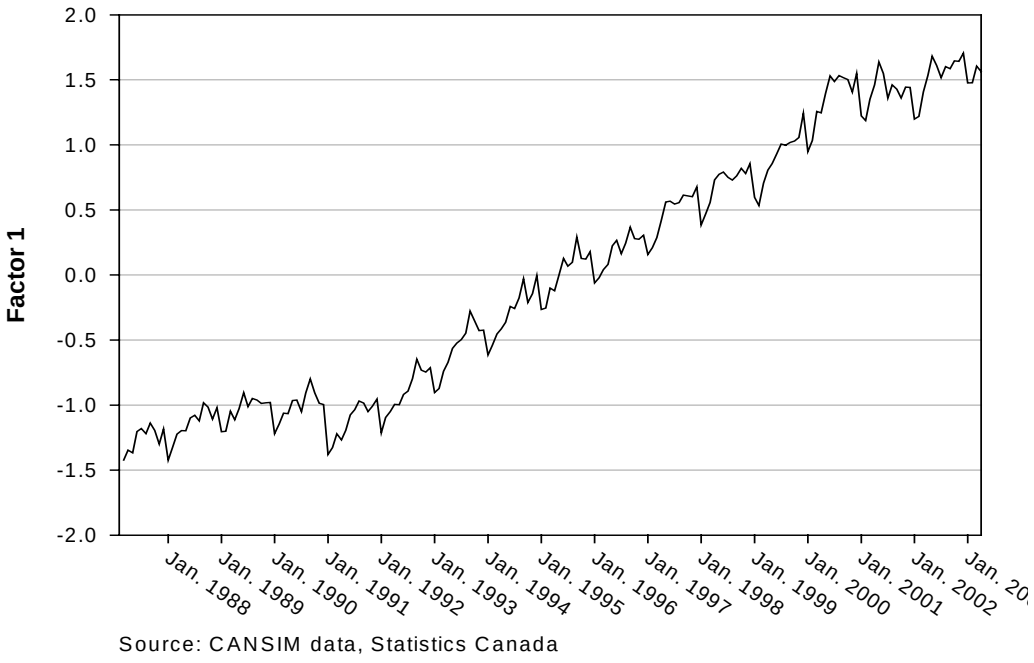


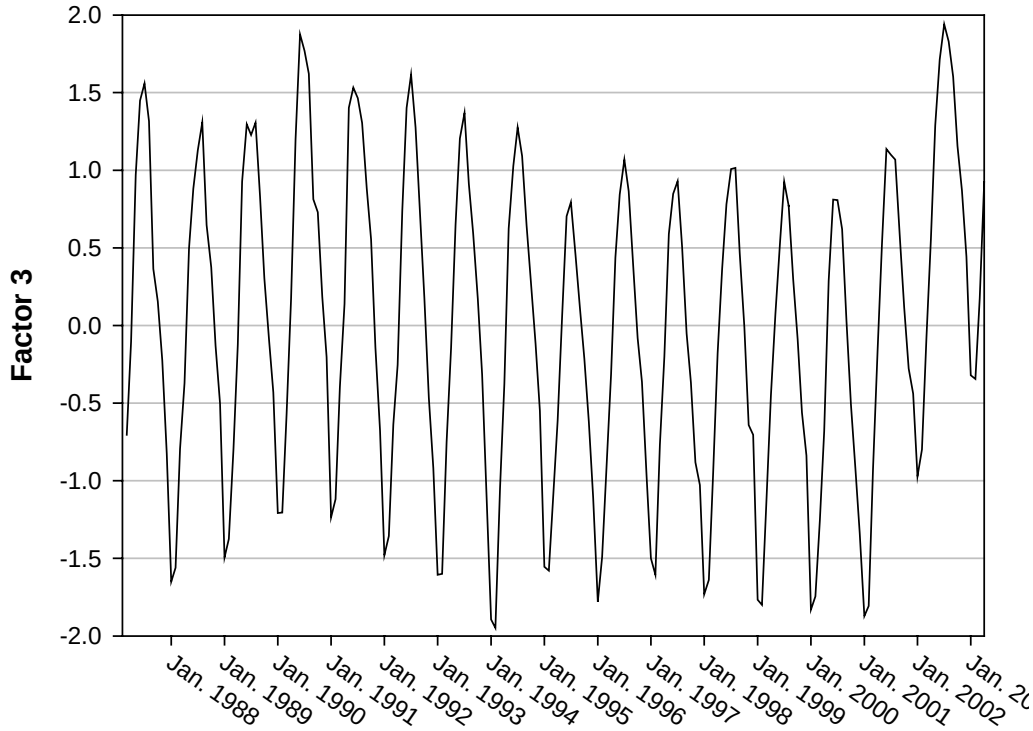
Figure 1 – Long economic cycle

Factor 2 is more concerned with job market variables in Montréal and Québec as shown in Table 2. These economic indexes cluster around an economic cycle with a ten-year periodicity that is shorter than that of the previous factor. Figure 2 shows the factor scores of this cycle and seems to describe the medium-term economic cycle.

Source: CANSIM data, Statistics Canada

Figure 2 – Medium-term economic cycle

Lastly, we expanded our 16 chronological series with a new series representing average monthly temperatures in Montréal to produce a seasonal index. This last component facilitates the positioning of economic indexes that may vary seasonally towards Factor 3. It represents the short economic cycle. The graph in Figure 3 shows positive factor scores in summertime and negative scores in wintertime.



Source: CANSIM data, Statistics Canada

Figure 3 – Short economic

Each of the three economic cycles was then adjusted to the respondent's arrival date and modified to obtain weekly instead of monthly values. These are dynamic characteristics since their values change for each time unit experienced by the respondent.

1.3 The National Occupational Classification and requalification

The SW study collected information for entering the National Occupational Classification (NOC) code for each job held during the period of the study or prior to immigration. This is a standardized four-digit code for describing the occupational duties of Canadian jobs. This code[16] is generally used by labour market analysts for career planning: it also helps us to measure requalification.

The first digit denotes the job's skill type. Ten employment skill types are listed, for example *business, finance and administration* (code 1) and *natural and applied sciences* (code 2).

The second digit denotes the skill level required for the job and is coded from 1 to 6. These are the figures that will be useful for measuring requalification. The six correspond to four generally used levels (A to D):

- level A: university training (NOC code 1)
- level B: college training or vocational apprenticeship (NOC codes 2 and 3)
- level C: secondary or vocational training (NOC codes 4 and 5)
- level D: on-job training (NOC code 6).

A level 0 for managerial and senior and middle-ranking executive jobs forms part of the first digit of the classification code: it addresses management positions that are often filled in consideration of factors other than education and training, like experience and capital. It was used to form the fifth category. In this survey, most level 0s attended university. For requalification purposes, employment levels 0 and A are considered equivalent.

[16] All relevant details about this code will be found on the Web site: http://www23.hrdc-drhc.gc.ca/2001/f/generic/welcome.shtml.

Since this code enables us to assign every job a generic education level, it becomes possible to compare the educational level of every job held in Québec with the worker's level of education.

Lastly, we note that the NOC was created in the early 1990s and certain jobs may have seen their educational requirements go up since this classification was developed: jobs that required a secondary diploma now call for a college diploma and jobs that required college now call for a university degree. This can result in an undervaluation of requalification by a percentage that eludes assessment.

For respondents' education levels we use the information on settlement records (federal permanent residency permits) to establish ties between NOC codes and the nine education levels as shown in Table 3.

Table 3: Education level on federal permits and corresponding NOC skill level

Education level	*Frequency*	*Percentage*	*NOC level*
Doctorate completed	110	7.14	A
Master's completed	230	14.93	A
Master's not completed	22	1.43	A
Bachelor's degree	533	34.59	A
University not completed	78	5.06	A
Technical diploma	306	19.86	B
Trade ticket	147	9.54	C
Secondary school or lower	112	7.27	D
Data gap	3	0.19	
Total	1,541	100.00	

This information enabled us to see the level and speed at which immigrants' academic credentials are put to use on the Québec labour market. For the purposes of this analysis requalification is achieved when the person obtains an employment level in Québec that is equal or superior to the corresponding level of education. For example, someone with a university background will be seen as requalified when he

or she finds a level A job while someone with a trade ticket will be accepted as requalified by getting an A, B or C job. It will be noted that we are overvaluing the equivalency for MAs and PhDs because we do not take the university degree hierarchy into account.

1.4 Analytical methods

a) Survival curves

Given the survey's longitudinal dimension, survival analyses can be conducted to determine an event's occurrence in each time unit (weeks in our case). We include survival curves in our analyses. They determine the likelihood of an event occurring over time. This is calculated over a maximum period of five years' residence that is to say, the respondents' longest possible period of residence. With this approach the question is not finding whether the respondents have a job at the time of the survey and whether or not they are qualified but how quickly they find their first jobs and the first jobs commensurate with their level of education.

b) Semi-parametric and exponential piecewise survival regressions with independent variables evolving over time

Analysis of the link between transitions to the first job and then the first skilled job and all the variables we have described in the five big groups will use survival regressions. The main model will be the so-called semi-parametric or Cox model named for its leading originator. The attraction of this model for the social sciences is that the researcher does not have to specify the form of the effect of time – a form that is not parametrized – hence the term "semi-parametric."

The regression coefficients then indicate whether the independent variable increases or reduces the chances of transition in each time unit. If it increases these chances the change will occur sooner for those with higher values on that variable. On the other hand, if it reduces the chances (it then bears a negative sign), the transition will tend to occur later for those with higher values on that variable.

In the case of nominal variables with more than two categories represented by 0/1 logical (or dummies) variables, the category with the most "extreme" behaviour will be omitted from the analysis and used as a reference. If any category can be used as a reference, this choice facilitates our reading of the tests: compared to the extreme value, the significant differences, if any, will be directly perceived. We could have proceeded otherwise and used post-tests with exactly the same results, but that would have needlessly complicated the tables.

Variables can have fixed values throughout the episode studied (sex, home country, age when the episode starts, etc.) or have their value fluctuate throughout the episode, whether through individual behaviours (e.g., courses taken) or variations independent of individuals (economic cycles).

For each variable brought into the analysis, we will also calculate a chi2 (or χ^2). The relative size of this chi2 helps to define the variable's relative contribution to the whole model.

Lastly, to test whether the *variables effect* (and not the variables themselves) fluctuates over time, we use the piecewise exponential survival regression model. Unlike the semi-parametric model, this has time explicitly parametrized. The general idea of this model is to divide the period under review into pieces between which the effect may be thought to vary and for which we assume that the basic risk (the unevaluated h_0 of the semi-parametric regressions) is constant in one piece of time and variable from one piece to another. This model helps to lift the assumption that the effect of a variable is fixed and has a unique value over time. For example, it might be thought that new graduates have a better chance of finding jobs in their fields as soon as they stop studying. However if these graduates have not managed to get into the labour market with their new backgrounds after a time they will lose their edge. The degree will thus have a diminishing effect after a certain point.

Section 2: Job integration

2.1 First job access

a) Definition

First job access in Québec is the immigrant's initial contact with the labour market in the host society. All respondents are likely to experience this event during their residence. The analysis therefore, bears upon 1541 survey respondents. This first job may be at a level commensurate with their skills or not—this aspect will be studied farther on. Naturally, if this job is underskilled it marks the beginning of a labour market integration process that may lead more or less quickly to a job commensurate with the respondent's skills.

b) Description

The survival curve in Figure 4 shows the speed of first job access by indicating, for every week since arrival, the projected proportion of selected workers who had not begun a first job.

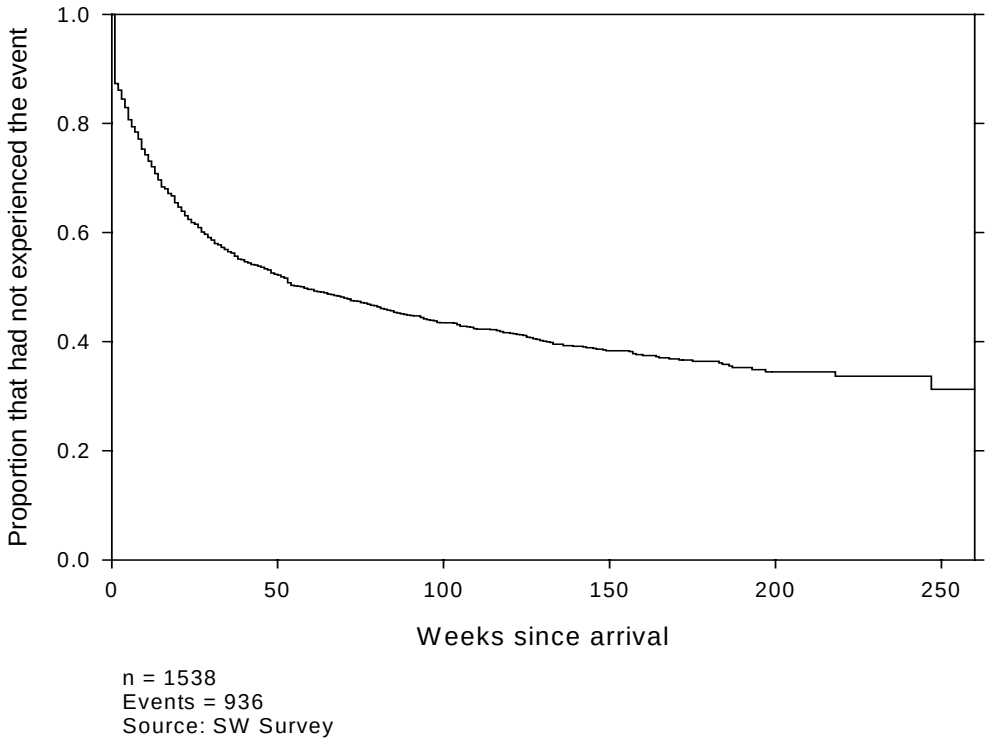


Figure 4 – First job access

The curve shows a very quick transition during the first six months' residence. Between Week 26 and Week 52 the curve flattens out somewhat but does not begin to stabilize until after Year 1.

