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Do the falling earnings of immigrants apply to self-employed immigrants?

by

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Abstract

Many studies have looked at the relative success of immigrant men in the (primarily paid) workforce. Despite the fact that they represent approximately one sixth of the immigrant workforce, self-employed immigrants are a relatively understudied group. This study uses the 1981, 1986, 1991, and 1996 Census files to assess the success of self-employed immigrant men (relative to self-employed native-born men), using the relative success of paid immigrant men as the benchmark. After controlling for various other factors, recent immigrants (those arriving within the last five years) are as likely to be self-employed as the native-born, and over time spent in the country, are more likely to become self-employed. Recent immigrants in the 1990s were far more likely to be self-employed than the native-born. Successive cohorts of recent immigrants have fared progressively worse in the paid labour market relative to paid native-born workers. This is not the case in the self-employed workforce. Although self-employed recent immigrants typically report lower net self-employment income upon entry than the self-employed native-born, the gap has not grown, but rather has followed a cyclical movement: narrowing at the peak, and widening in times of weaker economic activity.

Keywords: Immigrants, self-employment, paid employment, cohort effects, assimilation effects

1. Introduction

Canada is increasingly becoming a country of immigrants. This trend was evident in the 1990s when the proportion of immigrants in the population rose from 15.9% to 17.2% (Census, 1991 and 1996). The 1990s also saw a change in the composition of the Canadian workforce. Between 1991 and 1996, the self-employment rate among workers rose from 14.7% to 16.1% (Labour Force Survey, 1991 and 1996 annual averages). Previous studies have examined these issues separately. For example, some authors have looked at how well immigrant men have assimilated into the (primarily paid) workforce (e.g. Baker and Benjamin [1994]; Bloom, Grenier, and Gunderson [1995]; Grant [1999]) or into various occupations (Green [1999]), while others have investigated the factors associated with self-employment (Whitfield and Wannell [1991]; Schuetze [2000]; Lin, Compton, and Picot [2000]). However, very few Canadian studies have integrated both of these issues to examine the immigrant self-employed.

Self-employment in general may be explained by the “push” and “pull” theories of self-employment. One school of thought suggests that as a result of a lack of opportunities in the paid labour market, some workers may be pushed into self-employment. Alternatively, lucrative opportunities may entice workers out of the paid labour market and into self-employment. Although recent studies have been just as inconclusive as are the theoretical expectations when testing which effect dominates (Whitfield and Wannell [1991]; Alba-Ramirez [1994]; Schuetze [1998]; Lin, Compton, and Picot [2000]), it is possible that *both* effects may be at work. Which affect is at work obviously depends on the group in question. For example, Finnie, Laporte, and Rivard (2002) find evidence supporting the pull hypothesis among recent graduates, which is expected given that these individuals face promising paid job opportunities. The *push* hypothesis may very well be at work for immigrants, given the possible barriers to entry (or ascension) in the paid workforce. These barriers may result from a number of factors, such as gaps in training, a lack of knowledge of one of Canada’s official languages, or labour market discrimination. In terms of immigrant self-employment, the push hypothesis is referred to as the “blocked mobility hypothesis”. A competing hypothesis is that immigrants are pulled in to self-employment as a result of the comparative advantage they may hold in serving the needs of immigrants who share a common language, culture, etc. Immigrants may capitalise on this comparative advantage if they are situated in an immigrant enclave, or a large cluster of immigrants from a given country or ethnic background. This is referred to as the “enclave hypothesis”. The literature on immigrant self-employment is just as inconclusive as the general literature on the causes of self-employment among the general population (see Li [2001] for a description of the literature).

The goals of this study are more straightforward than attempting to support or refute the competing hypotheses of immigrant self-employment. Two questions are asked. First, “Are immigrants more likely to turn to self-employment, relative to the native-born?” Consistent with previous studies, the focus is on male workers. This is to avoid the difficulties of accounting for the more complex female labour supply decision process. Borjas (1986) asked a similar question in the United States using the 1970 and 1980 U.S. Census files. He found that recent cohorts of immigrants were more likely to be self-employed, and that immigrants were more likely to enter self-employment the longer they lived in the country. In Canada, Li (1997) found that immigrants as a whole were more likely to be self-employed than the native-born in 1991 for both visible minorities and non-visible minorities. Li (2001) used tax data to conclude that entry cohorts of immigrants have been more

likely to be self-employed in the 1990s than in the 1980s, but the data did not allow one to benchmark against the native-born. Of course, one of the positive contributions of the self-employed is to create jobs.

Previous work looking at the success of immigrants in the paid work force indicates that recent cohorts of immigrants have not fared so well, and that their assimilation rate has declined¹. Despite the fact that about one sixth of the immigrant workforce are self-employed, few studies has looked at the success of immigrants in the self-employed work force in great detail². The second (and more central) question asked is thus, “Do the falling earnings of immigrants apply to self-employed immigrants?”

After controlling for various other factors, the results of this study indicate that recent immigrants (those arriving within the last five years) are as likely to become self-employed as the native-born. Over time spent in the country, immigrants generally become more likely to enter self-employment. Immigrants entering Canada between 1991 and 1995 are worth noting, as they were 30% more likely to become self-employed than the native-born. Recent immigrant self-employed workers are about 20% *less* likely to acquire paid help than native-born self-employed workers. Over time spent in the country, however, the gap narrows substantially. Recent immigrants have fared progressively worse in the paid labour market relative to paid native-born workers (especially in the 1990s, where the gap between recent immigrants and the native-born was 36%. This is not the case in the self-employed workforce. Although self-employed recent immigrants typically report lower net self-employment income than the self-employed native-born, the gap has not widened over time, but rather, it has followed a cyclical movement consisting of narrowing during peaks, and widening in periods of weaker economic activity.

The remainder of this paper is divided in four sections. The next section describes the general methodology used in many immigrant studies, including this one. This is followed by a detailed description of the data used in the analysis. Next, the results are presented discussed in detail. And finally, the study is summarised in the last section.

¹ Note that the literature typically looks at total market earnings (the sum of paid earnings and net self-employment income). Since paid earnings comprise the main source of market earnings, the results of this literature mainly describe the events in the paid workforce. The current study will explicitly separate paid earnings from net self-employment income to the extent possible (see the data section for more details).

² Li (2000) looked at immigrant tax data to study the returns to immigrant self-employment, but a native-born benchmark is not available. Maxim (1992) and Li (1997) looked at the issue by using one cross-section of Census data, which do not allow for separating cohort and assimilation effects (described in the next section). Furthermore, all of these studies look at total market earnings from paid and self-employment, whereas the current study looks at paid earnings and net self-employment income separately, for those who are mainly involved in either paid or self-employment. Looking at total market earnings has the advantage of including everyone in the analysis, but at the cost of combining two sources of income that do not have the same meaning, and are difficult to compare. The results in this paper are thus not directly comparable to their results.

