

Immigration policy and the skills of Irish immigrants: evidence and implications.

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## Introduction

Migration is one of the dominant themes in Irish economic history. Over the last 200 years, it has been primarily a story of emigration. The causes and consequences of large-scale emigration out of Ireland have interested 19<sup>th</sup> century pamphleteers and political economists (Marx, 1870; Cairnes, 1873), contemporary economic historians (Hatton and Williamson, 1993, 1998; Ó Gráda and O'Rourke, 1997), and economists interested in post-war Ireland (Walsh 1974; Barrett 1999). The last 15 years have seen a marked change in the pattern of Irish migration. Ireland has experience positive net immigration since 1991. This was initially due to large flows of returning Irish emigrants, attracted by improved conditions in the Irish labour market.<sup>1</sup> Since the late 1990s, immigrant inflows have seen declining numbers of return migrants, and increasing numbers of foreign-born migrants. A considerable proportion of foreign-born arrivals now consist of immigrants who have no prior ties to Ireland, and flows are increasingly made up of immigrants from non-anglophone countries.

The transformation of Irish migration has lead to a growing debate regarding immigration policy. This has been a major policy issue in North America since the mid-19<sup>th</sup> century, and within Europe since (at least) the end of the Second World War. Less than 20 years after the end of emigration, it appears that Ireland faces the same challenges as her partners in the European Union, and other immigrant-receiving countries in North America and Oceania. I begin this paper with a review of the lessons that can be drawn from the experiences of other immigrant receiving economies. Labour economists have documented how policy regimes and economic conditions can shape the size and the composition of immigrant inflows. There are also substantial lessons to be drawn from historical research.

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<sup>1</sup> Positive net immigration also occurred in the 1970s, as expatriate Irish returned to Ireland in response to improved economic conditions. (Barrett 1999)

International migration one hundred years ago was largely unconstrained by formal policy; analyses of past immigrant flows can tell us much about where migration pressure is likely to be most intense, as well as the likely composition of flows over time.

In light of the key themes emerging from the historical experiences of other countries, I then offer a preliminary examination of recent Irish immigration. Are the new immigrants predominantly skilled or unskilled? Has the shift in immigrant sources led to a decline in skills (and likely earnings capacity) among immigrants? Some evidence on these questions has been produced based on the distribution of work permits across sectors and nationality (Ruhs 2003). I use a recently released OECD database of immigrant education attainment across member states to examine these questions. The information contained in this database, while far from perfect, allows Irish immigrants to be placed in a broader international context.

Evidence on immigrant skills can be brought to bear in identifying key issues in Irish immigration policy. Prior to 2004, most economic migrants would fall into one of two categories.<sup>2</sup> Immigrants from the European Economic Area (EEA) have had unfettered access to the Irish labour market since 1992. Evidence on their educational attainment should tell us something about how Irish immigrants are self-selected under a *laissez-faire* policy regime. Other economic immigrants to Ireland require a work permit or work visa.<sup>3</sup> While Ireland appears to have been fairly liberal in issuing permits to employers looking to import workers from abroad, the conditions imposed on permit-holders are quite restrictive. Permits and visas are limited in duration, and tie employees to a particular employer, or in the case of a visa, to a particular occupation. With the accession of ten new countries to the European

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2 A third source of economic migrants would be the holders of business permits, who obtain the right to reside in Ireland in exchange for a minimum investment of €300,000.

3 Ireland is also beginning to receive substantial numbers of non-economic migrants. About 48 thousand applications for asylum were processed between 1999 and 2003. Student visas are another source of immigrants to Ireland. There is some debate as to whether student immigrants are motivated by economic conditions or the desire to enter the Irish labour market. Non-EEA student visas currently allow the holder to work for up to 20 hours a week, a more generous entitlement than in many other immigrant receiving economies.

Union in 2004, the policy regime facing some of Ireland's leading sources of immigrants has seen a major change. Citizens of the accession countries now have free access to the Irish labour market, and there does appear to have been a surge in accession country immigrants since May 1 2004.<sup>4</sup> Will accession immigrants swamp the Irish labour market? Are post-accession immigrants likely to resemble pre-accession flows from this region? For continuing immigration from outside of the EEA, the nature of immigration policy will remain important. Is the current orientation towards temporary migration appropriate, or should a scheme favouring permanent migration be considered? Economics theory and evidence from Ireland and around the world can again be marshalled to help select among the alternatives.

The final point considered in this paper are the long-run implications of the broadening of migration into Ireland. While the absolute numbers of immigrants entering Ireland are small, they almost certainly represent the first link in a chain of potential migrants stretching back to the home country. Migration for the purposes of family reunification is likely to follow the arrival of the first generation of economic migrants. How will this affect the skill distribution of the immigrant population and overall conditions in the Irish economy? The paper will conclude with some speculative comments on these issues.

## **Immigration and immigration policy: issues and evidence**

### *Immigration and the host economy*

One of the most debated aspects of immigration is the potential impact on host country economies. If immigration is likely to have a major impact on conditions, identifying the economic aims of immigration policy must be placed near the front of the policy agenda. Economists have presented a range of reasons as to how immigration could impact upon a

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<sup>4</sup> These immigrants are restricted, however, in their access to state-funded social benefits.

host economy. One of the classic questions is the impact that immigration might have on the wages and employment of the existing population. If immigration can be treated as a shock to the supply side of the economy, simple economic theory would predict that host country wages and employment would be adversely affected. While the theory is straightforward, identifying the actual impact of immigration on labour markets has proved elusive. Economists have applied a range of techniques to assess the relationship between immigration and conditions in host labour markets, and few have found evidence of a substantial impact on native outcomes.<sup>5</sup> Scholars of 19<sup>th</sup> century migration, however, argue that international migration under *laissez-faire* conditions had profound effects on economic conditions around the globe. Hatton and Williamson (1998) report that US wages would have been 10-14 percent higher in 1910 in the absence of post-1870 immigration. Work by O'Rourke and Williamson (1999) suggests that the major labour market impacts of migration were felt in the emigrant-sending countries, where migration caused wages to rise rapidly, stimulating convergence with destinations in the New World. Both branches of research stress the potential for distributional effects. O'Rourke and Williamson (1999) argue that the 19<sup>th</sup> century mass migration of predominantly unskilled labour from Europe to the US increased American inequality, leading to demands for restrictive migration policy.<sup>6</sup> Whether the divergence between historical and present-day findings is a result of differences in econometric techniques, or differences in the scale of migration, is open to debate. A sensible interpretation may be that migration at rates common in contemporary economies will have moderate effects on receiving labour markets, and substantial effects on labour markets in the origin. Distributional issues, related to the skills of incoming workers in the host economy, will be of critical importance.

