



Executive Summary

1. International competition over highly skilled workers is becoming increasingly intense. Migration is critically important to the British economy. An ageing population and dynamic labour market mean that a flexible workforce is central to economy prosperity.
2. UK has the 4th highest number of highly skilled immigrants in the OECD, but also one of the highest rates of emigration by highly skilled workers. The next policy challenge is to both attract immigrants and retain potential emigrants.
3. Because of the UK's ageing population and the structure of the state pensions system, Britain will have to attract about 270,000 migrants each year between 2005 and 2050 to avoid a pensions crisis.
4. In order to attract and retain the most valuable migrants, the UK must focus on policy reforms that have the greatest impact on migrants' decisions to move to or stay in Britain. These are:
 - Wages
 - Employment prospects
 - Professional development prospects
 - Social and professional networks
 - Socioeconomic and political conditions
5. The tax burden is a crucial factor influencing highly skilled migrants' choice about where to emigrate to. This is one of the only variables that the government can influence in the short run with any success. Special tax breaks for highly skilled immigrants, however, have not worked where tried.
6. Abolishing the 50p tax rate and reducing taxes across the board could have a significant impact in attracting the most productive migrants to Britain, and in retaining potential emigrants.
7. Fears over abuse of the welfare system may be overblown but could be addressed by an "open borders, closed public accounts" system. Immigrants could be obliged to use private insurers for healthcare and other large welfare state expenditures for the first few years of working in the UK before becoming eligible for full benefits. This would address concerns behind the government's proposed migration cap while avoiding the negative economic impact of the cap itself.

Introduction

Immigration is becoming increasingly important to Britain's economy. Statistics from the Office for National Statistics (ONS) suggested that, like most other developed economies, Britain has an ageing population (though one aging less rapidly than most others in the developed world).¹ In the UK this change in the make-up of society means that the proportion of people not working, who are thus dependent on those employed, will increase by about 75 percent over the next 40 years.

Professional development prospects and wage differences are of particular interest to highly skilled migrants.

The dependency rate, the ratio of people over 65 years divided by the population between 15 and 65 years, is

1 Office for National Statistics, "Population trends 142: UK's population aging less rapidly than other countries" (2010). <http://www.statistics.gov.uk/pdfdir/popt1210.pdf>

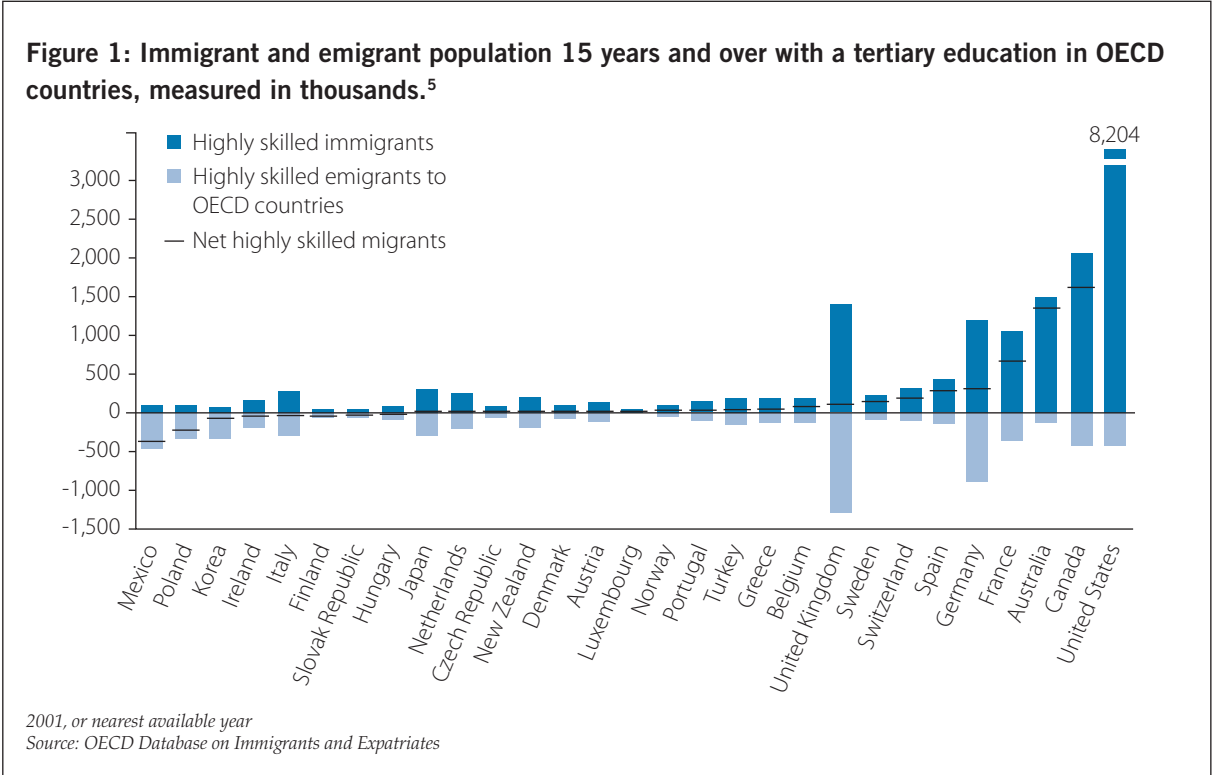
estimated to increase from 0.25 to 0.42.² This means that the number of people of working age for every individual over 65 will decrease from the current level of 4 to just over 2 in 2050.³ Desai, Kapur and McHale stress that this change in demographics will increase the already sharpened international competition for highly skilled workers. Furthermore, a 2005 United Nations survey of governments about their immigration policies shows that 15 out of 46 developed nations and 14 out of 98 less developed nations planned to increase the number of highly skilled immigrant workers they admit.⁴

To avoid the costs of caring for an elderly population ballooning relative to overall state revenue, it is critical that the UK and other OECD countries focus on how to finance state expenditures while ensuring they stay internationally competitive in the future. There are a number of policy proposals that aim to deal with this issue. This paper will look specifically at migration and focus on how to approach migration of highly skilled people as part of the solution to the problems surrounding the country’s aging population. It will discuss how state policies can be changed in order to give talented and highly productive migrants an incentive to come to the UK.

In this report I will discuss various topics related to migration, amongst others how to deal with an ageing population, the problem of “brain drain”, and the incentives that most influence a person’s decision to emigrate. Finally, I will draw on empirical findings from a study conducted by The Confederation of Danish Industries (CDI) to assess the Danish approach to migration. The CDI has carried out two studies – one in 2003 and one in 2007 – about the incentives that influence highly skilled workers’ decisions to migrate. I will conclude by arguing that the overall tax burden is one of the only variables influencing migrant behaviour that the government can control, and make recommendations about the best policies that the UK government can introduce in order to attract and retain the most valuable migrants.

Skilled migration in UK today

As seen in figure 1, the UK has the 4th highest number of highly skilled immigrants in the OECD. However, this picture changes when considering the number of highly skilled workers who leave the UK. If one combines the in and outflows of these individuals, the UK gains only slightly more highly qualified workers than it loses. In absolute



2 M.A. Desai, D. Kapur, and J. McHale, “Sharing the spoils: Taxing international human capital flows”, *International Tax and Public Finance* (11-5, 2004), pp. 663-693
3 M.A. Desai, D. Kapur, and J. McHale, “Sharing the spoils: Taxing international human capital flows”, *International Tax and Public Finance* (11-5, 2004), pp. 663-693
4 L. B. Lowell, *Trends in international migration flows and stocks, 1975-2005* (2005), Paris
5 OECD, *The Global Competition for Talent, Mobility of The Highly Skilled* (2008c), p. 79

terms, the UK has a lower net intake of highly skilled immigrants than countries like Sweden, Switzerland, Spain, Germany, and France, all of which have fewer highly skilled immigrants than the UK. What can further be seen from the graph is that the UK is the largest supply country in the OECD of highly skilled migrants, just about half a million more than Germany. In its own right, the high emigration rate constitutes a problem to the British economy, as investments made in education are lost to other countries.

