IZA DP No. 6924

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October 2012

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ABSTRACT

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This paper assesses the employment and earnings trajectories of refugee and family reunion category immigrants in Canada and Sweden using two national level sources of data. The Canadian Immigration Database (IMDB) is a file that links the intake record of post 1979 immigrants with annual taxation records. The 2007 Swedish Register Data includes information on all legal permanent residents. Using standard regression methods we compare labour force outcomes of age-sex-schooling-place of birth cohorts looking specifically at non-economic (family reunion and refugee intake) immigrants from Iran, Iraq, Afghanistan and the former Yugoslavia. We find that the employment and earning trajectories of the selected non-economic migrant groups are quite similar in the two host countries, although earnings are higher in Canada than in Sweden.

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Introduction

While there has been considerable research done on economic outcomes for immigrants in general, work that focuses on outcomes for specific classes of immigrants is less common. Research that has been conducted tends to focus exclusively on refugees, concluding that earnings are low. Further, these studies tend not to disaggregate the refugee population by intake category (see, for example, Aydemir, 2011; Bevelander and Pendakur, 2009; Devoretz et al., 2004; Hammerstedt and Mikkonen, 2007; Samuel, 1984). Research on outcomes for family reunion immigrants is even sparser.

Overall then, little is known about the labour force performance of difference classes of immigrants. However, even within non-economic intake, immigration category is important because it defines both the rules of entry and the services available after entry. For example – immigrants entering under the family reunion category in Canada are not eligible for financial support because a Canadian resident sponsors them, promising to look after social and economic needs. Government sponsored refugees in Canada on the other hand are eligible for income support. In Sweden, asylum refugees have more choice in terms of where they will live as compared to government sponsored refugees.

The goal of this paper is to assess the labour force outcomes of immigrants to Canada and Sweden, paying specific attention to class/category of entry. We focus on non-economic immigrants – family reunion, government assisted refugees and asylum refugees (landed in Canada or Sweden) because these are the most comparable intake categories across the two countries.[1] In addition we restrict our analysis to immigrants from four regions– Iran, Iraq, Afghanistan and the former Yugoslavia – the largest refugee groups for Sweden. Restricting our analysis in this way allows us to conduct a very tight comparison of outcomes in Canada and Sweden.

Our data are drawn from two national level datasets. The Canadian Immigration Database (IMDB) is a file that links the intake record of post-1979 immigrants with annual taxation records.   The 2007 Swedish Register Data includes information on all legal permanent residents. We use tabular data drawn from the IMDB that crosses sex, age, schooling, country of birth, year of immigration and intake category showing earnings in each year after immigration. These tables are matched to Swedish Register data for the year 2007. Using standard regression methods, we follow cohorts of immigrants from Iran, Iraq, Afghanistan and the former Yugoslavia entering Canada or

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[1] Please note that Canada and Sweden use slightly differing terminology to refer to these entry classes. For the purposes of this paper, Canadian terminology is used except where the Swedish immigration system is described in detail (See 'Data and Methods' for further details on the definition of entry classes).

Sweden between 1987 and 2005. This allows us to analyze and compare the earnings trajectories of the selected cohorts within and across the two host countries.

Background

Both Canada and Sweden have a history of admitting non-economic category immigrants. This is particularly the case in Sweden, where the bulk of all intake over the last few decades has consisted of refugees and family reunion migrants. In Canada, intake of refugees and family reunion migrants has been substantial, comprising 40% of annual intake in 2007 (CIC 2012). However, because of the large intake of independent and economic immigrants, non-economic migration makes up a smaller proportion of the total intake in Canada than in Sweden.

How immigrants fare economically is the subject of public debate in both Canada and Sweden. In Sweden, the debate revolves around humanitarian considerations related to alleviating the suffering of refugees, on the one hand, and the challenges of the barriers faced by immigrants in obtaining employment on the other hand. In Canada, while the debate is more muted, concerns have long been raised about the cost of immigration to the public purse and the barriers faced by immigrants in integrating into the labour force (Javdani, et al., 2012). Certainly, there is clear evidence that immigrants, in general, face barriers in accessing employment in both Canada and Sweden (Bevelander and Pendakur, 2012). However, to a degree this should be expected since immigrants can face challenges related to moving, language ability, and lack of social capital and/or limited country specific work experience.

In the Swedish debate, Canada is often identified as an important positive example of a country where immigrants from all over the world integrate largely without problems. In the Canadian debate, Sweden's integration policies are held up as the gold standard for facilitating positive social and economic outcomes, but not something that the Canadian state is willing to match. The situation is complicated by the fact that Canada and Sweden have different intake levels and concentrate on different categories of migrants. Thus, the above debates may or may not be valid. Indeed, a good comparison of the economic outcomes for immigrants in the two countries does not exist, which suggests that the debate operate in a vacuum.

Earlier Research

Research on economic outcomes by category of entry is quite uneven in part because of limited data availability. National datasets in Scandinavia contain information on entry class, while those in North America generally do not. Thus, quantitative assessments of outcomes by category of entry are more common in Northern Europe than in the United States or Canada. For example, Rooth (1999), looking at outcomes in Sweden for immigrants argues that refugee integration into labour markets is dependent on individual human capital, investments human capital development (made both in the source and host country) as well as labour market experience in the host country.

Bevelander and Pendakur (2009) point to clear differences in employment trajectories between government assisted refugees, landed refugees and family reunion immigrants in Sweden. They conclude that these differences are a product of integration policies that vary by entry category. They also point to possible differences in access to social capital and mobility choice. Government assisted refugees are often located in municipalities where housing is available but were employment opportunities are scarce. Asylum refugees often have resources and can settle where there are more job prospects. Family reuion immigrants are likely to draw on social capital acquired by family and friends already settled in the country (Bevelander and Pendakur, 2009).

Also for Sweden, Rashid (2009) uses national level data to assess the impact of mobility on economic outcomes for refugees and concludes that internal migration generates a positive outcome in terms of higher family income for newly arrived refugee families. This is in part because refugees are often moving from a place with few jobs to a city with greater employment opportunities. Further studies corroborate this finding, stressing that the internal migration of immigrants in general and refugees in particular are important factors related to obtaining employment. Rooth and Åslund (2006), for example, show that choice of city and the labour market situation are important predictors in explaining labour market integration. Moving to bigger cities, for example, is often correlated with the presence of larger co-ethnic populations and the possibility of accessing ethnic networks.

Aside from national level datasets, there are a number of special surveys that have supported studies on the relation between immigrant entry category and economic outcomes. Vroome and van Tubergen (2010) use the *Social Position and use of Provisions by Ethnic Minorities Survey* (SPVA), to assess the situation of refugees in the Netherlands. They find that host country specific education, work experience, language proficiency, and contacts with natives are positively related to the chances of employment and occupational status. Bloch (2007), using survey data from a sample of 400 refugees in the United Kingdom, points out that policies which restrict access to the labour market also have a negative impact on employment probabilities for refugees.

As earlier noted, there are relatively few studies assessing the labour force performance by admission status in North America, in general, and even fewer for Canada. One of the earliest by Samuel (1984) looks at outcomes in Canada for displaced persons from Hungary, Czechoslovakia, Uganda, Chile and Indo China. He concludes that economic adaptation for most refugee groups is good although they are often unable to get a job in their intended profession. Montgomery (1986) surveyed 537 Vietnamese refugees living in Alberta and also found refugees experience lower levels of mobility as a product of language ability, lack of credentials and lack of Canadian experience.

