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New Initiatives to Mitigate Brain Drain in the Least Developed Countries

The international migration of skilled persons from least developed countries (LDCs) continues to reduce their potential for technological catch-up and their absorptive capacity. National policies, international cooperation and networks with diaspora can limit the damage from such migration and derive gains from it.

The human capital endowment of an economy is a fundamental determinant of its long-term growth prospects, its absorptive capacity and its performance in technological learning. This means that the skills of the population must be upgraded and productively employed in order for countries to develop. The pervasive poverty in most LDCs, however, generally entails limited employment opportunities and/or low salaries for skilled persons, as well as poor working conditions and career paths for professionals.

For many decades, "push and pull" forces in countries of origin and destination have contributed to increase the migration of skilled workers from LDCs to developed countries and higher-income developing countries. Here "skilled" refers to workers with a university-level education. The latest available data suggest that skilled outmigration from developing countries increased sharply in the 1990s. Rates of skilled outmigration were highest in the LDCs – on average, over 13 per cent in 2000 (see table).

LDCs are more likely than other developing countries to be negatively affected by the outmigration of skilled persons. First, the skilled emigration rate of LDCs is virtually double that of other developing countries. Second, the number of university-educated persons in LDCs is very low. In some of them, therefore, outmigration further shrinks the pool of qualified personnel working in the country.

Outmigration is much higher in certain fields where the required skills are relatively uniform internationally, as in the case of medicine. Moreover, the migration rate for highly educated individuals with more than basic university training tends to be much higher than that for the tertiary-educated population as a whole. It has been estimated that between 30 and 50 per cent of the developing world's population trained in science and technology live in the developed world.

Apart from these negative impacts, outmigration can bring benefits to countries of origin. This happens, for instance, when skilled personnel return home, either temporarily or permanently, bringing with them new knowledge and expertise from more technologically advanced countries. In recent years, more attention has been paid to the role of return migrants in raising skill levels and promoting technology transfer and capital accumulation in their country of origin. This has particularly evident in the high-growth countries of East and South Asia since the 1990s.

There is, however, little quantitative information about the contribution of return migrants – the so-called "brain gain" – to skills formation and technology back home in LDCs. Nevertheless, studies in similar economies show that return migrants can have a positive impact on the skills endowments of their country of origin. Among the benefits which return mi-

Group of countries of origin	Rate of emigration 2000 (%)	
	Total (a)	*Skilled (b)*
High income countries	2.8	3.5
Upper-middle income countries	4.2	7.9
Lower-middle income countries	3.2	7.6
Low income countries	0.5	6.1
Least developed countries	**1.0**	**13.2**

a Number of adult immigrants living in OECD countries as a percentage of the total number of adults born in the same group of countries of origin.

b Number of adult immigrants with university-level education living in OECD countries as a percentage of the total number of adults with university-level education born in the same group of countries of origin.

grants themselves cited as most important, specialized technical expertise and communication skills ranked highest.

The dearth of data on the net impact of migration of skilled persons in terms of brain drain and brain gain means that it is very difficult to devise optimal policies to address and balance the potential losses and benefits arising from outmigration. This issue of *LDC Report Highlights* presents a range of policy mechanisms that have been implemented at the national level (in both recipient countries and countries of origin) and at the regional and international levels.

Policies in destination countries

Several developed countries have implemented policies that attempt to minimize the brain drain in certain sectors and from specific countries. Development assistance can be an effective channel through which developed countries can help tackle the worst impacts of brain drain. The case of the assistance provided to Malawi by the United Kingdom Department for International Development (DFID) is instructive. Malawi has expanded the training of health professionals but has major problems in keeping staff in the country. DFID has developed a special programme of assistance for that country to increase training of doctors and nurses and to increase pay and job opportunities. DFID reports that the programme has had some success in reducing pressure for outmigration.

The United Kingdom has been at the forefront of direct policies to reduce the impact of brain drain in the health sector in poorer countries. Its Department of Health has implemented guidelines on the international recruitment of nurses, with a list of countries (including many in sub-Saharan Africa) from which recruitment is prohibited. However, whilst the United Kingdom has taken some important initiatives in the health-care sector, broader immigration policies still target foreign professional and skilled workers, irrespective of country of origin. It has been argued that similar protocols to those used in the health sector should be developed for other areas where the social costs of migration are demonstrated to be high, as is the case with the serious shortages of university staff in many African countries. This type of measure remains, however, controversial.

Other European countries have tended to focus on policies to promote brain gain by giving incentives for emigrants to return home. For example, France, Italy and Germany have provided loans, training and technical assistance to return migrants. France has provided loans to emigrants from Mali and Senegal to establish businesses in their home countries. However, the small size of the programmes, lack of experience in undertaking business ventures (particularly among less educated migrants) and poor economic conditions at home are reported to have reduced the programmes' effectiveness.

The Joint Africa–European Union Declaration on Migration and Development signed by foreign ministers in November 2006 shied away from the sensitive issue of payments to African countries to compensate for the costs of skilled migration. The EU rejected the African ministers' proposal that a special development fund, provided by the EU, should be created to finance development in order to prevent young Africans from leaving for work in Europe. Nevertheless, progress was indicated by the joint decisions on "promoting concrete and tailor-made policies and reforms to address skills shortages caused by brain drain" by supporting human resource and educational development and on "supporting programmes which foster the mobility and temporary return of members of the diasporas with the necessary skills in their countries of origin". This highlights the potentially strong positive impact of international mobility through "brain circulation".

International and regional initiatives

A number of international agencies put substantial emphasis on promoting brain gain through return migrants by working with diaspora – either providing incentives for skilled migrants to return permanently or assisting in technology and skill transfer to the country of origin.

