Immigrant Receipt of Transfer Payments

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1 Introduction

The declining performance of recent immigrants in Canada's labour markets, based upon their entry earnings, unemployment rate, and labour force participation poses an interesting question as to whether or not these immigrants place a disproportionate burden on Canadian resources. The focus of this paper is to determine whether immigrants make significantly more or less use of three government financed transfer programs compared to the native-born Canadians. These programs include: unemployment insurance, social assistance, and rent subsidization. This paper uses merged cross-sectional Canadian census data in its analysis of unemployment insurance and social assistance that cover the sample period from 1980 to 2000. For the analysis of rent subsidies, this paper uses merged Canadian survey data covering the years from 1988 to 1996. Modelled as logits, the analysis estimates the probability of transfer receipt for each of the programs. To allow for comparisons between recent and earlier immigrant cohorts, immigrants are segmented based on year of entry into Canada. The results generate the assimilation profile for each immigrant cohort relative to the native-born population, providing us with an indication of the likelihood of receiving these types of transfers upon entry into the country and the changes to these rates as years in Canada increases. This paper finds that for the most part immigrants do not place any additional burden on Canadian resources. However, there is strong evidence suggesting that recent immigrants make more use of rent subsidies compared to the native population.

In the next section, I summarize the relevant literature: performance of immigrants in the labour market, net fiscal gains from immigration, and immigrant participation in transfer payment programs. Section 3 and 4 provide brief summaries of the changes that have occurred to the unemployment insurance program since 1980 and immigration policy since 1946. Section 5 provides a description of the analysis conducted in this paper. Section 6

and 7 summarizes the results of the analysis on unemployment insurance and social assistance for both male and females. Section 8 summarizes the results of the analysis on rent subsidies for family households. Section 9 concludes.

2 Literature Review

2.1 Performance of Immigrants in Canada's Labour Market

This section presents literature examining the deterioration to the entry earnings, unemployment rate and overall economic performances of recent immigrants relative to the native-born population. Some major papers that use U.S. data is discussed, however, the majority will pertain to the immigrant experience in Canada. Subsequent sub-sections discuss the harsher effects poor macroeconomic conditions have on immigrants, the increased difficulty in transferring human capital in the Canadian labour market for immigrants, and the rise in low income immigrant household.

The work of Chiswick (1978) outlines the typical earnings profile for immigrants in a host country. Upon entry into a labour market, immigrants typically earn less compared to the native population; however, within ten to fifteen years, their earnings increase matching those of natives, eventually exceeding them in subsequent years. The work of Borjas (1985) finds that there has been a secular decline in the quality of immigrants over the years. In his analysis, Borjas (1985) measures the change in quality of a particular cohort over time by pooling together cross-sectional data sets creating a pseudo-longitudinal data source for his analysis. Tracking cohorts across cross-sections provides an indication of their overall performance as their years of residency increases. These studies both analyze U.S. data; however, they form the basis from which many of the Canadian studies on immigration are based on. Bloom and Gunderson (1991), using 1971 and 1981 census data, discover a similar decline in the quality of immigrants arriving in Canada. They show

that immigrants arriving in 1971 took thirteen years to surpass the earning levels of natives, while those arriving in 1981 it took them twenty-two years. This gives rise to the possibility that if immigrant quality continues to decline – the typical earning profile for immigrants discussed by Chiswick will not be as evident in the future as it has been in the past.

Many studies have tried to find explanations to the decline in the performances of recent immigrant cohorts in the Canadian labour market. The common link in the literature relates to the introduction of the point system in 1967, which assessed entry into Canada based on the candidate's skill level. While the point system was aimed at attracting more skilled immigrants, it shifted the source of Canadian immigrants from developed countries to developing countries and may be a significant factor contribution to this decline. This generalization is evident in the study by Wright and Maxim (1993). Using 1971 and 1986 census years, they find that the declining quality of Canadian immigrants is a result of the policy reform in 1967, which brought about changes to the composition of immigrant cohorts, in terms of source countries and in terms of the gradual decline in numbers to economic class immigrants entering Canada relative to the refugee and family classes. The latter change was also influence by reforms in the 1970s that began stressing the importance of family re-unification and humanitarian outreach.

Baker and Benjamin (1994), using data from the 1971, 1981 and 1986 Canadian censuses, find that recent immigrants start off with significantly less earnings than their predecessors and they are unlikely to ever catch up to the earning levels of natives at the observed rate of assimilation; this happens even though immigrants were more highly educated than natives. They attribute the declining fortunes of immigrants to the changing composition of immigrant cohorts and to a relative decline to the returns of experience for immigrants educated outside of Canada.

Bloom, Grenier and Gunderson (1995), using the same census years, find similar deterioration in terms of entry earnings and assimilation. The study distinguishes between the immigrants originating from Europe and the U.S. with those origination from Asia, Africa and Latin America, and concludes that the amount of years required to catch-up to the earnings levels of natives are significantly higher for the latter group; for recent cohorts from both groups, complete assimilation is non-existent. They attribute this decline to the decreasing quality of immigrants in terms of the attributes that complement assimilation in the labour market, to increased discrimination coinciding with the increase in visible minorities within the economy, and to macroeconomic conditions affecting the newly arriving cohorts during the early 1980s.

By the next available census, there was some optimism surrounding the performances of immigrants. Grant (1999), who updates the Baker and Benjamin's (1994) study, includes data from the 1991 census and finds that the fortunes of immigrants have improved during the late 1980s, contrary to what was predicted to occur. Assimilation rates of successive immigrant cohorts were on the rise and the downward trend to their entry earnings had stopped; however, levels were still below those immigrants entering in the late 1970s. Unfortunately, subsequent studies would discover the re-emergence of the decreasing entry earning pattern for immigrants in the 1990s. The author finds no evidence in the observable characteristics that would account for the short-lived rise in fortunes but attributes the increase to a stronger economy in the late 1980s. This result places emphasis on the importance macroeconomic conditions in determining outcomes for immigrants.

Aydemir and Skuterud (2005), using five Canadian censuses, investigate the 27% drop in entry earnings for immigrant men arriving between 1995-1999 compared to the entry earnings for those with similar characteristics who arrived in 1965-1969. For female immigrants the drop in entry earnings is smaller, at 22%, for that same period. They find little to no evidence that foreign education of immigrants was valued less than an education obtained in Canada; however, they did find that compositional shifts in the language abilities of new immigrants and region of birth accounted for one-thirds of the deterioration in entry earnings. Also significant was the deterioration in the wage returns to foreign labour market experience which accounted for one-quarter to one-half of the drop in entry earnings; this effect was strongest amongst male immigrants from non-traditional source countries.

Using a collaborative data set jointly created by Statistics Canada, Revenue Canada and Citizenship and Immigration Canada called The Longitudinal Immigration Database (IMDB) which links immigrant landing and tax records in conjunction with survey data from Surveys of Consumer Finance (SCFs), Green and Worswick (2004) examine the source of the declines in the immigrant entry earnings in the 1980s and 1990s, the severity being greater in the 1990s than in the 1980s. Both natives and immigrants experienced an overall decline in entry earnings across cohorts during the 1980s and 1990s; however, the decline for immigrant cohorts was substantially larger. The authors find that this is due to the fact that while the entry earnings of the 1980-82 immigrant cohort reflected returns to foreign labour market experience, for the 1990-92 immigrant cohort it did not. The study finds no evidence suggesting that returns to foreign education have declined across successive cohorts once controlling for other factors. One noteworthy advantage of using the IMDB data is the ability to distinguish between immigrant entering under the economic, family, refugee and business classes. The authors find no evidence of a change in entry earnings resulting from changes to the class composition of immigrants during this period.

De Silva (1997a) looks at the IMDB data from 1981-84 to examine whether immigrants admitted under compassionate grounds such as refugee and family classes perform poorly compared to economic class immigrants. The author finds that although family and refugee class immigrants initially start off at an earnings disadvantage they both have closed the earnings gap over time and show significant convergence to the earning level of economic class immigrants during this time period. Across all three classes immigrants originating from Europe perform better than those from Third World countries. The study recommends that age at immigration should be looked at when considering policy since it is the only observable characteristic that the authors find that is indicative of immigrant success in the labour market with earlier age at immigration associated with better economic performance.

Li (2003), uses the IMDB data from 1980-1997 to examine how long it takes immigrants to catch up to the earning levels of natives. Although recent immigrants are earning less than earlier cohorts upon entry, the author finds that recent immigrants are assimilating more quickly. The study finds that younger immigrants, those originating from Europe and the U.S. and economic class immigrants, catch-up to native earnings the quickest. The most surprising result of the study showed that immigrants with human capital as measured by whether the immigrant had obtained a Bachelor's degree and official language capacity had significant effects for earlier immigrants, whereas for recent immigrants it had modest effects on catch-up rates. This finding adds support to the notion that transferring human capital into the labour markets is much more difficult for more recent cohorts.

2.2 Business Cycle

Studies on immigration and the business cycle show that macroeconomic conditions do not affect immigrants in the same manner as it does to natives. Many studies suggest that

recessions are harsher on immigrants, specifically, for more recent immigrants. The higher probability of unemployment of recent immigrant cohorts relative to natives is elevated during recessions; however, the increase is likely to be temporary. McDonald and Worswick (1997) recommend programs for recent immigrants implemented during recessions aimed at regaining access to labour markets; they also recommend lowering annual immigrant intake levels during recessions.

When examining the effects macroeconomic conditions have on immigrant earnings, using 1981-92 data of the Survey of Consumer Finances, McDonald and Worswick (1998) find that the low entry earnings of recent immigrants resulted from poor labour market conditions throughout the 1980s rather than from the characteristics of immigrants themselves. Immigrant earnings assimilated more slowly during the recessionary years of the early 1980s than they did during the expansion years of the late 1980s. Recent cohorts only started assimilation by the mid-late 1980s after showing no signs of assimilation in the early 1980s, only to diverge once again as the Canadian economy underwent another recession in the early 1990s. Earlier immigrants cohorts were unaffected by the changing economic conditions.

Similarly, Aydemir (2003) examines the effects macroeconomic conditions have on labour market participation, employment and earnings using cross-sections of Survey of Consumer Finances covering the years from 1979 to 1997. He attributes the deterioration of these economic indicators for immigrants, not to a decline in the "quality" of recent immigrants, but to the greater severity in which adverse macroeconomic conditions impact recent immigrants as opposed to natives. Once controlling for macroeconomic conditions, the estimated coefficients related to the quality effects are insignificant. The analysis on labour market participation is unique to this paper and the findings suggest that problems associated with economic assimilation may start in the early stages. Policy encouraging

more immigrants to participate in labour markets during recessions may bolster assimilation all together.

2.3 Human Capital Transfer

Many studies attribute the inability of recent immigrants to transfer their human capital into Canadian labour markets as a significant reason for their overall decline in outcomes. Chiswick and Miller (1988), using 1981 Canadian census data, found that, similarly to results for the US, UK, Australia, and Israel, education and foreign labour market experience have smaller effects on earnings than the training of native born; however, domestic labour market experience has larger effects. For immigrants originating in countries where there is greater transferability of skills, defined as immigrants from English-speaking developed countries, the partial effects of education and foreign labour market experience on earnings are greater.

Many other studies point to the decline returns to human capital of immigrants obtained via foreign work related experiences as a major reason for the declining outcomes for recent immigrants, while other studies indentify declining returns to their education as a contributing factor.

Sweetman (2004) examines the quality of education obtained by immigrants in their originating countries and compares it with labour market outcomes by merging 1986, 1991, and 1996 census data with standardized international test scores measuring the education systems of countries. The author finds that immigrants from source countries with lower quality of education receive a lower average return to their schooling compared to those from countries with higher quality. Also, the earnings of immigrants who migrated to Canada at a young age are not affected by the quality of education available in the source country.

Reitz (2001), suggests that the skill-based selection bias introduced in the 1960s, which gave immigrants an advantage of possessing higher skills relative to natives, was eroded by the fact that at around the same time Canada placed an emphasis on educating its workforce. The result was that native-born education levels rose more rapidly than those of immigrants between 1971 and 1991. Only in the 1990s have immigrant education levels been increasing at a rate higher than those of native-born, but because immigrant credentials are not understood or recognized and their overall value is discounted relative to an education obtained domestically, the gains from a more educated immigrant workforce have not been fully realized.

2.4 Low-Income Rates

Coinciding with the lower entry earnings, low-income rates among successive immigrant cohorts were on the rise beginning in the early 1980s. Between 1980 and 2000, Picot and Hou (2003) find that the low-income rates for immigrant families rose with each successive cohort and the gap between native low-income rates upon entry worsened for immigrants during this time. The authors find that changes to the observable characteristics of immigrants explain less than half of the growth in low-income rates among immigrants, and suggest several other possibilities that have been discussed in this section that may account for the remaining decline such as: macroeconomic conditions and condition upon time of entry, declining returns to foreign experience and education, deteriorating outcome for new labour-market participants in general which includes recent immigrants, and decreased recognizing of foreign credential.

Different studies in the literature identify all of the above explanations as possible factors explaining the deterioration in immigrant earnings over the 80s and 90s. In all likelihood it

is a combination of all these factors and all must be considered when seeking an explanation to this decline.

2.5 Net Fiscal Gains from Immigration

This section provides a very brief summary of the major papers discussing the overall net gains to a host country generated by immigration. For both Canada and the U.S. immigration is seen as wise investments as immigrants generate net gains. This section also discusses some of the criticism of the methodologies applied in these papers.

Simon (1984) for the U.S. and Akbari (1989,1995) for Canada are the prominent studies supporting the view that immigrants, on average, end up providing significant net benefits to the native citizens. The common theme of these studies is that since the majority of immigrants enter into a country at a working age, the host country, via taxation, immediately benefits from the productivity from these workers without having to incur the cost of "raising" them as children. By the time these workers retire, they would have contributed enough to the economy to place no additional burden on the resources of the receiving country.

Simon (1984) uses the 1976 Survey of Income and Education to investigate the net effect of immigrants on natives. The study finds that immigrants make less use of public services within the first 12 years since migrating relative to natives. This is primarily due to the relatively younger immigrants being less dependent on Social Security. After 12 years of residency, immigrants and natives make roughly equal use of public services. In terms of generating revenue, within 3 to 5 years of residency, immigrant families pay as much in taxes as native families, only to surpass them in subsequent years. Overall immigrants contribute more to the U.S. balance sheet than they take from it, making immigrants a wise

investment from the point of view of natives. Borjas (1991) is critical of Simon's analysis because of key public services left out of the calculations, and that its methodology yields positive net contributions for both immigrant and natives; also, it has the implications that the borders should be opened to all immigrants since they are such good investments.