More recently, Devoretz, Pivnenko and Beiser (2004) use the IMDB to assess outcomes for post 1981 refugees. They find that refugees tend to do as well as family reunion immigrants in terms of earnings. Aydemir (2011) uses the *Longitudinal Survey of Immigrants to Canada* to compare the labour force participation and earnings of differing

categories of immigrants 2 years after their arrival. He concludes that refugees have lower participation rates as compared to family reunion immigrants but that earnings are about the same. Connor (2010) assessing economic outcomes in the United States also finds that refugees are subject to lower earnings than other categories of intake but that this difference can, at least partially be explained by differences in language ability, schooling, level of family support, mental health and residential area. He notes, however, that a gap remains, even after controlling for these factors. Wilkinson (2008) looks specifically at outcomes for immigrant youth in Canada and concludes that refugee youth face higher levels of unemployment as compared with other immigrant groups.

Hiebert (2002), on the other hand, examining the situation in British Columbia, uses IMDB data to conclude that, the language training provided to refugees means that they can perform better than family reunion immigrants. Indeed, he argues that the earnings gap between refugees and economic immigrants is actually smaller than would be expected. A subsequent study conducted by Hiebert (2009), using 2005 IMDB, data also finds that refugees fare reasonably well and concludes that this is because government assisted refugees are eligible for language training, whereas family reunion immigrants are not (Hiebert, 2009).

Overall, however, most studies looking at the differences between refugees and economic category immigrants conclude that refugees do not fare well (Yu et al., 2007; see also Lamba, 2003). Whether refugees perform as well as other non-economic immigrants is up for debate with some arguing that they do (Devoretz et al., 2004) and others arguing that the gap is substantial (Aydemir, 2011; Wilkinson, 2008). There is also a serious lack of comparative studies that would serve to assess differences by intake category across host-countries.

Context

Canada and Sweden are good cases for comparison. Both Canada and Sweden can be considered immigrant intake countries – about 20% of Canada's population and 14% of Sweden's population are born outside the country. Both countries recognize three broad classes of immigrants – independent (or economic) class, family reunion and refugees. Indeed, Canada and Sweden have a long history of admitting immigrants under non-economic grounds. However, the composition of each country's intake differs. Where Canada has a large independent or economic class, Sweden's intake is comprised mainly of refugees and their families.

In both Canada and Sweden, refugee intake policy is based on the 1951 United Nations Convention Relating to the Status of Refugees. In essence, both host countries may give asylum to individuals who are stateless or outside the country of their nationality or former habitual residence, and who

> "owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside

the country of his nationality, and is unable to, or owing to such fear, is unwilling to avail himself of the protection of that country."
(UNHCR 2012. http://www.unhcr.org/pages/49c3646c125.html) .

Refugees are broadly divided into two groups. Refugees can apply for asylum at the Canadian or Swedish border and, where their claims are deemed be valid, obtain a residence permit. Asylum seekers in both countries can obtain a work permit under certain circumstances while their case is being reviewed (Citizenship and Immigration Canada, 2012b; SOU, 1992). Refugees can also be resettled directly from refugee camps or elsewhere. In these instances, Canada and Sweden cooperate with the UN High Commissioner for Refugees (UNHCR). The following sections provide greater detail on the differences between each country's intake as well as on the supports and services provided to new immigrants.

Canada

Canada's permanent immigration intake is broadly comprised of a mix of independent (economic), family class, and refugee category immigrants. From 1987 to 2007, permanent intake rose steadily from about 100,000 persons to about a quarter million persons annually. Through this period the proportion of economic category intake rose from about a third to about sixty percent of all intake, while family reunion intake dropped from just over forty percent to just under thirty percent. Intake of refugees dropped from about one in five to one in ten of all immigrants. Overall, however, because the absolute number of immigrants has increased, the absolute number of family reunion immigrants has stayed steady at around sixty thousand per year, and the absolute number of refugees accepted by Canada has remained around twenty to thirty thousand per year (Citizenship and Immigration Canada, 2010).

Refugee and family reunion intake is considered non-economic intake because these immigrants are not admitted to Canada specifically because of labour force requirements. Family reunion immigrants are sponsored – someone in Canada has promised to look after the individual's basic economic needs for a period of up to 10 years. Refugees generally enter Canada in one of two ways. First, they can be sponsored, either by the Canadian government (generally after having been identified and resettled from refugee camps) or through a private sponsorship. Second, migrants may travel to Canada independently with the intention of seeking asylum once landed in the country (asylum refugees).

In Canada, entry category determines the level of supports (social and economic) provided to new immigrants. Government assisted refugees receive up to a year of federally sponsored income assistance, after which they are eligible for provincially sponsored income assistance if they are unable to find work. However, the level of support provided is as low as that provided to Canadian citizen welfare recipients, so refugees are often living below the poverty line. As mentioned above, refugees may also be privately sponsored. Private sponsors (an organization or any group of five people) generally commit to providing financial settlement assistance to refugees for one year or

less, as well as social and integration services (Citizenship and Immigration Canada, 2012).

Language training is available on a part time or full time basis through settlement service agencies for all allophone (non-English or French speaking) immigrants through the *Language Instruction for Newcomers in Canada* (LINC) *Program.* Only government-supported refugees receive financial support through the training period. As such immigrants who are not coming in as government assisted refugees may have a harder time taking advantage of the classes.

Sweden

In 2007, over 1.2 million, or 14 percent, of Sweden's population was born abroad. The quota for resettled refugees ('government assisted refugees' in Canada) is decided annually by the Swedish government and in agreement with the UNHCR. In 2007 Sweden admitted 1,800 migrants in this class. From 1987-2007, Sweden resettled nearly 30,000 refugees. A further 230,000 asylum seekers were recognized as refugees and 315,000 migrants entered under the family reunion program. The main source countries are Iran and Iraq, Afghanistan and former Yugoslavia.

Prior to 1994, asylum seekers did not have the right to locate where they wished. Rather they were boarded in regions (often small towns) where housing was available. Since 1994, in the face of a large influx of primarily Bosnian asylum seekers, asylum seekers have had the option of living with family or friends while their application for residency is considered. Since then, approximately half of all asylum seekers have opted to live with family or friends.

Resettled refugees do not have the option of living with friends or family. Rather, they are housed by the Migration Board, which has negotiated special arrangements with a number of municipalities for both housing and integration training (Bevelander et al., 2009). However, given the shortage of housing in the larger municipalities, these refugees often end up in smaller centres.

Of note is the fact that under Swedish immigration regulations, relatives of refugees have the right to reunite. The Swedish government through the Swedish Red Cross also finances the travel costs associated with reuniting relatives.

Once an asylum seeker obtains a residence permit he/she has one month to decide on the location of their integration courses, which are comprised of language, societal and labour market introduction classes. Unlike in Canada, all refugees and their families are encouraged to take 1.5 years of training provided through the *Introductory Courses for Newcomer Program* for which they are provided a stipend. This means that most immigrants in these categories will take the classes. An important component of the classes involves mapping immigrants' skill levels to Swedish levels. This mapping essentially provides immigrants with equivalencies for their schooling obtained outside Sweden.

Family reunion immigrants also have access to the training, but do not have the same housing constraints since, in theory, they have family to live with (at least initially).

Data and Method

What should be clear from the above review is that there are differences in the way immigrants are treated and that these differences are based on the intake category. In Sweden, there are real differences in the distribution of immigrants by intake category based on the allocation of housing. Resettled refugees are far more likely to end up in smaller muncipalities (at least initially) whereas family reunion and asylum refugees are more likely to reside in larger centres. Access to training, however is similar across municipalities. In Canada, the distribution of non-economic immigrants is not greatly affected by intake category, but access to training is; with only government assisted (resettled) refugees having access to settlement training with an allowance.

