Impact of Skilled Migration on Receiving Countries
By Mark C Regets

Summary

The worldwide movement of highly skilled people is often seen as an exercise in accounting – one country gains “brains” that are “drained” out of another. But this is too simplistic. Many of the global gains from this kind of migration – the creation and transfer of knowledge, the emergence of a skilled and educated workforce, and the fostering of commercial ties – are shared to some extent by countries on both sides of the “equation”. But what of the impacts on the major world economies at the receiving end? For these countries, globalisation and the increasing economic importance of science and technology have made skilled international migration an important – and contentious – policy issue.

In the field of biotechnology, for instance, the need for rare combinations of skills – such as expert knowledge about a particular protein together with experience of a particular regulatory procedure – has led some firms to recruit in a number of countries abroad. And in the information technology sector, rapid growth in demand and the easy transferability of skills and qualifications make it worthwhile for countries on the receiving end to cast their recruitment net widely.

Knowledge networks and 'brain circulation'

In a sense, highly skilled migrants do not arrive at their destination alone; refugees apart, migrants seldom break all ties with their country of origin. Highly skilled migrants who have gained higher degrees or work experience at home tend to maintain contact with former colleagues, professors and fellow graduates – in the process forming international networks.

Networking is also enhanced by students who study abroad and then return home after graduating (amounting to around half of those gaining doctorates in the United States). Such networks can prove highly fruitful for both the adoptive and the home countries of migrants, in terms of the exchange of knowledge and useful contacts.

One of the few direct measures of such international collaboration is the co-authorship of scientific papers. The US National Science Board reports a correlation between the number of doctorates earned by a country's students in the United States and the percentage of that country’s internationally co-authored articles with US researchers.

It's hardly surprising, of course, that postgraduates come together to do collaborative research. The same is true in workplaces with a mix of foreign and native
professionals. Indeed, moving between firms has long been recognised as a powerful source of knowledge transfer – both of technology and of more subtle things such as business practices.

An influx of human capital

Even in a model of highly skilled migration that excludes this kind of “brain circulation”, receiving nations are clearly benefiting from an influx of students or workers who often have sought-after or unique skills that are needed to overcome bottlenecks in production or research. And even if foreign students leave after graduating, they still provide much in the way of research and teaching services before they depart.

In the United States, highly skilled foreign-born workers make up a huge proportion of the total science and technology labour force: over a quarter of science and engineering doctorate holders; around half the doctorate holders in computer science, electrical engineering, and industrial and civil engineering; and a fifth of all degree holders in engineering, computer science, chemistry and physics.

Overall, this represents a large influx of talented individuals, nearly half of who already hold degrees – and have expertise – from abroad. What is unclear, however, is if these gains in the national stock of human capital are partly offset by a reduction in native skill levels.

Opponents of highly skilled migration often fear that their populations will be excluded from jobs and opportunities for formal education. Older Silicon Valley workers, for instance, are unhappy about the levels of support provided for retraining. And in Germany there have been protests under the slogan “Kinder statt Inder” – “Children, instead of Indians” – essentially calling for more support for the education of native Germans, and reducing efforts to attract foreign IT workers.

On the other side of the fence, advocates for boosting immigration of the highly skilled often cite how innovations and investments made by this group have in turn increased opportunities for natives. Unfortunately, there is no strong empirical research on either side of this issue.

Effects of migrants on wages

Many of those involved in this debate base their arguments on a very simple static model of labour market supply and demand. This suggests that highly skilled migrants boost the wages of less skilled natives by complementing their labour; lower the wages of their highly skilled native competitors; and increase per capita production by adding to the average skill level of the labour force. These hypothetical effects on the labour market are good for countries at the receiving
end in various ways – by simultaneously reducing inequalities in income and increasing average real wages, for instance. But the suggestion that highly skilled natives would receive lower wages, which would in turn lower incentives for natives to gain skills, is hardly a positive outcome. Thus the same model offers support to both sides of the debate. Additionally, there is little evidence that this model does a good job of explaining the effects of highly skilled migrants on their counterparts in receiving countries.

Studies of immigration show that even very large inflows of migrants have failed to make much of an impact on the national workforce. In part, this may be down to the way that choices about business investments and where to base economic activity can shift local demand for labour over time, in response to the skills available. In general, new capital investments are made to take advantage of available labour. For example, the recent growth of the high technology industry in Israel is due in part to the large-scale immigration of technicians and scientists from the former Soviet Union.

Although there have been no detailed econometric studies, the most basic statistics suggest that highly skilled migration is most prevalent in fields with relatively good employment opportunities. For example, among recent PhD holders in the United States, there is a strong correlation between the percentage of foreign-born graduates and the median salary.

There may be many different reasons for this. Individuals may be less willing to undertake the costs of migration unless job opportunities are abundant. Employers may not want to pay the (often considerable) legal costs of obtaining work visas unless they face a tight domestic labour market. And it has also been suggested that the influx of diverse human capital brought by migrants may help to create opportunities in a particular field.

Another associated effect – often discussed but little studied – is that talented immigrants “crowd out” natives from graduate programmes and other advanced training. But the counter-argument holds that if a large number of foreign students are available to graduate schools, this increases the number and variety of training opportunities for native students. In the United States, for example, outside the elite institutions some graduate programmes would have trouble justifying their existence in terms of total enrolment without foreign students.

**Increasingly diverse migration patterns**

One factor that may affect the nature of highly skilled migration is that there are now more countries on the receiving end.

All the major industrialised countries have for a long time received highly skilled individuals from abroad, but the United States has in many ways been the hub of the
phenomenon. It has the largest economy, educates the most foreign students, spends the most on research and development (R&D), and is a nation built on successive waves of immigration. Although it still reigns in these areas, the United States is becoming relatively less important in each of them.

Economic development and R&D spending is growing around the world – providing job opportunities that create new migration flows, or that draw graduates back to their countries of origin. Foreign students are an increasing part of graduate enrolments in the European Union, Japan, Canada and Australia. As well as generally becoming more open to immigration, most of these countries increasingly encourage various ways for highly skilled workers and students to stay, either temporarily or permanently.

The effect of these newly developing patterns cannot yet be fully predicted. It is clear that more knowledge will be shared – not least because more people will be mobile – as long as movement goes on between all of the hub countries. But countries on the receiving end may also find their “brain gain” more short-lived, as highly mobile and educated individuals find alternative options. And this in turn could lead to increased competition between these countries – in terms of education and economic policies – to attract, keep and lure back highly skilled workers.

(The author is a research fellow at the Institute for the Study of Labour (IZA) in Bonn, Germany, and a senior analyst at the US National Science Foundation. The views expressed in this document are those of the author and do not necessarily reflect the views of the National Science Foundation.)

References


Source: http://www.scidev.net/ 05/2003