Akbari (1989) uses data from the 1981 Canadian Census of Population to analyze the net transfer of public funds from immigrants to natives. Government transfer payments, public goods, health and education services were measures against estimated tax revenue collected from immigrants and natives alike. It was found that the average immigrant household generated a positive net transfer of public funds to natives for at least the first 35 years of residency. Only pre-1946 cohorts, because older individuals tend not to work as much and immigrants with less than 2 years of residency because those immigrants have yet to fully assimilate into labour markets, generated a negative net transfer of public funds. Akbari (1995) uses data from 1991 Survey of Consumer Finance to conduct a similar analysis to his earlier study and arrives to the same conclusion. Overall, that author recommends that immigrant policy should target younger working immigrants to capitalize on the years of their peak productivity.

2.6 Transfer Payments Receipts

This section presents papers that measure the overall performance of immigrants based upon the use government financed transfer payments. In general, immigrants are not seen to place a disproportional burden on these resources. There is mixed evidence regarding participation in the programs over time and changes to rates across immigrant cohorts. Most of the papers in section look at the Canadian experience and focus on unemployment insurance.

The pioneer study examining the use of transfer payment by immigrants was done by Blau (1984) using U.S. data from the 1976 Survey of Income and Education. The study looks at male and female headed immigrant households and compares their use of welfare and social insurance with the usage rates of native-born Americans. The author finds that the higher levels of transfer payments received by immigrant households is due to the fact that immigrant households are on average older than native-born households, a result of the pre-1924 U.S. immigration policy. Age tends to increase use of transfers; once controlling for age and other factors, immigrant headed households were found to depend significantly less on welfare and only slightly more on social insurance compared to native-born headed households.

The major criticism of this study is that it only uses data from a single year. Failing to use a data set that covers two or more cross-sectional survey years makes it difficult to distinguish the aging and cohort effects on the variable that is being measured[1]. Borjas and Trejo (1991) overcame this problem by pooling together data from the 1970 and 1980 Public Use Samples of the U.S. Census. Their results were vastly different from those of previous studies. They found that although welfare dependency had increased for both immigrant and native households between 1970 and 1980, the increase was larger for immigrants. Male-headed immigrant households, who were 0.8 percentage points more likely to receive welfare in 1970 than their native counterparts, had jumped to being 1.7 percentage points more likely to receive welfare by 1980. A similar relative increase in welfare dependency occurred to female-headed immigrant households. When controlling for years since migration and the secular rise in welfare dependency as indicated by the rise in native dependency rates, the most recent immigrant cohort in 1980 was 2.8 percentage points more likely to receive welfare than the most recent immigrant cohort in 1970. The

[1] See Heckman and Robb (1983)

authors attribute this to fewer immigrants origination from Europe and more from Asia and Latin America.

The study by Baker and Benjamin (1995a) examined the extent to which immigrants depend on Canada's transfer programs relative to the native born population. To determine if immigrants pose any excess burden on Canada's resources, the authors used 1986 and 1991 data from the Survey of Consumer Finances to analyze the participation rates of males between the ages of 16 and 64 on the following three transfer programs: unemployment insurance (UI), social assistance (SA), and rent subsidies. They find that recent immigrant cohorts participated more in UI and SA programs compared to earlier cohorts. Relative to the native population, immigrants were less likely to participate in these programs; however, assimilation resulted in convergence to native levels. The authors leave it up to future research in determining if the participation rates of the most recent immigrant cohorts will surpass those of natives. In terms of rent subsidies, immigrants are more likely to make use of these transfers; however, levels decrease as usage rates converge to native levels over time. The analysis was replicated on a female sample by Baker and Benjamin (1995b) and found that the majority of immigrant cohorts make less use of UI and SA compared to their native counterparts. Recent cohorts depend more heavily on SA compared to earlier ones, holding years in Canada constant. There was no clear evidence suggesting that recent cohorts depended on UI more than earlier cohorts. Participation rates within UI increased over time; however, there was no evidence that female immigrants assimilated into higher usage rates regarding SA. Overall, the findings from both studies conclude that neither male nor female immigrants pose an additional burden on Canada's transfer programs.

Crossley, MacDonald and Worswick (2001) attempted to replicate Baker and Benjamin's results and found that they were sensitive to two factors: the choice of survey years used in the analysis and a common assimilation profile model (CAPM) that restricted the years-

since-migration variable (assimilation effects) in having equal impact on all cohorts. For their analysis the authors used a more comprehensive data set covering the years 1982, and 1984-1994. In the specification that allowed assimilation effects to vary across cohorts, in terms of UI and SA, they found no evidence suggesting that recent cohorts depend more heavily on these programs than earlier cohorts. They found mixed evidence suggesting that assimilation brings about increased usage of these programs by immigrants. The rate of receipt of UI for post 1980 cohorts grew but only for the first few years after migration and for earlier cohorts the rate of receipt of UI declined with years in Canada. Overall, they found that even the more recent cohorts do not generate an excess drain on Canada's resources compared to previous cohorts. The change in immigrant selection affecting the more recent cohorts does not seen to have had an impact on the receipt probabilities of these programs.

Several studies using US census data suggest that arrival cohorts differ in terms of assimilation. Duleep and Regets (1996) find an inverse relationship between assimilation and entry earnings, higher entry earnings results in slower rates of assimilation and vice-versa. Recent cohorts arriving into the labour market with lower entry earnings than their predecessors should assimilation at faster rates. Duleep and Regets (1997) find more evidence suggesting immigrant arrival cohorts differ in assimilation rates in term of wages. The direct application to participation in transfer programs is clear, suggesting that results could improve if model specification allows for assimilation effects to vary across arrival cohorts

DeSilva (1997b) uses data from the 1986 and 1991 Canadian censuses to investigate UI participation rates. The author conducts a similar analysis to that done by Baker and Benjamin (1995a, 1995b), but pays specific attention to the impacts that the changing ethnic compositions of recent immigrants have on the probabilities of receiving UI. For both males and females, Portuguese, Italian, Polish, West and South Asian, Other Asian, and

Black immigrants were the ethnic groups most likely to receive UI. Not having a university education and not being proficient in English were also found to significantly elevate UI probabilities. Assimilation resulted in increased participation in UI, this effect was stronger for men than it was for women. With each additional year spent in Canada, the probability receiving UI increases by 1.5% for men and by 0.7% for women, this is within the range reported by Baker and Benjamin.

Marr and Siklos (1999), using IMDB data, examine the relationship between UI claims and the immigrant class in which the individual making the claim entered the country under. The dataset indentifies immigrants who entered Canada in 1980, 1985 or 1989 and who filed a tax return from the year of landing to 1995, it does not include immigrants who did not file a tax return. They find that regardless of class, claim rates rise rapidly within the three or four years after arriving in the country, and decline thereafter. The findings suggest that the decline in claims after three to four years could be attributed to immigrants eventually finding secure employment; it could also be attributed to immigrants exhausting their UI entitlements by that time. The authors leave this question open to future research.

Sweetman (2001) uses data collected from the Survey on Repeat Use of Employment Insurance (EI) for individuals who initiated an EI claim and received benefits in 1996. The study finds that immigrants make less use of the program compared to natives, and when they do make use of the program, they use it less intensely. One interesting aspect of the study finds that immigrant claims were more likely to come from those who were permanently separated from their work, whereas native claims tended to be because of temporary layoffs such as from seasonal employment. This could account for the study's findings that immigrants search for re-employment more intensely than natives do and are willing to accept lower wages conditional on their age, region, and education; in contrast, natives use EI to temporally supplement income during the "off seasons".

The literature thus presents little evidence suggesting that immigrants place a disproportional burden on Canada's resources. There is mixed evidence indicating that participation in these transfer programs changes with years of residency. A number of the studies suggest that participation in unemployment insurance for some immigrants peaks within the early years of residency in Canada and declines thereafter. Comparisons with natives have also been limited to studies analyzing the years prior to the early 1990s. The analysis in the paper is set out to address similar questions with data spanning across five censuses, including the 1996 and 2001 census – a time period that has received little attention in terms of analysis of transfer programs participation by both immigrants and natives.

3 Canada's Employment Insurance (1980-2001)

The largest component of Canada's social safety net, employment insurance, referred to as unemployment insurance prior to 1997, has undergone significant reforms since its inception in 1940 as a means of transferring income to the temporality unemployed. Budgetary constraints and alleged abuses of the system have influenced changes to the program in attempts to mitigate its adverse effects and to maximize overall gains to Canada. Eligibility, benefit rates and entitlement, the amount of weeks one receives benefits after becoming eligible and subsequently unemployed, have all undergone significant reforms, contributing towards making the program "less-generous" in 2000 than it was in 1980. This section outlines the changes to UI that are relevant to the empirical analysis conducted in this paper, that is, changes to UI between 1980and 2001 that impact the probability of receiving UI benefits. I will begin by summarizing the more recent changes to the program and determining how those changes have influenced UI distribution, helping us distinguish between the sample years analyzed in this paper (1980, 1985, 1990, 1995 and 2000).

A new method used to calculate the amount of insurable work performed, implemented in 1997, replaced the weeks-based approach under the rationale that the newer method would better relate work effort with insurance benefits. 2000 is the only year in the sample that uses an hour-based approach to calculate benefit eligibility and entitlement. Under the old system, an individual would be credited with having worked one week regardless if that person had worked 15 hours or 40 hours during that week; also, the weeks-based approach did not recognize anybody working less than a 15hr work week. Under the hours-based approach, UI would expand to cover relatively more non-standard, seasonal workers. Green and Riddell (2000) look at the impacts of the new accounting system on eligibility and entitlement and conclude that the hours-based approach had a very small net increase on eligibility and on entitlement. They find that hour-based approach redistributes weeks of entitlement towards male, seasonal workers at the expense of part-time female workers.

Other UI reforms occurring between 1995 and 2000 were the reduction to the maximum duration of entitlement from 50 weeks to 45 weeks, reflecting the fact that the majority of the unemployed find work within the first 40 weeks of receiving benefits. A new method of calculating the amount of weekly benefits was introduced that encouraged working beyond the amount of time required to become eligible. Tougher reform was placed on repeat users of UI, where the benefit rate for repeat users was reduced from 55% to 50%.

The amount of hours of work required to become eligible for UI varied between 420–700 hours, equivalent to 12–20 weeks. Within this range an applicant's eligibility depended on regional levels of unemployment; individuals living in the highest unemployed regions would find themselves at the low-end of this range, requiring 12 weeks to qualify for UI, and individuals living in the lowest unemployed regions would require 20 weeks to qualify. By 2000, new entrants and re-entrants to the labour force faced a harder eligibility requirement which was set at 26 weeks of work, equivalent to 910 hours. Six weeks/210 hours of more

work were needed for new and re-entrants to the labour force to qualify for UI compared to individuals living in the lowest unemployment regions.

The reforms occurring prior to 1995 saw a significant decrease to the generosity of the program. The period between 1990 and 1995 saw the benefit rate reduced from 60% to 57% in 1993 and to 55% in 1994 for most individuals, the exception was applied to low-income individuals with children, whose rate was 60%. The maximum number of weeks somebody was entitled to benefits was reduced by 8 weeks on average. Individuals who voluntarily quit their jobs or who were dismissed were prevented from receive UI, even if they had worked long enough to obtain the necessary eligibility requirements. The minimum number of weeks required to become eligible for UI in the highest unemployment regions was increased from 10wks to 12wks.

The decade of the 1980's saw relatively fewer reforms to UI than what was experienced in the 1990's. The benefit rate was held constant at 60% for 1980, 1985, and 1990. For 1980 and 1985, the eligibility requirement range was set at 10–14 weeks; in 1990, failure to renew legislation resorted in the abandonment of the 10–14 weeks eligibility requirement criteria. For most of 1990, eligibility requirement was fixed at 14 weeks regardless of regional unemployment levels. After November 18, 1990, the variable entrance requirement was restored; however, the high-end of the range was increased from 14 to 20 weeks, making it on average harder to qualify for UI.

To summarize, changes to eligibility requirements from 10–14 weeks in 1980 to 12–20 weeks in 2000 has made it harder to qualify for UI in recent years. New and re-entrants to the labour force faced even tougher requirements (26 weeks) by 2000 in order to gain eligibility. The amount of benefit payments distributed decreased from 60% in 1980 to 55% for most individuals, repeat users of UI saw an even greater decrease (50%) and those who

voluntarily quit their jobs saw no payments at all by 2000[2]. Entitlement had also decreased over the years. Overall, it is clear that the generosity of the programs has declined significantly since 1980.

4 Canada's Immigration History - Since 1946

Canada's immigration policy from 1946 to 1962 was characterized by the major goals of enlarging the population, improving living standards for existing Canadians via domestic market expansions and resource sector development, and ensuring the maintenance the basic character and composition of the current population. This was outlined in Prime Minister Mackenzie King's speech before the House in May of 1947[3]. This meant that immigration policy was very selective in maintaining its inflow of immigrants from Britain and the U.S. with few exceptions, and that it was also flexible enough to address short term domestic concerns.

Green and Green (1999) point out that policy during this era gave rise to conflicts amongst its intended goals. When labour shortages in the booming resource sector could not be filled by immigrants from traditional source countries, immigration policy was to reach outside of Canada's basic population makeup. As a result, Canada saw an increase of immigrants from non-traditional source countries, primarily from central, eastern and southern Europe. When immigrants from the non-traditional countries, particularly Italy, were more likely to exercise their sponsorship rights the undesired result saw a more unskilled inflow beginning in late 1950s. This change occurred during a time where Canada was transitioning towards a modern manufacturing sector, where it was argued that a relatively more skilled labour force was required and led to significant changes to immigration policy.

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[2] 2003 November Report of the Auditor General of Canada
[3] Marr and Siklos (1995)

In 1962, Canada abandoned its discriminatory policies on admitting immigrants on the basis of national origins[4]. Admissions were now based on the potential migrant's own skills and abilities. Opening up the border to more countries solved the problem of the inadequate supply of skilled workers from traditional source countries. In contrast to the previous era, immigration policy was no longer used as a mechanism to promote population growth, but it focused primarily on addressing the immediate needs of the domestic labour market. To ensure a relatively skilled flow of workers, the points system was introduced in 1967 to objectively assess applicants based on education, age, language, employment arrangements, etc. The points system is constantly under revision to reflect changing needs in the economy and levels were dependent on the business cycle. Green and Green (1995), credit the point system for shifting the inflow of immigrants away from less skilled categories, such as labourer and transportation workers, to more skilled such as professionals. The points system is only used to assess whether economic class immigrants meet the minimum admission requirements, immigrants wishing to enter under the family or refugee class are not subject to this assessment.

The new Immigration Act proclaimed in 1978 placed importance in the re-unification of Canadians with family members living abroad and in upholding Canada's humanitarian efforts by bringing in a substantial number of refugees each year[5]. Since admittance for these types of immigrants was not based on their skills, the aggregate skill level of new immigrants would likely decrease relative to previous years since in the majority of cases these immigrants would be arriving from countries where individuals posses lower skills on average. Overall, opening up of the borders resulted in a drastic change in the originating countries of immigrants entering Canada.

[4] Green and Green (1999)
[5] Marr and Siklos (1995)

The "Canadians First" provision of the 1978 Act prevented employers from obtaining employment authorizations until after they could provide enough proof that all attempts were made to hire and/or train Canadian citizens. The point system also penalized economic class applicants who had not arranged employment prior to entering the country. In May of 1982, amidst high domestic rates of unemployment, restrictions completely prevented economic class immigrants from entering the country unless they had pre-arranged employment.

