DISCUSSION PAPER SERIES

No. 8182

CITIZENSHIP AND EMPLOYMENT – COMPARING TWO COOL COUNTRIES

Pieter Bevelander and Ravi Pendakur

INTERNATIONAL MACROECONOMICS

Centre for Economic Policy Research

www.cepr.org

Available online at: **www.cepr.org/pubs/dps/DP8182.asp**

ISSN 0265-8003

CITIZENSHIP AND EMPLOYMENT – COMPARING TWO COOL COUNTRIES

Pieter Bevelander, Malmö University
Ravi Pendakur, University of Ottawa

Discussion Paper No. 8182
January 2010

Centre for Economic Policy Research
77 Bastwick Street, London EC1V 3PZ, UK
Tel: (44 20) 7183 8801, Fax: (44 20) 7183 8820
Email: cepr@cepr.org, Website: www.cepr.org

CEPR Discussion Paper No. 8182

January 2010

ABSTRACT

Citizenship and Employment – comparing two cool countries*

Over the last decades, both Canada and Sweden have liberalized citizenship regulations for permanent residents. During the same period, immigration patterns by country of birth have changed substantially, with an increasing number of immigrants arriving from non-western countries. The aim of this paper is to explore the link between citizenship and employment probabilities for immigrants in both countries, controlling for a range of demographic, human capital, and municipal characteristics such as city and co-ethnic population size. We use data from the 2006 Canadian census and Swedish register data (STATIV) for the year 2006. Both STATIV and the Census, include similar sets of demographic, socio-economic and immigrant specific. We use instrumental variable regression to examine the 'clean' impact of citizenship acquisition and the size of the co-immigrant population on the probability of being employed in both countries. We find that citizenship acquisition has a positive influence on employment probabilities in both Canada and Sweden. The size of the co-ethnic population has a positive impact for many immigrant groups--as the co-ethnic population increases, the probability of being employed also increases.

JEL Classification: F22, J61, J68
Keywords: employment, citizenship, integration

Pieter Bevelander
MIM
Malmö University
20506 Malmö
SWEDEN

Email: pieter.bevelander@mah.se

For further Discussion Papers by this author see:
www.cepr.org/pubs/new-dps/dplist.asp?authorid=146241

Ravi Pendakur
Faculty of Social Sciences
University of Ottawa
55 Laurier Avenue E
Desmarais Building, Room 11101
Ottawa, Ontario, Canada
K1N 6N5

Email: pendakur@uottawa.ca

For further Discussion Papers by this author see:
www.cepr.org/pubs/new-dps/dplist.asp?authorid=172222

* This Paper is produced as part of the CEPR project "Temporary Migration, Integration and the role of Policies (TEMPO) funded by the NORFACE Research Programme: 'Migration in Europe - Social, Economic, Cultural and Policy Dynamics.

We wish to thank Jean-Michel Billette, of the COOL-Research Data Centre for his logistical and analytical help. We also wish to acknowledge comments from commentators at the first TEMPO NORFACE conference held at Trinity College Dublin, in October of 2010. Sadly, all the errors remain ours.

Submitted 14 December 2010

Introduction

Over the past three decades, both Canada and Sweden have liberalized citizenship acquisition regulations by reducing the required number of years of residency and recognizing dual citizenship. During the same period, both countries have witnessed changes in immigration patterns by country of birth, with an increasing number of immigrants arriving from non-western countries.

In an era where there is increasing immigration and increasing diversity, and concomitantly a policy era where countries both within and outside Europe are seeking to tighten citizenship acquisition rules, it is important to understand the socio-economic outcomes associated with naturalization.

The aim of this paper is to explore the link between citizenship and employment probabilities for immigrants in Canada and Sweden, controlling for a range of demographic, human capital, and municipal characteristics such as city and co-ethnic population size. Specifically, we examine the degree to which citizenship acquisition effects employment outcomes, controlling for place of birth, personal characteristics, and the characteristics of the city within which immigrants reside. We pay particular attention to the size of the co-immigrant population within a municipality and ask if the size of the community impacts employment opportunities.

Using instrumental variable regressions to control for the impact of citizenship acquisition, we find that age, marital status, and educational level are important determinants of obtaining employment by foreign-born men and women. For immigrants from outside the EU and North America, we find that the size of the co-immigrant population in a city often has a significant positive effect on the probability of being employed. In the same way, we find that the acquisition of citizenship makes a real difference to the probability of finding work and obtaining employment. Foreign-born men and women who acquired citizenship are far more likely to be employed than those who have not. The size of the co-ethnic population has a positive impact for many

immigrant groups—as the co-ethnic population increases, the probability of being employed also increases.

Immigration, Citizenship and Employment

Immigration and employment integration

Both Canada and Sweden have witnessed substantial change in patterns of immigrant intake and citizenship acquisition rules. Post-war immigration to Sweden came about in two waves. Prior to the early 1970s the dominant sources for intake were from Europe, and in particular Nordic countries. Labour market regulations allowed Nordic immigrants to freely enter the Swedish labour market without applying for permanent residency. In 1995 these rights were granted to citizens from EU member states. Immigration from outside Europe has also increased, but through refugee intake and family reunification. Thus, prior to 1970 intake was primarily Nordic, while in the last three decades intake has become increasingly non-European. This means that most of the European intake arrives under a labour-market bound policy and the bulk of non-European intake arrives under humanitarian policies.

As was the case for Sweden, immigration policy in the 1960s marked a profound change in Canada's immigration intake philosophy. Where previously policy had emphasized family reunification almost exclusively, new regulations introduced in 1962 also stressed skills and schooling (Pendakur, 2000). The changes allowed immigration intake to rise rapidly, but in two distinct directions— – skilled and sponsored— – which were linked over time. As well, regulations concerning regionally based (and hence discriminatory) intake, were slowly removed, creating, for the first time in Canada, an arguably "colour free" immigration strategy. As a result, the dominant source countries slowly shifted away from Europe toward Asia for the first time.

The new regulations, encouraged intake from countries where potential migrants would have access to high levels of schooling, and where extended families were the norm. This meant that the first wave of immigrants would be well highly skilled, and that there was an almost guaranteed to be a second wave of sponsored relatives who were not selected on the basis of skill requirements.

There is evidence to suggest that immigrants face barriers to both labour market entry and career progression in both Canada and Sweden. Examples of such barriers

include non-recognition of foreign credentials and experience, loss of networks, accent penalties and more general discrimination. An examination of Sweden's employment integration suggests that almost all foreign-born groups, and in particular newly arrived groups of refugees, have lower employment rates compared to natives. The general pattern is that natives have the highest employment rate, followed by Europeans and thereafter non-Europeans (Bevelander 2009). Work at Human Resources and Skills Development Canada concludes that immigrants who have been in Canada for less than 10 years are at higher risk of experiencing persistent poverty and have lower probabilities of employment than those born in Canada (HRSDC 2010). In 2005 Asians immigrants aged 25 to 54, had an employment rate of 63.8%, compared to 83.1% for their counterparts born in Canada. Latin American immigrants had an unemployment rate 2.1 times higher than their Canadian-born counterparts. African-born recent immigrants had an unemployment rate more than four times higher than that of their Canadian-born counterparts. They also had lower employment rates (Galabuzi 2009).

Citizenship in Canada and Sweden

Sweden has, perhaps, the most liberal naturalisation rules in Europe, however it is based on the *jus sanguinis* principle. Even if born in Sweden, the children of non-Swedish citizens are not automatically entitled to Swedish citizenship. Naturalisation is possible after five years, and for refugees, after four years, of residence in Sweden. Citizens from Nordic countries are exceptions to this rule and can obtain citizenship after two years of residence. In addition, the applicant has to be eighteen years of age or older and have no criminal record.[3]

Citizenship legislation has been reformed over the past forty years, with respect to naturalisation, civil and political rights of citizens and non-citizens, as well as dual citizenship. The waiting period for citizenship was shortened in 1976, and the subsistence requirement,[4] which had been relaxed during the 1950s and 1960s, abolished, as was the

[3] In this case, the applicant has a waiting period before he or she can apply for Swedish citizenship. Acquiring citizenship by notification is also possible. This is basically a simplified juridical naturalisation procedure that is mainly used by Nordic citizens. For notification, the applicant must be eighteen years of age or older, have five years of residence in Sweden, and no prison sentencing during this time.