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5 See Friedberg and Hunt (1995) and Borjas (1999a) for surveys of this literature.

6 Goldin (19xx) outlines the link between migration and the emergence of restrictive immigration policies in the late 19<sup>th</sup> and early 20<sup>th</sup> centuries.

Another area of interest is the interaction of immigration and the welfare state.

Immigration could prove costly if migrants make disproportionate use of social benefits. On the other hand, an immigration policy that favours the entry of young active workers could reduce dependency ratios in rich economies that feature ageing populations, thus helping to sustain the social safety net in the longer run. Most studies of social assistance recipiency find that immigrants are less likely to take up social assistance than demographically similar natives. The key words, however, are “demographically similar”. If immigrants have lower labour market capacities than native-born workers, they will make disproportionate use of social assistance. Economies in continental Europe have seen rising rates of recipiency accompany declining immigrant skill over the course of the 1990s (Brücker et al, 2001). While immigration can add fresh young workers to an aging population, it is unlikely that immigration can have a substantial impact on dependency ratios. Green and Green (1999) report that a trebling of (disproportionately young) Canadian inflows over a fifty-year period would reduce the proportion of the population over the age of 65 by only 5 percent. As a whole, it appears that so long as immigrants have the skills to succeed in host country labour markets, they are unlikely to have a major impact on the sustainability of the welfare state.

A further argument is that immigrants can fill economic needs not met by the native labour force. This perspective holds that immigration policy can be a useful method to fill occupations in which domestic workers are in short supply, and may also have a role in expanding the human capital endowment of the host economy.<sup>7</sup> Arguments in favour of migration to fill short-term requirements in the labour force have shaped migration policy on both sides of the Atlantic. Many European economies have operated temporary migration

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<sup>7</sup> A related argument, though one I will not examine in great detail here, is that national economies may feature increasing returns to scale. Some scholars argue that greater population size promotes innovation, and thus immigration can lead to enhanced productivity. While the link between population size and productivity growth is a key assumption in recent theoretical models of the long-run transition from economic stagnation to sustained growth, there is little historical evidence to support this view. (Voth 2003)

policies to fill “gaps” in domestic labour supply. The employer-driven allocation of work permits in Ireland would appear to work along this lines. Employers are entitled to apply for work permits to fill positions for which suitable candidates who do not require work permits are unavailable. Policies oriented towards permanent migration often reward potential immigrants in categories in high demand, and restrict migration into protected or high-unemployment occupations.

In the context described above, immigration policy is best seen as a potential substitute for education policy, and the relevant question is whether targeted migration is a superior approach to dealing with occupational shortages. In economies where permanent migration policy is the norm, the main shortcomings are that it is difficult to identify what sectors ought to be targeted, and that many immigrants do not enter their intended occupations after migration (Green 1995). Green and Green (1995) document the declining importance of occupational targeting as part of the Canadian point system, while Bauer and Zimmermann (1999) give this difficulty a major role in their argument against the adoption of a point system for European Union countries. As Green and Green (1999) conclude, it is likely that workers “on the ground”, be they immigrant or native, will do a better job of targeting high-demand occupations than will a migration policy that is costly to change.<sup>8</sup> In the case of an employer-led temporary migration policy, immigrants are recruited to directly positions that have not been filled by non-immigrant (or in the Irish case, non-EEA) labour. Immigrants are by definition filling “gaps”, but there are reasons to be hesitant regarding this policy orientation. Labour market conditions change over time, meaning that current immigrants may not have skills suited for the “gaps” that emerge in the future. This would be not a major concern if a policy of temporary contracted migration is enforced; today's

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<sup>8</sup> Another style of analysis, as seen in Borjas (1995), considers an economy characterised by a production function in which skilled labour, unskilled labour, and capital are employed as factors of production. This model suggests that the “surplus” from immigration, will be larger if immigration tends towards skilled individuals if capital and skilled labour are complementary.

temporary migrants will return to their homelands upon the expiry of their permits, to be replaced by migrants with skills more suited to the changed conditions in the domestic labour market. The enforcement of return migration is crucial for this policy to succeed; however, empirical evidence from migration regimes around the world suggest that temporary migration tends to transform itself into permanent migration.<sup>9</sup> If, after accounting for the risk of deportation, labour market opportunities for illegal immigrants (having remained past the expiry of their work permit, without renewal) exceed the opportunities at home, one would expect immigrants to attempt to remain in the host economy. Various schemes have been attempted to enforce the return of temporary immigrants, and most have met with little success.<sup>10</sup> If temporary migration results in the recruitment of immigrants who are less able to adapt to changing conditions in the host economy, the tendency of these migrants to linger will place additional demands on the welfare state and will likely stimulate anti-immigrant sentiment among the native population.

Other proponents of immigration point to the investment generated by migrants, and the trade links created by migration flows between source and destination economies. The notion that investment and trade will follow the settlement of certain types of immigrants is often used to motivate the recruitment of “investor immigrants.” This is a feature of current Irish policy, with business permits being issued to nationals countries outside the EEA and states with Association Agreements who are willing to invest €300,000 in the establishment of a business in Ireland. Evidence from Canada suggests, however, that while trade and immigration are linked, it appears that the volume of independent immigrants is a better predictor of trade flows than the volume of investor class immigrants (Head and Ries 1998).

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9 Epstein, Hillman, and Weiss (1999) demonstrate conditions under which under guest-worker programs result in populations of illegal immigrants.

10 One exception is a recent policy in Israel under which temporary migrants are forced to save part of their legal earnings, which are received by the worker as a lump sum upon departure from Israel (Brücker et al, 2001, p. 134)



While trade does appear to follow the arrival of immigrants, it is likely that there are rapidly diminishing returns to additional flows in this regard (Green and Green 1997). It is also not evident that investor immigrants will have a substantial marginal effect on inward investment. In economies that are open to international capital flows, the investment that accompanies immigrants will essentially crowd out additional capital imports.

A final consideration would be the possible benefits to having a population with greater diversity. Lazear (2000) argues that gains from trade exist in interactions between individuals of different backgrounds. This theory proposes that individuals of different backgrounds possess different sets of knowledge; the less overlap between the knowledge of interacting individuals, the larger the gains that can be made by the transmission of knowledge through the process of interaction. Gains from diversity imply that a policy of “balanced” immigration is desirable. The model also reminds us of the importance of general human capital: for the gains of diversity to be realised, immigrants and natives with disjoint backgrounds must be able to communicate in a common language. From the perspective of the host economy, immigrants who can speak the local language (or are more likely to rapidly acquire fluency) offer greater potential benefit.

