Citizenship acquisition, employment prospects and earnings: comparing two cool countries

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Abstract

Direct country comparisons on the effect of citizenship are rare. The aim of this paper is to analyze the citizenship effect on both employment probabilities and the relative income of work of immigrants in two countries, Canada and Sweden. We ask 'Is there a citizenship effect and if any, in which country is it that we find the largest effect and for which immigrant groups'. Using Instrumental Variable Regression to assess the clean effect of citizenship acquisition on data from the 2006 Canadian census and the 2006 Swedish registry we find that citizenship has a positive impact on both characteristics, and that it is often stronger in Sweden than in Canada.

Keywords: Immigration, Citizenship, Country Comparison

Introduction

The acquisition of citizenship offers membership in the collective and a degree of protection from removal for immigrants in a host country. It is also a marker, or point of passage -- often viewed as an endpoint to the integration process. While citizenship acquisition rules may vary from country to country, evidence on the effects of naturalization is less than clear. A number of studies suggest that naturalized individuals have higher employment rates, vote more and have higher incomes than those who do not naturalize (Bevelander & DeVoretz 2008; OECD 2011; Bevelander and Pendakur 2011). Direct country comparisons on the effect of citizenship, however, are rare. The aim of this paper is thus to analyze the citizenship effect on both employment probabilities and the relative income of work of immigrants in two countries, Canada and Sweden. We ask 'Is there a citizenship effect and if any, in which country is it that we find the largest effect and for which immigrant groups'.

Both Canada and Sweden have relatively high levels of immigrant intake -- the born-foreign population in Canada is about one in five (21 percent) whereas in Sweden it is about one in six (14 percent). Moreover, both countries have a large set of policies related to enhancing the integration of immigrants (MIPEX 2011). And both Canada and

Sweden have comprehensive datasets that allow us to explore these issues -- the Canadian Census of 2006 and the STATIV register database for the same year for Sweden. We run both OLS and instrumental variable (IV) regressions to estimate the effect of citizenship on the probability of employment and annual earnings.

Earlier findings

Citizenship acquisition is often viewed as an endpoint to the integration process, because it generally offers the full set of political and social benefits to newcomers. The last few decades has seen naturalization and naturalization policies become or even taken over as a tool of promoting integration of immigrants. In the social science literature the change of an individual's citizenship is seen, on the one hand, as an important signal of integration in the host society while on the other hand, as something that enables further integration. Recent evidence also suggests that naturalization positively effects political participation, as measured by voting participation in elections (Bevelander and Pendakur 2011a). In the field of economics the analysis of immigration and naturalization has played a minor role for a long time. One of the exceptions is the early work by Chiswick (1978) in which he compared wages of foreign-born men with and without US citizenship, using cross-sectional data from the 1970 US Census. He concludes that naturalized foreign-born men have higher average earnings than non-naturalized foreign-born men. However, controlling for the length of stay, the effect of naturalization on earnings becomes insignificant.

Contemporary studies of the impacts of citizenship acqusition by, Bratsberg et al. (2002), Hayfron (2008), Scott (2008), Steinhardt (2008), and Engdahl (2011) use longitudinal data to apply individual fixed effects models that control for self selection and both observable and non-observable characteristics. Contrary to Chiswick's (1978) seminal study, they find a positive impact of naturalization on wages even after controlling for time in the host country. Factors which could explain such an outcome include an individual's decision to invest in human capital or an employers decision to view citizenship acquisition as an indicator of long term commitment. Of course, in the short run this investment may affect wages, but in the long run the accumulation of human capital could result in higher wage levels. For the US, results by Bratsberg et al.

(2002) suggest that citizenship acquisition reduces institutional labor market barriers, thereby increasing job opportunities for immigrants. In particular, they demonstrate an increase in the likelihood of public sector employment as a product of naturalization. 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 year 2000 in the US and found that naturalized immigrants have increased treasury payments but also higher rates of welfare participation. However, tax payments exceed transfer payments for naturalized immigrants after ten years of residence. Mazzolari (2009) 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.

Turning to Europe, recent results for Sweden from Bevelander and Pendakur (2011b) point in the same direction. They assert that naturalization helps to improve the employment situation of refugees, in particular for those from lower income countries. Overall, empirical evidence indicates that naturalization increases the labor market opportunities of immigrants and helps to facilitate the process of employment integration (see for example Bevelander & Veenman (2008) for the Netherlands; Kogan (2003) comparing Austria and Sweden, Steinhardt (2008) for Germany and Steinhardt & Wedemeier (2011) for Switzerland and Kayaoglu & Kaya (2011)) comparing Germany and France).