[4] The subsistence requirement relates to persons' ability to support themselves in terms of work or other income.

language proficiency test. Despite a number of debates and proposals—most recently during the 2002 electoral campaign—about naturalisation requirements, including language proficiency, no changes to legislation or policy have been made.

The relation between residence and citizenship is also important. Most of the rights given to citizens are also granted to others residing in the country, with some exceptions such as the exclusive right to enter the country and voting rights in national elections. As well, legally speaking, it is easier to limit certain civil rights when it comes to foreigners. The citizenship requirement for several government positions has been relaxed over time and today only a few positions—including certain senior officials, judges and military personnel—are reserved for citizens.[5]

Canada's citizenship acquisition rules are based on a combination of *jus sanguinis* and *jus soli*. Thus, being born in Canada means automatically being granted citizenship, and being the offspring of a Canadian, has until recently meant having automatic citizenship.[6] The basic requirements for citizenship acquisition for those 18 years and older include 3 years of residency over a four year period, the ability to speak an official language and an understanding of citizenship rights and responsibilities (as defined by a citizenship test) (Citizenship and Immigration, 2010). Dual citizenship has been allowed since 1977. The obvious advantages of Canadian citizenship are somewhat limited. Basically, non-citizens enjoy all the rights of citizens except for access to federal public service jobs and the right to vote in federal elections.

Citizenship and employment

Although political and research interest in the topic has grown in recent years, there is no overwhelming number of studies analyzing the socio-economic impacts of the citizenship ascension of immigrants. Internationally, it was Chiswick (1978) who did the first study tracing the economic performance of immigrants to the US, including consideration of whether immigrants had become US citizens or not. Initially this study

[5] Obtaining a Swedish passport reduces barriers in certain jobs, such as those in the transport sector or cross-border service jobs.

[6] Recent changes to citizenship legislation has meant that the ability to pass on citizenship to children is somewhat restricted. People who are not born in Canada, but who acquire Canadian citizenship cannot automatically pass on citizenship if their children are born outside Canada.

finds a positive effect of naturalization on earnings. When including years since migration, however, this initial effect of citizenship acquisition becomes insignificant.

Renewed interest in the socioeconomic effects of naturalization can be observed in both North America and several European countries. Bratsberg et al. (2002), employing both cross-sectional and longitudinal data for the US, shows a positive significant effect of naturalization on the earnings growth of immigrants, controlling for differences in unobserved individual characteristics. Using cross-sectional data, DeVoretz and Pivnenko (2006, 2008) show for Canada that naturalized immigrants had higher earnings and consequently made larger contributions to the Canadian federal treasury than their non-naturalized counterparts. Similarly, Akbari (2008) used cross-sectional data for the year 2000 in the US and found that naturalized immigrants have increased treasury payments as well as a higher rate of welfare participation. In addition, tax payments exceed transfer payments for naturalized immigrants after ten years of residence in the US. Mazzolari (2007) found employment and earnings increased for naturalized Latin American immigrants to the US when their home countries passed dual citizenship laws and granted expatriates the right to naturalize in the receiving country.

For Europe, Kogan (2003) analyzed the impact of naturalization policy on former Yugoslavian immigrants to Sweden and Austria and showed a positive effect of naturalization for Austria but not for Sweden, indicating that the institutional framework around citizenship is different in the two countries, consequently impacting the effects of naturalization. Bevelander and Veenman (2006) analyzed the naturalization effect on Turkish and Moroccan immigrants to the Netherlands with cross-sectional survey data. The results of the multivariate analyses indicate that naturalization of Turks and Moroccans in the Netherlands is not positively related to cultural integration or to employment integration. In their 2008 study, Bevelander and Veenman analyze the effect of naturalization on refugee groups in the Netherlands and find naturalization to have a positive effect on the probability of obtaining employment. Moreover, this analysis indicates that so-called “naturalization classes” have no significant effect on the labour market participation of immigrants. For Norway, using longitudinal data, Hayfron (2008), shows that refugees in particular have higher earnings when naturalized relative to non-naturalized immigrants and confirms that naturalization is positively related to economic

integration. Similarly, in a study of Germany using panel data, Steinhardt (2008) finds an immediate positive naturalization effect on wages as well as an accelerated wage growth in the years after the naturalization.

Using 1990 census data for Sweden, Bevelander (2000) shows a log odds increase of obtaining employment for those naturalized compared to non-naturalized. Scott (2008), however, using longitudinal data for a number of immigrant countries, found only small "naturalization" effects on income. Moreover, Scott's study suggests that this citizenship effect is largely a selection effect and not a function of citizenship itself.

Summarizing the literature on citizenship and economic integration, and in line with Bevelander and DeVoretz (2008), studies for the US and Canada seem to support the existence of a "citizenship premium" whereas European studies show only scattered support for this hypothesis. One reason for the difference in results may be the variance in data across countres. Another may be that citizenship effects could be mixed with other selection effects, as well as issues of participation.

Ethnic Enclaves

The spatial segregation of ethnic groups is a complex question with several dimensions – cultural, social, economic, and demographic (see Van Kempen & Özüekren, 1998). Several hypotheses have been put forward to explain the spatial segregation of immigrant groups one of which is that segregation is mainly due to the socio-economic position of the individuals in the group. Another is that a combination of ethnic networks, discrimination by institutions and structural conditions create the conditions for segregation.

In the context of labour markets, cultural communities may be closely connected to labour market enclaves for three reasons (see Bonacich and Modell 1980; Wilson and Portes 1980). First, labour market enclaves may offer a degree of social comfort through language and shared identity that is not available outside the enclave. Second, ethnically defined enclaves may buffer the effects of ethnically based discrimination on the part of mainstream society. Third, Breton (1974) introduces the concept of "institutional completeness," which in part describes the variety of services available within an ethnic or cultural enclave. Enclaves that are institutionally complete offer a wide variety of

services and employment opportunities to group members. Large enclaves are more likely to be institutionally complete than small enclaves. We may then expect workers in large enclaves to earn more than workers in small enclaves because of the greater degree of choice that exists. Pendakur and Pendakur (2002) assessed the labour market impact of three types of enclaves in Canada (ethnic, linguistic, and ethno-linguistic) and concluded that the size of the ethnic enclave is important in reducing earnings differentials across minority groups.

Uni-ethnic enclaves do not exist in Sweden. National housing policies have typically discouraged high concentrations of single ethnic groups in any given area. However, some large cities like Stockholm, Gothenburg and Malmö do have concentrations of immigrants in particular residential areas (for example Rosengarden in Malmo). . More specific studies on urban residential segregation show that both the socio-economic composition of the neighborhood population, and wider "city" effects, the urban context, affect the labour market careers of immigrants (Hedberg & Tammaru 2010). With the use of longitudinal data they observe an over time waning effect of the "neighborhood" while the wider "city" labour market was important during the whole period. In other words, living in a distressed neighborhood is less important for labour market careers relative to how a city as a whole performs. Our goal is to understand the nature of these concentrations on employment outcomes. Specifically, does the presence of a large co-immigrant population in a given city help employment outcomes?

Data, method and model

Our data are drawn from the 2006 Canadian Census and the 2006 Swedish register through STATIV, the statistical integration database held by Statistics Sweden. These data contain information for every legal resident, including age, sex, marital status, children in the household, educational level, employment status, country of birth, years since migration,[7] and citizenship status. We sample people age 25-64 because we want to concentrate on people who have finished their studies and are likely to be active in the labour-force.

[7] Since Statistics Sweden has no individual information on year of immigration before 1968, we exclude immigrants arriving before that date from the analysis.

For Sweden, we limit our sample to people who are likely to be active in the labour-force. This is true for all Nordic and EU-25 immigrants on entry. However, nearly all non-Nordic/non-EU immigrants spend the first few years of residence in settlement training courses and therefore have limited possibilities to acquire gainful employment.[8] For this reason, we only include non-Nordic/non-EU immigrants who have been resident in Sweden for at least two years. In Canada however, we do not use this selection.