### *Who migrates?*

Much of the above discussion suggests that the net benefits to be captured by setting an immigration policy to achieve economic aims are largely illusory. This is reflected in recent quantitative studies of prospective migratory scenarios in Europe.<sup>11</sup> The skills of immigrants, however, do likely matter: if migrants do not possess sufficient general human capital to adjust to conditions in the host economy, the potential costs of immigration are

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<sup>11</sup>As an illustrative example, simulations of the potential impact of East-West migration in Europe on large states like Germany and the UK has been estimated to be in the order of one percent of GDP – a positive impact if flow consist of skilled workers, and a negative impact if flows are dominated by the unskilled (Bauer and Zimmerman, 1999).

heightened, as are any distributional consequences. Many contemporary studies argue that immigrant skills are closely associated with immigrant origin. Immigration is strictly controlled in most present-day economies through the use of quotas, permits, and other administrative methods, and these tools may play an important role in shaping the origins of the immigrant population. An important question is how large flows would be, and from what destinations, in an environment of *laissez-faire* migration. An understanding of the determinants of migration in such an environment can help generate informed predictions as to how the international mobility of labour will evolve when migration barriers are reduced. In the Irish context, particular interest is directed at future flows from the accession countries to the European Union, as their nationals now have virtually unfettered access to Irish labour markets.

Evidence from late 19<sup>th</sup> and early 20<sup>th</sup> century migration towards the New World offers a long run perspective on the forces driving migratory flows. Hatton and Williamson (1998) model of European emigration to the New World between 1860 and 1913. They find that while economic conditions at home and abroad were important determinants of migration flows, demographic factors also have an important role to play. Population growth in the source has a strong impact on future migration in their model, and the size of the emigrant stock abroad plays an important role in reinforcing migration trends over the long run. Economic historians have also used the framework of a gravity model to examine immigration to “open” American labour markets in the late 19<sup>th</sup> century (for example, Dunlevy and Saba 1992). One important result in this literature is that distance plays a strong role in determining the size of flows, with source countries closer to the Atlantic seaboard (or in the case of Canada, on the other side of the 49<sup>th</sup> parallel) supplying more immigrants to the United States, all else equal. These findings are unlikely to surprise

many economists, but they can be put to good use in determining the migration potential of source regions. Immigration is more likely to become a flood when the destination is close, an expatriate community already in place, and the source economy replete with young, unattached workers. Emigration is also a self-limiting process; as economic and demographic conditions at home change, demand for migration will attenuate quite rapidly (O'Rourke, 2004).

A second branch of migration research focuses on the nature of immigrant self-selection within source economies. Whether sources supply immigrants from the top or bottom end of their domestic skill distribution will also affect the composition of immigration and the result of any economic calculations as to the attractiveness of migration. What forces are likely to influence the selection of who migrates? Economic theories of individual migration typically treat the decision to emigrate as an investment decision (Sjaastad 1962). Potential migrants compare the present value of the benefits of migration – the discounted future stream of higher earnings associated with residence and work abroad – with the costs of migration. As identified by Borjas (1987), the benefits to migration may vary across individuals in accordance with their skills. Economies that feature high levels of dispersion in earnings offer better returns to skilled workers, and are predicted to be attractive to skilled migrants originating in source countries with less dispersed earnings. Destinations which feature low income inequality will prove more attractive to the relatively unskilled who originate in regions with more dispersed earnings. The relationship between source country and economic performance has been an area of intense interest to labour economists. Findings from contemporary labour markets suggest that the shift from European sources to developing countries in Latin America, Africa and Asia, has led to declining skill and earnings capacity. (Borjas 1985, 1994; Brücker et al 2001). Historical evidence is more

nuanced; a comparison of “old” and “new” immigrants in the early 20<sup>th</sup> century United States indicates that the “new” immigrants from southern and eastern Europe had steeper earnings profiles than the “old” immigrants (Minns 2001). It may be that the crucial element is not the origin of the migrants, but rather the intentions of immigrants once arrived in the source economy. The demographic characteristics of immigrants to North America one hundred years ago are those of economic migrants in search of labour market opportunities; recent migration flows to mature economies feature large numbers of migrants seeking family reunification with relatives already resident in the source country. Economic migrants from developing countries today may have high potential earnings capacity, but this is obscured by increasing non-economic migration from the same place of origin.

### **A picture of Irish immigrant skill**

How can lessons from historical and international evidence help in framing the present day immigration debate in Ireland? We first need to establish the nature of recent migration into Ireland. It is now well known that return migration to Ireland has declined, and that returnees and immigrants from Britain and the United States are being replaced by immigrants from the EEA (as it stood in April 2004) and other sources further afield. Therefore, Irish immigration has quite rapidly begun to shift away from being composed primarily of individuals with some familiarity with customs and institutions in Ireland and the broader anglophone world. Where are the immigrants coming from, and has Ireland been able to attract skilled individuals as part of these flows?

A recently released OECD dataset reports on the size of the stock of immigrants for all member nations in 2002, with these stock further subdivided by country of birth and educational status.<sup>12</sup> Ideally one would like to have this information for the flow of

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<sup>12</sup> The Irish component of the OECD database is drawn from the 2001 Census of population. For most other

immigrants into Ireland since 1998, but given the recent nature of the “new” immigration to Ireland, the composition of immigrant stocks from most sources other than the US and UK should be a fairly close match to the underlying flows in the past 5 years.<sup>13</sup> Evidence on the uptake of work permits is another good indicator of the leading sources of Irish immigrants. These figures are informative regarding the flows of certain types of immigrants from certain destinations, but do not identify EU immigrants or other migrants arriving in Ireland through avenues other than the possession of a work permit.

