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**IMPORTING SKILLS:
MIGRATION POLICY, GENERIC SKILLS AND EARNINGS
AMONG IMMIGRANTS IN AUSTRALASIA, EUROPE AND NORTH
AMERICA**

by

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Importing skills

Migration policy, generic skills and earnings among immigrants in Australasia, Europe and North America

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Abstract

One approach to meet a perceived increased demand for highly skilled workers has been to use migration policy, providing work permits and visas to highly skilled foreign workers. Our knowledge of how differences in migration policy are related to the skills of migrant populations is however fairly limited, being restricted largely to education. In contrast, we know little about how actual skills of immigrants compare to those of natives, how migrant skills differ according to migration policy, and how this is related to the labour market integration of immigrants. The purpose of this study is to explore these issues focusing on a specific set of generic skills, so-called 'literacy skills'. Rather than only literacy in the form of reading and mathematical skills, the measure used also captures complex reasoning and problem-solving abilities and should therefore be seen as a measure of broad generic skills. Using data from the International Adult Literacy Survey, nine countries representing a wide range of migration policies are examined; Canada, Germany, Great Britain, Ireland, New Zealand, Norway, Sweden, Switzerland and the USA. The analyses seriously question the belief that stricter selection of immigrants will produce a pool of skilled immigrants, simplify their economic integration and boost national economies. Given the emphasis placed on migrant selection, it is for instance surprising that immigrants in Canada and New Zealand do not perform better. Furthermore, immigrants in Canada and New Zealand do not integrate better than other migrants. Similar results are thus obtained for other countries, with drastically different migration policies. Instead, these results imply that there are many ways to attract highly skilled immigrants and paths to successful integration.

1. Upgrading the workforce

Rapidly increasing international economic integration and technological and organizational changes are believed to have led to increased demand for highly skilled workers. While the extent to which skill requirements have in fact risen and the importance of potential drivers are still being debated, the view that labour demand has shifted towards high skill workers has intensified policymaking in the area of skill supply. Arguing that an increase in the supply of skilled labour is necessary to remain competitive in the global labour market, governments' primary remedy has been to expand education and attempt to improve educational attainment.

A similar approach has been taken to migration policy. Here, the targeted provision of work permits and visas to highly skilled foreign workers has been put forth as a way to prevent possible skills shortages. In Europe, the Blue Card introduced in 2009 aimed at simplifying immigration for well educated foreign labour from outside the European Union in order to attract skilled labour to promote competitiveness and growth. Moreover, the Blue Card had important national precursors, such as the German Green Card for IT professionals launched in 2000 and the UK Highly Skilled Migrant Programme from 2002. Such policies are of course not new, but echo the demand-based labour migration policies emphasizing education, employment experience, and language skills traditionally pursued by, for instance, Canada (Shachar 2006).

Migration to Europe in recent decades, in contrast, has included a large proportion of people migrating for social or humanitarian reasons.

Family-related migration and forced migration due to calamitous events in the country of origin may bring immigrants with a different set of skills from those discussed in connection with the Blue Card. This may of course still be beneficial to the destination country, as less skilled immigration could bolster growth, for instance by providing cheap and flexible labour (Holzer 2011). Nonetheless, the skill structure of the migrant population may be of great importance for how migration affects the receiving labour market and the position of the immigrants themselves (Constant and Zimmermann 2005; Borjas 2007). Indeed, this is the premise on which demand-based migration policy is built.

Our knowledge of how differences in migration policy affect the skills of migrant populations is nevertheless fairly limited, being restricted largely to comparisons of the educational level of immigrants and natives. This obviously is an important characteristic, but we know little about how the skills of immigrants in fact compare to those of natives, and how migrant skills differ according to migration policy. This by extension also applies to the links between migration policy, immigrant skills and the labour market integration of immigrants, for instance in terms of earnings.

The purpose of this chapter is to explore these issues focusing on a specific set of generic skills, so-called 'literacy skills'. Generic skills are skills applicable across a wide range of jobs, and therefore crucial for labour market success. Although literacy is sometimes equated simply with the ability to read and write, the literacy concept used here is wider and the measure more complex. In addition to reading and mathematical skills, it

also captures complex reasoning and problem-solving abilities and should therefore be seen as a measure of broad generic skills. The underlying hypothesis explored here is that differences in migration policies should lead to variations in the generic skills of immigrants to different countries, differences that in turn should be associated with differences in economic integration in terms of earnings.

The data come from the International Adult Literacy Survey (IALS), a large-scale comparative survey of literacy skills carried out in 23 countries in the years 1995 to 1998. Data from nine countries are used here; Canada, Germany, Great Britain, Ireland, New Zealand, Norway, Sweden, Switzerland and the USA. These countries have a wide range of migration policies and immigration histories.

2. Migration policy, skills and integration

Immigration policies vary widely across countries and also over time.¹ The traditional immigration countries, such as Canada, New Zealand and the USA, have a history of large-scale immigration. As is well known, for a long time they relied on a relatively limited set of sending countries, mainly those of (Western) Europe and in particular Ireland and Great Britain. In the case of Canada and New Zealand this focus on source countries has since been replaced with an immigration policy focusing on desired labour market characteristics. In 1967, Canada adopted a points system within the framework of which immigrants are ranked according to their ability to

¹ The following discussion is based on Bauer et al. (2000) and Shachar (2006), and focuses on the evolution of migration policies prior to the IALS surveys in the mid-1990s.

meet the needs of the Canadian labour market. Canadian immigration policy distinguishes three broad categories of immigrants; social (family reunification), humanitarian (refugees) and economic (business migrants, dependent migrants and assisted relatives). It is only dependent migrants and assisted relatives that are subjected to the points system, which gives preference to well educated migrants with work experience and proficiency in English or French. The proportion of immigrants going through the system has varied, declining from over 70 per cent in the mid-1970s to around 15 per cent a decade later. The trend then reversed, the numbers increasing to roughly 50 per cent (Bauer et al 2000).

New Zealand's immigration policy has developed in a similar manner, albeit with a significant time lag. Following the Second World War, New Zealand continued its previous policy of strongly favouring immigration from Great Britain, targeting specific skills and occupations. However, after roughly a decade of negative net migration, a change in policy led to the introduction of a points system similar to the Canadian one in 1991 (Phillips 2011). As was initially the case in Canada, around 70 per cent went through the points system after its enactment (Winkelmann 2005).