Our goal is to assess the degree to which differences by intake category or host country exist in either labour force attachment or earnings. A further goal is to understand the degree to which differences may exist by place of birth and level of schooling.

We use two sets of data to conduct this analysis. For Canada we have a table drawn from the IMDB (*Immigration Database*) that crosses age (4 groups), sex (2 groups), schooling (5 groups), entry category (10 categories) and selected places of birth (7 areas) as well as selected tax information by year of landing (a maximum of 29 years) for every year after landing (a maximum of 28 years). Each row of information can be thought of as a separate age-sex-schooling-entry category- place of birth cohort.[2] It is important to note that the IMDB only contains information for immigrants. It does not include people born in Canada.

The table contains five sets of data for each cohort: the total number of immigrants in the cohort, the total number of immigrants who are employed by someone else, the total number of self-employed immigrants, the mean employment income and mean income from self-employment.

From this very large table (roughly 17 million cells) we draw a table showing 2007 tax information for the selected immigrant groups entering Canada from 1987 to 2005. This table provides information for our four country of birth groups (Iran, Iraq, Afghanistan and the former Yugoslavia) and crosses sex, age in 2007 (25-34, 35-44, 45-54, 55-64), schooling (primary or less, high school or less, post-secondary certificate, bachelor's degree, graduate degree) by category of entry (family class, government assisted refugees, landed refugees) along with the population size and tax information for each cohort. As discussed in greater detail below, the data items were selected so as to maximize the potential for comparisons between Canada and Sweden.

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[2] While it is possible to request more detail than is available in our IMDB table, Statistics Canada confidentiality rules and data rounding criteria means that more detail would result in more error due to rounding error.

Data for Sweden are drawn from the 2007 Register. This dataset provides individual level information for all Swedish residents and includes detailed information on all the variables listed above. In order to compare the two countries we created a table analogous to the Canadian table. We thus end up with a table that describes the average income of work in 2007 for age, sex, education, year of immigration, intake category, place of birth cohorts, along with information on the number of people in each cohort by host country.

Because each data source has a different level of detail we were forced to 'dumb the data down' based on the coarsest information available across the two sets. In most cases, this meant recoding the more detailed Register data to match the coarser categories available on the IMDB table. We also made a number of selections designed to increase the level of comparability between the two countries. First, we concentrate on 'non-economic' immigrants. This is because although the economic category is quite large in Canada (anywhere from 40% to 60% of annual intake) it is quite small in Sweden. Thus we only look at three comparable classes – family class, government assisted refugees and asylum refugees.[3]

The Swedish Register contains very detailed information on level of schooling (over 40 levels ranging from none to doctorate), which were matched to 5 categories contained in the IMDB table (none, high school or less, post-secondary certificate, bachelor's degree and graduate degree). Individual years of age on the Register were recoded to match the four categories available on the IMDB (25-34, 35-44, 45-54, and 55-64).

We compare four country/region of births: Iran, Iraq, Afghanistan and Former Yugoslavia. These countries were chosen because they are the biggest refugee groups in Sweden, and they represent sizable populations in Canada.

Landing year and tax year information are both more detailed on the IMDB than on the Register. The Register only contains landing year information by intake category for 1987 onwards. Thus our analysis is limited to immigrants who entered the host country after 1986. As well, because immigrants in Sweden spend the first two years after landing in introductory settlement training classes we do not include those who entered after 2005. Finally, although the IMDB table includes declared earnings from work for

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[3] The terminologies used by the two countries differ somewhat. In Sweden, 'government assisted refugees' are referred to as 'resettled refugees,' and 'landed refugees' are referred to as 'asylum seekers who have obtained residency.' Both countries use the term 'family class.' Canada also has a category for refugee dependents. We do not include people in this category because the group is small and we could not easily combine them with one of the refugee categories. Canada's intake also includes privately sponsored refugees, but because there is no equivalent to this category in Sweden, this category is not included in the analysis
"Refugee dependents are permanent residents in the refugee category who are family members of a refugee landed in Canada, and who were living abroad or in Canada at the time of application." (http://www.cic.gc.ca/english/resources/statistics/facts2010/glossary.asp). Based on our selection criteria, there are a total of about 60 people in this category who have been dropped from the analysis.

all years after entry, the Register only includes information for tax year 2007.   Thus we also limit our analysis to 2007 earnings.

We do not have information for all cohorts either because the cohort is too small or because no one entered under a particular category – thus there are no cohorts of refugees from our selected countries that entered Canada prior to 1991. Data for cohorts may be suppressed – Statistics Canada confidentiality rules require that all cells (cohorts in our case) with fewer than 5 cases are suppressed. As well, although averages are not rounded, all cell counts are rounded to 0 or 5. In order to try to minimize errors from rounding, we only include cohorts with 10 or more immigrants. To preserve comparability across the countries, we used the same cohort selection criteria in both Canada and Sweden. We are left with 4,280 cohorts of immigrants split across Canada and Sweden representing a total of 105,314 people.

Treatment of earnings

As is to be expected, the IMDB shows earnings in current dollars and the Register shows earnings in 2007 Kronors. In order to compare earnings in Canadian dollars and Swedish Kronors we convert all earnings amounts using a Purchasing Power Parity (PPP) measure for 2007. PPP rates for private consumption were drawn from the OECD StatExtract database.[4] Canadian dollar averages are divided by 1.276064 and Swedish Kronor averages are divided by 9.182538.   This essentially converts both currencies to an American dollar PPP.

Caveats

Because cohorts differ by size (i.e., the number of people in a cohort varies) we run analytically weighted regressions.[5] It is important to note that we are not conducting an individual level analysis and that there are no comparisons made with the native born population. Ours is an analysis of cohorts of immigrants. Thus our results are compared with other groups of immigrants and do not reflect the degree to which immigrant cohorts may 'catch-up' with the Swedish or Canadian-born population. As well, because this is a cohort analysis and therefore assesses changes in the average earnings of a cohort (as compared with the average change in individual level earnings) the results show higher than normal R^2 levels and lower than normal standard errors (essentially because we are assessing changes in averages, all the points tend to be closer to the regression line, which means the correlations and significance figures tend to be high).[6]

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[4] (http://stats.oecd.org/Index.aspx?DataSetCode=SNA_TABLE4)

[5] We also run regressions using frequency weights. This has the effect of weighting the cohorts up to the total number of people in the sample. While the coefficients and R^2 values are unaffected, the standard errors tend to be much smaller in these runs. However it is useful to know the size of the cohort. For this reason the tables provide sample sizes from both the frequency weighted and analytically weighted regressions. Robust standard error and t values are drawn from the analytically weighted regressions.

[6] In order to test the degree to which our results may differ from regressions run at an individual level we compared cohort and individual level regressions run on the Swedish Register. Results can be found in Appendix 1.   In both sets of regressions, the coefficients are in the same direction, and

On the positive side, both datasets can be considered censuses in the true sense of the word. The IMDB links all immigration intake records to their respective tax records for all years and is considered a census of all immigrant tax-filers in a given tax year.[7] The Swedish Register includes a record of all legal residents to Sweden in 2007 from which we draw all immigrant records and then aggregate into cohorts.

Research Question

Our goal is to compare the labour force outcomes of immigrants in Canada and Sweden. In this study, we focus on non-economic immigrants largely because the number of economic immigrants in Sweden is relatively small, making robust quantitative comparisons difficult. However as has been described above, even within non-economic categories of intake the policies and settlement programs differ substantially across the two countries.

