

# Why migration to Ireland reinforces skills shortages when it is supposed to alleviate them: the case of the software industry

**Ian Bruff, Employment Research Centre / Institute for International Integration Studies, Trinity College Dublin ([ianbruff@gmail.com](mailto:ianbruff@gmail.com))**

In recent years, an oft-repeated claim has been that the Irish economy suffers from skills shortages in key industries such as software. This predicament arose as a consequence of the problems of prosperity: the Celtic Tiger boom left the Irish labour market dry, with new vacancies being filled, more often than not, by non-Irish workers. The government's 2005 white paper 'Immigration and Residence in Ireland' states that migration is important for long-term economic success, arguing that "there will be an ongoing requirement for significant immigration levels, particularly of people with higher qualifications" (quoting an Enterprise Strategy Group Report published in July 2004). To encourage continued migration to Ireland by skilled workers it is proposed that the rules governing work permits, visas and authorisations should be reformed in a way that makes it easier for them to move to and settle in Ireland.

This all seems very far away from the rhetoric of websites such as IDA Ireland, which proclaims that Ireland possesses a skilled and flexible workforce, and one of the best educated populations in Europe. We have to ask, why do key economic sectors need to import labour due to the absence of suitable domestic candidates? The Employment Research Centre's 'Globalisation and transnational migrant workers in the Dublin labour market' project focuses on the role of skilled migrants in the software industry in order to get a clearer picture of why this key industry seems to be constantly suffering from a skills shortage. Our findings – based on in-depth interviews with migrants, human resource managers, and representatives of government agencies – reveal a more complex situation than is normally acknowledged, and they make it necessary for us all to re-think the relationship between migration and the economy.

The first evidence alerting us to the more complex situation is Ireland's surprisingly low employment rate, which is only a little above the average for the whole of the EU. European Commission figures for 2004 state that 66.3% of 15-64 year olds in Ireland were in employment. This is an improvement on the disastrous situation in the 1980s, but it is sobering to discover that Germany, widely seen as one of the worst performing economies in Europe, employed 65% of its 15-64 year olds in the same year. The Celtic Tiger image is further tarnished when one considers that the European Union average was 63%, and that several countries boasted superior records to Ireland: for example, the UK stood at 71.6%, the Netherlands at 73.1%, and Denmark at 75.7%. A low unemployment rate does not necessarily mean that all, or even most, available workers are in employment. These figures make it clear that Ireland's labour market is not working at maximum capacity, thereby debunking one of the central myths about the skills shortage – there is no shortage of potential workers.

However, the skills shortage still exists, worker shortage or no worker shortage. The Tech Central website ([www.techcentral.ie](http://www.techcentral.ie)), which provides daily updates about the Irish IT industry (of which software is a crucial part), reported on 19 November 2004 that “one in two Irish IT directors are concerned about a deficit in suitably trained professionals. This compares to just two per cent in the UK and eight per cent in Germany...[last year] 88 per cent of Irish managers said that they were not worried about an Irish IT skills shortage”. Employment in the software industry fell by 25% in the 2001-3 period, from 31,500 to 24,000, before rising slowly in 2004. Yet problems with recruiting suitable candidates re-emerged almost immediately. Why did this happen? Surely there was a plentiful supply of labour to be employed?

The answer to these questions is three-fold, relating to: the Irish education and training system; the recruitment and training strategies of software companies; and the decisions taken by individuals, both Irish and foreign. Taking the Irish education and training system first, it is clear that the Irish population are not one of the best educated in Europe. While Ireland is a middle-ranking country when one looks at the average secondary

school student across developed countries, a significant minority of school students do much less well: one noticeable example is the 15%-20% of school leavers who according to the OECD's 1995 International Adult Literacy Survey lack basic literacy, well above the figure for many other European countries. Also symbolic of the lower educational standards are this year's Leaving Cert results, which continued the established trend for high rates of failure and poor overall results in maths and science subjects (i.e. the subjects important for students aspiring to work in the software industry). Moreover, at university level, the Working Group on Higher Education believes that, at minimum, Ireland needs to increase investment by 30% if it wants to achieve its goal of being in the top rank of rich developed countries. The picture is also disappointing when one considers lifelong learning, to the extent that Eoin O'Driscoll, president of the American Chamber of Commerce in Ireland, warned in July that dramatic action is needed to prevent the workforce from becoming uncompetitive by 2015.

To some extent this may not matter if, in the industries suffering from a skills shortage, the company training programmes enable the employees to improve their skills set. However, in the software industry this is not being tried; at least not on an industry-wide basis. The research did find some migrants satisfied with the training they have been receiving while in Ireland. We also found some firms that seemed to be highly committed to training their workforce. However, this was the case in a minority of the interviews. A large majority of the migrants interviewed complained that they have received plenty of internal training – such as company procedures, quality control, etc. – but little or no external training – for example, in newer software languages. Several of them have taken or are taking part-time MSc courses in the evenings in order to improve their skill set, and they all expressed satisfaction that the company, in part or in full, sponsored them to do this. While this may be viewed as company training, because the company is paying for the employee to improve their skill set, the point is that the training takes place outside working hours, to the benefit of the company and to the detriment of the worker's leisure time.