Figure 1 only describes the stock of highly skilled migrants, not annual flows. On the other hand, the chart shows that some countries, like Germany and the UK, have a tendency of losing a fair share of their highly skilled workforce to other countries. In recent history, the greatest net receivers of highly skilled people have been the US, Canada, Australia and France.

A globalized labour market

Globalization is one of the central phenomena shaping the world in which we live. The term can be defined in many different ways, from cultural spill over to economic interdependence. Globalization as such is not new, as cultures have always influenced each other and there has always been international trade. What is new about this modern form of globalization is the pace at which things have changed and continue to change. Modern globalization, from the 1960s onwards, has seen a tremendous increase in economic transactions between states and is therefore often referred to as an economic globalization.⁶ However, capital transactions are not the only phenomenon that has characterised this new era of globalization – migration is also a key feature.⁷

The revolution within the transport sector has made travelling easier and increased the mobility of the world's workforce to a degree never seen before.⁸ Consequently, states can no longer consider their domestic workforce to be a fixed entity, because better job opportunities in other countries can be taken up relatively easily. As skills are easily transferable within the global labour market, highly skilled people in particular can seize opportunities for higher

wages and better living conditions in foreign countries. This is because they are continuously assessing how to optimize their utility in the context of the international labour market.⁹ This situation is well illustrated by the British case as shown in figure 1. Britain is the fourth largest receiver of highly skilled immigrants, but only has a marginally positive inflow because of an extraordinary outflow of the same group.¹⁰

While travelling has become easier in technical terms, states have tended to make migration more difficult by putting up regulation barriers. The modern era of migration regulation arguably began in the 1920s when the US ended its free entry policy for Europeans. However, in a longer historical perspective, states have always tended to discriminate between those they allow to enter their country and those they do not.¹¹ Though there has been an increase in migration regulation over the past century, it can still be said that highly skilled migrants have experienced an extensive freedom of mobility throughout the period. On a global scale this is exemplified by the increase of migrants holding tertiary education from about 12 million in 1990 to more than 20 million in 2000¹² (Tertiary education is here understood as the completion of at least a 3 year undergraduate university degree.)

Gilpin stresses that one of the core reasons for more restrictive immigration rules is the welfare state. Because welfare goods to an extent can be viewed as public goods, it is difficult to limit certain people's use of those facilities. This leads to a political demand for the prevention of migrants entering the country and exploiting the public goods.¹³ This demand for regulation leads to a migration regime where only few migrants are entitled to enter foreign countries and entrance is often subject to evaluation of the individual's educational and economic status.

One of the symptoms of increasing mobility is shown in the migration statistics of OECD countries, they reveal that net migration in these countries has tripled since the sixties. Forecasts even propose that these patterns are likely to continue to an even stronger extent.¹⁴ About 3% of the world's population or 190 million people live outside their country of birth. This statistic does not show the great differences

6 R. Gilpin, *Global political economy: Understanding the international economic order* (2001), p. 7

7 B. Keeley, *International migration: The human face of globalization* (2009), p. 31

8 *ibid* p. 12-13

9 H.G. Grubel, *Reduction of Brain Drain – Problems and Policies. Minerva*, 6, (4) 541-558 (1968), p. 543

10 OECD (2008c), p.79

11 B. Keeley, pp. 24-25

12 Lowell, p. 16-17

13 Gilpin, p. 92, 366

14 Keeley, p. 12

in migrants as a proportion of population in different countries, from 23% in Switzerland to 3% in Finland.¹⁵ The British share of those expats is about 3%, roughly 6 million people, of whom more than 1.3 million are highly skilled.¹⁶ Further, statistics show that UK citizens today are leaving the UK in greater numbers than in the 1990s.¹⁷ The UK is additionally experiencing the largest outflow per capita in the OECD, with almost 10% of its population living abroad.¹⁸

State pensions and ageing populations

During the last 20 years, it has become increasingly apparent that the populations of Western countries are growing older. Thus, the proportion of pensioned people grows while the proportion of working people diminishes. As Desai, Kapur and McHale argue, this will escalate the international competition to get hold of the best educated and most productive workforce.¹⁹

One of the central reasons for this sharpened competition is the way the pension systems are organised. In the UK, state pensions are financed by current taxation. This makes pension payments dependent on current tax revenues, thus also somewhat dependent on a stable ratio between workforce and non-workforce. In the current situation only about 30% of the total pensions are paid by private savings, making government paid pensions the essential source of income for many pensioners in the UK.²⁰

Desai, Kapur and McHale outline that, other factors being held equal, the UK will have to take in about 270,000 migrants each year between 2005 and 2050 to avoid a pensions crisis. This assumes there is no outwards migration in the same period and that migrants have similar characteristics as natives.²¹ This assumption is made to simplify calculations, but could result in an overestimation of the rate of labour force participation rate and productivity achieved by immigrants. This could be due to questions about immigrants' qualifications, rigidity in the domestic labour market, language barriers or other problems immigrants face in new countries.

After the Second World War, Germany learned that, even when encouraging immigrants into their country for a short period of time, immigrants tend to bring their families with them. As Max Frisch has said: "We wanted workers, [but] we got people".²² This means that a country must expect immigrant workers to stay and settle down – short-term immigration is difficult to bring about. Those who immigrate to the UK will subsequently grow old in the UK. Taking in immigrants without considering this is thus not a sufficient answer to the problem of future state funds; however, it is part of the answer.

Part of the solution to this problem is to shift the focus of immigration policy from immigrants in general to those people who are able to produce more than they themselves can consume. As an example, Brian Keeley argues that immigrants contribute to society by introducing new ways of doing things. Research carried out in the US for example shows that about half of all the entrepreneurs in Silicon Valley are immigrants.²³ In addition, about half of all Nobel prize winners in the US between 1901 and 1991 were foreign born or first generation immigrants.²⁴

All this is not to say that the borders should be closed for those who do not have higher qualifications. It merely shows that, even if immigration policies are to be restrictive (as the current government has stated that it believes they should be), legislation should be aimed at making the UK more attractive for people with higher education qualifications and/or higher productivity to ensure that those who do enter the UK are the best immigrants we can get.

A historical view of international competition for highly skilled workers

This section outlines the emergence of a system of competition for the best immigrants among developed countries in the twentieth century. It is largely based on Ayelet Shachar's 'The Race for Talent: Highly skilled migrants and Competitive Immigration Regimes'.

¹⁵ *Ibid*, p. 31

¹⁶ Keeley, p. 30; OECD (2008); D. Sriskandarajah & C. Drew, *Mapping the scale and nature of British emigration*, Institute for Public Policy Research, London (2006)

¹⁷ Office for National Statistics, *Emigration of British citizens fell in 2007*, 19. November 2008

¹⁸ OECD, (2009c) available from <http://stats.oecd.org/Index.aspx?QueryId=11112&QueryType=View> accessed 15-12-2009; Office for National Statistics (2009b) *Population Trends Winter 2009*

¹⁹ M.D. Desai, et al, pp.663-693

²⁰ OECD (2009a), available from <http://stats.oecd.org/Index>, accessed 15-12-2009

²¹ Desai et al., pp.667-9

²² Keeley, p. 27

²³ Keeley, pp.54-5

²⁴ A Shachar, *The race for talent: Highly skilled migrants and competitive immigration regimes*, New York University Law Review, 81 (2006), p.149

It can be argued that the current competition for talent started in the mid 1960s, when the US Congress passed a series of amendments to the Immigration and Nationality Act of 1952. These amendments removed barriers which discriminated against immigrants from the “Eastern hemisphere” and added an imbedded preference towards highly skilled immigrants.²⁵ This formalisation of the recruitment of highly skilled foreigners is well captured by the statement made by the American president Lyndon B. Johnson when signing the amendments in 1965:

“This bill says simply that from this day forth those wishing to immigrate to America shall be admitted on the basis of their skills and their close relationship to those already here. This is a simple test, and it is a fair test. Those who can contribute most to this country – to its growth, to its strength, to its spirit – will be the first that are admitted to this land.”²⁶

Canada followed the US trend by introducing a points-based system in 1967, which was designed to facilitate the admission of highly skilled immigrants into Canada. The objective of the Canadian migration system has traditionally been to promote long term economic growth by admitting productive immigrants.²⁷ The points-based system built on this as it gave special entrance advantages to people with tertiary education and those who were considered to have an ability to become economically established in Canada. One of the features of this system is that the amount of points needed to enter Canada can be changed depending on needs within the Canadian labour market.

