Ottawa Workshop, 7 May 2009

in conjunction with EREF-2009

Brain Migration, Knowledge Spillovers and the Ethics of Public-Private Partnerships

Compendium & Bibliography

Compiled by Boštjan Šinkovec, edited by dr. Boris Cizelj

A - Compendium

1. State of Play – Facts, Figures

Different OECD countries have pursued different immigration policies and these differences are reflected in the **stocks of migrants** in those countries today. The so-called **settlement countries**, namely Australia, Canada, New Zealand and the United States, have traditionally focused on permanent migration and it is not surprising that the foreign-born populations in those countries are relatively high. The **foreign-born share of the total population** is **23 per cent in Australia**, **19.3 per cent in Canada**, **19.5 per cent in New Zealand** and **12.3 per cent in the United States**.

Although some European countries of the OECD have very large foreign-born populations (e.g. **Luxembourg, with 32.6 per cent**, or **Switzerland, with 22.4 per cent**), most have lower proportions of migrant stocks than the settlement countries. The foreign born comprise less than 5 per cent of the population in Poland, the Slovak Republic, Finland, Hungary and the Czech Republic, and between 5 and 10 per cent in Spain, Portugal, Denmark, Norway, the United Kingdom, Greece and France. **(*Policy Coherence for Development, Migration and Developing Countries, pg.* 29)**

Until quite recently, **little effort** was made by European states **to attract highly skilled migrants**. Partly by default and partly by design, a significant portion of migrants to Europe has consequently possessed fairly low skill levels. In the OECD countries of Europe, by 2000 there were about 11 million expatriate adults with low levels of education (nine years of schooling or less). In comparison, there were nearly 6 million with a secondary school education and slightly fewer than 5 million with a tertiary education. **(*Op.cit, pg.* 33)**

In 2000, about **55 per cent of foreign adults present in the EU-15** were estimated to have had **less than a secondary education** (i.e. less than nine years of schooling). **(*Ibid, pg.* 34)**

By contrast to the situation in many European OECD countries, **10.2 million foreign-born adults in North America are highly skilled while 14.2 million are lowskilled**. In North America (but also Australia and New Zealand, which have similar migration patterns) migrants generally have **higher educational attainments** owing to **rigorous selection processes**. Of course, much of the high-skilled mobility occurs between OECD countries. In particular, the United States, Australia, Canada, Switzerland, Spain, Sweden, Luxembourg and Norway (in that order) are **net beneficiaries of highly skilled migration** from other OECD countries (OECD, 2006a). **(*Ibid, pg.* 35)**

For these OECD countries, the inflow of highly skilled nationals from other OECD countries is higher than the outflow from these countries to other OECD countries. In the **US**, for example, **49.9 per cent of those born in other OECD countries have at least some tertiary education**. The **settlement countries** are **net winners** in the **global competition for talent**: though many of their skilled citizens emigrate to work elsewhere, especially in the OECD (e.g. a skilled Canadian going to work in France), they receive many more highly skilled immigrants from all countries, OECD and non-OECD alike (e.g. a skilled Chinese coming to work in the United States). **The net inflow of highly skilled immigrants is positive in the United States** (8.2 million), **Canada and Australia. (*Ibid, pg.* 35)**

First, migrants are more likely to come from middle-income countries. That is, on average **emigration rates to the OECD are higher among richer developing countries than poor ones.** Using the OECD Database on Immigrants and Expatriates, Cogneau and Gubert (2005) show that a country's emigration rate is a smooth and increasing function of the country's per capita income up to a point; beyond a certain level of average income emigration rates fall as income rises. They point out that Latin American countries and countries from the Middle East and North Africa (MENA) region, including Turkey, together account for only one-sixth of the population of the developing world, but account for fully two-thirds of the migrant stock born in developing countries resident in the OECD. **(*Ibid, pg.* 40)**

Second stylised fact is that **"brain drain",** or the emigration of the highly skilled, disproportionately **affects low-income countries**, while **mobility of the low skilled** is more a phenomenon of **middle-income countries.** This is consistent with the first stylised fact, given that the overall size of flows of the low skilled are much larger. **(*Ibid, pg.* 40)**

A former Soviet republic, **Moldova** has been the source of large-scale labour emigration, most of it low-skilled. In some rural regions, the emigration rate has been extraordinarily high: for example, in some villages, surveys report that as many as 60 per cent of working-age women had migrated. Overall, migrants (as measured by net cumulative emigration) may constitute as much as 10 or 11 per cent of the population, or 17 to 18 per cent of the labour force. In **Bulgaria** the emigration numbers are equally impressive: between 1992 and 2001, emigration averaged 22 000 yearly, while the total number of returnees was estimated at just 19 000 people over the period. The 2001 census recorded a population size of 7.9 million, a decrease of nearly half a million from the previous census in 1992. ***(Ibid, pg.* 41)**

Albania, though not part of the Soviet bloc, likewise witnessed an explosive emigration that continues, at a diminished pace, to this day. While the Albanian economy stabilised during the mid-1990s, job creation nevertheless lagged behind the growth of the labour force. By the mid-1990s, even as one-fifth of the labour force had emigrated, unemployment was still at 20 per cent. By 2001, emigration had removed one in six, possibly even one in five or one in four Albanians from their country of origin. This is **a rate of loss unparalleled** in any other Eastern European country at that time, or indeed by just about any other country in the world. Government estimates from 2004 place the total number of Albanian emigrants at one million, out of a 1989 population of 3.2 million. **(*Ibid, pg.* 41)**

Significant **inflow of highly skilled immigrants** has been observed **in Poland**; the reasons are strongly related to inflows of foreign direct investment (FDI). FDI inflows grew during the transition period on average 5 per cent annually or more, and today 5 per cent of the labour force work in companies that are at least partly foreign owned. At the same time, the proportion of persons with tertiary education in the total employed population rose from 10.5 per cent in 1993 to 17.1 per cent in 2001. These changes were not the result of significant changes in the tertiary enrolment ratio. As a consequence, in the first few years of transition there was an under-supply of skilled labour, especially in services and high-tech industries, which **increasingly sought workers abroad**. **(*Ibid, pg.* 45)**

Studies in the **United States** and **Sweden** show that **migrants from higher income countries return home earlier and at a higher rate than other migrants** (Borjas and Bratsberg, 1996; Edin et al., 2000). This provides indirect support for the hypothesis that rates of return in poorer economies may be insufficient to generate meaningful transfer of skills and technology. **(*Ibid, pg.* 63)**

The foreign-born, tertiary educated populations of the OECD countries are estimated to have increased by nearly 8 million between 1990 and 2000. By the turn of the millennium, this resulted in a total of slightly over **20 million such highly skilled people in the OECD**. **North America** is clearly the dominant attraction. Almost **two-thirds of the foreign-born, tertiary-educated population living in the OECD countries were in North America in 2000**. Most of these were in the United States. The OECD countries of Europe have attracted about one quarter of the highly skilled migrants, while the remaining 10 per cent are in Australia, New Zealand, Japan and Korea.
Second, more than **40 per cent of highly skilled migrants in the OECD are actually transfers from one OECD country to another:** brain circulation among the advanced economies is common. In 2000, almost one-third of the highly skilled adults in the OECD who originated from outside of the OECD came from East Asia with nearly 80 per cent of them residing in North America. **(*Ibid, pg.* 66)**

In 2004, there were **2.7 million students worldwide studying outside their own countries**; in other words, almost three times as many as 20 years ago. OECD countries receive some 85 per cent of all foreign students, two-thirds (66%) of whom were nationals of non-OECD countries in 2004. Thus, such student flows show a strong **South-North orientation**, with five OECD countries hosting over half of the total (58%). In 2004, 22 per cent of all foreign students worldwide were in the United States, 11 per cent in the United Kingdom, 10 per cent in Germany, 9 per cent in France and 6 per cent in Australia. The top five English-speaking host countries (United States, United Kingdom, Australia, Canada and New Zealand) alone receive almost half (47%) the total number of foreign students (Figure 4.1). Of the ten countries hosting the largest share of foreign students (75% of the world total) only Russia and South Africa are not OECD members. ***(World Migration 2008: Managing Labour Mobility in the Evolving Global Economy,* pg. 106*)***

Asia ranks first in terms of students going abroad to pursue higher studies. In 2004, almost half (48%) of the foreign students in the OECD area came from Asia, followed closely by Europe (27%), Africa (12%), South America (7%), North America (4%) and Oceania (1%). ***(Op.cit,* pg. 108*)***

Some factors determining the choice of a foreign destination include:

- The destination country's immigration (or visa) policy for foreign students: Potential determinants are the ease of obtaining a visa, the possibility to work while studying or to remain in the country upon completion of studies.
- Employment possibilities in the host country and the country of origin: A host country will be more attractive if students can work there after completing their studies, or if their qualifications are highly regarded on the local job market when they return home.
- Recognition of skills and foreign qualifications in the country of origin and the host country: The frequent absence of any formal framework for such recognition partly explains the success of student mobility under joint university programmes or partnerships between establishments - leading to double degrees or automatic recognition of credits obtained in the partner establishment. ***(Ibid,* pg. 111*)***

In numerical terms, **international students** do not represent a very significant source of skilled migration. Assuming that one-quarter of the stock of international students complete their studies each year and that 25 per cent of this group stay in the country where they studied, that would represent **no more than 20 per cent of the current level of skilled migration (and less than five per cent of migration flows)** (OECD, 2006c). Although it is known that in some countries former students may account for a much larger proportion of skilled migrants. ***(Ibid,* pg. 123*)***

One trend affecting labour supply is emigration: "outflows of nationals (…) can have an important impact on skills composition where high-skilled workers leave because of more attractive business or research conditions in third countries" (Boswell et al., 2004: 14). For example, **emigration from the U.K.** has become quite significant in the last few decades, with the country experiencing **a total net loss of approximately 2.7 million nationals between 1966 and 2005.** More than 198,000 nationals left the country in 2005, while only 91,000 returned. Moreover, two-thirds of those who left the country did so to take up or **seek employment opportunities abroad** (Sriskandarajah and Drew, 2006). A similar net exodus, though to a lesser extent, was experienced in Germany (Landler, 2007) ***(Ibid,* pg. 293*)***

In Italy, the risk of unemployment for young people does not depend on their level of education (unlike all the other EU15 countries except Spain) and unemployment differentials for prime-age people do exist, but they are far less sharp than the EU15 average. The reason is not an oversupply of highly educated labour, because Italy still lags substantially behind other countries in the proportion of upper secondary and tertiary education graduates, even in younger age groups. Actually the narrower differentials by level of education regarding unemployment as well as income (OECD, 2005) are caused by the fact the **Italian economy provides far fewer highly-qualified jobs than the number of Italians attaining high educational qualifications**. ***(Permanent or circular migration, pg. 111)***

During the 1990s, **many developed countries recruited foreign health professionals**; consequently nearly one-third of doctors and 13 per cent of nurses in the United Kingdom are foreign born, and half the extra staff employed by the National Health Service over the past decade qualified abroad. 11 From 1995 to 2000 in the OECD countries, the foreign labour force grew by 3-4 per cent per year; however, the highly educated migrant workforce grew much faster – on average 35 per cent annually in the United Kingdom over the past five years, and 14 per cent a year in the United States. ***(Towards a fair deal for migrant workers in the global economy,* pg. 15*)***

The **EU as a whole, however, seems not to be considered attractive by highly qualified professionals in a context of very high international competition**: for example, the EU is the main destination for unskilled to medium-skilled workers from the Maghreb (87% of such immigrants), while 54% of the highly qualified immigrants from these same countries reside in the USA and Canada. The attractiveness of the EU compared to such countries suffers from the fact that at present highly qualified migrants must face **27 different admission systems**, do not have the possibility of easily moving from one country to another for work, and in several cases **lengthy and cumbersome procedures make them opt for non-EU countries** granting more favourable conditions for entry and stay. ***(EC Communication on the conditions of entry and residence of third-country nationals,* pg. 3*)***

3. Case Study – ***The Brain Drain from Romania and the Other CEECs***

After the fell of Communist regimes in Eastern Europe, and the subsequent opening of borders, fears of large migration flows from East to West rose on both sides. However, these fears remained largely unconfirmed partly because people had optimistic expectations related to their regained freedom. Indeed, in a few years the economic progress was apparent, such that some of the CEECs now already have positive rates of migration. This is not the case with Romania who still lags considerably behind from an economic point of view. In the last few years emigration has started to be a more serious problem, as people counteract the lack of opportunities in Romania by migration prospects. Moreover, studies show that it is rather the skilled and young who are the most likely to move abroad and they usually choose permanent emigration (MLSS, 2001). **(*Brain Drain and Brain Gain,* pg. 8)**

As far as Romanian emigration is concerned, ex-post self-selectivity is very strong, as the stock of Romanian nationals is much higher skilled than the flow of immigrants– 21% against 10%. Thus, Straubhaar and Wolburg's study brings some evidence for the idea of an Eastern European brain drain and moreover there is some proof that the **skill selection continues ex-post as only the most skilled remain on the long run.**
Another way of studying the phenomenon is by using data and estimations from emigration studies. Such a study has been realized by the Romanian Ministry of Labour and Social Solidarity based on estimations of the National Institute of Statistics and the Ministry of Interior. These data also reveal a bias towards skilled migration, which increased after 1998, as shown in figure 3.2. Thus the **share of highly qualified permanent migrants** in the total permanent flows **approaches 30% in 2001** and together with secondary and post secondary migration it amounts to **almost 60% of the total flows**. **(*Op.cit,* pg. 10-11)**

Thus in the first part of the 90s there was confidence in the new regained freedom so that it appeared that Romania was not going to lose a considerable part of its highly skilled workforce. However, as expectations were repeatedly contradicted by evidence on failure of reforms, the share of highly skilled emigration became more significant. The SOPEMI 2002 report 'Trends in International Migration' singles Romania among the CEECs as experiencing increased out-flows especially among the young and skilled. Their observations are summarized in the table below, sustaining the idea of a brain drain with focus on development relevant occupations: teachers and economists. **(*Ibid,* pg. 11 – 12)**

Table 3.3: Recent trends in emigration from Romania (2002 compared to 2001)

Emigration increased by 17%

Significant increases in certain groups:

ages 26-40	+34.7%
higher educational levels	+40.9%
teachers	+24.6%
economists	+38.4%

Source: SOPEMI, 2002

Nevertheless, some argue the phenomenon is insignificant, as the general migration rate is rather small. Thus even if the share of qualified people in the flow is considerable, the number of educated people that is lost is still rather limited. However, having in mind the bias of recent policies, it is **probably the very best who migrate and the qualitative impact of the highest skilled people is bigger than it would appear**.

Moreover, the 1997 and 1998 editions of the annual SOPEMI migration report signal the fact that outflows are seriously underestimated by Romanian authorities. The report mentions the example of Germany, where immigration data indicate flows of **380000 Romanian immigrants** between 1991-1995, while Romanian authorities **estimate only 55000** – that is **7 times smaller** (Nedelcu, 2001).

Although the phenomenon is expectable, as emigration data are generally unreliable being based on personal customs declarations, its dimension is surprising. The evidence thus suggests that a large proportion of emigrants take advantage of other types of mobility opportunities - as temporary, educational or even tourism- and decide to stay on the long term, after arriving in the destination country (Nedelcu, 2001). This makes it harder to estimate the phenomenon in reliable statistics.

In addition, it is increasingly argued that the international mobility of students is a sizeable phenomenon and that many choose to stay on after completing their studies (SOPEMI, 2001) while there is no account for this type of mobility.

Therefore, although the volume of skilled emigration is not very impressive, figures show a troubling trend and moreover there is **evidence that they might be fundamentally underestimated**. **(*Ibid,* pg. 11 – 12)**

Many developed countries have shifted their immigration admission policies to **actively recruit highly-skilled migrants,** whereas developing countries remain largely suppliers of such immigrants. In North America, the U.S. and Canada fit such profiles of developed economies whereas Mexico is a country supplying both skilled and unskilled labor to the other two. While issues relating to Mexican undocumented/illegal immigrants dominate the current immigration debates in the U.S., what has been largely overlooked is the highly-skilled immigration within North America: the brain mobility (or brain drain) in addition to labor mobility. **(*Brain Mobility, Highly Skilled Migration in North America, pg. 2*)**

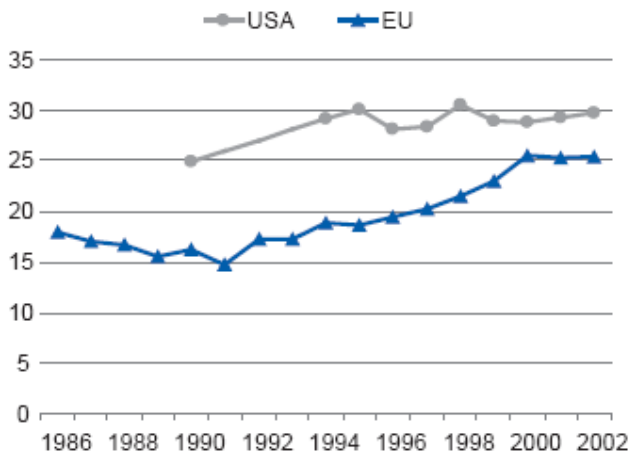
In **1995** there were some **28 million foreign workers** (national or foreign born) in **25 OECD countries**. Over the period 1995 to 2000 the foreign labour force in the European OECD countries rose by about **3 percent a year** while that in the **US grew faster at over 4 percent**. The migration of the highly educated and the **highly-skilled however grew faster practically everywhere** – by as much as **35 percent** annually in the **UK** over the last half of the last decade for long-term permit holders, **14 percent** a year in the US which include specialists and those with distinguished abilities, and **6 percent in Canada**. By any historical parallels these are very high rates of growth, reflecting fundamental changes in technologies and the production structures of the industrialized countries. **(*Global dimensions of the highly skilled migration,* pg. 1)**

The second gate has always been the main point of entry for the movement of managers and other professionals whose numbers have grown along with the global presence of trans-national corporations. Movements go in all directions – North to North, North to South, South to North, and increasingly South to South. Recorded data on **intra-company transferees in the OECD countries** however point to a concentration of such flows in the US and the UK. In the US the number rose from **112,000** in 1995 to **295 000** in 2000. By contrast, France only had 2,200 and Japan 3,900 in 2000. **(*Op.cit,* pg. 2)**

Using tertiary education, Figure 2.1 shows that the growth of highly skilled migration to EU countries already started in the early 1990s, preceding the “New Economy” and the boom in the information, communications and technology (ICT) sectors. Once underway, the percentage of highly skilled migrants increased until the end of the ICT-led cycle in 2001. From just under 15 per cent of all migrants in 1991, the share of the highly skilled grew to just over one-quarter of all migrants by 2001. ***(World Migration 2008: Highly Skilled Migration,* pg. 53 – 54*)***

Figure 2.1

Percentage of New Immigrant Adults Aged 15-64 with Tertiary Education



Sources: European Commission (2003: 197, chart 139); tabulations U.S. Census microdata.