Our study has two main goals. First we wish to understand how citizenship acquisition may be a factor in attaining employment. Second we wish to understand the degree to which the presence of an ethnic enclave may contribute to patterns of employment across different immigrant groups. However, citizenship acquisition is heavily correlated with other variables related to general integration and employment such as time in the country, development of networks etc. In order to measure the 'clean' effect of citizenship we run instrumental variable regressions in which we define citizenship to be a product of whether or not an immigrant is eligible to acquire citizenship.[9] Using this definition, we run IV regressions on the entire immigrant population to measure the impact of citizenship acquisition and the size of the immigrant population. We then run IV regressions for each of 11 places of birth. This is equivalent to a model in which all variables are interacted with country of birth. Within these regressions, we include a variable that identifies the number of people in the municipality who share place of birth with the respondent. In this way we can see the impact of the size of the ethnic enclave in a given city on the employment prospects of co-ethnic members.

We understand both citizenship acquisition and working to be a form of participation in the larger society. Within this context, the impact of citizenship may be interpreted two ways: Citizenship acquisition may be a sign of commitment, in that immigrants who acquire citizenship may be signalling their intentions to remain and participate in the host society; and, within the context of employment, citizenship

---

[8] This is largely true for immigrants from North America as well, and we therefore treat these immigrants as eligible for employment on entry.

[9] We also test models in which the instrument for citizenship is both being eligible and the number of years since eligibility as well as one in which the instrument is eligibility, the number of years since eligible and the number of years since eligible squared. These models yield similar results. Results using these instruments can be found in Appendix tables 2 and 3.

acquisition may act as a signal to employers that the prospective employee is committed to remaining and is thus a better "risk." We instrument citizenship because we believe that citizenship acquisition is wrapped up with a host of other participatory factors, including whether or not a person is employed. If this is the case, people who get a job are also likely to become citizens. In order to remove the bias caused by both actions being forms of participation, we use citizenship acquisition rules and the years since first eligibility for citizenship as an instrument for citizenship. The rules for Sweden are as follows:

1. Immigrants from Nordic countries who have lived in Sweden for two or more years are eligible for citizenship. For Nordic immigrants, the number of years in Sweden after two years of residence is assumed to be the number of years he or she has been eligible for citizenship.

2. Immigrants from other countries are eligible to apply for citizenship after five years. The number of years after this is considered to be the number of years he or she has been eligible for citizenship.

For Canada immigrants must be resident in Canada for a period of 3 years, over a 4-year period.[10] We operationalize these rules separately for Canada and Sweden. For Canada, we define eligibility for citizenship as having been in Canada for more than four years. For Sweden eligibility is defined separately by place of birth and intake class. By "instrumenting" citizenship in this way, we interpret the coefficient for citizenship as the "clean" effect of citizenship on employment possibilities (without the impact of participation that is correlated with getting a job).

We include fourteen variable types in our models. Contextual variables, drawn from the registry, include the log of the city population, the log of the immigrant population, and the local unemployment rate for the city labour market area. In order to define the size of the enclave population, we aggregated immigrant place of birth data

[10] Candidates for citizenship can only apply after four years of residency. If an immigrant was in Canada prior to receiving landed status, each day before permanent residency counts as half a day. Time spent serving a sentence for an offence in Canada (e.g. prison, penitentiary, jail, reformatory, conditional sentence, probation and/or parole) is generally not counted (Citizenship and Immigration Canada 2010).

from the Swedish registry to a municipal level and then merged this new dataset with our individual level dataset.

Demographic variables include age (four dummy variables), marital status (four dummy variables), presence of children in the household (four dummy variables), and a dummy variable indicating whether the spouse is Swedish.

Socio-economic variables include schooling (five dummy variables) and schooling interacted with whether the last level of schooling was outside Sweden (for a total of ten dummy variables). For regressions with all immigrants, we include country of origin (nine dummy variables), years since immigrating, and citizenship.[11]

Results

Descriptives

Table 1 provides information on the percent of men and women who are employed by country of birth and citizenship status. The most important thing to note in this table is the substantial variance in employment probabilities across groups and citizenship. In general it appears that the impact of citizenship on employment is lower in Canada than in Sweden, however there are differences by place of birth.

Looking first at citizens, we see that amongst female immigrants in Sweden, the employment rate ranges from a high of 72 percent for women from East Asia, the USA Australia and New Zealand to a low of 48 percent for women from the Middle East. For women who are not Swedish citizens, the employment rates are considerably lower for most groups compared to their co-ethnics who are citizens. Among men with citizenship, over 70 percent of those from the Nordic countries, East Asia, and the Americas are employed. Around 70 percent of immigrant citizens from the EU and the rest of Europe as well men from South Asia are employed. However, for other groups, that proportion drops to about 60 percent. As was the case for women, men who are citizens are more likely to be employed than their co-ethnic non-citizens.

Looking at Canada, we see a similar pattern. Women with citizenship from the USA, Australia and New Zealand, Latin America and East Asia enjoy the highest employment rates (over 70%). As was seen in Sweden, their non-citizen counterparts

[11] We use the EU 25 definition for our EU (non-Nordic category).

generally have lower employment rates (with the exception of women from Scandinavia and Germany). Male immigrants who are citizens from all regions except Scandinavia and Germany have employment rates in excess of 80%. Non-citizens tend to have lower employment rates. However immigrants from Scandinavia and Germany have higher employment rates than their co-ethnics with citizenship. [12]

Our examination of some fairly basic descriptives suggests that citizenship acquisition is correlated with higher employment integration in both the Canadian and Swedish labour market. However, citizenship is correlated with a number of attributes that are also correlated with employment probabilities, including, time in the country. Our question is whether citizenship still has this impact when controlling for other variables and whether the size of the enclave acts to increase the employment rate.

Regressions

OLS Regression Results:

Table 2 shows results from four instrumental variable (IV) regressions (2 for each country, split by sex) where the dependent variable is whether the respondent is employed.[13] In this analysis we instrument citizenship to be a product of whether or not an person is eligible for citizenship acquisition. This allows us to examine the degree to which effects attributed to socio-economic characteristics are actually a product of citizenship acquisition. The last two columns of table 2 show the results of a *t* test that measures the degree to which the coefficients for Canada and Sweden are significantly different from each other.[14]

Looking first at Sweden we see that the impact of the contextual (city characteristics) variables all have significant and fairly strong effects. For men and women the coefficient for city size is -0.03, which means that for every unit increase in

[12] The higher employment rate for German and Scandinavian non-citizens could be a generational effect. The bulk of Scandinavian and German immigrants with citizenship in Canada are likely to be older and therefore less likely to be active in the labour force.

[13] OLS results for the same type of regression can be found in Appendix table 4.

[14] We determine if there is a significant difference between the two variables by calculating the *t* value for independent samples:

$$t = \frac{coef_{Canada} - coef_{Netherlands}}{\sqrt{SE^2_{Canada} + SE^2_{Netherlands}}}$$

a *t* value greater than 1.96 is taken as significant

the log of city size (which varies from about 1 to 16) employment decreases by -0.03. However this effect is largely negated by the impact of the size of the immigrant population. As is to be expected, having a high employment benefits employment probabilities for immigrants.

Higher employment is also associated with demographic characteristics. Generally, being age, 25-34, being married, having higher levels of schooling and having kids are all associated with higher employment probabilities. The effect of obtaining schooling from outside Sweden is relatively small, but significant.

The coefficients for our "clean" version of citizenship are 0.43 for women and 0.26 for men, suggesting that citizenship has a very strong impact on the probability of getting a job. Further, there are important differences that become evident by considering place of birth. As compared to women from Scandinavia, the coefficient for women born in Germany is -0.04 and for women from the rest of the EU is -0.29. For women from the Middle East, the coefficient is -0.46. Among men, the impact of instrumenting citizenship is strong but not quite as stark. The coefficient for men from the Middle East is -0.27.

In Canada the effect of our control variables on being employed is generally smaller than is the case for Sweden. Looking at contextual variables, it appears that the negative impact of city size is smaller in Canada (-0.01) than is the case in Sweden. However the positive impact of the size of the immigrant population is about the same, which suggests that in Canada at least, a large immigrant population can undo the negative impact of a large population. The effect of naturalization is about 1/3 of that seen in Sweden (0.10 for men and 0.13 for women). Place of birth effects are generally small, with the exception of the Middle East, which is associated with a fairly strong negative effect (-0.17 for women and -0.10 for males).

