

# **The International Migration of Skilled Human Capital from Developing Countries**

by

Kuzvinetsa Peter Dzvimbo

World Bank, HDNED

A case study prepared for a Regional Training Conference on  
*Improving Tertiary Education in Sub-Saharan Africa: Things That Work!*

Accra, September 23-25, 2003

Financial and material support for this training activity were generously provided by the ADEA Working Group on Higher Education, the Association of African Universities, the Agence Universitaire de la Francophonie, the Carnegie Corporation of New York, the Ghana National Council for Tertiary Education, the Government of the Netherlands, the International Network for the Availability of Scientific Publications, the Norwegian Education Trust Fund, and the World Bank.

# **THE INTERNATIONAL MIGRATION OF SKILLED HUMAN CAPITAL FROM DEVELOPING COUNTRIES**

Kuzvinetsa Peter Dzvimbo

I acknowledge the extensive background research work done by my assistant Ines Kudo on whose research this paper is built on.

## **INTRODUCTION**

This paper is a discussion of the phenomenon which is popularly and erroneously referred to as the “brain drain” in the literature and the discourse practices about the movement of skilled personnel from one country to the other. The focus of the paper is on the causes, magnitude and policy options available to African governments and the destination countries on how to manage the international migration of skilled human capital from Africa to the developed world. The international migration of skilled human capital is a symptom of deeper problems in African and developing countries in general. The paper focus on the international migration of skilled human capital (IMSHC) rather than the more popular term: the “brain drain” because the IMSHC incorporates: the brain drain, optimal brain drain, brain waste, brain circulation, brain exchange, brain globalization, and brain export. ( Lowell and Findlay, 2001:6).

## **DETERMINANTS OF SKILLED INTERNATIONAL MIGRATION FROM DEVELOPING NATIONS**

In order to manage migration it is crucial to understand why people migrate. The international migration of skilled human capital, in the opinion of Papademetriou (1991), results from the complex interplay of economic, political, social, cultural, linguistic, and even religious forces. The equation however, is missing psychological factors such as an environment conducive to professional autonomy in universities, research institutes and the workplace in general; and personality, goals, and personal history, which accounts for individual differences. However, the way in which these factors combine to produce a specific migration flow, varies widely and it is hard to predict.

Zimmermann (1996) distinguishes between factors that “push” people out of their home countries, and factors that “pull” them to a new or “receiving” country. Among the former, we can mention adverse domestic conditions such as inadequate educational capacity, lower living standards, technology limitations, inadequate coordination between education and labor market, and uncertainty about the future, political unrest, armed conflict, lack of realistic manpower policies, and economic instability (Chang, 1999). For instance, a number of countries in Africa have experienced severe civil or political strife in the last 15 – 20 years. These include, South Africa, Zimbabwe, Mozambique, Angola, the Democratic Republic of the Congo, the Central African Republic, Kenya, Somalia, Sudan, Uganda, Ethiopia, Eritrea, Burundi, Rwanda, Morocco, Algeria, The Ivory Coast, Senegal, The Gambia, Sierra Leone, Liberia and Guinea. Nationals of these countries have either emigrated abroad or to neighboring countries fuelling what is known as irregular migration and the refugee crisis. For instance, in 1990, there were 125 792 Africans with secondary plus tertiary education in the USA (Ndulu 2002:27). Egypt with 52 281, Ghana (12 504 and South Africa 22 478 had the highest number of skilled personnel working in the US in 1990.

The “pull” reasons are related to better personal and professional opportunities in the host country, like favorable immigration policies for better-educated people, wage differentials, differences in the quality of

life, educational opportunities for children, interaction with other professionals, political stability, and job security (Hillman and Weiss, 1999; Portés, 1991). Countries such as Canada, Newzeland, Germany, the US and the UK now have aggressive policies of recruiting highly qualified foreigners to augment their own skilled labor force especially in a globalizing world economy where knowledge workers are in high demand.

The “push” – “pull” framework, contrary to the international economics literature, focuses more on personal variables. It moves “from a personal factors of production to consider that people have likes and dislikes in social interaction and that cultural preferences matter” (Hillman and Weiss, 1999:84). It fails, however, to explain the variance in size and direction of migration flows in the same regions such as Southern Africa, and even from the same country, as well as the differences among individuals from the same country or region in their susceptibility to migrate. The ““Push””-pull theory does not either help to understand why sources of migration concentrate in certain regions, and what are the distinctions between macro and micro-structural determinants of migration (Portés, 1991). Even though there are some factors that can be identified cross-nationally as “push” or “pull” forces fostering out-migration, in most cases the only way of understanding the dynamics involved in the international migration of skilled human capital is analyze the variables in the context of a specific region or country.

### **“PUSH” FACTORS**

Barriers to educational attainments or the lack of career opportunities (e.g. because of cuts in the budget allocated to public universities as is the case in most African countries) may act as a ““Push”” factor for migration. The establishment of a subsidiary of an international company, or the relocation of plants, is also pushing skilled workers abroad especially in the developed world where some IT companies are relocating certain skills categories to countries such as India. There is evidence that deteriorating economic standards are to blame for South Africa’s brain drain (Bhorat et al., 2002). However, for skilled white South Africans, dissatisfaction with the political situation and a loss of confidence in the government’s ability to improve living conditions –especially violence appear to play an additional important role.

In the worst case, people flee their countries because of violations of human rights, ethnic conflicts, or war. This has been the case in most African countries. Many people are pushed to migration and enter other countries as asylum seekers or refugees because ethnic or political conflict. The recent cases of Liberia, Sierra Leone and Rwanda are classic examples of the extent of the problem in Africa. Asylum seekers on a large scale are a relatively recent phenomenon in Europe. The number of asylum seekers peaked in 1992 with some 700,000 persons (Eurostat, 1999a, Chapter 6) and have been declining since.