2. Methodology

In virtually all of the analyses presented in this paper, the focus is on immigrant/native-born comparisons. But immigrants alone can be a very heterogeneous group of people. One way of accounting for the heterogeneity of immigrants is to sub-categorise them by period of arrival. To make matters more complicated, immigrants arriving in different periods may be different for two reasons. First, different entry cohorts of immigrants may be quite different, especially if the immigrant policy objectives and laws change over time. These are known as *cohort effects*. Furthermore, time spent in the country may allow immigrants to become more marketable to their new country's labour market, either by acquiring more knowledge of various job opportunities and requirements, enhancing their language skills, or upgrading their training so that it may be recognised by Canadian employers. These are known as *assimilation effects*.

For a given cross-section of data, say 1991, it is impossible to separate cohort and assimilation effects. Consider, for example, a comparison of the cohorts of immigrants arriving in 1985 and 1990. In 1991, these two cohorts may have different labour market outcomes for two reasons. One is related to the fact that they are different cohorts, while the other is related to the fact that the 1985 cohort has spent considerably more time in the country than the 1990 cohort. One way to resolve this problem is to add one more year of data, say 1996. To compare the 1985 and 1990 cohorts, one could condition on years since migration (YSM) by observing the 1985 cohort in 1991, and comparing them to the 1990 cohort, observed in 1996. In both cases, YSM is set to six years, thus allowing one to recover the cohort effect. Conversely, one would have to hold the cohort constant in order to identify the assimilation effect. For example, the 1985 cohort can be observed in 1991 and 1996³. Since the cohort is held constant (at the 1985 cohort), the difference can be attributed to an assimilation effect (between six and eleven years since migration).

Of course, it would be quite naïve to call the above cohort and assimilation effects “pure”. Since the years of observation are different (1991 and 1996), it is possible that part of the differences found are due to a change in the economic climate over this time period, or *cyclical effects*. One way of netting out the influence of the economic cycle is to benchmark all of the results on the native-born population, a technique that assumes that immigrant and native-born outcomes are equally sensitive to the economic cycle. If immigrant outcomes are more sensitive to economic downturns, then the benchmarking is not expected to fully net out time effects⁴. Aside from the obvious advantage of (partially) netting out time effects, benchmarking to the native-born allows one to frame immigrant research topics around the more interesting question, “How are various groups of immigrants doing relative to the rest of the population?”

More formally, the difference in any outcome (Y) between two cohorts of immigrants (1985 and 1990) in 1991 can be written as:

³ This is referred to as a “pseudo-panel” approach, since there is no guarantee that the same people are observed in 1991 to 1996. In a small survey, this can be problematic if sampling error is significant, but this is highly unlikely in the Census.

⁴ McDonald and Worswick (1998) found evidence suggesting that the immigrant earnings assimilation rate is cyclically sensitive to the economic cycle, but that the cohort effect is not.

$$(1) Y_{185,91} - Y_{190,91}$$

Note that the subscript “185,91” means “the 1985 cohort of immigrants in 1991”, and similarly for “190,91”. By adding and subtracting $Y_{190,96}$, we get:

$$(2) Y_{185,91} - Y_{190,91} = (Y_{185,91} - Y_{190,96}) + (Y_{190,96} - Y_{185,91})$$

Now subtract the native-born predicted outcome in the corresponding year for each term:

$$(3) Y_{185,91} - Y_{190,91} = [(Y_{185,91} - Y_{N91}) - (Y_{190,96} - Y_{N96})] + [(Y_{190,96} - Y_{N96}) - (Y_{185,91} - Y_{N91})]$$

Looking at the right hand side of Equation (3), the first term in brackets represents the cohort effect, while the second term in brackets represents the assimilation effect, both relative to the native-born (obtained by subtracting the corresponding native-born outcome, indicated by the subscript “N”). Of course, several comparisons can be made (depending on the number of immigrant cohorts and years of observations involved), which tends to increase the dimensionality of the results, thereby hindering the presentation. As it turns out, however, cohort and assimilation effects can be demonstrated quite easily (and perhaps more intuitively) in a graphical setting by arranging the predicted outcomes appropriately. This is the approach that is adopted in this paper.

3. Data

The data used in this study are the 1981, 1986, 1991, and 1996 Census files. This is the only available large Canadian data source covering a long period of time, and allowing one to separate immigrants from the native-born, self-employed from paid workers, and paid earnings from net self-employment income.

Immigrants are identified by asking respondents to name their place of birth. Any individual born outside of Canada is then classified as an immigrant. Immigrants are further categorised by grouping them into cohorts (i.e. the period they arrived in Canada). For the purposes of this study, four cohorts are examined: 1976-80, 1981-85, 1986-90, and 1991-95⁵. These represent the largest cohorts (five years) who can be examined from their period of entry onwards. Earlier cohorts are included in the analysis, but the main results will focus on the four cohorts listed above.

Self-employment is examined across two dimensions. First, the incidence of self-employment is observed as of the Census reference week (usually May or June). Respondents are asked about their class of worker (in their main job). For the purposes of this study, two categories are possible: paid or self-employed. The second way self-employment is studied is through self-employment “earnings” (i.e. net self-employment income, which can only be collected by unincorporated businesses). This relates to the year prior to the Census (e.g. 1995 for the 1996 Census). Some studies (Maxim [1992], Li [1997], and Li [2000]) looked at the success of self-employed immigrants by looking at total market earnings (including paid earnings). In order to circumvent the problems associated with comparing paid earnings to net self-employment income, this study will

⁵ This needs to be qualified. In the 1991 Census, an immigrant who arrived in 1991 would be grouped in the 1986-1990 cohort. In the 1996 Census, an immigrant who arrived in 1991 would be grouped in the 1991-1995 cohort.

examine the paid earnings (net self-employment income) of immigrants who focused primarily on paid (self-) employment. This obviously comes at the cost of eliminating those who spent considerable amounts of time in both forms of employment, but it does yield the “cleanest” comparison groups. In any event, the restriction is not very binding. In 1996, for example, only 3% fell into the “intermediate” category (not primarily paid nor self-employed).

In all cases, the samples consist of all male permanent residents⁶ between 20 and 59 years of age. Depending on the analysis at hand, however, three additional sample criteria are applied:

1. The incidence of immigrant self-employment: paid or self-employed in the Census reference week. To facilitate the estimation procedures, a 10% random subset was taken for this sample only.
2. The success of immigrants in the paid workforce: paid in the previous year – paid earnings \geq 80% of market earnings, and nonnegative net self-employment income (this ensures a sample of workers who relied almost entirely on paid employment in the year).
3. The success of immigrants in the self-employed workforce: self-employed in the previous year – net self-employment income \geq 80% of market earnings, and nonnegative net self-employment income (this ensures a sample of workers who relied almost entirely on self-employment in the year).