Looking at differences across countries we see that for women, the impact of socio-economic factors are generally not significantly different from each other – in other words, it appears that the impact of age, marital status and schooling are about the same in both Sweden and Canada. However the effect of place of birth and naturalization are significantly different with the impact being generally smaller in Canada than in Sweden. For males almost all the effects are significantly different from each other suggesting that

for males, at least, there are real differences in the way in which socio-economic and ethnic markers play in the labour force across the two countries.

Differences by country of birth:

Table 2 provides a bird's eye view of the impact different characteristics have on the probability of employment. This table allow us to understand the average degree to which the probability of employment differs across immigrant groups. However, it does not allow for the possibility that payoffs for different characteristics are different across immigrant groups. Results from Table 2, for example, do not allow us to see if Nordic women have a very different payoff to schooling as compared to women from the Middle East. Further, results at this level do not allow us to measure the impact of the co-ethnic population because all immigrant groups are rolled into the "log of immigrant population" variable. Table 3 resolves this situation by providing selected coefficients from a total of 44 separate regressions—a separate regression for each place of birth by gender by country group. The dependent variable remains employment status and independent variables include all the variables from Table 2. Thus we allow each of the coefficients to vary independently for each place of birth group (equivalent to results from Table 2, but where each characteristic is interacted with place of birth).

Regression results shown in Table 3 include one additional independent variable. For each respondent we have added the log of the number of immigrants from the same group who live in their city. Thus, for example, in the case of a Nordic immigrant from Malmo, "the Log of immigrant population" variable corresponds to the log of the number of Nordic immigrants living in Malmo.

As discussed, we include 3 variables that describe the size of the city – log of city size, log immigrant population and log of the coethnic population. As can be seen, as city size increases, the probability of employment decreases. As the size of the immigrant population increases, employment probabilities also often decrease – this is the case for Nordic men and women, German females, North American immigrants, immigrants from the Middle East, Africa, South Asian females and Chinese men. However, this negative effect is generally countered by a positive effect from the size of the coethnic population. In most cases, as the size of the coethnic population increases,

the probability of employment also increases. Citizenship acquisition has a strong positive effect f or all groups with the exception of Scandinavian immigrants.

Looking at Canada, we see similar, but smaller effects. The effect of naturalization is positive for all countries, but is smaller than is the case for Sweden. The impact of city size, immigrant population and coethnic population is very mixed. For immigrants from Germany, as city size increases, employment probability decreases, however as the immigrant population increases, employment increases for males (but not females). The impact of the coethnic population is null for females and negative for males. For Chinese immigrants in Canada, the naturalization effect is relatively large (0.12 for women and 0.14 for men). However as compared to most immigrant groups, as city size increases, employment probabilities also increase. The size of the coethnic population has a positive impact for women, but not for men.

An examination of the last two columns provides an understanding of the degree to which the effect of place of birth on employment differs between Canada and Sweden. As was seen in Table 2, there are more significant differences for men than for women. For women, the impact of naturalization is significantly higher for women from the Middle East, South Asia and from East Asia (outside China and Hong Kong). For women from Africa, the size of the coethnic population has a positive impact in Canada and a negative impact in Sweden (a difference that is statistically significant). As is to be expected the effect of being Scandinavian is statistically different in Canada and Sweden. In Sweden, attaining citizenship has a strong negative effect employment for immigrants from other Scandinavian countries. In Canada the effect is positive.

Amongst men, German and North American immigrants face about the same effects in both Canada and Sweden. However, immigrants from the Middle East, South Asia and Europe face effects that are significantly different in Canada and Sweden, with the impact generally being lower in Canada.

Conclusion

The latter half of the twentieth century saw a liberalization in immigrant intake and citizenship acquisition regulations in many immigrant receiving countries. More recently, countries such as Denmark, the Netherlands, the UK, and the USA have

tightened up citizenship acquisition rules and immigrant intake regulations and have witnessed declines in the employment probabilities for immigrants.[15] In contrast, Sweden has continued to liberalize citizenship acquisition regulations, most recently recognizing dual citizenship (2001), while at the same time seeing declining employment prospects for immigrants. Canada has a longstanding history of fairly liberal citizenship regulations, demanding a relatively short period of residency before citizenship acquisition is possible and recognizing dual citizenship.

Several scholars have argued that there is a link between citizenship acquisition and employment status (i.e., Devoretz and Pivenko [2008] in regards to Canada; Akbari [2008] in studies of the US; and Steinhardt [2008] and Hayfron [2008] in European studies). These studies, however, are hampered by their inability to distinguish the effect of citizenship from the effect of integration processes (i.e., they cannot say whether the measured impact is a product of citizenship or some correlate of citizenship such as better integration).

In this paper, we used instrumental variable regression to examine the "clean" impact of citizenship acquisition and the size of the co-immigrant population on the probability of being employed in Canada and Sweden. In contrast to Scott (2008), with the exception of Scandinavian immigrants in Sweden we find that citizenship acquisition has a positive impact for all immigrant groups. This is particularly the case for non-EU/non-North American immigrants in Sweden and European, Latin American and African and Chinese immigrants in Canada. The size of the co-ethnic population has a positive impact for many immigrant groups—as the co-ethnic population increases, the probability of being employed also increases. It appears to be particularly important for immigrants from Asia and Africa in Sweden and South Asia and Africa in Canada. For these immigrants, the co-immigrant population may serve as an employer of last resort, buffering the impact of possible discrimination by the majority population. It could also be an indicator of a lack of linguistic integration, which effectively locks immigrants out of the majority labour force (see, for example, Pendakur and Pendakur 2002).

[15] The Canadian government, under Stephen Harper tightened up citizenship acquisition rules in 2009. These rules relate to passing on Canadian citizenship to children for parents who are born outside Canada.

So, in a country where the barriers to non-citizens are relatively few (i.e., non-citizens have access to most of the jobs and most of the rights of citizens, both social and legal), why might citizenship help in employment prospects? Spence (1973) argues that observable characteristics act as signals to employers about the potential risk of hiring new employees. Within this context, citizenship may act as a signal to employers about an immigrant's commitment to remaining in the host country. Hiring a citizen thus reduces transaction and risk costs to employers because they can be more certain that the new employee will remain in the position.

Looking at citizenship and employment from a policy perspective, what are the implications of tightening up citizenship acquisition requirements? Our contention is that given citizenship's apparent link to improved employment prospects, tightening up citizenship regulations may result in decreased employment opportunities for immigrants in receiving countries. This means, in turn, that stricter citizenship regulations could have the effect of actually increasing social welfare costs—an effect neither intended nor desirable.

References

Akbari, A. H. 2008. Immigrant naturalization and its impacts on immigrant labour market performance and treasury. In *The economics of citizenship,* ed. Pieter Bevelander and Don J. DeVoretz. MIM/Malmö University. Malmö: Holmbergs.

Bevelander, P. 2000. *Immigrant employment integration and structural change in Sweden, 1970–1995.* Sweden: Almqvist & Wiksell International. [AUTHOR: provide city of publication instead of country, if available.]

———. 2009. The immigration and integration experience: The case of Sweden. In *Immigration worldwide*, ed. Uma A. Segal, Nazneen S. Mayadas, and Doreen Elliott. Oxford: Oxford University Press.

Bevelander, P. and D. DeVoretz, eds. 2008. *The economics of citizenship.* MIM/Malmö University. Malmö: Holmbergs.

Bevelander, P. and J. Veenman. 2006. Naturalization and immigrants' employment integration in the Netherlands. *Journal of International Migration and Integration* 7(3).

———. 2008. Naturalisation and socioeconomic integration: The case of the Netherlands. RIIM and IZA discussion paper. In *The economics of citizenship,* ed. Pieter Bevelander and Don J. DeVoretz. MIM/Malmö University. Malmö: Holmbergs.

Bonacich, E. and J. Model. 1980. *The economic basic of ethnic solidarity*. Berkeley: University of California Press.

Bratsberg, B., J. F. Ragan and Z. M. Nasir. 2002. The effect of naturalization on wage growth: A panel study of young male immigrants. *Journal of Labor Economics* 20: 568-97.

Breton, R. 1974. Ethnic stratification viewed from three theoretical perspectives. In *Social stratification: Canada,* 2nd edition, ed. J. E. Curtis and W. Scott. Toronto: Prentice-Hall.

Castles, S. and M. J. Miller. 2003. *The age of migration: International population movements in the modern world.* 3rd edition. Basingstoke: Palgrave.