### **“PULL” FACTORS**

The underlying motivation for migration from an economist’s perspective is an expected net utility gain. There are at least two potential economic benefits to migration for labor market participants. The first relates to labor market earnings or income more generally. A medical doctor in Kenya earns about US\$ 250 per month. When she emigrates to South Africa, the UK or the USA her salary increases forty times in some cases. The second concerns employment. Individuals move to either increase their labor market earnings in which migration is a result of the job search process, or to increase their likelihood of finding work, in which migration is an intrinsic part of the search for work. In most African countries, highly qualified science and technology graduates are finding it difficult to find work. In a country such as Zimbabwe, the Unemployment rate is 70% of the adult population. In a number of African countries, the

rate of Economic growth is very small. In some cases it is even negative. Therefore, in such economies, it is not possible for skilled professionals to stay if they cannot be employed.

While recent data on the magnitude of the migrants are patchy, the analysis of motives is even less well documented. One of the few attempts to elicit the motivation to migrate to another country was undertaken by Eurostat (2000b).

**Table 1: the African Diaspora in selected European and North American Countries**

| <b>Pull Countries</b> | <b>African Diaspora</b> | <b>Year (Most recent data)</b> |
|-----------------------|-------------------------|--------------------------------|
| France                | 1 652 400               | 1999                           |
| Italy                 | 411 492                 | 2000                           |
| UK                    | 373 000                 | 2000                           |
| Germany               | 300 611                 | 2000                           |
| Spain                 | 261 385                 | 2001                           |
| NL                    | 149 764                 | 2000                           |
| Belgium               | 143 745                 | 2001                           |
| Portugal              | 89 516                  | 2000                           |
| Sweden                | 25 651                  | 2001                           |
| USA                   | 36 700                  | 1999                           |
| Canada                | 229 300                 | 1996                           |

Source: World Migration (2003: 219)

In this study, households in Turkey and four African countries (Morocco, Egypt, Senegal, and Ghana) were interviewed before and after moving. Most people in the sending countries have no intention for migrating: they have either no economic need to move abroad, or, for a small group, they lack the necessary means to go abroad (Eurostat, 2001). This is one reason why the view to encourage migration and increase demand for secondary and higher education is being encouraged.

The main determinants of migration can be classified into “push” and “pull” factors. These are relatively demand and supply of skilled labor, career prospects, and the attractiveness of the educational sector, demographic factors, and personal preferences. “Push” factors increase the propensity to migrate and may be of an economic, political or environmental nature. They increase the “migration pressure” in an area and induce undirected migration. “Pull” factors are largely economic. Economic reasons for migration provide a gravitational centre for undirected migration flows. Economic reasons are the main motivation to move abroad for most skilled personnel from Africa. Bauer and Zimmermann (1999) provide an overview of reasons to migrate. The choice of destination country, however, is determined by family ties (Eurostat, 2001). Thus, there is anecdotal evidence that the largest number of African migrants in Canada are from Ghana and they tend to settle in Toronto and its environs. European immigration policies, which have so far provided more scope for family migration than for economic migration, contribute to such a selection.

However, even large wage differentials are not enough to motivate most people to move abroad. Other factors that enter the decision to migrate are labor market conditions, migration laws and policies in both country of origin and destination country, network effects, and financial constraints. Hatton and Williamson (2002) stress the importance of immigration policies and, in earlier work (2001), point to the increasing migration pressure in Africa from non monetary factors such as deteriorating economic conditions as is the case in most African countries. The table below shows how most low income countries which includes Sub Saharan Africa have deteriorating incomes which are eroded by inflation and high unemployment rates.

## WAGE DIFFERENTIALS

Wage differentials, and career prospects, are probably the most important reasons that motivate the international migration of skilled and unskilled labor. Demand for highly skilled workers is driven by the expansion of key S&T industries, ICTs, R&D and social services in industrialized countries.

**Table 2: GDP per capita, PPP, 2000 (current international US\$).**

| Country / Group                               | GDP per capita |
|---|----------------|
| European Monetary Union                       | 23,539.7       |
| High income OECD                              | 27,820.8       |
| Lower middle income                           | 4,651.6        |
| Low income                                    | 2,012.3        |
| Least developed countries (UN classification) | 1,222.4        |

Note: Data are from the World Bank (2002).

Immigrants are an important source of labor supply, especially in the IT sector. They play an increasingly important role in the tight national and international labor markets for IT specialists and S&T knowledge workers (Lopez-Bassols, 2000). But despite many claims of a shortage of IT workers, a recent study by the OECD showed that the evidence is mixed and it appears to be rather a skill mismatch than an overall skill shortage (OECD, 2000).

There are no comparable wage rates available. GDP per capita may be used as an indicator of differences in incomes, and thus also as a tentative indicator of wage differentials. The table above tabulates GDP/capita for the year 2000 (PPP in current US\$). The high income countries, i.e. European and non-European OECD countries, are ten times richer than low income countries, and more than 20 times richer than the least developed countries. Milanovic (2002), using data from household surveys for 91 countries, concludes that world income inequality is high, and it has increased between 1988 and 1993.<sup>1</sup>

Wage differentials need not correspond closely with migration flows because these depend also on other factors, e.g. immigration regulations or credit constraints. Moreover, as stated above, the decision to migrate is most likely to be based on economic incentives. The choice of the destination country is influenced by other factors, such as informal networks or friends and family ties. Skilled international migrants are also often motivated to migrate because of differences in the educational opportunities. Students gravitate to what are perceived to be the best universities and often remain in the host country upon completion of their studies.

The working conditions are also of importance, especially the autonomy given to young researchers. However, students' mobility appears to be highly influenced by the availability of financial support (OECD, 2002). In 2000/01, there were 22 679 undergraduate and 9 833 African students studying in the US (Open Doors 2001, 27). However when we compare these figures with the rest of the world, African students in the US, Europe, Asia and Oceania constitute a very small percentage of the entire international

<sup>1</sup> Most commentators agree that the situation has not significantly improved over the recent years. Especially in sub-Saharan Africa living conditions appear to have worsened.

student cohort in these regions. However, post September 11<sup>th</sup> restrictions in both Europe and the USA is bound to make the issuing of student visas more difficult for foreign students. (The Economist, November 30<sup>th</sup>, 2002: 28). In fact, the US now requires both public and private institutions to document every foreign student in the US. Studies that have documented the reasons why African researchers migrate have shown that the working environments in most African universities are no longer conducive to researcher and teaching. Those with better qualifications are able to migrate. The same applies to the medical profession. The working conditions for most health care workers in Africa are grossly inadequate and no longer offer opportunities for professional growth and research in particular.