Following the Canadian example, Australia introduced a similar migration system in 1973 – likewise providing entrance benefits to immigrants with “skills that meet Australian requirements for an occupation that requires a degree, diploma or trade-level qualification and at least twelve months recent employment in a skilled occupation at the time of application”.²⁸ In 1991, New Zealand introduced a points-based system to “offer opportunities for skilled migrants, particularly in industries and regions

experiencing growth”.²⁹ (New Zealand 2009). In addition, the New Zealand immigration minister is quoted as saying “We are looking for skills that will help us achieve sustainable economic growth and encourage innovation”.³⁰

A competitive reality

Competition for highly skilled migrants has intensified. The US government introduced the Immigration Act of 1990 in order to respond to “fears concerning the US work forces’ ability to compete in the global economy”. This immigration act introduced faster admissions procedures for highly skilled workers or so called “priority workers”.³¹ This acknowledgement of the competitive situation in the global economy shows the beginning of a competition.

From 1990 and onwards some noteworthy events takes place. Germany and other EU countries enter the market for attracting highly skilled migrants. The most notable sign of this increase in competition was the German abandonment of their zero admission policy.³² Furthermore, Australia, New Zealand, Canada and Germany allow spouses of highly skilled immigrants to take up employment upon their arrival. This is contrary to the US immigration policy where spouses are not allowed to take up work. Most countries, other than the US, also grant highly skilled immigrants and their spouses permanent residence after just a few years in the country.³³

The actions taken by various countries to encourage high skilled immigration has intensified over the past few years and there has been a change in discourse as the international dimension of migration is included in the discussions. This is, for example, underlined by the New Zealand immigration Act of 2003 which aims to “better enable the selection and active recruitment of migrants who can make the best possible contribution to New Zealand”.³⁴ Likewise, the German Minister of the Interior commented that the 2004 immigration act “strengthens our position in the global competition for the brightest minds and serves our country’s economic interests”.³⁵ The

25 Shachar, p.170

26 L.B. Johnson, 6-6-2007, *Lyndon B. Johnson’s Library and Museum*: available from <http://www.lbjlib.utexas.edu/Johnson/archives/home/speeches/home/651003.asp> accessed 6-4-2010

27 L. Parai, *Canada’s Immigration Policy, 1962-74*, *International Migration Review*, 9, (4) (1975) pp.449-477

28 Shachar, pp.171-4

29 S. Yale-Loehr & C. Hoashi-Erhardt, *A Comparative Look at Immigration and Human Capital Assessment*, *Georgetown Immigration Law Journal*, 16 (2001), p.120

30 Shachar, p.179

31 Shacher, p.183

32 Shacher, p.188

33 Shachar, p.148-206

34 New Zealand. Immigration Amendment Act (No 2) (2003)

35 Shachar, p.191

Canadian Immigration Minister also remarked in 2005 that “Canada’s immigration system is a model for the world and today’s measures allow us to maintain and enhance our position”.³⁶ This referred to Canada’s ability to maintain competitiveness in attracting highly skilled workers due to the decision by the Canadian government’s to speed up the processing of highly skilled applicants.

In 2005, Canada also chose to grant bonus points based on spouses’ educational qualifications to both married and same sex couples. This action is viewed by Shachar as a Canadian attempt to attract highly skilled workers from the US, whose spouses are not allowed to seek employment.³⁷ The US government has not been fully able to act upon these actions made by other countries. However, members of the US senate are currently working on a special entrepreneur VISA which would allow people who can attract investments and foster new jobs to receive permanent resident status more easily. This focus on entrepreneurs indicates a shift from purely looking at education as the desirable feature for potential immigrants, to also considering the applicant’s ability to create jobs.³⁸ This shift should be seen in the context of the financial and economic crisis where unemployment has soared. Whether you look at entrepreneurs, as Kerry and Lugar, or concentrate on highly skilled workers as this paper does, the goal is the same – to improve productivity and business development through what Schumpeter called creative destruction.³⁹

The challenge of the ‘brain drain’

The intensified competition for highly skilled workers, outlined above, has increased the importance of keeping and attracting highly-skilled workers. Due to this intensification of competition, the ‘brain drain’ and corresponding ‘brain gain’ have become important phenomena to migration-related policymaking. The term ‘brain drain’ either refers to a relative loss of brains – outflow minus inflow – or to absolute outflow of brains irrespective of inflow. In this paper, ‘brain drain’ refers to the absolute outflow of highly skilled people. The choice of definition is to make clear that, due to the increased mobility of highly skilled workers, it no longer makes sense only to focus

on attracting these individuals but also to consider how to maintain those already in the country. A brain drain is thereby characterised as a states loss of highly educated people who are needed in the domestic labour market.⁴⁰

Considerations about the competition for talent

As outlined above, many developed states have shown a willingness to compete to attract the best migrants into their economy. However, this competition can create a moral dilemma for many countries. This dilemma is described very well by Grubel, who on the one hand remarks that “the United States is morally and politically committed to assist the development of the poorer regions of the world” and on the other hand that “the United States has considered it to be in its national interest to...favour individuals with high levels of training”.⁴¹

From a wider economic viewpoint, free movement of labour is crucial to optimize the use of human capital. Human capital is distinct from other sorts of capital in its ability to move quickly and at a low price. That said, human capital also has many similarities to conventional capital in the sense that optimal productivity of the human capital depends on the environment in which it is working. The optimum conditions for an individual unit of human capital may not exist in that person’s country of origin. Therefore, the free movement of labour is of vital importance to achieve the most effective use of the given capital.⁴²

This importance is underlined by a study conducted by Winters et al. that finds that greater labour mobility could offer significant global economic benefits (Winters et al. 2003). The study estimates that liberalisation of labour mobility to the level of 3% of the workforce of OECD countries could result in global economic gains of up to \$150 billion a year.⁴³

The process of a brain drain becomes obvious when more highly skilled people are leaving the country than coming in to the country. As previously discussed, a brain drain can also occur when the country does not experience immediate net losses, because the brain drain is not definitive until the

36 Volpe (2005)

37 Shachar, p.186

38 Kerry et al (2010)

39 J. Schumpeter, *The process of creative destruction*, in *Capitalism, Socialism, and Democracy*, 4th ed., George Allen & Unwin LTD, London (1954)

40 R. Iredale, *The migration of professionals: Theories and typologies*, International Migration, 39 (2001), p.16

41 H.G. Grubel, *Brain Drain – A Us Dilemma*. Science, 154, (3755) (1966), p.1420

42 H.G. Johnson, *The Economics of the Brain-Drain – the Canadian Case*, Minerva, 3 (1965), p.301,303

43 A. Winters, et al., *Liberalising Temporary Movement of Natural Persons*, in *An Agenda for the Development Round*, Oxford, Blackwell Publishing (2003)

individual emigrant chooses permanently to settle down abroad. As conditions constantly alter and individuals continually reassess their potential utility in other countries, this process might not even have an end.⁴⁴ The likelihood of a person returning to his or her country of origin diminishes with age and establishment of family commitments in the country to which they immigrated.⁴⁵ People who have not returned to their home countries before their mid-thirties are likely not to return at all, except after retirement.

The importance of education

This paper has so far attempted to outline the importance of migration outflows to state pensions and to the general supply of labour force in the domestic labour market. This applies to almost all kinds of labour, and it would therefore seem fair to justify the specific focus on people with tertiary qualifications.