All samples are further restricted to “full-time” workers. This refers to people who worked at least 30 hours in the Census reference week (in sample 1) or at least 40 weeks in the previous year (in samples 2 and 3)⁷. In both cases, the focus is clearly placed on workers with a strong attachment to the labour force, at least for the given period of observation. Note also that in analysing the success of self-employed immigrants relative to their native-born counterparts (sample 3), the scope is limited to the unincorporated self-employed, a group which represents roughly two-thirds of all self-employed individuals⁸.

The other explanatory variables included in the models are similar to those usually employed in labour market analyses. Dummy variables for education are included (no high school, high school, non-university post-secondary certificate – omitted, bachelor’s degree, and graduate degree), as is a proxy for labour market experience (age in years, and its square to capture diminishing returns to experience). Another important factor surrounding self-employment is the number of adults (16 years or older) in the (economic) family, which is included in the models. Getting help from family members reduces the probability of shirking among employees, since all family members benefit from the success of the family business. Of course, the presence of a spouse may be particularly helpful in this regard, not only in terms of helping in the business, but also with respect to taking care of younger children when they are in the picture; therefore a dummy variable indicating marital

⁶ The 1991 and 1996 censuses include non-permanent residents, so they had to be deleted from the sample.

⁷ The hours of work are not available for the year prior to the Census.

⁸ Proceeds from incorporated businesses are not collected in the Census.

status (married or not currently married) is included. Note that in the paid earnings models, the number of adults is omitted, but the “married” variable is retained (since a spouse may once again alleviate day-care issues, thus allowing at least one parent to focus more on their paid job). A dummy variable indicating visible minority status is also included. This is an important variable, considering the large increase in the proportion of recent immigrants who are visible minorities, as well as the possibility that visible minority status may be highly correlated with the class of worker (paid or self-employed), or even the level of success once in a job or business. And finally, a series of regional dummy variables is also included (the Atlantic Provinces, Quebec, Ontario – omitted, Manitoba, Saskatchewan, Alberta, and British Columbia), as is a dummy variable indicating whether or not the respondent lived in a Census Metropolitan Area (CMA). Regional and local control variables are used to proxy economic conditions that may influence the decision to participate in self-employment, or the eventual success of those who choose this path. Note that industry is excluded from the earnings models for two reasons. First, the industry is only available for the main job as of the reference week, which may or may not correspond to the main job in the previous year. Regardless, immigrants may earn less than the native-born partly because they find themselves in lesser paying industries, but perhaps also because they earn less in any given industry. This study attempts to estimate the *overall* earnings differences, gross (not net) of any differences in the industrial distribution.

The means of these variables are shown below in Table 1 (for sample 1: employed in the Census reference week):

	Native-borns				Recent immigrants (< 5 yrs in Canada)			
	1981	1986	1991	1996	1981	1986	1991	1996
No high school	0.38	0.34	0.28	0.23	0.27	0.27	0.23	0.20
High school	0.17	0.18	0.20	0.25	0.15	0.17	0.19	0.21
Non-university postsecondary cert.	0.34	0.36	0.38	0.35	0.38	0.33	0.33	0.30
Bachelor's degree	0.08	0.09	0.10	0.11	0.12	0.13	0.14	0.16
Graduate degree	0.03	0.04	0.04	0.05	0.08	0.11	0.11	0.13
Age (years)	36.06	36.21	37.04	38.19	33.15	33.72	34.75	35.88
# Adults	2.66	2.60	2.51	2.51	2.75	2.83	2.87	2.98
Married	0.80	0.79	0.68	0.65	0.82	0.81	0.76	0.77
Visible minority	0.01	0.01	0.02	0.02	0.53	0.59	0.70	0.71
Atlantic provinces	0.10	0.11	0.10	0.10	0.02	0.02	0.01	0.01
Quebec	0.30	0.29	0.28	0.28	0.15	0.15	0.14	0.13
Ontario	0.31	0.33	0.33	0.33	0.46	0.51	0.58	0.56
Manitoba	0.04	0.04	0.04	0.04	0.04	0.04	0.03	0.02
Saskatchewan	0.04	0.04	0.04	0.04	0.02	0.02	0.01	0.01
Alberta	0.09	0.10	0.10	0.10	0.15	0.12	0.08	0.07
British Columbia	0.10	0.10	0.11	0.11	0.16	0.14	0.15	0.20
CMA	0.66	0.73	0.73	0.73	0.89	0.95	0.97	0.97

Since much of the analysis that follows focuses on the conditions of immigrants upon entry into Canada, the means are shown for native-born and recent immigrants only. The levels and changes in the means over time are quite different for recent immigrants and the native-born. Relative to the native-born, recent immigrants are more educated, have seen an increase in the number of adults in

their family, have seen a lower decline in their marital rate, are much more likely to be a visible minority, are more concentrated in Ontario and British Columbia, but less concentrated in Quebec and Alberta, and are generally more likely to be found in CMAs. If these characteristics are believed to influence the choice of paid versus self-employment, as well as success in the labour market, then an immigrant/native-born comparison should account for differences in these factors.

4. Results

4.1. Descriptive results

Throughout the paper, the focus will be on examining the success of various cohorts of immigrants, relative to the native-born. In this context, particular attention will be paid to the outcomes of *new* entrants (fewer than five years in the country) over time, since this allows for the greatest number of comparisons. A secondary focus of the analysis will be the assimilation of immigrants relative to the native-born. This is achieved by following a particular cohort over time spent in the country. By definition, we can not analyse the assimilation of the most recent cohort (1991-95) since we only observe them at one point in time.

To begin examining the incidence and relative success of self-employed immigrants, Table 2 shows the empirical outcomes of interest:

Table 2: Sample outcomes				
Sample 1: Proportion self-employed				
	1981	1986	1991	1996
1976-80 cohort	0.082	0.114	0.139	0.171
1981-85 cohort		0.096	0.133	0.169
1986-90 cohort			0.102	0.145
1991-95 cohort				0.139
Native-born	0.127	0.125	0.123	0.143
Sample 2: Mean paid earnings (\$1996)				
	1980	1985	1990	1995
1976-80 cohort	23,664	23,674	26,031	24,742
1981-85 cohort		19,377	22,978	23,171
1986-90 cohort			19,367	20,604
1991-95 cohort				16,623
Native-born	28,340	26,468	26,888	26,615
Sample 3: Mean net self-employment income (\$1996)				
	1980	1985	1990	1995
1976-80 cohort	24,778	24,352	25,517	23,845
1981-85 cohort		18,897	26,271	20,202
1986-90 cohort			21,509	17,378
1991-95 cohort				16,495
Native-born	28,371	25,892	26,944	23,000

We begin with the incidence of self-employment. Earlier cohorts of immigrants were less likely to be self-employed upon entry, but this is not true for the most recent cohort. All cohorts show a positive assimilation rate into self-employment.