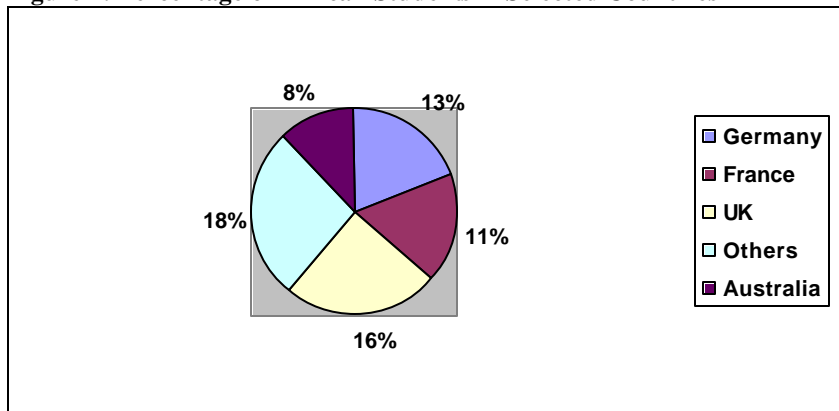
**Table 3: Foreign Students in American Institutions**

| Academic Level | International Students | Total US Students | % of US Enrollment |
|----------------|------------------------|-------------------|--------------------|
| Associate      | 67 493                 | 5 380 548         | 1.3                |
| Bachelors      | 186 936                | 6 840 390         | 2.7                |
| Graduate       | 238 497                | 1 825 721         | 13.1               |

Source: Open Doors, 2001:2

This table shows that foreign students are only about 13.1% of all graduate enrollments in the US. In Europe the main receiving countries for foreign students are United Kingdom (16%), Germany (13%) and France 11%). The pie chart below shows the number of foreign students in Europe and Australia for 1998. There were more African students in France during the same period that in any other country (43.1%), Canada (15.5%), Belgium - Flemish (15.4%), Finland (14.2%), Spain (10.3%), Italy (10.2%), Norway (10.5%), Poland (9.2%), United Kingdom (7.1%), USA (4.8%). It is surprising to note that in 1998 there were more African students in countries such as Spain and Poland than the US and the UK.

**Figure 1: Percentage of African Students in Selected Countries**



“Push” factors can be summarized as follows (World Migration 2003: 218):

1. Poor socio economic living conditions and the conditions deprivation of African populations in a number of countries;
2. Unemployment, increasing the dependency burden of households wage earners;
3. drops in real income, currency devaluation and rising cost of living; rigid government employment systems as is the case in countries such as Zambia, Sierra Leone, Somalia, Liberia and the DRC;
4. professional isolation of most of the intellectuals in African institutions due to the shortage of funds to improve the African universities;

5. Tribal/ethnic discrimination in appointments and personnel policies as the national cakes shrink and elites begin to fight for ascendancy in both the public and private sectors.;
6. Corruption;
7. Employer discrimination against the qualifications held (e.g. bias against degrees obtained in former socialist countries); and
8. Competition with expatriates as more Africans migrate within Regions such as North Africa, East Africa, West Africa and Southern Africa.

What this means is that any efforts to redress the migration of skilled human capital must then address these issues as well. This is a daunting task because these are the issues that have been confronting Africa's development dilemma since the early 1960s.

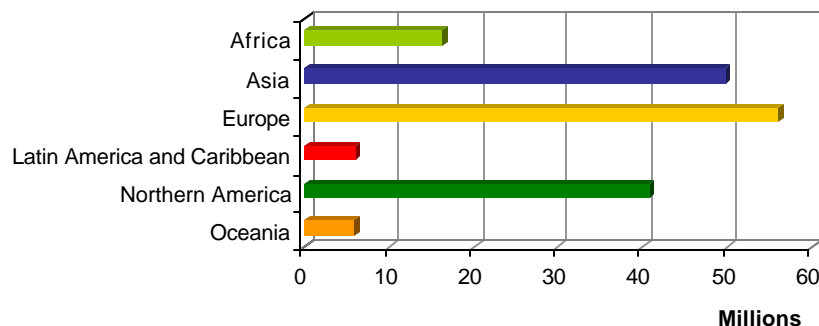
As argued in the World Migration Report (2003: 218) "pull" factors can be summarized as follows:

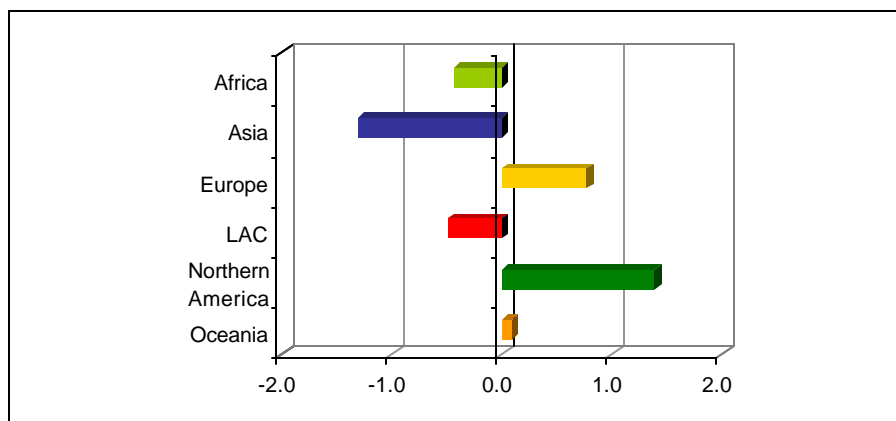
1. Higher salaries offered abroad although there are cases of under employment when African PhDs drive taxis or work in hotels and in security companies;
2. Greater job mobility and professional career development;
3. Fewer bureaucratic controls and higher standards of living;
4. Acquisition of high level skills which are not possible to get at home as the tertiary education sector is starved of funds and personnel;
5. Foreign scholarships and educational support;
6. Active presence of recruitment agents.