We ask two questions:

- First, is there a difference in the degree to which immigrant cohorts are active in the labour force between Canada and Sweden?
- Second, is there a difference in the earnings trajectories of immigrant cohorts between Canada and Sweden?

Given the limitations of the IMDB, our definition of labour force activity is very liberal – the employment rate is calculated by dividing the total number of immigrants in a given cohort with *any* employment earnings by the total number of immigrants in a cohort. This creates a loose definition of the cohort employment rate which some would argue is weak, but it is the only measure available that is comparable across the two tables.[8]

The comparison of earnings trajectories is cleaner because we have a record of the actual average employment earnings of each cohort in each country. This makes a direct comparison possible.

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close to the same magnitude. However, regressions run on individual data tend to have larger standard errors (although everything is significant at the 0.05 level).

[7] The Longitudinal Immigration Database (IMDB) includes 100% of individuals who filed an individual tax return (T1) or were Canada child tax benefits recipients. It covers approximately 95% of the population. Information on the T1 family file can be found at:
http://www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&SDDS=4105&lang=en&db=imdb&adm=8&dis=2
Information on data quality for the IMDB can be found at:
http://www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&SDDS=5057&lang=en&db=imdb&adm=8&dis=2

[8] We note that in the Canadian data there are likely some refugees who report earnings from wages and salaries and earnings from self-employment. These people are counted twice and therefore would inflate the employment rate. However we do not believe that they constitute a large part of the population.

We answer these questions by running three sets of weighted regressions. The first set has the cohort employment rate or the log of earnings as the dependent variable and includes all the variables that constitute the cohort definition (age group, education, intake category, place of birth and year of immigration) as well as a dummy for host country. This regression allows us to measure the overall impact of being in either Canada or Sweden.

In regression set 2 we run separate regressions for Canada and Sweden with the same controls as in the first set of analyses. Running the models this way is equivalent to running the first model but interacting all the variables with one of the host country variables. In regression set 3 the dependent variable is the log of PPP earnings and we interact the host country with category of intake, country of birth and level of schooling, which allows us to more directly compare outcomes by place of birth and category. All regressions are run separately for males and females.

Findings
    Descriptives

Table 1 shows the average proportion of immigrants from the 4 selected countries with any earnings (either employed or self-employed) in 2007 by the number of years in the host country and intake category. The minimum number of years displayed is 2 years because non-economic category immigrants to Sweden generally spend the first two years in language training. These data can be interpreted to provide a very liberal idea of the employment rate.

Results in Table 1 suggest that employment rates are actually quite similar across countries. As can be seen (and as is to be expected) the proportion of a cohort with earnings increases over time particularly in the first five years. For females, the rates are fairly close, although in Canada women who entered under the family reunion tend to have lower overall employment rates as compared with Swedish immigrants or refugees in Canada. For males, after 20 years, employment rates are almost identical across the two countries.

Amongst men, refugees start off with lower employment rates than family reunion immigrants in both Canada and Sweden. In Canada government assisted refugees have the lowest average employment rate on entry (41% after two years) while about three-quarters of family reunion and asylum refugees have some attachment to the labour force. In Sweden, about 72% of male family reunion immigrants have at least some attachment to the labour force on entry but attachment for the refugee classes is lower (about half for asylum and almost two-thirds for government assisted refugees.

Women tend to have lower employment rates than men regardless of entry category. In Canada just over 40% of family reunion and refugees have at least some employment earnings after two years. In Sweden, this is the case for just under 30% of these groups. However, the proportion of women with some attachment to the labour force increases faster in Sweden for all groups and remains higher. For example, after twenty years in

Sweden, over 70% of non-economic immigrant women have some employment earnings. In Canada this is the case for only 56% of family reunion women and two-thirds of government assisted refugees.

Table 2 shows average cohort earnings from wages and salaries by the same categories as were used in Table 1. Earnings have been standardized by Personal Purchasing Power Parity factors to make them comparable. Looking first at women we see that government assisted refugees display the lowest initial earnings in both Canada and Sweden (about 5000 in adjust earnings). Immigrant women in other entry categories have initial earnings that are over twice that of government assisted refugees. However the earnings gap diminishes substantially over time with refugees earning between 17 to 22 thousand PPP dollars after twenty years.

The pattern for males is similar across host countries with government-assisted refugees displaying the lowest initial earnings and family reunion immigrants the highest initial earnings. After twenty years however, earnings for all non-economic immigrant cohorts have increased substantially. Earnings for government assisted refugees triple in both host countries. Earnings for family reunion immigrants almost triple in Canada and almost double in Sweden, while earnings for asylum refugees almost double in Canada and more than double in Sweden.

Regression Results

Results from Tables 1 and 2 point to definite differences in employment probabilities and earnings by class, and somewhat smaller differences by host country. In essence, employment probabilities for women tend to be somewhat higher in Sweden over time but about the same for men across countries. Earnings tend to be higher for family reunion immigrants in Canada but about the same for other categories. These results, while comparable do not control for other factors such as country of birth, education and age. The following section provides results from a series of weighted regressions that assess the impact of age-education-country of birth-year of entry cohort characteristics on employment probabilities and standardized (PPP) earnings. These results allow us to assess the degree to which differences in the characteristics of the cohort may affect outcomes by host-country. As described earlier these regressions are run three ways – the first merges all cohorts in Canada and Sweden and includes a dummy variable for Sweden. This allows us to assess the overall impact of being an immigrant in Sweden as compared with Canada. The second set of analysis runs separate regressions for Canada and Sweden, thereby allowing us to compare individual coefficients in the two countries. In the third set we verify the results by merging the data an interacting host country with schooling, place of birth and intake class.

Table 3 shows results from four regressions in which the unit of analysis is the cohort as defined above and the dependent variable is either the employment rate (top panel of Table 3, defined as having any earnings in 2007) or the log of PPP earnings (bottom panel of Table 3). Separate regressions are run for men and women, making a total of 4 regressions. These regressions include a dummy for host country. This allows us to

assess the overall impact of being a non-economic immigrant in Sweden as compared with Canada. Standard errors are based on the number of cohorts but the number of observations is provided at both the individual level and the cohort level. Thus in the employment regression for females there are 1886 cohort representing 79,194 people.

Looking first at employment rates we see that for men and women, country of birth and entry category make a difference. As compared with women from Iran, women from Iraq and Afghanistan have much lower attachment to the labour force (-14% and -18% respectively). Women from the former Yugoslavia however are more likely to be active in the labour force (14% higher than Iranian women). The same pattern is apparent for men, but the differences are not quite as stark. Men from Iraq and Afghanistan are less likely to have any earnings in 2007 compared with Iranian men (-7% and -8% respectively) while men from the former Yugoslavia are 10% more likely to be active in the labour force.

Entry category has a greater impact for women than for men. As compared with immigrant women in the family class, refugees have higher probabilities of having at least some earnings in 2007 (8% higher for government assisted refugees and 4% higher for asylum refugees). Amongst men, however, the employment rate is about the same (just 2% higher for refugees as compared with family reunion men).

After controlling for other variables, the employment rate is almost the same in Canada and Sweden. (3% higher for women and 3% lower for men). This suggests that at least in terms of ability to work, outcomes are very similar across the two countries.

Turning to earnings we see that place of birth and host country have a far greater impact on earnings as compared with intake class. Intake category has only a minimal impact (less than 3%) on earnings for both men and women in both host countries. However, place of birth has a substantial impact. As was the case for employment probabilities, immigrants from the former Yugoslavia have the highest earnings (15% higher for women and 19% higher for men) while immigrants from Afghanistan have the lowest earnings (-18% and -19% for women and men respectively) as compared with immigrants from Iran.