Some 18% of respondents (276) found their first jobs in Week 1. The median value of the curve, the point where 50% of respondents have found at least a first job, is 14 weeks (three months plus a week). There is a 91.5% probability of someone having experienced the event by Week 260 (five years). In other words only 8.5% of principal applicants selected by the grid will still not have found first jobs in Québec after being there for five years.

c) The predictive potential of the selection grid

Regression table

Table 4 shows the results of semi-parametric survival regression with the selection grid criteria as independent variables (see section 1.4 on methodology). For a better grasp of this table remember that the chi2 determines the importance of the explanation of a variable or class of variables to the event in question and the coefficient corresponds to the strength of the influence of this class or variable. This coefficient can be considered only if it is significant as indicated by the asterisks in the table. Lastly, the bottom of the table has Cox's aggregate regression indicators. Here it is important to look at the chi2 of the model's loglikelihood and the resulting pseudo-R^2 (Cox and Snell) that enable us to assess the importance of the model explanation.[17]

[17] The analysis includes 1369 respondents out of a total 1541. The 172 missing values come from the variables in the regression—e.g., 125 missing values for the selection grid variables added to those missing in the questionnaire, which will be used in the regression models.

Table 4: First job access, selection grid variables

Variables	Coefficient	Sig.	Chi2
Level of English			
Points scored (ANGS_note)	0.216	*	4.452
Level of French			
Points scored (NGFR_note)	0.398	*	5.570
Age			
Points scored (NGAG_note)	0.181		2.280
Education (doctoral) (SCOL_cat_note)			*17,39***
Below secondary diploma	-0.717	*	4.452
Secondary	-0.432	*	4.537
Postsecondary non-university	-0.439	**	7.129
Bachelor's level	-0.577	***	14.138
Master's level	-0.540	***	11.628
Postsecondary studies in French (ref. no)			
Yes (POST_note)	0.063		0.462
Preferred educational background (ref. no)			
Yes (PRIV_note)	0.098		1.588
Second specialty			
Points scored (SPEC_note)	0.062		0.533
Experience			
Points scored (EXP_note)	-0.012		0.012
Anticipated employment (ref. Pers svcs, security) (CNproj_dom)			*13.100*
Finance and business	-0.392	*	5.336
Life sciences, architecture	-0.602	**	8.009
Health, law, social sciences and education	-0.592	***	10.176
Arts and culture	-0.395	*	4.494
Primary and secondary sectors, trades and transportation	-0.366	*	4.203
Physics and engineering	-0.470	***	7.344
Mathematics, computer science	-0.368		3.349
Sales	-0.333	*	3.842
Motivation			
Points scored (MOTV_note	0.104		0.240
Personal suitability			
Points scored (QALP_note)	-0.161		0.260
Knowledge of Quebec			
Points scored (CONQ_note)	-0.195	*	4.666
Ties with Quebec (ref. no) (LIEQ_note)			*2.980*
Friends	-0.127		2.161
Relatives	-0.165		2.789
Visit to Quebec (ref. no) (SEJQ_note)			*86,76****
Other visit	0.532	***	44.356
Work or study	0.791	***	77.088
Children			
Points scored (NGEN_note)	-0.391		3.423
Spouse's level of French			
Points scored (0 for no spouse) (FRAC_R_note)	0.040		0.078
Presence of a spouse (ref. no)			
Yes (spouse)	0.070		0.292
Selection category (ref. P.E.M.P)			*6,5**
P.D.Q	0.033		0.109
Other (assured job and exemption)	0.308	*	6.401
Likelihood logarithm			-7795.4556
R^2 Cox and Snell / LR Chi2	0.130		190.97***
n			1369.000
No. of events			1211.000

*** P<=.001 ** P<=.01 * P<=.0

Main selection grid results

Overall, the explanatory power of this regression is fairly modest: 13% of the variations would be caused by variables included in the analysis. In order of importance, the factors most influencing speed of first job access are visits to Québec (chi2 of 86.8 vs the 191 in the model) and level of education (17.4). To a lesser extent, anticipated employment field also affects the dependent variable though this time only locally[18] (chi2 of 13.1, generally insignificant). The selection program (6.5), level of French (5.6) and English (4.5) and knowledge of Québec (4.7) also significantly affect the speed of first job access. Characteristics like the presence of a spouse or her level of French, the presence of children or ties to Québec, work experience, second specialty, preferred educational background, postsecondary studies in French, the measurement of personal suitability, personal motivation and age have no effect on speed of first job access.

We note that prior visits to Québec to study or work or for any other purpose hasten entry into the labour market. A number of theories can be advanced to explain this. Obviously visits to Québec made it possible to build local social networks. This is especially likely where points were scored for work or study visits. To the networking effect would be added proof of work on the Québec job market—"Québec experience"—not to mention that training received in Québec will probably get more recognition on the local job market. These work or study visits are by far the leading factor favouring first job access. These respondents are also significantly more successful than those who visited for other reasons. As for applicants scoring points for other types of visits, they are also well ahead in terms of first access to the job market. Points scored for level of education help to hasten first job access as well. Respondents with doctoral backgrounds find first jobs faster than all the others while the other levels are undifferentiated in this respect.

[18] Here we have a significant contrast between the reference category (personal services and security) and almost all other categories. However we cannot consider that the variable overall has a significant effect.

The anticipated employment field suggests that the immigrants chosen for jobs in the personal services or security fields (reference category) are the ones with the fastest first job access compared to all other categories except mathematics and computer science, where the result is not significant.[19]

With regard to language levels as measured by the selection grid, a good level of French or English seems to speed job integration. Finally, the immigrant selection category influences the dependent variable more than the other controlled characteristics. Immigrants admitted for assured jobs or exemptions find jobs more quickly than those chosen for the employability and occupational mobility program, which is to be expected since respondents with assured employment were awaited by their future employers. However there is no distinction between the occupation in demand category (P.D.Q) and the reference category (P.E.M.P).

d) The predictive potential of the whole set of characteristics

Regression tables

Table 5 reports the survival analysis results with the five sets of factors as control variables. Table 6 reports the sixth model corresponding to all the variables available in Block E, the analysis of which has been reproduced in a piecewise exponential model (see section 1.4).

At the bottom of the table are Cox's overall regression indicators. The important thing here is to look at the R2 (Cox and Snell) and the chi2 of the loglikelihood (LR chi2) that show the importance of the explanation of the model. At the bottom of Table A, the overall indicator of piecewise exponential regression is provided by Wald's chi2. The loglikelihood and Wald chi2s are not comparable.[20]

[19] *Ibid*.

[20] The analysis includes 1,369 respondents out of a total of 1,541. The 172 missing values come from the variables in the regression—e.g., 125 missing values for the selection grid variables added to those missing in the questionnaire, which will be used in the final regression model.

Table 5 – Speed of first job access in Québec

	Block A	Block B	Block C	Block D	Block E	
Variables	**Coefficient**	**Sig.**	**Coefficient**	**Sig.**	**Coefficient**	**Sig.**	**Chi 2**
Sex (ref. Male)							
Female (sex)	-0.014		-0.009		0.026		-0.028		-0.029		0.144
Age							
(age)	-0.006		0.001		0.001		0.036		0.035		0.593
Age squared							
(age2)	0.000		0.000		0.000		-0.001		-0.001		0.941
Knowledge of English							
Points scored (ANGS_note)	0.339		0.322		0.184		0.468		0.484		1.664
Knowledge of French							
Points scored (NGFR_note)	0.456		0.390		0.045		0.144		0.147		0.185
Spouse's knowledge of French							
Points scored (Pts_fr_conjoint)	0.087		0.075		0.061		0.044		0.036		0.058
Level of bilingualism							
Points scored (bilingualism)	-0.183		-0.203		-0.069		-0.375		-0.393		0.922
Field of study (ref. Tech / specialized training)(q70r)	chi2=23,47	***	chi2=22,06	**	chi2=18,42	**	chi2=21,73	**			*21,18*	**
General training, arts etc.	-0.365	**	-0.344	*	-0.332	*	-0.352	*	-0.343	*	6.052	
Management, admin. and finance	-0.126		-0.116		-0.112		-0.112		-0.112		1.103	
Exact sciences (mathematics, physics)	-0.358	**	-0.359	**	-0.316	**	-0.359	**	-0.351	**	8.526	
Applied sciences (engineering)	-0.221	*	-0.201	*	-0.168		-0.162		-0.160		2.924	
Health sciences	-0.670	***	-0.661	***	-0.578	**	-0.502	*	-0.485	*	5.429	
Social sciences and Humanities	-0.349	**	-0.334	**	-0.329	**	-0.397	***	-0.401	***	11.903	
Level of education (doct.) (SCOL_cat_note)	chi2=20,49	***	chi2=17,23	**	chi2=17,29	**	chi2=17,14	**			*16,93*	**
Below secondary	-0.837	*	-0.808	*	-0.843	*	-0.822	*	-0.824	*	5.429	
Secondary	-0.607	**	-0.557	**	-0.634	**	-0.596	**	-0.590	**	7.840	
Postsecondary	-0.574	***	-0.504	**	-0.550	**	-0.547	**	-0.546	**	9.672	
Bachelor's	-0.686	***	-0.623	***	-0.620	***	-0.597	***	-0.591	***	13.323	
Master's level	-0.589	***	-0.569	***	-0.631	***	-0.657	***	-0.653	***	15.682	
Work experience							
Points scored (EXP_note)	-0.026		-0.035		0.004		-0.042		-0.049		0.137	
Anticipated employ (ref. Pers. Svcs, security)(CNPproj)	chi2=10,86		chi2=9,23		chi2=6,15		chi2=6,80				*7.080*	
Finance & business	-0.442	*	-0.395	*	-0.296		-0.279		-0.270		2.250	
Life sciences, architecture	-0.553	*	-0.503	*	-0.398		-0.433	*	-0.434	*	3.960	
Health, law, social sciences & education	-0.545	**	-0.495	**	-0.391	*	-0.408	*	-0.401	*	4.244	
Arts / culture	-0.428	*	-0.402	*	-0.291		-0.291		-0.289		2.280	
Primary/secondary sectors, trades and transportation	-0.443	*	-0.419	*	-0.331		-0.402	*	-0.417	*	5.108	
Physics / engineer	-0.525	**	-0.511	**	-0.424	*	-0.413	*	-0.416	*	5.336	
Mathematics, computer sci.	-0.436	*	-0.453	*	-0.386		-0.380		-0.378		3.460	
Sales	-0.368	*	-0.357	*	-0.282		-0.331		-0.329		3.386	
Prior employment level (jobless) (q73ncr)	chi2=9,28		chi2=10,40	*	chi2=13,47	**	chi2=11,75	*			*11,8*	*
Managerial level	0.327	*	0.365	*	0.443	**	0.417	**	0.424	**	8.468	
University level	0.248	*	0.258	*	0.316	*	0.291	*	0.293	*	5.476	
College and technical level	0.130		0.144		0.226		0.182		0.189		2.074	
Secondary or vocational level	0.059		0.073		0.111		0.118		0.121		0.706	
Pres. of children							
Points scored (NGEN_note)	-0.385		-0.347		-0.314		-0.316		-0.326		2.341	
Motivation							
Points scored (MOTV_note)	0.089		0.047		0.058		-0.028		-0.022		0.010	
Personal suitability							
Points scored (QALP_note)	-0.430		-0.366		-0.205		0.092		0.075		0.058	
Ties to Quebec (ref. no) (LIEQ_note)	chi2=3,06		chi2=2,36		chi2=2,05		chi2=1,65				*1.710*	
Friends	-0.128		-0.114		-0.105		-0.101		-0.100		1.300	
Relatives	-0.168		-0.147		-0.138		-0.034		-0.029		0.084	
Visits to Quebec (ref. no) (SEJQ_note)	chi2=83,09	***	chi2=79,46	***	chi2=72,55	***	chi2=37,50	***			*35,33*	***
Other visit	0.516	***	0.487	***	0.465	***	0.163		0.160		3.133	
Work or study	0.726	***	0.734	***	0.713	***	0.546	***	0.537	***	33.989	
Presence of spouse (ref. no)							
Yes (spouse)	-0.004		0.008		0.033		0.032		0.044		0.102	
Selection category (ref. P.E.M.P.) (categ3)	chi2=5.67		chi2=4.65		chi2=3.26		chi2=2.77				*2.570*	
P.D.Q	0.024		0.066		0.086		0.080		0.080		0.578	
Other (assured job and exemption)	0.274	*	0.250	*	0.204		0.188		0.180		2.341	

(cont'd on next page)

Table 5 (cont'd) – Speed of first job access in Québec

	BlockA	Block B	Block C	Block D	Block E	
Variables	**Coefficient Sig.**	**Coefficient Sig.**	**Coefficient Sig.**	**Coefficient Sig.**	**Coefficient Sig**	**Chi 2**
Enrolment in a French course (ref. no)						
Yes (recode Q50F)		-0.090	0.071	0.064	0.068	0.397
Enrolment in an English course (ref. no)						
Yes (recode Q50G)		-0.183 *	-0.185 *	-0.135	-0.141	2.856
Enrolment in another course (ref. no)						
Yes (recode Q50H)		-0.227	-0.154	-0.127	-0.126	0.757
Application for a degree equivalency (ref. no)						
Yes (recode Q50I)		-0.144 *	-0.137	-0.114	-0.114	2.496
Application for official documents (ref. no)						
Yes (recode Q50B)		-0.088	-0.054	-0.023	-0.019	0.096
Application to an occupational agency (ref. no)						
Yes (recode Q50E)		0.019	0.032	0.036	0.050	0.325
Job application (ref. no)						
yes (recode Q50A)		0.139 *	0.113	0.100	0.100	2.403
Taking an English course (ref. no)						
Yes (crs_ang)			0.255	0.227	0.240	1.588
Completing an English course (ref. no)						
Yes (dip_crs_ang)			0.111	0.127	0.128	2.161
Taking a French course (ref. no)						
Yes (crs_fr)			-0.251	-0.293	-0.284	1.166
Completing a French course (ref. no)						
Yes (dip_crs_fr)			0.698 ***	0.777 ***	0.783 ***	24.206
Another kind of training course (ref. no)						
Yes (crs_autre)			-0.533 ***	-0.551 ***	-0.541 ***	11.022
Completing other training (ref. no)						
Yes (dip_crs_autre)			0.155	0.127	0.133	2.822
Region of origin (ref. Western Europe, US) (origin)				chi2=69.99***		*68.70****
Maghreb				-0.705 ***	-0.694 ***	54.317
Eastern Europe & ex-USSR				-0.310 *	-0.297 *	5.018
Eastern Asia, Oceania				-0.630 ***	-0.636 ***	12.250
Western asia and Middle East				-0.802 ***	-0.803 ***	26.214
Americas except US				-0.313 *	-0.308	3.725
Africa except Maghreb				-0.351 *	-0.332 *	4.452
Long economic cycle (fact1)					-0.008	0.002
Medium economic cycle (fact2)					-0.025	0.073
Short economic cycle (fact3)					0.087 *	6.101
n	1369	1369	1369	1369		1369.0
Number of events	1211	1211	1211	1211		1211.0
LR Chi2	217,2***	241,13***	306,61***	377,88***		386,01***
R2 Cox & Snell	0.150	0.160	0.200	0.240	0.250	
Loglikelihood	-7782.3413	-7770.3761	-7737.634	-7702.0008		-7697.9345
Loglikelihood . test A and B	23.93***					
Loglikelihood . test B and C		65.48***				
Loglikelihood . test C and D			71.27***			
Loglikelihood . test D and E				8.13*		