Chiswick, B. 1978. The effect of Americanization on the earnings of foreign-born men. *The Journal of Political Economy* 86: 897-921.

DeVoretz, D. J. and S. Pivnenko. 2006. The economic causes and consequences of Canadian citizenship. *Journal of International Migration and Integration* 6: 435-68.

———. 2008. The economic determinants and consequences of Canadian citizenship ascension. In *The economics of citizenship,* ed. Pieter Bevelander and Don J. DeVoretz. MIM/Malmö University. Malmö: Holmbergs.

Galabuzi, GE. 2009. “The Just Society: Addressing Discrimination in Employment. » NCVM 10th Anniversary Symposium & National General Meeting. September 08 – 10, 2009

Hayfron J. E. 2008. The economics of Norwegian citizenship. In *The economics of citizenship*, ed. Pieter Bevelander and Don J. DeVoretz. MIM/Malmö University. Malmö: Holmbergs.

Hedberg, C. & Tammaru, T. (2010): ”Neighborhood effects and City effects: Immigrants’ transition to employment in Swedish large city-regions” SULCIS Working paper 2010:6, Stockholm.

HRSDC. 2010. http://www4.hrsdc.gc.ca/.3ndic.1t.4r@-eng.jsp?iid=13.

Kogan, I. 2003. Ex-Yugoslavs in the Austrian and Swedish labor markets: The significance of period of migration and the effect of citizenship acquisition. *Journal of Ethnic and Migration Studies* 29: 595-622.

Light, I. 1997. Immigrant and ethnic enterprise in North America. *Ethnic and Racial Studies* 7: 195-216.

Lundh, C. and R. Ohlsson. 1999. *Från arbetskraftimport till flyktinginvandring.* Andra reviderade upplagan. Stockholm: SNS Förlag.

Mazzolari, F. 2007. Dual citizenship rights: Do they make more and better citizens? IZA Discussion Paper No. 3008, Institute for the Study of Labor, Bonn.

Ohlsson, R. 1975. Invandrarna på arbetsmarknaden. Lund: Ekonomisk-historiska föreningen.

Pendakur, K. and R. Pendakur. 2002. Language knowledge as human capital and ethnicity. *International Migration Review* 36(1): 147-77.

Scott, K. 2008. The economics of citizenship: Is there a naturalization effect? In *The economics of citizenship*, ed. Pieter Bevelander and Don J. DeVoretz. MIM/Malmö University. Malmö: Holmbergs.

Spence, M. 1973. Job market signalling. *The Quarterly Journal of Economics* 87(3): 355-74.

Steinhardt, M. F. 2008. Does citizenship matter? The economic impact of naturalizations in Germany. Centro Studi Luca D’Agliano Development Studies Working Paper No. 266. Centro Studi Luca D’Agliano, Milan/Torino.

Van Kempen, R., & Sule Özükren, A., (1998). ”Ethnic Segregation in Cities: New Forms and Explanations in a Dynamic World”, *Urban Studies*, Vol. 35, No. 10.

Wadensjö, E. 1973. *Immigration och samhällsekonomi.* Lund.

Wilson, K. and A. Portes. 1980. Immigrant enclaves: An analysis of the labor market experiences of Cubans in Miami. *American Journal of Sociology* 86: 295-319.

Table 1
Citizenship and % employed for immigrants by place of birth for Canada and Sweden 2006

		canada				sweden			
		citizen		noncit		citizen		noncit	
sex	Country of birth	total	% employed	total	% employed	total	% employed	total	% employed
females	Total	1 598 480	68%	7 272 125	71%	245 474	62%	137 555	45%
	Scandinavia	8 940	64%	3 730	66%	43 309	71%	37 695	68%
	Germany	35 215	64%	17 025	71%	3 682	69%	5 967	59%
	rest of EU27	423 065	67%	113 335	65%	30 782	67%	22 408	51%
	OtherEur	77 235	71%	23 225	58%	49 748	62%	15 981	37%
	USAAustNZ	50 800	73%	62 315	68%	4 792	72%	5 014	44%
	Africa	91 095	69%	42 125	49%	15 383	59%	8 454	21%
	Latincarib	223 125	72%	70 225	57%	15 307	68%	5 759	44%
	MiddleEast	73 340	57%	25 900	38%	53 810	48%	14 715	13%
	S Asia	163 450	63%	95 335	47%	11 822	61%	8 705	25%
	China/HK	189 370	67%	65 620	52%	2 252	68%	2 479	27%
	E Asia	241 815	72%	96 790	61%	14 587	72%	10 378	39%
males	Total	1 498 910	82%	7 010 640	81%	222 283	68%	141 303	49%
	Scandinavia	8 635	77%	3 190	83%	33 475	74%	30 018	60%
	Germany	34 630	76%	14 695	85%	3 875	72%	6 810	66%
	rest of EU27	423 660	81%	113 935	81%	22 954	68%	29 642	63%
	OtherEur	73 795	84%	19 830	79%	43 734	71%	14 324	47%
	USAAustNZ	42 955	84%	45 885	83%	4 922	75%	7 041	54%
	Africa	98 920	83%	48 210	69%	18 104	64%	12 149	32%
	Latincarib	180 830	84%	66 235	77%	13 331	73%	6 242	57%
	MiddleEast	85 345	80%	28 210	68%	64 687	61%	20 496	26%
	S Asia	177 580	85%	88 380	79%	10 658	68%	10 847	31%
	China/HK	163 820	81%	56 990	66%	1 288	74%	2 011	31%
	E Asia	189 335	82%	57 440	73%	5 255	73%	1 723	44%

Table 2: IV regression results on full employment for immigrants, Sweden and Canada 2006

Variable		Sweden				Canada					
		female		male		female		male		T test of dif. Bet. 2 countries	
		coef.	SE	coef.	SE	coef.	SE	coef.	SE	females	males
	Observations	336 689		314 050		362 260		322 820			
	R2	0,05		0,09		0,10		0,06			
	Prob>0	0,00		0,00		0,00		0,00			
	Log of city pop	-0,03	0,00	-0,03	0,00	-0,01	0,00	0,01	0,00		**
	Log of immigrant pop	0,02	0,00	0,02	0,00	0,02	0,00	-0,01	0,00		**
	City employment rate	0,94	0,04	1,36	0,04	1,44	0,05	0,82	0,02		**
Age (25-34)	age 35-44	0,04	0,00	-0,03	0,00	0,05	0,00	-0,02	0,00		**
	age 45-54	-0,01	0,00	-0,10	0,00	0,06	0,00	-0,04	0,00		**
	age 55-64	-0,16	0,00	-0,24	0,00	-0,16	0,00	-0,19	0,00		**
Marital status	Married	0,02	0,00	0,08	0,00	-0,04	0,00	0,10	0,00		**
(single)	Divorced/separated	-0,04	0,00	0,00	0,00	0,01	0,00	0,08	0,00	**	**
	Widowed	-0,06	0,01	-0,03	0,01	-0,05	0,01	0,02	0,01		**
Children (non)	One child	0,04	0,00	0,10	0,00	0,00	0,00	0,02	0,00	**	**
	Two children	0,03	0,00	0,12	0,00	-0,01	0,00	0,04	0,00	**	**
	three + children	-0,06	0,00	0,06	0,00	-0,07	0,00	0,02	0,00		**
Schooling	Highchool	0,18	0,01	0,14	0,01	0,14	0,01	0,02	0,01		**
(less than hs)	Vocational	0,33	0,01	0,24	0,01	0,17	0,01	0,06	0,01		**
	Lower university	0,16	0,01	0,13	0,01	0,21	0,01	0,06	0,01		**
	Upper university	0,35	0,01	0,26	0,01	0,23	0,01	0,09	0,01		**
	Schooled outside host country	0,04	0,01	0,09	0,01	-0,04	0,01	-0,02	0,01	**	**
	Highchool	-0,01	0,01	-0,04	0,01	-0,02	0,01	0,02	0,01		**
	Vocational	-0,03	0,01	-0,05	0,01	-0,01	0,01	0,01	0,01		**
	Lower university	0,02	0,01	-0,02	0,01	-0,02	0,01	0,02	0,01		**
	Upper university	-0,04	0,01	-0,05	0,01	-0,01	0,01	0,00	0,01	**	**
Place of birth	Germany	-0,04	0,01	0,02	0,01	-0,01	0,01	-0,02	0,01	**	**
(Scandinavia)	Other EU 27	-0,19	0,00	-0,05	0,00	-0,01	0,01	-0,02	0,01	**	**
	Other Europe	-0,29	0,01	-0,14	0,01	-0,03	0,01	-0,04	0,01	**	**
	USA Aust NZ	-0,19	0,01	-0,08	0,01	0,03	0,01	0,02	0,01	**	**
	Latin Amer Caribbean	-0,23	0,01	-0,08	0,01	-0,02	0,01	-0,04	0,01	**	**
	Africa	-0,32	0,01	-0,21	0,01	-0,07	0,01	-0,07	0,01	**	**
	Middle East	-0,46	0,01	-0,27	0,01	-0,17	0,01	-0,10	0,01		**
	S. Asia	-0,31	0,01	-0,19	0,01	-0,08	0,01	-0,05	0,01	**	**
	China	-0,28	0,01	-0,19	0,01	-0,07	0,01	-0,10	0,01	**	**
	E. Asia	-0,17	0,01	-0,13	0,01	-0,03	0,01	-0,07	0,01	**	**
	Years since migrating	0,01	0,00	0,01	0,00	0,01	0,00	0,00	0,00		**
	Yrs since mig squared	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00		
	Naturalized	0,43	0,01	0,26	0,01	0,13	0,01	0,10	0,01	**	**