(Op.cit,* pg. 53 – 54*)

Table 2.1 shows the distribution in 2000 of the tertiary-educated, foreign-born individuals by country of residence.

Table 2.1:

Percentage of Tertiary Educated Foreign-born Adults by Region of Birth, 2000

Country of Residence	Region of Birth							
	Asia	Europe-EU25	Europe-Non EU	Africa	Latin American and the Caribbean	North America	Oceania	Total within Country
Australia	35	39	5	6	2	3	10	100
Austria	13	57	21	4	2	3	0	100
Belgium	11	68	4	13	2	3	0	100
Canada	35	35	7	6	11	5	1	100
Czech Rep.	8	64	24	1	1	2	0	100
Denmark	28	37	19	8	3	5	1	100
Finland	11	65	13	6	2	4	1	100
France	17	35	7	34	4	4	0	100
Germany	25	43	20	4	3	5	0	100
Greece	11	44	19	11	1	14	1	100
Hungary	5	30	61	1	1	2	0	100
Ireland	8	72	3	6	1	9	3	100
Italy	16	32	22	14	10	6	1	100
Japan	77	2	0	1	16	4	1	100
South Korea	86	2	0	0	0	11	1	100
Luxembourg	0	95	4	0	0	1	0	100
Mexico	7	25	3	1	34	31	0	100
Netherlands	28	36	6	10	17	3	1	100
New Zealand	24	47	3	7	1	4	15	100
Norway	23	49	9	6	4	9	1	100
Poland	4	28	67	0	0	1	0	100
Portugal	0	16	0	79	4	0	0	100
Slovak Rep.	3	79	17	1	0	1	0	100
Spain	6	39	8	8	35	4	0	100
Sweden	23	45	18	5	6	3	1	100
Switzerland	10	65	9	6	5	5	1	100
Turkey	6	56	33	0	0	5	0	100
U.K.	33	27	0	21	6	7	6	100
United States	41	16	5	4	29	4	1	100
Total OECD	**35**	**27**	**7**	**7**	**18**	**5**	**2**	**100**

Note: Adult population ages 25 and older. North America is Canada and the U.S. and the rest of the hemisphere is included in Latin America and the Caribbean.

Source: *Docquier and Marfouk (2006).*

(Ibid,* pg. 54*)

Traditionally, **considerable role in Poles' mobility was ascribed to the emigration of highly skilled persons.** Similarly to other less developed countries, this process was described and interpreted in the categories of **brain drain**. However, upon analysis of data on international migration, this thesis seems to be rather questionable with reference to almost the whole post-war period. With an exception of an episode of (partially) forced migration of persons of Jewish descent (1968-1971), when over 13,000 of mostly highly educated persons left Poland, the **share of persons with tertiary education among all migrants did not differ significantly from that of the total population**. However, the situation changed in the late 1970s and 1980s. The brain drain thesis is particularly true in the case of **massive outflow in the 1980s**. Calculations based on the policy register's data show that of almost **700,000 emigrants who left Poland between April 1st, 1981 and December 6th, 1988**, **15 per cent had a higher degree** and **31 per cent had secondary education**. If we consider that for the whole population the share of university graduates was ca. 7 per cent, the quoted data

show that there was a considerable overrepresentation of emigrants of high quality human capital in relation to the whole population of Poland (Sakson 2002). The scale of the emigration of highclass specialists in the 1980s was so large that the number of emigrants in this category each year (15,000) constituted approximately one fourth of Polish university graduates of all higher education institutions (Okólski 1997). ***(Highly skilled migration in Poland, CEE.* pg. 11 – 12)**

The **factors pushing the scientists to go abroad** were actually parallel in all CEE countries: low income and worse labour conditions, low prestige and social status of science and education, poorly equipped study rooms and laboratories, restricted access to the literature, lack of research funds, limited opportunities for contacting broader scientific circles. A massive migration abroad could have been expected as the education in many states of the region was of top quality. ***(Op.cit.* pg. 13*)***

The above presented data shows that a vast majority (80-90 per cent) of migrants from the A8 countries are hired for occupations that need no professional qualifications. Other sources state that out of the total number of migrants from Poland to the UK the **share of persons holding a university degree exceeds 25 per cent.** This would indicate that, certainly, positive effects related to opportunities for qualification improvement or professional development are out of range for the majority of educated migrants. Rather **wasting or deskilling of brains**, a typical phenomenon for the migration of the 1980s, should be expected. ***(Ibid. pg. 21)***

What are the scale and characteristics of the mobility of the highly skilled between OECD countries? While **most skilled workers migrate from developing countries to OECD countries, there is also important intra-regional migration of the highly skilled in Europe, the Americas and Asia**. Data show that countries such as Canada, France, Germany, Sweden and the United Kingdom are important sources of temporary skilled migrants to the United States (e.g. postdoctoral students, researchers, company transferees), but less so in terms of permanent skilled migration, suggesting more a **pattern of "brain circulation"** than one of **"brain drain".** Among some OECD countries such as Canada, France and Germany, the **evidence indicates that "brain drain" has been overestimated**, notably because the return rate is high and because **these countries are also hosts to highly skilled foreigners.** For instance, a survey shows that in **France** in 1999, **three years after completion of their PhD, only 7% of PhD graduates were still working abroad (most of whom had plans for returning to France soon).** ***(International Mobility of the Highly Skilled,* pg. 1 -2*)***

By and large, the data on **flows of the highly skilled show that skilled migration, especially from Asia, to the United States, Canada, Australia and the United Kingdom is quite significant**. It is also **increasing**, particularly with regard to **students** and the **temporary migration of skilled professionals** such as **IT workers**. An estimated **900 000 highly skilled professionals entered the US** labour market between 1990 and 2000 under the so-called H-1B visa programme for the temporary entry of skilled workers. While this amount is small in comparison to the 750 000 permanent and 1.9 million temporary average annual entries, mainly based on family reunification and humanitarian grounds, the OECD estimates that these **temporary workers accounted for one-sixth of the total US IT workforce**. ***(Op.cit,* pg. 2*)***

Another factor of mobility is associated with the growth and spread of multinationals. For example, in the midnineties, intra-company transferees accounted for 5 to 10% of the total flows of skilled workers from Canada to the United States.

Table 1. **Inflows of foreign highly skilled workers and share of Asian people among them**
Latest available year

	Permanent workers	Temporary
Australia (1999–2000)		
Inflows in thousands of highly skilled foreign workers	35.3	30.0
As a % of total permanent labour migration	*77.4*[1]	..
% of Asian workers among the highly skilled	..	*27.8*
Canada (2000)		
Inflows in thousands of highly skilled foreign workers	52.1	86.2
As a % of total immigrants who intend to work	*43.2*	..
% of Asian workers among the highly skilled	*56.4*	..
France (1999)		
Inflows in thousands of highly skilled foreign workers[2]	–	5.3
As a % of total labour temporary migration		*48.3*
% of Asian workers among the highly skilled		*14.4*
Germany (2000–2001)		
Inflows in thousands of highly skilled foreign workers	–	8.6
% of Asian workers among the highly skilled (India/Pakistan)		*21.8*
Japan (2000)		
Inflows in thousands of highly skilled foreign workers	–	129.9
As a % of total labour temporary migration		*70.6*
% of Asian workers among the highly skilled (China/Philippines)		*53.2*
United Kingdom (2000)		
Inflows in thousands of highly skilled foreign workers	–	39.1
As a % of total labour temporary migration		*60.6*
% of Asian workers among the highly skilled (India/Philippines/China/Malaysia)		*29.8*
United States (1999)		
Inflows in thousands of highly skilled foreign workers	24.1	370.7
As a % of total labour permanent or temporary migration	*46.0 (1998)*	*46.3*
% of Asian workers among the highly skilled	*46.4 (1998)*	*36.9*

Notes: a) All immigrant workers to European countries mentioned above and to Japan are recruited on a temporary basis; *b)* Intracompany transferees are not included. *c)* All data relate to specific programmes dedicated to highly skilled workers except for France and the United Kingdom for which highly skilled are those engaged in occupations classified as manager or professional.

1. Calculation based on the estimates of the per cent of immigrants in workforce (Longitudinal Survey of Immigrants in Australia, 1998-99).
2. Including permits for more than one year, generally classified as "permanent workers".

Source: Trends in International Migration, OECD, 2001.

(Ibid,* pg. 3*)

Often, especially in developing countries, the **most skilled individuals leave their homeland involuntarily, as a result of war, economic collapse, or political and religious persecution**. Indeed, skilled migrants are often found among refugees and asylum seekers. The wars in former Yugoslavia, civil strife in Southern Africa and two-decades of conflict in Afghanistan led to an exodus of the youngest and brightest, with few opportunities for those that remained.

In general, research shows there are several net positive effects for the main host countries, notably the stimulation of innovation capacity, an increase in the stock of available human capital and the international dissemination of knowledge. The contribution of foreign-born scientists to science is illustrated, for instance, by the number of Nobel prizes awarded to US-based researchers of European or Asian origin, for example, **32% of US Nobel-prize winners in Chemistry between 1985 and 1999 were foreign-born.** Skilled migrants are also a source of high-tech entrepreneurship. It is estimated that **a quarter of Silicon Valley firms in 1998 were headed by immigrants from China and India,** collectively generating almost USD 17 billion in sales and 52 300 jobs. ***(Ibid,* pg. 4*)***

Less Dependence on Government Services: "Immigration of people with higher levels of economically valuable skills than the average Australian-born tends to raise average incomes … [and] higher levels of education are associated with higher labour force participation, lower unemployment and higher average productivity and income … [Such an immigrant] pays more tax and draws less on public services over the life cycle." **(*Management policies of various countries,* pg. 6)**

Patterns of Skilled Migration

In the OECD countries alone, in 2000, it has been estimated by Docquier and Marfouk for the World Bank that there was a stock of **59 million migrants**, of which some 34.6% or **20.4 million people**

were skilled migrants. More than 85 per cent of that total were to be found in just six countries, the United States (circa 50 per cent), Canada (13.5), Australia (7.5), the United Kingdom (6.2), Germany (4.9) and France (3.0).

22% of skilled migrants come from the old EU-15 (the UK alone accounts for 7%), with another 7% from Australia, Canada, New Zealand and the United States together. China and India add another 9% with the Asian tiger economies and the Philippines adding almost a further 12%. So, half of the skilled migrants to OECD countries come from 26 countries. Most go to the same group, in a system of brain circulation within the developed world.
(*Skilled Migration New Policy Options,* pg. 2)

Attracting the 'best and brightest' immigrants has become government's priority across advanced industrial (OECD) countries over the past years. Especially labour **market shortages**, but also **ageing population, decrease in human capital stock** and **international competition for innovation**, **progress and economic growth** all heighten the conception that governments "need to act. Removing barriers is a priority: **even America still rations the number of highly skilled immigrants it lets in, and Japan and many European countries do far worse**" (The Economist, 5 October 2006). ***(The Varieties of High-Skilled Immigration Policies*, pg. 2)**

Countries' categorization has also changed over the years as **few initially restrictive countries have become more open towards HSI** (e.g. **France**). Some countries among the Coordinated Market Economies (e.g. the Netherlands, Switzerland) target high-skilled immigrants to greater extent than others (e.g. Belgium, Sweden). In the Liberal Market Economy group, **Ireland** has experienced several policy reforms over the past years that have **shifted the country's classification from restrictive to very HSI open.** As a consequence, countries' policies cannot be deducted from a simple division into three VoC groups.
***(Op.cit*, pg. 3)**

On the whole, **HSI is considered positive for a country's economic growth.** The Productivity Commission of **Australia** report shows the likely effects over 20 years of the government increasing the current intake of skilled migrants by 50 percent. In the Commission's modelling, the economy would grow by 3.5 percent by 2024-2025 and average incomes would be $335 higher (2006: 137). More generally, George Borjas assumes that the increase in skills through HSI "accelerates the rate of scientific discovery", which can bring large benefits for particular groups of the population (2006:32). However, HSI creates distributional consequences for different sectors of labour and capital that in turn establish varying preferences for HSI policy.***(Ibids*, pg. 5)**

2. Migration Management Doctrine (impact, benefits, barriers)

Countries of origin and destination can use bilateral agreements and arrangements as a vehicle for **maximizing the gains from international labour mobility by effectively linking recruitment with capacity building and development** in countries of origin. Under such arrangements, developed destination countries offer to rethink their labour migration policies, including, notably, measures to **promote circular mobility, accompanied by development assistance** to increase adaptive capacity in countries of origin. In turn, developing countries could undertake to mainstream migration and remittances into their national development strategies.

For example, such a partnership approach could **link migration policies in developed destination countries and human resource development policies in countries of origin**. In the presence of emigration, countries of origin need to be encouraged to develop human resource development policies that take account of current and projected effects of migration on domestic labour markets as well as the potential loss of public resources invested in highly skilled emigrants (see also Chapter 10). This implies the provision of sufficient incentives for public sector posts, effective deployment of available personnel and possible restructuring of methods of financing higher education. The retention of highly skilled professionals in developing countries, especially in the health and education sectors, can be substantially improved through investments in public service delivery systems, continuous training of personnel and better working conditions. Development assistance can play an important role in such partnership arrangements by providing resources to the economies of countries of origin to strengthen their capacity to adjust. This capacity could include better transport and communication infrastructure to link up labour markets in different regions of the country of origin, and promotion of financial sector development to encourage greater use of formal channels to transfer remittances. ***(World Migration 2008: Managing Labour Mobility in the Evolving Global Economy,* pg. 344*)***

In a country that has abundant labour but a shortage of skills, skilled immigrants can also be a **complement to unskilled workers.** The latter can gain from the inflow of new skills leading to a better and fuller utilization of labour and other resources, though skilled workers are likely to lose from this. The situation is less than clear cut if skills brought by immigrants lead to innovation and the creation of new jobs. Even in a highly advanced economy, and depending on the type of new jobs, it could have a positive effect on skilled workers as well. In the US, the Cypress Semiconductor Corporation recently reported that about 40 per cent of the research and development jobs were held by immigrants and that each job created nine additional jobs. ***(World Migration 2005. Costs and Benefits of Migration,* pg. 6*)***

Migration policies are very much like monetary policies designed to combat the insidious phenomenon of inflation. As the central banks know only too well, **it takes around two years before their change of monetary policy has an effect on a country's inflationary trends**. The same goes for migration. It has to be recognised that **there are no 'miracle cures'** that can solve within a few weeks the most serious problems of migration, which is not, and is not going to be, a transitory phenomenon. What we need is a policy consisting of structural measures that can provide a lasting response to the various requirements, including the requirements of the labour market and the requirement of family reunification. The underlying principles of this **new policy** should be **far-sightedness** and **courage**. ***(Legal migration, time for Europe to play its hand,* pg. 17*)***

At the same time, Mettler, whose organization serves as a reality check for the Lisbon Agenda, pointed out that Europe was spending far less than the United States on education. This, she asserted, was 'scandalous.' Only nine EU member states have workforces with 25 percent claiming a college degree. And in Italy, only 10 percent fall into the category of the highly skilled. Mettler noted that even if Europe achieved its 2010 goal of spending three percent of its budget on research and development, it would still need to create or find 600,000 new researchers. "We can never reach this goal," she said. "So instead of blindly regurgitating this goal, we should look more closely at it." ***(Report on the Future of Europe Summit,* pg. 18*)***

A new idea- educational incentives and uncertainty

The most recent studies on the brain drain issue place the emphasis on the change in incentives facing individuals. Mountford (1997) develops the study of the topic in this interesting direction. As Beine et al. (2001) underline, **in a poor economy with an inadequate growth potential, the return to human capital is likely to be low and hence leads to a limited incentive to acquire education, which further limits growth.** However, the **key difference between a closed economy and one opened for migration is not only in opportunities but also in the incentives confronted by people** (Stark et al., 1997). The possibility of migration constitutes an increased incentive to acquire skills and thus there is a **possibility of a beneficial brain drain** in circumstances of uncertainty. Given that only a proportion of the workers will actually emigrate, in the end the sending country might have a higher average level of human capital, i.e. a brain gain occurs. A further mechanism for beneficial effects is also discussed in Mountford, regarding the formation of educational classes in an economy. A brain drain can change the dynamics of 'class' formation and thus an under-educated class fails to develop (Mountford, 1997). (***Brain Drain and Brain Gain*, pg. 4)**

Many of the benefits for sending countries, however, can only be realised in the longer term and require that countries invest in science and technology infrastructure and the development of the opportunities for teaching, research and entrepreneurship at home. The case of Chinese Taipei, as well as those of Korea and Ireland, suggests that **when skilled migrants return to their origin country** after a long stay abroad, their **contribution to the expansion of a national high tech industry can be considerable.** ***(International Mobility of the Highly Skilled,* pg. 5*)***

The **development of a high-tech and innovative industry** is also an **important magnet for attracting skilled human capital.** More specifically, developing centres of excellence for scientific research and framing the conditions under which technological innovation and entrepreneurship may expand are important for making a country attractive to highly skilled workers, both native-born and from abroad. Therefore, the entire range of policies aimed at encouraging innovation has an indirect but powerful effect on the incentives for these workers to come to the labour market of the concerned country. Such policies include fostering entrepreneurship, mechanisms influencing the allocation of capital, training and education, public research and its links with business. Among sending countries, the **creation of science parks in Chinese Taipei has triggered the return of former migrant engineers and researchers trained abroad**. ***(Op.cit,* pg. 6*)***

Science and technology policies to retain and attract scientific talent

- Developing the infrastructure for innovation and high-tech entrepreneurship.
- Improving the attractiveness of the public research sector.
- Providing tax incentives to encourage recruitment of foreign personnel.
- Repatriation schemes for post-docs and scientists.
- Leveraging immigrant and diaspora networks.