In 1985, as the economy recovered, the Conservative government reviewed its immigration policy. Immigration was to be used as a tool to counteract the undesired effects Canada's decreasing fertility rates had on the population and to bring in enough productive workers to support the proportionally large baby boomer generation that would be entering retirement age. Shortly after, the restriction on economic class applicants was removed and immigration policy was focused on increasing capital inflow and establishing trade links.

In the early 1990s, when it was determined that immigration was not a feasible solution to correct for a naturally aging population, the government soon regained focus on using policy to target economic goals. The points system awarded immigrants who matched the specific occupational needs on a provincial basis and were processed on a high priority basis. The admittance of family class immigrants was reduced in favour of more economic class immigrants and annual immigration levels were not to be changed in accordance to the business cycle. It was decided that the long-term goals of immigration were enough to justify maintaining large inflows during bouts of high unemployment. By the end 1990s, long-term goals were not defined in terms of population growth or demographic controls, but in terms of making the makeup of the Canadian labour force more skilled and flexible[6]. Knowledge of the official languages was emphasized in order to bringing in immigrants better suited to cope with the evolving economy. Ultimately, the policy by the end to the

[6] Greene and Greene (1999)

decade was aimed towards making immigrants contribute as quickly as possible, without having to be a burden on Canada's social programs.

5 Methodology and Data

This paper examines the use of unemployment insurance, social assistance and rent subsidization (RS) by immigrants in Canada relative to the native born population. I analyze the probabilities of participation in each of the three programs, regressing a binary outcome Y indicating whether or not the individual/family had received UI, SA or RS in the reference year, on a set of explanatory variables. A value of 1 indicates that the individual or household received transfer payments during the reference period, and a value of 0 indicates otherwise. The analysis of UI and SA will cover the years between 1980 and 2000 inclusively by making use of public use microdata files (PUMF) of the 1981, 1986, 1991, 1996, and 2001 Canadian Censuses. Information on UI and SA is based on transfers received in the calendar year just prior to the census date. The analysis of RS is based on the Housing Income Facilities and Equipments files (HIFE) from the 1989-1997 Surveys of Consumer Finances. Information on RS is based on transfers received during the month the data was collected; for the HIFE data files, this is typically April of the survey year.

This paper uses a similar model specification to ones employed by much of the literature on immigrant assimilation within transfer programs, modelled as logits, the explanatory variables take the form:

$$f(Y_{it}) = \sum \alpha_j C_{ij} + \beta_1 AGE_{it} + \beta_2 AGE^2_{it} + \gamma_1 YSM_{it} + \gamma_2 YSM^2_{it} + \mathbf{X}'\delta_{it} + \sum \theta_t YR_t + \varepsilon_{it}$$

C_{it} are dummy variables identifying nine immigrant cohorts based on the year of arrival: 1946-55, 1956-1965, 1966-70, 1971-75, 1976-80, 1981-85, 1986-90, 1991-96, and 1997-2001. These variables measure the differences between the likelihood of participating in the transfer programs for each of the cohorts relative to natives. In the literature the estimated

coefficients associated with these variables are interpret to capture the relative "quality" of each cohort after controlling for all the explanatory variables. They represent the unobservable characteristics (motivation, perseverance, etc.) that we cannot account for in our regression. These cross-cohort differences are referred to as the *cohort effects*.

Assimilation effects are measured by the years-since-migration (YSM_{it}) variable and its quadratic; since YSM is always equivalent to zero for natives, this variable will capture the changes to the rates in which immigrants participated in the three programs as years in Canada increases.

To evaluate the robustness of the estimated cohort and assimilation effects, additional controls are incorporated into the analysis that account for demographic and economic differences across observations. These selected variables are included in the $\mathbf{X}'$ matrix and based on theoretical reasoning, vary across the three analyses. The year (YR_t) variable are sets of dummy variables identifying the census/survey year under which the observation was recorded.

The procedure for the analysis on all three transfer programs are conducted in a similar manner. The key variables we wish to identify are the cohort effects and assimilation effects. Combined, these two effects generate the assimilations profile for each immigrant cohort. This show the common changes over time to the participation rates within each transfer program for all cohorts along with the initial probability of transfer receive upon entry into Canada. On the profile itself, the cohort effect represents the y-intercept, and the assimilation effects represent the slope of the line (see Crossley, McDonald, Worswick (2001) p.391 for example of profile). As a point of reference, each case is benchmarked against the native population. The cohorts are grouped based on the immigrant's year of arrival into Canada. Always included in every regression besides the cohort and assimilation variables are the ages and its square and an identifier indicating the census/survey year.

This is a common assimilation profile model, meaning that the assimilation effects are identical for each immigrant cohort.

The initial model estimation includes only the assimilation and cohorts effects, age variables and year of the census/survey, this estimation is referred to as the baseline estimate. Subsequently, additional demographic and/or economics controls are incorporated into the regression and their impacts on the cohort and assimilation effects are examined.

This framework is similar to the one used in Baker and Benjamin's (1995a, 1995b) model measuring participation in Canadian transfer programs for both male and female samples.

A criticism of Baker and Benjamin's (1995) results is that it assumes that all cohorts assimilate at the same rate. To investigate this issue further, we also employ a less restrictive model specification taken from Crossley, MacDonald, Worswick (2001), which removes the equal assimilation rates assumption from the analysis by interaction each of the cohorts with the years-since-migration variable and its quadratic. The less restrictive flexible model specification that allows for separate assimilations paths for each cohort has the following form:

$$f(Y_{it}) = \sum \alpha_j C_{ij} + \beta_1 AGE_{it} + \beta_2 AGE^2_{it} + \gamma_1 YSM_{it} + \gamma_2 YSM^2_{it} + \sum \gamma_{1j} C_{ij} YSM_{it} + \sum \gamma_{2j} C_{ij} YSM^2_{it} + \mathbf{X}'\delta_{it} + \sum \theta_t YR_t + \varepsilon_{it}$$

The only differences between the common assimilation profile model and the flexible model are the interactions of the years-since-migration variables with the immigrant cohort variables. Rejecting the hypothesis that the coefficients associated with the interaction terms are simultaneously equal to zero will provide support to the claim that assimilation differs across cohorts. A likelihood ratio test is applied to each regression testing this restriction.

The rationale in this paper in incorporating the flexible form model, thus, allowing assimilation rates to differ across cohorts, is brought about by several factors. Upon arrival into Canada, recent cohorts benefit from pre-established communities comprised of previous immigrants originating from the same source countries. These established networks can provide relatively more recent immigrants with greater opportunities that earlier cohorts were not privy to. All else being equal, recent immigrants benefiting from pre-established immigrants communities would assimilate at faster rates than earlier immigrants who did not have the benefits provided by larger networks. This effect would be particularly relevant to economic class immigrants, who upon arrival have relatively fewer ties within the community. Assimilation can also be relatively faster for recent immigrants in the sense that access to information is more readily available to recent cohorts than it was for earlier ones. Recent immigrants relative to earlier immigrants are better suited to make informed decisions prior to migration and after migration these immigrants have more readily available information pertaining to employment opportunities. Size of community networks and information accessibility are not captured directly in the model, they encompass the unexplained differences between immigrant cohorts found in the cohort effects. It is reasonable to assume that these differences would have different implications on assimilation rates for each immigrant cohort. Thus, assimilation effects to equally apply to all cohorts would not be a reasonable assumption to make.

Bertrand, Luttmer and Mullainanathan (2000) investigate the importance of social networks in welfare use. Their findings show significant and positive network effects in welfare use. Implying that there is a correlation between an individual's rate of welfare participation with the average participation rate of members from that individual's social network.

In addition, changes to immigration policy over the years have altered the compositional makeup of the average immigrant allowed into Canada. The intent of immigration policy by the mid-1990s was geared towards bringing in relatively more flexible immigrants capable

of adaption to a changing economic environment. In contrast, immigration policy prior to 1962 focused on admitting immigrants under a different set of goals such as ones geared towards population growth. It is reasonable to assume that the former group of immigrants possess, on average, a better set of skills suited for quicker assimilation. Therefore, allowing assimilation to vary across cohorts is a reasonable assumption to make based on the compositional changes across cohorts that would be captured within the cohort effects.

The composition changes across cohorts that are captured within the explanatory variables, such as knowledge of official languages or belonging to a visible minority group, would also have different effects on assimilation for various cohorts based on the cultural and environmental conditionings at the time. For example, holding other factors equal, it is reasonable to assume that a visible minority in the 1950s would have greater difficulty assimilating amidst times, when racial discrimination was more prevalent than a visible minority in the 1990s. A similar logic applies to immigrants not having prior knowledge of English or French; assimilation for these types of immigrants would be faster in an environment where language training is more readily available and affordable. Restricting assimilation rates to equal across all cohorts would fail to reflect these types of differences.

Although cohort effects capture the difference between immigrants cohorts after accounting for all explanatory variables, they provide no indication on how these unexplained differences effect assimilation. Overall, differences in assimilation rates based upon compositional changes to observable and unobservable characteristics across cohorts, and general unobservable characteristic differences such as network size upon arrival and access to information, all justify allowing for unique assimilation paths across cohorts. The subsequent sections present the analysis on the three transfer programs. The sample means and sample sizes are presented in the appendix.

6 Analysis – Participation in Unemployment Insurance

The analysis on unemployment insurance makes use five Canadian censuses spanning from 1980 to 2000. The gaps in information between the five census years present a major drawback in this analysis, primarily due to the fact that this dataset fails to capture information amidst a full business cycle, an aspect that has merited importance in the literature. Instead, we settle for snapshots of the business cycle at different points in time. From 1980 to 2000, the average annual GDP growth was 2.89%[7]. The annual growth rates in GDP for the years referred to in the dataset are at 1.34% in 1980, 5.41% in 1985, 0.25% in 1990, 4.07% in 1996, and 5.38% in 2000. Data collected for 1990 was just prior to a relative low in the business cycle in 1991, data collected for 1985, 1995, and 2000 were one year after relative peaks in the business cycle. Although the dataset contains periods at various phases of the business cycle, it is not ideal in the sense that it fails to capture data from at least one uninterrupted cycle. It is also not ideal in the sense that the snapshots of the business cycle that the available census data provides disproportionally represent relative booms in the economic; where the sample's average annual GDP growth rate between reference years is 0.40 percentage points higher than the actual average annual GDP growth rate between 1980 and 2000.

Levels of UI benefit payments are dependent on two dynamic factors; macroeconomic conditions and generosity of the program. The annual unemployment rates for each of the reference years were: 7.52% in 1980, 10.62% in 1985, 8.15% in 1990, 9.49% in 1995, and 6.83% in 2000[8]. Holding all else equal, we would expect UI payments to be correlated with these rates. As discussed previously, the program has become progressively less generous over the years with the most dramatic changes occurring in 1997 affecting the 2000

[7] CANSIM Database
[8] CANSIM Database

reference year. We would expect UI payments across census dates to be influenced by these two dynamic factors.

Problems were encountered regarding the inconsistencies of the definitions of the variables across the five censuses and with those defined in the SCF data. This caused the omissions of a few variables that were used in Baker and Benjamin's (1995a,1995b) studies. The analysis in this paper looks only at working aged individuals between the ages of 23 to 54 years old and ignores Atlantic regions since the year of immigrant indicator is not consistent with the remaining provinces. While UI participation rates are highest for individual from these regions, these regions account for a small proportion of the population, the cost of ignoring them is small. By the 1991 census, the class of workers who were employed as unpaid family workers were no longer grouped in separate categories, making it impossible to distinguish.

Initial baseline estimates are obtained predicting the probability that an individual will receive benefits. Generating these initial estimates, we control only for age, year-since-migration, census year, and immigrant cohort. Demographic controls are incorporated into a second regression; these include region, levels of schooling, knowledge of official languages, whether and individual is married or in common-law, and an indicator if the immigrant originated from the U.S. or U.K. Insufficient data prevents accounting for the number of dependent children. Its inclusion would presumably have had some impact on participation rates via its relation to paternity and adoptive components of UI benefits. There is also insufficient information regarding dependents women are responsible for, having this type of data available in the censuses would help in identifying the receipt of the maternal, parental and adoptive component of UI benefits.

Interpretation of the baseline and demographic controlled results can be misleading if one correlates changes in participation rates over time and across cohorts with changes in the

overall performance for immigrants within the economy. It has been shown that immigrants tend to participate less in the labour market during tough economic times relative to natives. Such a trend would show a favourable decrease to UI usage rates for immigrants. However, not actively looking for employment is not synonymous with improved economic performance as would be suggested from the lower probability of collecting UI resulting from inactivity in the labour market. In essence, declining labour market outcomes can produce two contradicting outcomes for UI participation; declining outcomes can results in more unemployment which leads to more UI benefits payments, but more unemployment can also lead to less individuals becoming eligible to receive UI benefits, which subsequently leads to less UI benefit payments.

This is why a subsequent regression is included that accounts for economic variations across observation that gives a clearer picture of the use of UI, as was originally done in the work of Baker and Benjamin (1995a,1995b). For example, Canada experienced an increased flow of entrepreneur, self-employed and investor class immigrants during late 1980s and into the 1990s. These classes of immigrants are typically not eligible for UI. The fact that these individuals will be reflected in as not having received UI does not ultimately mean they had performed well in the economy. The economic controls used to prevent such scenarios from generating misleading results include full/part time working status, log of wage, an indicator of whether or not the individual was self-employed, and whether or not the individual has worked enough weeks in the reference year to be eligible for UI.

It was difficult to construct eligibility parameters with the available data. The qualifying period for UI is based upon the 52-week period immediately before the start date of a claim or the period since the start of a previous claim, whichever is shorter. Eligibility depends on if the individual making the claim has worked enough during this qualifying period to be entitled benefits. In the analysis, eligibility is based on the number of weeks worked during the reference year. This criteria is not an accurate indicator of eligibility for individuals

relatively early in the reference year because the majority of the qualifying period encompasses the year prior to the reference year; information on the amount of weeks worked just prior to the reference year is not available. In addition, the census credits individuals with having worked a week during the reference year even if the individual had only worked for an hour during that week. This is inconsistent with the eligibility criteria of the UI program prior to the 2001 census, where the program required individuals to have worked a minimum of 15 hours during a week to gain credit for having worked that week. This issue is not applicable to the 2001 census since by then the program had switched over to an hours-based approach instead of basing eligibility on number of weeks worked. This presents its own set of problems unique to the 2001 census since data on the quantity of hours worked during the reference year is unavailable; thus, the analysis relied on data on the number of weeks worked to approximate eligibility. These discrepancies could account for the negative coefficient associated with the dummy variable obtained in the regression designed to identify if the amount of weeks worked during the reference year is greater than the average number of weeks required to become eligible for UI for that year.