In contrast, the USA is alone among the traditional immigration countries in its current emphasis on family reunification rather than labour market skills. The source country quotas put in place in the 1920s were in 1965 replaced with a system that de facto prioritized family reunification. The changes also allowed for allocation of visas according to employment preferences, predating the Canadian policies but without the points system;

however, these have remained a small share of all immigrants. During the late 1980s and 1990s, for instance, around 10 per cent of all immigrants entered as employment-based immigrants (US Immigration and Naturalization Service 2000).

Other countries have a more recent immigration history, related to either post-colonial immigration or post-war labour recruitment. Following the Second World War, Great Britain and some other European countries experienced a wave of return migration by colonists and of native immigration from the former colonies. This was relatively unrestricted, in that it consisted primarily of each country's own citizens. However, the long period of low unemployment that commenced in the late 1950s led to substantial labour shortages in these countries. This spurred active labour recruitment, which also occurred in countries such as Germany, Sweden and Switzerland. Much of this took the form of migration from southern to northern Europe, often institutionalized in bilateral agreements, but there was also migration from other parts of the world. However, Great Britain differed in that it never had a period of labour recruitment and instead continued to favour migration from the former colonies.

In all countries, this demand-driven immigration came to an abrupt halt in the mid-1970s in connection with the rise in unemployment triggered by the oil crises. Nevertheless, despite the recession, little return migration occurred and immigration continued in the form of family reunification. This inflow was in some countries also supplemented by a flow of political refugees from repressive countries around the world. The most recent stage

in European migration history arrived with the fall of the Iron Curtain in 1989. West European countries, including Germany, Norway, Sweden and Switzerland, experienced a drastic increase in the number of refugees and asylum seekers, an east–west migration induced by the turbulence in the post-communist countries in general, and the wars in the former Yugoslavia in particular.

Finally, some European countries have developed into receiving countries only very recently. This applies to Ireland, a country that traditionally has seen many more leave than arrive. Annual net migration was generally negative until the early 1990s, but this turned into a substantial net inflow in the mid-1990s as Ireland began to experience rapid growth. Many of the arrivals – around 50 per cent – were return migrants (Ruhs 2009). A similar reversal of migration flows took place in a number of southern EU countries in the 2000s. Because of their histories of emigration these countries lacked immigration policies of their own. Instead they by default adopted those of the European Union, which regulated intra-EU migration as well as refugee policy.

As should be clear from this brief review, migration policy has varied substantially across and also within countries over time. The variation over time complicates cross-country comparison, but a rough ranking according to the prominence given to labour demand and skills still seems possible. Canada’s migration policy has undoubtedly had the strongest labour demand focus. The points system was put in place early, and although its importance has varied over time, a substantial fraction of

immigrants have gone through the system. Despite its late introduction of the points system, New Zealand's continued emphasis on demand considerations would seem to place it second. Labour demand has also at times been an important part of migration policy in Germany, Switzerland and Sweden. Here, however, immigration during the years preceding the survey was dominated by refugees from various parts of the world, in Germany supplemented by immigrants of German descent from Eastern Europe. Great Britain would seem to rank sixth, as their labour demand following the Second World War was met not by active recruiting but rather through immigration from the former Dominions. Great Britain is followed by the US, which had demand-related migration policies on a small scale. Norway brings up the rear, with very little labour recruitment and recently fairly substantial refugee arrivals. Ireland, finally, constitutes a category of its own, as it basically lacked a migration policy.

It is of course difficult to say what migrants would have come to a given country if it had applied a different migration policy. Comparisons of countries with different migration policies therefore serve as approximations of the counterfactual – that is, changes in policy regimes – and motivate comparisons of migrants' human capital in the points system countries Australia and Canada with that of migrants in the USA and Europe. These typically focus on the educational attainment of the migrant population and show that immigrants to OECD countries generally are less educated than natives (for example, OECD 2000 and 2007). However, the limited transferability of educational qualifications makes this an imprecise

indicator of immigrants' human capital (Chiswick and Miller 2007). It is therefore interesting to examine indicators of locally valued skills, and for a general assessment of the human capital acquisition associated with immigration these indicators should, moreover, be measures of generic skills.

While less frequently examined in the context of migration policy, such indicators of generic skills are available in the large-scale international surveys of literacy, mathematics and science skills that have been conducted since the mid-1990s. Most of the surveys target compulsory school students and are therefore less relevant in a migration context since children are not the direct focus of migration policy. In contrast, the International Adult Literacy Survey (IALS) examined generic literacy skills in the adult population, and can therefore provide important insights into the link between migration policy and human capital import.

The focus on attracting highly skilled migrants has often overlapped with attempts at promoting migration within a specific language community. The policies of countries such as Canada and New Zealand traditionally centred on attracting migrants from other English-speaking countries (and also French in the Canadian case). Although culturally motivated, this amounted to selection on language skills. Even after the replacement of a source-country focus with a points system, destination-country language skills continued to be seen as an asset. Likewise, the post-Second World War policy of free mobility of labour between the Nordic countries to a large extent involves mobility between countries with closely

related languages. In contrast, with some exceptions migration to European countries requires overcoming language barriers. This holds for both migration within Europe and migration to Europe from countries outside the continent. Comparing generic skills of immigrants who are native speakers of the language of the destination country with those who are not will therefore provide evidence of the possibilities for general skill import, that is from outside a language community, as envisioned by proponents of, for instance, the Blue Card.

This is also of crucial importance with regard to the link between migration policy and the economic integration of immigrants. In addition to factors such as gender, education and age, language proficiency has consistently been found to be extremely important for the economic status of immigrants (Chiswick 2008).² Little attention has been paid to how migration policy is related to the integration of immigrants through its relationship with language skills, however. Is it, for instance, the case that demand-oriented migration policies generally provide for better immigrant outcomes in terms of employment, wages or earnings (for example, OECD 2007)? Or is it simply that they have tended to emphasize language as a selection criterion? Exploring the links between migration policy, the generic literacy skills of different migrant groups and their earnings relative to the native population will provide evidence of the differential impact of different migration policies.