*** P<=.001 ** P<=.01 * P<=.05

Table 6: Speed of first job access, effects differentiated by periods

	0 to 6 months	6 to 12 months	Over 12 months		Difference periods 1-3
Variables	**Coefficient Sig.**	**Coefficient Sig.**	**Coefficient Sig.**	**Chi 2**	**Chi 2**
TP					
H0	-2.846 **	-4.293 ***	-3.649 **		1.190
Sex (ref. Male)					
Female (sex)		-0.051		0.449	
Age					
(age)		0.041		0.757	
Age squared					
(age2)		-0.001		1.210	
Knowledge of English					
Points scored (ANGS_note)		0.521		1.823	
Knowledge of French					
Points scored (NGFR_note)		0.130		0.137	
Spouse's knowledge of French					
Points scored (Pts_fr_conjoint)		0.010		0.005	
Level of bilingualism					
Points scored (bilingualism)		-0.456		1.166	
Field of study (ref. Tech / specialized training) (q70r)				28,57***	
General training, arts etc.		-0.399 **		8.066	
Management, admin. and finance		-0.151		1.932	
Exact sciences (mathematics, physics)		-0.403 ***		11.022	
Applied sciences (engineering)		-0.213 *		5.108	
Health sciences		-0.570 **		7.398	
Social sciences and Humanities		-0.487 ***		17.140	
Level of education (doct.)[e] (SCOL_cat_note)				23,88***	
Below secondary		-0.976 **		7.563	
Secondary		-0.653 **		9.425	
Postsecondary		-0.676 ***		14.516	
Bachelor's		-0.724 ***		19.448	
Master's level		-0.788 ***		21.902	
Work experience					
Points scored (EXP_note)		-0.091		0.462	
Anticipated employment (ref. Pers svcs, security) (CNPproj)				11.240	
Finance & business		-0.334		3.386	
Life sciences, architecture		-0.507 *		5.382	
Health, law, soc. sciences and education		-0.520 **		7.023	
Arts & culture		-0.394 *		4.203	
Primary/secondary sectors, trades and transportation		-0.546 **		8.526	
Physics and eng.		-0.519 **		8.237	
Mathematics, computer sci.		-0.470 *		5.198	
Sales		-0.416 *		5.336	
Previous employment level (ref. jobless) (q73ncr)				16,83**	
Managerial level		0.504 ***		11.972	
University level		0.363 *		8.180	
College and technical level		0.218		2.690	
Secondary or vocational level		0.168		1.346	
Pres. of children					
Points scored (NGEN_note)		-0.411		3.572	
Motivation					
Points scored (MOTV_note)		-0.011		0.003	
Personal suitability					
Points scored (QALP_note)		0.077		0.058	
Ties to Quebec (ref. no) (LIEQ_note)				1.730	
Friends		-0.110		1.563	
Relatives		-0.053		0.281	
Visits to Quebec (ref. no) (SEJQ_note)				44,82***	
Other visit		0.119		1.716	
For work or study		0.592 ***		41.216	
Presence of spouse (ref. no)					
Yes (spouse)		0.085		0.372	
Selection category (ref. P.E.M.P.) (categ3)				3.120	
P.D.Q		0.089		0.706	
Other (assured job and exemption)		0.202		2.822	

(cont'd on next page)

Table 6 (cont'd): Speed of first job access, effects differentiated by periods

	0 to 6 months		6 to 12 months		Over 12 months			Difference periods 1-3
Variables	**Coefficient**	**Sig.**	**Coefficient**	**Sig.**	**Coefficient**	**Sig.**	**Chi 2**	**Chi 2**
Enrolment in a French course (ref. no)								
Yes (recode Q50F)			0.056				0.260	
Enrolment in an English course (ref. no)								
Yes (recode Q50G)			-0.182	*			4.580	
Enrolment in another course (ref. no)								
Yes (recode Q50H)			-0.160				1.166	
Application for degree equivalency (ref. no)								
Yes (recode Q50I)			-0.118				2.624	
Application for official documents (ref. no)								
Yes (recode Q50B)			-0.040				0.397	
Application to an occupational agency (ref. no)								
Yes (recode Q50E)			0.063				0.518	
Job application (ref. no)								
Yes (recode Q50A)			0.121				3.460	
Taking an English course (ref. no)								
Yes (crs_ang)	0.074		-0.186		-0.001		0.250	0.020
Completing an English course (ref. no)								
Yes (dip_crs_ang)	0.176		-0.127		-0.468		6.000	3,91*
Taking a French course (ref. no)								
Yes (crs_fr)	-0.501		0.503		-0.412		3.400	0.010
Completing a French course (ref. no)								
Yes (dip_crs_fr)	0.724	***	1.561	*	0.822		23,26***	0.020
Taking another type of training (ref. no)								
Yes (crs_autre)	-0.843	***	-0.784	*	-0.333		14,61**	1.250
Completing another type of training (ref. no)								
Yes (dip_crs_autre)	0.084		0.360		-0.130		3.230	0.410
Region of origin (ref. Western Europe, US) (origin)							103,25***	
Maghreb	-0.877	***	-0.620	**	-0.255		69,92***	5,35*
Eastern Europe and ex-USSR	-0.416	**	-0.573	*	0.035		10,98*	2.340
East Asia and Oceania	-0.442	*	-1.624	**	-0.891	*	14,95**	1.220
Western Asia and Middle East	-0.832	***	-1.325	***	-0.708	*	31,39***	0.110
Americas except for US	-0.350		-0.218		-0.530		4.880	0.150
Africa except for Maghreb	-0.395	*	-0.006		-1.028		8,05*	1.210
Long economic cycle								
(fact1)			-0.474	*			6.503	
Medium-term economic cycle								
(fact2)			0.088				0.941	
Short economic cycle								
(fact3)			0.075	*			4.537	
n								1369.000
Number of events								1211.000
Wald chi2 (87)								13751,68***
Loglikelihood								-2432.317

*** P<=.001 ** P<=.01 * P<=.05

=> Coefficients calculated for the whole period studied

Main extended characteristics results

Every block added in the analysis contributes significantly to explaining the model inasmuch as the preliminary activities add a further explanation of the phenomenon (Block B adds a chi2 of 24), the settlement process (Block C adds a chi2 of 65), regions of origin (Block D adds a chi2 of 71) and economic cycles (Block E adds a chi2 of 8). In the last model (Block E, Table 5) the best explanation of the whole model is obtained by regions of origin (chi2 of 69 out of a model total of 386) when all the characteristics have been controlled, along with the factors of prior visits (chi2 of 35) or completing a French course (chi2 of 24). Other significant but less important factors are field of study (chi2 of 21), level of education (chi2 of 17), level of employment prior to immigration (chi2 of 12), taking a training course other than a language course (chi2 of 11), anticipated employment field (chi2 of 7) and the short economic cycle (chi2 of 6).

When controlled by all the characteristics the model accounts for 25% of the variations in first job access and the factors that will have facilitated first job access the most are primarily certain regions of origin (Western Europe and the US and the Americas except the US), prior visits for work or study, completing a French course, specialized technical training (for a manual trade) or a doctoral education level. Immigrants who held jobs of a managerial or university-level before immigrating also find jobs more quickly than those who had never had a job before immigrating. Although the effects of anticipated employment are not too clear (this variable works locally but not globally), immigrants who anticipated employment in the personal services or security fields come out ahead of those in other fields. Finally, the short economic cycle shows that immigrants find jobs more readily in summertime.

Still concerning Block E, which allows us to control all the variables, the most adverse factors are the regions of origin in Western Asia and the Middle East followed by the Maghreb, East Asia and Oceania, Africa except the Maghreb and Eastern Europe with the former USSR. Some fields of study are penalized in speed of job market

access: this applies to health sciences, humanities and social sciences, exact sciences (mathematics and physics) and general training (arts, etc.) compared to specialized technical training (manual trades).

As for level of education, the below secondary and master's levels had the strongest negative impacts. Backgrounds at the bachelor's, secondary and postsecondary levels also worked against immigrants compared to the doctoral level. Training other than language training delays job access owing to the fact that this is a competing activity. Those not reporting employment before immigration had the most trouble finding first jobs along with those anticipating employment in the life sciences and architecture, physics and engineering, primary and secondary sectors, trades and transportation and health, law, social sciences and education categories.

Speed of first job access is not dependent on the other characteristics of the analysis when all the factors are controlled. Knowledge of official languages, age at immigration, selection categories and other selection grid factors thus do not affect first job access. By consolidating in blocks we are able to determine their general importance in terms of all personal characteristics (the effect of the factors in Blocks A and B), the settlement process (the factors in Block C) and all the effects of the host society (Blocks D and E). We find that personal characteristics explain slightly under half of the phenomenon (chi2 of 123.1) whereas the settlement process (chi2 of 64.4) and the factors of the host society (chi2 of 78) together explain the other half.

But we have to return in more detail to the impact of the region of origin and settlement process to better define their effects.

The region of origin effect may stem from systematic and permanent discrimination against immigrants of certain backgrounds in the Québec labour market. However It may, on the contrary, reflect a temporary stall for these immigrants in the same market. This delay may be linked either to the process of learning the mores prevalent in that market (socialization, acculturation) or to the implementation of strategies to

circumvent obstacles (overinvesting in education, creating their own jobs, searching for financing or business partners, etc.) in response, for example, to the differentiated recognition of degrees by region of origin. We can distinguish between these two families of assumptions by watching how impact of the region of origin behaves during the settlement process. If this effect is constant throughout the period under study we will be obliged to prefer the systematic discrimination hypothesis. If this effect is present as settlement begins but disappears later on we have to reject the systematic discrimination hypothesis: if a given origin is the object of discrimination, we cannot assume that it is only temporarily so. We will then have to infer that we are in the presence of transient difficulties that probably involve socialization, acculturation or a circumvention process. Of course regions of origin can have different profiles, and these differences can be seen by using the piecewise exponential survival regression that helps to pinpoint and compare effects by periods.

The same methodology will also help to review the effect of settlement initiatives. In fact we may expect the accelerator effect of a course to differ when settlement begins and later in the process.

The last analytical model (Table 6) uses the same variables as those in Block E but this time the analysis is repeated for three time periods: the first six months, the second six months and the period after Year 1.[21] These three periods were chosen in accordance with the shape of the job access speed curve (see Figure 4). We measured the presence of separate effects by periods solely for regions of origin and the settlement process. This distinction will enable us to see whether the effects of the characteristics are constant or important for only a limited time.

[21] See paragraph (b) in section 1.4.

The piecewise exponential survival regression and logic variables reference category

When we divide the effect of the variables by time periods, two major opportunities arise for the researcher to insert logical (0/1) variables stemming from a nominal variable (like completing a course, regions of origin, etc.). The first is to make the reference point (which will be the category left out of the analysis) a category *exclusively for one time period*. The second is to make the reference point a category *regardless of time* or *for all periods together*. These two approaches are possible because we are essentially looking at one equation in which we note interactions over time.

Let us take the end of a course as an example. In the first case we would make *not completing a course in the first period* our reference and evaluate five coefficients related to this "excluded category": two coefficients for the differential effect of this category in periods 2 and 3 and three for the effect of having completed in each of the three periods. In the second case we would make *not completing a course at any time* our reference category and evaluate only three coefficients for this "excluded category" to measure the specific impact of completing a course in each of the three periods compared to *everybody* who had not completed a course.

The first approach has more analytical power because we can use it to test the evolving effect of the reference category itself during these periods. However it is more complex and calls for post tests to look for a difference between the yeas and the nays in each period and above all tends to muddle our impression of the phenomenon. It is hard to imagine the meaning, in for our example, of not completing a course in period 1 instead of the others. If the variable already has an effect in period 1 it helps to redefine the group that survives to the next period since those who completed a course have a better chance having found a first job.

The second approach, unlike the other, has clarity because the reference group is monolithic and inclusive. In our example it refers to everyone (person/time) who has not completed a course. The description of the effect is greatly simplified because the emphasis is placed on course completion in each period and the comparison of effects is direct.

We opted systematically for this second approach: the group making up the reference category does not change with time periods.

The region of origin effect

There is nothing unusual in seeing immigrants' home regions used to differentiate them in terms of job access and access to skilled employment: this can be seen as merely reflecting the different market characteristics of nationals from these countries.

However it is not usual to find this differentiation by region of origin still present when we are adding variables to the analysis that are used to control market characteristics: the effect of the region of origin now has no ordinary explanation. We speak then of residual proof of discrimination (since we controlled for the usual factors of differentiation). In the type of survey we are analysing here this is the only way of spotting discrimination: when we have controlled for the socially acceptable factors of differentiation any that remain can only stem from socially unacceptable causes that we lump together under the general term of "discrimination."

This approach is common and conclusive when we are working on general populations. When dealing with immigrant settlement it has to be qualified to accommodate the stage in settlement when these differentiations are at work.

Of course if they are at work throughout the settlement process it is highly likely that we are dealing with discrimination, even if we have to reduce the expression "throughout the settlement process" to just the first five years observed in the survey.

However if the region of origin effect does not persist we have to stop talking about discrimination. In fact it is hard to imagine why a society that practises discrimination against certain groups would affect the members of these groups briefly in their lives and then forget about them. It is more likely that we are looking at a personal adjustment process to the host society. This may be a period of acculturation or socialization to the new society's way of doing things or learning how its labour market works. It may involve delays imposed by the society itself – delays in certifying degree equivalencies, access to certain courses, etc. It may also involve problems associated with origin in terms of new immigrants' access to or initiation of social networks, networks with information about available jobs. We may also include what could be termed "circumvention strategies" like the option of self-employment or starting one's own business in response to problems with labour market access. All these effects should detect the region of origin effect as the settlement process begins and see it fade away later on. If we were to note this pattern there would be no way of differentiating in more specific terms which of the options we have mentioned is happening, but we can at least reject the discrimination hypothesis against one or more of the regions of origin concerned.