Although usage rates of UI can provide some indication of overall economic performance, UI is not solely comprised of benefits that pertain to unemployment. Sickness, paternal, maternal and adoptive benefits all make up additional parts of the UI program. This allows health factors and fertility decisions to play a role in determining rates, neither or which are within the scope of this paper. From the perspective of this paper, the analysis on UI is used to determine whether immigrants generate an excess drain on Canada's resources. By examining the UI program, their impact on the government's largest social program is identified.

6.1 Results – Male sample

Table 1 summarizes the results obtained using the flexible form model specification after analyzing 1981, 1986, 1991, 1996, and 2001 census data. The results show that immigrant participation rates converge to native rates over time. The direction of convergence is dependent on whether the initial cohort rates are above or below those of natives. After controlling for demographic and economic variations, the 1976-80, 1987-91, 1991-96, and 1997-01 cohorts all have lower participation rates relative to natives that increase over time. Earlier 1956-65 and 1966-70 cohorts have initially higher participation rates relative to natives that decrease with years in Canada. The cohort and assimilation effects associated with these cohorts are all statistically significant. Testing leads to rejecting the fi common assimilation profile model restriction, concluding that assimilation rates vary across cohorts. Results from the common assimilation profile model specification are presented in the appendix in table 1A. The remainder of the analysis is based upon the results obtained using the flexible form model specification.

Table 1
Logit estimates for the probability of receiving Unemployment Insurance - males
Flexible form model specification

	No Controls			Demographic Controls			Demographic + Economic Controls		
	Cohort Effects	YSM	$(YSM)^2$	Cohort Effects	YSM	$(YSM)^2$	Cohort Effects	YSM	$(YSM)^2$
C4655	**-0.189**	**-0.083**	**0.0029**	**0.732**	**-0.111**	**0.0031**	**1.420**	**-0.168**	**0.0042**
	-0.016	**-0.009**	**0.0003**	**0.054**	**-0.011**	**0.0003**	**0.156**	**-0.016**	**0.0004**
	-0.117	-0.953	2.2958	0.457	-1.280	2.4224	0.880	-1.935	3.2982
C5665*	**1.121**	**-0.167**	**0.0043**	**1.661**	**-0.180**	**0.0043**	**1.844**	**-0.214**	**0.0052**
	0.154	**-0.018**	**0.0005**	**0.183**	**-0.018**	**0.0004**	**0.237**	**-0.020**	**0.0005**
	2.828	-5.215	5.6590	4.205	-5.631	5.6898	4.626	-6.660	6.7731
C6670	**0.149**	**-0.114**	**0.0037**	**0.687**	**-0.127**	**0.0038**	**0.778**	**-0.160**	**0.0047**
	0.014	**-0.012**	**0.0004**	**0.050**	**-0.013**	**0.0004**	**0.065**	**-0.015**	**0.0005**
	0.532	-3.707	4.4755	2.452	-4.156	4.6180	2.746	-5.168	5.6481
C7175	**-0.182**	**-0.069**	**0.0024**	**0.270**	**-0.080**	**0.0025**	**0.281**	**-0.111**	**0.0035**

	-0.015	**-0.007**	**0.0003**	**0.016**	**-0.008**	**0.0003**	**0.019**	**-0.011**	**0.0003**
	-1.171	-2.759	2.9187	1.731	-3.204	3.1664	1.773	-4.407	4.3553
C7680*	**-0.644**	**0.083**	**-0.0030**	**-0.363**	**0.072**	**-0.0026**	**-0.565**	**0.095**	**-0.0033**
	-0.045	**0.009**	**-0.0003**	**-0.017**	**0.007**	**-0.0003**	**-0.027**	**0.009**	**-0.0003**
	-5.872	4.837	-4.8370	-3.298	4.190	-4.2132	-5.140	5.552	-5.3111
C8186*	**-0.463**	**0.027**	**-0.0025**	**-0.244**	**0.036**	**-0.0028**	**-0.510**	**0.051**	**-0.0035**
	-0.034	**0.003**	**-0.0003**	**-0.012**	**0.004**	**-0.0003**	**-0.024**	**0.005**	**-0.0003**
	-4.820	1.014	-2.2268	-2.480	1.376	-2.4802	-5.093	1.924	-3.0600
C8791	**-0.176**	**0.015**	**-0.0045**	**-0.080**	**0.076**	**-0.0080**	**-0.441**	**0.132**	**-0.0118**
	-0.015	**0.002**	**-0.0005**	**-0.004**	**0.008**	**-0.0008**	**-0.022**	**0.013**	**-0.0011**
	-2.857	0.572	-2.8204	-1.276	2.797	-4.9681	-6.865	4.812	-7.1475
C9296*	**-0.888**	**0.270**	**-0.0271**	**-0.533**	**0.275**	**-0.0289**	**-0.909**	**0.359**	**-0.0362**
	-0.056	**0.029**	**-0.0029**	**-0.023**	**0.028**	**-0.0029**	**-0.037**	**0.034**	**-0.0035**
	-9.575	5.806	-6.1594	-5.677	5.864	-6.4916	-9.512	7.560	-7.9841
C9701*	**-0.744**	**0.513**	**-0.0852**	**-0.317**	**0.528**	**-0.0900**	**-0.885**	**0.779**	**-0.1273**
	-0.050	**0.055**	**-0.0091**	**-0.015**	**0.053**	**-0.0091**	**-0.036**	**0.074**	**-0.0122**
	-5.341	3.511	-2.7024	-2.258	3.568	-2.8151	-6.167	5.162	-3.8955
Test Cohort Equality		196.92 0.000			82.16 0.000			253.62 0.000	
Test of CAPM Restrctn		219.17 0.000			230.37 0.000			395.70 0.000	

a) Marginal probabilities are presented below the parameter estimates

b) t-statistics are below the marginal probabilities (not bolded)

c) Test Cohort Equality is a LR test of the equality of the cohort effects, critical value is given with p-value below.

d) The test of common assimilation profile (CAPM) restriction is a LR test of the restriction that the coefficients on the interactions of the years-since-migration variables with the immigrant arrival cohort variables are equal to zero, critical value is given with p-value below.

e) * indicates significance of cohort effects across all regressions

f) Demographic controls: region, knowledge of official languages, education, married, source country, urban setting

g) Economic controls: eligibility, part-time or full-time status, log of weekly wage, self-employed

Seven out of the nine cohort variables are statistically significant (at 5%) after controlling for demographic & economic variations. Five of these comprised of the most recent cohorts and yield negative signs throughout the three regressions. The 1956-65 and 1966-70 arrival cohorts are the additional significant cohort variables, their positive coefficients implies relatively more use of UI by immigrants arriving into Canada between 1956 and

1970 compared to natives during the sample period. The mean receipt probability over the sample period was 12.69 percent. The five most recent immigrant cohorts, comprised of immigrants who had arrived into Canada after 1976, are on average, 2.92 percent less likely to use UI compared to natives. This value is obtained by calculating the average marginal effect across these five cohorts. In contrast, immigrants arriving between 1956 and 1970 are, on average, 15.1 percent more likely to use UI compared to natives. This estimate seems excessively large; however, similar estimates are found in Baker and Benjamin (1995) and Crossley, McDonald, Worswick (1999).

Five cohort variables remain statistically significant across all three regressions. The results show that as demographic and economic controls are incorporated into the regression, consistent changes are occurring to the relative probabilities of UI usage for four of these cohort all of which arrived after 1976. Collectively, the baseline regression estimates that probability of collecting UI for this group is 3.76 percent less than the native rate. The likelihood of receiving UI relative to natives increases by 2.12 percentage points after adding demographic controls into the regression. Once these demographics variations between immigrant groups and natives are accounted for we see a relative increase to immigrant usage rates. This is to be expected since immigrants are more likely to live in Toronto, where UI rates are generally lower than the rest of Canada during the sample period. In addition, immigrants are more educated than natives; holding all other factors equal, UI participation decreases for individuals residing in Ontario and urban centers, and decreases with levels of education. These results are presented in table 6A of the appendix.

Once economic controls are incorporated into the analysis, the likelihood of collecting UI for this group decreases relative to natives by 1.48 percentage points. Similar trends are seen in Baker and Benjamin's (1995a) study. To summarize, participation rates for immigrants arriving after 1976 gets closer to native rates as demographic controls are included in the analysis while the addition of economic controls causes participation rates to go further from

native rates. The four earlier cohorts, comprised of the groups of immigrants who had arrived into Canada prior to 1976, get progressively worse relative to natives as demographic controls are incorporated into the analysis, as it does for recent cohorts; however, they continue to do worse as economic controls are incorporated into the regressions, unlike recent immigrants. This applies to all four cohorts, although only the 1956-65 cohort is significant across all three regressions.

Many potential scenarios could account for this. Compared to natives and recent cohorts, earlier immigrant cohorts are more likely to have worked as self-employed as opposed to being paid workers, be attached to the labour force mainly as part-time workers or not attached at all, earn higher weekly wages or work enough weeks during the reference year to satisfy the average minimum eligibility requirement for UI. All of the above economic characteristics lead to lower participation rates, once accounted for lead to larger cohort effects.

Testing the equality of the immigrant cohort effects, I am able to reject the equality. This implies that there are significant differences in the quality of cohorts in terms of collection unemployment insurance at the time of entry. The signs and magnitude of each of the cohort variables suggest that dependency on UI across successive cohorts has been decreasing over time. This paper is tentative to arrive at such a conclusion based on the fact that the available census data used in the analysis disproportionally represents relative booms in the business cycle during the sample period. According to the five censuses used in the analysis the average annual GDP growth rate during the sample period was 3.29%; in actuality, the average annual growth rate was 2.89%[9]. Studies have indicated that recessions are more difficult on recent immigrants and new labour market participants than they are natives. Although the severity of this discrepancy is unknown, it is reasonable to assume that the favourable results given to the recent immigrants cohorts in this analysis

[9] CANSIM Database

are overestimated to some degree. Studies have also suggested that labour market conditions at the time of entry are important to performance outcomes. Again, average annual unemployment rates based on the five censuses is 8.50%; in actuality, the average annual unemployment rate during this time period was 9.33%[10]. This again would bias the results favourable for new labour market participants of whom recent immigrants are a part of. Ideally to correct for both these problems, more frequent cross-sections would be required to better capture a continuous stream of business cycle phases.

However, the magnitudes of the differences between the samples' estimated GDP growth and unemployment rates with the actual rates over the sample period are not excessively different from one another to have severe implication on the results. In addition, natives who are new labour market participants during the sample period would also have been impacted in a similar manner, yet they are not as visible since this group makes up a smaller portion of the total native population.

Overall, there is little evidence suggesting the immigrants make more use of UI relative to natives. The majority of immigrant cohorts tend to use less UI upon arrival and eventually converge to native rates with years in Canada. There is also no apparent decline to the quality of immigrants across successive cohorts. In addition, the shift in the composition of immigrant originating from either the US or UK to non-traditional source countries does not have a large impact on performance of recent immigrants in terms of collecting UI.

6.2 Results – Female Sample

The analysis is replicated on a female sample, the results are comparable with earlier findings on usage rates of UI by male immigrants. Table 2 summarizes the findings obtained using the flexible form model specification. The evidence suggests that female immigrants are generally less likely to use UI compared to natives. These differences are

[10] CANSIM Database

most evident for the immigrants arriving after 1981. Also, rates converge to native levels as years in Canada increases. Testing leads to rejecting the common assimilation profile model restriction, concluding that assimilation rates vary across cohorts. The remainder of the analysis is based upon the results obtained using the flexible form model specification. Results from the common assimilation profile model specification are presented in the appendix in table 2A.

Table 2

Logit estimates for the probability of receiving Unemployment Insurance - females

Flexible form model specification

	No Controls			Demographic Controls			Demographic + Economic Controls		
	Cohort Effects	YSM	$(YSM)^2$	Cohort Effects	YSM	$(YSM)^2$	Cohort Effects	YSM	$(YSM)^2$
C4655	**2.203**	**-0.197**	**0.0041**	**2.605**	**-0.197**	**0.0041**	**2.753**	**-0.210**	**0.0043**
	0.378	**-0.021**	**0.0004**	**0.425**	**0.082**	**0.0004**	**0.507**	**-0.020**	**0.0004**
	1.432	-2.388	3.4772	1.691	-2.388	3.4772	1.762	-2.511	3.6017
C5665	**-0.155**	**-0.047**	**0.0019**	**0.094**	**-0.047**	**0.0019**	**-0.104**	**-0.041**	**0.0019**
	-0.012	**-0.005**	**0.0002**	**0.006**	**0.032**	**0.0002**	**-0.008**	**-0.004**	**0.0002**
	-0.381	-1.470	2.6769	0.230	-1.470	2.6769	-0.251	-1.267	2.5876
C6670	**0.017**	**-0.082**	**0.0029**	**0.237**	**-0.082**	**0.0029**	**0.210**	**-0.088**	**0.0031**
	0.001	**-0.009**	**0.0003**	**0.016**	**0.030**	**0.0003**	**0.018**	**-0.008**	**0.0003**
	0.060	-2.758	3.7229	0.838	-2.758	3.7229	0.731	-2.913	3.8955
C7175*	**0.313**	**-0.103**	**0.0033**	**0.522**	**-0.103**	**0.0033**	**0.452**	**-0.103**	**0.0033**
	0.029	**-0.011**	**0.0003**	**0.041**	**0.023**	**0.0003**	**0.042**	**-0.010**	**0.0003**
	2.129	-4.448	4.4597	3.544	-4.448	4.4597	3.019	-4.366	4.4501
C7680	**-0.372**	**0.058**	**-0.0023**	**-0.190**	**0.058**	**-0.0023**	**-0.225**	**0.062**	**-0.0024**
	-0.026	**0.006**	**-0.0002**	**-0.011**	**0.006**	**-0.0002**	**-0.016**	**0.006**	**-0.0002**
	-3.638	3.692	-4.0464	-1.853	3.692	-4.0464	-2.146	3.841	-4.1011
C8186*	**-0.607**	**0.072**	**-0.0040**	**-0.458**	**0.072**	**-0.0040**	**-0.497**	**0.081**	**-0.0044**
	-0.038	**0.008**	**-0.0004**	**-0.023**	**0.025**	**-0.0004**	**-0.031**	**0.008**	**-0.0004**
	-6.145	2.853	-3.7045	-4.606	2.853	-3.7045	-4.858	3.131	-4.0241
C8791*	**-0.516**	**0.105**	**-0.0088**	**-0.413**	**0.105**	**-0.0088**	**-0.483**	**0.144**	**-0.0116**
	-0.033	**0.011**	**-0.0009**	**-0.022**	**0.026**	**-0.0009**	**-0.031**	**0.014**	**-0.0011**
	-7.927	3.975	-5.5603	-6.300	3.975	-5.5603	-7.156	5.322	-7.1179
C9296*	**-0.968**	**0.289**	**-0.0273**	**-0.909**	**0.289**	**-0.0273**	**-0.881**	**0.312**	**-0.0303**
	-0.053	**0.031**	**-0.0029**	**-0.039**	**0.044**	**-0.0029**	**-0.048**	**0.030**	**-0.0029**
	-10.627	6.512	-6.5547	-9.924	6.512	-6.5547	-9.317	6.824	-7.0570

C9701*	**-1.105**	**0.615**	**-0.1031**	**-1.029**	**0.615**	**-0.1031**	**-1.045**	**0.694**	**-0.1190**
	-0.057	**0.065**	**-0.0109**	**-0.042**	**0.146**	**-0.0109**	**-0.053**	**0.066**	**-0.0114**
	-7.919	4.223	-3.2882	-7.353	4.223	-3.2882	-7.280	4.633	-3.6934
Test Cohort Equality		297.42			229.86			226.70	
		0.000			0.000			0.000	
Test of CAPM Restrctn		266.97			268.94			305.65	
		0.000			0.000			0.000	

a) Marginal probabilities are presented below the parameter estimates

b) t-statistics are below the marginal probabilities (not bolded)

c) Test Cohort Equality is a LR test of the equality of the cohort effects, critical value is given with p-value below.

d) The test of common assimilation profile (CAPM) restriction is a LR test of the restriction that the coefficients on the interactions of the years-since-migration variables with the immigrant arrival cohort variables are equal to zero, critical value is given with p-value below.

e) * indicates significance of cohort effects across all regressions

f) Demographic controls: region, knowledge of official languages, education, married, source country, urban setting

g) Economic controls: eligibility, part-time or full-time status, log of weekly wage, self-employed

Five out of the nine cohort variables remain statistically significant (at 5%) across the three regressions. Four of these comprise the most recent immigrant cohorts and are all less likely to participate in the UI program compared to the native population. This confirms with the results from the most recent male immigrant cohorts; collectively, we are able to conclude that upon arrival recent immigrants are less likely to rely on UI than natives. The additional cohort variable that holds significance across the three regressions is the 1971-75 arrival cohort. Female immigrants arriving into Canada between 1971 and 1975 are 4.2 percent more likely to collect UI compared to their native counterparts. After controlling for both demographic and economic variables, the four most recent female cohorts are, on average, 4.08 percent less likely to use UI relative to natives during the sample period. Again, this value is obtained by taking the average of the marginal effects associated with these four cohort variables. This comprises of females immigrants arriving after 1981. The remaining cohort effects are not found to be significant throughout the analysis.