Summarizing the literature on citizenship and economic integration, most studies for the US and Canada as well as Europe support the existence of a "citizenship premium" on employment and income. However there seems to be a difference in the level of the premium pointing to a higher one in the US and Canada compared to Europe. One reason for the difference in results may be the variance in data across countries. Another may be that citizenship effects could be mixed with other selection effects, as well as issues of participation.

Context: Immigration and Labour market 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. 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.

There is evidence to suggest that immigrants face barriers to both labour market entry and career progression in both Canada and Sweden (see for example: Bevelander, Hagström and Rönnqvist 2009, Galabuzi 2009, Pendakur and Pendakur 1998, Rooth 1999). 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 2010). 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 Asian 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 (Galabuzi 2009).

Citizenship in Canada and Sweden

Sweden has, perhaps, the most liberal naturalization 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 (parents with Swedish citizenship can apply on their child's behalf). Naturalization rules vary by the category of intake and the source country. Refugees can naturalise after four years of residency, citizens from Nordic countries obtain citizenship after two years of residence and all other classes of immigrant must have five years of residency. In addition, the applicant has to be eighteen years of age or older and have no criminal record.[1]

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.[2]

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

[1] 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.

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

citizenship.[3] 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.

A cross OECD comparison shows that Sweden and Canada are countries belonging to the group with the highest naturalization rates with over 80 percent naturalized (OECD 2011). However as can be seen in Table 1, both countries show variation in naturalization rates are apparent by source country.

Table 1: Citizenship by country of birth, Canada and Sweden

Overall, citizenship acquisition is higher in Canada as compared to Sweden, with almost three-quarters of immigrants having citizenship compared to almost two-thirds of Swedish immigrants. There are variations in the proportion of immigrants who are citizens by place of birth, but save for the case of immigrants from the Middle East, Canadian immigrants are more likely to have citizenship than Swedish immigrants. The discrepancies are particularly evident when looking at the case of European Union immigrants who have fairly low rates of citizenship acquisition in Sweden and average to high rates in Canada.

Data, method and model

We use two distinct data sources. Canadian data are drawn from the 2006 Canadian Census long form, which contains information for approximately 20 percent of individuals.[4] Swedish data are drawn from the 2006 Swedish register, the statistical integration database held by Statistics Sweden. The Swedish register contains

[3] 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.

[4] The long form of the 2006 census is administered to 20% of households in general, but 100% of households living in designated Indian Reserves (some reserves did not participate in the census). For our analysis, we use the individual file, which is drawn from the household file.

information for all legal residents. Both datasets include information on an individual's age, sex, marital status, number of children in the household, educational level, employment status, country of birth, years since migration[5], annual income of work, 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.

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.[6] 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. 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 because immigrants are considered eligible for employment on entry.

We wish to understand how citizenship acquisition may be a factor in employment and earnings in Sweden and Canada. 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.[7] Using this definition, we run IV regressions on the entire immigrant population to measure the impact of citizenship acquisition. We then run IV regressions for each of 11 place of birth groups. 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 the same place of birth with the respondent. In this way we can assess the degree to which the size of the ethnic enclave in a given city affects employment and earnings of co-ethnic members.

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

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

[7] We also test models in which the instrument for citizenship is both being eligible and the number of years since eligibility. Both models yield similar results, but the tests for the instrument are better for models using just eligibility for citizenship and not years since being eligible.

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 earnings, citizenship 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 and have higher earnings. 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.[8] 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 and relative earnings (without the impact of participation that is correlated with getting a job).

[8] Candidates for citizenship can apply after four years of residency if the candidate was resident in Canada for at least three of the four years. 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).

We include fourteen variables in our models. Contextual variables include the log of the city population, the log of the immigrant population, and the local unemployment rate for the city labour market area.

Demographic variables include age (four dummy variables), marital status (four dummy variables) and presence of children in the household (four dummy variables).

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). Additional immigrant controls include years since immigrating, the square of years since immigrating. Our main explanatory variable is whether or not the immigrant is naturalized.[9]

Analysis

Descriptives:

Table 2 provides information on the percent of men and women who are employed (top panel) and the average log earnings (bottom panel) 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

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

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 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.