We find the same determinants as the ones in the Block E model: regions of origin, visits to Québec for study or work, specialized technical training (manual trades), a doctorate, completing a French course and a managerial or university-level job prior to immigration all hasten first job access. However taking another kind of training delays this access and the seasonal economic cycle (summertime) will facilitate it. Two last characteristics have an added effect in Block E: the preliminaries to enrolment in an English course and the long economic cycle. Though the first has a delaying effect, it is hard to interpret the second. The long economic cycle seems to have the effect of time passing in the analyses (always growing) and cannot really be interpreted (cf. the characteristics of the long economic cycle in section 2.5.6). We left it in the analyses to show that economic cycles are ultimately unimportant in terms of selected immigrants' first job access.

As regards region of origin effects by periods, two situations emerge clearly.

The Western Asia / Middle East and East Asia / Oceania groups have more difficulty finding first jobs than the Western Europe / United States group in all periods. These difficulties persist in all periods and the third period effect is the same as the first. These immigrants are victims of a permanent difficulty on the time scale considered and we may assume that they experience discrimination on the Québec labour market since all the other differentiation criteria are controlled.

Maghreb immigrants' difficulties with first job access are significant in the first year of residence compared to the Western Europe / United States group at all times but they disappear after twelve months as confirmed by a significant difference in the coefficients for 0-6 months and over 12 months. In this case we have to cite the assumptions of socialization, acculturation and even circumvention strategies working in the short term. It will be noted, of course, that these effects are net of all the other variables controlled by the model and are thus not effects related to the differential makeup of these groups. Since the reference group is fixed and inclusive these

effects are not the results of a change from one period to another in the reference group.

The other regions of origin show less definite effects. Respondents from Eastern Europe and the former USSR and Africa except the Maghreb have more difficulty with first job access than the reference group as the settlement process begins but these effects are insignificant after twelve months' residence. In both cases, however, we are unable to state that the third period coefficient differs significantly from the first. We cannot make a clear decision between the discrimination and the adjustment hypotheses.

Lastly, completing a French course accelerates first job entry in the initial year of residence. This effect disappears after a year although the coefficient does not differ significantly from the one for the first six months. Enrolment in another kind of training delays job access in the first year. Here too the effect disappears after a year, although this disappearance is not pronounced enough for us to decide without reservation.

Section 3: A job commensurate with education

3.1 First look at job qualification / dequalification

We have already seen in the data and methods section that the job classification used for the survey allowed us to assign occupations a general level of education. By comparing respondents' levels of education with their jobs we can determine whether these respondents are undergoing an occupational dequalification or holding jobs commensurate with their skills. Before tackling complex analyses to look for the determinants for obtaining skilled employment in Québec, we have to describe the broad lines of this phenomenon. The simplest way of doing this is to look at the link between respondents' pre-immigration levels of education and the general education requirements for the jobs they held prior to immigrating and then after six months, a year and two years of residence. This would give us an initial idea of the extent of requalification. We would also have a standard provided by the relation between education and pre-immigration employment. Since we cannot compare our cohort with the Québec population (at what point in the lives of natives should we compare immigrants?), we can generate an order of magnitude for this cohort's pre-immigration situation. Note that we are not looking at the similarity in *skill sets*, although that probably accounts for these persons' occupational identities and some of their sense of dequalification. That study would call for a major investment to trace the edges of these skill sets. As this instrument does not exist and out of concern for the vagueness of subjective measurements,[22] we chose a more general measurement, that of the *skill level,* that is less open to interpretation.

a) Education and pre-immigration employment: a standard

An initial way of studying the job qualification issue is to look at the tie between education and employment abroad (prior to immigration) as presented in Table 7.[23]

[22] These measurements ask the respondent to gauge the equivalency between his job and field of training. See, for example, the Godin report (Table 28, pp. 59-60 in Part 2).

[23] Levels C and D have been compounded to have adequate strength in each box in the table.

Table 7: Education and pre-immigration employment

		Pre-immigration employment level (q73ncr)				
		0	A	B	C	Total
Level of education	A	110	521	178	74	883
		12.46	59	20.16	8.38	100
	B	33	82	125	49	289
		11.42	28.37	43.25	16.96	100
	C	35	33	117	58	243
		14.4	13.58	48.15	23.87	100
	Total	178	636	420	181	1415
		12.58	44.95	29.68	12.79	100
	Pearson chi2(6) = 224.1157 Pr = 0.000					
	Pearson chi2(2) off diagonal = 12.9174 Pr = 0.002					

This table shows that 57.5% of immigrants who had held jobs before immigrating had positions strictly commensurate with education (the table diagonal plus box A0), whereas 21.2% held positions above their education levels (the light grey triangle at lower left): we will call this *upward mobility*. In all, 78.7% of immigrants held jobs they could consider "skilled" and 21.3% were *downwardly mobile* (the dark grey triangle at upper right). This, in a way, provides us with an order of magnitude allowing a comparison with what happens in Québec —if requalification is less important there we may feel there is a problem. Of course the pre-immigration situation is not necessarily "ideal" since in some countries, given their economic situation, dequalification is commonplace. Moreover this is often the motivation for migrating: to realize one's potential as human capital. All the more reason for seeing this tie as a minimum standard.

We can also calculate the association in the table (the dependence between its two variables). There is general association (chi2 of 224) between the two criteria used. Employment level heavily depends on education. This is also true if we look only at mobiles. When immigrants do not have jobs that match their education perfectly, that is when they are upwardly or downwardly mobile, they move at a level close to their own: the chi2 of quasi-independence calculated off diagonal is significant. Movements thus depend on level of education and seem close to the diagonal.

b) Mobility in the host society

We repeated the above analysis at three points during the settlement process in Québec to reflect employment levels at the sixth month and the first and second year of residence. Table 8 offers a picture of the situation after six months' residence.

Table 8: Education and employment after six months' residence

		Employment level at 6 months (nc6mois)					
		0	**A**	**B**	**C**	**D**	**Total**
	A	48	249	119	97	38	551
		8.71	45.19	21.6	17.6	6.9	100
Level of educati	**B**	18	41	54	46	19	178
		10.11	23.03	30.34	25.84	10.67	100
	C	8	4	50	22	15	99
		8.08	4.04	50.51	22.22	15.15	100
	D	8	8	21	22	15	74
		10.81	10.81	28.38	29.73	20.27	100
	Total	82	302	244	187	87	902
		9.09	33.48	27.05	20.73	9.65	100
	Pearson chi2(12) = 117.0713 Pr = 0.000						
	Pearson chi2(7) off diagonal = 22.1713 Pr = 0.002						

After six months' residence upward mobility was 19.9% (light grey area) and thus very close to what it was in the country of origin. Persons in jobs commensurate with their education were numerous as well (43%) and a majority of immigrants (62.9%) had found jobs at an equivalent or higher level. However more than one third of those employed at the sixth month (37%: dark grey area) had jobs below their level of education.

The immigrants' job placement situation is not random. For one thing, there is a dependency between level of education and level of employment (chi2 of 117, significant) and as well, people not working at an equivalent level do find jobs at close skill levels (chi2 of 22, significant).

Table 9: Education and employment after one year's residence

		Employment level after 1 year (nc1an)					
		0	A	B	C	D	Total
Level of educati	A	55	295	147	111	41	649
		8.47	45.45	22.65	17.1	6.32	100
	B	22	45	77	42	14	200
		11	22.5	38.5	21	7	100
	C	8	10	58	22	10	108
		7.41	9.26	53.7	20.37	9.26	100
	D	11	8	21	26	10	76
		14.47	10.53	27.63	34.21	13.16	100
	Total	96	358	303	201	75	1033
		9.29	34.66	29.33	19.46	7.26	100
	Pearson chi2(12) = 120.1798 Pr = 0.000						
	Pearson chi2(7) off diagonal = 25.7096 Pr = 0.001						

The situation changes little after one year's residence. Upward mobility is the same with one in five people in jobs (20.2%) above their level of education. People at an equivalent or higher level represent 64.6% of employed immigrants. We note a slight drop to 35.3% in the percentage of people employed at a level below their education. This is still important but tends to decline. However there is a basic fact here: more people are employed after a year (1033) than after six months (903). As a consequence, the sample contains 100 more people (667 vs 567) in skilled jobs after one year's residence than after six months.

Here again the job depends on the immigrant's level of education. We note further that persons who do not requalify still find jobs at a level close to their level of education: this suggests that they can requalify in the medium or long term.

Table 10: Education and employment after two years' residence

		Employment level after 2 years (nc2ans)					
		0	A	B	C	D	Total
Level of education	A	60	280	114	93	16	563
		10.66	49.73	20.25	16.52	2.84	100
	B	17	46	67	40	5	175
		9.71	26.29	38.29	22.86	2.86	100
	C	8	6	51	19	6	90
		8.89	6.67	56.67	21.11	6.67	100
	D	11	7	24	25	5	72
		15.28	9.72	33.33	34.72	6.94	100
	Total	96	339	256	177	32	900
		10.67	37.67	28.44	19.67	3.56	100
	Pearson chi2(12) = 130.5404 Pr = 0.000						
	Pearson chi2(7) off diagonal = 30.0392 Pr = 0.000						

Finally, the situation after two years[24] shows an upwardly mobile percentage similar to the one found for the situation prior to immigration: 21.7%. Some 69.6% of employed respondents (vs 64.6% after one year) had skilled jobs compared to 78.7% prior to immigration. The ties between education and employment level at two years are still significant. Employed respondents unable to find an equivalent are also found in jobs at a level close to their level of education.

This initial analysis enables us to conclude that immigrants position themselves at levels close to their qualifications and catch-up occurs over time. These tables have the advantage of drawing a simple, intuitive picture of this phenomenon. However these measurements have the shortcoming of considering only fixed points in time: this cannot help us to fully understand the dynamic of this phenomenon or the factors that facilitate or inhibit it. The analytical methods for transitions that we used for first job access will help to bridge this gap.

[24] It will be noted that the number of persons employed after two years is less than after one year, not because of a lower participation rate but because of a steady drop in total number of respondent reflecting the nature of the sample past the 21 months' residence point.

3.2 First job commensurate with skill level

a) Definition

How much time does it take for selected immigrants to find jobs with complexity ratings at least equivalent to their levels of education? Equivalency is attained at that point in the settlement process when immigrants find jobs that are equivalent or superior to their pre-immigration education levels.

Since the analyses take the immigrants' entire period of residence into consideration, requalification can occur at any employment stage from the first to the n^{th} job. Those who have never been employed during their residence (11.%) may still experience this event at any time during the period of observation. Even if this does not happen in the period it may well happen later on, and so these people are considered in the analyses. However persons of unknown level of education (three respondents) are not part of the group "at risk" of experiencing the event and are therefore left out of the analysis.

b) Description

The following two survival curves (Figures 5 and 6) provide a graphic picture of requalification and, more specifically, of the percentage that did not undergo an initial requalification over time.

The first curve (Figure 5) describes a very rapid requalification process in the first six months that slows somewhat but remains fairly fast for the following year and slows after a year and a half but continues nonetheless.

Some 12.7% of immigrants experience this event in Week 1. Half of them will have found their equivalency by Week 57 (a year and a month) and the cumulative likelihood of having experienced the event after five years' residence is 68.7%.

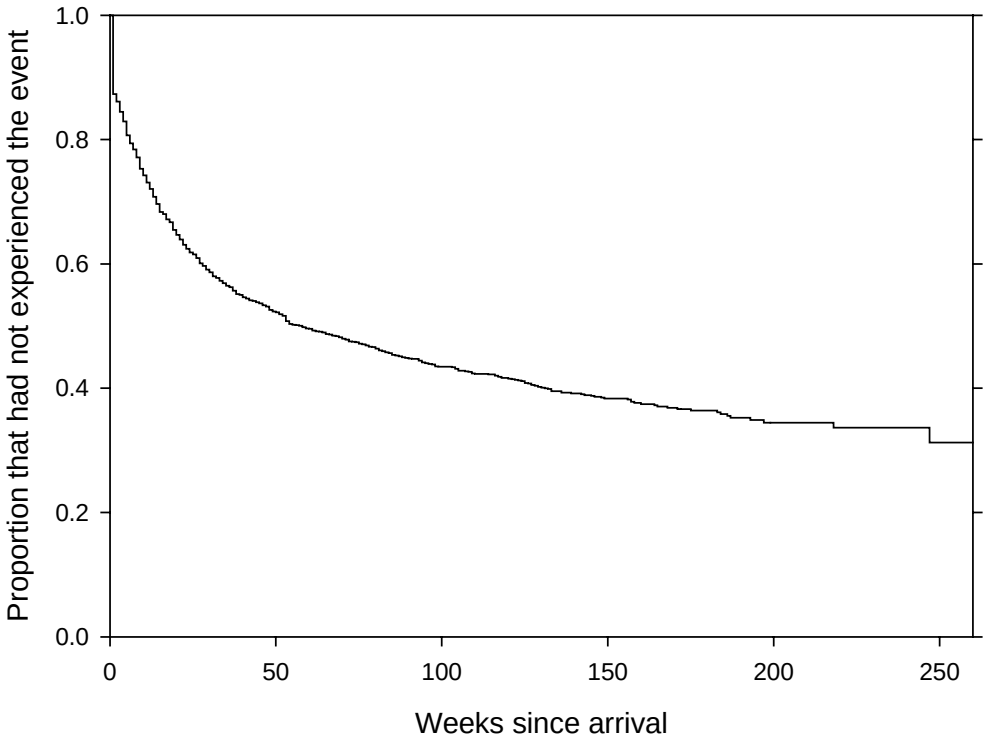


Figure 5 – First skilled job access

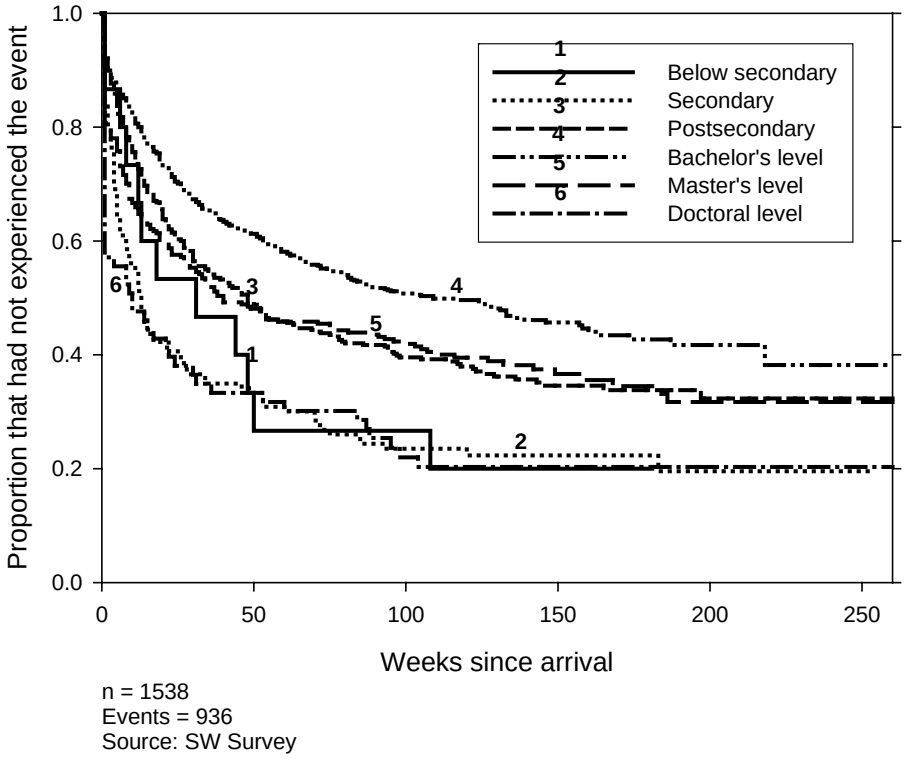


Figure 6 – First skilled job access by level of education

The second graph (Figure 6) is broken down by level of education. We see that the immigrants with a bachelor's level have, in absolute terms, the most difficulty (their survival curve is the highest) followed by those with master's and postsecondary credentials. Doctorates requalify quickly. This level of education tends to guarantee its population university-level employment but still does not guarantee doctoral-level employment, which the classification does not reveal. This requalification might actually indicate relative dequalification: for this group, getting a job lower than A signifies radical dequalification.