The probability of receiving UI for recent immigrants decreases relative to native rates as demographic controls are incorporated into the analysis and subsequently increase as economic controls are incorporated into the analysis. The baseline regression estimates that immigrants arriving after 1981 are 4.52 percent less likely to collect UI than natives. This increases by 1.39 percentage points once demographic controls are account for. Similarly to the case for male immigrants, female immigrants tend to move towards metropolitan cities where UI rates are lower and are also higher educated, accounting for these factors, the expected results are observed. Subsequently, rates decrease by 0.94 percentage points once economic controls are incorporated into the analysis. Once accounting for employment patterns (economic controls) the differences in participation increases favourable for recent immigrants relative to natives.

As was the case in the previous analysis for male immigrants, this favourable increase is not consistent for earlier female cohorts. Collectively, I am able to conclude that for both male and female immigrants; earlier cohorts, unlike recent cohorts, do not benefit in terms of decreasing participation rates relative to natives from the additional economic controls incorporated into the regression. As discussed in the previous analysis, this suggests that there are employment pattern differences between recent and earlier immigrant cohorts.

Overall, I arrive at similar conclusions as I did for the case of male immigrants. Female immigrants are less likely to make use of UI compared to female natives. Over time, immigrant rates converge to those of natives. On average, recent female immigrants seem to be faring better than recent male immigrants relative to their native counterparts. Again, there is little evidence suggestion the female immigrants place any additional burden on Canada's UI program. Similarly to the previous analysis, the signs and magnitudes of the successive cohort variables indicate that the dependency to UI across successive cohorts has been decreasing over time. Testing the equality of the immigrant cohort effects, I am able to reject there equality. However, the underrepresentation of census data referring to

years of poor macroeconomic conditions may have overestimated the growth in cohort quality over the years.

7 Analysis – Participation in Social Assistance and other transfer payments

One difficulty with using the PUMF census data when analyzing SA is that it groups the "Social Assistance and Provincial Income Supplements" category, used in Baker and Benjamin's analysis, together with a broader category of other governments transfer sources. These additional transfer sources according to the census documentation encompasses federal and provincial training programs, payments from provincial automobile insurance plans, allowances and pensions paid to veterans and their widows and/or dependants, and workers' compensation. Additionally, refundable provincial tax credits, the Alberta Energy Tax Refund and refunds of the Goods and Services Tax (GST), Harmonized Sales Tax (HST) or Quebec Sales Tax (QST) are all included in this broader category. This broader category of transfer payments, in addition to the transfers received from social assistance and provincial income supplement payments, make up the category defined in the PUMF census data as "Other Income from Government Sources". I estimate that one third of the total transfer payments within this category is associated to social assistance and provincial income supplements; this is based on the examination of the 1985-86 SCF data files used in Baker and Benjamin's analysis. From that dataset, 8% had received SA and 14.5% had received a transfer payment from at least one additional source from the broader category in 1985. The "Other Income from Government Sources" category found in the PUMF dataset is the sum of these two figures. To summarize, the analysis in this section will cover a broad range of income transfers in addition to social assistance transfers.

To analyze the relative use of these transfer payments by immigrants compared to natives, initial baseline estimates are obtained controlling for age, census year, years-since-

migration, and dummy variables indicating immigrant cohorts. A second regression is performed with additional demographic controls for schooling, region, urban residences, family structure, and an indicator if the individual originated from either the US or UK. A final regression is used in the analysis adding additional controls for full/part time working status, an indicator of whether the individual was self-employed, and the log of weekly wages. This approach is similar to the one used for unemployment insurance.

Information on wage levels should provide indication if the individual fall below the low-income cut offs (LICO) threshold as defined by Statistics Canada. Unfortunately, the dataset used in the analysis does not contain information on low-income class status since PUMF individuals files are been analyzed and not the families files. The individuals files used in this analysis, unlike the families files, do not provide information on LICO or spousal characteristics. However, the families files proved problematic since definitions of immigrant year of arrival is inconsistent across the five censuses. Use of the families' files would have resulted in the omission of two of the census years. The analysis maintains its sample period encompassing five censuses at the expense of omitting spousal characteristics and LICO status indicators in the regression.

7.1 Results Male – Sample

Table 3 summarizes the results obtained using the flexible form model specification after analyzing 1981, 1986, 1991, 1996, and 2001 census data. The results show that recent immigrants are less likely to use these types of transfers than natives. The differences are very small and almost negligible. Earlier cohorts, those arriving between 1946 and 1965, are more likely to receive these types of transfers. Testing the equality of the immigrant cohort effects, I am able to reject there equality. The signs and magnitudes of the cohort variables imply that the use of transfers at entry has been decreasing for recent cohorts. In terms of assimilation, we find that immigrants converge to native rates as years-since

migration increases. Testing leads to rejecting the common assimilation profile model restriction, concluding that assimilation rates vary across cohorts. The remainder of the analysis is based upon the results obtained using the flexible form model specification. Results from the common assimilation profile model specification are presented in the appendix in table 3A.

Table 3

Logit estimates for the probability of receiving Social Assistance - males

Flexible form model specification

	No Controls			Demographic Controls			Demographic + Economic Controls		
	Cohort Effects	YSM	$(YSM)^2$	Cohort Effects	YSM	$(YSM)^2$	Cohort Effects	YSM	$(YSM)^2$
C4655	**1.492**	**-0.161**	**0.0030**	**2.025**	**-0.162**	**0.0028**	**3.239**	**-0.227**	**0.0036**
	0.161	**-0.027**	**0.0005**	**0.113**	**-0.025**	**0.0004**	**0.310**	**-0.032**	**0.0005**
	1.132	-2.303	2.9621	1.465	-2.219	2.5906	2.230	-2.965	3.2245
C5665*	**-0.419**	**-0.063**	**0.0017**	**0.264**	**-0.078**	**0.0017**	**0.880**	**-0.123**	**0.0023**
	-0.020	**-0.010**	**0.0003**	**0.006**	**-0.012**	**0.0003**	**0.041**	**-0.017**	**0.0003**
	-1.026	-1.981	2.4839	0.624	-2.370	2.3141	1.995	-3.616	3.1182
C6670	**-0.656**	**-0.062**	**0.0018**	**-0.021**	**-0.070**	**0.0016**	**0.500**	**-0.123**	**0.0026**
	-0.028	**-0.010**	**0.0003**	**0.000**	**-0.011**	**0.0002**	**0.028**	**-0.017**	**0.0004**
	-2.076	-1.930	2.2929	-0.063	-2.101	1.9595	1.477	-3.622	3.0700
C7175	**-1.273**	**0.016**	**-0.0002**	**-0.609**	**-0.008**	**0.0002**	**-0.401**	**-0.049**	**0.0011**
	-0.042	**0.003**	**0.0000**	**-0.009**	**-0.001**	**0.0000**	**-0.012**	**-0.007**	**0.0002**
	-6.380	0.588	-0.2620	-2.978	-0.286	0.2188	-1.898	-1.724	1.3556
C7680*	**-0.886**	**0.095**	**-0.0026**	**-0.620**	**0.088**	**-0.0022**	**-0.845**	**0.105**	**-0.0025**
	-0.034	**0.016**	**-0.0004**	**-0.009**	**0.013**	**-0.0003**	**-0.008**	**0.015**	**-0.0004**
	-6.361	5.202	-4.4142	-4.372	4.656	-3.6388	-6.003	5.593	-4.2104
C8186*	**-0.498**	**0.013**	**-0.0015**	**-0.414**	**0.043**	**-0.0025**	**-1.085**	**0.105**	**-0.0045**
	-0.023	**0.002**	**-0.0002**	**-0.007**	**0.007**	**-0.0004**	**-0.006**	**0.015**	**-0.0006**
	-4.410	0.471	-1.5079	-3.507	1.570	-2.3776	-9.404	3.830	-4.3660
C8791*	**-0.264**	**0.143**	**-0.0142**	**-0.232**	**0.235**	**-0.0191**	**-1.032**	**0.359**	**-0.0257**
	-0.013	**0.024**	**-0.0023**	**-0.004**	**0.035**	**-0.0029**	**-0.006**	**0.051**	**-0.0036**
	-3.517	5.211	-10.0930	-2.953	8.208	-12.9800	-13.306	12.681	-17.4370
C9296*	**-0.689**	**0.435**	**-0.0469**	**-0.434**	**0.548**	**-0.0576**	**-1.653**	**0.869**	**-0.0825**
	-0.029	**0.072**	**-0.0077**	**-0.007**	**0.083**	**-0.0087**	**-0.003**	**0.123**	**-0.0116**
	-12.412	13.196	-16.3520	-7.241	15.710	-18.8180	-25.515	23.884	-25.6100
C9701*	**-1.160**	**1.293**	**-0.2507**	**-0.616**	**1.494**	**-0.2898**	**-2.109**	**2.298**	**-0.4151**
	-0.040	**0.214**	**-0.0415**	**-0.009**	**0.226**	**-0.0438**	**-0.002**	**0.324**	**-0.0586**

	-15.297	13.673	-11.953	-7.5252	14.895	-13.05	-23.885	21.878	-17.9380
Test Cohort Equality	506.78 0.000			157.99 0.000			1479.30 0.000		
Test of CAPM Restrctn	922.90 0.000			1061.21 0.000			2152.63 0.000		

a) Marginal probabilities are presented below the parameter estimates

b) t-statistics are below the marginal probabilities (not bolded)

c) Test Cohort Equality is a LR test of the equality of the cohort effects, critical value is given with p-value below.

d) The test of common assimilation profile (CAPM) restriction is a LR test of the restriction that the coefficients on the interactions of the years-since-migration variables with the immigrant arrival cohort variables are equal to zero, critical value is given with p-value below.

e) * indicates significance of cohort effects across all regressions

f) Demographic controls: region, knowledge of official languages, education, married, source country, urban setting, single

g) Economic controls: part-time or full-time status, log of weekly wage, self-employed

Five out of the nine cohort variables remain statistically significant (at 5%) across the three regressions. All of those are made up by the five most recent immigrant cohorts. These cohorts are 0.21 to 0.75 percentage points less likely to receive these types of transfer payments compared to the native population after controlling for demographic and economic factors. These are very small differences considering the mean receipt probability over the sample period was 29.75 percent.

Baseline estimates predict the probability of receiving these types of transfers is 2.78 percentage points lower for immigrants arriving after 1976 compared to natives. This value is obtained by averaging the marginal effects of the five cohort variables arriving after 1976. Once demographics are controlled for the difference decreases dramatically to where this group of immigrants are only 0.71 percentage point less likely to receive these types of transfers opposed to natives. This implies that demographic variations account for almost all of the differences in between the two groups. As economic controls are incorporated, the difference further reduces to a 0.32 probability difference in favour of immigrants.

Overall, there is a negligible difference in usage rates of social assistance and the additional transfer payments measured in the analysis. On average, recent immigrants are slightly less likely to depend on these types of transfer programs compared to natives over time. The two earliest cohorts are more likely to receive these types of transfers compared to natives. However, earlier cohort estimates hold significance only after accounting for demographic and economic controls. As was the case for usage rates of UI, recent male immigrants do not place any additional burden on social assistance and the other transfer payment programs included in the definition. The shift in the composition of immigrants originating from either the US or UK to non-traditional source countries has a larger impact on the probabilities of receiving these types of transfers compared its impact on UI. Origination from a non-traditional source country increases the probability of receiving transfer payments by 1.27%, all else being equal.

7.2 Results Female – Sample

The identical procedure is replicated on the female sample. Table 4 summarizes the findings obtained using the flexible form model specification. As seen in table 4 participation rates for all cohorts are very close to the native rate. After controlling for demographic and economic variations, the seven most recent cohorts are significant and participation are all just slightly below those of natives. Testing, leads to the rejection of both the common assimilation profile model restriction and equality of the cohort effects. This implies that there are differences in quality in terms of transfer receipt across cohorts and differences in assimilation rates across cohorts. Convergence to native rates occurs for the the three most recent cohorts and the 1976-80 cohort. Table 4A, in the appendix presents the results from the common assimilation profile model.