The companies' recruitment strategies shape how they approach training. Many of the migrants enter Ireland with a work visa, whose regulations (in contrast to the work permit rules) do not require employers to prove that an absence of suitable workers in Ireland made it necessary for them to employ the migrant. This suits them, because the software industry is characterised by rapidly changing technologies and work based on hitting project deadlines. The human resource managers interviewed confirmed that this means that temporary contractors will always comprise part of the workforce, for they will be needed for the specific project the company needs completing successfully. However, even if the migrants are employed on a permanent contract, there is a tendency to import rather than update skills. Why bother training your existing workforce when it is possible to import foreign workers who already possess the skills the company needs?

The final factor contributing to the skills shortage in the software industry is the choices made by individuals, both Irish and foreign. Taking the former first, there has been a dramatic fall in the past few years in the number of students taking science-related subjects in the Leaving Certificate (which is of great concern for IBEC). Also, the 2001-3 recession in the software industry had a big impact: fewer numbers are studying computer science or computer science-related courses at the moment. Female students are instead turning to nursing, which became a full-time degree a couple of years ago, and male students to business studies. Seamus Gallen, the department manager of the software services and emerging sectors at Enterprise Ireland, fears that the government may not be able to engineer a rise in computing numbers to 2001 levels unless there is a constant and long-term stream of good news about the industry. Otherwise, more stable, secure jobs will be more attractive for many people.

As for the migrants themselves, two clear conclusions could be drawn from the interviews. Firstly, most of them will not stay in Ireland in the medium-term. Many expressed the desire to return to their home country – very few discussed moving to another country to enhance their career – once they have gained enough international experience to enable them to work in a senior position back home. Almost all of the Indians had a strong desire to be back in India in time for their children to start school

(which, incidentally, would also abolish their childcare costs at a stroke, because their children could be cared for by members of their extended family), while others, regardless of their feelings for Ireland, still saw their 'home' as Spain, France, the Czech Republic, Hungary, etc. It is true that some have decided to settle here, but they have an Irish spouse, or their family ties in their home country are weaker than those in Ireland (for example, some brought their spouse and children with them – although a greater number of those migrants with their families in Ireland still intend to return to their home country).

Secondly, the majority sought to further their careers through moving into more management-oriented positions within the industry. For example, those taking MSc degrees were not studying computer science: their courses had titles such as Management of Information Systems and Business of IT. To make progress in their career and achieve a more senior position entails taking on more responsibility, and while this may still mean working with similar technology as before, there is a greater focus on project management, liaising with senior management, and meeting with clients. Therefore, even if the migrants do stay in Ireland, it is likely that they will no longer be employed in the roles more traditionally associated with the software industry, such as programming.

So the Irish software industry, faced with an education system that does not fare well in comparison to other countries, an industry that tends to cut corners with regard to training, an unwillingness among its students to study subjects helpful for working in the software industry, and the tendency among migrant workers to leave Ireland after several years and/or move into more management-oriented positions, needs a continued inflow of skilled workers for it to remain successful. For now this is the case, allowing Ireland to neglect the need to tackle the domestic sources of the skills shortage, papering over the cracks with its present success in attracting migrants. The question, though, is this: should such an important industry be so reliant on workers yet to set foot in Ireland?

Answers to this question may vary, depending on their perspective. However, it must be accepted by all those engaged in the debate about skills shortages and how to resolve

them, that the skills shortage in the software industry did not arise just by chance; it arose as a consequence of a combination of circumstances. So education, company training, and individual choices could change in the future in a way that allows for a different combination of circumstances, and therefore perhaps an alleviation of the skills shortage. This does not mean that we should relax, though, waiting for the skills shortage to resolve itself: on the contrary, we should start thinking about how the skills shortage can be tackled via acknowledging the following: there is not a worker shortage; the Irish population is not one of the best educated in Europe; companies both react to and produce skills shortages through their recruitment and training policies; students make choices that restrict the number of potential future Irish employees in the software industry; and the career and life choices made by the migrants reinforce the software industry's reliance on the willingness of people to migrate to Ireland on a continuous basis. In summary, the skills shortage is produced by a combination of domestic factors, and the employment of migrants reinforces rather than alleviates it.

Ireland has managed to achieve a stunning turnaround in 15 years, moving 180 degrees from the problems of emigration to the problems of immigration, and it is perhaps unsurprising that the changes this has brought are often one step ahead of how we perceive things to be. Nevertheless, given the importance of the software industry for the economy as a whole, it is essential that full and prompt attention be given to alleviating the skills shortage through concrete action, rather than waiting for the issue to be resolved by fate, circumstance and luck.