It is also important to see this in context with our basic standard, qualification prior to immigration (cf. section 3.1.1). Non-qualification after five years' residence is 31.3%. Calculated in the standard (between the last job before immigration and level of education) this was 21.3% but excluded those who had not worked although these

persons are included in the 31.3%. Adding them together (21.3% + 8.2%= 29.5%) gives us a rate that is barely higher. On the use of its skill levels in employment, the cohort *in general* saw no change one way or another compared to its experience prior to immigration.

c) The predictive potential of the selection grid

Regression table

Table 11 shows the details of the Cox regression for status recovery by level of education. The independent variables used are the selection grid characteristics.[25]

[25] The analysis covers 1402 respondents out of 1541 possibles. The missing values concern persons for whom we have no level of education (3) and all persons who had at least one missing value in the selection grid variables or the ones to be used in the models.

Table 11 - First skilled job access, selection grid variables

Variables	Coefficient	Sig.	Chi 2
Level of English			
Points scored (ANGS_note)	0.220		3.276
Level of French			
Points scored (NGFR_note)	0.405		3.572
Age			
Points scored (NGAG_note)	0.302	*	4.840
Education (ref. doctoral) (SCOL_cat_note)			*53,51***
Education less than secondary diploma	-0.028		0.006
Secondary	-0.058		0.068
Postsecondary non-university	-0.689	***	14.823
Bachelor's level	-0.858	***	26.523
Master's level	-0.714	***	17.472
Postsecondary studies in French (ref. no)			
Yes (POST_note)	0.363	***	10.563
Preferred educational background (ref. no)			
Yes (PRIV_note)	0.315	***	11.290
Second specialty			
Points scored (SPEC_note)	0.018		0.029
Experience			
Points scored (EXP_note)	0.097		0.563
Anticipated employment (ref. Pers svcs, security)			*18,94**
Finance and business	-0.496	*	6.003
Life sciences and architecture	-0.161		0.436
Health, law, social sciences and education	-0.187		0.792
Arts and culture	-0.207		0.941
Primary and secondary sectors, trades and transportation	0.006		0.001
Physics and engineering	-0.429	*	4.326
Mathematics, computer science	-0.243		1.061
Sales	-0.364		3.386
Motivation			
Points scored (MOTV_note)	-0.200		0.640
Personal suitability			
Points scored (QALP_note)	0.171		0.212
Knowledge of Quebec			
Points scored (CONQ_note)	-0.138		1.742
Ties with Quebec (ref. no) (LIEQ_note)			*5.840*
Friends	-0.107		1.103
Relatives	-0.272	*	5.290
Visit to Quebec (ref. no) (SEJQ_note)			*50,61***
Other visit	0.551	***	34.340
Work or study	0.660	***	39.313
Children			
Points scored (NGEN_note)	-0.419		2.993
Spouse's level of French			
Points scored (0 if no spouse) (FRAC_R_note)	0.253		2.045
Yes (spouse)	-0.035		0.044
Selection category (ref. P.E.M.P.)			*11,10***
P.D.Q	0.246	*	4.203
Other (assured job and exemption)	0.412	**	9.242
n			1402.0
Number of events			860.000
R2 Cox and Snell / LL chi2(32)	0.160		240,65***
loglikelihood			-5740.5

*** P<=.001 ** P<=.01 * P<=.05

Main selection grid results

The two most influential selection grid characteristics in terms of status recovery over time are the level of education (chi2 of 53.5 out of a total 240.7) and prior visits to Québec (50.6). To a lesser extent, the field of anticipated employment field (18.9), preferred educational background (11.3), selection category (11.1), postsecondary studies in French (10.6) and points scored for age (4.8) also affect the recovery of one's education level in employment. All other variables—language levels, specialty and experience, motivation and personal suitability, knowledge and ties to Québec, the presence of children and points for the spouse and the spouse's language level—have no effect on the immigrant's capacity to find a job commensurate with his skill level.

The possession of a doctorate makes for faster recovery of status than postsecondary, bachelor's and master's levels of education. However there are no significant differences between the doctorate and lower levels of education (secondary and below secondary). Though obviously it is easier to requalify from the bottom of the educational ladder, all indications are that it would be just as easy at the top. This may stem partly from our inability to make fine distinctions between university sublevels in employment, but the fact remains that people with doctorates have easier access to jobs at this level than other university graduates.

Whether a visit was made for study, work or any other reason, status will be recovered more quickly than by persons who have never visited Québec.

Specializing in a field like personal services and security (reference category) makes for a quicker recovery than specializing in business and finance or physics and engineering. None of the other categories differs significantly from the reference category. Points for preferred educational background or postsecondary studies in French also hasten recovery of status over time. Having been selected for an exemption, assured job or occupation in demand (P.D.Q) promotes recovery of

status compared to people selected for the employability and occupational mobility program (P.E.M.P.). Finally, points scored for age in the selection grid have a minor effect on recovery of status. The more a person scores for age, the speedier his recovery will be. This is not a linear effect of age since, on the grid, the 23 to 30 year old bracket garners the most points. When we bring age into the analysis later on, we will take this into account by using its quadratic form (age and age squared) to reproduce this kind of effect.

d) The predictive potential of the whole set of characteristics

Regression tables

Six regression models are shown in the table. The first covers the characteristics of human capital, the second adds the process of preparing for immigration, the third the settlement process, the fourth the region of origin and the last, the economic cycles, a structural characteristic independent of individuals. A sixth model is based on the fifth with special consideration for the effect of variables by three time periods.[26] These two "complete" models will be the only ones commented on. The chi-2 measurements presented in these models indicate the relative importance of each factor or group of factors in terms of explaining the requalification phenomenon. Lastly, the criteria with enough impact to explain requalification (the so-called significant relations) are flagged by asterisks.

[26] The first five models are presented in Table 12 and correspond to Blocks A to E. The sixth is shown in Table 13 and this time corresponds to a single regression.

Table 12: First skilled job access

	Block A		Block B		Block C		Block D		Block E		
Variables	**Coefficient**	**Sig.**	**Coefficient**	**Sig.**	**Coefficient**	**Sig.**	**Coefficient**	**Sig.**	**Coefficient**	**Sig.**	**Chi 2 Bloc E**
Sex (ref. Male)											
Female (sex)	-0.088		-0.088		-0.020		-0.061		-0.072		0.593
Age											
(age)	-0.058		-0.070		-0.045		-0.010		-0.011		0.044
Age squared											
(age2)	0.000		0.001		0.000		0.000		0.000		0.068
Knowledge of English											
Points scored (ANGS_note)	1.337	**	1.091	*	0.840		0.861		0.886		2.723
Knowledge of French											
Points scored (NGFR_note)	1.733	***	1.382	**	0.850		0.651		0.686		1.877
Spouse's knowledge of French											
Points scored (Pts_fr_conjoint)	0.311		0.316		0.239		0.181		0.181		0.922
Level of bilingualism											
Points scored (bilingualism)	-1.344	*	-1.103	*	-0.772		-0.766		-0.832		2.074
Field of study (ref. Specialized tech training) (q70r)	*chi2=19,99*	**	*chi2=18,64*	**	*chi2=19,94*	**	*chi2=23,66*	***			*23,36*	***
General training – arts, etc.	-0.488	**	-0.467	**	-0.447	**	-0.475	**	-0.453	**	7.728
Management, admin. and finance	-0.255	*	-0.268	*	-0.203		-0.202		-0.210		2.723
Exact sciences (mathematics, physics)	-0.233		-0.227		-0.231		-0.284	*	-0.284	*	4.121
Applied sciences (engineering)	-0.199		-0.181		-0.134		-0.134		-0.132		1.464
Health sciences	-0.620	**	-0.604	*	-0.663	**	-0.620	*	-0.607	*	6.150
Humanities and social sciences	-0.492	***	-0.471	***	-0.500	***	-0.582	***	-0.594	***	16.484
Level of education (ref. doctorate) (SCOL_cat_note)	*chi2=39,76*	***	*chi2=37,29*	***	*chi2=35,35*	***	*chi2=32,80*	***			*32,01*	***
Below secondary	-0.258		-0.287		-0.573		-0.601		-0.614		2.657
Secondary	-0.279		-0.288		-0.545	*	-0.517	*	-0.490	*	4.244
Postsecondary	-0.687	***	-0.684	***	-0.767	***	-0.760	***	-0.760	***	14.900
Bachelor's level	-0.883	***	-0.874	***	-0.962	***	-0.921	***	-0.901	***	24.800
Master's level	-0.656	***	-0.683	***	-0.846	***	-0.867	***	-0.860	***	22.278
Work experience											
Points scored (EXP_note)	0.163		0.225		0.152		0.115		0.101		0.410
Anticipated employment (ref. Pers svcs, security) (CNPp	*chi2=19,11*	*	*chi2=17,62*	*	*chi2=14,85*		*chi2=11,39*				*11.030*
Finance and business	-0.487	*	-0.427	*	-0.411		-0.368		-0.330		2.310
Life sciences, architecture	-0.168		-0.120		-0.193		-0.199		-0.167		0.436
Health, law, social sciences and education	-0.275		-0.247		-0.281		-0.264		-0.240		1.103
Arts and culture	-0.255		-0.217		-0.192		-0.179		-0.163		0.518
Primary and secondary sectors, trades and transportatio	-0.032		-0.039		-0.100		-0.111		-0.110		0.270
Physics and eng.	-0.558	**	-0.550	*	-0.568	**	-0.513	*	-0.505	*	5.570
Mathematics, computer science	-0.341		-0.373		-0.417		-0.388		-0.368		2.403
Sales	-0.380		-0.367		-0.323		-0.355		-0.327		2.434
Prior employment level (ref. jobless) (q73ncr)	*chi2=30,69*	***	*chi2=30,69*	***	*chi2=26,55*	***	*chi2=28,51*	***			*28,75*	***
Managerial level	0.076		0.146		0.324		0.310		0.345		3.764
University level	0.364	*	0.420	**	0.492	***	0.490	***	0.506	***	11.223
College and technical level	-0.115		-0.057		0.107		0.063		0.086		0.292
Secondary and vocational level	-0.223		-0.158		-0.061		-0.072		-0.052		0.090
Presence of children											
Points scored (NGEN_note)	-0.347		-0.361		-0.394		-0.360		-0.365		2.132
Motivation											
Points scored (MOTV_note)	-0.289		-0.261		-0.187		-0.241		-0.208		0.640
Personal suitability											
Points scored (QALP_note)	-0.043		0.034		0.041		0.370		0.294		0.608
Ties with Quebec (ref. none)	*chi2=7,25*	*	*chi2=6,51*	*	*chi2=6,18*	*	*chi2=1,84*				*1.730*
Friends	-0.151		-0.118		-0.120		-0.101		-0.098		0.865
Relatives	-0.321	**	-0.298	*	-0.293	*	-0.167		-0.162		1.716
Visits to Quebec (ref. none)	*chi2=43,89*	***	*chi2=39,16*	***	*chi2=55,98*	***	*chi2=27,65*	***			*23,54*	***
Other visit	0.535	***	0.460	***	0.561	***	0.260	*	0.230	*	4.537
For work or study	0.565	***	0.583	***	0.711	***	0.570	***	0.534	***	23.523
Presence of a spouse (ref. no)											
Yes (spouse)	-0.109		-0.096		-0.027		0.002		0.012		0.005
Selection category (ref. P.E.M.P)	*chi2=8,66*	*	*chi2=9,87*	**	*chi2=10,87*	**	*chi2=9,59*	***			*8,76*	*
P.D.Q	0.217		0.270	*	0.296	*	0.286	*	0.284	*	5.108
Other (exemption and assured job)	0.353	**	0.352	**	0.367	**	0.340	*	0.314	*	5.198

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Table 12 (cont'd): First skilled job access