## MAGNITUDE OF THE INTERNATIONAL MIGRATION PROBLEM

In general, immigration levels in all European countries are small relative to the total population and with respect to the existing stock of foreigners. According to the OECD (2003b: 12) in 2000 some 5.4 million foreigners resided in the European Economic Area (EEA) (excluding Greece) and net immigration amounted to 2.5 persons per 1,000 inhabitants (some 1.5 million moved into the EEA). Of this, the numbers of African migrants was very small comparatively speaking.

**Figure 2: Migrant stocks by region (UN, 2000)**



**Figure 3: Average annual net migration by region, 1995-2000 (UN, 2000)**

As shown in Figure 2, in 2000 Europe was the region with the highest migrant stock (over 50 million), followed by Asia and Northern America. However, when looking at average annual net migration by region, Asia appears to be more of a sending region than a host one. Also, Table shows how the top country of origin of immigrants to Japan is China. Something similar happens in the case of Africa, the high migrant stock reflects in both cases, intra-regional mobilization phenomena.

The countries receiving the largest inflows of workers in 2000 were U.S. and Germany, followed by Canada, Australia, France and UK (WDI, 2003; GCIR, 2002). However, in relative terms, Australia presents the highest proportion of foreign workers, with over one quarter of total labor force being non-nationals. Canada is the second, with 19.2 percent of foreign labor force (see Table ).

**Table 4: International migration flows by host country, 2000**

|             | Foreign Born Population, 1998 | Foreign born (% of Total Population) | Immigrant Inflow, 1998 | Top Country of Origin | From Top Country of Origin | Refugees and Asylum Seekers 1999/2000 | Total Foreign-Born Labor Force | Foreign-Born % of Labor Force, 1998 |
|-------------|-------------------------------|--------------------------------------|------------------------|-----------------------|----------------------------|---------------------------------------|--------------------------------|-------------------------------------|
| Australia   | 3,908,300                     | 21.1%                                | 77,300                 | New Zealand           | 14,700                     | 16,700                                | 2,309,600                      | 24.8%                               |
| Canada      | 4,971,100                     | 17.4%                                | 174,100                | China                 | 19,700                     | 54,400                                | 2,839,100                      | 19.2%                               |
| Switzerland | 1,347,900                     | 19.0%                                | 74,900                 | Yugoslavia (former)   | 11,500                     | 62,600                                | 691,100                        | 17.3%                               |
| U.S.        | 31,107,889                    | 11.1%                                | 660,500                | México                | 131,600                    | 481,500                               | 11,564,600                     | 11.7%                               |
| Austria     | 737,300                       | 9.1%                                 |                        |                       |                            | 6,100                                 | 239,000                        | 9.9%                                |
| Germany     | 7,319,600                     | 8.9%                                 | 605,500                | Poland                | 66,300                     | 180,000                               | 2,521,800                      | 9.1%                                |
| Belgium     | 892,000                       | 8.7%                                 | 50,700                 | France                | 7,400                      | 46,400                                | 374,200                        | 8.8%                                |
| France      | 3,596,600                     | 6.3%                                 | 138,100                | Algeria               | 16,700                     | 26,200                                | 1,593,800                      | 6.1%                                |
| Sweden      | 499,900                       | 10.8%                                | 35,700                 | Iraq                  | 5,400                      | 18,500                                | 219,000                        | 5.1%                                |
| UK          | 2,208,000                     | 3.8%                                 | 236,900                | United States         |                            | 87,800                                | 1,005,000                      | 3.9%                                |
| Ireland     | 111,000                       | 3.0%                                 | 20,800                 | UK                    | 8,300                      | 7,700                                 |                                | 3.2%                                |
| Denmark     | 256,300                       | 5.4%                                 | 20,400                 | Somalia               | 1,800                      | 10,300                                | 93,900                         | 3.2%                                |
| Norway      | 165,100                       | 6.1%                                 | 26,700                 | Sweden                | 6,000                      | 8,600                                 | 66,900                         | 3.0%                                |
| Netherlands | 662,400                       | 9.6%                                 | 81,700                 | Morocco               | 5,300                      | 29,600                                | 208,000                        | 2.9%                                |
| Portugal    | 177,800                       | 1.8%                                 |                        |                       |                            | 1,600                                 | 88,600                         | 1.8%                                |
| Italy       | 1,250,200                     | 2.1%                                 | 111,000                | Albania               | 11,200                     | 13,700                                |                                | 1.7%                                |



|             |           |      |         |                   |        |       |         |      |
|-------------|-----------|------|---------|-------------------|--------|-------|---------|------|
| Finland     | 85,100    | 2.4% | 8,300   | U.S.S.R. (former) | 2,500  | 2,600 | 34,600  | 1.4% |
| Spain       | 719,600   | 1.8% |         |                   |        | 1,100 | 190,600 | 1.2% |
| Japan       | 1,512,500 | 1.2% | 265,500 | China             | 55,700 | 3,800 | 119,100 | 0.2% |
| New Zealand |           |      | 36,200  | United Kingdom    | 5,500  | 3,100 |         |      |

Source: Created from GCIR, 2002. [http://www.gcir.org/about\\_immigration](http://www.gcir.org/about_immigration)