(Ibid,* pg. 7*)

A **high share of high-skilled immigrants strengthens the positive fiscal impact of immigration and is likely to attenuate adverse distributional effects**. Furthermore, skilled immigrants facilitate integration by reducing prejudice among the native population and **acting as role models for other immigrants**. It should be stressed that these advantages of a **better immigration skill-mix** do not imply that lowskilled immigration is generally harmful or not needed. Instead, it can be argued that the net contribution of low-skilled immigration is enhanced by the simultaneous presence of high-skilled immigration, which would also be reassuring from a development perspective. **(*Irregular and high-skilled migration – not such strange bedfellows*, pg. 5)**

The mobility of top specialists enhances the development of scientific disciplines by fostering international research and exchanges: a survey of Polish scientific migrants reports that they feel close ties to Poland and its scientific community. **Return migration itself is reportedly difficult**: Polish scientists and technical workers who spend some years abroad find it difficult to be accepted in Polish scientific and research institutions; limited infrastructure and an unfavourable research environment prove an obstacle to their productive integration upon return. **(*Policy Coherence for Development, Migration and Developing Countries, pg.* 63)**

But when it came to skills, von Weizsäcker noted that the people with university degrees took a different approach to those seeking asylum. And he added that the EU's small, non-English speaking countries did not get the best graduate immigrants. The advantage of the Blue Card, he said, was that

an immigrant who felt confined in, say, Vienna, could move easily to another European city. There is also the **brain drain paradox**, von Weizsäcker said: for example, France only allows immigrants to stay in the same job for three years, and yet they do not go home after that - they simply move from one temporary job to another. The Blue Card thus gives them a measure of security and allows them to go back to their country of origin as often as they want. ***(Does the European economy need more migrant workers,* pg. 5*)***

The empirical evidence from Europe, reviewed by Muenz et al. (2006), shows that **immigrants and natives are complements rather than substitutes in the labour market**. That is, immigrants tend to fill labour-market gaps avoided by natives, including jobs that are dirty, dangerous and difficult (e.g. low-paid service jobs), seasonal shortages of labour (e.g. farming, road repair and construction) and the unmet demand for skilled labour in several skill- and knowledge-intensive industries (e.g. IT sector). In that sense, immigration contributes to labour market efficiency. The effect of immigrants on the wages of native workers ranges from no measured effect at all (e.g. United Kingdom) to weak but positive effects (e.g. Spain) to strongly positive effects (e.g. the north of Italy). **(*Policy Coherence for Development, Migration and Developing Countries, pg.* 23)**

It is an unfortunate and perhaps misleading shorthand to refer to **migrants as "skilled" and "unskilled**". A farmer from sub-Saharan Africa who migrates to Europe may be nearly illiterate (and therefore counted as "unskilled"), but he may also embody highly specialised and productive knowledge about agricultural practices: this knowledge is a **loss of skills to his home country when he migrates.**

Moreover, many migrants explicitly recognised as "skilled" are unable to practise their professions in OECD countries, a phenomenon known as **"skill waste":** everyone has heard of migrant engineers driving taxi cabs. A further complexity arises when workers who are **highly skilled in their low-income country of origin find that their skill levels are below average when they migrate**, a phenomenon that likely besets the **middle range of the skills continuum**. **(*Op.cit, pg.* 33)**

As more people leave the country, output continues to fall. Continuing migration improves, however, the information regarding employment opportunities in destination countries and thus reduces the information and transaction costs related to migration. Reduced migration costs, in turn, encourage family or community members to start joining initial migrants. Households start using migration as a livelihood strategy. Within such a strategy, the possibility of migration might also encourage those left behind to start investing in skills required to leave the country and seek improved prospects abroad (e.g. training to be a nurse). At this stage, the home economy starts adjusting to migration. This may take the form of increased labour force participation, as women and children in the home economy begin looking for employment. Adjustment often leads to the restructuring of the economy, including the mechanisation of agriculture, or increased investment in other sectors, including human capital accumulation. **(*Ibid, pg.* 55)**

This so-called **"Dutch Disease"** occurs for at least two reasons. Massive infusions of foreign currency – in the form of migrants' remittances – increases overall liquidity and tends to raise domestic relative to foreign prices. In other words, the real exchange rate appreciates; foreign consumers pay more for the home country's exports, depressing the country's export sector. Second, migrants' families often use their increased income to purchase more "non-traded" goods, such as consumer goods and housing improvements. Increased demand for nontradeable goods increases their price relative to that of traded goods, shifting domestic resources towards non-traded goods production. **(*Ibid, pg.* 56)**

Emigration has contributed to development, skill formation and increased growth. As a result, the home country begins to experience labour shortages, especially in low-skill jobs in selected local markets. These vacancies may be filled by domestic migration and by inflows of labour from neighbouring countries. Repatriation of older emigrants coincides with immigration of unskilled labour to increase labour supply. Transfers tend to decline with repatriation. Return migrants, wherever they might have lived before, often choose to settle in cities when they go home, increasing pressure on urban labour markets. New immigrants, being more flexible, usually settle in areas where the labour shortages appear, such as rural areas, finding employment as agricultural workers or providing household services. ***(Ibid, pg.* 57)**

First, **when migrants – particularly the highly skilled among them – leave, potential tax**

revenues decline. Consequently, alternative mechanisms of raising tax revenues so as to avoid a budget deficit need to be adequately addressed. ***(World Migration 2008: Managing Labour Mobility in the Evolving Global Economy,* pg. 341*)***

The negative effects of brain drain are only one side of the story, as highly specialized emigration may also bring tangible benefits to sending countries; a well educated diaspora "can improve access to capital, technology, information, foreign exchange and business contacts for firms in the country of origin" (World Bank, 2006), providing that it is able to gain employment commensurate with its technical expertise (Koehler and Laczko, 2006). ***(Achieving policy coherence,* pg. 43*)***

Migration also incurs a loss for developing countries. Indeed, through what is commonly referred to as brain drain, Africa loses thousands of its best trained, most highly educated and skilled nationals to the developed markets of Europe and the United States. Since 1990, each year an **estimated 20,000 skilled professionals have left Africa**, depriving the continent of the doctors, nurses, teachers and engineers it needs to break the cycle of poverty and underdevelopment. Movement of health workers from Africa to industrialized countries has led to a significant outflow of essential skills in the health sector. Such losses put a severe strain on the ability of developing countries to provide quality and comprehensive health services, and hamper ongoing efforts to reach the Millennium Development Goals.

In Zambia, for instance, it is estimated that **only 50 of the 600 medical graduates trained in the 23-year history of the medical school in Lusaka still work in the Zambian public health service.** If the training cost of a non-specialized medical doctor in a developing country is estimated at US$ 60,000, and that of paramedical personnel at US$ 12,000 per head, it may be that the developing countries are sponsoring North America, Western Europe and Oceania by an amount of almost US$ 750 million each year – far more than the international development aid. At this rate, **who is aiding whom?** ***(Diaspora dialogue,* pg. 6*)***

Engaging highly skilled migrant workers result to lesser cost for their training and education. The **training of Filipino doctors** in the Philippines saves the US the cost of medical education. It is calculated that the net benefit to the US of Filipino doctors alone was more than its official development assistance to the Philippines for the entire 50 years. The UN reported that every time Malawi trains a doctor who eventually chooses to practice in Britain, the latter saves as much as **US$148,000 in terms of investment in education**. ***(Migration and development conference,* pg. 189*)***

Studies show that the **countries with the highest levels of immigration are among the most successful economically – the US, Canada, Australia and South Africa**. In Europe, **Germany, Switzerland and Luxembourg** have some of the highest proportions of immigrant workers and are among the wealthiest. According to some statistical analysis conducted in 15 European countries over the period 1991-95, **for each 1 percent increase in a country's population through immigration there was an increase in GDP of 1.25 to 1.5 percent**. ***(Op.cit,* pg. 189*)***

To a certain extent, **migration of the highly skilled can be beneficial for the country of origin** because of the social and economic returns. Successful migrants abroad also free opportunities for those left behind on the local labour market, thus easing competition, and their success stories can stimulate new generations to acquire the necessary skills to follow in their footsteps. The prospect of working abroad for higher wages and better conditions can trigger the wish to pursue higher education, increasing the number of local students beyond what it might have been without migration. If such increased numbers of students opt to stay in the country after graduation, they bolster the knowledge available locally (Stark, 2002). ***(Ibid,* pg. 222*)***

Migration of the highly qualified can be positive, but **this assumes that there is already a minimal stock of qualified people. When professionals or skilled workers leave and there is nobody to replace them, one can hardly speak of an advantage for society.** One might speak of two critical thresholds: a lower limit below which society suffers the consequences of skilled and highly skilled migration, because there is no replacement capacity. Above this threshold, migration can be positive until the number of migrant workers reaches the upper limit, above which emigration of professionals and the highly qualified again becomes a problem because the replacement capacity has been drained. Between the two limits, we can talk of brain transfer, brain circulation and even brain gain.

Above and below, we would better talk about brain drain. For every country, for every region and even for every sector, the picture is different.

Highly qualified migrants from the less advanced countries are not always developing their talents in the industrialized world. If trained nurses migrate to the more advanced societies only to work in a factory, a shop or to clean the houses of the double-income families, it becomes more difficult to evaluate this positively. Although supply met demand, the worker is able to earn money and send part of it to the family left behind, and the employer found relatively cheap labour, **it cannot be considered a win-win situation.** Here, the investment in education is not put to advantage. Not for the country of origin that lost a skilled worker, nor for the country of destination, where the available skills are not used efficiently. This is an important aspect of economic loss, brain waste. ***(Ibid,* pg. 222*)***

A major source of complaint about the brain drain is **the 'lost' public investment in the education** of the emigrant. Where emigration of highly educated people is common, the likelihood of departure must be integrated into any serious thinking about the educational strategy of the country and the means of financing that education. It may not be in the interest of the home country to invest in training people in fields where the chances of emigration are especially high. Indeed, the choice of such fields may well reflect an aspiration to work abroad. Overseas education poses a particularly difficult dilemma: taking advantage of specific forms of training abroad that are not available at home, then returning to work in the home country, may prove very valuable, at least if the newly acquired skills have some relevance at home; on the other hand, studying abroad is often a port of entry to more permanent settlement abroad. ***(Integrating migration issues into development planning,* pg. 17*)***

In the absence of definitive data, conclusions about the impacts of PTK migration on developed and developing countries often rest on world views. Ellerman (2003) discusses the debate between **"internationalists"** who believe that, if migrants move voluntarily and achieve higher incomes, global economic welfare increases because e.g. each one million migrants earning an average $10,000 more increases global income by $10 billion. Even if the people in the country of emigration are worse off, internationalists believe that the benefits to migrants and the increase in global economic welfare are more important than losses to particular countries. The **"nationalist" model**, on the other hand, aims to maximize growth in a particular country, and nationalists note that such growth may be fostered by strictly limiting the time abroad of students and professionals if their exit sets in motion a vicious circle that slows growth and development (2003, 7). ***(Highly skilled labour migration*, pg. 11)**

However, the increased PTK migration of the 1990s was accompanied by a new literature that reached the seemingly counterintuitive conclusion that the emigration of skilled workers can accelerate economic growth in their countries of origin. This conclusion is a straightforward result of the assumptions. Imagine a developing country with no emigration that suddenly opens its borders, so that PTK workers who emigrate have incomes abroad that are 5 or 10 times their incomes at home. For all workers with PTK credentials, emigration has raised the average returns to education, which should induce more people in the emigration country to stay in school and obtain PTK credentials. However, not all of this expanded number of PTK workers will in fact emigrate, so switching from no or low emigration to more emigration can, paradoxically, increase the number of PTKs in an emigration country (Mountford, 1997; Beine, Docquier and Rapoport, 2001). The conclusions of such studies suggest that:

• Neither developing nor industrial countries should ban the exit or entrance of PTK migrants if their goal is to prevent a brain drain
• There may be some "optimal level of brain drain": low enough to avoid a vicious downward spiral but high enough to inspire more residents to acquire PTK skills. ***(E-Handbook, Immigration & Skill Shortages*, pg. 12)**

Empirical studies seeking to determine the net effect of PTK emigration on countries of origin generally focus on **the 3 R's** of **recruitment**, **remittances**, and **returns**. Recruitment refers to who goes abroad — the number of migrants as well as the roles they played in the sending country economy. (Does PTK migration put the sending country "on the map" in the scramble for Foreign Direct Investment (FDI), as seems to have occurred for Indian IT migrants in North America, or do PTK migrants quickly break ties with their countries of origin, as seems to occur with many migrants from Africa who move to industrial countries?) Migrants go abroad for higher wages, and remittances are the monies they send home. (How does the volume of remittances compare with the earnings and savings that would

be available if the migrant stayed home?) The third R is returns, the permanent or temporary return of migrants. (If most migrants return, then a "brain drain" in one period can become a "brain gain" in the next. Alternatively, back-and forth migration can become brain circulation that contributes to economic growth in both countries.) ***(Op.cit*, pg. 13 - 14)**

By an analogous argument, high-skill immigration could be expected to have a benign distributional impact by somewhat reducing the above-average wages of high-skilled locals and somewhat increasing the below-average wages of the low skilled.

In contrast, higher-skilled immigrants and locals appear to be sufficiently different that they generally do not hurt each other's employment and wage prospects. In other words, the wage and employment impact of high-skill immigration appears to be fairly unproblematic. ***(What Should a Cautious Immigration Policy Look Like*, pg. 2)**

The fiscal policies currently in place tend to redistribute from the rich to the poor and from the working-age population to the inactive population and pensioners in particular. Hence, the net fiscal impact of a high-skilled immigrant tends to be substantially more favourable than the net fiscal impact of low-skilled immigrants. ***(Op.cit*, pg. 2-3)**

To the extent that the high skilled are more important net contributors to public finances during their life cycle, **their emigration tends to hurt public finances more**. If education is provided by the state, this negative effect is reinforced because high-skilled emigrants would tend to have received greater government subsidies for their education before they leave. ***(Ibid*, pg. 4)**

Migrants become better integrated into the destination country and often **form networks across transnational communities;** family reunification is largely completed and a second generation of emigrants appears in the host country. The creation of "home town associations" in the destination country **improves the communication** between the two countries and **enhances economic links**. As time passes, migrants exploit their knowledge of markets in both countries and become good trade and investment intermediaries. **(*Policy Coherence for Development, Migration and Developing Countries, pg.* 56)**

Emigration opportunities for the highly educated can encourage higher levels of education at home. If only a small fraction of those who are induced to seek out further education and training emigrate, then the stock of highly educated at home may even expand. Put simply, the possibility of migration creates incentives for improvement of skills and human capital formation. This, in turn, enhances economic growth in the home country. Newer models of economic growth suggest that **the average level of human capital is an important determinant of an economy's growth rate:** higher levels of educational attainment induced by a brain drain can thus accelerate growth even if some of the highly skilled leave. Although the **net effect can also be negative**. In Mexico, for example, researchers find that migration to the United States reduces educational attainment among rural Mexicans. **(*Op.cit, pg.* 62)**

Like other categories of migrants, **skilled people mostly move in response to economic opportunities** abroad that are better than those available at home as well as in response to the migration policies in destination countries. Other factors, however, also play a role in the decision of the highly skilled to migrate and in their choice of destination and include intellectual pursuits, be it education, research or language training. In the case of researchers and academics, the conditions in the host country regarding support for research and demand for R&D staff and academics can be an important determinant in the migration decision and destination. **Among the entrepreneurially-minded, the climate for innovation generally, and for business start-ups and self-employment in particular, may play an important role in the decision of the highly skilled to move abroad**. ***(International Mobility of the Highly Skilled,* pg. 3*)***

3. Policies (instruments, objectives)

Middle class Bulgarian emigrants (about 20 000 people) are found in the United States, Canada, Germany, Austria and other Western European countries. They are considered an already established **Bulgarian lobby** and a good potential source of investment. (For example, the United States is already home to three Bulgarian-American Chambers of Commerce.) In 2000 former Prime Minister Ivan Kostov attempted to attract the interest and expertise of young Bulgarian expatriates from this group, organising a **"Bulgarian Easter"** in Bulgaria. **(*Policy Coherence for Development, Migration and Developing Countries, pg.* 42)**

Return migration can be actively promoted by migrants' home countries through various incentive schemes; in some cases these efforts reach out to the descendants of the original migrants. The Bulgarian government, for example, attempted to resettle ethnic Bulgarians from abroad (e.g. from Moldova and Ukraine). The unwritten policy amounted to an attempt to achieve an ethnic balance in "ethnically sensitive areas" especially those depopulated by emigration. The attempt was not particularly successful as most of the returning Bulgarians wanted to settle in the cities, and not in the targeted regions. **(*Op.cit, pg.* 57)**

The **internationalization of higher education** enables national systems to compare themselves to foreign systems of higher education and often leads establishments and universities to come up with innovative ideas to adapt themselves to the requirements of foreign students (or of their own students returning from abroad). It also paves the way to attract foreign talent to the host country. Though scholarship programmes could remain an important part of this strategy, they are also complemented by other measures, such as actively promoting a country's higher education system abroad while simultaneously relaxing the visa or immigration regulations for the target groups. Dedicated entities are sometimes created to assist foreigners in relation to their studies and their stay in the host country. Instruction in English might be developed and encouraged in non-English-speaking countries. As such, studies pursued by international students are subsidized by the host country in the same way as for local students. They may target students from certain regions, postgraduate students or future researchers, rather than undergraduate students or students specializing in a particular field. ***(World Migration 2008: Managing Labour Mobility in the Evolving Global Economy,* pg. 116*)***

Visa policy for students and university personnel and, more generally, immigration policy are an important part of the machinery for the internationalization of higher education. Attracting international students to a country will make sense only if they are able to enter to pursue their studies and, ideally, to do so without undue difficulties. If international students are to be attracted while they are also being expected to pay market-driven tuition fees, authorization to work in the host country will go a long way to persuading them to come. Similarly, attracting foreign teaching establishments and educational programmes often entails facilitating temporary migration for professionals (university personnel, etc.). Many countries now attach growing importance to attracting foreign students and have therefore simplified or reviewed their application procedures for visas and residence permits for foreign students, not least by improving the available information concerning these procedures. ***(Op.cit,* pg. 117-118*)***

While it may assist developing countries in their efforts to strengthen their own human resource capacities (Vincent-Lancrin, 2005), **cross-border education** can indeed **favour brain drain** rather than the circulation of skills between host and home country. There is no record of systematic data on the relationship between the mobility of students and researchers, and subsequent variations in immigration patterns. What little exists, however, confirms that there is a link. Some **75 per cent** of Chinese students who studied abroad between 1978 and 1999 **have not returned to China** (Iguchi, 2003). ***(Ibid,* pg. 119*)***

In Canada, it is estimated that between 15 and 20 per cent of foreign students have stayed on and are working in the country; in New Zealand, 13 per cent of the foreign students who entered the country between 1998 and 2005 to study obtained a residence permit by 2006; in Norway, 18 per cent of the foreign students studying there between 1991 and 2005 and originating from outside the European Economic Area (EEA) remained in the country, as against nine per cent of foreign students from within the EEA; lastly, in the United Kingdom, a recent study showed that, in 2005, 27 per cent of

international students from within the EU were employed in the U.K. six months after obtaining their degrees. ***(Ibid,* pg. 119*)***