	Block A	Block B	Block C	Block D	Block E	
Variables	**Coefficient Sig**	**Coefficient Sig**	**Coefficient Sig**	**Coefficient Sig**	**Coefficient Sig**	**Chi 2 Block E**
Enrolment in a French course (ref. no)						
Yes (recode Q50F)		-0.378 **	-0.261 *	-0.206	-0.214	2.341
Enrolment in an English course (ref. no)						
Yes (recode Q50G)		-0.175	-0.205 *	-0.162	-0.172	2.789
Enrolment in another course (ref. no)						
Yes (recode Q50H)		-0.184	-0.209	-0.159	-0.152	0.672
Application for a degree equivalency (ref. no)						
Yes (recode Q50I)		-0.099	-0.134	-0.102	-0.109	1.513
Application for official documents (ref. no)						
Yes (recode Q50B)		-0.127	-0.082	-0.061	-0.062	0.689
Application to an occupational agency (ref. no)						
Yes (recode Q50E)		-0.069	-0.051	-0.052	-0.020	0.036
Job application (ref. no)						
Yes (recode Q50A)		0.210 **	0.214 **	0.204 **	0.213 **	7.896
Taking an English course (ref. no)						
Yes (crs_ang)			0.139	0.128	0.146	0.360
Completing an English course (ref. no)						
Yes (dip_crs_ang)			0.037	0.060	0.068	0.410
Taking a French course (ref. no)						
Yes (crs_fr)			-0.823	-0.827	-0.818	2.190
Completing a French course (ref. no)						
Yes (dip_crs_fr)			0.933 ***	0.989 ***	0.988 ***	16.646
Taking another kind of course (ref. no)						
Yes (crs_autre)			-0.213	-0.226	-0.204	1.166
Completing another kind of course (ref. no)						
Yes (dip_crs_autre)			0.303 **	0.276 **	0.292 **	7.728
Accepting an underskilled job (ref. no) (job)						
Yes			-1.414 ***	-1.513 ***	-1.506 ***	145.444
Region of origin (ref. Western Europe, US) (origin)				*chi2=48,96****		*46,29****
Maghreb				-0.674 ***	-0.649 ***	33.408
Eastern Europe, ex-USSR				-0.495 **	-0.480 **	8.821
East Asia, Oceania				-0.628 **	-0.612 **	8.237
Western Asia and Middle East				-0.921 ***	-0.922 ***	21.252
Americas except US				-0.585 **	-0.571 **	7.508
Africa except Maghreb)				-0.486 *	-0.471 *	6.101
Long economic cycle						
(fact1)					-0.333	2.528
Medium economic cycle						
(fact2)					0.024	0.053
Short economic cycle						
(fact3)					0.070	2.822
n	1367	1367	1367	1367		1367.0
Number of events	837	837	837	837		837.0
LR chi2 (87)	273,06***	303,95***	515,53***	565,1***		571,84***
Loglikelihood	-5548.9686	-5533.5239	-5427.7312	-5402.9444		-5399.6
Loglikelihood test A and B	30,89***					
Loglikelihood test B and C		211,59***				
Loglikelihood test C and D			49,57***			
Loglikelihood test D and E				6.74		

*** P<=.001 ** P<=.01 * P<=.05

Table 13 – First skilled job access, effects differentiated by periods

	0 to 6 months		6 to 18 months		Over 18 months			Difference periods 1-3
Variables	**Coefficient**	**Sig.**	**Coefficient**	**Sig.**	**Coefficient**	**Sig.**	**Chi 2**	**Chi 2**
TP								
H0	-2.559	*	-4.083	**	-4.356	**	10,96*	1.920
Sex (ref. Male)								
Female (sex)			-0.113				1.440	
Age								
(age)			-0.027				0.260	
Age squared								
(age2)			0.000				0.001	
Knowledge of English								
Points scored (ANGS_note)			0.922				2.890	
Knowledge of French								
Points scored (NGFR_note)			0.794				2.496	
Spouse's knowledge of French								
Points scored (Pts_fr_conjoint)			0.186				0.960	
Level of bilingualism								
Points scored (bilingualism)			-0.925				2.528	
Field of study (ref. Specialized tech training) (q70r)							*25,25***	
General training – arts, etc.			-0.488	**			8.880	
Management, admin. and finance			-0.234				3.349	
Exact sciences (mathematics, physics)			-0.287	*			4.244	
Applied sciences (engineering)			-0.162				2.220	
Health sciences			-0.637	**			6.656	
Humanities and social sciences			-0.615	***			17.640	
Level of education (ref. doctorate) (SCOL_cat_note)							*42,94****	
Below secondary			-0.731				3.764	
Secondary			-0.588	*			6.003	
Postsecondary			-0.909	***			21.068	
Bachelor's level			-1.065	***			34.223	
Master's level			-0.992	***			28.837	
Work experience								
Points scored (EXP_note)			0.126				0.624	
Anticipated employment (ref. Pers svcs, security) (CNPproj_dom)							*15.040*	
Finance and business			-0.434	*			4.000	
Life sciences, architecture			-0.227				0.810	
Health, law, social sciences and education			-0.376				2.690	
Arts and culture			-0.300				1.742	
Primary and secondary sectors, trades and transportation			-0.262				1.513	
Physics and eng.			-0.668	**			9.734	
Mathematics, computer science			-0.503	*			4.452	
Sales			-0.440	*			4.368	
Prior employment level (ref. jobless) (q73ncr)							*33,94****	
Managerial level			0.410	*			5.290	
University level			0.592	***			14.977	
College and technical level			0.132				0.672	
Secondary and vocational level			0.017				0.008	
Presence of children								
Points scored (NGEN_note)			-0.379				2.220	
Motivation								
Points scored (MOTV_note)			-0.216				0.689	
Personal suitability								
Points scored (QALP_note)			0.257				0.462	
Ties with Quebec (ref. none)							*2.050*	
Friends			-0.096				0.810	
Relatives			-0.177				2.045	
Visits to Quebec (ref. none)							*27,52****	
Other visit			0.170				2.434	
For work or study			0.571	***			26.523	
Presence of a spouse (ref. no)								
Yes (spouse)			0.024				0.017	
Selection category (ref. P.E.M.P)							*11,26***	
P.D.Q			0.339	**			7.129	
Other (exemption and assured job)			0.347	*			6.101	

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Table 13 (cont'd): First skilled job access, effects differentiated by periods

	0 to 6 months		6 to 18 months		Over 18 months			Difference periods 1-3
Variables	**Coefficient**	**Sig.**	**Coefficient**	**Sig.**	**Coefficient**	**Sig.**	**Chi 2**	**Chi 2**
Enrolment in a French course (ref. no)								
Yes (recode Q50F)			-0.268				3.610	
Enrolment in an English course (ref. no)								
Yes (recode Q50G)			-0.182				3.028	
Enrolment in another course (ref. no)								
Yes (recode Q50H)			-0.163				0.774	
Application for diploma equivalency (ref. no)								
Yes (recode Q50I)			-0.114				1.638	
Application for official documents (ref. no)								
Yes (recode Q50B)			-0.097				1.638	
Application to an occupational agency (ref. no)								
Yes (recode Q50E)			-0.014				0.017	
Job application (ref. no)								
Yes (recode Q50A)			0.245	***			10.368	
Taking an English course (ref. no)								
Yes (crs_ang)	-0.198		0.179		-0.244		0.620	0.000
Completing an English course (ref. no)								
Yes (dip_crs_ang)	0.085		-0.175		0.285		1.370	0.110
Taking a French course (ref. no)								
Yes (crs_fr)	-0.725		-12.382		-13.418		1.680	0.000
Completing a French course (ref. no)								
Yes (dip_crs_fr)	0.881	***	1.632	*	0.253		15,28**	0.340
Taking another kind of training (ref. no)								
Yes (crs_autre)	-0.644		-0.104		0.344		4.040	1.760
Completing another kind of training (ref. no)								
Yes (dip_crs_autre)	0.211		0.424		0.387		6.250	0.080
Accepting a deskilled job (ref. no) (job)								
Yes	-1.766	***	-1.184	***	-0.447	**	134,47***	26,81***
Region of origin (ref. Western Europe, US) (origin)							*84,18***	
Maghreb	-0.885	***	-0.538	**	0.188		47,80***	11,67***
Eastern Europe and ex-USSR	-0.729	***	-0.612	*	0.494		21,99***	13,06***
East Asia and Oceania	-0.241		-1.572	***	-0.431		11,18*	0.140
Western Asia and Middle East	-1.009	***	-0.693	*	-1.185		21,43***	0.070
Americas except the US	-0.527	*	-0.356		-0.930		6.630	0.360
Africa except Maghreb)	-0.400		-0.609		-0.457		5.780	0.010
Long economic cycle								
(fact1)			-0.688	***			11.560	
Medium-term economic cycle								
(fact2)			0.058				0.303	
Short economic cycle								
(fact3)			0.038				0.828	
n								1367.000
Number of events								837.000
Wald chi2(93)								14453,5***
Loglikelihood								-2151.256

*** P<=.001 ** P<=.01 * P<=.05

=> Coefficients calculated for the whole period studied

Main extended characteristics results

The first thing we notice is that the addition of each block is significant except for the economic cycles. Put otherwise, preparing for immigration adds explanatory factors to the immigrant characteristics (added chi2 of 31) as does behaviour in the host society (added chi2 of 212) and region of origin (added chi2 of 50). Looking more carefully at the Block E analysis model (Table 13) since it is the most complete, we can use it to verify the effect of characteristics when all factors are controlled. This model accounts for 24% of the variation in speed of skilled job access (Cox and Snell R2). Here, in order of importance, are the characteristics with the most influence on recovery of status (we will review the description of these effects later): accepting an underskilled job (chi2 of 145), region of origin (chi2 of 46), level of education (chi2 of 32), employment level prior to immigration (chi2 of 29), prior visits to Québec (chi2 of 24) and field of study (chi2 of 23). The characteristics with an effect of lesser importance are completing a French course (chi2 of 17), selection category (chi2 of 9), job searches/applications (chi2 of 8) and, finally, completing a course other than language training (chi2 of 8).

No other factor, once controlled by all the characteristics, will either speed or delay access to a job equal or superior to an immigrant's education. We may conclude, for example, that contrary to expectations, status recovery is not a function of the periods of economic growth or recession.

Among all educational levels, the doctoral and the below secondary levels most facilitate status recovery. Immigrants whose employment was at the university level prior to immigration requalified faster than those without jobs before immigrating. Prior visits to Québec are highly favourable for recovery of status, especially when visits were for work or study but still, to a lesser extent, when they were for other purposes. In terms of fields of study, specialized technical training (manual trades) is the most advantageous for immigrants.

Although less important, certain preparatory or settlement factors favoured recovery of status. Examples are completing a French course or non-language course and job search prior to arrival.

Coming to the more unfavourable factors, we find all the regions of origin compared to the reference category (Western Europe and the US), starting with Western Asia and the Middle East, the Maghreb, East Asia and Oceania. Delays are somewhat shorter for the Americas except the US, Eastern Europe and the former USSR and Africa except the Maghreb. The most problematical levels of education are the bachelor's and master's university levels, postsecondary and secondary. Immigrants with no employment history prior to arrival in Québec will have more problems recovering their skill level even when controlled by taking courses in Québec.

Studies in health sciences, humanities and social sciences, general training (arts, etc.) and exact sciences (math and physics) slow respondents' recovery of status. Respondents selected for the employability and occupational mobility category (P.E.M.P. program) are the slowest to recover compared to the other two selection categories.

Finally, the most unfavourable characteristic in our analysis is acceptance of deskilling employment, one that requires less education than the respondent has to offer: the delaying effect on recovery of status is substantial. Accepting a deskilled job competes with the search of a qualified job. But having a job ensures income while waiting for a better opportunity. We will return to this factor.

As has been seen, the region of origin effect can be basically explained in terms of two general possibilities: a process of discrimination or one of adjustment to the host society. Assuming this effect as constant throughout our period we may consider discrimination, which, if it exists in the host society, would logically exist at any specific time during the settlement process. On the other hand, if its effect is felt as the

settlement process begins and then vanishes or drops dramatically we may consider an acculturation, adjustment or circumvention process for persons from these regions.

We used a piecewise exponential survival regression[27] to divide the education-equivalent job search process into three major periods: the first six months when transitions appear to be fast, the following year (6 to 18 months) when the survival curve bends and then the period starting at 18 months. This gives us the final model (cf. Table 13) where the coefficients are put in columns corresponding to the periods for the variables with effects that fluctuate over time (regions of origin and the settlement process) while the coefficients for the rest of the variables are presented only once since they do not vary over time (cf. the grey areas on the table). It will be noted that this is a single regression with a column format designed only to simplify communication. Remember that, as explained above when looking at first job access, the reference category for regions of origin consists of all respondents from Western Europe and the US *undifferentiated by periods.*[28]

What it tells us about the effect of origin refers to a very clear-cut situation and a series of ambiguous situations.

Taken together, the Maghreb, Eastern Europe and the former USSR are in sharp contrast to Western Europe and the US from 0 to 6 months and 6 to 18 months. However this difference disappears (becomes statistically insignificant) after 18 months. Moreover, as can be seen in the final column on Table 13, coefficients after 18 months also differ significantly from those of 0 to 6 months: the change is confirmed. The effect of these national origins is clear and unquestionably associated with an acculturation, socialization or circumvention process because we know that, for all practical purposes, it disappears over time.

[27] A few methodological details are described in section 1.4 above.
[28] See the box on the "region of origin effect" above.

The effects for immigrants from Western Asia and the Middle East are both similar and different— similar because they are significant from 0 to 6 months and 6 to 18 months but insignificant thereafter and different because this time there is no significant difference between the coefficients for 0 to 6 months and over 18 months. The similarity would suggest an acculturation or circumvention process while the difference would suggest discrimination. Segmenting effects over time thus does not enable us to settle the issue for this group.

The same applies to immigrants from East Asia and Oceania and the Americas except the US, the only difference being that the coefficients are not significant at 0 to 6 months (East Asia and Oceania) or 6 to 18 months (the Americas except the US). The matter therefore cannot be settled.

Lastly, immigrants from Africa except the Maghreb do not seem to be differentiated from those from Western Europe and the US at any time during their settlement process. However the coefficient was significant (at a threshold of 0.05) in Block E, undifferentiated by periods. It may be that the statistical significance in these blocks was borderline and increasing the number of parameters made it disappear. We have to remember that this group of immigrants is effectively differentiated but we cannot tell how this differentiation evolves during the settlement process.

The difficulty in distinguishing the processes at work for most origins actually makes us even more confident in our analysis for nationals of the Maghreb, Eastern Europe and the former USSR. These people unquestionably go through a *temporary* process of adjustment, acculturation, learning how things are done or circumventing obstacles that ends and is settled after a year and a half of residence.

As for the variables reflecting the settlement process, we also have a clear-cut phenomenon and a group of less clear-cut ones.

Let us begin with the clear-cut phenomenon. The delay in requalification caused by accepting a lower-level job drops significantly from one period to the next. By definition, the effect of accepting deskilled employment can never be positive, but the decline in its impact as confirmed by the test for difference between the coefficients for the periods from 0 to 6 months and over 18 months indicates that building up Québec experience or being able to wait and look for a better job generally makes an effective process that promotes requalification while delaying it, though less and less over time.

The less clear-cut phenomena are the changing effect of completing a French course, an effect that disappears after 18 months but cannot be stated as differing from the effect at 0 to 6 months.

To conclude, it will be noted that this last model qualifies what we were saying about the effect of completing another kind of training course and the impact of visits for purposes other than study or work: these two factors do not remain significant.