Differences in the log of earnings can be broadly interpreted as percent differences. Thus, we see no difference in earnings for citizens and non-citizens coming from the Scandinavian and Germany in Sweden and Canada, irrespective sex. All other immigrant groups have higher earnings when citizens in both Canada and Sweden and for both females and males.

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. Further, immigrants from a number of countries show higher relative earnings after naturalization. However, citizenship is correlated with a number of attributes that are also correlated with employment probabilities and relative earnings, including, time in the country. Our question is whether citizenship still has this impact when controlling for other variables and whether this impact differs across our two countries.

Regressions

OLS Regression Results: Employment

Table 3 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.[10] In this analysis we instrument citizenship to be a product of whether or not a 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 3 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.[11]

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 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 rate 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 has a small negative effect.

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 being employed. 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 the instrumented citizenship variable 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

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

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

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

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 for women 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 men).

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.

Table 4 shows results from four instrumental variable regressions in which the dependant variable is earnings from employment and citizenship has been instrumented to be a product of being eligible for citizenship.[12] The sample for all regressions is all immigrants whose primary source of earnings is from wages and salaries. Separate regressions were run for men and women in each of Canada and Sweden. Information in the table includes the impact of the independent variable on earnings, the standard error associated with the estimate and the level of significance. This information allows us to assess the magnitude and significance of the coefficient by country but does not tell us if the impacts in Canada and Sweden are significantly different from each other. For this reason, the last two columns of Table 4 tell us whether the coefficients in Canada and Sweden are statistically different from each other.[13]

Looking at the results for contextual variables we see that living in a large city is universally bad for immigrant earnings, however it is worse in Canada than in Sweden (coefficients of about -0.14 and -0.09 respectively for every log unit increase). However

[12] A test of the instrument for all regressions can be found in Appendix table 1.
[13] See footnote 13 for method.

this can be mitigated by having a large immigrant population which acts to increase earnings. Having a high employment rate is also good for earnings, but has a much higher impact in Canada as compared to Sweden (coefficient of 3.48 versus 1.32 respectively for women and 5.82 and 2.19 for men respectively). This suggests that overall contextual factors are more important in Canada than in Sweden.

Moving to personal characteristics we see that (as expected), schooling counts. Generally payoffs for lower levels of schooling are better in Sweden for both men and women, but payoffs at higher levels of schooling at better in Canada. This is likely a product of the higher minimum wage in Sweden, which offers a fairly generous wage for low skill work. Getting schooled outside the host country has mixed effects. In both countries, there is generally a cost to having being schooled outside the country, but in Sweden that cost is lower than in Canada.

The rest of the variables relate to immigrant status and allow us to assess the impact of place of birth, citizenship and years in the country. Looking at the results for Canada, we see that with the exception of immigrants from the EU or North America, immigrants generally face an earnings penalty after controlling for personal and contextual characteristics of between -0.17 to -0.33 for women and -0.08 and -0.59 for men as compared to immigrants born in Scandinavia. In Sweden, with the exception of men born in Germany, all groups face substantial earnings penalties. While amongst men, penalties are often on the same order as is the case in Canada, there are exceptions – immigrant men from outside the EU, Latin America or Africa face higher penalties in Sweden than in Canada. Amongst women, with the exception of Germans, penalties are universally higher for immigrants in Sweden as compared to Canada.

The impact of citizenship varies by country and sex but is always positive and strong. In Canada the coefficient for having citizenship is .41 for women and 0.50 for men. In Sweden, the impact is substantially (and statistically significantly) higher for women (coefficient of 0.75) and about the same for men (0.49).

Years since migrating is also important, but has a stronger impact in Canada than in Sweden, suggesting that there are real payoffs to integration.

Differences by country of birth:

Table 3 and 4 provide a bird's eye view of the impact different characteristics have on the probability of employment and relative income. These tables allow us to understand the average degree to which the probability of employment differs across immigrant groups. However, they not allow for the possibility that payoffs for different characteristics are different across immigrant groups. Results from Tables 2 and 3, 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. Tables 5 and 6 resolve this situation by providing selected coefficients from a total of 22 separate regressions for each dependant variable —a separate regression for each place of birth by gender by country group. The dependent variables remain either employment status or earnings and independent variables include all the variables from Table 3 and 4. Thus we allow each of the coefficients to vary independently for each place of birth group (equivalent to results from Table 3 and 4, but where each characteristic is interacted with place of birth).