The average stay rate for foreign recipients of science and engineering doctorates in the United States four to five years after earning their degrees rose from 41 to 56 per cent between 1992 and 2001. The figures leapt from 65 to 96 per cent for Chinese and from 72 to 86 per cent for Indian nationals. Stay rates in countries following the completion of studies vary considerably depending on the country of origin and the academic discipline pursued. But in most cases stay rates do not decline significantly over time and partly depend on the level of economic development of the country of origin, though there seems to be no systematic pattern in that regard. Concerning students from Argentina, China, Greece, India, Iran, Israel, eastern European countries as well as New Zealand and the United Kingdom, about 50 per cent are still in the United States five years after receiving their doctorate (Finn, 2003). ***(Ibid,* pg. 120-121*)***

Most European destination countries, as well as Canada and the United States, apply a **labour market test to first-time applicants** for a work permit, or to migrant workers already in the country who wish to change jobs. Though admission procedures are usually simplified, the existence of a quota does not necessarily mean that the labour market test is withdrawn. The test serves to ascertain whether there are local workers available, by either requiring employers to advertise the post for a set period of time (e.g. U.K.), or demonstrate that they have taken active steps towards recruiting local workers, or both (e.g. the Netherlands). A third option, sometimes also combined with the latter, is to require that foreign workers are paid the average or prevailing wage in the industry or sector concerned (e.g. Canada, U.S.). Where no local workers are either available or willing to accept the conditions offered, foreign workers can then be employed. In some countries, it is left to the employer to provide evidence of labour scarcity (e.g. Mauritius, U.K.), whereas in other countries this is incumbent on the competent authority. For example, in Canada, before a foreign worker can be hired, the Department of Human Resources and Social Development Canada (HRSDC) must normally provide a positive labour market opinion (LMO) to certify the impossibility of finding suitable local candidates to fill the job in question and that the admission of foreign workers would not negatively affect the Canadian labour market (Canada, 2006). ***(Ibid,* pg. 295*)***

In the EU, the **preference principle** applies, requiring Member States to ensure that there are no suitable EU workers available prior to hiring a non-EU national lawfully resident within the EU or to newly admit a non-EU national for employment; however, more information is still needed to see how this principle operates in practice in different Member States. While a number of policy options exist in the application of labour market tests, it is also important for evaluation and enforcement measures to be built into their design to ensure they actually work in practice and serve the needs of employers, local workers and the economy (Ruhs, 2006).
Several countries (including Norway, Spain and the U.K.) have introduced exceptions to the labour market test in respect of certain professions with shortages, such as health professionals, engineers, teachers and ICT specialists, and either do not apply the test or relax the rules. This more flexible and less bureaucratic approach has considerable economic advantages, since it enables a speedier and more efficient admission of migrant workers to fill shortages in important employment sectors. ***(Ibid,* pg. 295-296*)***

Occupational shortage lists can be an efficient way to channel foreign workers into sectors of the economy suffering from a lack of workers with specific skills. In the U.K., the National Shortage Occupations List, modified in July 2008, indicates shortages for certain categories such as engineers, doctors, social workers, veterinary surgeons and teachers for compulsory schooling posts in England and Scotland.18 No labour market test is required to fill these posts under the ordinary U.K. work permit scheme.

In **Australia,** a **Migration Occupations in Demand List (MODL)** has been drawn up containing, as at 17 May 2008, 53 professional occupations/specializations and 49 trades persons' categories in which shortages have been identified nationally. The list is reviewed twice a year. Points are assigned to each category which can then be used by migrants applying for skilled migration visas (Australia, 2007; Abella, 2006) ***(Ibid,* pg. 296*)***

Levying fees on employers for every foreign worker hired may be used to ensure that migrant workers are in fact brought in to **fill genuine gaps in the labour market** rather than just as

convenient – and perhaps cheaper – substitutes for local workers. In Singapore, such fees are charged to employers wishing to employ medium-level skilled, semi-skilled or low-skilled workers in certain sectors, such as manufacturing, construction and services, and which are increased if the worker is less skilled.20 The official website refers to the foreign worker levy as "a pricing control mechanism to regulate the demand of foreign workers in Singapore" (Singapore Ministry of Manpower, 2008). Such policies serve to minimize distortions in certain sectors of the economy, for instance agriculture, that often depend on a foreign workforce, and make funds available to restructure these sectors to make them less dependent on migrants (Martin et al., 2006). However, the effective implementation of such policies depends on the extent to which governments of destination countries are prepared to recognize the merits of setting fees when weighed against the additional costs generated through increased government intervention and the introduction of adequate enforcement mechanisms to ensure that fees are not deducted from the wages of migrant workers (Ruhs, 2006; Ruhs, 2005). ***(Ibid,* pg. 296*)***

The established countries of destination provide for **employment-based immigration in two ways.** The **first** involves the use of a **supply-based points system** (Australia, Canada, New Zealand), grounded on the assumption that "an increased supply of skilled workers will have a generally positive impact on innovation, productivity and growth" (Boswell et al., 2004: 41). Under points systems, applicants are selected in accordance with a number of objective criteria.23 For example, in Canada, the successful applicant must demonstrate (i) possession of minimum work experience in the chosen profession or a related field; (ii) proof of adequate funds for settlement; and (iii) earn a sufficient number of points in six selection criteria to meet the "pass mark" of 67 points. These selection criteria comprise: education, knowledge of English and French (Canada's official languages), experience, age, arranged employment in Canada, and adaptability (including previous work or study in Canada) (CIC Canada, 2008). ***(Ibid,* pg. 298-299*)***

Points systems are also increasingly adopted in certain European countries as **the most efficient means of regulating skilled migration**. For example, the new points tier system introduced in the U.K., which is being phased in as of the beginning of 2008, is intended to regulate all forms of employment-based migration, permanent and temporary, high-skilled and low-skilled, as well as admissions for the purpose of study. The first two tiers, however, are reserved for highly skilled and skilled migrants, who are viewed as candidates for permanent settlement (U.K. Home Office, 2006; 2007b). In the Czech Republic, a Pilot Project for Permanent Labour Migration (2003-2008), administered by the Ministry of Labour and Social Affairs with the assistance of IOM, aims to facilitate the permanent residence of skilled persons from specific countries on the basis of a points system (Czech Ministry of Labour and Social Affairs, 2008; see also Portrait 2.1). ***(Ibid,* pg. 298-299*)***

The adoption of **flexible laws and policies in host countries** is important for generating and supporting circular movements or to promote sustainable returns. Such dispositions would, for instance, enable migrants to travel outside the country without prejudice to qualifying periods in view of a more secure residence status or naturalization; assure foreigners with long-term or permanent residence status of the possibility to return in the event of a temporary or medium-length return to their country of origin; and facilitate the portability of pensions and other benefits (Agunias and Newland, 2007). ***(Ibid,* pg. 303*)***

The **EU Council Directive on the status of third-country nationals who are long-term residents**, adopted in November 2003, is an important measure in this regard. Article 9 of the Directive provides that third-country nationals who hold long-term resident status (for which they are eligible after five years of residence in a participating EU Member State) can leave their country of residence for a period of up to 12 consecutive months without losing their status. The European Commission has suggested that this 12-month period might be extended for a 2-3-year period to promote circular migration of long-term residents. ***(Ibid,* pg. 303*)***

Eliminating discrimination against women migrant workers in respect of access to the labour market and the adoption of appropriate policies in this area are also important considerations. First, the demand for domestic workers, nurses and entertainers may appear neutral at first sight, but in practice recruitment to fill the available jobs is effectively aimed at women. Second, the majority of women migrant workers end up in low-skilled jobs and, in some countries, are also subject to intrusive questioning regarding possible pregnancy and even pregnancy tests before being permitted to take up

employment, practices that amount to unlawful sex discrimination in international human rights law (OSCE/IOM/ILO, 2006, 2007). ***(Ibid,* pg. 306*)***

Putting in place **appropriate mechanisms to recognize the diplomas and qualifications of migrant workers** acquired in their countries of origin or third countries would give them more opportunities to make an optimal contribution to the destination country, and to the country of origin in terms of remittances and the eventual transfer back home of additional skills and know-how. The phenomenon of "brain waste" is particularly pronounced in the case of unauthorized employment in which many migrants end up because of the absence of regular migration opportunities, and adversely affects women in the care and domestic work sectors, where demand, as noted above, frequently remains unrecognized (OSCE/IOM/ILO, 2006, 2007). ***(Ibid,* pg. 306-307*)***

Many developed countries have **programmes to facilitate the entry of highly skilled migrants**. Indeed, the global competition to attract the best and the brightest is intensifying (see Chapter 2). The disruption from the loss of key personnel, such as healthcare workers and educators, and the public costs incurred to train potential emigrants can be very real. Of course, a **highly educated diaspora could, in principle, provide benefits to the home economy** – but the **evidence for this remains weak** and pertains more to upper middle-income countries, which are better placed to take advantage of technologies transferred from abroad and any fresh skills of returning diaspora members. Meanwhile, the poorer the country, the more it is likely to feel the loss of highly educated persons migrating to industrialized countries. ***(Ibid,* pg. 333*)***

First, **innovative circularity schemes – including resort to flexible, multi-use, multi-annual work permits** – may allow countries of origin to manage migration flows more effectively and avoid critical shortages in the provision of public services, such as healthcare or education, in particular. They could be expanded to include multi-annual fixed-term contracts for professionals to train or work for a certain period in developed destination countries. Such schemes could furthermore be aimed at students and/or postgraduates from developing countries. Under the terms of such agreements, the country of origin could commit itself to upgrade and modernize its social service delivery system, such as education or health, supported, if need be, by the destination country. Measures to ensure appropriate training of personnel, and the deployment and replenishment of staff to maintain social service delivery at the desired level, could also be included. Moreover, the circular migration of the highly skilled also means that their skills will be made more widely accessible at home during the process and enhance local capacity through the transfer of technology and knowledge acquired by such migrants during their professional activities abroad. ***(Ibid,* pg. 334*)***

Other steps might also be considered to **limit negative impacts on the countries of origin**. Countries of destination should continue to develop **guidelines for the recruitment** of highly skilled workers from developing countries. In that context, it should be borne in mind that self-imposed recruiting restraints by public-sector employers have not been effective in limiting the migration of healthcare workers. Exhorting private-sector employers to recruit ethically is likely to prove equally ineffective. However, there may be a role to play for internationally agreed upon guidelines;10 these can serve as a benchmark against which civil society organizations and the nationals and governments of destination and origin countries can evaluate the practice of destination countries. Such peer pressure can help to avoid imminent crises, for example in developing countries' healthcare systems. ***(Ibid,* pg. 334*)***

Since most developing countries welcome the **opportunity to export their "excess" unskilled workers** in order to relieve unemployment pressures and generate remittances, **a critical dialogue is needed between developed and developing countries on the potential impacts of brain drain** on development and the conditions under which "brawn drain" migrants can be employed abroad to mutual benefit. ***(World Migration 2005. Costs and Benefits of Migration,* pg. 28*)***

These **asymmetries in the regulation of international labour migration** create at least some obligation for receiving countries to **make their labour immigration policies "development friendly"** for sending countries. This could be achieved by creating legal and readily accessible channels for the flow of remittances, discouraging the permanent immigration of highly skilled migrant workers, where such migration would constitute a serious loss to the sending country, and by encouraging the return and/or circulation of migrant workers. The best way of promoting sending countries' interests in international labour migration would be to adopt **a more inclusive approach in**

the design of labour immigration policies, and to cooperate with sending countries in at least some aspects of policy design. ***(Op.cit,* pg. 49*)***

In 1999, for example, the Beijing municipal government issued a provisional **regulation to encourage overseas Chinese students and scholars to return** to work there. Returnees were entitled to a number of benefits: simplified application and registration procedures for setting up a business; waiver of business taxes in high-tech areas; eligibility to apply for special research funding and low-interest loans to establish private businesses; eligibility to import tax-free equipment, materials and other goods for research/business, and eligibility to import some durable personal items tax-free. ***(Ibid,* pg. 68*)***

There is also evidence to suggest that **returns are increasing** even without direct government intervention to encourage them. For example, in India several media articles in 2004 suggested that many more highly skilled migrants are returning in response to growing economic opportunities there. The International Herald Tribune reported in 2004 that, "what began as a trickle in the late 1990s is now substantial enough to be talked about as a **"reverse brain drain".** By one estimate, there are **35,000 "returned non-resident Indians in Bangalore**, with many more across India" (Waldman, 2004). ***(Ibid,* pg. 131*)***

MacArthur is supporting the Washington-based Academy Health to collaborate with some of the world's largest recruiting companies, U.S. hospitals, nursing associations and migrant representatives to craft **voluntary standards for recruiting nurses to work in the United States**. Such standards can help to protect migrant workers while also allowing countries of origin to benefit from their investment in their training, for example through temporary return programmes and exchanges. ***(Continuing the Dialogue: Legal and Policy Perspectives, pg. 54)***

Many countries offer access to permanent residence to attract desirable highly skilled workers and investors, and are aware of the need to attract talent and capital if they are to gain or maintain a competitive advantage, especially in highly specialized industries. In the United States, 40 per cent of doctorates in physical sciences now go to non-U.S. citizens and nearly half the scientific and medical staff at the National Institutes of Health are foreign nationals. Foreign nationals who are employed in certain capacities, such as researchers, professors or scientists or in particular occupations, such as information technology, may **qualify for permanent residence after a shorter period of time**. They may also be **exempt from labour market tests** to determine the availability of suitable local workers prior to being allowed to hire a foreign national. ***(Op.cit, pg. 149)***

Permanent residence is accessible to highly skilled workers, foreigners who have been in the country in an irregular situation for an extended period of time may benefit from regularization programmes that are periodically conducted in some countries to render the actual numbers of undocumented foreigners in the country more visible, and to bring them within the scope of the law. To benefit from such programmes, irregular migrants have to supply evidence of a minimum period of residence in the country, a clean criminal record and continuing employment, and, in some countries (i.e. the U.S.) may be required to pay a penalty. ***(Ibid, pg. 149)***

An increasing number of countries aim to increase the level of skilled migration. In 2007, **36 countries out of 144 countries reported promoting the admission of highly skilled workers.** While more than 40 per cent of developed countries aimed to increase the number of admission of the highly skilled, only 17 per cent of developing countries pursued such a strategy. To attract skilled third-country nationals, the European Union proposed a "Blue Card" visa programme in 2007. ***(Ibid, pg. 233)***

"The Selection of Qualified Foreign Workers". This pilot project is a sort of special recruitment programme. This scheme (started on 28 July 2003)[47] recruits new immigrants (with at least a secondary education) who could help build national prosperity (while complementing the Czech domestic labour market which lacks some professions and suffers from low fertility and overall ageing – Burcin, Kučera 2003). The project is the first step in designing the future migration policy of the country. Its main goal is to encourage foreign experts, specialists, highly-skilled workers, to settle along with their families in the country. The crucial point is that the programme tries to attract permanent immigrants. A hypothesis is that foreign specialists will not compete with Czech citizens on the Czech labour market. Also that they will find jobs in regions and professions in which shortages are visible today and, furthermore, due to immigrants´ activities, new jobs should be created while economically enriching society. People who meet all these

demands may ask for a permanent residence permit as early as after 2.5 years instead of the current five years.
Selection is based on a **point system** in which applicants have to get 25 points out of 66 points as a minimum. Seven criteria are assessed: having a job, working experience, education, age, former experience with life in the CR, language abilities, and family members. The CR does not provide an applicant with a job, housing or finance his trip to the country. When losing a job during a waiting period (through no fault of his/her own) an applicant has a 30-day protection period, within which he/she does not lose their visa and their stay is not interrupted, thereby giving them the chance to find another job. ***(Permanent or circular migration, pg. 63)***

Highly skilled Indians have migrated to the developed countries not only through the **"employment gate"**. Another stream of skilled migration has been taking place through the "academic gate" as growing pools of revolving students formed a distinct set of actors amongst the Indian migrants – the "semi-finished human capital" of Indian professionals abroad (Majumdar, 1994; Abella, 2006). Data collated by the US Institute of International Education's Open Doors 2005 survey revealed that in 2004-05 India retained its No. 1 position in the US university enrolments (followed by China, Korea, Japan, Canada, and Taiwan Province of China) for the fourth year in a row. In 2005-06, the numbers of applications from Indian students have been reported to have registered a 23 per cent increase over the previous year, the highest among all countries (Hindustan Times, 23 March, 2006). ***(Perspectives from the south, pg. 88)***

The newly formed **Ministry of Overseas Indian Affairs**, constituted in 2004, has taken the initiative to amend the Emigration Act, 1983, and introduce a number of measures. In addition, there are various other pro-active programmes that are in the pipeline of the MOIA, including benchmarking of the best practices of other progressive sending countries like the Philippines and Sri Lanka (See GOI, MOIA, Annual Report 2005-6). Overseas Indian, the house journal of the Ministry, has been launched in five languages with an electronic version accessible online. Of all the government measures and programmes in India, the **Overseas Citizenship of India** (OCI) is an important landmark in redefining the contours of its migration policy in the new millennium. This measure seems to be relevant mainly to the highly skilled migrants in the developed countries. A second measure, that Indian citizens abroad would have the right to exercise their votes from abroad, is primarily meant for the Indian workers in the Gulf – those who send large remittances back home but can never hope to become naturalized citizens of those countries because of restrictive regimes there. However, it is still too early to gauge the impact of these two measures as they are in their infancy. ***(Op.cit, pg. 101)***

The Indian Ministry for Indians Overseas supports the **Diaspora Knowledge Network**, which is designed to connect highly skilled emigrants with opportunities at home. **Mexico** has set up a mechanism to encourage migrant collective investments in community projects. The **Programa Tres por Uno** (Three-for-One Programme) was established in 1999, based on regional programmes set up since the early 1990s. Tres por Uno is administered by the government's Secretariat for Social Development (SEDESOL). Transfers from Mexican hometown associations are matched by equal commitments from municipal, state and federal authorities. Funds are used for projects to improve roads, drinking water, sewage and electricity. In 2004, more than US$ 50 million were made available in this way. There is also an **"Invest in Mexico" programme** of the Inter-American Development Bank and Nacional Financiera. **Morocco** set up the Banque Al Amal in 1989, to encourage legal transfer of remittances and to support migrants' projects. In the Philippines, the **Commission for Filipinos Overseas** (CFO) supports LINKAPIL (Link for Philippine Development) to mobilize the resources of the diaspora. ***(Ibid, pg. 276)***

Gender research emphasizes how **migration policies can render female migrants more vulnerable than males**, e.g. current tendencies towards admitting only highly skilled professions, where women are still underrepresented (Jolly and Reeves, 2005) may mean female migrant workers can often only enter as unskilled workers and/or as irregular migrants. Both routes carry a high element of risk, irregular migration **exposes women to abusive practices** associated with smuggling and trafficking, while legal routes of unskilled migration may afford greater protection but are rare, especially in the sectors in which female migrants are most typically employed. ***(Achieving policy coherence,* pg. 33*)***

Professional Diaspora networks, like the **Digital Diaspora Network Africa** (DDNA), the **South African Network of Skills Abroad** (SANSA) and the **African Foundation for Development** (AFFORD) (ILO, 2005), have proven a **useful means for migrant professionals to pool their**

knowledge and contacts with professionals in their homeland. Internet and e-learning provide considerable potential for such transfer of skills. The influence of such networks is difficult to quantify as, on the one hand, collaboration appears to occur such as strong positive correlation between the country of birth of
U.S. college faculty staff and the percentage of scientific articles originating in their countries with U.S. co-authorship (Lowell, 2004) and, on the other, some e-networks may lie dormant and unused for long periods.
The **IOM Migration for Development Africa** (MIDA) pilot initiative has sought to capitalize on this potential for distance learning by facilitating a virtual transfer of skills using ICT, and also through short and long-term visits. MIDA has sent five diaspora medical doctors (based in the Netherlands, Belgium and the UK) to Ghana to teach or work in Ghanaian hospitals. A full evaluation has not yet been conducted, but participants initially reported positive experiences. ***(Op.cit,* pg. 75*)***

Countries of destination frequently perceive **conflicts of interest between migration policies that focus on internal needs**, and **external commitments to international development**. Temporary migration and brain drain/skilled labour migration issues are two areas where the policies in receiving countries are based on their own needs, and where any related development dimension is not of primary concern. However, experience shows that measures to support development do not necessarily work against receiving country interests.