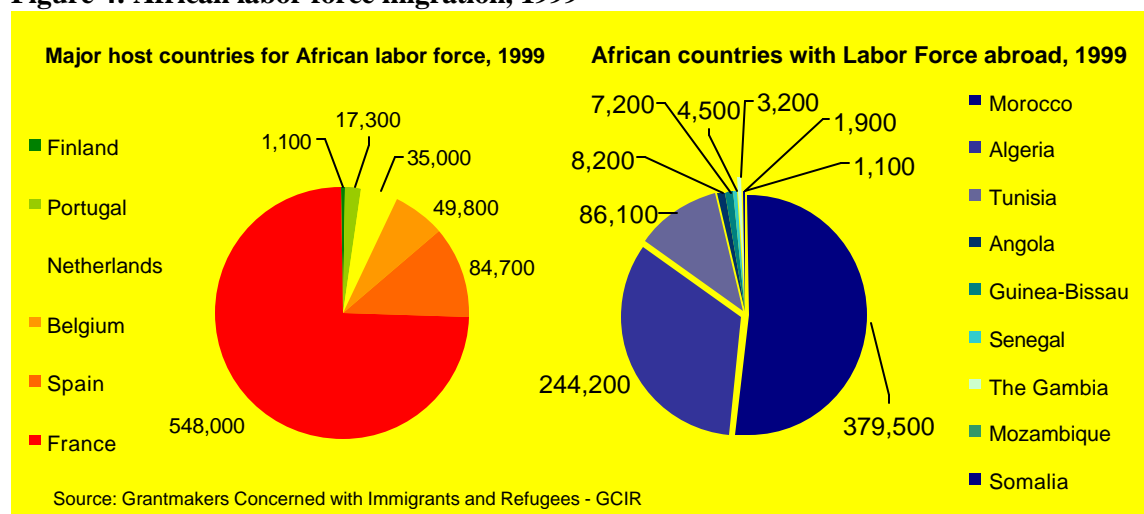
There are just a few countries of origin that tend to dominate migration flows. The relative importance of these few countries may be attributed to geographical proximity (e.g. the Maghreb countries for the Mediterranean area, Mexico and Central America for the U.S.), historical and cultural ties (e.g. former colonies like Algeria for France, the Indian subcontinent for the UK), or the more favorable policies towards refugees, which predominate in the immigrant population of certain countries (e.g. Northern Europe). The OECD estimates that about one-third of inflows may be explained by these three factors (OECD, 2003b).

Inflows to Europe in the early 1990s decreased in comparison to previous years, the exception being the UK. From about 1996 immigration flows started to increase, reaching 2000 and 2001 an increment of 3.2 percent in the European Union (OECD, 2003b). Not all countries had increasing net migration rates. Germany, for example, had a drop of net immigration of about 27 percent (while still being the main European immigration country). This change was in part also due to different policies by the receiving countries.

In 2000, the inflow of workers increased throughout Europe (with the exception of Norway). The increment was only of 3 percent in France, but it reached 18 percent in Denmark, 25 percent in the United Kingdom, 29 percent in Sweden and 88 percent in the U.S. It is important to note that the majority of “foreigners” counted in the national statistics are European citizens living in another member state of the EU. In 2000, about 64 percent of foreigners in the EU and EFTA countries were Europeans and their numbers are fairly constant over the years (Salt, 2001). About 3 million (16 percent) were Africans and about 2 million (11 percent) were Asians. In addition, it is estimated that about 40 percent of migration flows in the EU are internal.

The distribution of nationalities among the foreign population reflects to a large extent the waves of post-war migration associated with the independence of former colonies and labor shortages in Europe. Past colonial history is clearly important for countries like France, Belgium and Portugal (immigration from African countries), the Netherlands (Asia), and the UK (Indian subcontinent, Africa and the West Indies). It has been noted, that due to the differences in the composition of foreign stock, the European countries may have divergent perspectives on migration (Salt, 2001:10).

Migration from the Maghreb countries is significant in relation to the volume of the flows and the number of residents in Europe. Immigrants from the Maghreb are about 4.6 percent of the flows in Europe (Giubilaro, 1997). In 2000, refugees from Iraq featured prominently in the statistics of the Nordic countries, especially Norway. Immigrants from Somalia in Norway, Chinese in Italy, and Angola in Portugal were other non-European non-OECD sending countries that ranked among the top five sending countries.

**Figure 4: African labor force migration, 1999**

Two features about immigration to Europe appear. First, Africa and Asia, which respectively account for 13 percent and 59 percent of the world's population, are under-represented in the foreign populations of Europe. Second, the biggest group of non-European migrants living in the EU is composed by the Turks, and then followed by immigrants from the Maghreb, and U.S. citizens.

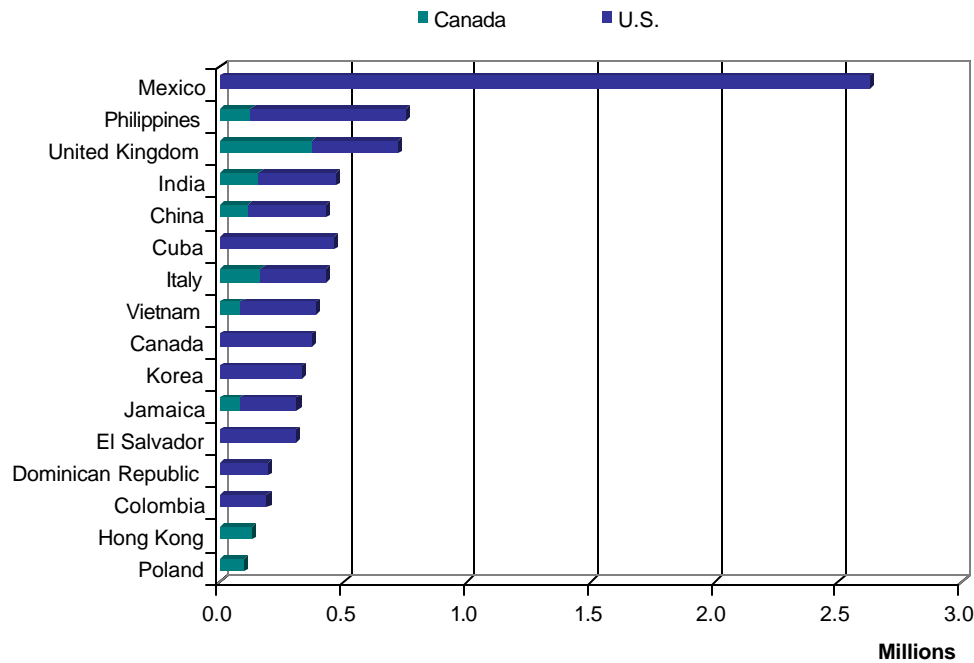
Table 5 shows that family reunification and refugees form the largest groups of immigrants to European OECD countries. Since 2000 family-related migration and asylum seekers lost some of their dominance in favor of increased employment related migration (OECD, 2003b). But overall, there is a trend away from immigration for family reasons and humanitarian grounds towards admission for employment-related grounds. The admissions of new permanent foreign workers are few, although the majority of European OECD countries have implemented programs to facilitate the entry of skilled and highly skilled foreigners.