Table 1 lists the top twenty sources of Irish immigrants in 2002. Column (1) lists the stock of immigrants from each source country present in the Census of that year. Columns (2) and (3) offer two measures of the educational attainment of the stock from each source country: the proportion having tertiary education, and the proportion possessing only primary education. Unsurprisingly, Great Britain and the United States head the list of immigrant stocks. While immigrants from the the UK are not particularly skilled, the majority of Americans in Ireland have attended college or university. Below these two countries, we see a mix of nearby and distant sources. Anglophone source countries are important, with almost 19,000 immigrants hailing from South Africa, Australia, Canada, and New Zealand. The education data for these origin groups suggest skill levels that are quite similar to those of American immigrants. EU-15 sources also figure prominently, with German, French, Spanish, Italian and Dutch immigrants represented in Table 1. The include considerable numbers of recent arrival. Of the 27 thousand immigrants from France, Germany, Italy, Spain, and the Netherlands, over 11 thousand (about 40 percent) arrived in Ireland after 1996, with more than half of French, Italian, and Spanish migrants having been in Ireland less than

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OECD countries, the data is derived from Census records in 2001, 2002, or the most recent available year. See Dumont and Lemaître (2003), for preliminary work with this data.

13 The stock of immigrants in Ireland is included as part of the tabulations from the 1996 Census of population. Unfortunately, the available data for 1996 is less informative as regards country of origin, with by-birthplace stocks listed only the UK and the EU-15.

5 years in 2002. EU immigrants can migrate freely to Ireland, and their characteristics give a good picture of the nature of migrant self-selection between Ireland and her neighbours. The message that one would take from this table is that EU immigrants in Ireland are if anything more skilled than their Anglophone counterparts from North America, Oceania, and Southern Africa. Outside of the (old) EEA and the English-speaking world, three developments can be highlighted. The first is the presence of large numbers of immigrants from Eastern Europe. Tabulations of work permits suggest that Latvia, Lithuania, and the Ukraine figure most prominently within the ex-USSR category. We will see that these immigrants take up a large proportion of the work permits issued in Ireland (especially prior to May 2004). At first glance, Table 1 suggests that Central and Eastern European immigrants to Ireland are among the least skilled in Ireland; among Romanian immigrants and arrivals from the former Yugoslavia, over 30 percent lack a secondary education.<sup>14</sup> Immigrants from the former USSR are also less educated than most other European immigrants in Ireland; unfortunately the data do not allow for a separation between the various new states that make up this entity. Asian immigrants have made a substantial foothold in Ireland. These immigrants also account for a large proportion of Irish work permits, particularly arrivals from the Philippines and the Indian sub-continent. Over two-thirds of Philippino, Indian, and Pakistani immigrants have a third-level education, while less than fifty percent of Chinese and Malaysian immigrants have the same level of qualifications. Table 1 also confirms the important presence of the Nigerian community in Ireland, who appear to be roughly mid-table in terms of education among immigrants.<sup>15</sup>

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<sup>14</sup> Polish immigrants just miss out this table, but make up a large proportion of issued work permits in 2002 and beyond. About 35 percent of Poles present in Ireland in 2002 held third-level qualifications.

<sup>15</sup> Note that Nigerians dominate demands for asylum in Ireland, with about 35 percent of asylum applications in 2003.

The final column in Table 1 lists average educational attainment at home for the twenty source countries under consideration.<sup>16</sup> A quick glance at the figures makes clear that the average education of immigrant populations in Ireland bears little relationship to average educational attainment at home. Among the relatively wealthy countries listed, the best educated immigrants appear to come from France and Spain, which, by European standards, have low levels of average education at home. Eastern Europeans are on average about as well-educated as their counterparts in the West, but it is clear that Ireland has not received as favourable a draw from these populations. The figures for Asian immigrant in Table 1 confirms the overall pattern; some groups are highly-skilled, others less so, and these differences hold little relationship with average educational attainment at home. The data as a whole suggest that Irish immigrants are predominantly economic migrants, with characteristics shaped by the self-selective nature of flows between particular source countries and Ireland.

### **National origin and education in an international context**

In Table 2, I extend the analysis of immigrant educational to a subset of fellow European economies. The educational attainment of the Irish “top 20” is compared to immigrants of the same origin in France, Belgium, Spain, and the United Kingdom. The reader should use some caution in making comparisons based on Table 2. Self-reported measures of education are often overstated, and whether the qualifications of all immigrants should be treated as equivalent to domestic qualifications is open to debate. The figures presented are also subject to the caveat that there may be important demographic differences between immigrant groups within and across countries. Many European economies have

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<sup>16</sup> The data refer to average years of schooling in each source country among the population aged 15 years and above. The source is Barro and Lee (2000).

immigrant communities much longer established than those in Ireland, and it is possible that older immigrants have a very different distribution of (relative) skills than do recent arrivals. With these limitations in mind, what can be concluded from the numbers on display? Most striking is the evidence that Ireland's immigrants are highly skilled, relative to foreign-born populations in other European economies. For 12 of 20 source countries, the Irish-resident group is has the largest proportion with higher education. Earlier studies (Brücker et al , 2001) have attribute the education profile of Irish immigrants to high skill levels among immigrants originating in the the United States, but it is clear from Table 3 that recent years have seen Ireland attract highly-educated immigrants from both high-income and low-income countries. Caution is required in comparing Ireland's young, recently educated immigrant stock with the more seasoned immigrants of other European economies. However, the bulk of research on European migration suggests that the skills of recent immigrants have declined relative to earlier waves of immigrants, and this is usually thought to reflect the changing composition of the source of immigrants since 1990. In terms of education, there is less evidence of a similar trend accompanying the rise of the “new” immigration in Ireland.

While the above analysis suggests that Irish immigrants are skilled by international standards, some of the relatively large immigrant groups do not appear to be as skilled as the equivalent communities in other European economies. In particular, Ireland does not appear to fare as well in selecting immigrants from Central and Eastern Europe; while immigrants from the former Yugoslavia appear among the list skilled on the continent, the UK, and to a lesser extent Belgium and France, have to attract more educated arrivals from the former Romania and the former Soviet Union. As Central and Eastern Europeans have migrated in increasingly large numbers to Ireland since 2002, lower levels of education among this group could lead to an unraveling of the relatively positive picture suggested thus far.



## **Self-selection, migration policy, and immigrant skill**

Recent Irish immigrants are predominantly economic migrants, and as such their skills are unrepresentative of “average” skill levels at home. The evidence on education suggests that there is little reason to presume that the potential fortunes of the immigrant population will decline as the primary source for immigrants shift from countries with high average skill levels to countries with low average skill levels. This does not imply, however, that economic conditions at home and abroad are unimportant in shaping the character of immigrant flows between Ireland and particular source countries. The structure of earnings in Ireland relative to the source country may be important determinant of immigrant skill levels. Migration choices are also constrained by immigration policy. In this section, I assess what can be learnt through an examination of the skill composition of immigrant flows entering Ireland under different policy environments.