² Language skills may, however, also be a consequence of labour market attainment (Chiswick 2008).

3. Generic skills data and analysis

Large-scale comparative studies rarely have access to direct data on skills of any kind. One exception is the International Adult Literacy Survey (IALS), a survey encompassing 23 countries conducted in the mid-1990s with around 3,000 respondents per country. Although only a cross-sectional survey, the data set has the advantage that it includes immigrants, has fairly extensive information on various background factors, as well as data on earnings, and, most importantly, contains detailed measures of generic literacy skills.

Literacy is sometimes conceived of simply as the ability to read, but as used by the IALS measures it encompasses a broader set of generic skills. The survey defined literacy as ‘the ability to understand and employ printed information in daily activities, at home, at work and in the community – to achieve one’s goals, and to develop one’s knowledge and potential’ (OECD 2000, x). The survey thus examined comprehension of different types of text, distinguishing between the following three domains: prose, document and numeric literacy. The three types of literacy correspond to understanding prose material, extracting and interpreting information from diagrams, maps and so on, and carrying out arithmetic operations based on information located in text and documents. To assess individual skills in these domains, respondents were asked to complete around 45 tasks, each corresponding to a specific level of complexity and type of literacy skills (Myrberg 2000). To illustrate the types and varying complexity of the task, we take three examples from the prose domain provided by Kirsch (2001).

One of the simplest tasks involved deducing from the label of a medicine container the maximum number of days the medicine should be taken. Another, more difficult task involved determining whether the seat of a bicycle was in the correct position using information from a page in the manual. The most difficult task required respondents to list two ways in which a particular employee support initiative aids individuals who lose their jobs because of departmental reorganization, based on an announcement by the personnel department. Basically, simple tasks demanded a direct match of an individual piece of concrete information with few distracting elements, while the most difficult tasks necessitated higher-level inferences, the management of conditional information and sorting out credible distracting information.

Since the IALS literacy measure captures task complexity it may be seen as an indicator of cognitive skills. Although not discussed in these terms in the final report, frequent references to cognition may be found in the background report (NCES 1998). An argument for such an interpretation certainly can be made with respect to the native population, although it should be remembered that the cognitive aspects surveyed are limited to understanding and employing printed information. However, an interpretation of literacy as general cognitive skills seems less permissible in the case of the foreign-born. The crux is of course that for many immigrants the language in which the tasks were conducted was not their mother tongue. They may, in other words, have been perfectly capable of completing higher order tasks if the language of the survey had been

different. The literacy measure should therefore be interpreted as *problem-solving ability in the language of the country of destination*.

This, however, makes the skill measure particularly relevant from a migration-policy point of view. If the goal of migration policy is to attract highly skilled foreign labour it is precisely problem-solving in the destination language that is central. Literacy skills in the language of origin are, in contrast, less pertinent. This would also seem to apply to individual labour market integration, as employers primarily would be expected to be interested in applicants' skills in the local language. The IALS' literacy measure is, in other words, of fundamental importance from both a societal and an individual point of view.

The literacy estimates derived from the survey responses can be related to the five pre-defined levels of literacy below (Kirsch 2001).³

³ To save time and costs, each respondent completed only a selection of tasks. Scaling methods from item response theory (IRT) were then used to transform the results into a common scale. Since each individual completes only parts of the survey a 'series' of more or less likely estimates of individual skill on the common scale are generated. For each individual, five different equally valid estimates from the domain-specific skill distribution were then drawn randomly (cf. NCEs 1998). To obtain valid point and variance estimates, all five plausible estimates of domain-specific literacy have been used, together with the so-called replicate weights required by the sampling schemes. The measure of overall literacy skills used in the descriptive analyses consists of the simple average score across the 15 estimates of literacy level. In the regression analyses, each plausible value has been treated as an equally valid estimate of skill and separate regressions run for each and the results then averaged. To obtain unbiased variance estimates a jackknife estimator utilizing the replicate weights provided with the data has been used (see Westat 2007 for details).

[Box starts here]

Five Levels of Literacy

- **Level 1** indicates persons with very poor skills, where the individual may, for example, be unable to determine the correct amount of medicine to give a child from information printed on the package.
- **Level 2** respondents can deal only with material that is simple, clearly laid out, and in which the tasks involved are not too complex. It denotes a weak level of skill, but more hidden than Level 1. It identifies people who can read, but test poorly. They may have developed coping skills to manage everyday literacy demands, but their low level of proficiency makes it difficult for them to face novel demands, such as learning new job skills.
- **Level 3** is considered a suitable minimum for coping with the demands of everyday life and work in a complex, advanced society. It denotes roughly the skill level required for successful secondary school completion and college entry. Like higher levels, it requires the ability to integrate several sources of information and solve more complex problems.
- **Levels 4 and 5** describe respondents who demonstrate command of higher-order information processing skills.

Source: OECD (2000, xi).

[Box ends here]

In the subsequent analyses of literacy differences between the immigrant and native populations we focus on the working age population,

that is, respondents between 16 and 65 years of age. The definition of 'immigrant' here relies on information on country of birth, with immigrants defined as those born outside the country of interview. Another important variable is mother-tongue. Information was gathered on the first language spoken, with each country having separate lists of the languages most often spoken by the foreign-born in that country. This has then been used to create three different indicators of the similarity between an immigrant's mother tongue and the language of destination. Same language indicates that the first language was identical to that spoken in the country of destination. Related language indicates that the first language belonged to the same language family as the destination language, although not identical. For example, in the case of English the related languages are the other Germanic languages. The last category, distant languages, refers to all other languages, including the category 'other/unspecified'.

With regard to earnings there is information on annual gross wage and salary income, a convenient comprehensive measure of economic integration as it represents the combined outcome of wages and employment. The IALS public use file provides only grouped earnings data: more specifically, data in which each respondent is placed in a particular quintile of the country's earnings distribution as determined from outside sources. This relative crudeness should be kept in mind in the subsequent analyses of immigrant earnings. In particular, although the earnings measure is identical in the various countries, it should be remembered that the substantive importance of quintile placement will depend on the underlying

level of inequality in the countries. In other words, while a position in the second rather than the fourth quintile in all countries implies that one's earnings belong to the bottom 40 rather than the top 40 per cent, the actual, absolute difference in earnings between the quintiles will be greater the more unequal a country is.