Host country has a substantial impact on earnings. Immigrant women from the four countries who settled in Sweden earn about 11% less than those who settled in Canada. Men who settled in Sweden earn 16% less.

Table 4 presents results from regressions on employment rates similar to those in the top panel of Table 3 but this time, regressions are run separately for Canada and Sweden. The intent of this set of analysis is to allow us to understand the degree to which there may be differences in the individual coefficients between the two countries, rather than the overall difference between the two countries.

Comparing across the two countries we see that for both men and women younger age cohorts fair better than older cohorts. Higher levels of schooling result in higher

employment rates in Sweden as compared with Canada. Indeed, having a graduate degree in Canada has no impact on the employment rate, but having a graduate degree in Sweden increases the cohort employment rate by 13% for women and 11% for men as compared to people with only highschool. This boost in employment probabilities for graduate degrees may be a product of the equivalency exercise that immigrants receive as part of the settlement training.

Results by place of birth are a little more mixed. In Canada, amongst women, as compared with immigrants from Iran, women from Iraq and Afghanistan have much lower employment rates. (-0.37 and -0.24 respectively). In Sweden differences are not as stark (with differences ranging from -0.07 to -0.04). Women from the former Yugoslavia tend to have higher rates of employment as compared with women from Iran (0.12 in Canada and 0.15 in Sweden).

As compared with family reunion immigrants, refugees in Canada do better than refugees in Sweden, where there is very little difference across classes. Government assisted refugees in Canada are over 10% more likely to be active in the labour force as compared with family reunion immigrants. This may be because refugees have access to a wider range of services in Canada compared with family reunion immigrants in Canada, whereas in Sweden access to services is more even across intake categories.

Table 5 shows differences in earnings (analogous to results shown in the lower half of Table 3) run separately for Canada and Sweden. As is to be expected, these results are similar in flavour to those seen in Table 4. Overall, older cohorts have lower earnings in Canada as compared with younger cohorts, whereas in Sweden older cohorts do better. Rewards to schooling are as to be expected, with higher earnings going to those with higher levels of schooling in both countries. However, the payoffs are higher in Sweden as compared with Canada. Men with graduate degrees in Sweden earn over double that of immigrants with highschool or less (coefficient of 0.86) while those in Canada earn about 64% more (coefficient of 0.50).

These findings differ from those in Table 4, which showed markedly smaller differences by level of schooling – while employment probabilities are relatively low for cohorts with higher levels of schooling, earnings increase substantially with schooling. Keeping in mind that Table 5 only includes people who have earnings, this could be an indication that those with higher levels of schooling are more likely to stay out of the labour force until they find a job that is better matched to their level of schooling.

Differences by place of birth and intake category are not as stark as those seen in Table 4 but follow a similar pattern. Men and women from Yugoslavia have higher earnings as compared with immigrants from Iran regardless of host country, but payoffs are higher in Canada than they are in Sweden (0.19 and 0.24 for women and men in Canada compared with 0.14 and 0.16 in Sweden). Refugee women have higher earnings relative to family reunion women in Canada but differentials amongst men, or men and women in Sweden are minimal.

Table 6 shows results from a regression in which cases from Canada and Sweden are merged. This is similar to results in Table 3 but rather than having a single coefficient for host country, host country Sweden is interacted with level of schooling, country of birth, and intake category. The dependent variable is PPP earnings from wages and salaries. The intent of this regression is to provide a more direct assessment of earnings differences in Canada and Sweden.

The coefficient for Sweden provides an overall impact of being an Iranian family reunion immigrant with high school or less in Sweden as compared with Canada. Results from Table 6 confirm the findings from Table 5, but these findings are more nuanced. The coefficient for Sweden is -0.09 for women and -0.16 for men, and can be interpreted as the impact of being an Iranian family reunion immigrant with highschool or less living in Sweden as compared to Canada. These coefficients are very similar to those found in Table 3 (where the Sweden effect is -0.11 for women and -0.16 for men). As is to be expected, higher levels of schooling are correlated with higher earnings. Looking at the coefficients for schooling we see that in Canada, men with primary school or less, earn about 8% less than men with high school. Men with graduate degrees in Canada, have a coefficient of 0.37 (or about 45% more).

In Sweden, immigrants with low levels of schooling earn less than Canadian immigrants with low levels of schooling (-0.26 versus -0.08 for men respectively).[9] However Swedish immigrants with graduate degrees have much higher payoffs to schooling. Immigrant men with graduate degrees in Sweden earn about 33% more than those in those in Canada (coefficient of 0.37 in Canada versus 0.70 in Sweden). For women the payoff for a graduate degree is 0.62 in Canada versus 0.71 in Sweden. For immigrants with post-secondary certificates or a bachelors degree, the payoff is higher in Canada.

Looking at the coefficients for country of birth we see that, as before, after controlling for other effects immigrants from the former Yugoslavia have significantly higher earnings than Iraqi or Afghani immigrants in Canada but not in Sweden. Immigrants from the former Yugoslavia do particularly well in Canada, where earnings for males are about 21% higher than immigrants from Iran. In Sweden the earnings are about the same (coefficient of 0.03 for men).

Finally, turning to intake category we see that refugees in Canada fare about as well or better than family reunion immigrants. However in Sweden refugees have lower earnings relative to family reunion immigrants. Female refugees in Sweden earn about 10% less than family reunion women in Canada. In Sweden, amongst males, refugees fare worse than immigrants in Canada (-21% for government assisted refugees and -16% for asylum refugees as compared with Canadian family reunion immigrants). Within Sweden, however, differences across intake categories are minimal, suggesting that immigration category does not have a significant impact on earnings.

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[9] Calculating the coefficient for Sweden requires adding up 3 coefficients (the Sweden coefficient, the base coefficient and the interaction coefficient). So to calculate the impact of a Swedish immigrant male with a low level of schooling it is necessary to add up the coefficient for Sweden (-0.16) + the coefficient for primary or less (-0.08) + the interaction for Sweden + primary or less (-0.03)= -0.26.

Discussion / Conclusions

In this paper we have assessed the employment probabilities and earnings differentials of non-economic immigrants from 4 countries in Canada and Sweden. Our intent was to assess the degree to which outcomes for different classes of immigrants (family class, government assisted refugees or asylum refugees) from different countries (Iran, Iraq, Afghanistan and the former Yugoslavia) varied and the degree to which outcomes differed between host countries.

We find that after controlling for other variables, the employment rate (broadly defined as people who have at least some earnings from employment in 2007) is roughly the same in Canada and Sweden. However there are some differences by country of birth, with immigrants from the former Yugoslavia having higher employment rates than immigrants from other regions. Immigrant cohorts from Iran have higher employment rates than those from either Iraq or Afghanistan.

Overall we see that differentials in employment rates across intake categories and countries of origin are much smaller in Sweden as compared with Canada. Additionally, refugees in Canada appear to do better in comparison to family reunion immigrants, while in Sweden differences across intake categories are relatively small. It is possible that these differences are a product of the services and programs accessible by intake category in the two host countries. In Sweden all non-economic intake has access to roughly the same range of settlement assistance. This includes about 18 months of settlement training comprised of language and labour market schooling (including credential recognition/assessment) as well as housing. In Canada, family reunion immigrants are admitted with the understanding that the sponsoring party will look after the economic needs of the immigrant. Government assisted refugees, have access to settlement/language training and housing assistance as well as income assistance whereas family reunion immigrants only have access to language training. Thus, we conclude that despite social and psychological disadvantage, the access to settlement services allows refugees to perform better than family reunion immigrants.