Temporary migration schemes can work well for both: they provide the labour force needed by receiving countries, help combat irregular migration and, at the same time, provide secure migration channels for migrants which can generate greater dividends for sending countries through increased remittances.

Return migration has the potential to suit the needs of both sending and receiving countries, depending on the timing, form and the skills acquired by migrants abroad and their useful application at home.
Coherence in the other direction, i.e. to ensure that development policies take account of migration, is less prone to tensions. The development policies in receiving countries can take account of migration without compromising their ultimate goals. The main challenge here is the lack of consensus among development communities on the level of priority to be assigned to this issue, as well as practical and logistical difficulties in harnessing the potential of remittances and diaspora engagement. For sending countries, the key issue is to raise awareness in ministries dealing with development and poverty reduction of the potential impacts of migration. ***(Ibid,* pg. 98*)***

Policymakers have the power to be creative and establish what might be referred to as an **"education fund"**. Companies wanting to recruit skilled workers to fill particular skills profiles should be asked to pay a **"recruitment tax"**. The tax can differ, depending on the profile of the workers hired. The money thus collected could be reinvested in the education of young professionals in the South. Such a fund could be created on a regional level (e.g. the European Community) or on an international level (United Nations). ***(Migration and development conference,* pg. 224*)***

The EU and the non English-speaking member states in particular are increasingly recognising that much more attractive entry conditions for high-skilled immigrants are needed for the EU successfully to participate in the global competition for talent. The recent flurry of national attempts to improve the legal basis for attracting high-skilled migrants, including the recent **'carte des compétences et talents'** in France, illustrate the **progress that has been made** in this debate.

However, there is one important feature that purely national initiatives will not be able to offer: **immediate access to the entire EU labour market**. For highly specialised immigrants this would undoubtedly be attractive. In particular, it would make migrants hesitate less about accepting a first job in a small or a non English-speaking member state. For example, an Indian high-skilled migrant with a job offer in Vienna will accept it much more readily if this guarantees access to the entire EU labour market. In the case that the first job turns out to be unattractive after all or the family has difficulties adjusting, the option value of being able to transfer to, say, Düsseldorf or Manchester (and not just within Austria to, say, Innsbruck) would be substantial. ***(Division of labour, rethinking Europe's migration policy,* pg. 47*)***

The 1990 Immigration Act in the US **tripled the ceiling on employment- based visas** from the pre-1990 cap of 54,000 to 140,000. L-1 and H-1B non-immigrant visas were introduced to facilitate managerial personnel migration and resolve shortages of highly-skilled professionals. The H-1B visa is designated for "specialty occupations" that require the equivalent of a bachelor's degree. Its annual quotas were increased twice by the Congress in 1998 and 2000 respectively, and peaked at 190,000/year in the early 2000s. Moreover, **academic institutions and non-profit organizations are exempted from these annual caps**. Two important provisions of the H-1B visa stipulation are during the two three-year terms of their stay, H-1B visa holders 1) are eligible to bring their immediate family members under H-4 visas (although H-4 visa holders cannot work in the US); and 2) can apply for permanent residency. **(*Selective Immigration Policies in the US and Canada*, pg. 3)**

In Canada, immigration now accounts for 60% of total population growth, a figure that is likely to rise in the next decade to 100%.
The European Commission recently published its **"Green Paper on an EU approach to Managing Economic Migration,"** with the distinct goal to target more aggressively highly skilled migrants. In the attempt to reform immigration policies, **Canada's Point System and modes of recruiting economic immigrants are often perceived as models** (adopted, for instance, in the **UK** and in the form of the Green Card Initiative in **Germany**), and Europe is likely to become an increasingly attractive competitor for highly trained migrants. (***Canada's immigration and integration policies*, pg. 2)** (***Canada's immigration and integration policies*, pg. 3)**

For example, what the **UK now calls a "points system**" has a very high selection criterion, but small or non-existent numerical goals. The UK system is **open to the admission of Nobel Prize winners in science, or similarly accomplished individuals. But the country seems unlikely to get demographically-significant numbers** using this scheme. **(*Canadian Experience*, pg. 8)**

Third, global competition for high-skilled workers has intensified owing to skillbiased technological change and globalisation and the EU struggles to attract and retain top talent. For both economic and political reasons, it is more promising to pursue the European agenda on irregular migration and high-skilled migration jointly as a policy package rather than separately. **(*Irregular and high-skilled migration – not such strange bedfellows*, pg. 1)**

The second priority area should be high-skilled migration, since the EU is falling behind in the global competition for talent and high-skilled immigration is comparatively uncontroversial. Foreign-born workers in Australia, Canada or the US are much more likely to be high-skilled than foreign-born workers in the EU. The phenomenal success of economic hot spots such as California is not least due to their ability to attract high-skilled migrants. A joint approach for high-skilled immigration would allow Europe to attract more skilled migrants than could be achieved through purely national policies by offering access to the entire EU labour market. The Commission's draft directive calling for the introduction of a Blue Card for high-skilled migrants is a step in the right direction but does not go far enough. Fortunately, the economic effects of high-skilled immigration are likely to be positive in virtually all member states. These relatively well-aligned preferences should pave the way for bolder measures that are needed for Europe successfully to participate in the global competition for talent. **(*Op.cit*, pg. 2-3)**

Most countries also required that the temporary migrant had a job to go to. The **UK's Highly Skilled Migrant Program** had limited special arrangements which permitted selected migrants to enter the country without a job offer. Australia's job offer requirements varied according to the skilled migration scheme. **(*Management policies of various countries,* pg. 2)**

The **UK Highly Skilled Migrant points-based program** began in January 2002, to run for 12 months, "to provide an individual migration route for highly skilled persons who have the skills and experience required" by the UK. In September 2002 the UK removed all ICT jobs from its Shortage Occupation List. **(*Op.cit,* pg. 3)**

The Committee concluded that the changes initiated in **Australia** as well as elsewhere confirmed that, to be competitive, skilled migration programs needed to be sufficiently flexible to identify and capitalise on short-term fluctuations in skills supply and demand.

The Committee also thought that **systematic reviews of skill shortages** made government policy making less susceptible to domestic lobby groups. **(*Ibid,* pg. 4)**

TYPES OF POLICIES

Our results suggest that the mechanisms and policy initiatives used by governments to attract foreign expertise can be classified into five groups:

1. Those countries where a **comprehensive scheme exists such as the 'Green Card' system in Germany and H 1B visas in the USA**, which are **specifically aimed at attracting highly skilled migrants.**

2. Governments which have made **minor positive changes** to the **existing work permit system** to facilitate quicker access to the labour market for highly skilled personnel, for example the fast-track work visas for IT specialists in the Netherlands and the work authorisation system in Ireland.

3. Governments which have used **exemptions from work permits** or **relaxation of work permit regulations** to enable employers and **foreign workers to gain easier access to the labour market**, for example intra-company transfers in Ireland are exempt from work permit regulations and are exempt from a labour market test in the Netherlands.

4. **Tax incentives** are used to **reduce the tax burden**, **particularly in Nordic countries for high earning foreign workers**. These tend to be long-standing rather than recent introductions.

5. Policies to **encourage return migration of highly skilled** (notably in Ireland).

(*Migration policies towards highly skilled foreign workers,* pg. 4)

SUMMARY CONCLUSIONS

- Most European countries, together with developed Asian ones, have not introduced special measures to recruit highly skilled workers. They continue to rely on their existing work permit systems. Where schemes have been introduced, they are invariably aimed at IT and health (especially nurses) staff and intracompany transferees (ICTs).

- In a minority of countries, most notably Australia, Canada and the US, the mainspring for policy has been the perceived benefit to national economic growth derived from the permanent acquisition of high-level human expertise. However, even in these countries temporary migration is becoming increasingly important as a strategy to cope with labour shortages in some sectors.

- In Europe, temporary migration has been the norm and schemes have been designed to deal with specific labour shortages that cannot be met by free movement within the EEA.

- In terms of the range of specific schemes and initiatives to attract the high skilled, the UK has moved faster and further than any other country, with the exception of Australia and to a lesser extent Canada.

- Most countries have managed to reduce the length of time taken for work permit approval but Work Permits UK provides a faster response rate than anywhere else.

- Student switching is not yet widespread but several countries are either in the process of liberalising or exploring possibilities. Where this does exist it tends to be sector specific for example IT graduates in France and Germany.

- Countries have a range of criteria for measuring the success of their schemes; some are seen as part of wider training or migration policies. In only a few cases, notably Australia, US and Germany, have there been systematic attempts either to collect the necessary data or carry out a full evaluation and follow-up research. Frameworks for evaluation are only now being worked out.

- There is a strong sense that schemes are employer driven, sometimes resulting in over-estimation of the scale of shortages.

- No country has yet ceased an IT programme.

(*Management policies of various countries,* pg. 5)

Otherwise, there have been policy recommendations for the orderly management of migration on a worldwide basis that are in some ways on a par with international trade agreements. They offer ideas for the cooperative management of highly skilled workers between developing and developed countries. Such projects include the Transatlantic Learning Connection (Transatlantic Learning Connection, 1999), or the International Regime for Orderly Movements of People (Ghosh, 2000). The International Organization for Migration (IOM) launched the Global Consultative Process for Inter-State

Cooperation on Migration Management in 2001 with **ongoing discussions on inter-state frameworks** (International Organization for Migration, 2003). The Governments of Sweden and Switzerland, together with those of Brazil, Morocco and the Philippines, established the **Global Commission on International Migration** in December 2003, with the encouragement of the Secretary-General of the United Nations. Its final report in 2005 will **make recommendations** on ways to improve the national, regional, and global management of international migration (United Nations, 2004). In the European Union, the recent enlargement from 15 to 25 Member States has **renewed pressure** for going beyond the **harmonization of national policies to a common immigration policy** (van Selm and Tsolakis, 2004). While there are some common policies on asylum seekers or the movement of long-resident third party nationals, there are many issues to work out from border security to work authorization. ***(Policies and Regulations for Managing Skilled International Migration for Work,* pg. 8)**

A well-managed skilled migration policy should be developed in Turkey to secure ‘brain gain’. By following the Indian example, Turkey can attract R&D and technology transfer in the long run (many Indians who studied in the U.S. returned home and establish their own companies with close links with firms in the United States). Therefore, Turkey should also:

- Address structural problems, like corruption, low wages, unattractive working conditions, etc.
- Provide a sound and favorable economic environment to pave the way for more investments in business, and reduce the major determinants of out-migration for skilled people.
- Try to eliminate frustration associated with doing business with Turkey, and fight vigorously with corruption and develop further an open, rule-based, trustworthy trading and financial system (Target 12 of Goal 8 of the Millennium Development Goals)
- Continue reforms in the labor markets and attract more foreign direct investment (FDI), as FDI will also accelerate reverse brain drain as in the case of China, India and Korea (See Stalker, 2000: 111-112).
- Wages of highly skilled public employees and those working in the State Universities should be bettered,

***(The Varieties of High-Skilled Immigration Policies*, pg. 149)**

4. Best practice – Canadian Experience

While the **Australian model** has to be adapted to Europe's needs, a number of guidelines could be used as a source of inspiration. Australia has a specific programme called **"Skill Stream"**, which divides highly qualified migrants into **five categories** and accounts for a very high percentage of the total number of visas issued for economic purposes. According to the latest statistics, the total number of immigrants to arrive through the Skill Stream programme increased from 71,240 between 2003 and 2004 to 77,880 between 2004 and 2005, and to 97,000 in 2006. In other words, between 2003 and 2006, the **percentage of highly qualified migrants rose from 62.3% of the total number of migrants arriving in Australia to 67.8%:** a very marked increase given that the gross domestic product of Australia is a quarter of Germany's and barely 60% of Spain's (OECD, 2006). In 2002, the Australian government set a **target of 100,000 new entries a year up to 2006**, but has had to change this initial figure and granted **143,000 permits** in 2006 to meet the growing demand from companies wanting to recruit highly qualified workers. Among the factors guiding the Australian government's selection are knowledge of the language and consolidated work experience, in conjunction with study courses. ***(Legal migration, time for Europe to play its hand,* pg. 15*)***

Australia is a country that has embarked on bold structural changes to its economic system and has **made migration one of the priorities of its foreign policy, starting with the recognition of the qualifications of highly skilled immigrants.** This is a sore point at the Community level where there is still no agreement among the 27 countries on how to appraise degrees and diplomas awarded by third countries. Not only will this obstacle be difficult to overcome, it will prevent European countries from tapping the full potential of the immigrants to whom they play host. At present, each country operates a series of bilateral agreements with certain third countries and decides whether and how to recognise qualifications. In practice, this attitude amounts to a waste of skills, with negative spin-off not only for the economy of a country – immigrants do not contribute up to their capacity – but also for the process of integration. The workplace should be seen as the optimum vehicle for integrating new arrivals into the socio-economic fabric of the host country – as otherwise the immigrant feels isolated and exploited. ***(Op.cit,* pg. 16*)***

In order to tackle the challenges of global competition for economic and geopolitical power, the **US** and **Canada** have **implemented increasingly selective immigration policies to facilitate the influx of international migrants possessing investment capital and/or human capital**. For example, since 1967, Canada has adopted a point system by admitting immigrants primarily based on their human capital, such as level of education, good English and/or French language capability, and prior working experiences. In addition, a business immigrants program has been installed, with entrepreneur stream introduced in 1978, and the investor stream introduced in 1986.

In the U.S., landmark 1965 immigration legislation set aside the third and sixth preferences for employment-based visas, including respectively, "members of the professions and scientists and artists of exceptional ability" and "skilled and unskilled workers in occupations for which labor is in short supply". Both of these two preferences require U.S. Department of Labor certification ensuring that no qualified Americans are available for such positions. **(*Selective Immigration Policies in the US and Canada*, pg. 2 – 3)**

The Influence of NAFTA - A new non-immigrant visa type, TN, is established which allows citizens of Canada and Mexico to work in the U.S. as NAFTA professionals.

- those from Mexico have grown steadily since NAFTA
- In the last four fiscal years, Mexicans not only surpassed Canadians as employment-based visa holders in the U.S., but also counted for more than 20% of world total.
- Canada and Mexico rank no.3 and no.5 as origin countries for employment-based immigrants to the U.S., counting for 6.9% and 6.4% respectively in the 2005 fiscal year

(*Op.cit*, pg. 4 – 5)

Main obstacles to a successful labour market integration of migrants

- Individual barriers (fulfilling the entry requirements, work experience is absent, Lack of knowledge of labour market regulations, Language skills, Soft skills missing, Lack of access to support networks)

Structural barriers (recognition and assessment of credentials, Regulation of professions, Lack of social networks in the host country, Discrimination, Lack of information, Returns on foreign education(***Canada's immigration and integration policies*, pg. 6-7)**

With the sophisticated recruitment strategy of the point system came the **assumption** that once these carefully selected immigrants were in the country, the **transition into the labour market would unfold almost automatically.** Yet the reality is different: Canada loses many of these highly trained immigrants to other countries (in particular the US) because opportunities for labour integration often prove to be highly restrictive. The assessment of foreign work experiences, the transferability of foreign credentials, the lack of language and soft cultural skills, as well as insufficient information and experience on behalf of Canadian employers are among the most important hurdles to an immigrant's finding employment in Canada. Often newcomers to Canada face unemployment or employment in less qualified fields, and their potential for Canadian society and economy is seriously underutilized. (***Op.cit*, pg. 12)**

A system Canada pioneered in the 1960s that favors highly skilled foreigners, by assigning points for education and work experience and accepting those who earn high scores.

The point system has helped Canada compete with the United States and other Western powers for highly educated workers, the most coveted immigrants in high-tech and other cutting-edge industries. But in recent years, immigration lawyers and labor market analysts say, the Canadian system has become an immovable beast, with a backlog of more than 800,000 applications and waits of four years or more.

The system's bias toward the educated has left some industries crying out for skilled blue-collar workers,

"The points system is so inflexible," said Herman Van Reekum, an immigration consultant in Calgary who helps Alberta employers find workers. "We need low-skill workers and trades workers here, and those people have no hope under the points system." **(*Canada's Policy On Immigrants Brings Backlog,* pg. 1)**

Under Canada's system, 67 points on a 100-point test is a passing score.
Part of the backlog in Canada can be traced to a provision in the Canadian system that allows highly skilled foreigners to apply to immigrate even if they do not have a job offer.
The sheer size of the Canadian point system, the complexity of its rules and its backlogs make it slow to adjust to shifts in the labor market, like the oil boom in Alberta. **(*Op.cit,* pg. 2)**

One of the most important features of Canada's immigration program is its large size relative to the overall population. **For the last 15 years, the explicit goal has been to take a number of immigrants equalling 1 percent of the total population per year**. The actual intake has fallen short of this target – at between 200-250,000 annually for most years since 1990 (see chart 1), the intake represents 0.75 percent of population. **(*Canadian Experience*, pg. 3)**

The **program is also successful in political terms**, and this may be the most important success indicator. There is relatively **widespread acceptance and support for immigration policy in Canada**, and relatively little of the kind of acrimonious debate often seen elsewhere. Public opinion polls show that for the last several decades, in every year but one (1982, a recession year), a majority of the population has either supported immigration levels or has wanted them increased. **(*Op.cit*, pg. 4)**

There are **two key aspects of Canadian policy**: **immigrant selection policy**, and **immigrant integration policy.**

Regarding selection of immigrants, the best known feature is the **skills-based selection criteria**, the so-called "points system" for selecting skilled immigrants. There is also a certain amount of provincially-controlled selection (**particularly in Quebec, but now in every province**).