Regression results shown in Tables 5 and 6 include one additional independent variable. For each respondent we add 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.

Looking first at the results for Sweden we see that 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 co-ethnic population increases, the probability of employment also increases. Citizenship acquisition has a strong positive effect for 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 co-ethnic 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 co-ethnic 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 co-ethnic 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 3, differences in country effects are more prevalent for men than for women. Amongst 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 co-ethnic 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 on 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.

Turning to relative income results, Table 6 shows selected results from 22 regressions in which we run separate regressions using the same set of controls as in Table 4, but for each of our eleven places of birth (11 place of birth groups by two countries for men and women). As in the employment analysis, this is equivalent to interacting all variables by place of birth. The last two columns of Table 6 indicate whether or not the coefficients for Canada and Sweden are statistically significantly different from each other.

Looking at the results for Scandinavian immigrants in Canada, we see that there are really no statistically significant results for either men or women. In other words, size of city, size of the immigrant population, the mean employment rate, and citizenship

make little difference to the earnings of Scandinavian immigrants living in Canada. However, these characteristics do make a difference in Sweden. In particular, as the size of the immigrant population increases, earnings for males decrease. Citizenship acquisition has a substantial negative impact on both male and female earnings (-3.98 and -4.02 respectively) and in the case of women this impact is statistically different from the results in Canada. To a small degree, this may be offset by the impact of years since migrating, which has a fairly strong positive effect for both men and women (0.08 for both men and women for every year of residence).

For German immigrants, the size of the immigrant population is correlated with higher earnings in both Canada and Sweden, however, citizenship acquisition has little impact – although there is a positive and significant impact for men in Canada, the coefficient is not significantly different from that in Sweden. The impact of citizenship is higher for immigrants from the rest of the EU in both countries but the impact is greater in Sweden (ranging from 0.50 in Canada to 2.05 for men in Sweden). The mean employment rate is also important, but stronger in Canada for EU men.

In the case of China, there are few differences that are significant between Canada and Sweden. This may be because the Chinese population is small and variances are large, which results in differences between the two countries being insignificant. Thus, in Sweden, there are no significant differences across the control variables – income for Chinese appears unrelated to the size of the immigrant population, enclave population, citizenship or time in the country. In Canada, all those variables are strong and with the exception of the enclave population, positive. Citizenship acquisition in particular has a very strong impact for men and women, 0.41 and 0.71 respectively.

The results for East Asian immigrants suggest strong and significant differences between Canada and Sweden, particularly for women. The women get a much higher payoff for citizenship acquisition in Sweden as compared to Canada (0.89 versus 0.24). For men the coefficients are 1.23 and 0.28 respectively. By contract, the payoff for time in the host country is higher in Canada for both East Asian men and women (0.03 in Canada for men versus -0.04 for men in Sweden). The presence of an ethnic enclave however, appears to be more helpful in Sweden than in Canada.

For other cases, the impact of citizenship on earnings is generally higher in Sweden than in Canada. The exception for immigrants from the Middle East, and Chinese males, who enjoy a higher citizenship premium in Canada than in Sweden.

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, Canada and the USA have tightened up citizenship acquisition rules and immigrant intake regulations and have witnessed declines in the employment probabilities for immigrants.[14] 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.

Several scholars have argued that there is a link between citizenship acquisition and employment status and earnings (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 study, we used instrumental variable regression to examine the "clean" impact of citizenship acquisition on the probability of being employed and relative income of work 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 on employment 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

[14] 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.

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).

The results for earnings are similar. Citizenship acquisition has a positive and significant effect on earnings for immigrants in both Canada and Sweden. However, depending on the country of origin, the impact of citizenship on earnings can be stronger in Sweden. Of interest is the fact that citizenship acquisition appears to be more important for women than for men. This is true both for employment and earnings. The notable exception is the case of Scandinavian immigrants in Sweden who show a negative effect of naturalization on earnings. We suggest that this is a product of the fact that these naturalised immigrants may be older, less educated and more likely to work in low skill occupations than their more recent compatriots who are more likely to be in higher skill, higher pay jobs, but less likely to be citizens.

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 and earnings 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 and earnings prospects, tightening up citizenship regulations may result in decreased 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.

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