Turning to earnings we see that earnings are higher in Canada as compared with Sweden. However, in Sweden, the payback for graduate degrees is much higher, suggesting that the equivalency of credentials exercise, done, as part of the settlement package has been successful. Further, after controlling for other effects, place of birth makes less of a difference to immigrants to Sweden than to immigrants to Canada. Immigrants from the former Yugoslavia, however, perform better in both host countries with the payoff being higher in Canada as than in Sweden). Given the long history of Yugoslavs in both host countries, it is possible that the positive earnings enjoyed by immigrants from the former Yugoslavia are a product of the larger co-ethnic populations (Bevelander and Lundh, 2006).

Finally, category of intake makes a difference for women in Canada but not for men or women in Sweden. Earnings for refugee women are higher than earnings for family reunion women, but earnings for refugee men are about the same as those for family reunion men. In Sweden, differences are minimal across intake categories in both employment probabilities and earnings. This may be because non-economic immigrants in Sweden have access to the same package of services. In Canada government sponsored refugees may have access to a more robust package of services than is available to either family reunion or asylum refugees.

We note that earnings are higher in Canada despite Sweden enjoying a much higher minimum wage. Why should we find this difference? It is possible that entry-level positions in Sweden are 'stickier' than those in Canada. If the positions open to immigrants in Sweden are also positions that do not offer promotion opportunities, while those in Canada do, Swedish immigrants may be 'trapped' in low wage labour positions. Thus, while the employment rates are comparable across the two countries, Canada may offer more opportunities for upward mobility than is the case in Sweden.

Another possibility is that the ubiquity of English means that immigrants (particularly family class) immigrants are more likely to speak an official language on entry in Canada compared to Sweden. However, this argument is weakened by the fact that Sweden offers language training to all non-economic category entrants.

In Canada, the family reunion category comprises about a quarter of the annual intake (Citizenship and Immigration Canada, 2010). These immigrants are sponsored by someone who makes a declaration that they will look after the economic needs of the immigrant. If sponsors are primarily independent category immigrants themselves, then in theory they have the means to provide substantial support to family reunion immigrants. This is not the case in Sweden, where family reunion immigrants are generally connected to refugee category immigrants and are sponsored by the Government of Sweden. All non-economic immigrants to Sweden receive the same level of support, which includes language training, settlement training and labour market introduction. The training in Sweden provides a tremendous leveling effect, which means differences across intake categories are minimized. In Canada, government assisted refugees have access to a greater range of settlement services but family reunion intake should do better because their sponsor has been income tested. Thus the training offered to refugees has the same leveling effect as has been witnessed in Sweden.

Appendix 1: Test of analysis with aggregate regression

As noted in the text, running regressions on aggregate data generally results in higher measures of association (R^2 values) and higher coefficient effects. Because our Canadian data are only available in tabular form, our results are subject to these effects. We test the effect by running four regressions using the Swedish data. The first of set of regressions runs regressions to the ones in our study (one for males and one for females by sex) at an individual level. The second is a cohort level regression (without the minimum cohort size restriction) constructed by aggregating the Swedish Register data to cohorts.

Results from Table 1a suggest that while R^2 and standard error values are higher for the cohort regressions the results are comparable. Standard errors for the individual level regressions are all at the 0.05 level and 0.01 or better for the cohort regressions. This suggests that despite the tighter estimates at the cohort level, results are still valid at the individual level. Looking at the coefficients themselves, they are generally close and never in the opposite direction.

We also did tests running regression with robust standard errors. Adding this option inflated the standard errors, but did not change the level of significance.

References:

Aydemir, A. 2011. "Immigrant selection and short-term labor market outcomes by visa category." Journal of Population Economics. 24(2): 451– 475.

Bevelander, P. and C. Lundh. 2006. "Flyktingars jobbchanser: Vad betyder lokala erfarenheter av tidigare arbetskraftsinvandring?" Arbetsmarknad & Arbetsliv. 12(2): 83 – 98.

Bevelander, P and R. Pendakur. 2012. "Citizenship and employment in two cold countries: Canada and Sweden compared," in J. Frideres. International Approaches to Integration and Inclusion. Montreal: McGill-Queens University Press. 251 – 272.

Bevelander, P and R. Pendakur. 2009. "The employment attachment of resettled refugees, refugees and family reunion migrants in Sweden," in Bevelander, P. M. Hagstrom and S. Ronnqvist. Resettled and Included? The employment integration of resettled refugees in Sweden. Malmo: Malmo University. pp: 227 – 245.

Bloch, A. 2007. "Refugees in the UK Labour Market: The Conflict between Economic Integration and Policy-led Labour Market Restriction," Journal of Social Policy 37(1): 21–36.

Citizenship and Immigration Canada (CIC). 2012a. Sponsoring refugees: Private Sponsorship of Refugees Program. Ottawa: CIC. (www.cic.gc.ca/english/refugees/sponsor/private.asp).

CIC. 2012b. The Refugee System: Refugee claims in Canada — Refugee rights. Ottawa: CIC. (http://www.cic.gc.ca/english/refugees/outside/arriving-rights.asp).

CIC. 2010. Canada – Permanent residents by gender and category, 1986 to 2010. Ottawa: CIC. http://www.cic.gc.ca/english/resources/statistics/facts2010/permanent/01.asp

Connor, P. 2010. "Explaining the Refugee Gap: Economic Outcomes of Refugees versus Other Immigrants," Journal of Refugee Studies. 23 (3): 377-397.

DeVoretz, D. S. Pivnenko, and M. Beiser. 2004. "The Economic Experiences of Refugees in Canada" IZA Discussion Paper No. 1088.

de Vroome, T and F. van Tubergen. 2010. "The Employment Experience of Refugees in the Netherlands" International Migration Review 44 (2):376–403

Hammerstedt, M and M. Mikkonen 2007. " Geografisk rorlighet och sysselsattning bland flyktingar." Economisk Debatt. 35(3).

Hatton, T. 2011. Seeking Asylum: Trends and policies in the OECD. London: CEPR.

Hiebert, D. 2009. "The Economic Integration of Immigrants in Metro Vancouver,"
        Metropolis BC working paper 09-08. Vancouver: MBC.

Hiebert, D. 2002. "Canadian Immigration and the Selection-settlement Services Trade-
        off: Exploring Immigrant Economic Participation in British Columbia"
        Metropolis BC working paper 02-05. Vancouver: MBC.

Lamba, N. 2003. "The employment experiences of Canadian refugees: Measuring the
        impact of human and social capital on quality of employment." Canadian Review
        of Sociology and Anthropology 40(1): 45 – 64.

Montgomery, R. 1986. "The Economic Adaptation of Vietnamese Refugees in Alberta:
        1979-84," International Migration. 24(4): 749–768.

Javdani, M, D. Jacks and K. Pendakur. 2012. Immigrants and the Canadian Economy.
        Vancouver: Metropolis BC working paper 12-09.

Rashid, S. 2009. "Internal Migration and Income of Immigrant Families" Journal of
        Immigrant and Refugee Studies, 7:180–200.

Rooth, D. 1999. Refugee immigrants in Sweden: educational investments and labour
        market integration. Lund: Department of Economics, Lund University.

Rooth, D. and O. Åslund. 2006. "Utbildning och kumskaper I svenska:
        Framgangsfaktorer for invandrade? Stockholm: SNS Forlag.