Most economists agree that, in a developed economy, there is a positive correlation between increased education and increased productivity. The productivity of an educated workforce is assumed to exceed that of a less educated workforce, other things being held equal.⁴⁶ The believed importance of this is by and large shown by the increased competition among states to capture technological superiority.⁴⁷ A highly-skilled workforce also seems to increase innovative and entrepreneurial activity. Power and Lundmark further underline this point by implying that the sharing of knowledge in the workplace is one of the most frequent sources of innovation.⁴⁸ Shane further emphasises that people with higher levels of education often have a good ability to commercialize innovations.⁴⁹

If this is combined with the increasing focus on research and development (R&D) from both large corporations and leading world economies, it indicates the importance of technological advantages to an economy's performance in an international setting.⁵⁰ The combined positive impacts of education highlight the importance of attracting highly

educated people into an economy, to help aid the economic growth of that country. Increasing the relative educational level of a population will increase the economic performance of that economy. Additionally, the more educated people in an economy, the higher their aggregated production will be due to the increasing returns from investment in human capital outlined by Thomas Johnson.⁵¹

Brain drain and migration in Britain

In Britain, there has been a consistent flow of highly educated workers out of the country since the sixties. However, it has never escalated to a net brain outflow because there have been marginally more educated people travelling to the UK than leaving it.⁵² A majority of those "brains" travelling to the UK come from developing countries, indicating that the gain Britain is getting is caused by relative levels of development, rather than particular unique British attributes.⁵³ This indication is also backed by the fact that immigrants from more developed countries are less likely to move to the UK than those from less developed ones.⁵⁴

During the sixties the UK experienced what could be called the first wave of brain drain. The National Health Service (NHS) experienced a somewhat consistent loss of doctors and nurses who primarily went to Canada and the USA to pursue greater earnings. Much of the blame for this was put on the British government, as they had managed wages in the NHS and not allowed them to rise in line with the wages of those in the private sector.⁵⁵ Looking back, the explanation stressing the importance of wages seems very likely, but is also somewhat simplistic. A less obvious explanation would probably state the importance of after-tax earnings, access to research investments, together with other less materialistic issues such as the desire to achieve professional development and increase one's social position among other professionals.⁵⁶

In the UK, the expansion of the EU has created a notable increase in immigration from Eastern European countries,

44 Grubel, *Reduction of the Brain-Drain* p.543

45 CDI 2007, *Udlandsdanskere 2007*, Confederation of Danish Industry

46 M.E. Porter, *The Competitive advantage of nations*, New York; London, Free Press (1990)

47 Gilpin, p.108

48 D. Power et al, *Working through knowledge pools: Labour market dynamics, the transference of knowledge and ideas, and industrial clusters*, *Urban Studies*, 41, (5-6) (2004), p.1027

49 S. Shane, S., *Prior knowledge and the discovery of entrepreneurial opportunities*, *Organization Science*, 11, (4) (2000), pp.448-469

50 Gilpin, p.127

51 Johnson, p.306

52 OECD (2008c), p.79

53 OECD (2008c), p.76, J. Salt, *International Migration and the United Kingdom* OECD (2009) pp.97-8

54 Salt, p.3

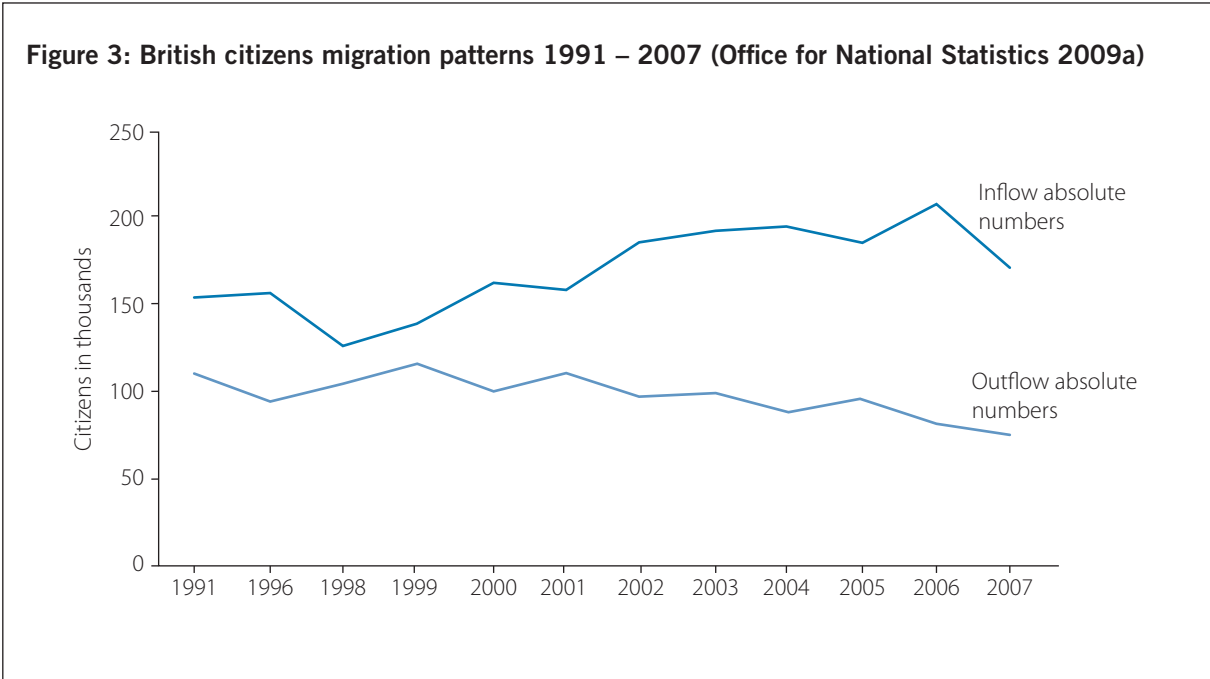
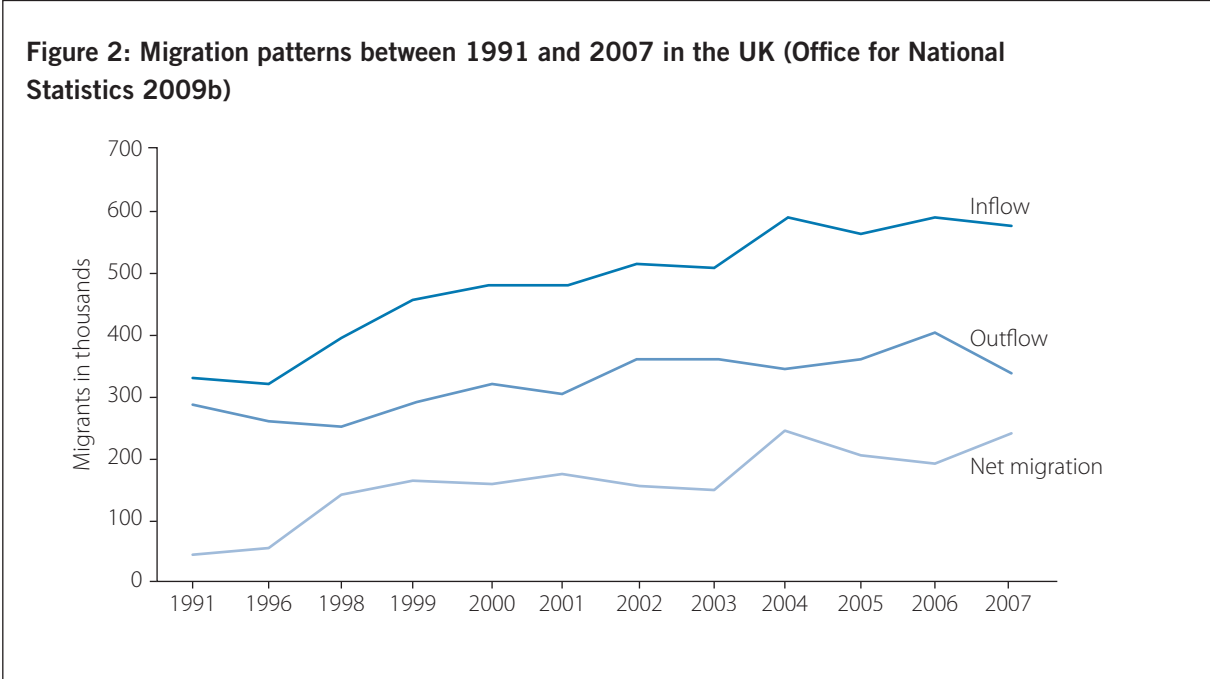
55 Johnson, p.299

56 T.M. Andersen, *Migration, taxation and educational incentives*, *Economics Letters*, 87, (3) (2005), pp.399-405

particularly the Poles who have come temporarily to work in Britain. As figure 2 shows the immigration numbers rose dramatically during 2004, and by looking at the country of origin the rise clearly was due to the EU expansion.⁵⁷ EU expansion cannot be the only explanation for an increase in migration to the UK, as there has been a steady increase in the number of migrants since 1991. Additionally, immigration has risen marginally faster than emigration but both patterns have been fairly stable. The migration numbers also show

that there has been a somewhat constant net immigration of about 250,000 over the last couple of years.