In the paid labour market, immigrants initially earn considerably less than the native-born. The ratio of recent immigrant to native-born earnings has also declined with successive cohorts. If immigrant earnings are more cyclically sensitive than native-born earnings, and there was no long-term trend, then we could expect to see higher ratios in 1980 and 1990 (the peaks of the economic cycle), and lower ratios in 1985 and 1995 (periods of economic recovery). What we see in the data, however, is a large decline in the ratio between 1980 and 1985 (which might be expected, given the changing economic conditions), no change between 1985 and 1990 (despite improving economic conditions), and a large decline between 1990 and 1995. Comparing similar points in the economic cycle, we thus see a continuous decline in the relative earnings of recent immigrants. All cohorts show some assimilation in terms of earnings, but this seems to have declined with more recent cohorts.

Recent immigrants also have lower net self-employment income than the native-born, but the ratio has followed a pattern more consistent with the economic cycles. The relative fortunes of self-employed immigrants are greater in 1980 and 1990, and worse in 1985 and 1995. The 1976-80 cohort appears to have fully assimilated in terms of net self-employment income, but more recent cohorts have not assimilated as quickly.

So who are these self-employed immigrants? Table 3 shows the proportion of recent immigrants by source region, the self-employment rate within each source region, and the proportion of all self-employed recent immigrants from each source region.

Region of origin	1986			1996		
	% From...	% SE	% of SE immigrants from...	% From...	% SE	% of SE immigrants from...
North America	7.0	12.4	9.5	2.8	11.3	2.2
Central America	4.0	5.0	2.2	3.5	6.6	1.6
Caribbean Islands	5.8	2.6	1.7	5.5	4.2	1.6
South America	5.6	2.7	1.7	3.9	7.1	1.9
Northern Europe	9.6	12.3	13.0	2.8	17.2	3.2
Western Europe	5.0	29.4	16.3	2.7	25.7	4.8
Southern Europe	4.6	3.8	1.9	5.1	9.7	3.4
Eastern Europe	9.6	5.4	5.7	8.6	14.8	8.7
Africa	3.9	6.1	2.6	7.3	14.5	7.3
South Asia	7.9	5.6	4.8	13.5	7.6	7.0
Southeast Asia	16.4	4.5	8.1	11.4	3.2	2.5
East Asia	13.3	15.6	22.8	24.3	26.9	44.6
West Asia	6.0	12.6	8.3	7.8	19.2	10.2
Oceania and others	1.2	10.8	1.4	0.9	20.0	1.2
Total	100.0		100.0	100.0		100.0

* Recent immigrants have been in the country for less than 5 years.

Clearly, East Asia⁹ stands out from the table. First, the proportion of recent immigrants from East Asia has risen considerably between 1986 and 1996 (from 13% to 24%). East Asians also have a

⁹ East Asia includes China, Hong Kong, Japan, North and South Korea, Macau, Mongolia, and Taiwan.

high rate of self-employment, and this rose from 16% to 27% between 1986 and 1996. These two trends combined to make East Asians the single largest group of self-employed recent immigrants in Canada in 1996 (45%). An increasing proportion of self-employed recent immigrants are from Africa (from 3% in 1986 to 7% in 1996). This was due to an increasing proportion of immigrants from Africa, as well as to an increasing tendency of African immigrants to become self-employed. Immigrants from Northern and Western Europe accounted for 29% of all self-employed recent immigrants in 1986, but sharp declines in immigrants from these source regions have significantly lowered their presence among self-employed recent immigrants (down to 8% in 1996).

In what industries do these self-employed immigrants work? Table 4 shows the distribution of self-employed native-born and recent immigrant workers across industries. Relative to the self-employed native-born, self-employed immigrants are far more likely to be found in consumer services (including retail trade) and slightly more likely to be found in manufacturing. Self-employed immigrants *used* to be equally likely to be in distributive services (in the 1980s), but they are now considerably more likely to be in this industry. They are less likely to be in primary industries, although the size of this industry is on the decline in general.

	1981		1986		1991		1996	
	Native-Born	Recent Immigrants	Native-Born	Recent Immigrants	Native-Born	Recent Immigrants	Native-Born	Recent Immigrants
Primary	0.331	0.160	0.294	0.125	0.238	0.042	0.193	0.042
Manufacturing	0.056	0.090	0.051	0.109	0.058	0.102	0.058	0.088
Construction	0.149	0.121	0.151	0.085	0.180	0.129	0.179	0.110
Business Serv.	0.096	0.105	0.116	0.118	0.141	0.150	0.167	0.163
Distributive Serv.	0.102	0.105	0.108	0.125	0.107	0.167	0.117	0.188
Consumer Serv.	0.230	0.356	0.238	0.380	0.228	0.364	0.238	0.362
Public Serv.	0.037	0.063	0.043	0.059	0.047	0.046	0.048	0.048
Total	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

* Recent immigrants have been in the country for less than 5 years.