Regarding integration policy, the best known facet is probably **the country's official policy of "multiculturalism," now enshrined in the constitution.** As well, there are a large number of programs to encourage settlement and effective integration into local communities. **(*Ibid*, pg. 5)**

A prime example of a non-policy circumstance that has helped Canadian immigration is Canadian geography. The **geographic isolation of Canada from all countries other than the United States has limited illegal immigration and has made legal immigration more attractive**. This has been important in sustaining the **political perception of Canadian immigration as being controlled in the national interest**. **(*Ibid*, pg. 10)**

Frenette and Morissette documented a significant decline in the earnings of successive cohorts of new immigrant since the 1970s – virtually the entire period during which the points system has been in place. What the 2001 data suggest is that the much-touted policy framework is no longer working.

There is a debate about the causes of this trend, and the following factors have all been cited as relevant:

1. Declining employment opportunity for all new labour market entrants;
2. A shift in the immigrant origins (more in the 1970s and early 1980s than recently);
3. Increased credentialism, compounding low returns to education for immigrants;
4. Declining returns to education for immigrants (probably small);
5. A decline in the returns to foreign labour market experience for immigrants;
6. A shift to the "knowledge economy," with implications for the transferability of immigrant skills;
7. Increased labour market inequality. **(*Ibid*, pg. 11 – 12)**

KEY FINDINGS
83% think attracting high-skilled workers is important to Canada
66% support the proposal to amend the Immigration and Refugee Protection Act
65% believe the new rules will help ease labour shortages in Canada; 49% believe they will lead to unfair and arbitrary decisions affecting immigrants
85% think there are too many immigrants in Canada who are not working in their fields of study or experience **(*Canadians Prefer High-Skilled Workers*, pg. 1)**

Two-thirds of respondents (65%) believe the new rules will help ease labour shortages in Canada, and three-in-five (59%) think they will effectively reduce processing times for immigration applications. However, half of Canadians (49%) believe the guidelines will lead to unfair and arbitrary decisions affecting prospective immigrants, and two-in-five (41%) fear they will negatively affect the process of family reunification.

Respondents to the survey were provided with four ideas to revamp Canada's immigration system. More than two-thirds of Canadians (71%) believe new immigrants should be encouraged to settle in rural areas, rather than urban centres, and a majority of respondents believe Canada should attract immigrants primarily from industrialized countries (58%) or people who come from English- and French-speaking countries (55%). A slim majority (51%) also voiced support for reducing the number of immigrants who enter Canada each year. **(*Op.cit*, pg. 2)**

There are three major 'gaps' between this skilled immigration and the actual role of immigrants in Canadian labour markets

First, skilled immigrants often do not succeed in getting those professional and other highly-skilled jobs for which they are presumed to be qualified. …('brain waste')

Second, many employers have indicated significant demand for less-skilled immigration to meet labour shortfalls in various trades and other lower-level occupations

Third, there appears to be an increasing pattern of illegal immigration, mainly unskilled workers, who take jobs which reportedly go unfilled by native-born workers. ***(Closing the gaps between skilled immigration and Canadian labour markets,* pg. 2)**

Even though high-skill immigration does not fully address the demand for high-skill workers, such immigration will continue to be useful to pursue longer-term goals of nation-building and population expansion, since high-skill levels contribute to the objective of long-term integration. Hence, the policy imperative of maintaining mass immigration of the highly-skilled is to focus on the transferability of the skills of these highly-educated immigrants. At the same time, the concern with self-sufficiency and integration does not necessarily mean maintaining an almost exclusive focus on recruiting the most highly skilled. But to increase use of less-skilled immigration to address immediate labour demand at that level, **a policy of simply 'lowering the bar' in immigrant selection could threaten long-term integration.** The policy imperative then is to provide additional support for the longer-term integration of less-skilled immigrants. Such support may include special assistance in the case of job loss, including provision for labour market transition and possible re-training, and also assistance for the education of the next generation. **(*Canadians Prefer High-Skilled Workers*, pg. 4)**

Sociologist John Porter (1965), in his classic book **The Vertical Mosaic**, published at the end of the low-skill era of Canadian immigration, discussed the interrelation of immigration and education policy in Canada. He noted that during the industrial phase of development, immigration policy was directed mainly at low-skill workers. The work-force demand for workers with higher levels of education, including post-secondary education, was met primarily from domestic sources. Even in this phase, Canada looked to immigration as a source for some of its skilled workforce, but according to Porter, the process by which immigrants were slotted into occupations was **differentiated by immigrant source country.** Immigrants from the United Kingdom and the United States were recruited to fill the demand for professional and managerial workers, while those from elsewhere in Europe, particularly Eastern and Southern Europe, filled the unskilled positions in manufacturing and construction. **(*Op.cit*, pg. 8 - 9)**

Evidence suggests that a high level of education for immigrant parents is an important reason for the success of their children in achieving high levels of education, almost regardless of the parents' employment success. To cite one example, the children of Asian and other **'visible minority' immigrants in Canada have university degree attainment rates higher than the mainstream population**, propelling them to employment success (Reitz and Zhang 2004). **(*Ibid*, pg. 12)**

There is much public discussion in Canada of the **non-recognition of immigrant qualifications** by employers, a phenomenon known as 'brain waste.' News accounts portray the social stereotype of 'PhDs driving taxis,' and there are statistics to back it up. Census data examined by Galarneau and Morissette (2004, p. 13) show that among university graduates, immigrants are many times more likely to be working in several occupations requiring only a high school education; in the case of 'taxi and limousine drivers,' the figure is ten times more likely. **(*Ibid*, pg. 14 - 15)**

The specific **proposal is to allow temporary immigrants**, who are currently in Canada for periods up to one year, to remain longer, and if their jobs remain stable over a period of perhaps three years, to permit them to apply for permanent residence on that basis. Under this policy revision, persons trained in skilled trades would be more likely to gain permanent admission to Canada, thereby becoming part of the immigration-generated workforce of the future.
The key difference in this selection method is that filling the demand for less-skilled immigration would be based on **employer-driven selection**. Employers would be the gatekeepers for initial admission to Canada and the gatekeepers for permanent residency. If this is done, the following two issues should be addressed. **(*Ibid*, pg. 16)**

In 1996, highly skilled immigrant women had a higher unemployment rate, lower earnings, and lower labour force participation rates than those of equally skilled Canadian-born women. The gap was largest for women who had immigrated in the preceding ten years (Chard, Badets, and Howatson-Leo). **(*Employment Experiences of Highly Skilled Immigrant Women,* pg. 1)**

Labour market barriers may discourage skilled women's participation in the labour force. Faced with employers' unwillingness to recognize the value of foreign education and work experience abroad and lengthy and expensive accreditation processes for many regulated professions (Brouwer; Lopes), highly skilled immigrant women may be unwilling to accept jobs for which they are overqualified. The presence of labour market barriers means that the gap in labour force participation rates is likely to be

greatest for the most skilled women who would suffer the greatest downward mobility in the Canadian labour market. **(*Op.cit,* pg. 4)**

Immigrant women who settled recently in Canada are better educated than their predecessors. Among the women who settled in Canada in the 1990s, almost half (46.9%) have some university education compared with 35.0% in the preceding decade.

Compared with their Canadian counterparts, skilled immigrant women are less likely to participate in the paid labour force (Table 2). The disparity in participation rates is largest at each end of the educational spectrum. Among the least educated women, Canadian-born women with less than a grade nine education are less likely to work than their immigrant counterparts, and the gap between the participation rates is large: 11.5%. Among the highly skilled, the gap between participation rates is almost as large but in the opposite direction. **(*Ibid,* pg. 9)**

Highly skilled immigrant women are also more likely to be in less prestigious occupations such as manual worker, sales and service, and clerical occupations than their Canadian-born counterparts. The disparities are substantial, with 13.9% of immigrant women with at least one university degree working in sales and service compared with only 7.1% of Canadian-born women. Highly skilled immigrant women are also more likely to be clerical and manual workers, 17.0% and 3.9%, respectively, than Canadian-born women. **(*Ibid,* pg. 13)**

For women from each country, labour force participation rates increase with improvements in knowledge of official languages, but the magnitude of the effects varies among countries. For example, the participation rate for women from the United States who know English only is 78.5% compared with a participation rate of 84.0% for women from the same country of origin who know both languages. For Filipinas, knowledge of English is crucial, while knowing both languages does not affect labour force participation rates. Among Korean women who have lower participation rates overall, knowledge of both official languages adds slightly to participation rates, raising them from 67.3% for women who know English to 71.2% for those who know both official languages. **(*Ibid,* pg. 19)**

Immigration is an increasingly important component of net population growth in Canada. According to Statistics Canada, **immigration represents close to 70% of current population growth**, up dramatically from under **20% in 1976**. Given today's below-replacement fertility rates, within 25 years immigration will be the only source of net population growth factor, as deaths will outnumber births. ***(E-Handbook, Immigration & Skill Shortages*, pg. 6)**

Of the **707,000 immigrants to Canada** in the three years starting in 2000 and ending in 2002, more than one-half **(61%) entered through the economic class.** This group includes skilled workers (and their dependents) who are selected on the basis of the knowledge, skills, and experience deemed necessary and appropriate for Canada's labour market. It also includes investors, entrepreneurs, and self-employed immigrants. About 193,000 immigrants **(27% of total) came to Canada to join close family members. Refugees made** up about **12%** of immigrants coming to Canada between 2000 and 2002. ***(Op.cit*, pg. 12)**

Given the wide range of education levels and specialties found among Canada's immigrant population, it is not surprising that immigrants represent a significant share of employment within all occupational groups. For example, immigrants fill 27% of Canada's Natural and Applied Science occupations, 22% of management occupations, and 18% of occupations in trades, transport and equipment operations. ***(Ibid*, pg. 15)**

In 2001, the unemployment rate among recent immigrants was 1.5 times that of the Canadian- born unemployment rate (11.4% compared with 7.4%). As education levels increase, the relative difference between the unemployment rates of immigrants and the Canadian-born also increases. Consider recent immigrants with a bachelor's degree; they have unemployment rates that are three times greater than Canadian-born degree holders (11.8% compared with 3.9%). The highest ratios occur among recent immigrants with Masters degrees or earned Doctorates. Their unemployment rates are more than 3.5 times higher than Canadian-born with graduate level degrees. ***(Ibid*, pg. 24)**

A study by Statistics Canada compared occupations of immigrants before and after arrival in Canada and found that **60% of new immigrants did not find employment in the same occupational fields they had prior to arriving in Canada**. Most of these people (52%) were looking for another job.

After six months in Canada, 24.9% of employed immigrant men and 37.3% of employed immigrant women were working in sales and service occupations. Before arriving in Canada, only 10.2% of these men and 12.1% of these women were employed in such occupations.

On the other hand, **only about one-half of immigrants who were previously employed in natural and applied science occupations had these occupations after arrival in Canada**. ***(Ibid*, pg. 26)**

The increase in the proportion of highly educated and skilled immigrants coming to Canada since the early 1990s appears to have had little effect on low income outcomes of immigrants. Their economic position relative to the native population has steadily declined. Moreover, recent immigrants are faring worse that those that arrived in Canada in earlier years. ***(Immigration, The Changing Face of Canada,* pg. 8*)***

A significantly higher proportion of immigrants to Canada are highly-skilled. This has increased the supply of skilled labour and lowered the wages of high-skilled workers. In the United States, a significant proportion of immigrants have been unskilled. This has increased the supply of lower-skilled labour and depressed the earnings of lower-paid Americans.

In both Canada and the United States, a **migration induced shift of 10 percent in labour supply was associated with a 3 to 4 percent drop in weekly earnings**. ***(Op.cit,* pg. 9 - 10*)***

The **economic position of newcomers relative to the native population has steadily declined**, and recent immigrants are faring worse that those that arrived in Canada in earlier years despite the increase in the proportion of highly educated and skilled immigrants coming to this country since the early 1990s. If we are unable to utilize the skills and education of our immigrant population, the costs to our economy can be great: Increased costs for welfare and social services, and for training and re-training of foreign individuals; the loss of potential tax revenue because foreign trained individuals are unable to work and contribute to the economy; loss of foreign trade opportunities; possible feelings of alienation; as well as mental health impacts. ***(Ibid,* pg. 12*)***

In Canada, under Bill C-50, the Minister of Citizenship and Immigration now has discretionary power to issue ministerial instructions regarding the processing of certain types of permanent residency applications. The Ministers Instructions were released on December 1, 2008 and take effect as of February 1, 2009. Under the new system, only those Economic Class applicants who are in occupations on the list will be processed.

The list includes regulated professions in healthcare, accounting, engineering and skilled trades, as well as a number of non-regulated professions. ***(Key trends and changes in immigration policy,* pg.1)**

There are two types of temporary foreign workers: high skilled and low skilled. The skill level is determined by the National Occupational Classification (NOC) codes. High skilled migrants can bring their families and are eligible to apply for permanent residency through the Canadian Experience Class. ***(Op.cit,* pg. 2)**

Canada coordinates much of its immigration regime with the United States; however, in several major policy areas, it diverges. Notably, Canadian immigration policy strongly favors permanent immigration based on skilled employment. In fact, about 60 percent of all of Canada's permanent immigrants every year earn their status based on their skills.
(*Merit-Based Permanent Immigration, A Look at Canada's Point System*, pg. 2)

A number of studies have concluded that **skills-based immigration contributes positively to the economy in Canada** and to those of other countries using such systems. Here are some of the studies' results:

Higher Employment Rate: “Higher skilled migration raises the labour force participation rate. . . [which] in turn raises the employment rate.”

More Taxes Paid: “Highly educated, skilled, or talented immigrants … normally make a positive fiscal contribution … [and] pay more in taxes than they absorb in government expenditure.” **(*Management policies of various countries,* pg. 6)**

By 2050, real per-capita GDP is 10.5% lower, compared to a steady state with no population ageing. Several alternative policy scenarios concerning skilled immigration have been experimented with the model. In a first scenario (referred to as **Alternative Scenario 1**), we simulate a permanent—after year 2002—increase in the level of yearly high-skilled immigration flows. The increase is chosen so as to maintain unchanged the average national real per-capita GDP over the period 2006-2050. This requires **raising the proportion of highskilled immigrants from the current trend by 0.5% of the population each year** which corresponds to raising the total proportion of recent immigrants from **0.75%** to **1.25% of the population**. Unreported simulations suggest that to achieve the same GDP objective by acting on **medium-skilled** immigration numbers would **require a 0.7% increase** in the proportion of immigrants each year, corresponding to **nearly doubling the current flow** of recent immigrants. ***(Population Ageing and Quality Immigration,* pg. 7-8*)***

We see that in the short-to-medium term, a **0.5% increase of high-skilled immigrants is enough to more than offset the negative impact of ageing on real GDP per-capita**, suggesting that fewer immigrants would be required. However, in the long run, the negative impact of ageing is amplified by **increased retirement rates**. By 2050, the 0.5% higher-to-base-case immigration flows can no longer suffice to prevent a reduction in real per-capita GDP. This suggests that additional increases in immigration would eventually be required to prevent a reduction in real GDP per-capita in about 40 years. ***(Op.cit,* pg. 8-9*)***

In **Alternative Scenario 2**, we simulate a more gradual increase in the proportion of high-skilled immigrants in an effort to counter the fall in real per-capita GDP. Table 4.1 reports the real GDP effect and the required increase in immigration to maintain real GDP per-capita constant. In the initial years—between 2006 and 2022—no change in the proportion of immigrants is required. The proportion of immigrants has to be raised to **1%** of the population in **2026**, 1.18% in 2030, 1.45% in 2034, 1.79% in 2038, 2.06% in 2042, 2.33% in 2046 and **2.5%** in **2050**, in order to stabilize real per-capita GDP. Such a policy would require raising the immigration target several times to what seem unrealistic levels of immigration, given that Canada is competing with other industrialized countries to attract skilled immigrants.
(Ibid,* pg. 9*)

From a regional perspective, things are more complicated. Our results clearly indicate that using immigration as a policy to compensate for the negative effects of population ageing will induce strong disparities in regional welfare. **Increased immigration would need to be accompanied by strong incentives for regional mobility of skills from slower ageing to faster ageing regions of Canada. Finally, these findings support the view that ignoring the regional perspective of immigration in Canada could lead to a sharp increase in regional income disparity. *(Ibid,* pg. 11*)***

Attracting skilled immigrants provides economic benefits, as **immigrants represent a rich source of human capital**. Although immigration policy has mainly been the responsibility of the federal government, **provincial involvement** can promote the **different objectives**, and **needs, of each region.** Provinces are in the best position to determine what types of skilled workers they need, since labour shortages particular to a certain province may arise due to regional differences. For industries experiencing immediate skills shortages, the PNP can be a valuable policy, bringing in highly-skilled immigrants in a relatively efficient manner. **(*Provincial Immigration Policy in W. Canada*, pg. 7)**

Statistics Canada data from the 1996 Census show that among recent immigrants (arriving from 1991-1996) who settled in rural areas (defined as a density of 150 persons per km2), the proportion of those with a university degree exceeded those of the Canadian-born (Statistics Canada 2004). In the rural regions, more than 20% of new immigrants held a university degree, while approximately 10% of the Canadian-born possessed a university degree. Rural areas benefit from drawing this high level of education, as these **immigrants are a valuable source of highly-skilled labour**. **(*Op.cit*, pg. 9)**

A lion share of public spending in Canada is allocated to education, health and social services. They account for 57 percent of total consolidated expenditure of all levels of government. These expenditures are essential for producing a well educated, healthy and productive citizen. **Every graduate produced in Canada, therefore, is highly subsidised by public money or tax revenue**. When these graduates leave for some other countries, most notably to the United States, they create **significant negative balance in Canada's public account**.

Though there is big controversy in Canada about the actual extent of brain drain or high-skill workers emigrating to US, there is **complete agreement that they are the best and brightest of Canadian human resource pool**. Their departure would negatively affect the country's economic growth, productivity and ultimately living standard of ordinary Canadians.