**Table 5: Immigration by eligibility category in selected OECD countries (percent of total).**

|                | Family |      | Skills |      | Refugee |      | Other |      |
|----------------|--------|------|--------|------|---------|------|-------|------|
|                | 1993   | 1999 | 1993   | 1999 | 1993    | 1999 | 1993  | 1999 |
| Denmark        | 29     | 32   | 12     | 10   | 19      | 15   | 40    | 42   |
| France         | 60     | 71   | 28     | 15   | 12      | 8    | –     | 7    |
| Sweden         | 21     | 49   | –      | 1    | 75      | 26   | 4     | 24   |
| Switzerland    | 41     | 31   | 26     | 34   | 4       | 2    | 29    | 34   |
| United Kingdom | 40     | 46   | 41     | 46   | 14      | 8    | 4     | –    |

Note: OECD (2002, Table 1, p74). "Other" varies among countries, for example, in Denmark it includes students and immigrants from the European Economic Area.

The low numbers of foreigners from LDCs may be due to high naturalization rates. See Eurostat (2000a) for a description of naturalization procedures in the EU. Depending on how liberal a country's policy is with respect to liberalization, it may accelerate or slow the absorption. Over the last years several European countries liberalized their laws on naturalization.

**Figure 5: Top sending countries of labor force in Canada and the U.S., 1999**

These figures show that Africa is sending a very small proportion of immigrants to these countries compared to the rest of the world.

## CONCLUSION

### Strategies and policy options to manage the IMSHC

There are six general policy responses to international migration, also known as the 6 R's that can be grouped into two broader approaches to reduce migration pressures. First, maximizing migration's payoffs through:

1. Policies to promote the *return* of migrants to their source country;
2. *Recruitment* policies for international migrants that ease numerical and protective regulations on admissions;
3. Initiatives to *resourcing* expatriates by increasing communications, knowledge transfer, remittances and investment; and
4. *Reparation* policies that either makes host countries to compensate source countries for their human capital loss, or tax emigrants directly.

The second approach points toward making emigration unnecessary by strengthening domestic educational institutions, adapting trade, investment and aid policies to accelerate economic development. These are called five *retention* policies to prevent graduates from leaving. The sixth “R” does not fall in either of the approaches mentioned, given that more than reducing migration pressures, it aims to control the flow through (6) *restrictive* emigration and immigration policies in developing and developed countries respectively (Lowell and Findlay, 2001; Martin and Straubhaar, 2002).

### **Return policies**

Return-home policies are long-term operations that work only when the home country can offer prospective returnees satisfactory career conditions in their field, which supposes a high level of development (Gaillard and Gaillard, 2001). International research has found also that factors of family, culture, free press, and democracy influence in the decision to return. Additionally, the decision whether to stay abroad or to go back home differs significantly by country of origin. For instance, Indian students in the US are by far more likely to stay than their South Korean or Taiwanese peers (Johnson, 2002). There are also a growing number of programs and policies to facilitate transnationalism or dual nationality. Some programs are focusing on temporary returns of highly skilled emigrants to their home country. Bringing back expatriates for short periods guaranteeing their return to the host country afterwards, is another suggested policy (The Economist, 2002; Lowell and Findlay, 2001).

We do not know much about return-migration. In all migration research, more is known about immigration than emigration. Several countries have implemented programs to increase return-migration of highly skilled workers. The International Organization for Migration (IOM) operates the “Return of Qualified African Nationals” (RQAN) which is an active policy for return-migration that funds the expatriate family’s return and helps establish them in their home country. At the moment, ten African countries are using RQAN which has succeeded in returning and integrating some 1,500 skilled Africans (Lowell, 2002).

Another policy option is the provision for dual citizenship. Many countries do not allow their citizens to keep their citizenship once they claim citizenship of another country. Losing the citizenship, often implying the loss of political rights or the loss of land or financial assets, reduces the incentives to return. India has somehow introduced dual citizenship with the introduction of a “Person of Indian Origin” (PIO) card but the initiative, possibly due to high fees and limited duration, “failed to evoke an enthusiastic response” (Khadria, 2002, p41).

### **Maximizing migration’s payoffs**

The three main payoffs of migration are remittances, recruitment, and return. Remittances might be maximized by reducing costs of remitting. Also, emigration countries must have a realistic exchange rate, and their governments have to encourage and channel investments made with remittance money (Martin and Straubhaar, 2002). Another option mentioned is to tax skilled expatriates or to charge them back for the tertiary education received in their home country (The Economist, 2002). This is easier said than done because migrants do not give information of their whereabouts to the sending countries.

According to the IMF (cf. Martin and Straubhaar, 2002), Mexico received 41 percent of the total of remittances to the western hemisphere in 1999, while India concentrated 40 percent of the remittances to Asia, becoming the 2 countries with the highest net remittances in the world (US\$6,649 and US\$11,124 millions respectively). A study in Mexico shows also that each dollar of remittances generates three dollars of spending power (The Economist, 2002).

The transfers of remittances are universally seen as one positive outcome of emigration. On a global level, remittances have increased considerably over the last years and the increase is owed to remittances sent to the developing countries (Clark and Drinkwater, 2001). India, in an attempt to increase these monetary flows, has set up various deposit schemes which allows Indians living abroad to deposit their money in “repatriable accounts” which offer higher interest rates than accounts for the general public. However, Khadria (2002) reports that these schemes have been expensive for India as non-resident Indians appear to have borrowed in Europe at low interest rates. Investment by expatriates may be considered as a particular form of remittances. Khadria (2002) reported that, the Indian government has made efforts to urge citizens living abroad to invest in India in remittance-backed bonds. This is a strategy that African governments can adopt.

Another form of capitalizing on the human capital of nationals who moved abroad may be through networks (Brown, 2000). (See also Khadria (2002)). Skilled emigrants can be a significant source, and their skills may be used through the establishment of research partnerships, special programs to initiate knowledge transfers, and the investment in joint ventures.