Swedish Official Publications (SOU). 1992. Meningsfull vistelse. 1992: 69

UNHCR. 2012. "Who we help". UNHCR.
        http://www.unhcr.org/pages/49c3646c125.html

Wilkinson, L. 2008. "Labor Market Transitions of Immigrant-Born, Refugee-Born, and
        Canadian-Born Youth," Canadian Review of Sociology. 45(2): 151 – 176.

Yu, S., E. Ouellette and A. Warmington. 2007. "Refugee Integration in Canada: A
        Survey of Empirical Evidence and Existing Services," Refuge 24(2): 17 – 34.

Table 1:

Cohort employment rate by intake category, sex and years since migrating, total of Iran, Iraq, Afghanistan and the Former Yugoslavia, 2007

gender	Years since migrating	Canada Family	Govt assisted refugees	Refugees (asylum)	Sweden Family	Govt assisted refugees	Refugees (asylum)
female	2	0.45	0.09	0.41	0.29		0.28
	3	0.55	0.25	0.65	0.31	0.25	0.61
	4	0.51	0.32	0.43	0.42		0.58
	5	0.55	0.41	0.33	0.48	0.64	0.57
	6	0.54	0.55	0.48	0.52	0.43	0.58
	7	0.57	0.58	0.47	0.59	0.82	0.58
	8	0.55	0.78	0.51	0.60		0.64
	9	0.46	0.80	0.64	0.62	0.78	0.74
	10	0.54	0.85	0.66	0.67	0.74	0.78
	11	0.59	0.84	0.67	0.68	0.67	0.74
	12	0.54	0.86	0.65	0.71	0.65	0.72
	13	0.58	0.87	0.71	0.77	0.74	0.80
	14	0.68	0.66	0.74	0.76	0.67	0.83
	15	0.62	0.46	0.77	0.75	0.79	0.77
	16	0.68	0.71	0.71	0.78	0.69	0.72
	17	0.55	0.72		0.70		0.66
	18	0.67	0.70		0.69	0.65	0.70
	19	0.47	0.68		0.67	0.82	0.71
	20	0.56	0.66		0.72	0.77	0.70
male	2	0.74	0.41	0.74	0.72		0.49
	3	0.67	0.61	0.77	0.77	0.64	0.70
	4	0.80	0.54	0.67	0.80	0.40	0.64
	5	0.76	0.67	0.74	0.79	0.73	0.67
	6	0.77	0.67	0.73	0.74	0.74	0.69
	7	0.79	0.77	0.77	0.76	0.77	0.70
	8	0.91	0.81	0.74	0.80		0.71
	9	0.80	0.89	0.81	0.83	0.70	0.76
	10	0.83	0.88	0.80	0.85	0.67	0.79
	11	0.65	0.87	0.82	0.85	0.73	0.71
	12	0.71	0.91	0.89	0.84	0.68	0.77
	13	0.74	0.83	0.75	0.82	0.76	0.81
	14	0.81	0.83	0.75	0.83	0.72	0.84
	15	0.82	0.69	0.79	0.81	0.77	0.74
	16	0.83	0.77	0.72	0.78	0.75	0.74
	17	0.84	0.74		0.78	0.79	0.70
	18	0.89	0.74		0.71	0.71	0.73
	19	0.90	0.84		0.68	0.76	0.74
	20	0.76	0.80		0.71	0.79	0.74

Source: Canada: IMDB

Sweden: 2007 Swedish Registry

Note: IMDB data is weighted by the cohort population. Swedish Register data is self-weighted.

Selection : All cohorts with more than 9 people

Table 2:
Average cohort PPP income from wages and salaries intake category, sex and years since migrating, total of Iran, Iraq, Afghanistan and the Former Yugoslavia, 2007

gender	Years since migrating	Canada			Sweden		
		Family	Govt assisted refugees	Refugees (asylum)	Family	Govt assisted refugees	Refugees (asylum)
female	2	9,202	4,203	9,943	10,787		8,638
	3	11,434	5,470	14,474	11,253	5,096	13,422
	4	11,838	8,369	8,799	10,996		13,640
	5	12,828	10,059	8,883	11,415	13,555	14,071
	6	11,671	11,278	11,357	12,197	10,519	15,049
	7	14,895	13,454	13,647	13,140	17,917	14,336
	8	14,748	18,575	14,424	14,246		15,992
	9	12,979	20,459	16,693	15,214	12,807	18,620
	10	17,886	21,407	16,687	15,656	13,778	18,725
	11	19,122	22,727	17,832	16,828	17,367	15,503
	12	18,500	25,093	19,123	18,059	19,485	17,868
	13	19,145	27,935	25,054	19,421	19,392	20,279
	14	20,403	19,876	20,744	19,544	13,916	22,062
	15	18,536	13,891	21,787	19,893	18,281	18,617
	16	21,763	21,296	17,915	19,875	10,828	18,757
	17	24,057	22,313		21,207		18,367
	18	22,428	21,763		21,097	18,563	20,735
	19	33,791	21,858		21,324	20,727	22,361
	20	21,487	21,402		22,283	17,301	21,977
male	2	16,268	9,469	14,853	14,859		12,888
	3	19,419	14,246	18,127	17,227	7,717	20,406
	4	20,251	14,778	14,593	19,510	6,199	18,278
	5	21,591	16,271	17,119	20,748	12,185	20,245
	6	18,644	19,360	21,511	20,586	15,856	19,119
	7	24,960	22,378	20,120	21,635	21,223	20,893
	8	24,933	26,019	20,475	21,768		21,123
	9	30,548	28,881	22,608	23,692	19,253	23,462
	10	26,332	28,209	25,743	23,710	16,910	23,871
	11	28,802	31,625	25,160	25,694	23,208	22,794
	12	29,087	33,895	27,541	26,002	22,429	22,692
	13	30,982	36,960	27,636	26,449	25,193	26,207
	14	32,634	29,760	27,841	25,980	22,123	28,059
	15	32,471	19,517	27,353	25,281	24,008	23,647
	16	34,236	25,704	25,436	25,764	23,101	24,334
	17	40,128	28,072		24,730	25,736	24,326
	18	35,391	27,552		24,868	24,856	26,549
	19	39,467	29,947		24,327	29,275	26,914
	20	46,557	30,610		26,808	24,702	28,444

Source: Canada: IMDB
            Sweden: 2007 Swedish registry
Note: IMDB data is weighted by the cohort population. Swedish Register data is self-weighted.
Selection: All cohorts with more than 9 people

Table 3: Partial results from 4 regressions assessing the cohort employment rate (any earnings in 2007) and log of PPP earnings, non-economic immigrants

		female			male		
	variable	coef.	Rob SE	sig.	coef.	Rob SE	sig.
Employment rate	Observations	79194	1886		83808	1883	
	Prob>F	0			0		
	Adj R2	0.66			0.49		
Place of birth	Iraq	-0.14	0.01	***	-0.07	0.01	***
(Iran)	Afghanistan	-0.18	0.02	***	-0.08	0.02	***
	Former Yugoslavia	0.14	0.01	***	0.10	0.01	***
Intake class	Govt assisted refugee	0.08	0.01	***	0.02	0.01	**
(family)	Refugees (asylum)	0.04	0.01	***	0.02	0.01	**
Host country (Canada)	Sweden	0.03	0.01	***	-0.03	0.01	***
Log of earnings	Observations	48273	1231		57041	1417	
	Prob>F	0.00			0.00		
	Adj R2	0.74			0.72		
Place of birth	Iraq	-0.12	0.02	***	-0.10	0.02	***
(Iran)	Afghanistan	-0.18	0.03	***	-0.19	0.02	***
	Former Yugoslavia	0.15	0.01	***	0.19	0.01	***
Intake class	Govt assisted refugee	0.02	0.02		-0.03	0.01	**
(family)	Refugees (asylum)	0.02	0.01		-0.01	0.01	
Host country (Canada)	Sweden	-0.11	0.02	***	-0.16	0.01	***