Further, **most of the emigrating Canadian high-skill workers to the United States fall in high income category.** Their departure leads to an erosion of the tax base and government revenues. These revenues are essential to finance the social programs for which Canadians are so proud of. ***(The Migration of High-Skilled Workers from Canada to United States*, pg. 3-4)**

Also in high skill areas, significantly more Canadians are emigrating to the United States on permanent basis than the other way round. For example, for every American coming to Canada in the managerial occupation, there are 59 Canadians moving to US. Canadian engineers, nurses and physicians have similarly high tendency of emigrating to US. However, in a global perspective, Canada receives four university graduates from all over the world for departure of one of its graduate to US, estimated by Statistics Canada. ***(The Accelerating Decline in Americas High-Skilled Workforce*, pg. 5)**

Surveys by various research and business organizations invariably identify the same **reasons for emigrating to the United States** (though not necessarily in the same order): higher salary, paid in US dollars; more growth opportunities; exposure to leading-edge technology; lower taxes; better management; and even a warmer climate. ***(Op.cit*, pg. 14)**

What have we learned from this analysis that we did not know from the extensive earlier work on the brain drain? First, Canadians' "staying power" in the face of large prospective gains in income is extraordinary. In 1991, **highly trained Canadians would forego $C75,000 in annual income gains before moving to the United States**, in 1996 $C46,000. Thus, we now have an estimate of the implied value for the social goods and milieu provided by Canada. It is important to note that this **"reservation wage"** while large, is declining rapidly over time. It fell almost 40 per cent between 1991 and 1996.

Our second major finding—that **only a large gain in income will induce movement to the United States**—also suggests that several conditions must all be in place to induce a move for a highly trained Canadian. In particular, the potential mover must be young, and expect a relatively rapid gain in earnings after arrival in the United States, conditions that in fact apply in particular to Canadian knowledge workers who typically receive payments in the form of stock options, to physicians entering their specialties and nurses or to star academics who receive a once-and-for-all large initial bonus upon movement. ***(Why do highly skilled Canadians stay in Canada*, pg. 4-5)**

5. Recommendations

In formulating policies on international migration, **Governments of receiving countries should take into account not only their own country's economic and social needs but also the well-being of the migrants concerned and their families** and the demographic implications of migration. Governments of countries of origin concerned with the continuing outflow of skilled workers and professionals should seek to retain those workers as well as encourage their return through, inter alia, the promotion of an economic environment favourable to the expansion of employment opportunities. To redress the existing imbalance of skills, Governments should try to identify alternative skill resources. Governments should formulate **national and international measures to avoid the brain-drain from developing countries and to obviate its adverse effects.** While pursuing these purposes in a manner consistent with respect for human rights, Governments are invited to conduct, inter alia, consultations or negotiations, on either a bilateral or a multilateral basis, with the support, upon request, of competent international organizations. ***(Compendium of recommendations on international migration and development,* pg. 28*)***

Global Commission on International Migration
Recommendation 5
Governments and employers should jointly review current barriers to the mobility of highly educated professionals, with a view to removing those which are unnecessarily hindering economic competitiveness.
World Conference against Racism (Durban, 2001)
Urges States: […] (f) To consider the question of promoting the recognition of the educational, professional and technical credentials of migrants, with a view to maximizing their contribution to their new States of residence; […] (Programme of Action, para. 30)
(Op.cit,* pg. 98*)

The following options were considered:
Option A - **status quo**. Member States' immigration policies widely differ on admission of highly qualified workers. Such workers are increasingly needed to fill existing and arising gaps on the labour market, but the EU substantially fails in attracting them. In the absence of common action in this field, the situation may not substantially change.

Option B - to establish a **basic common policy for the admission of highly qualified workers**. A minimum set of entry conditions would be proposed, leaving to Member States broad autonomy in defining the distinctive elements of their national legislation. Residence and work conditions would not be tackled. This option would have only a limited effect in attracting these workers or in improving the efficiency of the EU labour market: the overall impact on the macroeconomic environment would be quite limited.

Option C - to **simplify the admission system**, by setting up an E**U point-system and a fast-track admission procedure**, allowing **immediate family reunification** and **creating a skill-matching database.** This option could strongly promote and facilitate the migration of third-country highly qualified workers to the EU. However, unless the points are set at EU level (which could be in contrast with subsidiarity for the time being), immigrants would continue to face very different admission conditions.

Option D - to **establish a set of common criteria and a fast-track procedure for entry plus favourable residence conditions** (working and residence rights, immediate family reunification, quicker acquisition of EC long-term status, etc.). The effective integration of third-country highly qualified workers into the labour market and society would be the best way to maximise their contribution to economic growth and competitiveness, and it would really improve the EU's ability to deal with the present and expected challenges. However, the effects of such a policy would be limited to individual Member States.

Option E1 - to **foster intra-EU mobility through coordination of national priority lists and by creating an EU Blue Card and a database for Blue Card holders**. Intra-EU mobility would be a strong incentive for third-country highly qualified workers to enter the EU labour market, and could play a primary role in relieving the labour shortages in certain areas/sectors. Further tools could help in matching labour supply and demand (i.e. the EU Blue Card Database). This policy option could achieve notable and positive effects on labour market efficiency and on the EU macroeconomic environment.

Option E2 - to **extend to highly qualified workers the provisions on intra-EU mobility contained in Directive 2003/109/EC**. This option also includes the point system under Option C. However, the intra-EU mobility under this option could be more limited than under Option E1. Therefore, the whole relevance and effectiveness of this policy option could be more limited.

Option F - **communication, coordination and cooperation**. The envisaged actions could support, to a certain degree, the establishment of a basic common ground facilitating attraction of highly qualified workers and more their efficient allocation in the EU labour market. However, it would have limited effectiveness. ***(EC Communication on the conditions of entry and residence of third-country nationals,* pg. 6*)***

With the floor opened up to broader debate, Jakob von Weizsäcker, Resident Fellow at Brussels European and Global Economic Laboratory (BRUEGEL), **attacked the notion of 'absorption capacity' as a phenomenon to justify tighter measures. "This is wrong: absorption capacity is determined by the skills mix." He said countries where foreignborns represented 10% or less of their population might have huge internal debates on immigrants, yet those with 20% might be totally relaxed about it.** "The difference is that they have a better skills mix," von Weizsäcker stated. He also claimed authorship credit for the Blue Card idea – and thanked the Commission for taking it up. ***(Does the European economy need more migrant workers,* pg. 5*)***

HIGH SKILL MIGRATION
For the proposed **Blue Card to become a success**, it needs to be made substantially more attractive. The most important reason why a European Blue Card can be more attractive than 27 different national schemes is that it could grant high-skilled migrants access to the entire EU labour market. Unfortunately, the Commission's current Blue Card proposal falls short in this regard. According to the current draft directive it would be almost as difficult to transfer to another member state with an existing Blue Card as it would be to apply for a fresh Blue Card in that second member state.

To stand a better chance of reaching agreement on a Blue Card that grants access to the entire EU labour market, the **eligibility criteria for the Blue Card need to be refined.** The current draft directive proposes proof of an employment contract with a remuneration level of at least three times the minimum wage as the minimum eligibility criterion for the Blue Card. Because the level of the minimum wage compared to the median wage varies substantially between member states, the economic rationale for the proposed eligibility criterion is weak to start with. More importantly, a Blue Card that can be obtained merely on the basis of, say, €400 monthly earnings in Romania is unlikely to be ever accepted throughout the EU. A more promising approach would be to allow skill and other characteristics to determine eligibility for a Blue Card jointly with a national salary threshold. **Ideally, this would be achieved through a points system.** On that basis, it should be much easier to agree on a Blue Card that would grant access to the entire EU labour market in a more meaningful way.

In addition to a strengthened Blue Card, **member states may wish to consider investing in complementary measures such as expatriate infrastructure** in order to compete better for talent. Sought-after high-skilled migrants often have a choice between different destinations. One important but often neglected determinant of their ultimate migration decision is the **availability of expat infrastructure** such as suitable foreign language schools for their children. Since most high-skilled migrants have a good command of English, availability of suitable expat infrastructure tends to be an especially important criterion for moves into non-English speaking countries. The expansion of such expat infrastructure well beyond national capitals where it is currently concentrated is an example of a national measure that could usefully complement any EU effort on high-skilled migration.

It should be easier to pursue the required agenda on irregular migration and highskilled migration jointly instead of separately – for both political and economic reasons. **(*Irregular and high-skilled migration – not such strange bedfellows*, pg. 4-5)**

Migration to European countries can promote economic and social progress in migrants' home countries, but only if the process is better managed — by European countries, and by the sending countries as well.

In this light, this **report makes four general policy recommendations**.

- First, **European countries must revisit their migration policies with an eye to ensuring that these policies are consistent with their development co-operation goals**, and that developing countries derive greater benefits from migration flows.
- Second, developing countries are encouraged to mainstream migration and remittance dimensions into their national development strategies, especially their poverty reduction strategy papers; European countries, in the context of their development co-operation policies, can help build capacity and provide other forms of assistance to developing countries in this area.
- Third, the organisational structures for migration management must be reformed both at the national and EU levels, in order to promote better mechanisms for communication and consensus building across ministries and directorates.
- Fourth, the EU and its member states should pursue greater coherence across different policy domains and generate greater synergies across migration, trade (including trade in services), security and development policies; this coherence extends, in line with the EU's Consensus on Development, to policies affecting employment, decent work and the social dimensions of globalisation.

(*OECD gaining from migration, towards a new mobility system*, pg. 15-16)

As earlier noted, shortages of skills and geographic mismatches across EU labour markets are projected to increase over the next two decades. **Immigration, of both high- and low-skilled workers, to fill labour needs will increase**. **These flows have to be managed sensitively to address the needs for transparency, responsiveness and cohesiveness**. Accordingly policy innovation could be pursued in several areas. We **recommend** that:

- the EU and its member states must **develop** an **Integrated Migration Monitoring System** to provide effective monitoring of flows;
- **labour-market access policies** should be adopted that **abet circular migration** for those workers in critical occupational categories who do not aim for (or who will not be likely to be granted) permanent residence;
- **cross-EU harmonisation** must provide uniform access to all member-state labour markets for defined categories of skilled workers; and
- labour-market access and citizenship policies must be attractive to those workers — highly skilled or not — needed by EU member states and who seek eventually the security and stability of permanent residence and citizenship.

Given that demand for low-skilled and semi-skilled migration will continue to increase in the decades ahead, we further recommend that the **EU may want to engage in an informal but inclusive policy dialogue among all relevant stakeholders on GATS Mode 4 provision**.
(*Op.cit*, pg. 43)

The European Union is not the only supra-national political organisation that can regulate labour mobility in Europe. Under the **General Agreement on Trade in Services** (GATS), part of the World Trade Organization (WTO) treaty, **services can be provided by suppliers in one country to consumers in another through the Mode 4 supply**, **namely the movement of natural persons to the country of the consumer**. Mode 4 movements for service provision encompass temporary movements which involve self-employed persons based in the country of origin and/or employees of a contract service provider also based in the country of origin. **(*Ibid*, pg. 44)**

For more effective labour-market policy making, information on migration flows needs to be substantially improved through better collection of data, statistical capacity building, and more effective harmonisation and data sharing across countries. (*Ibid*, pg. 45)

As such, we **recommend four specific policies to encourage temporary or circular migration**.

- Issue multi-use, multi-annual work permits
- Lower the cost of re-entry and offer flexible procedures for readmission of workers
- Transfer pension and social security contributions to the home Country
- Entitle third-country nationals enrolled in a tertiary educational institution in the EU to remain for up to two years after graduation with the purpose of seeking employment anywhere within the EU

(*Ibid*, pg. 46-47)

Summary of Policy Recommendations
The policy proposals made in this chapter can be summarised as follows:

1. **Innovative circularity schemes** (favoured by multi-use, multi-entry visas and work permits) can help manage migration flows more effectively. In the case of highly skilled migrants, such schemes can mitigate crippling effects on social services in sending countries. For the low skilled, circular schemes can promote remittances and reduce the incidence of irregular migration.
2. **OECD countries should continue to develop guidelines** for the **recruitment of highly skilled workers from developing countries.**
3. **OECD countries** should **take concerted steps to lower the costs of transfers through formal channels while banks and financial institutions**, in co-operation with financial institutions in developing countries, take the lead in expanding financial services to poor rural communities.
4. **A partnership approach** should **link OECD countries' migration polices** and **non-OECD countries' human resource development policies** as well as their **labour market and social policies.**

(*OECD Study on Migation and Developing Countries*, pg. 132)

Summary of Policy Recommendations

1. **Major emigration countries should adapt many aspects of macroeconomic policy making – including taxation, expenditure and exchange rate policies – to the outflow of workers.**
2. Sending countries must adapt their human resource policies, in both the public and private sectors, to emigration in order to facilitate adjustment and replenishment; at a minimum, such policies should not punish migrants who wish to return and re-enter the labour market.
3. Financing higher education, including financial assistance to needy students and the planning of curricula, must take into consideration the possibility that some, indeed many, students may migrate.
4. Infrastructure investment decisions need to take into account mobility corridors; improved transport and communication capacity, meanwhile, can help labour markets adjust to emigration.
5. Regional initiatives among developing countries need to be strengthened with the support of OECD c countries; much low-skilled migration from the poorest countries is to nearby developing countries.

(*OECD gaining from migration, towards a new mobility system*, pg. 140)

Summary of Policy Recommendations
How to make migration and development policies more coherent? This chapter has made several recommendations:

1. At the national level, inter-ministerial and interdepartmental initiatives must be established to promote co-ordination of development and migration policies.
2. OECD countries and migrants' countries of origin alike must **incorporate migrant organisations into the policy making process.**
3. At the level of the supranational entities such as the European Commission or the African Union, **stronger systematic consultations** must be put in place **across all relevant decision making bodies.**
4. Development assistance can bring developing countries to the bargaining table, and can help **build capacity** in **migrant-sending countries** so that they can **better adapt to emigration**.
5. OECD countries' **trade policy** should be crafted with attention to its **impact upon labour mobility.**
6. OECD countries' security policies must recognise the broad nature of "insecurity" and the relationship between human insecurity and labour mobility

(*Ibid*, pg. 148)

For example, by combining public sources of aid with private sources of finance, developed countries could seek to build, fund and monitor centres of advanced training at key centres in the developing world. The centres would train men and women to the standards required of the developed world, thus avoiding the issues of accreditation. It would be accepted that many would migrate overseas but the costs of their training would be met from overseas sources.
(*Skilled Migration New Policy Options,* pg. 3)

This Blue Card would help to attract more highly skilled migrants to the EU than purely national schemes because of its greater value for subsequent employment. Accepting a first job in Amsterdam is more attractive if the option for the next job is the whole of the EU, not only the Netherlands. ***(What Should a Cautious Immigration Policy Look Like*, pg. 7)**

B - Select Bibliography

Key Sources

Von Weizsäcker, Jakob. “Irregular and high-skilled migration - not such strange bedfellows”, 28 April 2008, 6 pp.

Kirkegaard, F, J. “The Accelerating Decline in America’s High-Skilled Workforce: Implications for Immigration Policy”, Policy Analyses in International Economics 84, Washington DC, December 2007, 132 pp.

Hutchison, B, K., Hughes, B. “Merit-Based Permanent Immigration: A Look at Canada's Point System” Senate Republican Policy Committee, Washington, DC, May 22, 2007, 8 pp.

Regets, M.. “Brain Circulation: The Complex National Effects of High-Skilled Migration”, National Science Foundation - Division of Science Resources Statistics, OECD Committee for Scientific and Technology Policy (CSTP) and Steering & Funding of Research Institutions (SFRI), Workshop on the International Mobility of Researchers, Paris, 28 March, 2007.

Von Weizsäcker, J. “What Should a Cautious Immigration Policy Look Like?”, European View, Volume 5, 2007, 8 pp.

“Policy Coherence for Development. Migration and Developing Countries”, A Development Centre Perspective, Development Centre of the Organisation for Economic Co-operation and Development (OECD), 2007, 152 pp.

“Skilled Migration: New Policy Options”, Development Research Centre on Migration, Globalisation & Poverty, Briefing, No. 5, March 2006, 4 pp.

Lowell, B, L. “Policies and regulations for managing skilled international migration for work”, United Nations Expert Group Meeting on International Migration and Development, New York, 23 June 2005, 24 pp.

Akçapar, K, S. “Turkish Highly Skilled Migration to the United States. New Findings and Policy Recommendations”, Migration Research Projects 2005 – 2006, Istanbul, Turkey, 178 pp.

Martin, L, P. “Highly Skilled Labor Migration: Sharing the Benefits”, International Institute for Labour Studies, Geneva, May 2003, 39 pp.

McLaughlan G., Salt, J. “Migration policies towards highly skilled foreign workers”, Report to the Home Office, University College London, London, March 2002, 155 pp.

Organisation for Economic Co-operation and Development, “International Mobility of the Highly Skilled”, Policy Brief, Paris, 2002, 8 pp.

Regets, C, M. “Research and Policy Issues in High-Skilled International Migration: A Perspective with Data from the United States”, IZA Discussion Paper No. 366, Bonn, Germany, September 2001, 34 pp.

Igbal, M. “The Migration of High-Skilled Workers from Canada to the United States: Empirical Evidence and Economic Reasons”, The Conference Board of Canada, Working Paper 20, The Center for Comparative Immigration Studies, University of California, San Diego, August 2000, 20 pp.

Li, W., Wang, D. “Brain Mobility: Highly Skilled Migration in North America”, Arizona State University, 6 pp.

"Competition for skilled workers", Chapter 3, Competition for skilled workers to make a contribution, 12 pp.

Kaczmarczyk, P. "Highly skilled migration from Poland and other CEE countries – myths and reality", Center for International Relations, Reports & Analyses 17/06, Warsaw, Poland, 29 pp.

Pãnescu, C, A. "Brain Drain and Brain Gain: A New Perspective on Highly Skilled Migration", Diplomatic Academy, Ministry of Foreign Affairs, Bucharest, Romania, 24 pp.

Canadian Sources

The Canadian Chamber of Commerce, "Immigration: The Changing Face of Canada", Economic Policy Series, Policy Brief, Canada, February 2009, 13 pp.

Valiani, S. "The Shift in Canadian Immigration Policy and Unheeded Lessons of the Live-in Caregiver Program", Ottawa, Canada, February 2009, 22 pp.

"Key Trends and Changes in Immigration Policy", TRIEC Toronto Region Immigrant Employment Council, Toronto, December 2008, 2 pp.

Angus Reid Strategies, "Canadians Prefer High-Skilled Workers, But See Immigrants as Underutilized", National Public Opinion Poll, Vancouver, 23 June 2008, 12 pp.