4.2 Econometric results

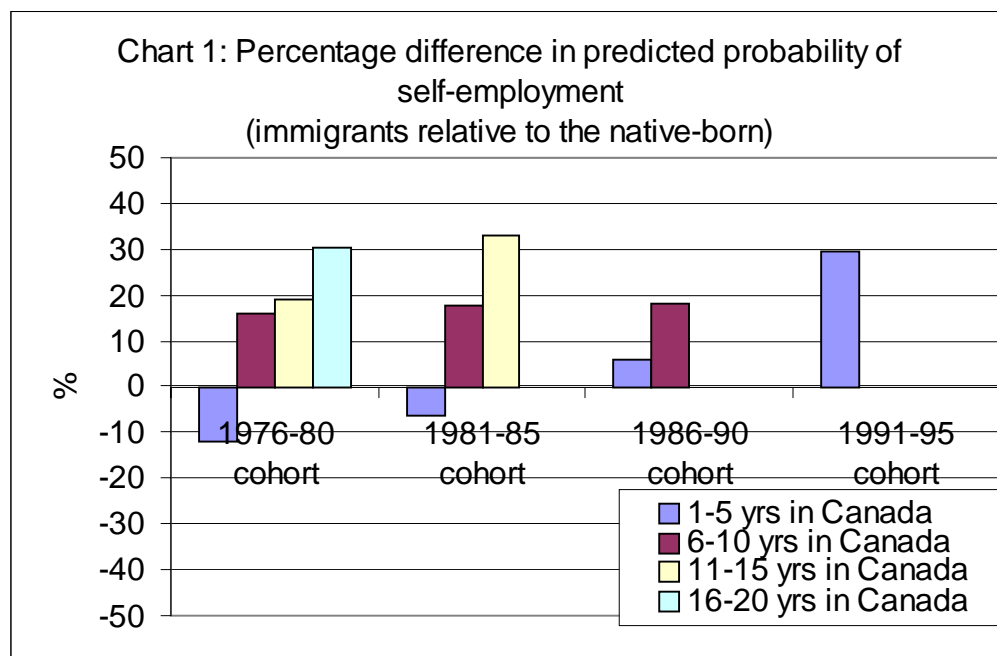
In order to compare immigrants to the native-born, various regressions were estimated. These regressions control for various characteristics thought to influence the outcome variable in question (mentioned in the data section). The estimated regressions appear in Tables A1 through A3 in the appendix. To study the incidence of self-employment and self-employment with paid help, logit models of the general form $\ln[\text{probability}/(1-\text{probability})] = \mathbf{x}\mathbf{b}$ were estimated (\mathbf{x} is a vector of covariates, while \mathbf{b} is a vector of coefficients). To study the success of immigrants in paid and self-employment, ordinary least squares log earnings models of the form $\ln(\text{earnings}) = \mathbf{x}\mathbf{b}$ were estimated.

The focus of the analysis, however, is on the average predicted outcomes of all individuals generated from these regressions, based on various scenarios (immigrants vs the native-born) and organised in a manner conducive to studying cohort and assimilation effects.

All predicted outcomes are shown in Table A4 in the appendix, and should be consulted to get exact numbers. To ease the presentation, however, the predicted outcomes are shown in charts.

The incidence of immigrant self-employment

To begin with, the predicted probabilities of self-employment have been reorganised below in Chart 1. The vertical axis represents the percentage difference in the predicted probability of self-employment among immigrants and the native-born. Positive values refer to a higher predicted outcome for immigrants than for the native-born, and vice-versa for negative values.



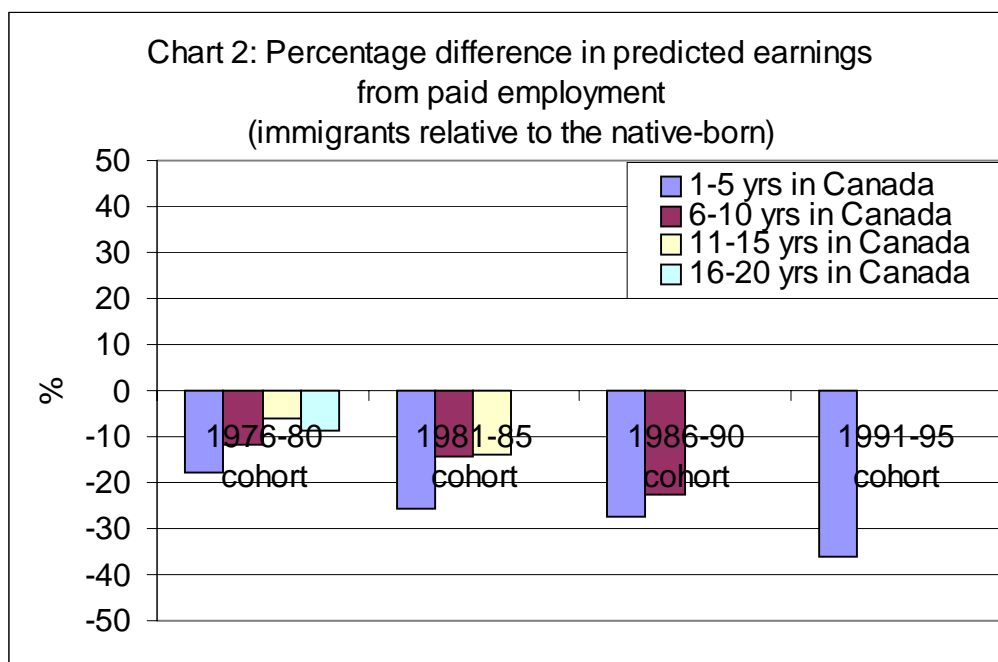
This chart and the ones that follow contain two valuable pieces of information. First, the cohort effect can be ascertained by comparing the first bars to the left of successive cohorts. The first bars represent the percentage difference in the outcome upon entry (the first five years in Canada). In other words, the number of years-since-migration (YSM) is held fixed, but the cohort is allowed to change. Earlier cohorts were about as likely to be self-employed as the native-born upon entry, but the 1991-95 cohort was 30% more likely to be self-employed than the native-born in 1996.

The second valuable insight gained from the chart above and the ones that follow is the assimilation of immigrants into the general population. Assimilation can be measured from a variety of angles: educational attainment, earnings, language acquisition, etc. In this instance, assimilation refers specifically to the convergence or divergence of the immigrant/native-born probabilities of self-employment. This can be deciphered in a straightforward manner from the charts by looking at a particular cohort, and observing the relative outcomes through time. Immigrants generally become relatively more likely to enter self-employment over time spent in the country than the native-born, although there is obviously no available evidence yet for the most recent cohort.

The success of immigrants in the paid workforce

Previous studies by Baker and Benjamin (1994) and Bloom, Grenier, and Gunderson (1995), and Grant (1999) have found that recent cohorts of immigrant men have performed worse (relative to native-born men), and have shown few signs of improvement over time in the paid workforce¹⁰. In this section, this work is extended to the 1990s, a time when the immigrant population grew substantially in Canada.

The focus now shifts to the income received in the year prior to the Census. Standard log (paid) earnings models are estimated for those who worked at least 40 weeks and relied primarily on paid earnings, as described for sample 2 in the data section. Chart 2 depicts the relative predicted outcomes (in \$1996):



Successive entry cohorts of immigrants have fared progressively worse in the paid workforce. This was especially true in the 1990s, when recent immigrants earned about 36% less than the native-born. Successive cohorts have also *generally* fared progressively worse after spending more time in the country; that is, the assimilation rate has declined.¹¹

The success of immigrants in the self-employed workforce

¹⁰ The literature normally looks at total market earnings (the sum of paid earnings and net self-employment income), which is mainly comprised of paid earnings.

¹¹ The one exception can be found by comparing assimilation rates for the 1976-80 and 1981-85 cohorts. Between 1-5 years and 6-10 years in the country, both cohorts closed about 40% of the relative gap with the native-born. The lack of a decline in the assimilation rate is perhaps surprising given the more favourable economic context of the 1981-85 cohort observed 6-10 years in the country (1990).