Finally, other variables included in the analyses are total years of education, gender and age. For Canada, age is available only in 10-year intervals, in which case age has been set to the mid-point of the interval. In addition, there is information on date of arrival for all countries except New Zealand and Norway. In most cases the information refers to the year of first arrival, but in the Canadian case the information on first arrival is provided only for 15-year intervals: year of immigration have here again been set to the mid-point of the interval. This information has then been used to calculate the variable 'years since migration'

Apart from the lack of longitudinal information, the survey also has other drawbacks. One problem is the massive non-response in some countries. While there are no clear-cut rules regarding inadmissible non-response, a response rate of at least 50 per cent has here been deemed acceptable. This disqualifies Italy, Belgium and the Netherlands from the analyses (see Table A1 in the appendix). In addition, although the sample sizes are relatively large, meaningful analyses focusing on the plight of immigrants are still not always possible. The immigrant sample size is on average around 8 per cent of the total, ranging from 25 per cent in Switzerland to 0.5 per cent in Chile. Since an analysis of immigrants' labour

market position requires a sufficient number of foreign-born respondents, a second exclusion criterion of an immigrant sample of at least 5 per cent of the country total has been adopted. This leaves us with nine countries: Canada, Germany, Ireland, New Zealand, Norway, Sweden, Switzerland, Great Britain and USA.⁴

4. Immigrant skills

The generic literacy skills of the native- and the foreign-born are examined in Table 1 which shows mean and variation in skill levels within and across countries. Literacy skills are measured as a simple average over the items capturing literacy in the prose, document and quantitative dimensions. In the table, countries are listed from top to bottom according to our assessment of their use of demand-based migration policy.

Starting with the skills of the native-born population shown in column 1, the results in the table suggest that the countries fall into three clusters. Norway and Sweden have scores around 3, clearly higher than the other seven; 3 was also the level the IALS survey team considered to be a suitable minimum in modern societies (OECD 2000). Then there is a middle category made up of Canada, Germany, the USA and Switzerland with values of around 2.7. Finally, there is a trailing cluster encompassing Great Britain, Ireland and New Zealand. The literacy skills of the latter group average around 2.5, that is, halfway between the suitable minimum and a

⁴ A tenth country, Slovenia, also meets the 5 per cent criterion. However, it seems that the vast majority of Slovenian immigrants never immigrated, but were born in other parts of the former Yugoslavia and moved to Slovenia while it was still part of the republic. Moreover, of those who arrived after independence many are likely to have come as refugees from adjacent war zones. Migration to the former Yugoslavian republic is, in other words, likely to differ substantially from the other countries, and Slovenia was therefore also dropped from the analyses.

level at which one can manage in everyday life but may have problems when facing novel demands. It may also be noted that the difference between the top (Sweden) and the bottom (Ireland) is almost a whole level of literacy, quite a substantial gap.⁵

[[Table 1 about here](#)]

Moving on to the mean scores of the immigrant population in column 2, we again find a certain clustering. The highest immigrant literacy scores are found in Canada, Ireland, Norway, New Zealand and Sweden. The level of literacy among immigrants in these countries is around 2.5. A second group with literacy levels of roughly 2.2 includes Great Britain and Germany, while Switzerland and the USA trail the others with levels in the vicinity of 1.9. Here too there is almost a full skill level's difference between the high (Norway) and the low (USA) scoring countries.⁶

These results can be discussed from a number of different perspectives. First of all, as is evident from column 6, there tends to be a significant difference between the literacy skills of natives and of foreign-born immigrants. This is not particularly surprising; the tests are, after all, conducted in a language that most immigrants only began to master as adults. However, Canada and Ireland differ in that no significant difference can be established. In the Canadian case, the point estimates do indicate that

⁵ It may also be noted that there are also important differences with regard to dispersion. The standard errors are much larger in, for instance, Germany and Switzerland than in Great Britain and Sweden, evidence of much greater disparities in the literacy skills of the native population in the two former countries.

⁶ As is evident from the standard errors there are also large differences in the spread around these means, with the smallest dispersion in New Zealand and the largest in Canada.

foreign-born persons have lower skills than the native-born, but the standard error for immigrants is so large that the difference is not significant. Ireland, in contrast, is very singular: this is the only country for which there are indications that immigrants are more proficient than natives. However, as indicated by the Irish sample sizes almost all the Irish foreign-born have English as their mother tongue, reflecting the substantial migration from Great Britain.

Interesting also is the size of the within-country differences. Disregarding Ireland momentarily, the immigrant–native difference is relatively small in Canada and New Zealand and, as noted, non-significant in Canada. A second group of countries consists of Great Britain and Norway, while in Germany and, in particular, in Sweden, Switzerland and the USA the immigrant population has sizeable skill gaps. The gap is greatest in the USA, where the average immigrant score is almost a full level below that of the native-born. The comparison of the latter three countries also indicates a complex relationship between the relative position of immigrants and the skill level of the native population. The Swedish skill gap is only slightly smaller than the Swiss and the American, even though Swedish immigrants have among the highest scores and clearly above the other two. In contrast to Switzerland and the USA, where immigrants have a very low level of literacy, the reason for the Swedish skill gap is of course the high level of literacy in the Swedish native population. Conversely, although Canada, Ireland and New Zealand are among the countries with the highest immigrant literacy scores, the low gap in these countries is not

primarily the consequence of particularly high immigrant skills but rather of low or medium skills among the native populations.

Relating these scores to the differences in migration policies outlined above, it is noteworthy that Canada and New Zealand do not stand out as having particularly highly skilled immigrants. Norwegian and Swedish immigrants stand up fairly well in comparison, and from the standpoint of skill importation their relatively high scores could be judged a success. However, the Swedish immigrants still lag far behind the native-born, simply because literacy skills in the native population are so high. In contrast, the results for Canada and New Zealand suggest that the points system may actually succeed in picking immigrants with a good fit to the local labour market.