Table 3: Results from 11 IV regressions on employment, Sweden and Canada, 2006

		Sweden				Canada				T test of dif. Bet. 2 countries	
		female		male		female		male			
pob	variable	coef.	SE	coef.	SE	coef.	SE	coef.	SE	females	males
Nordic	Observations	79 277		60 494		2 025		1 825			
	R2	0,00		0,00		0,07		0,00			
	Prob>0	0,00		0,00		0,00		0,00			
	Log of city pop	0,04	0,02	0,04	0,01	0,00	0,03	-0,03	0,03	**	**
	Log of immigrant pop	-0,07	0,02	-0,05	0,01	0,00	0,02	0,04	0,02	**	**
	City employment rate	1,39	0,22	1,63	0,15	0,23	0,46	0,52	0,23	**	**
	Yrs since migrating	0,05	0,01	0,04	0,00	0,00	0,01	-0,01	0,01	**	**
	Yrs since mig. Squared	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00		**
	Naturalized	-2,90	0,40	-1,65	0,25	0,17	0,24	0,56	0,38	**	**
	log co-immig pop	0,00	0,00	0,02	0,00	-0,01	0,02	-0,02	0,02		**
Germany	Observations	8 827		9 397		7 485		6 885			
	R2	0,00		0,00		0,00		0,09			
	Prob>0	0,00		0,00		0,00		0,00			
	Log of city pop	0,01	0,03	-0,04	0,02	-0,02	0,02	-0,01	0,01		
	Log of immigrant pop	-0,02	0,03	0,03	0,02	0,02	0,01	0,02	0,01		
	City employment rate	0,64	0,48	1,14	0,23	1,16	0,29	0,85	0,10		
	Yrs since migrating	-0,04	0,03	0,00	0,01	-0,01	0,01	-0,01	0,00		
	Yrs since mig. Squared	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00		
	Naturalized	2,72	1,23	0,74	0,27	0,57	0,23	0,23	0,12		
	log co-immig pop	0,01	0,03	-0,01	0,01	0,00	0,01	-0,01	0,01		
Rest of EU	Observations	49 384		46 298		88 455		86 615			
	R2	0,00		0,00		0,11		0,07			
	Prob>0	0,00		0,00		0,00		0,00			
	Log of city pop	0,00	0,01	0,08	0,02	-0,01	0,00	0,01	0,00		**
	Log of immigrant pop	0,01	0,01	0,01	0,02	0,02	0,00	0,01	0,00		
	City employment rate	0,99	0,11	1,40	0,19	1,13	0,09	0,74	0,03		**
	Yrs since migrating	-0,01	0,00	-0,05	0,01	0,00	0,00	0,00	0,00	**	**
	Yrs since mig. Squared	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	**	**
	Naturalized	0,63	0,05	1,66	0,36	0,17	0,02	0,16	0,01	**	**
	log co-immig pop	-0,02	0,01	-0,09	0,02	-0,02	0,00	-0,02	0,00		**
Rest of Europe	Observations	57 777		51 963		17 055		15 245			
	R2	0,09		0,14		0,10		0,08			
	Prob>0	0,00		0,00		0,00		0,00			
	Log of city pop	-0,01	0,01	0,00	0,01	-0,02	0,01	0,00	0,01		
	Log of immigrant pop	-0,01	0,01	-0,02	0,01	0,01	0,01	0,00	0,01		
	City employment rate	0,52	0,08	0,98	0,07	1,42	0,22	0,74	0,09		**
	Yrs since migrating	0,00	0,00	0,00	0,00	0,01	0,00	0,01	0,00		**
	Yrs since mig. Squared	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00		**
	Naturalized	0,44	0,02	0,20	0,02	0,18	0,02	0,08	0,02		**
	log co-immig pop	0,01	0,00	0,01	0,00	0,01	0,01	0,00	0,01		
N. America	Observations	7 739		9 218		17 805		12 665			
	R2	0,10		0,12		0,07		0,07			
	Prob>0	0,00		0,00		0,00		0,00			

	Log of city pop	0,00	0,02	-0,01	0,02	0,00	0,01	-0,01	0,01		
	Log of immigrant pop	-0,01	0,02	0,00	0,01	0,00	0,01	0,01	0,01		
	City employment rate	0,61	0,27	1,11	0,26	0,69	0,11	0,67	0,06		
	Yrs since migrating	0,02	0,00	0,01	0,00	0,01	0,00	0,00	0,00		**
	Yrs since mig. Squared	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00		
	Naturalized	0,29	0,09	0,10	0,08	0,09	0,07	0,08	0,05		
	log co-immig pop	0,01	0,00	0,01	0,00	0,00	0,01	0,00	0,01	**	
Latin America	Observations	18 723		17 713		46 120		35 970			
	R2	0,00		0,02		0,08		0,05			
	Prob>0	0,00		0,00		0,00		0,00			
	Log of city pop	-0,01	0,01	-0,03	0,01	-0,03	0,01	0,00	0,01		**
	Log of immigrant pop	0,00	0,01	0,02	0,01	0,05	0,01	0,02	0,01		
	City employment rate	0,94	0,19	1,19	0,18	2,02	0,17	0,87	0,06		
	Yrs since migrating	0,00	0,00	0,00	0,00	0,01	0,00	0,00	0,00		
	Yrs since mig. Squared	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00		
	Naturalized	0,50	0,07	0,34	0,10	0,17	0,02	0,12	0,02		**
	log co-immig pop	0,02	0,00	0,01	0,00	-0,01	0,00	-0,01	0,00	**	**
Middle East	Observations	60 881		74 243		16 755		17 400			
	R2	0,18		0,11		0,14		0,07			
	Prob>0	0,00		0,00		0,00		0,00			
	Log of city pop	0,02	0,01	-0,02	0,01	-0,06	0,01	0,01	0,01		**
	Log of immigrant pop	-0,04	0,01	-0,01	0,01	0,07	0,01	0,00	0,01		
	City employment rate	0,93	0,11	1,39	0,10	1,43	0,27	0,80	0,09		**
	Yrs since migrating	0,04	0,00	0,02	0,00	0,02	0,00	0,01	0,00		**
	Yrs since mig. Squared	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00		**
	Naturalized	0,14	0,02	0,11	0,02	0,03	0,02	0,07	0,02	**	
	log co-immig pop	0,02	0,00	0,02	0,00	-0,02	0,01	-0,01	0,01		**
Africa	Observations	18 260		23 271		20 865		19 985			
	R2	0,10		0,10		0,14		0,08			
	Prob>0	0,00		0,00		0,00		0,00			
	Log of city pop	0,04	0,01	0,02	0,01	-0,04	0,01	-0,01	0,01		
	Log of immigrant pop	-0,07	0,01	-0,04	0,01	0,05	0,01	0,03	0,01	**	**
	City employment rate	0,93	0,22	1,10	0,20	1,72	0,23	0,73	0,07		
	Yrs since migrating	0,01	0,00	0,01	0,00	0,01	0,00	0,01	0,00		
	Yrs since mig. Squared	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00		
	Naturalized	0,33	0,05	0,14	0,07	0,13	0,02	0,11	0,02		
	log co-immig pop	0,03	0,00	0,02	0,00	-0,02	0,01	-0,03	0,01	**	**
S. Asia	Observations	15 426		14 578		45 480		44 720			
	R2	0,08		0,08		0,12		0,07			
	Prob>0	0,00		0,00		0,00		0,00			
	Log of city pop	0,02	0,01	-0,03	0,01	-0,03	0,01	0,01	0,01		**
	Log of immigrant pop	-0,03	0,01	0,00	0,01	-0,01	0,01	-0,01	0,01		
	City employment rate	1,50	0,19	1,13	0,20	2,97	0,24	0,82	0,06		
	Yrs since migrating	0,01	0,00	0,00	0,01	0,02	0,00	0,01	0,00		
	Yrs since mig. Squared	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00		**
	Naturalized	0,38	0,07	0,33	0,07	0,03	0,02	0,03	0,01	**	**
	log co-immig pop	0,02	0,00	0,02	0,00	0,04	0,00	0,00	0,00		**
China	Observations	3 330		2 069		43 365		37 450			
	R2	0,11		0,14		0,10		0,08			
	Prob>0	0,00		0,00		0,00		0,00			
	Log of city pop	-0,05	0,02	-0,04	0,03	0,02	0,01	0,04	0,01	**	**