Though there has been an increase in the number of people immigrating to the UK, figure 3 demonstrates a striking pattern showing that the number of Britons leaving the UK has been rising. It also shows that the number of Britons re-entering the UK has decreased by about 35,000 from 110,000 in 1991 to 75,000 in 2007.



57 OECD, *International Migration Outlook Paris*, OECD (2008b), p.286

Migration among highly skilled workers

As outlined above, the flow of highly skilled workers between countries has been consistently high throughout the last 50 years. Unfortunately, there is no continuous data showing the trends and quantity of tertiary educated Britons emigrating in this period. The OECD has provided a number of net figures for the UK indicating how extensive the phenomenon is.

Of all Britons who have emigrated and are considered to be expatriates, 34.7% have obtained a tertiary education. This means that over 10% of all Britons who have achieved a tertiary education live outside the UK.⁵⁸ In absolute numbers the UK, with its 1,276,929 tertiary educated expatriates, has the largest share of highly educated expatriates coming from an OECD country. In total, it is estimated that 6,726,847 tertiary educated people from the OECD countries live outside their country of origin and almost 20% of those are British.⁵⁹

While this extensive emigration of highly educated Britons has not yet evolved to a brain deficit, this is mainly due to the UK's ability to attract highly educated people from non-OECD countries. The inflow of highly educated workers from non-OECD countries is about 30% higher than the inflow from OECD countries. In fact non-OECD migrants account for about 10% of all tertiary educated people living in the UK.⁶⁰

What needs to be considered about these highly educated migrants is that they are coming from developing and non-OECD countries, especially India, China and other fast emerging economies. As these countries grow richer and their economies become more and more knowledge-based, the incentives for those individuals with tertiary education to migrate to the UK will diminish. This development will leave the UK with a negative net inflow of highly skilled individuals, if Britain does not increase its attractiveness to highly skilled immigrants.

Considering the extraordinary annual growth rates experienced by China and India, no-one can fully predict the development in competition for talented migrants.⁶¹ It is, however, very likely that the rapid developments

experienced by those two countries will increase global competition for highly skilled labour, as Chinese and Indian expatriates working in Western countries may find it attractive to return to their countries of origin when economic conditions there have improved.⁶² Attracting highly skilled people is one thing, but governments must consider how to keep them as well.

Incentives to emigrate

A major incentive calculation of whether a person will migrate is the consideration of after-tax earnings in the new country compared with after-tax earnings in the country of origin, combined with the intangible benefits and costs of moving. These intangibles include the potential costs of learning a new language, adaption to a new culture, loss of friends, etc. They mean that a person could choose to emigrate even though after tax earnings are smaller in the new country. This happens if intangible values like civil or economic liberties, good governance, higher educational levels, climate or culture exceed the negative pay difference. To academics, values like the academic level of co-workers, equipment and the possibility of adopting new professional skills could all be factors that could outweigh lower after-tax earnings.

If the goal is to attract highly-skilled immigrants, the key task is to evaluate what higher skilled people value the most and determine if and how these factors can be fostered. Andersen's way of viewing incentives makes it possible to consider both material and immaterial factors as part of a person's cost-benefit analysis. In more specific terms, a study conducted by Chappell, Sanchez and Shahin finds that five general incentive areas of comparison between countries can be identified, which can be broken down to:

- Wages
- Employment prospects
- Professional development prospects
- Social and professional networks
- Socioeconomic and political conditions

58 OECD, *A Profile of Immigrant Populations in the 21st Century, data from OECD countries* Paris (2008a), OECD, p.178

59 OECD (2008c), p.73

60 OECD (2008c), p.76

61 OECD (2008c), p.14

62 Shachar, p.168

They conclude that professional development and wage differences are of particular interest to tertiary educated migrants.⁶³

Returns to education

In its report *Education at a Glance* from 2009 introduced a new measure in order to quantify the incentives to undertake different levels of education called the Net Present Value (NPV). The NPV resembles the current value of undertaking an education when all costs and benefits have been taken into account. In short, the NPV figure reflects how much more a person is expected to gain by obtaining an education compared to investing in “safe” assets.⁶⁴ Comparing the UK to other European countries, the UK (\$207,000) has a substantially higher NPV than that in Germany (\$136,000) and the Netherlands (\$104,000), four times that of Sweden (\$52,000) and 10 times that of Denmark (\$20,000).

Historically the US has an even higher NPV, though data is not available for the US in the 2010 edition and it is therefore not possible to directly compare it to the UK and continental European countries. When looking at the relative earnings, one need to take factors as tuition fees, taxes and other financial costs into account. This means that a British graduate, doing his or her education in the UK, where even after the recent tuition fees reforms higher education is subsidized extensively, will be able to gain substantially higher benefits from the education by going to the US than an American would get by staying in the US.

This is because the cost of education in the US primarily falls upon the individual receiving that education, whereas the cost in the UK is partially dispersed among taxpayers. Moving from the UK to the US allows Britons with tertiary education to move from a regime in the UK where the private direct costs are lower but taxes are higher, to a regime in the US where direct costs are higher but taxes are lower, thus enjoying the benefits of both worlds. This jump in returns to education represents a major incentive for people to migrate.

Academic development

As shown earlier, professional development is counted as one of the core incentives of highly skilled people to migrate. In her study of migration among the scientific elite, Gritt Laudel shows that those movements of these individuals tend to favour the US. One of the reasons she finds is that already established elites in the US act as magnets to other scientists who move to the US.⁶⁵ There is a greater chance of attracting tertiary educated people if a scientific elite already exists in a given country. The study also reveals that this movement, in those areas researched, consistently flows towards the US. That this trend is repeated in other areas of research is supported by the survey conducted in 1989 among UK academics by A. H. Halsey. Halsey asked 7,665 academics: “Since taking an academic post in Britain, have you seriously considered applying for, or accepting, a permanent post in higher education or research abroad?” About 35.5% of the respondents answered “Yes, seriously” and another 27% answered “Yes, not seriously”. Even disregarding the latter category, the potential outflow of academics could be 35% of all academic staff.⁶⁶

The same survey also asked the academics where they had considered moving. More than half (63.4%) of those who had seriously considered emigrating had considered going to the US, 44% to Australia and about 10% to Canada. Moreover, Halsey discovered that a majority of those academics who considered emigrating had the potential for academic research as their core incentive.⁶⁷ Laudel and Halsey’s research shows that academics and professional scientists are willing to move for the best research options (funding, academic milieu, etc), but also that tertiary educated people, no matter subject, age or core interests, consider emigration as a way of achieving personal development.⁶⁸

Other Incentives

There are, of course, other incentives than those identified so far. A range of Danish organisations have long been interested in finding out why highly skilled people migrate.