Have the declining fortunes of immigrants in the paid workforce been mirrored in the (unincorporated) self-employed workforce? To answer this question, log net-self employment income models were estimated on the sample of men who worked at least 40 weeks and relied primarily on income from self-employment, as described for sample 3 in the data section. The relative predicted outcomes (in \$1996) are reorganised in Chart 3, shown below:

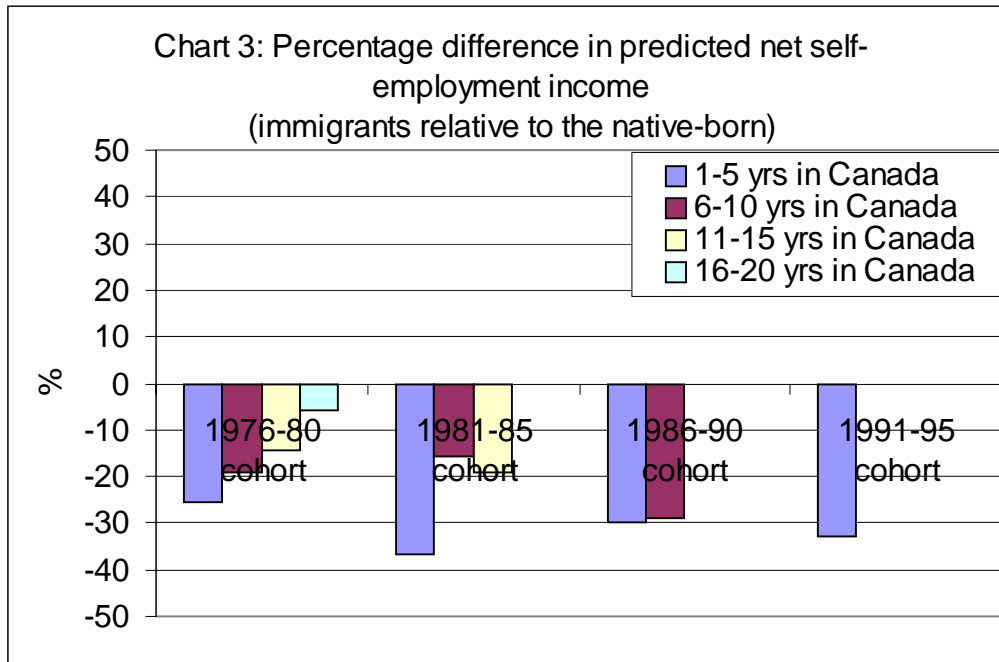


Chart 3 indicates that recent cohorts of immigrants choosing self-employment have not fared progressively worse. The pattern seems to follow the economic cycle, as opposed to the long-term downward trend observed in the paid workforce. The relative fortunes of self-employed recent immigrants have been better during peaks (i.e. 1980 and 1990¹²), and worse during times of recovery (i.e. 1985 and 1995). The assimilation rate of net self-employment income, however, has declined (for the cohorts we can observe). Recall, however, that many immigrants “set up shop” after several years in the country (see Chart 1). If these “late starting” immigrant businesses are initially less successful than older businesses, then there is an inherent downward bias in the assimilation rate of self-employed immigrants (Chart 3).

5. Summary

Two segments of the Canadian population have increased their presence in the 1990s: immigrants and self-employed workers. Despite this fact, very little research has focused on self-employed

¹² Recall that income information refers to the year prior to the Census.

immigrants. In particular, studies on immigrant well being have almost exclusively focused on the success of immigrant men in the paid labour market. Since roughly one sixth of the immigrant workforce is self-employed, this study bridges the gap in the literature by assessing the relative success of self-employed immigrant men. Throughout the paper, the analytical focus is on immigrant/native-born comparisons, with particular attention paid to two questions: “Are immigrants more likely to turn to self-employment, relative to the native-born?” and “Do the falling earnings of immigrants apply to self-employed immigrants?”

Immigrants are generally about as likely as the native-born to choose self-employment upon entry into Canada, except for the cohort arriving between 1991 and 1995, who were 30% more likely to enter self-employment than the native-born. Over time, immigrants generally become more likely to choose self-employment (i.e. they have a positive assimilation rate).

Recent studies by Baker and Benjamin (1994), Bloom, Grenier, and Gunderson (1995), and Grant (1999) indicate that immigrant men earn less in the (primarily paid) workforce than native-born men and that more recent cohorts have fared even worse, with few signs of improvement over time (at least up to the 1980s). This paper looks at the early 1980s through the mid-1990s, and finds that successive cohorts of recent immigrants (those in the country for less than five years) have fared progressively worse in the paid labour market.

The unfavourable outcomes of immigrants in the paid labour market do not mirror themselves in (unincorporated) self-employment. Although self-employed immigrants do not report as much net self-employment income as the native-born, the gap in the first five years in the country has not progressively declined. The gap has rather followed a more cyclical pattern: lower during peak years and higher in recovery years.

Why have recent cohorts of new immigrants been more likely to favour self-employment? One important factor is clearly the changing source regions of immigrants. As Table 3 demonstrated, the rise in immigrant self-employment was largely concentrated among entrants from East Asia. Over the years, this group has increased in size and has become more likely to turn to self-employment. Exactly *why* they have become more likely to turn to self-employment is less clear, although the declining fortunes of paid immigrants might a large part of the reason. One factor that *doesn't* seem plausible is the composition of entrants by class. As Table A5 in the appendix indicates, the proportion of immigrants entering under the entrepreneur and self-employed classes has remained fairly steady throughout the 1980s and 1990s.

Why has the relative success of immigrants declined in the paid workforce, but remained stable in the self-employed workforce? One possibility is the rising proportion of immigrants from non-English speaking countries (Table 3), a group that may face particular difficulties integrating into paid jobs. Some recent evidence suggests that education acquired in non-English speaking countries is not valued as highly as if it were acquired in English speaking countries (Bratsburg and Ragan [2002]). This may be more of an issue in paid jobs than in self-employment.

This paper has focused on the *relative* outcomes of immigrants (i.e. compared to the native-born). That is, “How does the *relative* success of immigrants in the paid workforce compare to the *relative* success of immigrants in the self-employed workforce?” But are immigrants actually better off in

self-employment? In general, it is a daunting task to compare the success in the paid and self-employed workforces. Although the predicted net self-employment income of immigrants are considerably lower than the paid earnings of immigrants (as is the case for the native-born), the possibility of cost deductions complicate the issue. Net self-employment income is the (unincorporated) self-employment income received, net of costs incurred. If some of the costs deducted would have been incurred *regardless* of the individual's self-employment activities, and thus used to purchase goods that have enhanced their well being (e.g. car expenses, a room in one's house, etc.), then a given amount of net self-employment income is clearly superior (in terms of standard of living) to an equivalent amount of paid earnings. On the other hand, self-employment earnings are generally more volatile than paid earnings. All that can be said is that immigrants who have chosen self-employment have not seen the general downward trend in success that immigrants in the paid labour market have seen.