Nonetheless, as suggested by the Irish case, the composition of the migrant group is crucial for the observed skill differences, and for the evaluation of migration policy a comparison of the skills of the non-native-speaker immigrants is particularly interesting. The proportion of the foreign-born having an unrelated mother tongue varies widely, from 6 per cent in Ireland to around 85 per cent in Sweden and the USA. With the exception of Germany, with 65 per cent, most other countries have proportions in the 40–50 per cent range. There are also stark differences in the proficiency levels of the native speakers (and of related languages) and of those having an entirely distinct linguistic background. The former categories tend to have literacy scores at least on a par with the native population, while the latter

have clearly and often dramatically lower ability levels.⁷ In most countries, the literacy scores for those who grew up speaking a distant language are below 2.0.⁸ The migrants have clearly lower skills in the language of destination than the native population, skills that range from very poor to a level which enables them to ‘manage everyday literacy demands’, but not much more. The gap to the native population is also often close to 1, putting them at an unequivocal disadvantage.⁹

These results can, again, be viewed from the perspective of migration policy, and this raises questions regarding the general success of migration policies employed by countries such as Canada and New Zealand. Despite their selective systems the skills of the non-native speakers are not particularly high – they are roughly average. This also applies to their skill gaps, which also are around average. Instead, Germany stands out as the country with highly skilled non-native-speaking immigrants, as well as a

⁷ An exception here is Germany, where native-speaking immigrants have relatively low scores. Although there is no direct information on this, it is likely to be related to the immigration of Eastern Europeans of German descent. A large part of the German-speaking immigrants in the survey come from Poland, Romania, the former Soviet Union or the former Yugoslavia, and this group is known for its limited German knowledge. As for the high scores for non-native-speaking Irish immigrants, they are based on too few cases to be considered reliable.

⁸ Note here that the Canadian score in column 5 is likely to be an overestimate. It includes immigrants speaking a related language, who in the other countries perform much better than those speaking an unrelated language.

⁹ The differences in Table 1 may of course also reflect differential learning processes among the immigrants in the different countries after arrival. This would primarily be related to length of stay, but also age at arrival. The importance of these two factors for the differences observed is examined in Table A2, showing results from literacy regressions with and without the two variables ‘age’ and ‘years since migration’. Panels A and C in Table A2 basically reiterate the results from Table 1, with the slight difference that the categories ‘same’ and ‘related language’ here have been combined. Panels B and D show the results including the new variables, and although both ‘age’ (negatively) and ‘years since migration’ (positively) are strongly related to skills, the pattern evident in Table 1 appears to be stable. The immigrant variables now indicate the skills of a newly arrived migrant relative to that of natives. The most noteworthy differences in relation to Table 1 is that the British skill gaps decrease and the German and Swedish ones increase. Canada remains in the middle, followed by Switzerland and the USA. The low correlation with the initially hypothesized ranking remains.

fairly small skills gap. Sweden would seem to place second, also with highly skilled immigrants but with a greater gap. Canada, Great Britain, New Zealand and Norway are about equal, while the USA and Switzerland seem to have the biggest problems. This ranking obviously deviates quite substantially from our initial expectations, indicating the difficulties involved in using immigration policy as a strategy for upgrading the labour force. The indications in Table 1 of successful ‘cherry-picking’ on the part of Canada and New Zealand (and Ireland) instead hinges on the availability of a large pool of English speakers. This, in turn, suggests that the possibilities for applying similar systems in other countries are limited.

5. Immigrant earnings

How do these results relate to immigrants’ economic integration? To examine this question we now turn to analyses of immigrants’ earnings relative to the native population. Recall that earnings in the IALS refer to annual gross earnings and that the data are provided in quintile form. The quintile form implies an interval scale (each unit increase of the dependent variable thus involves an equidistant relative earnings boost), and we will therefore make use of standard OLS regression. We have estimated a basic earnings model in which quintile placement has been regressed on the variables sex, age, age squared, years of education, immigrant (or sub-groups) and a constant. In some models, we also include years since migration.

Panel A of Table 2 shows the results for all countries combined, as well as for each of the nine countries separately. As is clear from the leftmost, pooled, model, those born abroad tend to earn less. The point estimate of -0.25 indicates that immigrants in the nine countries on average are located a quarter of a quintile below natives in the earnings distribution, that is, around 5 percentile points. This result is expected, as native-immigrant earnings gaps have been documented in a wealth of country studies.

[[Table 2 about here](#)]

However, the country-specific results evince a fair degree of variation in the earnings gap. Most startling, perhaps, is the finding that in Canada, Great Britain, Ireland, New Zealand and the USA there is no clear evidence of an immigrant-native earnings gap. For Canada and New Zealand, the estimates are also close to zero, suggesting that there is indeed no immigrant earnings disadvantage. Great Britain and the USA display higher but insignificant point estimates. The point estimate for Ireland is actually relatively close to the cross-country average, only much less precisely estimated. In contrast, immigrants in Germany, Norway, Switzerland and Sweden earn clearly less than natives. The German and Norwegian earnings gaps are particularly large, around a half-quintile or 10 percentile points.

One interpretation of these results is that, with the exception of the USA, the countries lacking an earnings gap also have relatively small

literacy gaps, suggesting that similar skill levels could be associated with similar earnings. A direct way of examining this conjecture is of course to explicitly take skill differences into account in the analyses, and Panel B of Table 2 presents results from analyses in which the literacy measure has been added to the models of Panel A. The leftmost column again shows the result from the pooled analyses, and it is clear that the skill differential is important for the earnings differences. Increasing literacy in the destination-country language is positively related to increasing earnings, a one-level increase in literacy skills is associated with an increase of earnings equal to a fourth of a quintile. Moreover, in this pooled model no immigrant earnings gap remains after controlling for literacy differences. It would appear that the literacy differential explains all of the earnings disparities.

These average results also to some extent carry over to the individual countries, as skills are positively related to earnings in all countries. In all countries, controlling for skills – that is, comparing individuals with identical skill levels – also tends to decrease the immigrant earnings disadvantage. The changes in the point estimates are relatively small, however, although the level of significance drops in Germany, Sweden and Switzerland.