	Log of immigrant pop	0,03	0,03	-0,01	0,03	0,00	0,01	-0,04	0,01		
	City employment rate	1,90	0,43	0,43	0,64	1,24	0,18	0,72	0,07		
	Yrs since migrating	0,02	0,01	-0,01	0,01	0,01	0,00	0,01	0,00		
	Yrs since mig. Squared	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00		
	Naturalized	0,27	0,14	0,60	0,20	0,12	0,02	0,14	0,02		**
	log co-immig pop	0,01	0,02	0,03	0,02	-0,01	0,00	0,00	0,00		
Rest of E. Asia	Observations	19 391		6 078		51 935		39 715			
	R2	0,00		0,08		0,06		0,05			
	Prob>0	0,00		0,00		0,00		0,00			
	Log of city pop	0,00	0,01	-0,07	0,02	0,04	0,01	0,04	0,01		**
	Log of immigrant pop	0,03	0,01	0,06	0,02	-0,01	0,01	-0,02	0,01	**	**
	City employment rate	1,41	0,16	1,59	0,25	1,74	0,17	0,75	0,06		**
	Yrs since migrating	-0,01	0,00	0,00	0,01	0,02	0,00	0,01	0,00		
	Yrs since mig. Squared	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00		
	Naturalized	0,44	0,06	0,16	0,16	0,02	0,02	0,02	0,02	**	
	log co-immig pop	-0,03	0,01	0,00	0,02	-0,01	0,01	-0,01	0,00		

Appendix table 1: test of instrument

Sum of T		Sweden				Canada			
		Model 1		Model 2		Model 1		Model 2	
Place of Birth	instrument	female	male	female	male	female	male	female	male
all	eligcit	116,5	89,58	109,1	93,2	217,8	205,2	133,2	123,1
	yrsint			10,35	36,45			-48,36	-44,88
Nordic	eligcit	-8,08	-8,74	-3,65	-3,61	5,17	2,84	3,27	1,74
	yrsint			4,09	4,81			-1,01	-0,81
Germany	eligcit	2,4	5,17	3,44	6,08	5,91	7,66	1,44	4,7
	yrsint			3,02	2,58			-4,56	-1,16
Rest of EU	eligcit	26,16	5,41	24,73	13,03	84,07	77,45	46,6	43,96
	yrsint			2,58	20,83			-15,45	-14,47
Rest of Europe	eligcit	54,07	47,23	55,36	47,73	62,23	61,36	33,92	31,76
	yrsint			17,65	15,48			-18,68	-17,68
N. America	eligcit	11,77	11,94	13,03	15,27	16,11	17,38	8,44	11,89
	yrsint			6,49	11,59			-7,53	-4,99
Latin America	eligcit	16,14	10,42	14,42	9,08	57,04	51,3	37,56	32,99
	yrsint			-4,68	-5,35			-14,68	-13,33
Middle East	eligcit	66,32	51,31	55,58	49,25	52,4	52,99	32,34	31,76
	yrsint			-18,01	-4,02			-17,78	-17,23
Africa	eligcit	20,17	14,83	15,95	13,19	53,89	56,97	38,86	38,97
	yrsint			-9,6	-2,72			-11,35	-13,07
S. Asia	eligcit	15,13	14,93	13,22	14,45	58,48	62,56	47,52	47,28
	yrsint			-1,19	1,32			-12,7	-16,76
China	eligcit	8,04	5,88	4,55	6,45	80,55	73,61	47,56	47,26
	yrsint			-4,95	2,78			-12,74	-16,77
Rest of E. Asia	eligcit	17,79	6,87	12,41	7,31	55,43	45,12	39,64	32,18
	yrsint			-5,9	2,45			-13,5	-11,15

Appendix table 2: IV regression results on full employment for immigrants, Sweden and Canada 2006
Instrument: citizenship eligibility and years since eligible

Variable		Sweden				Canada			
		female		male		female		male	
		coef.	SE	coef.	SE	coef.	SE	coef.	SE
	Observations	336 689		314 050		362 260		322 820	
	R2	0,06		0,09		0,10		0,06	
	Prob>0	0,00		0,00		0,00		0,00	
	Log of city pop	-0,03	0,00	-0,03	0,00	-0,01	0,00	0,01	0,00
	Log of immigrant pop	0,02	0,00	0,02	0,00	0,02	0,00	-0,01	0,00
	City employment rate	0,94	0,04	1,37	0,04	1,43	0,05	0,82	0,02
Age (25-34)	age 35-44	0,04	0,00	-0,03	0,00	0,05	0,00	-0,02	0,00
	age 45-54	-0,01	0,00	-0,10	0,00	0,06	0,00	-0,04	0,00
	age 55-64	-0,16	0,00	-0,24	0,00	-0,16	0,00	-0,19	0,00
Marital status	Married	0,02	0,00	0,09	0,00	-0,03	0,00	0,10	0,00
(single)	Divorced/separated	-0,04	0,00	0,00	0,00	0,01	0,00	0,08	0,00
	Widowed	-0,06	0,01	-0,03	0,01	-0,05	0,01	0,02	0,01
Children (non)	One child	0,04	0,00	0,10	0,00	0,00	0,00	0,02	0,00
	Two children	0,03	0,00	0,12	0,00	-0,01	0,00	0,04	0,00
	three + children	-0,06	0,00	0,06	0,00	-0,07	0,00	0,02	0,00
Schooling	Highchool	0,18	0,01	0,14	0,01	0,14	0,01	0,02	0,01
(less than hs)	Vocational	0,33	0,01	0,24	0,01	0,17	0,01	0,05	0,01
	Lower university	0,16	0,01	0,13	0,01	0,21	0,01	0,05	0,01
	Upper university	0,35	0,01	0,25	0,01	0,23	0,01	0,09	0,01
	Schooled outside host country	0,04	0,01	0,08	0,01	-0,04	0,01	-0,02	0,01
	Highchool	-0,01	0,01	-0,04	0,01	-0,02	0,01	0,02	0,01
	Vocational	-0,03	0,01	-0,04	0,01	-0,01	0,01	0,01	0,01
	Lower university	0,02	0,01	-0,02	0,01	-0,02	0,01	0,02	0,01
	Upper university	-0,04	0,01	-0,05	0,01	-0,01	0,01	0,00	0,01
Place of birth	Germany	-0,04	0,01	0,02	0,00	-0,01	0,01	-0,02	0,01
(Scandinavia)	Other EU 27	-0,19	0,00	-0,04	0,00	-0,01	0,01	-0,02	0,01
	Other Europe	-0,29	0,01	-0,13	0,01	-0,03	0,01	-0,05	0,01
	USA Aust NZ	-0,18	0,01	-0,07	0,01	0,03	0,01	0,02	0,01
	Latin Amer Caribbean	-0,23	0,01	-0,07	0,01	-0,02	0,01	-0,04	0,01
	Africa	-0,31	0,01	-0,19	0,01	-0,07	0,01	-0,07	0,01
	Middle East	-0,46	0,01	-0,25	0,01	-0,17	0,01	-0,10	0,01
	S. Asia	-0,31	0,01	-0,17	0,01	-0,08	0,01	-0,05	0,01
	China	-0,28	0,01	-0,18	0,01	-0,07	0,01	-0,10	0,01
	E. Asia	-0,17	0,01	-0,12	0,01	-0,03	0,01	-0,08	0,01
	Years since migrating	0,01	0,00	0,01	0,00	0,01	0,00	0,00	0,00
	Yrs since mig squared	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
	Naturalized	0,43	0,01	0,22	0,01	0,15	0,01	0,12	0,01