Source:	Canada: IMDB
	Sweden: 2007 Swedish registry
Note:	Cohorts are analytic weighted. Observations show both frequency weights and analytic (cohort) weights. Comparison category is in parentheses.
	Variables also in regression: age groups, schooling, years since arrival
Significance:	***: 0.01, **: 0.05, *: 0.10
Selection:	All cohorts with more than 9 people

Table 4: Partial results from 4 regressions assessing the cohort employment rate (any earnings in 2007) and log of PPP earnings, non-economic immigrants by host country

		Canada				Sweden			
		reg 1		reg 2		reg 3		reg 4	
		female		male		female		male	
		coef	Rob SE	coef	Rob SE	coef.	Rob SE	coef.	Rob SE
	Observations	29400	901	24090	823	49794	967	59718	1060
	Prob>F	0		0		0		0	
	Adj R2	0.65		0.41		0.77		0.69	
	constant	0.49	0.02	0.70	0.03	0.40	0.02	0.74	0.01
Age cohort	35-44	-0.11	0.02	-0.09	0.02	0.00	0.01	-0.07	0.01
(25-34)	45-54	-0.18	0.02	-0.20	0.02	-0.09	0.01	-0.14	0.01
	55-64	-0.49	0.03	-0.49	0.03	-0.38	0.01	-0.35	0.01
Schooling	primary or less	-0.14	0.04	-0.02	0.06	-0.18	0.01	-0.11	0.01
Highschool or less	Post Sec cert	0.06	0.02	0.01	0.02	0.05	0.01	0.04	0.01
	BA	0.10	0.02	0.01	0.03	0.13	0.02	0.11	0.01
	graduate degree	-0.10	0.10	-0.21	0.11	0.11	0.02	0.15	0.02
Place of birth	Iraq	-0.37	0.02	-0.19	0.02	-0.07	0.01	-0.05	0.01
(Iran)	Afghanistan	-0.24	0.02	-0.11	0.02	-0.04	0.04	0.01	0.02
	Former Yugoslavia	0.12	0.02	0.13	0.02	0.15	0.01	0.10	0.01
Intake class	Govt assisted refugee	0.12	0.01	0.11	0.02	0.02	0.02	-0.02	0.01
(family)	Refugees (asylum)	0.07	0.02	0.09	0.02	0.03	0.01	0.00	0.01
	Years in host country	0.02	0.00	0.01	0.00	0.02	0.00	0.01	0.00

Source: Canada: IMDB; Sweden: 2007 Swedish registry

Note: Cohorts are analytic weighted. Observations show both frequency weights and analytic (cohort) weights

Variables also in regression: age groups, schooling, years since arrival

Selection: All cohorts with more than 9 people

Significance: ***: 0.01, **: 0.05, *: 0.10

Table 5   Partial results from 4 regressions assessing the cohort ppp earnings (log), non-economic immigrants, by host country

		Canada				Sweden			
		reg 1		reg 2		reg 3		reg 4	
		female		male		female		male	
		coef	Rob SE	coef	Rob SE	coef.	Rob SE	coef.	Rob SE
	Observations	16455	542	16880	597	31818	689	40161	820
	Prob>F	0		0		0		0	
	Adj R2	0.76		0.75		0.84		0.76	
	constant	8.81	0.05	9.48	0.05	8.99	0.04	9.59	0.04
Age cohort	35-44	-0.04	0.02	0.02	0.02	0.21	0.01	0.07	0.01
(25-34)	45-54	-0.12	0.03	-0.11	0.02	0.23	0.01	0.02	0.01
	55-64	-0.27	0.05	-0.26	0.03	0.11	0.02	-0.13	0.02
Schooling	primary or less	-0.02	0.07	-0.14	0.12	-0.13	0.02	-0.10	0.01
Highschool or less	Post Sec cert	0.19	0.02	0.13	0.02	0.17	0.01	0.08	0.01
	BA	0.44	0.03	0.36	0.03	0.41	0.02	0.32	0.02
	graduate degree	0.69	0.07	0.50	0.04	0.80	0.06	0.86	0.04
Place of birth	Iraq	-0.39	0.05	-0.30	0.03	-0.11	0.02	-0.09	0.02
(Iran)	Afghanistan	-0.22	0.04	-0.19	0.03	-0.10	0.04	-0.06	0.04
	Former Yugoslavia	0.19	0.02	0.24	0.02	0.14	0.01	0.16	0.02
Intake class	Govt assisted refugee	0.06	0.02	-0.01	0.02	0.00	0.02	-0.04	0.02
(family)	Refugees (asylum)	0.10	0.04	0.02	0.03	0.02	0.01	0.00	0.01
	Years in host country	0.12	0.01	0.08	0.01	0.06	0.01	0.04	0.01
	Yrs in host cntry sq	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Source: Canada: IMDB; Sweden: 2007 Swedish registry

Note: Cohorts are analytic weighted. Observations show both frequency weights and analytic (cohort) weights

Variables also in regression: age groups, schooling, years since arrival

Selection: All cohorts with more than 9 people

Significance: ***: 0.01, **: 0.05, *: 0.10

Table 6   Partial results from 2 regressions assessing the cohort ppp earnings (log), including an interaction with host country (Sweden)

			Regression 1 Females			Regression 2 Males		
			coef.	Rob se	sig.	coef.	Rob se	sig.
Observations			48273	1231		57041	1417	
Sig			0.00			0.00		
R2			0.75			0.74		
Host country (Canada)	Sweden		-0.09	0.01	***	-0.16	0.01	***
schooling (hs or less)	primary or less		0.06	0.02	***	-0.08	0.03	**
	post sec cert		0.16	0.00	***	0.12	0.00	***
	BA		0.37	0.01	***	0.33	0.01	***
	grad degree		0.62	0.02	***	0.37	0.01	***
	Sweden Interaction	primary or less	-0.20	0.02	***	-0.03	0.03	
		post sec cert	0.02	0.00	***	-0.04	0.00	***
		BA	0.03	0.01	***	-0.02	0.01	***
		grad degree	0.18	0.02	***	0.49	0.02	***
Region (Iran)	Iraq		-0.35	0.01	***	-0.31	0.01	***
	Afghanistan		-0.19	0.01	***	-0.22	0.01	***
	former Yugoslavia		0.18	0.01	***	0.21	0.00	***
	Sweden Interaction	Iraq	0.26	0.01	***	0.26	0.01	***
		Afghanistan	0.07	0.01	***	0.20	0.01	***
		former Yugoslavia	-0.03	0.01	***	-0.03	0.01	***
Category (Family)	govt assisted		0.04	0.00	***	-0.01	0.01	**
	asylum		0.08	0.01	***	-0.01	0.01	
	Sweden Interaction	govt assisted	-0.06	0.01	***	-0.04	0.01	***
		asylum	-0.07	0.01	***	0.00	0.01	

Source: Canada: IMDB; Sweden: 2007 Swedish registry

Note: Cohorts are analytic weighted. Observations show both frequency weights and analytic (cohort) weights

                 Variables also in regression: age groups, schooling, years since arrival

Selection: All cohorts with more than 9 people

Significance: ***: 0.01, **: 0.05, *: 0.10