The International Organization for Migration has been at the forefront of those efforts to promote brain gain, which have had mixed success. In 1983 it established the Return of Qualified African Nationals (RQAN) programme. Over nearly two decades some 1,500 Africans were induced to return to their home countries before the programme was discontinued. The numbers may seem very small, although they are not insignificant in the context of the importance of highly trained return migrants for certain African LDCs. Nevertheless, the high unit cost of the programme, equity considerations (with regard to colleagues back home who did not migrate) and especially lack of ownership by recipient Governments were all identified as problems. There are however indications that qualified return migrants are making a difference by occupying key positions in the public and private sectors.

In 2001 RQAN was replaced by the Migration and Development for Africa programme, which puts much greater emphasis on short-term visits and transfer of knowledge through the Internet and diaspora groups, rather than on the permanent return of skilled migrants.

Digital networks to link skilled migrants with their countries of origin are the most frequently used mechanism to encourage brain gain. For example, the United Nations Development Fund for Women has launched the Digital Diaspora Initiative, which involves overseas professionals helping women in their country of origin to use new information technologies.

Similarly, regional initiatives to enhance brain gain have been particularly important in southern Africa through the South Africa Network of Skills Abroad. Some 22,000 graduates from five countries were reported to be linked through its website to universities back home in a range of fields, including medicine, commerce, education and engineering. The network is intended to encourage offers from migrants to train southern African counterparts, help them to conduct research, transfer technology (for example, though the provision of computers and software) and facilitate business contacts. Initiatives of this kind could be extended to LDCs.

Relaxing restrictions on trade in services can contribute to brain circulation of professionals from LDCs. These persons can benefit from the temporary movement of professionals to technologically more advanced countries, where they can enhance their skills, learn about new technologies and acquire more experience. That can be useful when professionals are working once again in their home countries. Temporary emigration rules should therefore be relaxed in order to benefit LDCs.

Policies in countries of origin

In the past, policies that aimed to prevent brain drain through programmes for the permanent return of migrants often failed. This was due to the mechanisms used (such as bonds and financial sanctions), which were based on restrictions on skilled personnel. Brain retention and brain gain depend crucially on general economic and political developments in LDCs. The creation of employment opportunities for qualified professionals with increasing rates of pay is crucial for retaining locally trained human capital and for attracting return migrants. That includes not only higher salaries, but also improved working conditions and career paths.

In the health-care sector, for example, new initiatives are beginning to produce the desired effects in some low-income countries. Measures taken include:

- Significant increases in salaries, especially those of nurses (Botswana);
- Schemes to develop health-care cadres, particularly in rural areas (for example, Malawi and Zambia have clinical officers, and Mozambique has a similar category of health carer);
- Extending the retirement age (for example, beyond 55, as is currently the practice in Malawi and Lesotho); and
- New programmes for management of migrant return, especially on a temporary basis.

Policies aimed at increasing the gains from return migration have some potential benefits for LDCs. The benefits are likely to be greater in the case of permanent return of former emigrants, as compared with temporary returns, particularly in terms of the skills endowment of countries of origin. Nonetheless, devising and implementing policies to this end are difficult, and there have been several cases of failure. On this basis, it could be argued that LDCs should target short-term professional visits by skilled nationals, since that is where policy initiatives are most likely to succeed.

Fostering the temporary return of migrants with the aim of capturing learning benefits from short visits also requires complementary policies and diplomatic efforts to promote greater freedom of movement internationally. For example, only emigrants with permanent residence overseas are likely to return even for short visits.

Given the difficulties facing initiatives to encourage skilled persons to return to their countries of origin, either permanently or for short professional visits, policymakers in LDCs should focus more closely on facilitating networks with their diaspora. Such initiatives could produce longer-term “external” benefits by keeping skilled migrants engaged with the environment and challenges of their home county, and keeping open the possibility of return if conditions are favourable. Such programmes for return migration have been successfully applied by, for example, Malaysia, the Republic of Korea, Taiwan Province of China and, more recently, China and India.

One important consideration, in order to ensure greater utilization of diaspora skills, is the collection and tracking of information on the occupations and training of nationals working abroad. Countries of origin should also ensure that overseas nationals are able to retain their citizenship, even if they take up citizenship in destination countries. This means recognizing dual nationality, which may require special arrangements with countries of destination that do not allow dual citizenship. Other incentives involve revising regulations that discriminate against emigrants, such as eliminating restrictions on ownership of land and property.

The importance of remittances

Finally, it should be noted that broad-based concerns about the losses from brain drain are sometimes counterbalanced by the value of remittances from migrants to their countries of origin.

Remittances to developing countries have increased dramatically in recent years, totalling an estimated US$ 207 billion in 2006. They have grown faster than foreign direct investment and official development assistance over the past decade. The total value of remittances to LDCs more than doubled between 2000 and 2006, from US$ 6 billion to US$ 13 billion.

The potential benefit of remittances to receiving countries is to stimulate consumption and investment in those countries, help relax foreign exchange constraints and contribute to poverty alleviation. Their contribution to development depends on their macroeconomic impact. There is evidence that remittances are more directed to consumption than investment, which perhaps explains why no link between them and long-term growth has been found.

Although remittances emanate from both skilled and unskilled emigration, their benefits appear to be stronger in cases where unskilled migration predominates. Qualified emigrants have higher earnings abroad than unskilled ones, but are more likely to become permanent migrants with weaker links to their countries of origin. Eventually, this leads to smaller remittances and fewer benefits to LDCs.

This issue of *LDCR Highlights* is based on UNCTAD, *The Least Developed Countries Report 2007: Knowledge, Technological Learning and Innovation for Development*, chapter 4. The Report is available on the UNCTAD website (www.unctad.org).