### *EEA immigration*

Immigrants from the European Economic Area have had free access to Irish labour markets since 1992. Therefore, their migration decision are a true test of self-selection; no policy is in place to limit intake to the highly skilled or those who have established contact with particular employers. Given freedom of movement between Ireland and the rest of the EU, it is likely that the returns to skill play an important role in determining who chooses to locate in Ireland. Can the self-selection hypothesis espoused by Borjas (1987) explain the patterns of labour mobility within the EU? Pane A of Table 2 lists the ratio of incomes at the 90<sup>th</sup> and 10<sup>th</sup> percentiles for a selection of EU states.<sup>17</sup> This measure of income inequality can be interpreted as a rough proxy for the returns to skills across the countries. These data

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<sup>17</sup> The figures are drawn from Nolan and Smeeding (2004)

suggest that Ireland is near the top of the EU on this measure, and well above most continental members. When absolute levels of income are considered, Nolan and Smeeding (2004) estimate that the gap between the top and bottom ten percent in Ireland is equal to \$32,473 US dollars at 2000 PPP, compared to \$29,960 for the UK, \$22,510 for the Netherlands, and \$21,830 for Germany.

That Ireland leads the European table of income inequality is quite possibly an undesirable policy outcome, but the implications for migration, particularly within the EU, are important. High returns to skill in Ireland appear to have attracted highly educated immigrants from continental Europe. These flows may have served to dampen further rises in inequality, much as the return of skilled expatriate Irish in the early 1990s are thought to have had a similar effect (Barret, FitzGerald, and Nolan, 2002).

#### *Non-EEA immigration*

In the Irish case, economic migrants who do not possess EEA passports require a work permit or work visa to participate in the Irish labour market. Work permits, for which the employer makes the application, legitimize the work relationship between a particular employer and employee. For a permit to be granted, the employer must establish that they have been unable to fill the employment position with an individual who does not require similar authorization<sup>18</sup>. Immigrants who enter Ireland on this basis do not have the opportunity to search for employment that better matches their skills. These permits are usually granted for a period of 12 months, and work permit holder are not entitled to state-funded medical care, education, or social welfare. The work permit scheme has recently been complemented by a work visa and work authorisation scheme. Since 2000, potential

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<sup>18</sup> The letter of the law states that employers must advertise position nationally and throughout the EEA for a minimum of four weeks before searching for workers outside of the EEA.

employees in sectors featuring labour shortages having secured a job offer in Ireland can receive employment clearance before immigrating to Ireland.<sup>19</sup> Work visas are granted for a two-year period, and holders of these permits are allowed to change employers, so long as they remain in the same occupational class. While holders of these visas do not have the right to state-funded medical care, education, or social welfare, they may be accompanied by spouses and dependent children, with minors under the age of 18 being eligible for state-funded primary and secondary education.<sup>20</sup>

Table 4 provides a statistical overview of the recipients of work permits in Ireland. The first three columns lists the number of work permits issued to national groups in the years between 2002 and 2004. Columns four and five summarize the proportion of immigrants from each source region with third-level education in Ireland and across the entire OECD. Where Ireland appears to have done particularly well in attracted highly educated immigrants is from countries with strong Anglophone traditions (due to being colonies of either Great Britain or the United States) in the developing world. In particular, consider the case of immigrants from the Philippines, India, and Pakistan. It is likely that there is a relatively larger pool skilled workers from these countries who are fluent in English than is the case among their counterparts in South America or Eastern Europe. The employer-led permit system would also facilitate the recruitment of skilled labour from these countries; English-speaking recruiters can verify credentials at lower cost than in economies that do not have the same extent of Anglophone traditions. Skilled workers from Central and Eastern Europe may be more attracted to migration possibilities offered on a permanent basis. In the Canadian case, for example, a match with an employer is not required prior to migration, which means that immigrants can concentrate on investing in host-country specific human capital before

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19 In 2001 (check), occupations covered by this scheme included positions in information and computing technology, architects, construction engineerings, quantity and building surveyors, town planners, and registered nurses.

20 Visa holders must have been in Ireland for three months before being joined by their family.

beginning an employment relationship. The OECD data on immigrant education supports this hypothesis. The percentage of the Canadian adult immigrant stock with third-level education from the former Soviet Union (49), Romania (54), Poland (35), and the former Yugoslavia (30) match or exceed the figures for the same stocks in Ireland. Brazilian immigrants in Canada are also more likely to have some college or university training than their Irish counterparts (49 percent versus 25). Once again, these comparisons must be interpreted carefully, as demographic differences between these groups will be likely related to educational attainment. At first glance, however, the comparison suggests that a policy of permanent migration (complemented by a points system, as discussed in more detail below), may be more effective in attracting immigrants with higher levels of general human capital who lack host-country specific human capital.

Table 5 lists the distribution of work permits by occupation for leading sources of Irish immigrants. Anglophone immigrants from Australia, Canada, New Zealand, and the United States are concentrated in professional-type occupations, with weekly wages ranging from €750 to €1200 in 2002.<sup>21</sup> Asian immigrants also have substantial presence in the top end of the occupational distribution, but personal and protective service emerges as a dominant category in many cases. This is an extremely heterogeneous category, as it includes workers engaged in domestic service, with weekly wages of about €250, catering employees, as well as nursing and other medical services, where weekly wages are over €700. Eastern European migrants are much more concentrated in agriculture, “other services, and “other” occupations, where weekly pay tends to be in the order of €280 to €350. These figures present a much less flattering portrait of immigrants entering under permit than do the data on education. The educational qualifications many of these groups would suggest greater earnings capacity than the typical wage offers received by permit holders. A possible

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<sup>21</sup> All wage figures are drawn from Ruhs (2003), Figure 19.

explanation is that despite the limitations imposed by the Irish permit system, relatively well-educated immigrants are willing to engage in service employment in order to gain a foothold in the Irish labour market. Immigrants may arrive in Ireland on an initial permit under the expectation that they will be able to obtain a better match upon its expiry if they are “on the ground” in Ireland to search for future employment.