Section 4: Loss of skilled status

4.1 Dequalification after qualification

a) Definition

Analysis of the loss of qualification after accessing it in Québec rounds out the description of the status recovery process. Looking at loss of qualification will show us whether recovery of status is stable or not. Put otherwise, when the qualification level is recovered are we dealing with a permanent phenomenon as we would wish or just an ephemeral one? If the latter it will be understood that studying qualification is meaningless since we would not be dealing with a cumulative process but with a series of "accidents." Note that the criterion of loss of qualification used here means accepting a lower level job after holding a job commensurate with one's skill level. In other words, we study the confirmation of dequalification immigrants losing their jobs or experiencing one or more periods of unemployment will be seen as "dequalified" only if they get new, lower level jobs. The same conditions apply here as to equivalent-education recovery of status with the added proviso of prior employment status commensurate with education.

b) Description

Figure 7 shows the likelihood of experiencing the event during residence once requalification is achieved.

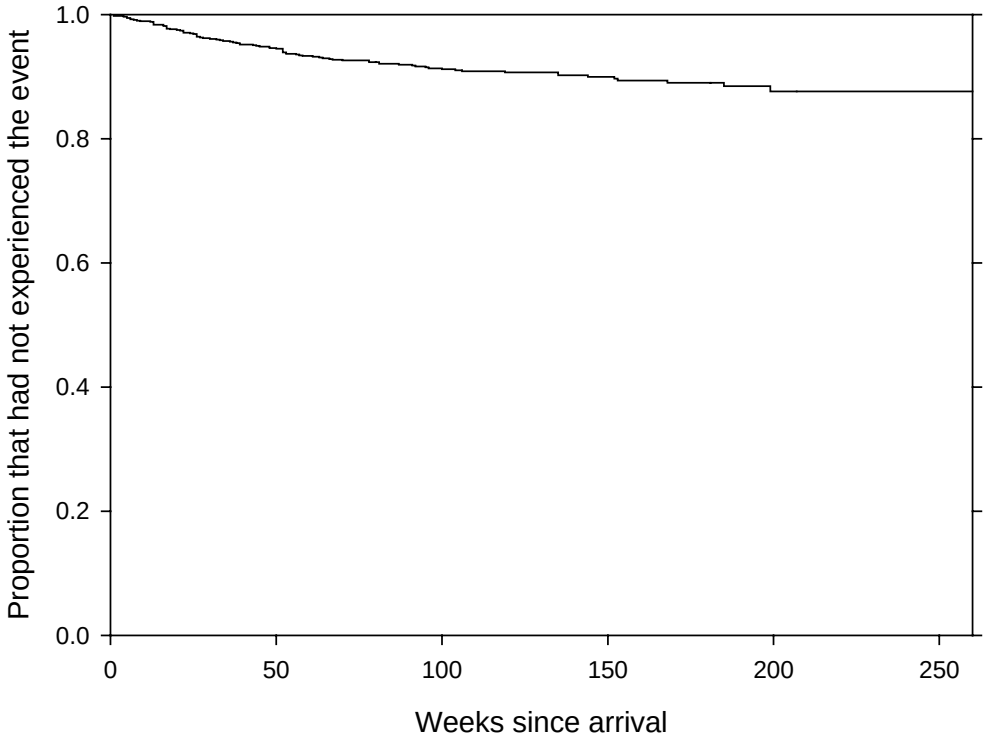

Figure 7 – Dequalification after qualification

As the curve shows, recovery of status is apparently part of a process that tends to make it irreversible. The likelihood of seeing dequalification, although weak, is very present in the first year following the beginning of the first skilled job. We may estimate the likelihood of losing one's equivalency five years after the skilled job begins as 12.2%.

c) The predictive potential of the selection grid

Regression table

Table 14 shows the effect of the selection grid characteristics[29] on the dependent variable.

[29] The analysis includes 860 respondents out of 1541. To be in this group, respondents had to have experienced the event of requalification by level of education, all employment levels included. Recovery of status had been achieved by 860 persons.

Table 14: Access to a dequalified job following qualification, grid variables

Variables	Coefficient	Sig	Chi2
Level of English			
Points scored (ANGS_note)	0.013		0.001
Level of French			
Points scored (NGFR_note)	-0.817		1.613
Age			
Points scored (NGAG_note)	-0.435		0.846
Education (ref. doctorate) (SCOL_cat_note)			4.470
Below secondary	-43.666		0.000
Secondary	0.619		0.640
Postsecondary non-university	-0.245		0.144
Bachelor's level	0.323		0.270
Master's level	0.325		0.270
Postsecondary studies in French (ref. no)			
Yes (POST_note)	0.248		0.410
Preferred educational background (ref. no)			
Yes (PRIV_note)	0.729	*	4.666
Second specialty			
Points scored (SPEC_note)	-0.297		0.723
Experience			
Points scored (EXP_note)	0.493		1.188
Anticipated employment (ref. Math, computer sci (CNPproj_dom)			23,56**
Finance and business	2.394	***	14.063
Life˙sciences, architecture	2.037	**	7.840
Health, law, social sciences, education	0.821		1.232
Arts and culture	2.400	***	13.104
Personal services and security	0.568		0.230
Primary/secondary sectors, trades and transportation	1.582	*	6.200
Physics and engineering	0.954		3.204
Sales	2.257	***	13.764
Motivation			
Points scored (MOTV_note)	0.741		0.740
Personal suitability			
Points scored (QALP_note)	-0.375		0.090
Knowledge of Quebec			
Points scored (CONQ_note)	-0.201		0.336
Ties with Quebec (ref. no) (LIEQ_note)			0.330
Friends	-0.140		0.168
Relatives	-0.227		0.325
Visit to Quebec (ref. no) (SEJQ_note)			0.070
Other visit	0.020		0.005
Work or study	-0.074		0.040
Children			
Points scored (NGEN_note)	-1.453		2.341
Spouse's level of French			
Points scored (0 if no spouse) (FRAC_R_note)	0.060		0.010
Presence of a spouse (ref. no)			
Yes (spouse)	-0.026		0.003
Selection category (ref. P.E.M.P.)			3.910
P.D.Q	0.295		0.640
Other (assured job and exemption)	-0.848		2.560
n			860.000
Number of events			79.000
loglikelihood			-490.370
R2 (Cox and Snell) / LR chi2(32)	0.050		47.81*

*** P<=.001 ** P<=.01 * P<=.05

Main selection grid results

This regression explains only 5% of the loss of qualification once acquired. Very few factors are predictive and the model has a very weak explanatory value (chi2 of 47.8). One variable alone, anticipated employment field (23.6), accounts for virtually the whole model, and a second variable has an effect in the model: preferred educational background (4.7). No other factor from the selection grid can be used to predict instability in recovery of status: this seems almost random compared to the factors measured by the grid.

Compared to the reference category used this time, which is math and computer science, the anticipated employment fields of finance and business, arts and culture, sales, life sciences and architecture and the primary and secondary sectors will be the categories that lose their recovered status the fastest. As well, respondents scoring points for preferred educational background were more likely to lose their requalification.

d) The predictive potential for the whole set of characteristics

Regression table

Table 15: Access to a dequalified job following qualification

	Block A		Block B		Block C		Block D		Block E		
Variables	**Coefficient**	**Sig.**	**Coefficient**	**Sig.**	**Coefficient**	**Sig.**	**Coefficient**	**Sig.**	**Coefficient**	**Sig.**	**Chi 2 Bloc E**
Sex (ref. Male)											
Female (sex)	0.285		0.313		0.317		0.353		0.317		1.124
Age											
(age)	0.056		0.000		-0.020		-0.067		-0.068		0.116
Age squared											
(age2)	-0.001		0.000		0.000		0.001		0.001		0.090
Knowledge of English											
Points scored (ANGS_note)	0.410		0.348		0.436		0.184		-0.031		0.000
Knowledge of French											
Points scored (NGFR_note)	-0.493		-0.472		-0.562		-0.522		-0.748		0.185
Spouse's knowledge of French											
Points scored (Pts_fr_conjoint)	0.349		0.590		0.574		0.770		0.766		1.020
Level of bilingualism											
Points scored (bilingualism)	-0.657		-0.741		-0.815		-0.501		-0.136		0.005
Field of study (ref. Specialized tech training) (q70r)	*chi2=11,91*		*chi2=12,19**		*chi2=12,84**		*chi2=12,58**				*12,89**
General training – arts, etc.	-0.504		-0.516		-0.559		-0.482		-0.510		1.000
Management, admin. and finance	-0.403		-0.577		-0.620		-0.695		-0.739		3.610
Exact sciences (mathematics, physics)	-0.928		-1.104	*	-1.117	*	-1.049		-1.051	*	3.842
Applied sciences (engineering)	-1.219	**	-1.208	**	-1.251	**	-1.246	**	-1.271	**	7.673
Health sciences	-36.977		-46.226		-39.292		-46.413		-46.443		0.000
Humanities and social sciences	-1.432	*	-1.472	*	-1.503	**	-1.467	*	-1.473	*	6.250
Level of education (ref. doctorate) (SCOL_cat_note)	*chi2=5,49*		*chi2=4,87*		*chi2=4,90*		*chi2=4.06*				*4.470*
Below secondary	-36.172		-44.224		-38.118		-44.175		-44.112		0.000
Secondary	-0.389		-0.267		-0.088		-0.020		-0.089		0.008
Postsecondary	-0.609		-0.590		-0.447		-0.228		-0.281		0.102
Bachelor's level	0.160		0.128		0.274		0.382		0.368		0.203
Master's level	0.282		0.287		0.408		0.594		0.590		0.533
Work experience											
Points scored (EXP_note)	1.031		1.030		1.053		1.283	*	1.310	*	5.290
Anticipated employment (ref. Pers svcs, security) (CNPpr	*chi2=13,93*		*chi2=15,76**		*chi2=15,44*		*chi2=15,81**				*15,67**
Finance and business	1.870	**	2.195	***	2.174	***	2.183	***	2.157	***	10.693
Life sciences, architecture	1.930	*	2.008	*	2.010	*	1.919	*	1.900	*	5.336
Health, law, social sciences and education	0.656		0.923		0.970		0.775		0.702		0.774
Arts and culture	1.687	*	1.721	*	1.744	*	1.637	*	1.637	*	5.476
Primary and secondary sectors, trades and transportatior	0.171		0.331		0.346		0.443		0.473		0.160
Physics and eng.	1.183		1.140		1.102		1.140		1.130		2.756
Mathematics, computer science	1.205	*	1.252	*	1.249	*	1.112		1.109		3.725
Sales	1.513	*	1.765	**	1.823	**	1.880	**	1.840	*	8.526
Prior employment level (ref. jobless) (q73ncr)	*chi2=8,76*		*chi2=9,60**		*chi2=8,79*		*chi2=9,15*				*9.370*
Managerial level	-0.161		-0.096		-0.105		-0.105		-0.108		0.040
University level	-0.404		-0.347		-0.334		-0.317		-0.349		0.563
College and technical level	-0.783		-0.735		-0.653		-0.665		-0.681		1.613
Secondary and vocational level	0.330		0.490		0.513		0.549		0.542		1.082
Presence of children											
Points scored (NGEN_note)	-1.412		-1.437		-1.409		-1.461		-1.493		2.341
Motivation											
Points scored (MOTV_note)	0.268		0.418		0.370		0.228		0.224		0.058
Personal suitability											
Points scored (QALP_note)	-0.066		-0.055		-0.074		-0.083		-0.051		0.002
Ties with Quebec (ref. none)	*chi2=0,13*		*chi2=0,38*		*chi2=0,60*		*chi2=1,54*				*1.490*
Friends	-0.080		-0.144		-0.098		-0.098		-0.102		0.084
Relatives	-0.147		-0.256		-0.301		-0.476		-0.472		1.166
Visits to Quebec (ref. none)	*chi2=0,29*		*chi2=0,23*		*chi2=0,16*		*chi2=0,09*				*0.020*
Other visit	0.017		-0.117		-0.121		-0.031		0.020		0.004
For work or study	-0.164		-0.147		-0.089		-0.114		-0.042		0.012
Presence of a spouse (ref. no)											
Yes (spouse)	-0.290		-0.470		-0.428		-0.535		-0.549		0.672
Selection category (ref. P.E.M.P)	*chi2=3,19*		*chi2=3,41*		*chi2=3,17*		*chi2=2,85*				*2.180*
P.D.Q	0.267		0.361		0.394		0.402		0.378		0.828
Other (exemption and assured job)	-0.776		-0.755		-0.696		-0.651		-0.546		1.020

(Cont'd on next page)

Table 15 (cont'd): Access to a dequalified job following qualification

	Block A	Block B	Block C	Block D	Block E	
Variables	**Coefficient Sig**	**Coefficient Sig.**	**Coefficient Sig.**	**Coefficient Sig**	**Coefficient Sig.**	**Chi 2**
Enrolment in a French course (ref. no)						
Yes (recode Q50F)		0.075	0.161	0.075	0.107	0.053
Enrolment in an English course (ref. no)						
Yes (recode Q50G)		-0.324	-0.335	-0.369	-0.368	0.865
Enrolment in another course (ref. no)						
Yes (recode Q50H)		-0.177	-0.134	-0.159	-0.160	0.063
Application for a degree equivalency (ref. no)						
Yes (recode Q50I)		0.464	0.465	0.441	0.490	2.993
Application for official documents (ref. no)						
Yes (recode de Q50B)		-0.100	-0.129	-0.098	-0.102	0.152
Application to an occupational agency (ref. no)						
Yes (recode Q50E)		-0.171	-0.178	-0.125	-0.201	0.325
Job application (ref. no)						
Yes (recode Q50A)		0.775**	0.775**	0.783**	0.751**	8.180
Taking an English course (ref. no)						
Yes (crs_ang)			0.452	0.519	0.474	0.462
Completing an English course (ref. no)						
Yes (dip_crs_ang)			-0.062	-0.078	-0.097	0.053
Taking a French course (ref. no)						
Yes (crs_fr)			-0.449	-0.517	-0.501	0.123
Completing a French course (ref. no)						
Yes (dip_crs_fr)			0.773	0.734	0.712	0.436
Taking another kind of course (ref. no)						
Yes (crs_autre)			0.065	0.037	-0.069	0.017
Completing another kind of course (ref. no)						
Yes (dip_crs_autre)			-0.373	-0.409	-0.459	1.988
Region of origin (ref. Western Europe, US) (origin)				*chi2=9,10*		*8.540*
Maghreb				-0.030	-0.057	0.020
Eastern Europe and ex-USSR				0.215	0.207	0.130
East Asia and Oceania				0.509	0.454	0.423
Western Asia and Middle East				1.082	0.968	2.624
America except the US				0.314	0.272	0.203
Africa except Maghreb				1.287*	1.289*	5.382
Long economic cycle						
(fact1)					0.001	0.000
Medium economic cycle						
(fact2)					0.615	2.993
Short economic cycle						
(fact3)					0.014	0.010
n	837	837	837	837		837.000
Number of events	76	76	76	76		76.000
LR chi2 (87)	66,39**	79,48**	84,23**	92,29**		96,55**
loglikelihood	-459.58676	-453.03928	-450.66812	-446.63561		-444.504
loglikelihood test A and B	13.09*					
loglikelihood test B and C		4.74				
loglikelihood test C and D			8.07			
loglikelihood test D and E					4.26	

*** P<=.001 ** P<=.01 * P<=.0

Main extended characteristics results

Obviously, with a chi2 of 96.6 for Block E, the explanatory factors are ineffective in defining the event under study. Yet the model remains significant. This regression explains only 11% of the loss of qualification once acquired. No variable is significant in the block of personal characteristics.[30] With the addition of preliminaries, a number of variables become significant: anticipated employment (chi2 of 15.8), field of study (chi2 of 12.2) and job search prior to immigration (chi2 of 9.1).