63 L. Chappell et al, *Easing the Strain: Understanding brain drain and where policy can respond*, Global Development Network and Institute for Public Policy Research (2009)

64 For further details on the method please see: OECD 2009b. *Education at a glance, OECD indicators* Paris, OECD (2009b), p.154

65 G. Laudel, *Migration currents among the scientific elite*, *Minerva*, 43, (4) (2005) pp.393-4

66 J.H. Schuster, *Emigration, Internationalization, and Brain-Drain – Propensities Among British Academics*, *Higher Education*, 28, (4) (1994) p.440

67 Schuster, pp.441-2

68 Schuster, p.449

They have conducted a range of surveys into these incentives, and some of the most-frequently cited reasons for emigrating were personal development and a desire to live in other countries for the cultural experience.⁶⁹

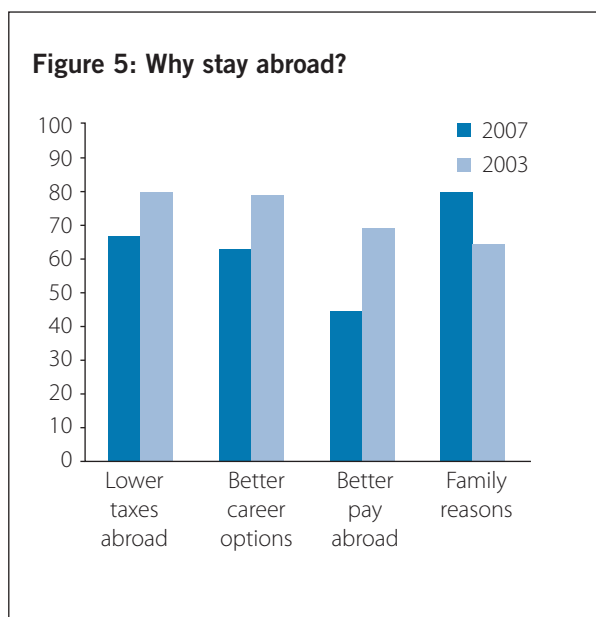
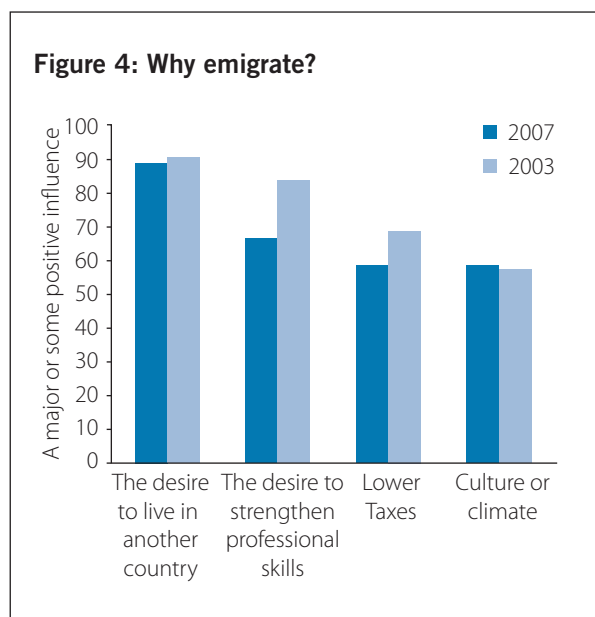
The Confederation of Danish Industries (CDI) has conducted one of the more extensive studies on people's incentives to migrate. CDI has conducted two surveys among Danish expats, one in 2003 with more than 2000 respondents and one in 2007 with more than 1000 respondents. In both studies respondents were asked to what degree a series of incentives had motivated them to emigrate and how those same incentives influenced their decision to either return to Denmark or stay abroad. One of the main characteristics of the respondents in both surveys was that they predominantly held tertiary education qualifications. In both 2003 and 2007, about 70 percent of the respondents had tertiary qualifications. The research can therefore by and large be regarded as a study of incentives among highly skilled migrants.

A notable finding from the studies is that people tend to shift from intangible values when deciding to emigrate, to more material values like higher disposable income when deciding to stay abroad. The respondents were asked to what degree eleven factors had influenced their decision to emigrate and stay abroad. Among those eleven factors, four were consistently in the top five in both studies which can be seen below in figure 4 and 5.

Figure 4: The four most significant factors in people's decision to move, according to the studies from The Confederation of Danish Industry. The respondents were asked: "To what degree has the following factors influenced your decision to emigrate?" Only responses which indicate that the given factor had a major or some influence on their decision are included (CDI 2003;CDI 2007).⁷⁰

Figure 5: The four most significant factors in people's decision to stay abroad, according to the studies from The Confederation of Danish Industry. The respondents were asked: "To what degree has the following factors influenced your decision to stay abroad emigrate?" Only responses which indicate that the given factor had a major or some influence on their decision are included (CDI 2003;CDI 2007).⁷¹

As can be seen from figure 4, the most consistent reason for Danes to emigrate is the internal desire to live in another country. In both 2003 and 2007, about 90% of respondents answered that this was a major or contributory factor in deciding to emigrate. As figure 4 indicates, the reasons to move abroad are largely immaterial, whereas figure 5 indicates that people have more material reasons to stay abroad. The striking finding from these surveys is that lower tax is strongly represented in both considerations to emigrate and to stay abroad. In the survey from 2003 the significance of tax increased by 12% when people decided to stay abroad compared to when people decide to emigrate.



69 CDI, *Udlandsdanskere 2003*, Confederation of Danish Industry, Copenhagen (2003); CDI (2007); L. Munck, *International skills – Danish needs, opportunities and barriers*, The Danish Association of Lawyers and Economists, Copenhagen (2008)

70 CDI (2003, 2007)

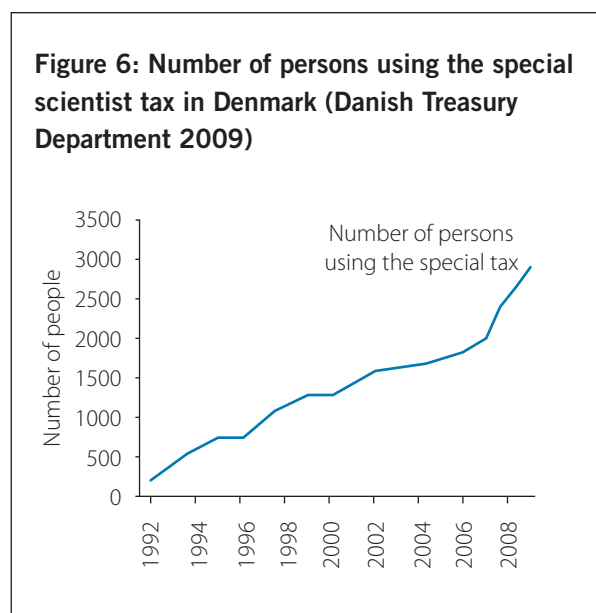
71 CDI (2003, 2007)

The same trend was presented in the figures from 2007, where the importance of tax increased from 58% to 67%.

The importance of tax

As mentioned above, tax – along with potential for professional development and better career options – is a major influence on people’s decision to migrate. Looking specifically at tax as a motivator for migration, Richard Vedder from Ohio University has been looking at domestic migration patterns within the US. Vedder has found indications that Americans by and large choose to migrate into low tax states and that this tendency has been consistent over the last 20 years.⁷² Kathleen Day has also found that regional fiscal policies including taxation to some degree influences inter provincial migration in Canada.⁷³

A further example of the importance of tax can be derived from the experiences with the Danish scientist tax. In Denmark, foreign scientists and specialised workers can achieve a tax discount for either 3 or 5 years. This tax discount scheme has become increasingly popular since it was introduced in 1992. As shown by figure 6, take-up of this scheme has gone from 229 people in 1992, to more than 2,800 in 2009.⁷⁴ As the graph below indicates, the popularity of the scheme has increased dramatically and though 2,800 may seem small, it is not insignificant in a labour force of 3 million people.



Experiences from the Scientist Tax in Denmark

The Danish scientist tax scheme works like a tax discount system where the scientist or skilled worker chooses how many years he or she wishes to work in Denmark. The scientist can choose between 3 years with an effective flat tax of 31% or 5 years with 38% flat tax. In 2009, only 50 out of almost 3000 choose the 5 year option, which indicates that disposable income is of great importance.⁷⁵

From the above section and from figure 6, it would be arguable that the tax discount scheme has shown that scientists are responsive to lower taxes and that the scientist tax is a viable way of attracting talented people. The problem with this conclusion is that it only takes the short-term perspective into account and only considers the recruitment part – but what about maintaining the highly skilled? In the long term the tax discount doesn’t seem to permanently attract highly skilled individuals, which is also indicated by the fact that only 50 out of 3000 chose the five year option, which would be more likely to lead to long-term residency.⁷⁶ It can therefore be said that, looking at what happens after the tax discount stops, the scheme does not appear to be effective in keeping the highly qualified workers in Denmark.