## **Immigration and the future**

### *Accession and immigration*

Prior to 2004, economic migrants from Eastern European would require work permits or visas. A substantial number of permit-holding European migrants were from the ten accession countries, with Lithuania and Latvia make up about half of the total for “ex-USSR.” How will migration from these sources be changes with the accession of these states to the European Union? The first question that might be asked is whether accession is likely to trigger a flood of immigrants from these states. While preliminary evidence on the uptake of PPS numbers suggests that accession country migrants have been coming to Ireland in increasing numbers since May 1 2004, geography and demographics suggest that a “flood” of migrants to Ireland from these countries is unlikely. One reason is that there are major European economies much closer to most of the accession countries – in particular, Germany, which already has substantial communities of migrants from these countries. Distance from home, and the size of the expatriate community in the destination, remain important determinant of the size of immigrant flows. Another reason is that the demographics of the accession countries do not favour mass migration to richer markets in the EU. The demographic structure of the accession countries is very much like that of their new European partners; In Ireland, 24 percent of the population is aged between 20 and 34, which are often

through to be prime ages for potential emigration. In Germany, the largest EU economy, the corresponding figure is 19 percent. For Latvia, Lithuania, and Poland, accession countries which dominate recent flows into Ireland, the proportions aged 20 to 34 are 21, 20, and 23 percent. A temporary rise in migration post-accession from these countries is likely as they become better integrated into the wider European economy, but there seems little reason to suspect that accession will release a raging stream of pent-up potential immigrants.

How will accession affect the skill composition of Irish immigrants? If one were to project based on the skills of the stock in 2002, increasing migration from accession countries would be predicted to drive down the average skills (and presumed earnings capacity) of the immigrant population, a trend that would exacerbate income inequality and perhaps encourage developing anti-immigrant sentiment. However, evidence for existing EU immigrants suggests that this is not the most likely development. Now that immigrants from the accession countries can freely self-select migration to the EU, theory would predict that Ireland will attract the highly-skilled, as it has from existing EU member states. Self-selection theory would predict this outcome, as income inequality in Ireland exceeds that in most of the accession countries. Panel B of Table 3 lists decile ratios for a sample of EU accession states. With the exception of Estonia, where language ties make Finland a major immigrant destination, these are well below the ratio reported in Ireland (panel A).<sup>22</sup> This prediction is subject to the caveat that the impact of accession on the distribution of incomes in the accession countries is unknown. If inequality increases as a consequence, the incentives to migrate to Ireland would likely shift as well.

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<sup>22</sup> Estimates of Gini indices for Latvia and Lithuania, two accession states not included in Table 2, are typically smaller than corresponding estimates for Ireland (World Bank, 2004).

### *Permits or permanence?*

The current system of admitting immigrants to Ireland is one that encourages temporary, rather than permanent migration. Is it likely that this system is to prove the most desirable in the longer run? A temporary policy seems attractive if one is interested primarily in remedying labour shortages, and wishes to avoid the potential costs of changing ethnicity associated with permanent migration. Consider, however, the the earlier discussion regarding the economics of immigration policy. Temporary migration is unlikely to remain temporary, so long as economic conditions in Ireland are attractive to potential immigrants. Even if the individual immigrants currently in Ireland on permits were to return home, the “friends and family” effect will likely operate through the information about Irish institutions and conditions that they would take back to their home economies. This will spawn future demand for migration to Ireland, be it through the permit system or through illegal employment on the black market.

The potential benefits and distributional consequences of immigration are linked to the skills of migrants. An important question, therefore, is how permanent and temporary migration policies may influence the self-selection of workers who wish to reside in Ireland. The evidence suggests that potential permanent immigrants from EEA economies are highly educated, while immigrants arriving through the permit regime are more mixed. It is plausible that contracted temporary migration, at least under the restrictive regime imposed in Ireland, may be unappealing to some workers with high levels of general human capital. The restrictions placed on immigrants' ability to search for employment once in Ireland provides employers with a degree of monopsony power over their immigrant work force. If immigrants with high levels of general human capital sacrifice much of the return to their skills if they are unable to complement their pre-migration human capital with post-migration

job search, flows may be diverted towards less skilled immigrants with less to sacrifice in terms of potential earnings. It is hard to see how a policy that restricts immigrants from outside the expanded EEA into the full set of opportunities available in the Irish labour market is likely to enhance the selection of skills among arriving immigrants. Low unemployment and high returns to skill currently make Ireland attractive to skilled migrants from around the world, but this situation will change as the relative labour market conditions in Ireland evolve in the future. At the very least, a policy allowing temporary migrants longer spells in the Irish economy and more latitude in searching for employment would make Ireland more attractive to those with general skills, and would reduce the potential for employers to extract monopsony profits from their immigrant work force.

One might also question whether temporary contracted migration of low-skilled workers is desirable over the longer run. These immigrants may fill short-run shortages in the supply of unskilled labour, but they are likely to have difficulty adapting to changing labour market conditions should they remain permanently in Ireland. Ample evidence exists that temporary migrants are less likely to invest in host country specific human capital than individuals intending to migrate on a permanent basis.<sup>23</sup> This points to the potential emergence of a vicious cycle: the permanent settlement of what were intended to be temporary immigrants is unlikely to be well-received by the domestic population, particularly if they do not adjust well into Irish labour market over the longer run. A hardening of Irish attitudes towards migration would lead to demand for greater restrictions, and the benefits of greater ethnic diversity would be lost.<sup>24</sup>

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23 A recent example is Dustmann (2001)

24 Note also that the benefits of diversity are likely to be larger if immigration is permanent. It would be possible in principle to operate a “balanced” temporary migration scheme, but interactions between the ethnic majority and minority groups are likely to be less frequent if immigrants have a reduced incentive to assimilate into the traditions and culture of the host economy.



If Ireland were to move towards a migration policy favouring permanent migration, what options ought to be considered? One possibility is the introduction of a points system, as currently in place in Canada, Australia, and New Zealand. A point system selects immigrants on the basis of characteristics associated with likely success in the host country labour market. In the Canadian case, immigrants with a minimum of one year of work experience in managerial, professional, and skilled technical occupations are eligible to apply for entry as independent immigrants. The majority of points are awarded predominantly for general human capital characteristics: education, language ability, labour market experience, and age. Additional points are allocated to arranged employment and “adaptability”, which reflects past employment and contacts in Canada, the education of the spouse of an immigrant, and previous employment experience in Canada.<sup>25</sup>

The virtue of a points system is it can be used to screen out a pool of suitably skilled immigrants from the population of potential immigrants. The number of immigrants admitted from this pool can be varied from year to year, depending on current conditions in the domestic labour market. The virtues of the point system have also stood up to empirical scrutiny. Borjas (1990) identifies the presence of a point system as one reason for which Canadian immigrants since the 1960s have been more skilled than their American counterparts. Green and Green (1995) also find that the introduction of the points system has helped slant the Canadian immigrant population towards higher levels of skill. The introduction of a points system would seem a good way to select highly educated and adaptable immigrant for potential permanent migration to Ireland.