Appendix

Note: In all regressions that follow, a “*” indicates significance at 5% and a “**” indicates significance at 1%.

	1981		1986		1991		1996	
	Coefficient	z-stat	Coefficient	z-stat	Coefficient	z-stat	Coefficient	z-stat
Intercept	-7.1173	(-46.91)**	-6.6170	(-41.59)**	-6.0653	(-36.59)**	-5.6757	(-33.68)**
Pre 1961 cohort	0.3871	(11.97)**	0.3209	(8.9)**	0.3212	(7.07)**	0.2205	(4.11)**
1961-65 cohort	0.3152	(4.81)**	0.2546	(3.84)**	0.3742	(5.34)**	0.4394	(5.88)**
1966-70 cohort	0.2442	(4.55)**	0.2774	(5.53)**	0.3053	(5.89)**	0.2516	(4.65)**
1971-75 cohort	0.0659	(0.98)	0.0823	(1.34)	0.2551	(4.58)**	0.3612	(6.93)**
1976-80 cohort	-0.1546	(-1.75)	0.1803	(2.48)*	0.2094	(3.1)**	0.3304	(5.25)**
1981-85 cohort			-0.0769	(-0.85)	0.1944	(2.49)*	0.3542	(4.97)**
1986-90 cohort					0.0665	(0.98)	0.2068	(3.32)**
1991-95 cohort							0.3224	(5.43)**
No high school	0.1279	(5.53)**	0.0675	(2.91)**	0.0302	(1.23)	0.1108	(4.32)**
High school	0.1249	(3.95)**	0.0341	(1.12)	0.0953	(3.35)**	0.0183	(0.71)
Bachelor's degree	0.4544	(12.26)**	0.4317	(12.91)**	0.4838	(15.3)**	0.3871	(13.01)**
Graduate degree	-0.1935	(-3.34)**	-0.2054	(-3.97)**	-0.0945	(-2.01)*	-0.0355	(-0.85)
Age (years)	0.2428	(30.6)**	0.2155	(26.61)**	0.1892	(22.95)**	0.1736	(21.03)**
Age ² (years)	-0.0026	(-26.86)**	-0.0022	(-22.34)**	-0.0019	(-19.25)**	-0.0017	(-16.98)**
# Adults	0.0338	(3.42)**	-0.0151	(-1.45)	-0.0008	(-0.07)	-0.0146	(-1.36)
Married	0.2416	(6.28)**	0.3071	(8.33)**	0.2136	(7.57)**	0.1660	(6.41)**
Visible minority	-0.1262	(-2.14)*	0.0070	(0.14)	-0.0551	(-1.22)	-0.2075	(-4.96)**
Atlantic provinces	-0.1913	(-4.77)**	-0.2485	(-6.27)**	-0.2790	(-6.87)**	-0.3902	(-9.58)**
Quebec	0.0223	(0.83)	-0.0145	(-0.55)	0.0205	(0.77)	-0.1026	(-3.92)**
Manitoba	0.4443	(9.76)**	0.4019	(9.03)**	0.1556	(3.16)**	0.2014	(4.13)**
Saskatchewan	1.0561	(25.56)**	0.9735	(24.06)**	0.7507	(17.07)**	0.6208	(13.33)**
Alberta	0.5390	(16.56)**	0.4081	(12.54)**	0.3388	(10.29)**	0.2931	(9.25)**
British Columbia	0.2286	(6.84)**	0.2208	(6.82)**	0.2488	(7.91)**	0.2729	(9.29)**
CMA	-0.8759	(-42.78)**	-0.8002	(-37.89)**	-0.6590	(-30.05)**	-0.5520	(-24.86)**
N (1/10)	106,239		109,725		115,433		109,790	
-2*log(likelihood)	-75,548.34		-78,449.53		-84,536.68		-87,585.55	

Table A2: Log paid earnings models (OLS regressions)

	1981		1986		1991		1996	
	Coefficient	z-stat	Coefficient	z-stat	Coefficient	z-stat	Coefficient	z-stat
Intercept	8.3796	(476.26)**	7.8459	(329.11)**	7.8488	(292.71)**	7.3705	(248.37)**
Pre 1961 cohort	-0.0108	(-2.24)*	-0.0009	(-0.12)	0.0056	(0.52)	-0.0015	(-0.12)
1961-65 cohort	-0.0506	(-5.89)**	-0.0515	(-4.26)**	-0.0027	(-0.21)	0.0215	(1.31)
1966-70 cohort	-0.0543	(-8.29)**	-0.0515	(-5.69)**	-0.0060	(-0.57)	0.0107	(0.93)
1971-75 cohort	-0.1032	(-13.04)**	-0.0708	(-7.17)**	-0.0531	(-5.13)**	-0.0210	(-1.85)
1976-80 cohort	-0.1990	(-19.12)**	-0.1229	(-10.28)**	-0.0611	(-4.81)**	-0.0906	(-6.54)**
1981-85 cohort			-0.2935	(-20.27)**	-0.1550	(-10.41)**	-0.1487	(-9.77)**
1986-90 cohort					-0.3226	(-23.92)**	-0.2580	(-19.54)**
1991-95 cohort							-0.4487	(-33.21)**
No high school	-0.1510	(-50.65)**	-0.1294	(-32.54)**	-0.1785	(-39.03)**	-0.1857	(-34.14)**
High school	-0.0354	(-9.4)**	-0.0238	(-4.97)**	-0.0808	(-16.31)**	-0.0721	(-14.53)**
Bachelor's degree	0.1986	(30.87)**	0.2029	(28.04)**	0.2118	(29.98)**	0.2426	(35.44)**
Graduate degree	0.3405	(43.77)**	0.3555	(37.69)**	0.3244	(35.69)**	0.3224	(34.83)**
Age (years)	0.0854	(84.95)**	0.1054	(77.52)**	0.1109	(76.72)**	0.1325	(83.55)**
Age ² (years)	-0.0010	(-75.95)**	-0.0012	(-68.28)**	-0.0012	(-67.9)**	-0.0015	(-72.75)**
# Adults								
Married	0.2621	(58.51)**	0.3210	(58.16)**	0.2281	(47.39)**	0.2221	(44.89)**
Visible minority	-0.1529	(-21.43)**	-0.1505	(-17.5)**	-0.1995	(-22.07)**	-0.2295	(-25.7)**
Atlantic provinces	-0.1564	(-29.95)**	-0.1809	(-26.31)**	-0.2373	(-30.46)**	-0.2465	(-29.21)**
Quebec	-0.0455	(-13.93)**	-0.0740	(-17.65)**	-0.1107	(-23.93)**	-0.1415	(-27.34)**
Manitoba	-0.0549	(-7.53)**	-0.0782	(-8.51)**	-0.1874	(-17.86)**	-0.1667	(-14.99)**
Saskatchewan	-0.0038	(-0.43)	-0.0343	(-3.26)**	-0.1888	(-15.22)**	-0.1132	(-9.36)**
Alberta	0.1507	(32.15)**	0.0390	(6.18)**	-0.0698	(-10.23)**	-0.0446	(-6.21)**
British Columbia	0.1478	(34.45)**	0.0367	(6.19)**	0.0014	(0.24)	0.0470	(7.87)**
CMA	0.0310	(10.68)**	0.0437	(10.61)**	0.0623	(13.7)**	0.0281	(5.62)**
N	249,619		193,994		211,341		218,871	
Adjusted R ²	0.1660		0.1816		0.1641		0.1749	