Mason, C., Preston, J. "Canada's Policy on Immigrants Brings Backlog", The New York Times, 27 June, 2007, Toronto, Canada, 3 pp.

Cerna, L. "The Varieties of High-Skilled Immigration Policies: Sectoral Coalitions and Outcomes in Advanced Industrial Countries", Paper presented at the European Union Studies Association Conference,
Montreal, 17-19 May, 2007, 26 pp.

Reitz, G, J. "Closing the gaps between skilled immigration and Canadian labour markets: Emerging policy issues and Priorities", University of Toronto, Toronto, March 2007, 29 pp.

Reitz, G, J. "Does Canadian Experience in Immigrant Incorporation Have Lessons for Europe?", University of Toronto, 19 October, 2006, 24 pp.

Huynh, V. "Closer to Home Provincial Immigration Policy in Western Canada", Canada West Foundation, Building the New West, Report No. 35, June 2004, 18 pp.

Preston, V., Giles, W. "Employment Experiences of Highly Skilled Immigrant Women: Where Are They in the Labour Market?", A paper presented at the "Gender & Work: Knowledge Production in Practice" Conference: 1-2 October, 2004, North York, Ontario, Canada, 32 pp.

Rekai, P. "US and Canadian Immigration Policies, Marching Together to Different Tunes", No. 171, Ottawa, November 2002, 27 pp.

DeVoretz, J, D., Iturralde, C. "Why do highly skilled Canadians stay in Canada", Policy Options, March 2001, 5 pp.

Schmidtke, O., Kovacev, M., Marry, B. "Policy Memo: Canada's immigration and integration policies: A multi-national evaluation of labour market integration of skilled immigrants", University of Victoria, Canada, 13 pp

"Immigration & Skill Shortages", CLBC Handbook, Canadian Labour and Business Centre, Ottawa, Ontario, 36 pp.

Fougère, M., Harvey, S., Mercenier, J., Mérette, M. "Population Ageing and Quality Immigration: A National and Regional Perspective for Canada", 14 pp.

Li, S, P. “World Migration in the Age of Globalization: Policy Implications and Challenges”, PowerPoint Presentation, Department of Sociology, University of Saskatchewan, Canada, 23 pp.

EU, IOM, UN, ILO Documents

“World Migration 2008: Managing Labour Mobility in the Evolving Global Economy”, International Organization for Migration, Volume 14, ISBN 978-92-9068-405-3, 2008, 562 pp.

“World Migration 2005: Costs and Benefits of International Migration”, International Organization for Migration, ISBN 92-9068-209-4, 2005, 494 pp.

“Migration and Development Within and Across Borders: Research and Policy Perspectives on Internal and International Migration”, International Organization for Migration & Social Science Research Council, 2008, 373 pp.

“Migration Initiatives, Appeal 2009”, International Organization for Migration, Geneva, Switzerland, February 2009, 124 pp.

“International Migration and Development. Continuing the Dialogue: Legal and Policy Perspectives”, Center for Migration Studies & International Organization for Migration, Geneva, Switzerland, 2008, 124 pp.

“Permanent or Circular Migration? Policy Choices to Address Demographic Decline and Labour Shortages in Europe”, International Organization for Migration & Regional Mission for Central and South Eastern Europe, Geneva, Switzerland, April 2008, 338 pp.

“Migration and Development: Perspectives from the South”, International Organization for Migration, Geneva, Switzerland, 2008, 324 pp.

“International Dialogue on Migration. Migrants and the Host Society: Partnership for Success”, International Organization for Migration, Geneva, Switzerland, 2008, 109 pp.

“Migration and Development: Achieving Policy Coherence”, International Organization for Migration Resarch Series, No. 34, International Organization for Migration, Geneva, Switzerland, 2008, 120 pp.

“Assessing the Costs and Impacts of Migration Policy: An International Comparison”, 2008 International Organization for Migration & Eurasylum Ltd, Geneva, Switzerland, 2008, 210 pp.

“Living Across Worlds: Diaspora, Development and Transnational Engagement”, International Organization for Migration, Geneva, Switzerland, 2007, 246 pp.

“Diaspora Dialgoue”, International Organization for Migration, Geneva, Switzerland, 2007, 66 pp.

“Return Migration in Austria”, Austrian contribution to the European Research Study Project III: Return Migration in the EU Member States, International Organization for Migration, Vienna, September 2006, 114 pp.

“Migration Policy”, International Organization for Migration & National Economic and Social Council, Geneva, Switzerland, September 2006, 259 pp.

“Migration and Development Conference”, Conference on migration and development, Final Report, The Goverment of the Kingdom of Belgium The International Organization for Migration, European Commission, World Bank, Brussels, 15 – 16 March 2006, 292 pp.

“Migration in Central and South-Eastern Europe Management”, IOM Strategies and Objectives 2006-2007, International Organization for Migration, Geneva, Switzerland, 2006, 79 pp.

“Towards a fair deal for migrant workers in the global economy”, Sixth item on the agenda, Report VI, International Labour Conference, 92nd Session, International Labour Office, Geneva, Switzerland, 2004, 210 pp.

"Integrating Migration Issues Into Development Planning", International Migration Papers, No. 93, Integrating Migration Issues, International Migration programme, International Labour Office, Geneva, Switzerland, 2008, 47 pp.

Martin, P. "Towards Effective Temporary Worker Programs: Issues and Challenges in Industrial Countries", International Migration Papers, No. 89, International Labour Office, Geneva, Switzerland, 2007, 70 pp.

Ammassari, S. "Migration management and development policies: maximising the benefits of international migration in West Africa", International Migration papers, No. 72, International Labour Office, Geneva, Switzerland, 2007, 90 pp.

Moreno-Fontes Chammartin, G., Cantu-Bazaldua, F. "Identification of potential for increasing employment and productive investment in Albania, Moldova and Ukraine based on remittances", International Migration papers, No. 74, International Labour Office, Geneva, Switzerland, 2005, 123 pp.

Moreno-Fontes Chammartin, G., Cantu-Bazaldua, F. "Migration prospects after the 2004 enlargement of the European Union", International Migration Papers, No. 73, International Labour Office, Geneva, Switzerland, 2005, 30 pp.

"International Migration Report 2006: A Global Assessment", Department of Economic and Social Affairs, Population Division, United Nations, New York, 2009, 365 pp.

"Compendium of Recommendations on International Migration and Development: The United Nations Development Agenda and the Global Commission on International Migration Compared", Department of Economic and Social Affairs, Population Division, United Nations, New York, 2006, 130 pp.

"International Migration", Department of Economic and Social Affairs, World Economic and Social Survey 2004, United Nations, New York, 2004, 274 pp.

"International migration in GCC countries", Population Division, Department of Economic and Social Affairs United Nations, New York, Regional symposium on foreign workers in the GCC: Towards a common trategy Doha, Qatar, 17-19 April 2007, 25 pp.

European Commission, Proposal for a Council Directive on the conditions of entry and residence of third-country nationals for the purposes of highly qualified employment, COM(2007) 637 final, Brussels, 23 October, 2007, 32 pp.

European Commission, "A Common Immigration Policy for Europe", MEMO/08/402, Brussels, 17 June 2008, 5 pp.

Lowell, B, L. "High Skilled Mobility: Changes and Challenges", Institute for the Study of International Migration, June 2006, Presentation to the United Nations "International Symposium on International Migration and Development," Turin, 28-30 June, 2006, 19 pp.

Salt, J. "Current Trends in International Migration in Europe", Council of Europe, CDMG (2005) 2, January 2005, 123 pp.

"Addressing Europe's Brainpower Challenge", Report on the Future of Europe Summit, 29 - 30 November 2007, Andorra, 44 pp.

European Commission, "Questions and Answers on the European Partnership for Researchers", MEMO 08/343, Brussels, 2008.

European Commission, "Optimising Research Programmes and Priorities- Report of the ERA expert group", EUR 23324 EN, Brussels, 2008.

European Commission, "Expert Group's Report on 'Realizing a Single Labour Market for Researchers", EUR 23321, Brussels, 2008.

European Commission, "Better Careers and More Mobility: A European Partnership for Researchers." COM (2008) 317, Brussels, 2008.

European Commission, “Integrated Information System on European Researchers”, Brussels, 2008.

European Commission. “Key Figures 2007: Towards a European Research Area Science, Technology and Innovation”, EUR 22572, Brussels, 2007.

European Commission, “Mobility, an Instrument for More and Better Jobs: The European Job Mobility Action Plan (2007-2010)”, COM (2007) 773, Brussels, 2007.

European Commission, “Improving knowledge transfer between research institutions and industry across Europe: embracing open innovation – implementing the Lisbon Strategy“, COM (2007) 182, Brussels, 2007.

European Commission, “Green Paper - The European Research Area: New Perspectives”, COM (2007) 161, Brussels, 2007.

Meri, T. “How mobile are highly qualified human resources in science and technology?”, Eurostat – Statistics in focus: Science and Technology, 75/2007.

European Commission, “Delivering on the Modernisation agenda for Universities: Education, Research and Innovation”, COM(2006) 208, Brussels, 2006.

European Commission, “Mobility of Researchers between Academia and Industry: 12 Practical Recommendations”, EUR 22573, Brussels, 2006.

European Commission, “Green Paper on an EU approach to Managing Economic Migration”, COM(2004) 811 final, Brussels, 2005, 14 pp.

European Commission, “Key Figures 2005: Towards a European Research Area Science, Technology and Innovation”, Brussels, 2005.

European Commission, “Recommendation on the European Charter for Researchers and a Code of Conduct for the Recruitment of Researchers”, EUR 21620, Brussels, 2005.

European Commission, “Second Implementation report on ‘A mobility strategy for the European Research Area”, Commission staff working paper, SEC(2004) 412, Brussels, 2004.

European Commission, “Investing in Research: an Action Plan for Europe”, COM(2003)226 final, Brussels, 2003.

European Commission, “Researchers in the European Research Area: one profession, multiple careers”, COM (2003)436, Brussels, 2003.

European Commission, “Integrating migration issues in the European Union’s Relations with Third Countries”, COM(2002) 703 final, Brussels, 2002, 61 pp.

European Commission, “A mobility strategy for the European Research Area”, COM(2001)331, Brussels, 2001.

Research papers & reports

Pethe, H. “Un-restricted agents? International migration of the highly skilled revisited”, Social Geography Discussions, Munchen, Germany, 9 July 2007, 26 pp.

“UEAPME position paper on the proposal for a directive on a single application procedure for a single permit for third-country nationals to reside and work in the territory of a Member State and on a common set of rights for third country workers legally residing in a Member State”, European Association of Craft, Small and Medium-Sized Enterprises, Brussels, 7 January, 2008, 2 pp.

"Does the European Economy Need More Migrant Workers?", Friends of Europe, Report of Café Crossfire held at the Solvay Library, 22 November, 2007, Brussels, 7 pp.

Von Weizsacker, J. "Divisions of labour: rethinking Europe's migration policy", Bruegel Blueprint Series, Volume VI, 2008, Brussels, 74 pp.

"EU Policy on Labour Migration, A First Look at the Commission's Blue Card Initiative", CEPS Policy Brief, No. 145, Centre for European Policy Studies, November 2007, 8 pp.

Dayton-Johnson, J., Katseli, T, L., Maniatis, G., Munz, R., Papademetriou, D. "Gaining from Migration, Towards a New Mobility System", OECD, Paris, France, 2007, 92 pp.

Bertozzi, S. "Legal Migration, Time for Europe to Play Its Hand", CEPS Working Document, No. 257, Centre for European Policy Studies, February 2007, 20 pp.

"Migration in an interconnected world: New directions for action", Report of the Global Commission on International Migration, October 2005, 98 pp.

Dølvik, J, E. "Mobility of Labor and Services across the Baltic Sea after EU Enlargement: Trends and Consequences", Paper for the Seminar on Inequality and Social Policy at Kennedy School of Government, 7 April, 2008, 35 pp.

Dory, T. "RTD Policy Approaches in Different Types of European Regions", ERAWATCH: Jointly carried out by the EC's DG for Research and Joint Research Centre / IPTS in collaboration with CORDIS, EUR 23366 EN- 2008, Brussels, 2008.

Moguerou, P., Di Pietrogiacomo, P, M. "Indicators on researchers' stock, career and mobility, Structuring the European Research Area: Human Resources and Mobility - Marie Curie Actions", Specific Support Action Contract No. FP6-518790, in joint action with the European Commission and the JRC& IPTS ERA Expert Group, November 2007.

Georghiu, L. "The Future of Science and Technology in Europe", Interim policy options paper of the ERA expert group", RATIONALES FOR THE EUROPEAN RESEARCH AREA, Lisbon, 8 – 10 October 2007.

Mouton, Johan. "Scientific Mobility and the African Diaspora", James Martin Institute Working Paper 6, Centre for Research on Science and Technology, University of Stellenbosch, South Africa. Prepared under Work Package 2 of ResIST – Researching Inequality through Science and Technology, April 2007.

Trippl, M., Maier, G. "Knowledge Spillover Agents and Regional Development", Institute for Regional Development and Environment: Vienna University of Economics and Business Administration, April 2007, 34 pp.

Grablowitz, A., Delicado, A., Patrice, L. "Business R&D in Europe: Trends in Expenditures, Researcher Numbers and Related Policies", ERAWATCH: Jointly carried out by the EC's DG for Research and Joint Research Centre/ IPTS in collaboration with CORDIS, EUR 22937 EN- 2007.

Vis, C. "Towards a European Labour Market for Researchers: Building up and on human resources", Strategy and Policy D.1, DG Research, Marie Curie Actions in FP7, Presentation at UKRO Annual Event 2006, Civic Centre, Newcastle, 7 July, 2006, 27 pp.

De Haas, H. "Engaging Diasporas: How governments and development agencies can support diaspora involvement in the development of origin countries", A study for Oxfam Novib, International Migration Institute, James Martin 21st Century School, University of Oxford, London, June 2006, 117 pp.

Chou, M. "EU and the Migration-Development Nexus: What Prospects for EU-Wide Policies?", Working Paper No. 37, Centre on Migration, Policy and Society, University of Oxford, London, 2006, 26 pp.

"Indicators and Issues for Brain Circulation", Maastricht Economic and Social Research and Training Centre on Innovation and Technology, Knowledge Economy Indicators project, October 2005, 13 pp.

Leal, J, P. "Early Stage Researcher Mobility in Europe. Meeting the Challenges and Promoting Best Practice", Preliminary Report, Workshop 2 - Promotion of Early Stage Mobility – The Influence of the Cultural Framework, 2004.

"Brain Drain- Emigration flows for Qualified Scientists", Executive Summary and Conclusions, Knowledge Economy Indicators project, Maastricht Economic and Social Research and Training Centre on Innovation and Technology, October 2003, 23 pp.

Wickramasekara, P. "Perspectives on Labour Migration: Policy responses to skilled migration: Retention, return and circulation", Social Protection Sector – International Migration Programme, International Labour Office, Geneva, Presentation to the meeting on skilled migrations organised by the Institut de Sociologie de l'Université de Neuchâtel and the Forum suisse pour l'étude des migrations et de la population, Neuchatel, Switzerland, November 2002, 32 pp.

Casey, T. "The Mobility of Academic Researchers: Academic Careers & Recruitment in ICT and Biotechnology", A joint study between European Commission's Joint Research Center (JRC) and the Institute for Prospective Technological Studies (IPTS), Report EUR 19905 EN, June, 2001, 62 pp.

Various

Euraxess. "Making researchers' mobility easier in France." Europe4Researchers: Newsletter Issue 2- March 2008.

Euraxess. "How mobile are EU researchers within Europe? Europe4Researchers: Newsletter Issue 2- March 2008.

Euraxess. "Online consulation, offline realisation." Europe4Researchers: Newsletter Issue 7- December 2007.

Euraxess. "Breaking the Glass Ceiling in Research Decision-Making." Europe4Researchers: Newsletter Issue 7- December 2007.

Showkat, A. "Elite Scientists and the Global Brain Drain", A paper by the University of Warwick, U.K, presented at the World Universities Conference in Shanghai, September 2007.

Dayton-Johnson, J. "Gaining from Migration: Towards a New Mobility System", OECD Publishing, ISBN: 978-92-64-03740-3, September, 2007.

Preda, G. "Southeast Europe turns 'brain drain' into 'gain'", Southeast European Times, 25 June, 2007

Charlemagne. "The Brain Business – How Europe uses and abuses its brainpower", The Economist., 12 October, 2006.

Katseli, L T., Lucas E, B., Xenogiani, T. "Effects of Migration on sending countries: What do we know?" OECD DEVELOPMENT CENTRE, Working Paper No. 250, Research programme on: Economic and Social Effects of Migration on Sending Countries, DEV/DOC(2006)04, June 2006, 91 pp.

Kuznetsov, Y., Sabel, C. "Chapter 1: International Migration of Talent, Diaspora Networks, and Development: Overview of Main Issues", Diaspora Networks and the International Migration of Skills: How Countries Can Draw on Their Talent Abroad, World Bank Publications, ISBN-10: 0821366475, May, 2006.

Çaglar, Ö., Schiff, M. "International Migration, Remittances, and the Brain Drain", A co-publication of the World Bank and Palgrave Macmillan, 2006, 292 pp.

Ackers, L. “Moving People and Knowledge: The Mobility of Scientists within the European Union.” International Migration. Volume 43:5, December 2005, 99-131 pp.

Blitz, B. “Brain circulation: The Spanish medical profession and international medical recruitment in the United Kingdom”, Journal of European Social Policy, Vol. 15: 4, 2005, 363- 380 pp.

Saxenian, A. “From Brain Drain to Brain Circulation: Transnational communities and Regional Upgrading in China and India”, Studies in Comparative International Development, Vol. 40:2, 2005, 35-61 pp.

Horvat, V. “Brain Drain. Threat to Successful Transition in South East Europe?”, Southeast European Politics, Vol. V, No. 1, June, 2004, 76-93 pp.

Chu, J. “How to plug Europe’s Brain Drain”, Time 11 January, 2004.

Morano-Foadi, S., Foadi, J. “Italian Scientific Migration: from Brain Exchange to Brain Drain”, Symposium on Science Policy, Mobility and Brain Drain in the EU and Candidate Countries, Centre for the Study of Law and Policy in Europe, University of Leeds, 27 – 28 July, 2003, 36 pp.

Basri, E. “The International mobility of researchers: recent trends and policy initiatives”, OECD, Science and Technology policy division, 17 pp.

Teferra, D. ”Brain circulation: Unparalleled Opportunities, Underlying Challenges and Outmoded Presumptions”, Journal of Studies of International Education, Vol. 9:3, 229-250 pp.