Skills are thus important for the economic integration of immigrants, but there is no obvious link between national migration policies that target skilled migrants to different extents and integration. Canada and New Zealand have been successful in the sense that immigrants have the same earnings as natives, but this is also the case in Great Britain, Ireland and the

USA. This, moreover, has little to do with the skills of the migrants, as the results for the Anglo-Saxon countries are similar irrespective of whether one controls for skill differences or not. The disparity is instead between the Anglo-Saxon countries and the other four. This could be a result of differences in migration policy, as Germany, Norway, Sweden and Switzerland have admitted a substantially larger number of refugees. This could explain the disparity to the extent that refugees have greater difficulties in integrating in the local economy. On the other hand, any such difficulties would appear to be independent of the skills of immigrants, as their disadvantage only diminishes somewhat after skills differences are taken into account.¹⁰

One way of exploring the importance of refugees is to look at the two immigrant sub-groups, since in these countries refugees are most likely to belong to the ‘unrelated language group’. This is not an ideal approach as the unrelated language group also includes many migrants arriving for other reasons; however, the data provide no direct information on reasons for migration. The leftmost column of Panel C again presents results for all countries combined, and it is evident that immigrants with unrelated mother

¹⁰ It may be recalled here that the dependent variable measures relative position in an earnings distribution rather than earnings per se. In principle, an identical absolute disadvantage may therefore show up as a relative disadvantage only in the four countries with a more compressed earnings structure. An attempt at assessing the importance of this issue has been made using the Luxemburg Income Study (LIS). The LIS contains roughly comparable income information for most of our IALS countries from around the time of the IALS. Using the Panel A models, the expected earnings percentile of males with mean years of education and age have been calculated for both natives and immigrants. The nominal values of the percentiles from the LIS, and exchange rates from around the time of the surveys, suggest expected earnings differences of around 750 USD in the USA, 1350 USD in Sweden, and 3500 USD in Norway. Although these estimates are crude, do not cover all the nine countries and depend on, for example, which year of the LIS is examined and the exchange rate at the time, they nonetheless do not indicate that the differences in the spread of the earnings distributions offset the differences in earnings rank found here.

tongues are at the greatest disadvantage on the labour market. While immigrants speaking the native language or some variant thereof have the same earnings as the natives on average, those coming from other backgrounds have clearly lower earnings. The point estimates in the country-specific regressions also show that, with the exception of Germany, those speaking a language markedly different from that of the new country do tend to earn less than other migrants. However, the difference is generally small and not significant (significance tests not shown), and it is only in New Zealand and Norway that immigrants speaking an unrelated language clearly trail immigrants speaking the native language. While there may be a difference between the two groups of immigrants, the difference is not as clear-cut as could be expected. As shown in Panel D, this conclusion does not change if we take literacy skills into account.¹¹

These mixed results are of course interesting from a migration policy perspective. Canadian immigrants integrate well, both English- and French-speaking and others. In contrast, the relative success of New Zealand's approach turns out to be related to the fate of their English-speaking immigrants; despite their demand-based selection other immigrants clearly fare worse. Moreover, a demand-oriented migration policy is not a requirement for integration, as is evident from a comparison with the other,

¹¹ Again, the differences in Table 2 may reflect differences in integration processes among the immigrants in the different countries after arrival, and one factor beyond those already included is length of stay. However, in the analyses presented in Table A3 it is only in Britain and the USA (and sometimes Ireland) that the variable is significant. These are also the countries evincing the biggest changes in relation to Table 2. Newly arrived immigrants (irrespective of language) are thus at a clear and quite sizable earnings disadvantage. The effect of residence is generally positive, implying that the disadvantage tends to decrease over time in all countries, but most markedly in Great Britain and the USA.

equally successful, Anglo-Saxon countries. As noted, the earnings measure may complicate comparisons with the other European countries, but migrants to these countries do undeniably worse than the native-born. This does not seem to be related to the composition of the immigrant group, however; it is only in Norway that the two migrant groups clearly differ from each other. Again, it is not clear that a demand-oriented migration policy is associated automatically with markedly better immigrant integration, nor that substantial refugee immigration necessarily poses serious integration problems in itself.

6. The possibility of successful skill importation

Recent European debate on immigration and immigration policy has been based on the premise, implicit or explicit, that stricter selection of immigrants, primarily according to various labour market criteria, will produce a pool of skilled immigrants, simplify their economic integration and boost national economies (see, for instance, Constant and Zimmermann 2005). The analyses of locally valuable generic skills presented here seriously question this assumption. Indeed, if anything these results imply that there is no obvious way to obtain highly skilled immigrants or a self-evident path to their integration.

First, one immediate reflection regarding immigrant literacy is that the group of countries with relatively high immigrant literacy skills consists of countries with substantial immigration from places sharing the same linguistic heritage. Great Britain, Canada, Ireland and New Zealand have

profited from migration within the Anglo-Saxon (and also French in the case of Canada) language community, while Norway (and to a more limited extent Sweden) has benefited from labour mobility among Scandinavian countries. That such a selection of immigrants has a positive impact on immigrant literacy skills is not particularly astonishing. With the exception of Sweden, they also belong to the countries with the lowest literacy gaps and could be said to have secured a migrant workforce with a relatively close fit to their labour markets.

Such mobility is in part likely to be the outcome of self-selection among migrants; it is for instance clearly simpler to move to a country in which one is familiar with the language. It could, however, also be seen as a consequence of an active migration policy: Canada and New Zealand, as well as Norway and Sweden have promoted migration within their language communities by various means. In Canada, this has primarily involved attaching weight to language skills under the points system introduced in the late 1960s. This has also played a role in New Zealand since 1986, and prior to this Great Britain was a favoured country with respect to immigration. In the Norwegian and Swedish cases, the gradual removal of mobility restrictions culminating in the creation of a common Nordic labour market in 1954 obviously simplified intra-Nordic migration. Seen in this light, a policy of successful skill import would seem to consist primarily of an emphasis on migration from countries belonging to the domestic language family.

Clearly, however, for most European countries this is not a viable policy option, and in many countries a substantial part of the immigrant population comes from countries outside their language communities. Given the emphasis placed on migrant selection, it would seem surprising that immigrants speaking a distant language do not perform better in Canada and New Zealand. Their small overall immigrant–native skill gaps are in part related to the low skill level in the native population and in part to the relatively high skills among a large native-speaking immigrant group. Their success in securing highly skilled migrants from unrelated language groups, on the other hand, appears no more than average. (Recall that the Canadian estimate in column 5 of Table 1 is likely to be an overestimate.) Instead, proficiency among immigrants with an unrelated mother tongue is greatest in Sweden, Germany and Norway. Strict migration policies might also affect the distribution of skills, but although immigrants in New Zealand have relatively few low skilled the dispersion in Canada is fairly large. A migrant population with substantial generic skills may in other words be obtained in different ways.