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<sup>25</sup> The province of Quebec operates a separate immigration policy, in which points allocated to targeted occupations have a substantial influence on the selection process.

### *Immigration and the Irish population in the longer run*

This paper's review of Irish immigrant skills suggest that Ireland has had the fortune to mainly attract skilled economic migrants. The message one can take from the analysis above is that this should be expected to continue to continue in the near future, perhaps with some assistance from the introduction of a points-type system. The permanent settlement of economic migrants will, however, in due course lead to increasing levels of non-economic migration. The "friends and family effect" will lead to demand for family reunification following initial permanent settlement. In some sense this is unavoidable; countries might wish to limit migration by operating policies of contracted temporary migration, but these flows are unlikely to remain temporary so long as labour market conditions in Ireland are attractive. A policy that spells out the legal rights of permanent immigrants in this regard is no doubt preferable to a situation in which illegal or semi-legal temporary migrants in Ireland attempt to smuggle in family members as tourists and the like. This will likely have an impact on the skills of Irish immigrants. Family migrants are not likely to be self-selected in the same way as economic migrants. Borjas and Bronars (1991) suggest that in the case of sequential family migration, members who benefit most from potential migration will be the first movers, with less suited family members to follow. Empirical evidence from North America tends to support this perspective. Green and Green (1995) report that while the points system is highly effective on the margin, its overall impact on immigrant skill level is muted by growing numbers of non-economic migrants.

While the evidence listed in Table 1 suggests little relationship between immigrant education and average education in the source country among Irish migrants, this presumption may not hold once family reunification becomes an important source of immigrants. In the longer run, the average educational attainment of source countries may

become a more important predictor of the characteristics of the Irish immigrant population. In the medium term, this is likely to have a modest effect on immigrant skills; European countries dominate Irish immigrant stocks, and be they in the EU, the accession states, or further east, these sources have relatively high levels of average education. In the longer run, inflows of economic migrants from developing countries outside of Europe will be joined by family. Current schooling levels in these source countries are below the European norm; if this continues to be the case, immigrant skills are likely to decline. This does not mean that Ireland ought to limit access to family reunification in preparation for this possibility. The morality of denying current Irish immigrants from developing countries the possibility to bring their families to Ireland, while many less-skilled European immigrants will do so, is questionable at best. It is also likely that if the first generation of these immigrants are highly skilled and well integrated in the Irish economy, this will lead to positive spillover effects that will ease the assimilation of later generation of immigrants. Better adjusted (permanent) immigrants today will enhance the prospects for successive generations.

## **Conclusions**

Immigration is at the heart of major policy debates in most of the world's leading economies. Ireland is no longer exempt for this debate, as prosperity has led to significant migration of overseas immigrants into Ireland. What should be the objectives of Irish immigration policy? While there is little evidence that immigration has a large impact on wages and employment in contemporary labour markets, it is also unlikely that immigration is a highly effective solution to economic problems such as short-run labour shortages, an aging population, or the attraction of foreign investment. Some benefits may flow from the promotion of trade or the increased diversity of the domestic population. Policy can play an

important role, however, in shaping the selection of migrants that enter Ireland. Policies geared towards the admission of skilled economic migrants are likely to enhance any benefits that do flow from immigration. They are also likely to result in an immigrant community that adapts well to labour market conditions in Ireland and enhances the reputation of the foreign-born among the native-born population.

Evidence on education suggests that Ireland has mainly attracted skilled immigrants as part of recent inflows. Immigrants from within the EEA are highly educated, a pattern that appears to the self-selection theory developed by Borjas (1987). Outside of the EEA, the evidence is more mixed. While about 75 percent of work permit holders are contracted to work in unskilled occupations, data on education suggests that many source countries outside of the EEA are supplying Ireland with highly qualified immigrants. This would appear to be due to the economic conditions that prevail in Ireland, rather than a result of the policy regime that selects immigrants. High returns to skill in Ireland are attractive to educated immigrants, who may be willing to enter Ireland in unskilled employment with the intention of moving up the job ladder in subsequent years.

What policy alternatives need to be considered for the future? One option is the development of a policy regime that encourages the immigration of skilled individuals on a permanent basis. A substantial share of today's temporary immigrants will establish a permanent foothold in Ireland. The current policy, which favours the employer-led recruitment of foreign labour into mainly unskilled employment, is unlikely to enhance the skills level of the Irish immigrant population in the longer run. A permanent migration policy that offers immigrants the same rights in the Irish labour market as EEA nationals will enhance the economic assimilation of Irish immigrants, and will expand the benefits associated with trade and diversity. A points system that selects immigrants on the basis of

general human capital characteristics has proven an effective device to select economic migrants who are likely to adapt well in the host economy.

Finally, it should be noted that non-economic migration is likely to grow in importance in Ireland. Part of these flows consist of refugees and asylum seekers arriving in Ireland for humanitarian reasons. They will soon be joined by immigrants seeking family reunification with relatives who have already established themselves in Ireland. While family migrants are unlikely to be self-selected in the same way as earlier economic migrants, it will provide difficult to justify their exclusion from the state. Once again, a sensible policy would appear to be one that allows for the permanent migration of skilled economic migrants. A well-integrated first-generation of immigrant arrivals will enhance the economic prospects of those that follow.

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**Table 1: Irish immigrant stock and educational attainment, 2002**

Source country	Stock, 2002	Proportion tertiary education	Proportion primary education only	Average years of schooling in source, 2000
United Kingdom	248515	.34	.37	9.4
United States	21541	.59	.17	12.1
Ex-USSR	11130	.40	.17	10.0
Nigeria	9225	.51	.19	---
Germany	8770	.50	.15	10.2
France	6815	.70	.06	7.9
South Africa	6260	.56	.11	6.1
Australia	6107	.56	.14	10.9
Romania	5838	.28	.31	9.5
China (PR)	5669	.46	.17	6.4
Spain	4632	.71	.08	7.3
Philippines	4086	.83	.06	8.2
Canada	4081	.59	.15	11.6
Italy	3705	.48	.24	7.2
Netherlands	3512	.54	.14	9.4
India	3402	.73	.11	5.1
Pakistan	3391	.68	.17	3.9
FR Yugoslavia	2442	.27	.37	7.1 (1990)
New Zealand	2256	.61	.09	11.7
Malaysia	2195	.48	.20	6.8

Source: Immigrant stocks and education are from OECD (2003). Source country education data is from Barro and Lee (2000).