Table A3: Log net self-employment income models (OLS regressions)

	1981		1986		1991		1996	
	Coefficient	z-stat	Coefficient	z-stat	Coefficient	z-stat	Coefficient	z-stat
Intercept	8.0606	(81.66)**	7.8062	(61.26)**	8.2948	(60.96)**	8.0227	(58.03)**
Pre 1961 cohort	0.0011	(0.06)	0.0444	(1.78)	0.0251	(0.69)	-0.0387	(-0.82)
1961-65 cohort	0.0171	(0.5)	-0.0252	(-0.57)	0.0178	(0.34)	-0.0209	(-0.35)
1966-70 cohort	-0.0524	(-1.66)	-0.0152	(-0.41)	0.0311	(0.79)	0.0269	(0.75)
1971-75 cohort	-0.1845	(-4.66)**	-0.0956	(-2.28)*	0.0108	(0.25)	-0.0309	(-0.77)
1976-80 cohort	-0.2958	(-4.83)**	-0.2116	(-4.1)**	-0.1545	(-3.15)**	-0.0585	(-1.42)
1981-85 cohort			-0.4549	(-5.65)**	-0.1705	(-3.01)**	-0.2112	(-4.23)**
1986-90 cohort					-0.3520	(-4.77)**	-0.3405	(-8.27)**
1991-95 cohort							-0.3952	(-8.79)**
No high school	-0.0241	(-1.69)	-0.0125	(-0.72)	-0.0395	(-2.03)*	-0.0099	(-0.53)
High school	0.0147	(0.72)	-0.0166	(-0.69)	-0.0202	(-0.87)	-0.0005	(-0.03)
Bachelor's degree	1.0429	(57.46)**	1.1479	(54.82)**	0.9892	(45.98)**	0.8795	(40.67)**
Graduate degree	0.7850	(23.72)**	0.8346	(22.89)**	0.6865	(17.93)**	0.6069	(18.3)**
Age (years)	0.0722	(14.3)**	0.0839	(13.05)**	0.0672	(9.93)**	0.0764	(11.33)**
Age ² (years)	-0.0008	(-13.5)**	-0.0010	(-12.52)**	-0.0008	(-9.49)**	-0.0009	(-10.69)**
# Adults	0.0233	(3.76)**	0.0280	(3.43)**	0.0294	(3.23)**	0.0106	(1.3)
Married	0.3618	(13.89)**	0.3073	(11.07)**	0.2319	(11.18)**	0.2262	(12.58)**
Visible minority	0.0047	(0.15)	-0.0562	(-1.61)	-0.1123	(-3.13)**	-0.1515	(-5.08)**
Atlantic provinces	-0.0926	(-3.58)**	-0.0328	(-1)	-0.0628	(-1.76)	-0.1898	(-4.89)**
Quebec	0.0271	(1.77)	-0.0617	(-3.35)**	-0.1196	(-6.04)**	-0.1187	(-6.12)**
Manitoba	-0.1456	(-4.62)**	-0.0869	(-2.59)**	-0.2016	(-5.16)**	-0.1680	(-4.31)**
Saskatchewan	0.1336	(5.33)**	-0.0294	(-0.98)	-0.2534	(-6.95)**	-0.0495	(-1.41)
Alberta	0.1784	(8.45)**	-0.0754	(-2.88)**	-0.1936	(-6.99)**	-0.1466	(-6.03)**
British Columbia	0.0664	(3.15)**	-0.1034	(-4.28)**	-0.0959	(-4.15)**	-0.0770	(-3.86)**
CMA	0.1587	(12.04)**	0.1776	(10.94)**	0.2299	(12.79)**	0.1535	(8.72)**
N	23,875		20,028		19,384		25,317	
Adjusted R ²	0.2348		0.2426		0.2163		0.1521	

Table A4: Predicted outcomes				
Predicted probability of self-employment				
	1981	1986	1991	1996
1976-80 cohort	0.109	0.144	0.148	0.183
1981-85 cohort		0.117	0.146	0.186
1986-90 cohort			0.131	0.166
1991-95 cohort				0.182
Native-born	0.124	0.125	0.124	0.140
Predicted paid earnings (\$1996)				
	1980	1985	1990	1995
1976-80 cohort	23,824	24,039	25,845	24,858
1981-85 cohort		20,267	23,527	23,454
1986-90 cohort			19,896	21,025
1991-95 cohort				17,375
Native-born	29,068	27,182	27,472	27,215
Predicted net self-employment income (\$1996)				
	1980	1985	1990	1995
1976-80 cohort	21,766	21,690	23,954	22,296
1981-85 cohort		17,006	23,573	19,139
1986-90 cohort			19,661	16,818
1991-95 cohort				15,923
Native-born	29,257	26,802	27,956	23,641

Table A5: Immigrant landings in the entrepreneur and self-employed classes			
Year	Total entrepreneur and self-employed immigrants	Total other immigrants	Proportion entrepreneur or self-employed
1981	6,028	122,590	0.047
1982	6,364	114,783	0.053
1983	6,225	82,932	0.070
1984	6,260	81,979	0.071
1985	6,481	77,821	0.077
1986	7,495	91,724	0.076
1987	10,753	141,345	0.071
1988	14,084	147,845	0.087
1989	15,293	176,708	0.080
1990	14,237	199,993	0.066
1991	11,854	218,927	0.051
1992	18,515	234,327	0.073
1993	20,050	235,769	0.078
1994	16,910	207,047	0.076
1995	14,264	198,261	0.067
1996	16,280	209,493	0.072

Source: Citizenship and Immigration Canada.

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