Table 4

Logit estimates for the probability of receiving Social Assistance - females

Flexible form model specification

	No Controls			Demographic Controls			Demographic + Economic Controls		
	Cohort Effects	YSM	$(YSM)^2$	Cohort Effects	YSM	$(YSM)^2$	Cohort Effects	YSM	$(YSM)^2$
C4655	**-1.588**	**-0.031**	**0.0018**	**0.218**	**-0.097**	**0.0026**	**0.463**	**-0.103**	**0.0025**
	-0.052	**-0.004**	**0.0002**	**0.001**	**-0.008**	**0.0002**	**0.003**	**-0.007**	**0.0002**
	-1.039	-0.382	1.5531	0.123	-1.031	1.9345	0.255	-1.071	1.8580
C5665*	**-1.507**	**-0.034**	**0.0017**	**-1.158**	**-0.019**	**0.0014**	**-0.733**	**-0.041**	**0.0016**
	-0.051	**-0.004**	**0.0002**	**-0.004**	**-0.001**	**0.0001**	**-0.003**	**-0.003**	**0.0001**
	-3.220	-0.977	2.3508	-2.169	-0.479	1.6056	-1.356	-1.010	1.8301
C6670	**-1.697**	**0.003**	**0.0007**	**-1.060**	**-0.015**	**0.0010**	**-0.911**	**-0.018**	**0.0009**
	-0.054	**0.000**	**0.0001**	**-0.004**	**-0.001**	**0.0001**	**-0.003**	**-0.001**	**0.0001**
	-4.902	0.096	0.9163	-2.714	-0.383	1.0605	-2.297	-0.473	0.9357
C7175	**-1.763**	**0.048**	**-0.0007**	**-1.192**	**0.023**	**-0.0003**	**-0.999**	**0.007**	**0.0000**
	-0.055	**0.006**	**-0.0001**	**-0.004**	**0.002**	**0.0000**	**-0.003**	**0.000**	**0.0000**
	-8.346	1.712	-0.9257	-5.071	0.725	-0.2814	-4.188	0.214	0.0122
C7680*	**-1.045**	**0.117**	**-0.0031**	**-0.822**	**0.106**	**-0.0030**	**-0.871**	**0.107**	**-0.0030**
	-0.042	**0.015**	**-0.0004**	**-0.003**	**0.008**	**-0.0002**	**-0.003**	**0.008**	**-0.0002**
	-7.310	6.284	-5.2698	-5.370	5.147	-4.5019	-5.702	5.167	-4.4053
C8186*	**-0.582**	**-0.022**	**-0.0004**	**-0.377**	**-0.035**	**0.0003**	**-0.630**	**-0.015**	**-0.0002**
	-0.028	**-0.003**	**-0.0001**	**-0.002**	**-0.003**	**0.0000**	**-0.002**	**-0.001**	**0.0000**
	-4.882	-0.821	-0.4321	-2.816	-1.119	0.2851	-4.669	-0.472	-0.1577
C8791*	**-0.367**	**0.008**	**-0.0043**	**-0.390**	**0.085**	**-0.0094**	**-0.808**	**0.141**	**-0.0119**
	-0.020	**0.001**	**-0.0005**	**-0.002**	**0.007**	**-0.0007**	**-0.003**	**0.010**	**-0.0009**
	-4.510	0.271	-3.0714	-4.289	2.674	-5.6626	-8.980	4.444	-7.1879
C9296*	**-0.966**	**0.290**	**-0.0306**	**-1.209**	**0.539**	**-0.0545**	**-1.852**	**0.674**	**-0.0643**
	-0.040	**0.036**	**-0.0038**	**-0.004**	**0.042**	**-0.0042**	**-0.004**	**0.049**	**-0.0047**
	-16.256	8.875	-11.2620	-16.201	13.694	-16.1740	-24.527	16.996	-18.8460
C9701*	**-2.405**	**1.350**	**-0.2194**	**-2.685**	**1.960**	**-0.3261**	**-3.519**	**2.238**	**-0.3623**
	-0.061	**0.168**	**-0.0273**	**-0.006**	**0.153**	**-0.0254**	**-0.005**	**0.163**	**-0.0264**
	-23.767	13.318	-10.402	-22.313	16.234	-12.89	-28.701	18.281	-14.1320
Test Cohort Equality		1028.72			844.25			1556.08	
		0.000			0.000			0.000	
Test of CAPM Restrctn		1719.96			958.25			1264.98	
		0.000			0.000			0.000	

a) Marginal probabilities are presented below the parameter

estimates

b) t-statistics are below the marginal probabilities (not bolded)

c) Test Cohort Equality is a LR test of the equality of the cohort effects, critical value is given with p-value below.

d) The test of common assimilation profile (CAPM) restriction is a LR test of the restriction that the coefficients on the interactions of the years-since-migration variables with the immigrant arrival cohort variables are equal to zero, critical value is given with p-value below.

e) * indicates significance of cohort effects across all regressions

f) Demographic controls: region, knowledge of official languages, education, married, source country, urban setting, single

g) Economic controls: part-time or full-time status, log of weekly wage, self-employed

Seven out of the nine cohort variables remain statistically significant (at 5%) as demographic and economic controls are incorporated into the analysis, these cohorts comprise female immigrants arriving into Canada after 1966. The mean receipt probability over the sample period was 20.51 percent. The differences between the usage rates of these cohorts to those of natives are small, female immigrants arriving after 1966 are 0.29 to 0.47 percentage points less likely to receive these types of transfer payments.

The differences are minimized as each additional group of controls are incorporated into the regression. On average, baseline estimates predict the probability of receiving these types of transfer payments for immigrants arriving after 1966 is 4.29 percentage points less relative to natives. As demographic controls are incorporated into the analysis this estimate changes to almost identical levels with natives, where immigrants arriving after 1966 are only 0.36 percentage points less likely to receive these transfers. These differences are further minimized after controlling for economic variations, where there is a 0.32 percentage point difference in probabilities between immigrants and natives when incorporating economic controls. An identical pattern is observed for male immigrants. I am able to conclude that demographic controls play a large role in explaining the differences in participation rates for both male and female immigrants. The minimal effects of the economic controls may be a result of the difficulty in construction eligibility requirements for the broad range of transfers included in the analysis.

Overall, there is no evidence suggesting that female immigrants make more use of these types of transfers compared to their native counterparts. The differences in probabilities between statistically significant cohorts and natives are very small. The analysis on these types of transfer payments also encounters the same issue with the analysis on UI regarding not accurately reflecting the actual macroeconomic condition during this period. However, it is unlikely that this would have significant implications on the final results as overall average annual GDP growth is overestimated by only 0.40%. There is also little evidence that the quality of successive cohorts is declining over the years in term of receiving these types of transfers.

8 Analysis – Rent Subsidies

The analysis in this section applies the methodology used by Baker and Benjamin (1994) to a more recent dataset that covers the years from 1988 to 1997 by combining 9 HIFE surveys. The analysis looks at households where the heads of the household are between the ages of 16 and 64 across all provinces, distinguishing between natives' receipt of rent subsidies and immigrants' receipt. The immigrant population is segmented in the following categories based on year of arrival: prior to 1955, 1956-65, 1966-70, 1971-75, 1976-80, 1981-85, and 1986-98.

As in the previous sections for UI and SA, baseline estimates are obtained controlling for age, years-since-migration, survey year and the immigrant cohorts. A second regression is run with the additional demographic controls for region, size of residing area, and an indicator if the household head is female. Both common assimilation profile model and flexible model specification are incorporated. The models estimate that probability that a household will pay a rent that is less than normally charged for the dwelling. The rent may be subsidized either by the government, employer or relative. A subsequent regression that accounts for economic variation across household controlling for eligibility requirements

could not be incorporated into the analysis. As indicated in Baker and Benjamin's study, the broad definition of the types of rent subsidies recorded in the HIFE surveys makes it difficult to construct the eligibility criteria for this type of transfer.

8.1 Results

Table 5 summarizes the results after analyzing a more comprehensive set of HIFE surveys covering the years from 1988-1997 using the common assimilation profile model specification. The results show no evidence suggesting that participation rates change with years in Canada for immigrants, the YSM estimate being negative and insignificant. Also, removal of the common assimilation profile model restriction fails to provide any additional evidence of assimilation. Table 5A, available in the appendix, summarizes the results obtained from the flexible form model specification. Testing leads to not rejecting the common assimilation profile model restriction, concluding that allowing rates of assimilation to vary across cohorts does not improve the results. In terms of the probability of participation in rent subsidy programs, the flexible form model specification offers no significant insight into the analysis. The interaction terms associated with the cohort and YSM variables are all individually insignificant as well as the cohort effects. Therefore, the remainder of the analysis is based upon the results obtained from the common assimilation profile model.

In terms of usage rates relative to natives, the 1981-85 and 1986-98 immigrant cohorts are more likely to receive rent subsidies compared to natives. Earlier cohorts are less likely to receive this types of transfer compared to the native population, although the estimates for the earlier cohorts are all insignificant. Once controlling for demographics, this study finds that the most recent immigrant cohorts rely more on rent subsidies relative to the native population. Relative to earlier immigrant cohorts, dependency is increasing for immigrants arriving after 1980, suggesting that dependency on rent subsidies has increased at time of

entry for recent cohorts. Equality of the immigrant cohort effects is rejected suggesting that the quality of successive cohorts has been declining in terms of receiving rent subsidies.

Table 5
Logit estimates for the probability of receiving rent subsidies - households
Common assimilation profile model specification

	No Controls	Demographic Controls
YSM	**-0.014**	**-0.022**
	-0.001	**-0.001**
	-0.596	-0.917
YSM^2	**0.001**	**0.001**
	0.000	**0.000**
	1.4712	1.7223
C55P	**-0.806**	**-0.641**
	-0.024	**-0.017**
	-1.513	-1.187
C5665	**-0.436**	**-0.273**
	-0.015	**-0.008**
	-0.954	-0.589
C6670	**-0.355**	**-0.229**
	-0.013	**-0.007**
	-0.892	-0.568
C7175	**0.137**	**0.181**
	0.006	**0.007**
	0.399	0.520
C7680	**0.387**	**0.417**
	0.020	**0.018**
	1.388	1.473
C8185*	**0.439**	**0.475**
	0.023	**0.021**
	2.142	2.272
C8696*	**0.902**	**0.939**
	0.059	**0.051**
	9.882	10.027
Test Cohort Equality	364.71	348.13
	0.000	0.000

a) Marginal probabilities are presented below the parameter estimates

b) t-statistics are below the marginal probabilities (not bolded)
c) Test Cohort Equality is a LR test of the equality of the cohort effects, critical value is given with p-value below.
d) * indicates significance of cohort effects across both regressions (Appendix 10A)
e) Demographic controls: region, urban settings(Appendix 10A)

Two out of the seven cohort variables are statistically significant (at 5%) before and after demographic controls are incorporated into the analysis. There is no indication suggesting that immigrants arriving prior to 1980 have differing dependencies relative to natives. The two most recent cohort variables are significant, this comprises of immigrants arriving into Canada after 1980. Their mean receipt probability over the sample period was 4.81 percent. After accounting for demographics, immigrants arriving between 1981 and 1986 are 2.07 percent more likely to depend on subsidies compared to natives during this sample period. Immigrants arriving after 1986 exhibit the largest usage rates; holding all other factors equal, this group is 5.87 percent more likely to make use of this type of transfer program than natives are.

There appears to be no signs that dependency changes with years spent in Canada. This is indicated by the statistical insignificant of the year-since-migration variables. This suggest that for the immigrants arriving after 1981, who as a group are more likely to depend on public housing compared to natives and earlier immigrant cohorts, are not moving out of these public houses over time. For these immigrants, transitioning out of public housing and into the private market is less apparent, possibly because the transition process is slower since it involves physical relocation and a significant amount of savings beforehand. It is reasonable to assume that the propensity for families who depend on public housing to save is low or even zero. This evidence, in addition to the minimal effects controlling for age related factors have on the probabilities of transfer receipt, suggests the families tend to reside in these dwellings for the long-term.

The regression accounts for the tendency of immigrants to concentrate in Canada's largest cities such as Toronto, Montreal, and Vancouver where housing markets are more expensive relative to less populated regions. Households face a greater likelihood of receiving rent subsidies where affordability issues are the most severe; as such, we would expect individuals residing in urban areas to make most use of these transfers. Since this will disproportionally affect immigrants more so than the native population, it is important to have such a control into the analysis. The results are consistent; holding all other factors equal, households residing in regions with populations over 500,000 are most likely to receive subsidies (Appendix 10A). After controlling for demographics, the likelihood of receiving rent subsidies decreases relative to natives for 6 out of the 7 cohorts. For the two significant and most recent cohorts the likelihood of receiving rent subsidies decreases by an average of 0.48 percentage points after controlling for demographics, all else being equal. We are able to conclude that demographics play a small role in explaining the overall differences in participation rates.

More important to consider are the variables not being controlled for in the regression. Such factors pertinent to the analysis on rent subsidies include the cost of buying a house, the supply of rental vacancies and discrimination by landlords in selecting tenants. As the results indicate, the lower "quality" of the 1981-85 and 1986-98 cohorts in terms of receiving rent subsidies may be due to any of these factors, all of which are exogenous from the perspective of the immigrant household. Therefore, the increase in the probabilities of receiving rent subsidies for recent cohorts may not be a reflection of the declining quality of recent cohorts, but it can be attributed to the exogenous factors that have had an adverse effect on these probabilities, all of which merit further discussion.

The cost of purchasing a house has risen significantly over the years. Recent immigrant cohorts, those arriving after 1980, did not enter into a marketplace amidst favourable housing market conditions. The purchase of a house is more difficult for recent immigrants

compared to the conditions earlier immigrant cohorts and older natives faced prior to 1980. Holding all other factors equal, individuals who can afford to purchase a house are less likely to depend on rent subsidies in the short and long run compared to somebody who is unable to afford the initial purchase. The rise in housing cost is even more significant considering the fact that recent immigrant made up a disproportional share of the rise in low-income households during this time period, as discussed in the literature. From the HIFE dataset, 34% of households from the 1986-98 cohort were tenants, as opposed to 64% for native households and 78% for households from cohorts arriving before 1970. The fact the buying a house today is a much more difficult task than it was decades ago suggests that earlier cohorts and older natives and less likely to burdened by rental expenses compared to recent cohorts and younger natives.

Recent immigrants also faced a relative shortage of rental vacancies compared to earlier cohorts and the native population. The Canada Mortgage and Housing Corporation identifies three components of appropriate housing: adequacy, suitability and affordability. Adequacy refers to the physical quality of the dwelling (does not require major repairs); suitability refers to whether the dwelling can accommodate the size of the household (has enough bedrooms). Affordability refers to whether the shelter costs are less than 30% of before-tax household income. If any one of the three requirements are violated the dwelling is said to be below standards. The percentage of households who were tenants to below standard dwellings and who could afford alternative housing that meet all three standards was 29% for cohort arriving after 1986, 12% for native households, and 14% for cohorts arriving prior to 1976[11]. This indicates that recent immigrant cohorts are facing more difficulties finding suitable vacancies. These figures are comprised of households who are not financial constrained. Since the supply of rental vacancies is identical for all groups, the importance

[11] Canada Mortgage and Housing Corporation, Special Studies on the 1996 Census Data: Canadian Housing Conditions, Ottawa: Canada Mortgage and housing Corporation, no date.

of networks established with years in Canada could possible account for the inability of recent immigrants to locate or be recommended affordable vacancies.

A shortage of rental vacancies could also increase the frequency in which discrimination occurs in the housing market by tenants less willing to rent to visible minorities. This would have a more profound impact on recent immigrant cohorts since the composition of immigrants changed towards more visible minorities. This could also attribute or even account for the fact the recent immigrants are having relatively more difficulties in finding available rental vacancies.