**Table 2: Immigrant education around Europe**

Source Country	Host Country				
	France	Belgium	Spain	United Kingdom	Ireland
United Kingdom	.50 [76423]	.43 [23390]	.26 [91560]	---	.34 [207320]
United States	.62 [32321]	.58 [10594]	.53 [15310]	.60 [126482]	.59 [14609]
Ex-USSR	.41 [32662]	.42 [9790]	.26 [41708]	.56 [39023]	.40 [9726]
Nigeria	.44 [2491]	.36 [1460]	.13 [8289]	.57 [79880]	.51 [7355]
Germany	.29 [198297]	.25 [73442]	.28 [131927]	.31 [231332]	.50 [7622]
France	---	.20 [141904]	.28 [140394]	.60 [85179]	.70 [6161]
South Africa	.42 [2875]	.40 [2269]	.38 [1172]	.47 [124658]	.56 [5029]
Australia	.48 [3656]	.48 [926]	.34 [3467]	.54 [96889]	.56 [4377]
Romania	.47 [21997]	.43 [6244]	.13 [50910]	.56 [6662]	.28 [4388]
China (PR)	.25 [31334]	.31 [6019]	.10 [24312]	.47 [47850]	.46 [5497]
Spain	.09 [336699]	.15 [35548]	---	.45 [50337]	.71 [4391]
Philippines	.30 [5870]	.27 [5057]	.20 [15987]	.51 [38069]	.83 [3926]
Canada	.52 [16179]	.45 [3547]	.47 [3282]	.48 [66858]	.59 [3332]
Italy	.07 [403547]	.07 [129908]	.34 [22777]	.27 [103466]	.48 [3469]
Netherlands	.45 [26006]	.25 [89317]	.32 [20068]	.51 [35043]	.54 [2903]
India	.21 [26403]	.28 [7935]	.17 [7067]	.33 [454501]	.73 [3113]
Pakistan	.11 [10813]	.17 [3954]	.08 [9426]	.19 [301892]	.68 [2791]
FR Yugoslavia	.13 [74666]	.12 [18330]	.35 [3852]	.31 [40617]	.27 [2017]
New Zealand	.57 [885]	.47 [271]	.57 [272]	.55 [54608]	.61 [1996]
Malaysia	.37 [1369]	.34 [416]	.30 [198]	.54 [47470]	.48 [2195]
Native population	.17 [n]	.23 [n]	.19 [n]	.20 [n]	.23 [n]

Notes: Listed is the proportion of the immigrant stock in each country with third-level education. Number of observations (the size of the stock) is in square brackets.

Source: OECD (2003)

**Table 3 – Income inequality in EU and accession states**

<u>A –EU states</u>		<u>B – Accession states</u>	
Country	P90/P10	Country	P90/P10
Netherlands	2.98	Slovak Republic	2.88
Germany	3.18	Czech Republic	3.01
France	3.54	Hungary	3.57
Spain	3.96	Poland	3.59
Italy	4.33	Estonia	5.08
UK	4.58		
<b>Ireland</b>	<b>4.57</b>		

Source: Nolan and Smeeding (2004).

**Table 4: Work permits and education among Irish immigrants**

Country	Permits, 2002	Permits, 2003	Permits, 2004	Proportion tertiary education, Ireland	Proportion tertiary education, OECD
Ex-USSR	12232	15840	7525	.40	.33
Philippines	3255	4042	4301	.83	.48
Romania	2459	2527	2113	.28	.27
South Africa	2273	2468	2031	.55	.51
Poland	3142	4808	1915	.35	.27
Brazil	1327	1554	1512	.25	.28
China	1236	1593	1284	.46	.40
India	845	1030	1253	.73	.54
Turkey	155	466	1191	.45	.07
Bangladesh	767	1038	1009	.48	.29
United States	792	961	927	.59	.51
Australia	1116	1149	908	.56	.47
Malaysia	1086	1030	886	.48	.53
Pakistan	840	830	846	.68	.32
New Zealand	569	658	550	.61	.45
FR Yugoslavia	***	***	***	.27	.14
Nigeria	87	84	60	.51	.57

Source: DETE, OECD (2003).

Notes: Ex-USSR includes the following countries: Armenia (1 permit in 2004), Azerbaijan (4), Belarus (760), Estonia (306), Georgia (13), Kazakhstan (36), Kyrgyzstan (5), Latvia (1368), Lithuania (1238), Moldova (849), Russia (795), Turkmenistan (1), Ukraine (2137), and Uzbekistan (12). The figures in the final column pertain to international immigrants only.

**Table 5: Work permits by nationality and occupation, 2002**

Source country	Permits, Feb-Dec 2002	% professional	% clerical	% personal service	% sales	% other sales, service	% craft, operative	% other agriculture	% other
Belarus	818	3	1	16	11	22	13	19	16
Latvia	3621	1	.3	11	2	18	14	31	24
Lithuania	3563	2	1	13	3	20	16	22	24
Russia	1084	15	2	13	4	16	17	12	22
Ukraine	1950	2	.3	10	1	16	15	31	24
Poland	2921	11	1	9	1	14	34	8	30
Romania	2316	5	1	24	1	20	16	11	24
Turkey	137	13	1	35	3	12	18	4	16
Australia	998	60	6	9	3	5	6	2	9
New Zealand	485	54	6	10	1	4	12	3	11
USA	717	56	4	11	3	4	4	1	9
Bangladesh	733	4	1	50	1	27	6	1	11
China	1145	12	1	49	1	14	14	2	8
India	751	39	1	36	2	6	7	.3	9
Malaysia	974	28	1	51	1	14	1	---	3
Pakistan	751	19	1	34	5	11	17	2	15

Source country	Permits, Feb-Dec 2002	% professional	% clerical	% personal service	% sales	% other sales, service	% craft, operative	% other agriculture	% other
Philippines	2989	4	1	53	2	16	7	1	14
Brazil	1274	3	1	3	1	10	54	4	26
South Africa	2094	35	3	19	6	13	12	2	10

Source: Ruhs (2004).

Notes: Professional occupations include those defined as “managerial, professional. And associate professional or technical” in Ruhs (2004). Personal service is the “personal and protective service” category, and craft and operative combines these two categories from the original source. Information on the occupation of permit holders is only available from February 2002 onwards. Row totals may not add up to 100 due to rounding.