Appendix Table 3: IV regression results on full employment for immigrants, Sweden and Canada 2006
Instrument is eligibilityfor citizienship, years since eligible and years since eligible squared

		Canada				Sweden			
		female		male		female		male	
		Coef.	s.e.	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.
observations		261 272		283 007		336 689		314 050	
R2		0,02		0,01		0,07		0,09	
Contextual variables	Log of city pop	0,00	0,00	-0,01	0,00	-0,03	0,00	-0,03	0,00
	Log of immig pop	0,00	0,00	0,01	0,00	0,02	0,00	0,02	0,00
	Mean employment rate	0,82	0,06	1,03	0,05	0,94	0,04	1,36	0,04
Age	35-44	0,05	0,00	0,00	0,00	0,04	0,00	-0,03	0,00
(25-34)	45-54	0,06	0,00	-0,01	0,00	-0,01	0,00	-0,10	0,00
	55-64	0,00	0,00	-0,05	0,00	-0,16	0,00	-0,24	0,00
Marital Status	Married	-0,02	0,00	0,04	0,00	0,02	0,00	0,08	0,00
(single)	Divorced/sep	-0,01	0,00	0,03	0,00	-0,04	0,00	0,00	0,00
	Widowed	-0,01	0,01	0,01	0,01	-0,05	0,01	-0,03	0,01
Number of children	One child	-0,01	0,00	0,01	0,00	0,04	0,00	0,10	0,00
(none)	Two children	0,00	0,00	0,02	0,00	0,03	0,00	0,12	0,00
	Three + children	-0,02	0,00	0,01	0,00	-0,06	0,00	0,06	0,00
Schooling	Highschool	0,02	0,01	-0,02	0,01	0,18	0,01	0,14	0,01
(lt highschool)	Vocational	0,02	0,01	0,00	0,01	0,33	0,01	0,24	0,01
	Lower university	0,03	0,01	0,00	0,01	0,16	0,01	0,13	0,01
	Upper university	0,04	0,01	0,02	0,01	0,35	0,01	0,26	0,01
	Schooled outside host country	-0,01	0,01	0,00	0,00	0,04	0,01	0,08	0,01
	Highschool	0,00	0,01	0,02	0,00	-0,01	0,01	-0,04	0,01
	Vocational	0,00	0,01	0,01	0,01	-0,03	0,01	-0,05	0,01
	Lower university	0,01	0,01	0,01	0,00	0,02	0,01	-0,02	0,01
	Upper university	0,01	0,01	0,00	0,00	-0,04	0,01	-0,05	0,01
Place of Birth	German	0,00	0,01	0,00	0,01	-0,04	0,01	0,02	0,01
	Rest of EU	0,00	0,01	-0,01	0,01	-0,17	0,00	-0,05	0,00
	Other Europe	-0,02	0,01	-0,02	0,01	-0,26	0,01	-0,14	0,01
	Africa	-0,03	0,01	-0,04	0,01	-0,21	0,01	-0,08	0,01
	USA Aust NZ	0,02	0,01	0,01	0,01	-0,17	0,01	-0,07	0,01
	Latin America	-0,02	0,01	-0,02	0,01	-0,29	0,01	-0,21	0,01
	Middle East	-0,05	0,01	-0,04	0,01	-0,43	0,01	-0,26	0,01
	S. Asia	-0,05	0,01	-0,02	0,01	-0,29	0,01	-0,19	0,01
	China	-0,04	0,01	-0,04	0,01	-0,26	0,01	-0,19	0,01
	S.E. Asia	-0,01	0,01	-0,03	0,01	-0,15	0,01	-0,13	0,01
Citizenship	citizen	0,11	0,01	0,07	0,00	0,38	0,01	0,25	0,01
	Years since migrating squared	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
	years since migrating	0,00	0,00	0,00	0,00	0,01	0,00	0,01	0,00

Appendix table 4: OLS regression results on full employment for immigrants, Sweden and Canada 2006

		Canada				Sweden			
		female		male		female		male	
		Coef.	s.e.	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.
Observations		261 272		283 007		336 689		314 050	
R2		0,03		0,02		0,14		0,11	
Contextual variables	Log of city pop	0,00	0,00	-0,01	0,00	-0,03	0,00	-0,03	0,00
	Log of immigrant pop	0,01	0,00	0,01	0,00	0,02	0,00	0,02	0,00
	Mean employment rate	0,84	0,06	1,04	0,05	0,96	0,03	1,38	0,04
Age	35-44	0,05	0,00	0,00	0,00	0,04	0,00	-0,03	0,00
(25-34)	45-54	0,06	0,00	-0,01	0,00	0,00	0,00	-0,09	0,00
	55-64	0,00	0,00	-0,05	0,00	-0,16	0,00	-0,24	0,00
Marital Status	Married	-0,02	0,00	0,04	0,00	0,04	0,00	0,10	0,00
(single)	Divorced/sep	-0,01	0,00	0,03	0,00	-0,02	0,00	0,00	0,00
	Widowed	-0,01	0,01	0,01	0,01	-0,04	0,01	-0,02	0,01
Number of children	One child	-0,01	0,00	0,01	0,00	0,04	0,00	0,10	0,00
(none)	Two children	0,00	0,00	0,02	0,00	0,04	0,00	0,13	0,00
	three + children	-0,02	0,00	0,01	0,00	-0,05	0,00	0,06	0,00
Schooling	Highschool	0,02	0,01	-0,02	0,01	0,18	0,01	0,14	0,01
(lt highschool)	Vocational	0,03	0,01	0,00	0,01	0,32	0,01	0,24	0,01
	Lower university	0,04	0,01	0,01	0,01	0,16	0,01	0,13	0,01
	Upper university	0,05	0,01	0,03	0,01	0,34	0,01	0,25	0,01
	place_ed	-0,01	0,01	-0,01	0,00	-0,01	0,01	0,04	0,01
	Highschool	0,00	0,01	0,02	0,00	0,00	0,01	-0,03	0,01
	Vocational	0,00	0,01	0,01	0,01	-0,02	0,01	-0,03	0,01
	Lower university	0,01	0,01	0,01	0,00	0,02	0,01	-0,01	0,01
	Upper university	0,00	0,01	0,00	0,00	-0,03	0,01	-0,04	0,01
Place of Birth	Germany	0,01	0,01	0,00	0,01	-0,03	0,01	0,02	0,00
	Rest of EU	0,00	0,01	0,00	0,01	-0,10	0,00	-0,03	0,00
	Other Europe	0,00	0,01	0,00	0,01	-0,10	0,00	-0,06	0,00
	Africa	-0,02	0,01	-0,03	0,01	-0,08	0,00	-0,03	0,00
	USA Aust NZ	0,01	0,01	0,00	0,01	-0,10	0,01	-0,05	0,01
	Latin America	-0,01	0,01	-0,02	0,01	-0,14	0,00	-0,14	0,00
	Middle East	-0,04	0,01	-0,03	0,01	-0,26	0,00	-0,18	0,00
	S. Asia	-0,03	0,01	-0,02	0,01	-0,17	0,00	-0,13	0,00
	China	-0,02	0,01	-0,03	0,01	-0,13	0,01	-0,14	0,01
	S.E. Asia	0,00	0,01	-0,02	0,01	-0,03	0,00	-0,07	0,01
Citizenship	Citizenship	0,03	0,00	0,02	0,00	0,06	0,00	0,08	0,00
	Years since migrating	0,01	0,00	0,00	0,00	0,02	0,00	0,01	0,00
	Years since migrating squared	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00