The immigrants who will be the slowest to lose their qualification are those who studied humanities and social sciences, applied sciences (engineering) and exact sciences (mathematics and physics) compared to those who took specialized technical training (manual trades). Not enough of the people going into health sciences experienced the event to rule on their status here.[31] Among anticipated employment fields, the fastest to lose their recovered status compared to the reference category are finance and business, life sciences and architecture, arts and culture, physics and engineering, and sales.

Immigrants who initiated job searches prior to immigration are also in the fastest group to experience the event. However this characteristic had the effect of speeding recovery of status. No other factor was significant once controlled for all blocks, not even region of origin.

The consolidation of blocks enabling us to rule on the importance of personal characteristics, settlement processes and effects of the host society affords us a final picture of the situation. The explanation comes essentially from personal characteristics (chi2 of 63.7) with a minimal, insignificant role for settlement processes (chi2 of 4.9) and the effects of the host society (chi2 of 13.2).

[30] The variables “field of study” and “anticipated employment” are significant locally but not globaly.
[31] The very high coefficient (more than 40) is not representative, given an exaggerated margin of error caused by the small number of cases in this category.

Since dequalification following first access to a job of a complexity rating commensurate with education is a rare and undefined occurrence, this reinforces the idea that first skilled job access is truly significant in the occupational integration of new immigrants and that the contributing factors we have described are all the more basic.

Section 5: Discussion

5.1 What have we learned from this analysis?

Let us restate our core question: at what level and speed are immigrants' academic credentials put to use on the Québec labour market? In the absence of research in the world literature on requalification processes over time, we had to probe the issue's basic aspects to get a better idea. The requalification of immigrants selected as workers is now documented in greater detail.

To begin with, we found that requalification is not immediate but occurs during the settlement process. More than 91% of selected workers will access the job market within the first five years. At this point an estimated 68.7% of all selected workers will have at least found a first job commensurate with their level of education. Once this occupational level is attained, the likelihood of moving to a job at a lower level is very weak (12,2%).

The outcome of these movements can be seen in Figure 8, which shows the distribution of respondents by employment status and quality for each week since their arrival[32], regardless of their job ranking at any time. We note the percentage of workers in skilled jobs rising gradually to a peak of 63% at Week 200 (more random thereafter: see previous note) with a simultaneous drop in the percentages of jobless and workers in jobs below their academic levels.

[32] It will be noted that the size of the sample under observation decreases over time since respondents had variable lengths of residence in Québec when interviewed. Beginning at 1538, this number drops gradually to reach 1385 at Week 100, 764 at Week 150 and 290 at Week 200 until by Week 240 only 69 respondents are still under observation. The inaccuracy that dogs dwindling samples may be responsible for the fluctuations noted in the graph after 200 weeks' residence. Another possible source of this fluctuation is that, as the observation time lengthens, we deal increasingly with a very specific landing group because the survey is retrospective.

Figure 8 – Designation of employment

Should we regard this requalification rate as strong or too weak? We cannot provide a definite answer. As we are dealing with immigrants in the selected worker category, we might expect all of them to eventually find jobs at their own level. But this raises the following two questions: What do we mean by the term *eventually,* and how much waiting time would be normal? What is the skills use level on the local market, whether workers are immigrants or not? For want of comparable research bearing on the speed and rate of conversion of educational levels into occupational ones for the population at large, these questions have no answers. As a very relative standard

we may look at the sample's pre-immigration performance and come up with a work-study equivalency rate that is quite close to the one found in Québec and conclude that, by this yardstick, there is no major underuse of skills. But we then have to remember that the situation before immigration is not a good reference: a respondent's problems finding a foreign job commensurate with his skills might be his very reason for leaving. In a general sense, then, migration achieved nothing and we would have to conclude, at least from the subjects' standpoint, that there is major skills underuse.

However, the question can be approached in a completely different way. Instead of debating the work-study equivalency rate we can look at the factors accelerating or delaying this match.

If these factors are merely *normal and socially accepted factors* of labour market differentiation – level and field of education, anticipated employment, foreign work experience, knowledge of languages, courses taken in Québec, etc. – we might see failure to achieve a better fit as a result of the supply and demand equilibrium in this market, where the workforce supply does not match the demand. In this event we would be looking at the best possible fit given market conditions at a particular time. Of course we could wish for a market upturn to enhance this level ... but that is a whole other line of thinking.

If the factors speeding or delaying this equivalency were also to include *socially unacceptable factors* of differentiation – age, sex, region of origin – we would, whatever fit was achieved, be looking at unacceptable skills underuse[33] by the Québec job market.

[33] Age is a problem for this type of reasoning. Age discrimination in the job market is unacceptable. We also know that the young are generally the most adaptable in this market, and if this aspect of age is at work, differentiation is acceptable. Finally, the selection grid for selected workers awards the maximum points for age to the 23-30 year olds for reasons we see as reflecting adaptability as well as demographics. As age has no effect in our analysis, all else being equal, the problem of its interpretation will not have to be resolved here.

Finally, a third group of factors cannot be used to form a judgment about the equivalency between the educational level and the skill level required for jobs, but it can be used to grasp the complexity involved in entering a new job market. This group includes variables like knowledge of Québec, ties in Québec, prior visits to Québec, etc. Whether or not they influence skilled job access, their effect still does not tell us whether the qualification rate is acceptable or not: these are parts of the process without *normative value* like the other two groups of variables.

To simplify the review of all analyses from this perspective, the following three pages contain a stripped-down version[34] of all the regressions reported in detail above (Tables 16 and 17).

[34] ® Reference category: '+': favours; '-': penalizes; '0': is not separate from the reference category; 'L': there is a local effect (between the categories of the variable) but no general effect; 'grey area': the effect of the variable always functions significantly in the same sense.

Table 16: Summary of selection grid analyses

Variables	Job access	Skilled job access	Degualification after qualification
Good level of English	+	0	0
Good level of French	+	0	0
More points for age	0	+	0
Level of education			
Below secondary	-	0	0
Secondary	-	0	0
Postsecondary non-university	-	-	0
Bachelor's	-	-	0
Master's level	-	-	0
Doctoral level	+®	+®	0®
Postsecondary studies in French	0	+	0
Preferred educational background	0	+	+
Second specialty	0	0	0
Experience	0	0	0
Anticipated employment			
Personal services and security	+®	+®	0
Finance and business	-	-	+
Life sciences, architecture	-	0	+
Health, law, social sciences and education	-	0	0
Arts & culture	-	0	+
Primary and secondary sectors, etc.	-	0	0
Physics and eng.	-	-	0
Mathematics, computer sci	0	0	-®
Sales	-	0	+
Motivation	0	0	0
Personal suitability	0	0	0
Knowledge of Quebec	-	0	0
Ties with Quebec			
None	0®	+®	0®
Friends	0	0	0
Relatives	0	-	0
Prior visits to Quebec			
No	-®	-®	0®
Other visit	+	+	0
Work or study	+	+	0
Children	0	0	0
Spouse's good level of French	0	0	0
Spouse	0	0	0
Selection category			
P.E.M.P	-®	-®	0®
P.D.Q	0	+	0
Other job (assured job & exemption)	+	+	0
n	1369	1402	860
Number of events	1211	860	79
LR chi2(32)	191	241	48

® Reference category; '+' : favours; '-' : penalizes; '0' : not separate from the reference category.
'Grey area': the effect of the variable always functions significantly in the same sense.

Table 17: Summary of analyses on all characteristics

Variables	Job access	Skilled job access	Dequalification after qualification
Being a male	0	0	0
Being older	0	0	0
Being older (quadratic function)	0	0	0
Good level of English	0	0	0
Good level of French	0	0	0
Spouse's good level of French	0	0	0
Good level of bilingualism	0	0	0
Field of study			
Specialized technical training	+®	+®	+®
General training - arts, etc.	-	-	0
Management, administration and finance	0	0	0
Exact sciences (math, physics)	-	-	-
Applied sciences (engineering)	0	0	-
Health sciences	-	-	0
Humanities and social sciences	-	-	-
Level of education			
Doctoral level	+®	+®	0®
Master's level	-	-	0
Bachelor's level	-	-	0
Postsecondary	-	-	0
Secondary	-	-	0
Below secondary	-	0	0
More work experience	0	0	+
Anticipated empl.	*L*	*L*	
Personal services, security	+®	+®	0
Finance and business	0	0	+
Life sciences, architecture	-	0	+
Health, law, social sciences and education	-	0	0
Arts and culture	0	0	+
Primary and secondary sectors, trades and transportati	-	0	0
Physics and engineer.	-	-	0
Mathematics, computer science	0	0	-®
Sales	0	0	+
Prior employment level			
Managerial	+	0	0
University	+	+	0
College and technical	0	0	0
Secondary or vocational	0	0	0
No employment	-®	-®	0®
Presence of children	0	0	0
Motivation	0	0	0
Personal suitability	0	0	0
Ties with Quebec			
None	0®	0®	0®
Friends	0	0	0
Relatives	0	0	0
Prior visits to Quebec			
No visit	-®	-®	0®
Other visit	0	+	0
For work or study	+	+	0
Presence of a spouse	0	0	0
Selection category			
P.E.M.P	0®	-®	0®
P.D.Q	0	+	0
Other (assured job and exemption)	0	+	0

(cont'd on next page)

Table 17 (cont'd): Summary of analysis on all characteristics

Variables	Job access	Skilled job access	Dequalification after qualification
Application for a French course	0	0	0
Application for an English course	0	0	0
Application for another course	0	0	0
Application for diploma equivalency	0	0	0
Application for official documents	0	0	0
Application to an occupational agency	0	0	0
Job application	0	+	+
Taking an English course	0	0	0
Completing an English course	0	0	0
Taking a French course	0	0	0
Completing a French course	+	+	0
Taking another kind of training	-	0	0
Completing another kind of training	0	+	0
Taking a lower-level job	s/o	-	s/o
Region of origin			*L*
Western Europe and US	+®	+®	-®
Maghreb	-	-	0
Eastern Europe and ex-USSR	-	-	0
East Asia and Oceania	-	-	0
Western Asia and Middle East	-	-	0
America except the US	0	-	0
Africa except the Maghreb	-	-	+
Long economic cycle (positive)	0	0	0
Medium economic cycle (positive)	0	0	0
Short economic cycle (positive)	+	0	0
n	1369	1367	837
Number of events	1211	837	76
Loglikelihood chi2	386,01	571,84	96.55

® Reference category; '+' : favours; '-' : penalizes; '0': not separate from the reference category
L: There is a local effect (between the categories of the variable) but no general effect
'Grey area': the effect of the variable always functions significantly in the same sense.

5.2 What is the outcome?

Of course the first group of factors applies: field of study, level of education, level of employment prior to immigration, anticipated employment field, French courses. There is differentiation of immigrants' capacity to assert their skill level in terms of market requirements.

Unfortunately, the second group of factors also applies. Neither sex nor age is at work. Only the region of origin applies and affects all dependent variables analysed: first job access, access to a job commensurate with skill level, dequalification after qualification. One may think, therefore, that there is an element here showing systematic underuse of the skills of some new immigrants on the basis of their region of origin. But this has to be qualified: we saw earlier that the Maghreb and Eastern Europe with the former USSR taken together were sharply differentiated from Western Europe and the US as the settlement process began in terms of speed of first job access and access to a job commensurate with skill level, but this differentiation disappears (becomes statistically non significant) thereafter. For this group, then, it is very unlikely that we are dealing with a *socially unacceptable differentiation.* It is, rather, a temporary adjustment process. These immigrants would thus see a temporary underuse of their academic credentials—a delay but not a barrier. Meanwhile, immigrants from Western Asia and the Middle East have regular and perennial problems finding first jobs and skilled jobs.[35] In their case we have to conclude that we are facing a relative equivalency level between their education and the skill set needed for the job that is unacceptably low.

Finally, the third group of factors also applies, with time spent in Québec accelerating skilled job access. This factor suggests a sustained increase in the access to skilled employment. If immigrants who had visited Québec before getting their visas were able to benefit from this boost, we may imagine that the others, as the length of their

residence increases, will ultimately benefit from it as well. The skilled employment rate should keep growing after the period covered by the survey.

Is the Québec job market making use of the level of these immigrants' academic credentials? Obviously the answer is that use tends to reflect market capacity since variations primarily reflect characteristics of individuals. But these variations also reflect regions of origin which, for some, cause no problems (Western Europe and the US); for others (Maghreb, Eastern Europe and the ex-USSR) they amount to an initial handicap that clearly disappears with time while for some other regions the effect lingers in terms of first job access and shows no significant change in skilled job access. The first group thus appears not to experience skills underuse (relative, reflecting market conditions). For the second group there is a period of underuse that is soon resolved and that can, conceivably, be tracked and accelerated. For the third group, the situation would seem to reflect a discriminatory process leading to skills underuse, all things being equal, since the situation lasts throughout the period that interests us without revealing any significant change. Admittedly, we could argue that the five-year observation period was not long enough for respondents in these groups to complete their "acculturation," but there is nothing in our observations to indicate an eventual change in the future. For this last group, discrimination remains the most likely hypothesis.

Given the data from this survey it is hard to be more specific about the forces at work. We will at least have had the merit of showing, for the first time, the level of qualification and dequalification of immigrants in the selected worker category, its evolution during the settlement process and the major factors responsible for these changes. Now we have to use targeted surveys to identify the specific processes involving regions of origin that delay or prevent job access and skilled job access.

[35] Remember that, for these origins, the coefficient for skilled job access becomes insignificant in the third period studied but does not stand out significantly from the coefficient for the first period.