Second, immigrants in Canada and New Zealand do not integrate better than other migrants. Not that they do poorly: on the contrary, there appears to be no difference in the earnings of native and foreign-born workers in these countries. But similar results are also obtained for other countries, with drastically different migration policies. In Great Britain, Ireland and the United States there is also no clear immigrant earnings gap. The fact that the relative position of immigrants is similar in all five

countries, regardless of their very different migration policies, suggests that economic integration can be achieved through various means and not only through the introduction of immigration programmes based on stringent labour demand considerations. For instance, the British and US results indicating a gradual earnings convergence despite substantial initial disadvantages point to the importance of labour market integration after arrival.

A particularly interesting case is of course the USA, where immigrants have been found to achieve earning levels similar to natives despite having the lowest skill levels among all immigrant groups and also being at a substantial skills disadvantage. How this comes about is beyond this chapter, but one potential explanation is that roughly half of the US immigrants in the survey are Spanish-speaking. Many parts of the USA, in particular along the Mexican border, now have substantial Spanish-speaking minorities, so large that they may have developed ethnic economies in their own right. If this is the case, a lack of one generic skill (English literacy) may be compensated by another (literacy in Spanish).

If the advantages of a demand-based migration policy are somewhat ambiguous, the lower earnings of immigrants in Germany, Norway, Sweden and Switzerland would seem to suggest that extensive social and humanitarian immigration may be difficult to handle. Nonetheless, while the data prevent us from focusing directly on refugees, the results in Table 2 suggest that more distant migrants need not inevitably fare worse than others. Moreover, with the exception of Norway, the results presented here

suggest that the difficulties these groups have had in closing the earnings gap is at least in part related to their lack of this type of generic skills. This would seem to be an obvious area for remedial action (see, for instance, Myrberg 2000, for a discussion of how to develop literacy skills among migrants).

Taken together, these results call into question the general importance of migration policy for the possibility of skill import. Although there are large differences in the generic skills of immigrants in the nine countries, these differences do not appear to be related to migration policy in any systematic manner. Of course, migration policy is but one element of the long chain of events leading to permanent resettlement. This selection process starts with the question of who migrates, when and to which country, and continues with integration and potential return migration. Different factors may thus influence this process in numerous ways at various stages, and there may be differences between individuals in how relevant a specific factor is. The role of migration policy in this process may in fact be quite limited.

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Table 1. Mean literacy level among 16 to 65 year-olds by country, country of birth and mother tongue. Standard error in parentheses, sample size in brackets

	Native	Foreign-born					
		All	Same language	Related language	Unrelated language	Diff. col. 3–2	Diff. col. 5–2
	1	2	3	4	5	6	7
Canada [^]	2.75 (0.05) [4175]	2.49 (0.31) [325]	3.23 (0.44) [154]		1.94 (0.24) [171]	-0.26	-0.81***
New Zealand	2.56 (0.06) [2726]	2.39 (0.06) [575]	2.80 (0.09) [344]	2.77 (0.24) [35]	1.77 (0.10) [196]	-0.16**	-0.79***
Germany	2.73 (0.15) [1900]	2.23 (0.24) [162]	2.29 (0.28) [51]	2.20 (0.85) [5]	2.20 (0.24) [106]	-0.50***	-0.53***
Switzerland	2.70 (0.14) [3071]	1.92 (0.12) [1040]	2.53 (0.19) [422]	1.99 (0.14) [179]	1.53 (0.09) [439]	-0.79***	-1.18***
Sweden	3.15 (0.04) [2403]	2.43 (0.12) [241]	2.92 (0.17) [40]	2.88 (0.46) [4]	2.32 (0.14) [197]	-0.73***	-0.83***
Great Britain	2.49 (0.03) [3564]	2.12 (0.11) [247]	2.51 (0.14) [105]	2.76 (0.75) [7]	1.82 (0.16) [135]	-0.36***	-0.67***
USA	2.72 (0.06) [2336]	1.84 (0.08) [579]	2.75 (0.21) [65]	2.19 (0.42) [13]	1.64 (0.08) [501]	-0.88***	-1.09***
Norway	2.91 (0.08) [3064]	2.59 (0.14) [243]	2.96 (0.14) [93]	3.26 (0.20) [40]	1.93 (0.19) [110]	-0.32***	-0.98***
Ireland	2.35 (0.08) [2227]	2.53 (0.12) [142]	2.51 (0.12) [129]	3.44 (0.55) [4]	2.43 (0.44) [9]	0.18	0.08

Notes: International Adult Literacy Survey. [^] Canada only distinguishes between the languages English, French and Other. ***, **, and * indicate significance at the 1%, 5% and 10% levels, respectively.