This is the most serious problem with the tax break – that it only seems to attract highly skilled workers, not maintain them in the country. A further problem relating to the scientist tax scheme is that it actually discriminates against highly skilled Danes. Some have said that this problem has encouraged a brain drain, as natives’ earnings diminish in relative value when their foreign colleagues’ pay a lower tax. This highlights the potential for negative unforeseen consequences in government attempts to engineer certain economic outcomes through tweaks in the tax code.

What can the UK learn from Denmark?

According to the experiences from Denmark lower taxes do attract scientists. Furthermore, it can be concluded from the research conducted by the CDI that lower tax substantially influences highly skilled people’s decision to migrate. However, it can also be concluded that special tax schemes don’t work in the long run and may even

72 R. Vedder, The Heartland Institute (2005)

73 K.M. Day, *Interprovincial Migration and Local Public-Goods*, Canadian Journal of Economics-Revue Canadienne D’Economie, 25, (1) (1992), pp.123-144

74 Danish Treasury Department, 18-5-2009, SKAT.dk

75 CDI, Confederation of Danish Industry (2010)

76 C.K. Jessen, (21-7-2010), www.business.dk

have negative overall effects by complicating the tax code. What matters for highly skilled immigrants is the general tax level.

The evidence that low taxes can attract highly skilled workers into the country can also be said to minimize the outflow of domestically highly skilled individuals – or at least make it more favourable for them to return home afterwards. In more general terms, improving the economy by making business more profitable would also have the indirect effect of attracting and maintaining highly educated workers. This kind of policy would attract more investments to the economy and thus increase the general wealth of society.

As can be seen from the above discussion it is not only about attracting the highly skilled, but also a matter of maintaining them. For this to happen, it is of great importance that labour market policies do not discriminate against the native labour force and regards the labour market as being international rather than national. This is illustrated by the British case, where despite attracting a high level of highly skilled workers, the domestic conditions still encourage a similar number of people to emigrate.

Policy proposals: Harnessing the international labour market

The diminishing labour force and the ageing populations of most Western economies mean that international competition for highly skilled migrants has intensified. This can also be seen in the change of behaviour amongst leading economies as illustrated earlier. One of the striking similarities among the migration policies implemented by most countries is that they all try to attract highly qualified workers – whereas very few countries have specified policies to maintain them.⁷⁷ This has materialised, for example, in policies giving migrants easier access to the domestic labour market, certain tax exemptions, or other benefits. This reveals a tendency among governments to regard the increased competition for talent as an exogenous factor to society, rather than one which is affected directly by broader realities. Integrating this competition into national legislation and thereby acknowledging that the society as a whole has to be competitive would not only have an effect of attracting and maintaining skilled immigrant labour, but would also make it more attractive for highly-skilled native labour to remain in the country.

As argued above, the tax burden is a crucial factor influencing highly skilled people's choice about where to emigrate to. This is one of the only variables that the government can influence in the short run with any success. Overall tax levels should therefore be held at a competitive level in order to attract and maintain the relevant highly skilled workforce. Lower income taxes would also increase returns to education, improving the incentive to complete a higher education in the first place.

This is not just to stress the importance of wages, but also the importance of research budgets. One way of getting around constrained research budgets and wages for scientists in the UK could be to separate teaching from research in universities. If universities were able to operate fully privatized research companies, they could become more competitive and create new revenue streams as they are weaned off public funding for tuition. The teaching part of the universities, subsidised or not, would then be able to hire researchers from the research part of the university or any other sources to teach. The researchers would then be paid by the hour/week or term – to provide a certain amount of teaching hours. The rest of the time the researcher/teacher would of course be free to earn money through the research department or any other individual arrangements.

A reorganisation of universities along these lines would have two major benefits. First, it would secure that any public money going into higher education would actually be used for educational purposes. Second, it would give the research departments an incentive to invest in profitable and market-relevant research which would allow them to invest further in equipment and research facilities. Furthermore, the professionalization of university research would appeal to academics as well as highly-qualified professionals, as it would reduce some of the imbalance between university and private organisational research – wages and budgets would rise in university research bodies. The virtuous circle of increasing returns to research spinning off increased investments into research would increase the likelihood of highly productive people to choose to immigrate to the UK.

What is the cost?

As already indicated, increased immigration comes at a cost as well, in particular in a universal welfare system like the British. As the Danish society is also a universal welfare

77 J.C. Dumont & G. Lemaître, *Counting immigrants and expatriates in OECD countries: A new perspective*, Paris, OECD (2004)

system the small Danish liberal party the Liberal Alliance, has come up with an answer to this “problem”, known as “open borders, closed public accounts”. The system means that you as an immigrant are required to have a healthcare insurance for the first couple of years 5 years of your stay and that you are not allowed to use any public services for those first five years.

Further, it is a requirement that you have a contract/agreement with an employer in the UK at your entry. As it would be unrealistic to expect foreigners to pay full tax and not being able to benefit from any public services I would propose a system where foreigners are obliged to pay a reduced tax, say 10%. Also you would not be allowed to receive unemployment benefits or any other public or social benefits. A system like this would make sure that any person who enters the UK will have the propensity to work and contribute to society.

It also would make sure that the British society does not carry any or at least very few of the expenses relating to immigration. In regard of the problems of the Danish scientist tax break, a limitation of immigrants access to public services and benefits would make a tax break for immigrants more fair to the domestic workforce. After the first five years the immigrant can be regarded as eligible for any public services and benefits also available to British citizens.

Conclusion

This paper has assessed the international competition for talented people as well as various aspects of the incentives behind highly skilled migration. This has been done in the context of the demographic development of most Western countries, including the UK, which will lead to a higher ratio of retired people per working aged people within the next 40 years. The proportion of working age people to pensioners will rise from the current 4:1 to just over 2:1 by 2050. This demographic development will increase the international competition for talented and productive people. It is therefore important to investigate how national policies can be tailored to meet this competition. In addition, it is done out of recognition that the labour market for highly skilled workers has developed into one international market, where highly skilled people can effectively choose wherever they want to live.

First, it can be concluded that the UK is the largest provider of highly educated expatriates of all OECD countries. One in five highly skilled migrants from an OECD

country is of British origin. Second, the point of this paper is that the inflow of highly educated people to the UK is only marginally higher than the outflow. This means that the net inflow of highly skilled people to the UK is highly sensitive to how well other economies are doing. A relative decline of the UK's economy compared to, for example, China and India could potentially lead to lower inflows and thereby an actual brain deficit. This is a likely scenario, as comparatively low economic performance in the UK will decrease the advantages of migrants leaving their home countries to move to the UK. Furthermore, increases in competition for a highly skilled workforce, as well as the continuous integration of national labour markets into one entity, might even escalate the outflows as more economies become more knowledge-based and successful.

Concerning the incentives behind migration, it is important to remember that reasons to migrate are very personal and it is therefore not possible to give any simple explanation. There are, however, some core incentives that can be acknowledged to have some universal value to all skilled migrants. As the analysis in this paper shows, values and incentives can be divided into material and immaterial (or intangible) factors. Some of the immaterial considerations could be the psychic value of a new adventure in a foreign country or, in other cases, political stability.

Consideration of material incentives shows that salaries and after-tax earnings are of central importance to migrants. Highly skilled workers have a more complex set of incentives that also includes potential for professional development and available research funding. In addition, highly skilled individuals are more attracted to countries with established scientific elites, in this aspect the UK is doing okay however not brilliantly.

Regarding the ability to attract and maintain highly skilled workers, experiences from Denmark shows that special tax discounts can attract highly skilled individuals. However, these tax discounts are less effective at keeping those migrants in the country after their expiration. Moreover, these kinds of tax discount policies have the risk of making the domestic labour market less attractive to native workers as great differences in after tax earnings might occur, inducing an outward migration of native labour.