Overall, there is evidence suggesting that immigrants arriving after 1981 are more likely to have their rents subsidized than native. The differences are fairly substantial and coincide with the raw data. Controlling for demographics has little effect on these probabilities. Possible factors that could be attributed to this decline are the rise in the costs of purchasing a house, difficulties finding rental vacancies, and discrimination towards visible minorities in the housing market.

8 Conclusion

The major findings in this paper are consistent with the results of Baker and Benjamin (1995a, 1995b) and Crossley, McDonald, Worswick (1999). Regarding unemployment insurance and social assistance, immigrants do not place any additional burden on these on these programs. However, the analysis on SA incorporated a broader range of transfer payments in this paper than in the previous studies. There is also no apparent difference between male and female immigrants relative to their native counterparts. Consistent with the analysis on rent subsidies found only in Baker and Benjamin's study, this paper also finds that recent immigrant families do utilise this type of transfer more than native families. Over time, participation rates for both UI and SA converge to native rates, no evidence of assimilation is found in the analysis on rent subsidies. In addition, allowing

rates of assimilation to vary across cohorts is a reasonable assumption as opposed to having equal rates for all cohorts. For both analyses on UI and SA, the flexible model specification provided more explanatory power than the model where the restriction is applied. Overall, the declining performance of recent immigrants in Canada's labour markets has not translated into higher use of either UI or SA. However, there is evidence that it has resulted in higher use of rent subsidies for recent immigrants only. It is unclear whether this is a reflection of the decline in immigrant quality or a result of exogenous factors such as the cost of purchasing a house, inadequate supply of vacancies or discriminatory practices in the housing market.

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Appendix

Table 1A

Logit estimates for the probability of receiving Unemployment Insurance - males

Common assimilation profile model specification

	No Controls	Demographic Controls	Demographic + Economic Controls
YSM	**0.012**	**0.009**	**0.027**
	0.001	**0.001**	**0.003**
	3.411	2.537	7.069
YSM^2	**-0.0004**	**-0.0003**	**-0.0006**
	0.0000	**0.0000**	**-0.0001**
	-4.242	-3.450	-7.192
C4655	**-0.299**	**-0.037**	**-0.198**
	-0.024	**-0.002**	**-0.012**
	-4.169	-0.504	-2.678
C5665*	**-0.198**	**0.040**	**-0.161**
	-0.017	**0.002**	**-0.010**
	-3.399	0.681	-2.667
C6670	**-0.240**	**0.050**	**-0.163**
	-0.020	**0.003**	**-0.010**
	-4.562	0.924	-2.968
C7175	**-0.269**	**0.029**	**-0.185**
	-0.022	**0.002**	**-0.011**
	-5.711	0.599	-3.755
C7680*	**-0.274**	**-0.029**	**-0.230**
	-0.022	**-0.002**	**-0.014**
	-6.397	-0.654	-5.138
C8186*	**-0.139**	**0.103**	**-0.085**
	-0.012	**0.006**	**-0.005**
	-3.670	2.668	-2.140
C8791*	**-0.028**	**0.221**	**0.026**
	-0.003	**0.014**	**0.002**
	-0.959	7.366	0.829
C9296*	**-0.165**	**0.137**	**-0.041**
	-0.014	**0.008**	**-0.003**
	-5.207	4.168	-1.210
C9701*	**-0.020**	**0.391**	**0.138**
	-0.002	**0.026**	**0.010**
	-0.450	8.463	2.908
Test Cohort Equality	78.82	161.15	59.62
	0.000	0.000	0.000

a) Marginal probabilities are presented below the parameter estimates
b) t-statistics are below the marginal probabilities (not bolded)
c) Test Cohort Equality is a LR test of the equality of the cohort effects, critical value is given with p-value below.
f) Demographic controls: region, knowledge of official languages, education, married, source country, urban setting
g) Economic controls: eligibility, part-time or full-time status, log of weekly wage, self-employed

Table 2A

Logit estimates for the probability of receiving Unemployment Insurance - females

Common assimilation profile model specification

	No Controls	Demographic Controls	Demographic + Economic Controls
YSM	**0.013**	**0.013**	**0.015**
	0.001	**0.001**	**0.001**
	3.690	3.682	4.131
YSM^2	**-0.0003**	**-0.0004**	**-0.0004**
	0.0000	**0.0000**	**0.0000**
	-4.012	-4.426	-4.274
C4655	**-0.159**	**0.055**	**-0.035**
	-0.012	**0.004**	**-0.003**
	-2.255	0.767	-0.475
C5665*	**-0.130**	**0.061**	**-0.021**
	-0.010	**0.004**	**-0.002**
	-2.283	1.052	-0.359
C6670	**-0.235**	**-0.053**	**-0.121**
	-0.017	**-0.003**	**-0.009**
	-4.568	-1.015	-2.249
C7175	**-0.203**	**-0.036**	**-0.085**
	-0.015	**-0.002**	**-0.006**
	-4.415	-0.777	-1.779
C7680*	**-0.148**	**-0.008**	**-0.038**
	-0.011	**0.000**	**-0.003**
	-3.565	-0.180	-0.874
C8186*	**-0.143**	**-0.020**	**-0.017**
	-0.011	**-0.001**	**-0.001**
	-3.905	-0.527	-0.434
C8791*	**-0.168**	**-0.055**	**-0.025**
	-0.013	**-0.003**	**-0.002**
	-5.802	-1.852	-0.804
C9296*	**-0.278**	**-0.183**	**-0.123**
	-0.020	**-0.011**	**-0.009**
	-9.270	-5.953	-3.867
C9701*	**-0.333**	**-0.247**	**-0.186**

	-0.024 -7.462	**-0.014** -5.475	**-0.014** -3.988
Test Cohort Equality	148.46 0.000	76.03 0.000	40.83 0.000

a) Marginal probabilities are presented below the parameter estimates

b) t-statistics are below the marginal probabilities (not bolded)

c) Test Cohort Equality is a LR test of the equality of the cohort effects, critical value is given with p-value below.

f) Demographic controls: region, knowledge of official languages, education, married, source country, urban setting

g) Economic controls: eligibility, part-time or full-time status, log of weekly wage, self-employed

Table
3A

Logit estimates for the probability of receiving Social Assistance - males

Common assimilation profile model specification

	No Controls	**Demographic Controls**	**Demographic + Economic Controls**
YSM	**0.044**	**0.053**	**0.102**
	0.007	**0.008**	**0.014**
	13.0830	15.1060	27.5600
YSM^2	**-0.0010**	**-0.0012**	**-0.0022**
	-0.0002	**-0.0002**	**-0.0003**
	-14.862	-16.886	-28.867
C4655	**-0.436**	**-0.143**	**-0.474**
	-0.019	**-0.003**	**-0.008**
	-6.066	-1.888	-5.973
C5665*	**-0.560**	**-0.359**	**-0.847**
	-0.024	**-0.006**	**-0.011**
	-9.377	-5.666	-12.671
C6670	**-0.739**	**-0.496**	**-1.078**
	-0.029	**-0.008**	**-0.013**
	-13.494	-8.521	-17.494
C7175	**-0.689**	**-0.446**	**-1.059**
	-0.028	**-0.007**	**-0.013**
	-13.810	-8.405	-18.808
C7680*	**-0.504**	**-0.345**	**-0.924**
	-0.022	**-0.006**	**-0.012**
	-11.101	-7.163	-18.074
C8186*	**-0.249**	**-0.061**	**-0.624**
	-0.012	**-0.001**	**-0.009**
	-6.395	-1.468	-14.337
C8791*	**0.045**	**0.329**	**-0.198**

	0.003	**0.008**	**-0.004**
	1.559	10.637	-6.136
C9296*	**0.154**	**0.556**	**0.011**
	0.009	**0.014**	**0.000**
	6.310	21.085	0.396
C9701*	**0.079**	**0.770**	**0.169**
	0.004	**0.022**	**0.004**
	2.787	24.724	5.122
Test Cohort Equality	807.17 0.000	2104.23 0.000	931.29 0.000

a) Marginal probabilities are presented below the parameter estimates

b) t-statistics are below the marginal probabilities (not bolded)

c) Test Cohort Equality is a LR test of the equality of the cohort effects, critical value is given with p-value below.

f) Demographic controls: region, knowledge of official languages, education, presence of spouse, source country, urban setting, single parent

g) Economic controls: part-time or full-time status, self-employed

Table 4A

Logit estimates for the probability of receiving Social Assistance - females

Common assimilation profile model specification

	No Controls	**Demographic Controls**	**Demographic + Economic Controls**
YSM	**0.062**	**0.061**	**0.084**
	0.008	**0.005**	**0.006**
	17.778	14.729	19.992
YSM^2	**-0.0012**	**-0.0013**	**-0.0018**
	-0.0001	**-0.0001**	**-0.0001**
	-15.661	-15.377	-20.655
C4655	**-0.870**	**-0.345**	**-0.458**
	-0.033	**-0.002**	**-0.002**
	-11.465	-3.881	-5.061
C5665*	**-1.035**	**-0.625**	**-0.821**
	-0.036	**-0.002**	**-0.003**
	-16.682	-8.578	-10.981
C6670	**-1.028**	**-0.738**	**-0.970**
	-0.036	**-0.003**	**-0.003**
	-18.215	-11.101	-14.211
C7175	**-0.867**	**-0.675**	**-0.925**
	-0.033	**-0.003**	**-0.003**
	-16.962	-11.208	-14.922

C7680*	**-0.739**	**-0.588**	**-0.854**
	-0.029	**-0.002**	**-0.003**
	-15.818	-10.709	-15.127
C8186*	**-0.623**	**-0.495**	**-0.778**
	-0.026	**-0.002**	**-0.003**
	-15.391	-10.346	-15.857
C8791*	**-0.370**	**-0.212**	**-0.513**
	-0.017	**-0.001**	**-0.002**
	-12.305	-5.893	-13.953
C9296*	**-0.282**	**-0.079**	**-0.453**
	-0.014	**0.000**	**-0.002**
	-12.181	-2.743	-15.393
C9701*	**-0.697**	**-0.333**	**-0.839**
	-0.028	**-0.002**	**-0.003**
	-23.640	-9.093	-22.585
Test Cohort Equality	809.91 0.000	288.22 0.000	718.29 0.000

a) Marginal probabilities are presented below the parameter estimates

b) t-statistics are below the marginal probabilities (not bolded)

c) Test Cohort Equality is a LR test of the equality of the cohort effects, critical value is given with p-value below.

f) Demographic controls: region, knowledge of official languages, education, presence of spouse, source country, urban setting, single parent

g) Economic controls: part-time or full-time status, self-employed

Table 5A

Logit estimates for the probability of receiving rent subsidies - household

Flexible form model specification

	No Controls			Demographic Controls		
	Cohort Effects	**YSM**	**$(YSM)^2$**	**Cohort Effects**	**YSM**	**$(YSM)^2$**
C55P	**5.665**	**-0.111**	**-0.0023**	**5.711**	**-0.128**	**-0.0019**
	0.875	**-0.005**	**-0.0001**	**0.862**	**-0.005**	**-0.0001**
	0.750	-0.178	-0.1621	0.751	-0.201	-0.1290
C5665	**7.618**	**-0.316**	**0.0020**	**9.918**	**-0.487**	**0.0051**
	0.953	**-0.013**	**0.0001**	**0.973**	**-0.018**	**0.0002**
	0.570	-0.317	0.1057	0.739	-0.485	0.2624
C6670	**3.405**	**-0.119**	**0.0003**	**3.166**	**-0.126**	**0.0008**
	0.473	**-0.005**	**0.0000**	**0.358**	**-0.005**	**0.0000**
	0.382	-0.131	0.0152	0.353	-0.137	0.0366

C7175	**1.505**	**-0.194**	**0.0061**	**1.283**	**-0.176**	**0.0056**
	0.100	**-0.008**	**0.0003**	**0.061**	**-0.006**	**0.0002**
	0.300	-0.366	0.4419	0.252	-0.328	0.4006
C7680	**-2.749**	**0.658**	**-0.0231**	**-2.568**	**0.601**	**-0.0211**
	-0.031	**0.028**	**-0.0010**	**-0.024**	**0.022**	**-0.0008**
	-0.992	0.993	-1.1678	-0.911	0.896	-1.0529
C8185	**-1.838**	**0.718**	**-0.0349**	**-1.914**	**0.730**	**-0.0369**
	-0.027	**0.031**	**-0.0015**	**-0.022**	**0.026**	**-0.0013**
	-1.473	1.196	-1.6801	-1.508	1.201	-1.7516
C8696	**0.343**	**0.579**	**-0.0669**	**0.471**	**0.507**	**-0.0609**
	0.013	**0.025**	**-0.0029**	**0.015**	**0.018**	**-0.0022**
	0.906	0.998	-1.7157	1.215	0.861	-1.5250
Test Cohort Equality		5.16 0.640			5.95 0.545	
Test of CAPM Restrctn		11.13 0.517			10.58 0.564	

a) Marginal probabilities are presented below the parameter estimates

b) t-statistics are below the marginal probabilities (not bolded)

c) Test Cohort Equality is a LR test of the equality of the cohort effects, critical value is given with p-value below.

d) The test of common assimilation profile (CAPM) restriction is a LR test of the restriction that the coefficients on the interactions of the years-since-migration variables with the immigrant arrival cohort variables are equal to zero, critical value is given with p-value below.

e) * indicates significance of cohort effects across all regressions

f) Demographic controls: region, urban settings

Table 6A - Explanatory Variables

	CAPM specification - males			
	UI Receipt		SA Receipt	
	Dem	Dem + Eco	Dem	Dem + Eco
Language[1]	**-0.076**	**-0.064**	**-0.182**	**-0.009**
	-0.004	**-0.004**	**-0.028**	**0.000**
	-1.767	-1.438	-4.325	-0.204
Elementary school or less[2]	**0.399**	**0.383**	**0.908**	**0.549**
	0.027	**0.030**	**0.137**	**0.014**
	22.558	21.038	48.850	28.064
Some high school	**0.248**	**0.225**	**0.274**	**0.175**
	0.016	**0.016**	**0.041**	**0.004**
	17.356	15.440	19.711	12.054
Some post secondary	**0.055**	**0.025**	**-0.171**	**-0.128**