Bhagwati (1976*b*) proposed to tax the increased income of emigrants at some rate greater than their normal tax rate in the receiving country which should be spent in developing countries. Alternatively, the immigrant could be taxed the normal rate and the destination country could share the increased productivity with the developing world. Initially, such programs could be focus on the highly skilled emigrants and funds be made available to the United Nations. Straubhaar (2000) points out those proposals are not only complicated to administrate because the correct amount of the tax is not known and that there are feedback mechanisms in place (remittances). Increasing the tax on skilled workers also introduces an incentive structure that could result in less human capital than socially optimal.

### **Retention policies: Controlling ““Push”” factors**

However, the best long-term strategies are retention strategies. The United Nations (2000*b*) stress the need for effective links between governments and the private sector to improve the incentives to invest in and retain highly skilled workers. Retention strategies involve increasing the number of the highly educated, providing graduates with viable career opportunities, fostering international cooperation with research institutions of developed countries, and attracting foreign investment in high-tech clusters.

The solutions to migration pressures, however, lie mostly within emigration countries. Domestic labor market outcomes influence the direction and magnitude of the international migration flow. “When wages are low and jobs are scarce, there is an incentive for workers to migrate to environments where jobs are available at higher wages.” (Banerji, Campos and Sabot, 1995:32). Policy choices, therefore, concentrate not on the migrants themselves nor on the receiving countries, but rather on ensuring that migration is a choice and not the only option (Nyberg-Sorensen, Van Hear and Engberg-Pedersen, 2002).

Gaillard and Gaillard (2001) affirm that success depends very much on the level of economic, scientific and technological development of each country, as well as on political leaders taking a long term view. According to Martin and Straubhaar (2002), in the effort of improving living and working conditions in source countries to reduce unwanted migration, there are three major economic instruments: trade policies, foreign direct investment (FDI), and aid. The best policies to accelerate “stay-at-home” economic growth, the authors claim, involve freeing up trade and facilitating FDI. In these same lines, Johnson (2002) sustains that the countries that have attracted their students to return have often opened up economic opportunities for the host countries (i.e. US) through science and technology partnerships.

It has been found that in developing countries with rapidly growing populations, like India and Mexico, trade liberalization raises emigration of the unskilled and reduces emigration of the skilled. That is, the average skill level of the country rises and the net effect on total emigration is ambiguous. The opposite occurs with increased protection (Lopez and Schiff, 1995). Changes in national context, however, are not limited to economic growth, but also to political stability and governance. Thus, “to the extent that highly skilled migration is determined by poor governance in the country of origin, return of skilled migrants can only be expected when local governance radically improves” (Nyberg-Sorensen, Van Hear and Engberg-Pedersen, 2002:15).

Governments must first establish credibility, because otherwise by simply announcing new policies they will not convince local and foreign investors that those policies will continue to be followed. Second, governments in emigration areas must establish certainty for investors. Finally, development is a slow process, and economic policies that indirectly reduce emigration pressures need time to work (Martin and Straubhaar, 2002). When addressing high skilled migration, it is important to keep in mind how it relates to unskilled migration as well as what are the differential impacts on domestic labor dynamics. The situation of non-migrant workers in source countries is affected not only by brain drain itself, but also by the economic policies suggested to address it. Liberalization of trade and promotion of FDI by themselves will not protect the most vulnerable of all, the poor and unskilled who stay in their countries. If not paired with equity measures, “the ravages of the global free market in money and goods violently disturb those who seek a livelihood within their own country” (Seabrook, 1998:27). Furthermore, it uprooted whole populations while global markets have pressed them into a form of industrial slavery.

### **Policy options by host countries**

The encouragement of temporary stays increases knowledge transfers. For example, the only exception to the recruitment of health workers from developing countries by the British health service is training programs and programs where the worker agrees to return home after an agreed period (Department of Health, 2003). Khadria (2002) argues that such programs should be specially targeted at women for two reasons. First, raising their labor productivity increases their chances of labor force participation and implying an easing of economic pressures. Second, employed spouses act as constraints on their partners’ mobility. In the case of IT skills that are in high demand, the OECD countries have undertaken one or more of the following strategies (Lopez-Bassols, 2000):

- Relaxing quantitative constraints (e.g. United States).
- Setting up special inward migration programs for occupations with shortages (e.g. Germany, Canada, and Australia).
- Facilitating recruitment conditions or procedures and relaxing criteria for issuing employment visas for highly skilled workers (e.g. Australia, Canada, France, Japan, New Zealand, Norway, and United Kingdom).
- Increasing non-wage incentives for skilled foreign workers (e.g. Australia).
- Allowing foreign students to change status at the end of their studies (e.g. Germany, Switzerland, Australia, and United States).

There is evidence that the European countries are considering a potential negative effect of their increased recruitment efforts for the developing countries. For example, the Commission of the European Union proposed in 2000 to establish a program within the Partnership and Cooperation Agreements. Such a partnership framework could “encourage(s) migrants to maintain and develop their links with their countries of origin. This includes ensuring that the legal framework does not cut migrants off from their country of origin e.g. that they have possibilities to visit without losing their status in their host country, and of moving on or going back as the situation develops in the country of origin and elsewhere in the world” (Commission of the European Communities, 2000, p8). The main aims and principles of the

proposed common legal framework for the admission of economic migrants should be based on i) transparency, ii) differentiated rights according to the length of stay, iii) clear application procedures, and iv) protection of the domestic labor market.

The lack of suitable data is the main obstacle to evaluate policies and consequences for receiving and sending countries, and for the migrants themselves. Following the Conference of Barcelona in 1995, held by the then 12 members of the European Union and twelve countries in the Mediterranean Basin, adopted a joint statistical effort to collect data on migrant flows were started in 1996 (Eurostat, 1999b). Most countries agreed to include the UN's recommended question on usual address one year prior to the interview in the next census. Since the majority of these censuses will be carried out starting in 2004, reliable data on migration, intentions to migrate, and on return-migration from the main sending countries to the EU will be available only towards the end of the decade. (See also Eurostat (1999b, p37-9). The political discussions in Europe on immigration centers around managing the migration flows (European Committee on Migration, 2002). Although improving the economic situation of the sending countries is seen as an important part of policy, there is the acknowledgement that there is a need for an open and transparent comprehensive immigration policy in Europe.