This leads to the core conclusion of this report: policies meant to attract and maintain highly skilled workers should be incorporated into those policies that apply to society in general. Policies should be more concerned about making

the society attractive not only to immigrants but also to those already working in the country. This includes changes to the education system to further privatize elements of university research, and an approach to taxation which seeks to reduce the tax burden on highly successful people. One option might be to abolish the 50p tax band which only hits very highly productive people (those earning over £150,000/year) and, as this report has shown, must figure highly in many migrants' considerations.

In order to make immigration easier and less burden full to the English society, this report also recommends an introduction of an "open borders, closed public accounts" system. The introduction of this system would make immigration policies less bureaucratic and more fair to Britons who have paid high taxes all of their lives. Future policies designed to affect migration ought to recognise that the UK needs not only to attract foreign workforce, but also give highly skilled Britons a reason to stay.

References

- Andersen, T.M. 2005. Migration, taxation and educational incentives. *Economics Letters*, 87, (3) 399-405 available from: ISI:000229534800017
- CDI 2003, *Udlandsdanskere 2003*, Confederation of Danish Industry, Copenhagen.
- CDI 2007, *Udlandsdanskere 2007*, Confederation of Danish Industry, Contact Jacob Bræstrup on jcb@di.dk for further information on the research, Copenhagen.
- CDI, 2010, Confederation of Danish Industry: available from http://di.dk/Opinion/arbejdskraftogintegration/Pages/SpecialisterdropperDanmark.aspx?isnewslink=true&custguid=defde65e-670f-486c-b799-7c875e4747c5_166&newsguid=26e299d1-271b-44ec-b2ea-08cc0e8be5eb_137
- Chappell, L., Sanchez, L., & Shah, J. 2009, *Easing the Strain: Understanding brain drain and where policy can respond*, Global Development Network and Institute for Public Policy Research.
- Danish Treasury Department, 18-5-2009, SKAT.dk: available from http://www.skm.dk/ta/_statistik/skatte_og_afgifter/671.html accessed 14-1-2010
- Day, K.M. 1992. Interprovincial Migration and Local Public-Goods. *Canadian Journal of Economics-Revue*

Canadienne D Economique, 25, (1) 123-144 available from: ISI:A1992HF49600008

- Desai, M.A., Kapur, D., & McHale, J. 2004. Sharing the spoils: Taxing international human capital flows. *International Tax and Public Finance*, 11, (5) 663-693 available from: ISI:000223065500005
- Dumont, J.-C. & Lemaître, G. 2004. *Counting immigrants and expatriates in OECD countries: A new perspective* Paris, OECD.
- Gilpin, R. 2001. *Global Political Economy, Understanding The International Economic Order* Princeton, New Jersey, Princeton University Press.
- Grubel, H.G. 1966. Brain Drain – A Us Dilemma. *Science*, 154, (3755) 1420-& available from: ISI:A19668626600008
- Grubel, H.G. 1968. Reduction of Brain Drain – Problems and Policies. *Minerva*, 6, (4) 541-558 available from: ISI:A1968ZG71100004
- Iredale, R. 2001. The migration of professionals: Theories and typologies. *International Migration*, 39, (5) 7-26 available from: ISI:000172825700002
- Jessen, Chris Kjær, 21-7-2010, www.business.dk: available from <http://www.business.dk/oekonomi/danskere-vil-have-kloge-udlaendinge>
- Johnson, H.G. 1965. The Economics of the Brain-Drain – the Canadian Case. *Minerva*, 3, (3) 299-311 available from: ISI:A1965CBQ1400001
- Johnson, Lyndon B., 6-6-2007, Lyndon B. Johnson's Library and Museum: available from <http://www.lbjlib.utexas.edu/Johnson/archives.hom/speeches.hom/651003.asp> accessed 6-4-2010
- Kerry, J. F. & Lugar, R. G. Bring Opportunity, Investment, and Jobs to America, Co-Sponsor the StartUp Visa Act. 2010. Washington DC, United States Senate.
- Ref Type: Unenacted Bill/Resolution
- Laudel, G. 2005. Migration currents among the scientific elite. *Minerva*, 43, (4) 377-395 available from: ISI:000235574500003

-
- Lowell, L. B. 2007, *Trends in International Migration Flows and Stocks, 1975-2005*, OECD, Paris.
 - Munck, L. 2008, *International skills – Danish needs, opportunities and barriers*, The Danish Association of Lawyers and Economists, Copenhagen.
 - New Zealand. *Immigration Amendment Act (No 2) 2003*. 47. 2003.
 - Ref Type: Bill/Resolution
 - New Zealand, 2009, Immigration New Zealand: available from <http://www.immigration.govt.nz/NR/rdonlyres/E741D6F6-7670-48E1-B824-69B3959461D4/O/1101AMarch8FINAL.pdf> accessed 23-5-2010
 - OECD 2004. *Trade and Migration, Building Bridges for Global Labour Mobility* Paris, OECD.
 - OECD 2008a. *A Profile of Immigrant Populations in the 21st Century, data from OECD countries* Paris, OECD.
 - OECD 2008b. *International Migration Outlook* Paris, OECD.
 - OECD 2008c. *The Global Competition for Talent, Mobility Of The Highly Skilled* Paris, OECD.
 - OECD, 2009a, OECD: available from <http://stats.oecd.org/Index> accessed 15-12-2009a
 - OECD 2009b. *Education at a glance, OECD indicators* Paris, OECD.
 - OECD, 2009c, OECD: available from <http://stats.oecd.org/Index.aspx?QueryId=11112&QueryType=View> accessed 15-12-2009c
 - Office for National Statistics, 2009a, Office for National Statistics: available from <http://www.statistics.gov.uk/StatBase/ssdataset.asp?vlnk=9549&Pos=&ColRank=2&Rank=272> accessed 3-12-2009a
 - Office for National Statistics, 2009b, Office for National Statistics: available from <http://www.statistics.gov.uk/STATBASE/ssdataset.asp?vlnk=9546&More=Y> accessed 3-12-2009b
 - Office for National Statistics. 2009c. *Population Trends*.
 - Parai, L. 1975. Canada's Immigration Policy, 1962-74. *International Migration Review*, 9, (4) 449-477 available from: <http://www.jstor.org/stable/3002342>
 - Power, D. & Lundmark, M. 2004. Working through knowledge pools: Labour market dynamics, the transferase of knowledge and ideas, and industrial clusters. *Urban Studies*, 41, (5-6) 1025-1044 available from: ISI:000221870700005
 - Salt, J. 2009. *International Migration and the United Kingdom* OECD.
 - Schumpeter, J. 1954, "The process of creative destruction," *In Capitalism, Socialism, and Democracy*, 4 ed. London: George Allen & Unwin LTD.
 - Schuster, J.H. 1994. Emigration, Internationalization, and Brain-Drain – Propensities Among British Academics. *Higher Education*, 28, (4) 437-452 available from: ISI:A1994QF08300002
 - Shachar, A. 2006. The race for talent: Highly skilled migrants and competitive immigration regimes. *New York University Law Review*, 81, (1) 148-206 available from: ISI:000237068200007
 - Shane, S. 2000. Prior knowledge and the discovery of entrepreneurial opportunities. *Organization Science*, 11, (4) 448-469 available from: ISI:000089502800005
 - Sriskandarajah, D. & Drew, C. 2006, *Mapping the scale and nature of British emigration*, Institute for Public Policy Research, London.
 - Vedder, Richard, 2005, The Heartland Institute: available from http://www.heartland.org/policybot/results/18063/Taxes_Fuel_Historic_American_Migration.html
 - Volpe, Joe, 2005, Citizenship and Immigration Canada: available from <http://www.cic.gc.ca/english/department/media/releases/2005/0509-e.asp#tphp%20idtp> accessed 10-5-2010

-
- Winters, A., Walmsley, T., Zhen, K. W., & Grynberg, R. 2003, "Liberalising Temporary Movement of Natural Persons," *In An Agenda for the Development Round*, Oxford: Blackwell Publishing.
 - Yale-Loehr, S. & Hoashi-Erhardt, C. 2001. A Comparative Look at Immigration and Human Capital Assessment. *Georgetown Immigration Law Journal*, 16, 99-132