	0.003	**0.002**	**-0.026**	**-0.002**
	4.218	1.937	-14.267	-10.313
University	**-0.595**	**-0.625**	**-0.849**	**-0.778**
	-0.026	**-0.031**	**-0.128**	**-0.011**
	-35.652	-36.841	-59.206	-52.233
Quebec[3]	**0.479**	**0.466**	**0.528**	**0.435**
	0.033	**0.037**	**0.080**	**0.011**
	44.937	42.824	49.175	38.965
Prairie provinces	**0.027**	**0.027**	**0.838**	**0.910**
	0.002	**0.002**	**0.127**	**0.029**
	2.223	2.205	76.916	79.975
BC	**0.318**	**0.302**	**0.072**	**0.016**
	0.021	**0.022**	**0.011**	**0.000**
	25.565	23.790	5.876	1.224
Married[4]	**-0.277**	**-0.205**		
	-0.018	**-0.015**		
	-30.913	-21.949		
USorUK[5]	**-0.171**	**-0.163**	**-0.360**	**-0.319**
	-0.009	**-0.010**	**-0.054**	**-0.005**
	-6.945	-6.488	-16.361	-13.914
Major City[6]	**-0.369**	**-0.373**	**-0.245**	**-0.204**
	-0.025	**-0.029**	**-0.037**	**-0.004**
	-41.630	-41.173	-28.070	-22.369
Couple[7]			**-1.368**	**-1.126**
			-0.207	**-0.040**
			-146.140	-115.330
Single parent[8]			**-0.083**	**0.088**
			-0.012	**0.002**
			-3.047	3.093
Eligibility[9]		**-1.230**		
		-0.135		
		-83.929		
Fulltime[10]		**1.354**		**-0.729**
		0.051		**-0.021**
		60.284		-36.019
Part time		**1.764**		**0.029**
		0.236		**0.001**
		71.232		1.171
Self-employed[11]		**-1.175**		**-0.758**
		-0.048		**-0.011**
		-57.444		-45.254
Log of wage		**-0.080**		**-0.220**
		-0.008		**-0.031**

		-36.424		-102.620

1) Indicates knowledge of either English or French
2) Indicates highest level of education obtained (default = high school graduate)
3) Indicates province of residence (default = Ontario)
4) Indicates if individual is married or in common law
5) Indicates if individual originated for the U.S. or U.K. (for immigrants)
6) Indicates residence in urban setting
7) Indicates presence of spouse in household
8) Indicates single parent
9) Indicates if individual worked enough weeks in ref. yr to qualify for UI
10) Indicates part or full-time status (default = not worked at all during ref. yr.)
11) Indicates self-employed worker
12) Marginal probabilities are presented below the parameter estimates
13) t-statistics are below the marginal probabilities (not bolded)

Table 7A - Explanatory Variables

	Flexible form specification - females			
	UI Receipt		SA Receipt	
	Dem	Dem + Eco	Dem	Dem + Eco
Language[1]	**-0.094**	**-0.084**	**-0.220**	**-0.060**
	-0.005	**-0.005**	**-0.005**	**0.017**
	-2.179	-1.889	-5.123	-1.333
Elementary school or less[2]	**0.397**	**0.378**	**0.908**	**0.542**
	0.025	**0.027**	**0.028**	**0.029**
	22.472	20.773	48.843	27.590
Some high school	**0.247**	**0.223**	**0.274**	**0.173**
	0.015	**0.015**	**0.006**	**0.020**
	17.307	15.301	19.709	11.893
Some post secondary	**0.055**	**0.026**	**-0.171**	**-0.127**
	0.003	**0.002**	**-0.003**	**0.015**
	4.216	1.948	-14.261	-10.187
University	**-0.594**	**-0.622**	**-0.853**	**-0.779**
	-0.024	**-0.029**	**-0.011**	**0.008**
	-35.589	-36.647	-59.323	-52.088
Quebec[3]	**0.482**	**0.470**	**0.537**	**0.443**
	0.032	**0.035**	**0.014**	**0.027**
	45.157	43.077	49.811	39.447
Prairie provinces	**0.025**	**0.025**	**0.835**	**0.912**
	0.001	**0.001**	**0.025**	**0.042**
	2.098	2.013	76.470	79.773

BC		0.316	0.299	0.064	0.009
		0.019	0.020	0.001	0.017
Married[4]		25.372	23.542	5.244	0.692
		-0.278	-0.203		
		-0.017	-0.013		
USorUK[5]		-31.002	-21.776		
		-0.168	-0.157	-0.356	-0.311
		-0.008	-0.009	-0.006	0.013
Major City[6]		-6.803	-6.246	-16.134	-13.548
		-0.370	-0.373	-0.245	-0.204
		-0.023	-0.026	-0.005	0.017
Couple[7]		-41.680	-41.193	-28.085	-22.346
				-1.373	-1.128
				-0.054	0.017
Single parent[8]				-146.440	-115.240
				-0.085	0.086
				-0.002	0.019
Eligibility[9]				-3.150	3.023
			-1.242		
			-0.127		
Fulltime[10]			-84.524		
			1.364		-0.724
			0.047		0.017
Part time			60.594		-35.733
			1.770		0.031
			0.222		0.018
Self-employed[11]			71.332		1.247
			-1.191		-0.797
			-0.043		0.008
Log of wage			-58.049		-47.258
			-0.083		-0.228
			-0.008		-0.032
			-37.591		-105.580

1) Indicates knowledge of either English or French

2) Indicates highest level of education obtained (default = high school graduate)

3) Indicates province of residence (default = Ontario)

4) Indicates if individual is married or in common law

5) Indicates if individual originated for the U.S. or U.K. (for immigrants)

6) Indicates residence in urban setting

7) Indicates presence of spouse in household

8) Indicates single parent

9) Indicates if individual worked enough weeks in ref. yr to qualify for UI

10) Indicates part or full-time status (default = not worked at all during ref. yr.)

11) Indicates self-employed worker

12) Marginal probabilities are presented below the parameter estimates

13) t-statistics are below the marginal probabilities (not bolded)

Table 8A - Explanatory Variables

	Flexible form specification - males			
	UI Receipt		SA Receipt	
	Dem	Dem + Eco	Dem	Dem + Eco
Language[1]	**-0.094**	**-0.144**	**0.089**	**0.090**
	-0.006	**-0.012**	**0.000**	**0.000**
	-2.426	-3.595	2.288	2.259
Elementary school or less[2]	**-0.082**	**0.135**	**0.965**	**0.688**
	-0.005	**0.011**	**0.009**	**0.005**
	-4.106	6.518	39.521	27.266
Some high school	**0.003**	**0.077**	**0.378**	**0.260**
	0.000	**0.006**	**0.002**	**0.001**
	0.195	4.723	16.805	11.274
Some post secondary	**0.130**	**0.066**	**-0.066**	**0.013**
	0.009	**0.005**	**0.000**	**0.000**
	9.048	4.495	-3.715	0.730
University	**0.027**	**-0.049**	**-0.553**	**-0.375**
	0.002	**-0.004**	**-0.002**	**-0.002**
	1.696	-2.993	-27.473	-18.138
Quebec[3]	**0.401**	**0.466**	**0.281**	**0.239**
	0.030	**0.044**	**0.002**	**0.001**
	39.665	45.047	23.585	19.578
Prairie provinces	**-0.094**	**-0.134**	**1.065**	**1.107**
	-0.006	**-0.010**	**0.010**	**0.010**
	-7.670	-10.684	86.006	86.862
BC	**0.163**	**0.163**	**0.146**	**0.112**
	0.011	**0.014**	**0.001**	**0.001**
	12.964	12.734	10.496	7.812
Married[4]	**0.145**	**0.187**		
	0.008	**0.013**		
	16.123	20.269		
USorUK[5]	**-0.166**	**-0.166**	**-0.083**	**-0.086**
	-0.010	**-0.012**	**0.000**	**0.000**
	-7.443	-7.330	-3.377	-3.432
Major City[6]	**-0.221**	**-0.223**	**-0.202**	**-0.132**
	-0.015	**-0.019**	**-0.001**	**-0.001**
	-24.622	-24.251	-19.425	-12.331
Couple[7]			**-2.836**	**-3.054**

			-0.087	**-0.089**
			-241.960	-246.970
Single parent[8]			**0.871**	**0.745**
			0.008	**0.005**
			58.531	49.003
Eligibility[9]		**-0.860**		
		-0.095		
		-67.342		
Fulltime[10]		**1.782**		**0.084**
		0.069		**0.000**
		84.796		3.988
Part time		**1.871**		**0.391**
		0.291		**0.002**
		91.565		18.954
Self-employed[11]		**-1.068**		**-0.677**
		-0.054		**-0.002**
		-41.007		-28.598
Log of wage		**-0.063**		**-0.187**
		-0.006		**-0.014**
		-25.726		-70.000

1) Indicates knowledge of either English or French
2) Indicates highest level of education obtained (default = high school graduate)
3) Indicates province of residence (default = Ontario)
4) Indicates if individual is married or in common law
5) Indicates if individual originated for the U.S. or U.K. (for immigrants)
6) Indicates residence in urban setting
7) Indicates presence of spouse in household
8) Indicates single parent
9) Indicates if individual worked enough weeks in ref. yr to qualify for UI
10) Indicates part or full-time status (default = not worked at all during ref. yr.)
11) Indicates self-employed worker
12) Marginal probabilities are presented below the parameter estimates
13) t-statistics are below the marginal probabilities (not bolded)

Table 9A - Explanatory Variables

	CAPM specification - females			
	UI Receipt		SA Receipt	
	Dem	Dem + Eco	Dem	Dem + Eco
Language[1]	**-0.071**	**-0.124**	**0.057**	**0.131**
	-0.005	**-0.010**	**0.000**	**0.001**
	-1.817	-3.090	1.461	3.284
Elementary school or less[2]	**-0.080**	**0.139**	**0.964**	**0.693**

Some high school	-0.005	0.012	0.010	0.005
	-4.027	6.731	39.341	27.557
Some post secondary	0.003	0.078	0.374	0.264
	0.000	0.006	0.003	0.001
	0.210	4.810	16.599	11.491
University	0.130	0.067	-0.064	0.011
	0.009	0.005	0.000	0.000
	9.114	4.553	-3.611	0.624
Quebec[3]	0.026	-0.051	-0.553	-0.379
	0.002	-0.004	-0.003	-0.001
	1.651	-3.125	-27.414	-18.369
Prairie provinces	0.400	0.465	0.283	0.238
	0.030	0.045	0.002	0.001
	39.623	45.028	23.730	19.513
BC	-0.094	-0.133	1.068	1.102
	-0.006	-0.010	0.011	0.009
	-7.676	-10.663	86.116	86.737
Married[4]	0.163	0.163	0.145	0.115
	0.011	0.014	0.001	0.001
	12.995	12.733	10.368	8.049
USorUK[5]	0.146	0.188		
	0.009	0.014		
	16.181	20.343		
Major City[6]	-0.169	-0.170	-0.088	-0.095
	-0.010	-0.013	0.000	0.000
	-7.583	-7.498	-3.599	-3.792
Couple[7]	-0.220	-0.223	-0.200	-0.130
	-0.015	-0.019	-0.001	-0.001
	-24.601	-24.291	-19.273	-12.224
Single parent[8]			-2.823	-3.037
			-0.078	-0.084
			-241.980	-246.860
Eligibility[9]			0.873	0.748
			0.007	0.005
			58.683	49.231
Fulltime[10]	-0.858			
	-0.096			
	-67.232			
Part time	1.767		0.061	
	0.071		0.000	
	84.373		2.921	
	1.859		0.373	
	0.292		0.002	

		91.224		18.155
Self-employed[11]		**-1.051**		**-0.650**
		-0.054		**-0.002**
		-40.481		-27.554
Log of wage		**-0.060**		**-0.182**
		-0.006		**-0.013**
		-24.675		-68.442

1) Indicates knowledge of either English or French
2) Indicates highest level of education obtained (default = high school graduate)
3) Indicates province of residence (default = Ontario)
4) Indicates if individual is married or in common law
5) Indicates if individual originated for the U.S. or U.K. (for immigrants)
6) Indicates residence in urban setting
7) Indicates presence of spouse in household
8) Indicates single parent
9) Indicates if individual worked enough weeks in ref. yr to qualify for UI
10) Indicates part or full-time status (default = not worked at all during ref. yr.)
11) Indicates self-employed worker
12) Marginal probabilities are presented below the parameter estimates
13) t-statistics are below the marginal probabilities (not bolded)

Table 10A - Explanatory Variables

	Rent Subsidies - households	
	Flexible form	CAPM form
Quebec[1]	**-0.287**	**-0.287**
	-0.006	**-0.009**
	-9.681	-9.668
Prairie provinces	**0.155**	**0.155**
	0.004	**0.006**
	6.023	6.026
BC	**-0.334**	**-0.335**
	-0.007	**-0.010**
	-8.543	-8.545
Atlantic	**0.160**	**0.160**
	0.004	**0.006**
	5.519	5.532
Female head[2]	**-1.307**	**-1.307**
	-0.063	**-0.085**
	-67.707	-67.713
Small City[3]	**-0.151**	**-0.151**
	-0.003	**-0.005**
	-5.841	-5.843

Town	**0.028**	**0.028**
	0.001	**0.001**
	1.001	0.984
Rural	**-0.580**	**-0.580**
	-0.011	**-0.016**
	-17.700	-17.707

1) Indicates province of residence (default = Ontario)

2) Indicates female headed household

3) Indicates size of residing area (default = urban)

4) Marginal probabilities are presented below the parameter estimates

5) t-statistics are below the marginal probabilities (not bolded)

Raw Data – Sample Means

Percentage Receipt of Unemployment Insurance - males

	Mean	Sample Size
Natives	13.92	419,966
Immigrants - ALL	11.16	143,334
C4655	7.88	11,473
C5665	10.07	21,167
C6670	10.62	20,372
C7175	10.8	22,458
C7680	11.18	16,875
C8186	13.03	14,599
C8791	14.06	18,202
C9296	11.61	12,393
C9701	10.18	5,793

Percentage Receipt of Unemployment Insurance - females

	Mean	Sample Size
Natives	13.75	413,549
Immigrants - ALL	11.67	146,640
C4655	8.73	10,586
C5665	10.48	21,026
C6670	10.71	20,262
C7175	11.69	23,062
C7680	12.92	17,621
C8186	13.78	15,459
C8791	13.5	18,531
C9296	11.58	14,163
C9701	9.7	5,930

Percentage Receipt of Social Assistance* - males

	Mean	Sample Size
Natives	31.82	410,125
Immigrants - ALL	32.14	143,334
C4655	12.76	11,473
C5665	16.45	21,167
C6670	19.44	20,372
C7175	24.67	22,458
C7680	30.06	16,875
C8186	38.58	14,599
C8791	49.84	18,202
C9296	67.81	12,393
C9701	66.55	5,795

*includes broader range of transfer payments in addition to Social Assistance

Percentage Receipt of Social Assistance* - females

	Mean	Sample Size
Natives	23.06	398,039
Immigrants - ALL	20.9	149,277
C4655	8.85	10,610
C5665	10.27	21,187
C6670	13.58	20,486
C7175	17.97	23,373
C7680	20.64	17,900
C8186	24.36	15,795
C8791	30.58	19,015
C9296	40.13	14,672
C9701	29.92	6,236

*includes broader range of transfer payments in addition to Social Assistance

Percentage Receipt of Rent Subsidies - households

	Mean	Sample Size
Natives	5.68	291,059
Immigrants - ALL	6.59	40,175
C55P	6.8	12,963
C5665	3.88	7,344
C6670	3.64	4,920
C7175	5.82	4,075
C7680	7.44	3,065
C8185	7.84	2,476
C8696	12.04	5,332