Table 2. Earnings regressions by country. Standard errors in parentheses

	All	CA	NZ	GE	SW	HE	GB	USA	NO	IE
PANEL A										
Immigrant	-0.25*** (0.08)	0.02 (0.20)	-0.02 (0.07)	-0.43** (0.20)	-0.24*** (0.08)	-0.21*** (0.08)	-0.09 (0.10)	-0.11 (0.11)	-0.55*** (0.10)	-0.19 (0.16)
PANEL B										
Immigrant	-0.11 (0.08)	0.06 (0.18)	0.02 (0.07)	-0.37* (0.19)	-0.18** (0.08)	-0.15* (0.08)	0.00 (0.09)	0.03 (0.12)	-0.49*** (0.10)	-0.19 (0.16)
Literacy skills	0.23*** (0.04)	0.17** (0.08)	0.22*** (0.03)	0.13*** (0.04)	0.10*** (0.04)	0.13** (0.06)	0.21*** (0.04)	0.20*** (0.05)	0.10** (0.05)	0.25*** (0.05)
PANEL C										
Same/Related language	0.04 (0.12)	0.05 (0.18)	0.16* (0.08)	-0.49** (0.22)	-0.18 (0.25)	-0.12 (0.09)	-0.00 (0.12)	0.04 (0.18)	-0.36*** (0.11)	-0.15 (0.16)
Unrelated language	-0.38*** (0.09)	-0.01 (0.28)	-0.43*** (0.12)	-0.40 (0.25)	-0.26** (0.11)	-0.31** (0.15)	-0.20 (0.17)	-0.15 (0.12)	-0.83*** (0.12)	-0.67 (0.47)
PANEL D										
Same/Related language	0.06 (0.10)	0.06 (0.18)	0.14 (0.08)	-0.45** (0.22)	-0.16 (0.25)	-0.10 (0.10)	0.02 (0.12)	0.06 (0.17)	-0.34*** (0.11)	-0.16 (0.16)
Unrelated language	-0.19** (0.09)	0.06 (0.27)	-0.26** (0.12)	-0.33 (0.24)	-0.19* (0.10)	-0.21 (0.16)	-0.04 (0.16)	0.02 (0.13)	-0.72*** (0.13)	-0.53 (0.42)
Literacy skills	0.22*** (0.04)	0.17** (0.08)	0.21*** (0.03)	0.13*** (0.04)	0.10** (0.04)	0.13** (0.06)	0.21*** (0.04)	0.20*** (0.05)	0.10* (0.05)	0.25*** (0.05)
Notes: International Adult Literacy Survey. Dependent variable earnings quintile rank. OLS regression with jackknife standard errors. In addition to variables shown, all models also include the variables gender, age, age squared, years of education, and a constant. ***, **, and * denote significance at the 1%, 5% and 10 % levels, respectively.										

Appendix

Table A1. International Adult Literacy Survey: sample sizes and response rates by country

	Number of respondents	Response rate (per cent)	Number of respondents, age 16–65		
			Native	Foreign-born	Share foreign-born
Canada	5660	69	4175	325	7.2
New Zealand	4223	74	2726	575	17.4
Germany	2062	69	1900	162	7.9
Sweden	3038	60	2403	241	9.1
Switzerland	4140	52	3071	1040	25.3
Great Britain*	3811	63	3564	247	6.5
United States	3045	60	2336	579	19.9
Norway	3307	61	3064	243	7.4
Ireland	2423	60	2227	142	6.0

Note: * The response rate refers to the UK, as no separate rates are provided for GB and Northern Ireland.

Table A2. Literacy regressions by country. Standard errors in parentheses

	NZ	CA	GB	USA	IE	GE	HE	SW	NO
PANEL A									
Immigrant	-0.16** (0.08)	-0.26 (0.31)	-0.37*** (0.11)	-0.88*** (0.09)	0.18 (0.13)	-0.50*** (0.12)	-0.79*** (0.07)	-0.73*** (0.10)	-0.32*** (0.10)
PANEL B									
Immigrant		-1.03** (0.48)	-0.33 (0.22)	-1.40*** (0.15)	0.39 (0.24)	-0.75*** (0.14)	-1.11*** (0.14)	-1.12*** (0.17)	
PANEL C									
Same/Related language	0.25*** (0.07)	0.48 (0.45)	-0.04 (0.14)	-0.08 (0.21)	0.19 (0.12)	-0.44*** (0.17)	-0.32*** (0.09)	-0.23 (0.17)	0.15* (0.09)
Different language	-0.79*** (0.14)	-0.82*** (0.23)	-0.67*** (0.16)	-1.09*** (0.08)	0.08 (0.44)	-0.53*** (0.14)	-1.18*** (0.09)	-0.83*** (0.12)	-0.98*** (0.16)
PANEL D									
Same/Related language		-0.02 (0.59)	-0.13 (0.22)	-0.68** (0.29)	0.40* (0.24)	-0.68*** (0.20)	-0.48*** (0.16)	-0.73** (0.22)	
Different language		-1.14** (0.49)	-0.55** (0.23)	-1.39*** (0.14)	0.21 (0.51)	-0.77*** (0.16)	-1.30*** (0.14)	-1.14*** (0.17)	
Notes: International Adult Literacy Survey. In addition to the variables shown, Panels B and D also include the variables age and years since migration. In New Zealand and Norway, no information was collected on date of immigration and these countries are consequently left out of these analyses.									

Table A3. Earnings regressions by country. Standard errors in parentheses

	CA	GB	USA	IE	GE	HE	SW
PANEL A							
Immigrant	-0.43 (0.65)	-0.88*** (0.25)	-0.58*** (0.17)	-0.42** (0.21)	-0.71*** (0.27)	-0.21*** (0.08)	-0.35*** (0.13)
PANEL B							
Immigrant	-0.34 (0.63)	-0.81*** (0.22)	-0.35* (0.19)	-0.39* (0.20)	-0.64** (0.26)	-0.26* (0.14)	-0.25* (0.15)
Literacy skills	0.16* (0.08)	0.22*** (0.04)	0.19*** (0.05)	0.26*** (0.05)	0.12*** (0.04)	0.13** (0.06)	0.10** (0.04)
PANEL C							
Same/Related language	-0.45 (0.67)	-0.85*** (0.30)	-0.62* (0.34)	-0.43** (0.19)	-0.87*** (0.28)	-0.26* (0.14)	-0.31 (0.34)
Different language	-0.42 (0.66)	-0.90*** (0.25)	-0.58*** (0.17)	-1.06* (0.55)	-0.68** (0.30)	-0.43** (0.18)	-0.35*** (0.13)
PANEL D							
Same/Related language	-0.39 (0.64)	-0.87*** (0.27)	-0.49 (0.32)	-0.40** (0.19)	-0.82*** (0.29)	-0.20 (0.15)	-0.24 (0.35)
Different language	-0.32 (0.64)	-0.77*** (0.22)	-0.35* (0.19)	-0.84* (0.47)	-0.60** (0.28)	-0.30 (0.18)	-0.25* (0.14)
Literacy skills	0.16** (0.08)	0.22*** (0.04)	0.19*** (0.05)	0.25*** (0.05)	0.12*** (0.04)	0.13** (0.06)	0.10** (0.04)
Notes: International Adult Literacy Survey. Dependent variable earnings quintile rank. OLS regression with jackknife standard errors. In addition to variables shown, all models also include the variables gender, age, age squared, years of education, years since immigration, and a constant. ***, **, and * denote significance at the 1%, 5% and 10% levels, respectively.							