### **Restrictive and selective immigration and naturalization policies**

Recent evidence shows that policies aiming to restrict migration are costly and hurt more the poor than the rich (c.f. Nyberg-Sorensen, Van Hear and Engberg-Pedersen, 2002). Nevertheless, Bauer and Zimmermann (1999) argue that the first step to respond to the threats and challenges of globalization is the implementation of selective migration policies that restrict the immigration of unskilled workers while promoting the immigration of the skilled ones. Consequently, over the past few years some European countries have started to actively recruit skilled workers internationally. See McLaughlan and Salt (2002) for an overview.

The British government has introduced a Highly Skilled Migration Program, allowing highly skilled workers entry to the UK without a prior offer of employment. The UK has also introduced a new pilot scheme to enable multinational companies to self-certify work permits for their intra-company transferees. Germany has introduced the Green Card System and Ireland has moved to fast-track work authorizations for the highly skilled. Germany, France, and Norway have introduced regulations that allow foreign students to remain in the country on completion of their studies and obtain a work permit on the basis of their skills ("switching").

Denmark changed immigration regulations in order to attract more highly skilled workers. Spouses will be automatically covered by the permit of the initial applicant. The Netherlands have tax incentives to attract the highly skilled since 1995. Under this regulation, a special allowance is granted under certain conditions. Foreigners who are starting to work in the Netherlands may be granted a special tax-exempt allowance of 30%, subject to a requirement that the vacancy could not be filled with a Dutch person. Bauer and Zimmermann (1999) sustain that increasing the supply of skilled workers would lower their wages, while rising those of the unskilled workers and reducing their unemployment rates. A selective immigration policy would best be organized by auctioning the right to immigrate to potential migrants. They consider that "an auction selects migrants according to their ability and willingness to pay" (p.24), not only because it identifies the migrants with the larger capacity to produce goods of high economic value in the receiving country, but also because it self-selects those persons with the best chance of being economically successful.

In the opinion of Borjas (2001) this strategy, is similar to the idea of supporting an open market for visas where a limited amount of them are sold at high prices in the marketplace, can be efficient in the sense

that it would generate the highest economic return. However, it is not necessarily fair. Per capita income in most LCDs is so low that most visa applicants would not be able to raise the amount of money necessary to pay for their visa. Even if the price of the visa is set in relative terms as a function of the source's country per capita income, it would favor the wealthier sector and not necessarily attract the most skilled people.

In answering the question of whether the receiving country should allow permanent or temporary migration, Bauer and Zimmermann (1999) states that:

Permanent migration normally implies that selected high-skilled workers will immigrate together with their family. However, empirical evidence suggests that family members could end up as unskilled workers, and outcome that would result in problems similar to those under an unregulated immigration regime. This problem could be avoided by allowing temporary migration, since a government could then restrict the immigration of family members more easily (p.25).

Borjas (2001) argues that "as long as the contribution of an additional immigrant exceeds the costs imposed by that immigrant, the United States should let the people in" (p.200). He also concludes: "Americans would be better off if the immigrant flow were more skilled" (p.211). Opposed to restricting migration, Lowell and Findlay (2001) suggest that it is necessary to establish policies that facilitate migration, since it is in the best interest of developing countries. Yet, such policies should also protect domestic labor markets and the economic interests of LCD's.

Seabrook (1998), differs with the arguments made by Bauer and Zimmermann (1999), claims that instead of regulating international migration and making it more selective, the alternative is to give all workers in the world, wherever they are, the right to move from place to place as freely as goods and capital. This would create a truly free global market that does not keep people under economic captivity and, therefore, increases social justice. But global mobility of labor is an adventurous suggestion, considered so far unimaginable.

## **Recruitment**

Labor markets in host countries are the main determinant of who migrates, favoring the skilled, young, and ambitious people. There is still little agreement in how to regulate public and private recruitment agencies, what fees or taxes should be levied on migrants and for what purpose, as well as what selection mechanism should be used to pick migrants. (Nyberg-Sorensen, Van Hear and Engberg-Pedersen, 2002; Martin and Straubhaar, 2002). Winkelmann (2002), analyzing a sample of German, French, British, and Dutch companies, shows that the motives for hiring foreign skilled workers are varied. Amongst German companies, the perceived internationality of the worker (language skills, knowledge of foreign markets) is the main motivation for hiring, rather than skills, labor shortages, or higher productivity. The main obstacle to international recruitment is the (perceived) difficulties in obtaining work permits.

Countries may recruit skilled workers from abroad to compensate for the emigration of skilled workers. These may be nationals who previously had moved abroad (repatriation efforts), skilled workers who come into the country with multi-national companies (increase foreign direct investment), or simply (try to) recruit skilled workers internationally. The latter option may involve special tax treatment or other incentives in order to compensate for potential wage gaps. Additionally, "fast-track" immigration policies may be introduced.



A number of developing countries have introduced policies to recruit highly skilled workers from abroad. Malaysia, for example, has announced a “knowledge economy master plan” attempting to recruit 5,000 skilled workers (Lowell, 2002). South Africa has reformed its immigration laws to allow more immigration of skilled workers (Bhorat et al., 2002; OECD, 2003a). Most African countries have imported Indian science and mathematics teachers, and health care workers to fill gaps left by emigrating teachers and doctors. Of course, it is the developed countries that have successfully implemented immigration policies to increase immigration of skilled workers, e.g. Canada or Australia, and more recently the UK or Germany.

#### ***THE AUTHOR***

***Kuzvinetsa Peter Dzvimbo*** is a Zimbabwean national working for the World Bank, HDNED in Washington DC as a Senior Education Specialist.

He was educated at the University of Sierra Leone, Fourah Bay College where he earned a B. A and a Diploma in Education; and at Ahmadu Bello University in Nigeria where he obtained an M. Ed. He has a Ph.D from the University of Wisconsin – Madison in the USA.

He has taught in Sierra Leone, Nigeria, the USA, Zimbabwe, South Africa and Mozambique. He was Dean of the Faculty of Education and Pro-Vice Chancellor at the University of Zimbabwe and founding Vice Chancellor of the Zimbabwe Open University. He has worked as a consultant in Southern and Eastern Africa.