

# The Brain Drain in Africa

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## Introduction

Increased attention has recently been paid to the phenomenon of the brain drain of skilled (and often unskilled) Africans from their home countries to countries in the West. In part this is because of the relatively large percentages of skilled Africans going abroad. It is also due to the increased focus on the economic development of Africa in general, and the concern that many countries in Africa may be lagging behind economically and stuck in a poverty trap. Further, human capital, educated workers, and technology are perceived to be instrumental for economic development and competitiveness in today's world, so the drain of skilled professionals is of concern (see e.g. Benhabib and Spiegel 2005).

Although in the popular press and in some political circles the migration of skilled Africans is presented as an unmitigated minus for Africa, there are a large number of important caveats to this, which present a very different picture.

## Historical context

When reviewing the economics of the brain drain and skilled migration, it is first important to note first that this is neither a new phenomenon nor a recent literature. The term 'brain drain' was, I believe, first used in the context of the loss of skills from the UK to the USA in the late 1950s and early 1960s. Given the often loud and xenophobic reactions of the right wing in Europe to African immigration there, it is amusing to recall that the mother of all migrations was probably the movement of early man up the East African Rift Valley which ultimately resulted in the settlement of man in Europe. Further, from the 1500s onwards it was Europe, which experienced the mass emigrations, which successfully settled many parts of the New World and Africa.

## The data

Although the data on the brain drain remains incomplete, an important development in academic literature has been the recent data sets produced by Carrington and Detragiache (1998), Docquier and Marfouk (2005), and others. These data use various extensions to the Barro and Lee (1993) school attainment figures to determine the number of skilled individuals in the source countries. The authors then use census and other similar data sets in the US, western European, and other OECD nations to compute the numbers of foreign-born residents of different skill levels residing in those countries.

The 2000 data of Docquier and Marfouk (2005) indicates that many African nations have very high skilled emigration rates (i.e. the fraction of nationals with tertiary degrees who were born in the country but live outside it). Further, the brain drain today is almost exclusively an African phenomenon. Many of the small countries, like Cape Verde, as well as some bigger countries like Ghana and Kenya, have high skilled emigration rates, as just defined, ranging from 67% to 45%. In contrast, for example, the high skilled emigration rates of China and India are around 3% and 4%.

A look at the data in a little more detail, however, shows some nuances and caveats. As was pointed out in Easterly and Nyarko (2009), census data in the UK distinguishes between white and black immigrants. In many African countries, a substantial proportion of those emigrating are non-blacks. For example, in South Africa only 3% of the emigrants to the UK are black, while in Tanzania the figure is 13%. Presumably there are other more complicated racial and political issues in those countries explaining the emigration; in particular, the emigration is not that of the standard stereotype of the black African skilled professional trained at local expense and going to seek greener economic pastures abroad.

A more important revelation from the data is the exceptionally small number of skilled people in different countries. For example, the Docquier and Marfouk (2005) data put that the total number of tertiary educated Ghanaians in 2000 (at home and abroad) at 150,000. This is for a country whose population is currently in excess of 20 million, and was close to that level in 2000. Many universities in the US have close to a quarter that number, with many single universities having almost that number. This is an incredibly low stock of tertiary educated Ghanaian. The brain drain accounts for a significant portion of this; but the data signal an inadequate output of skills more than anything else.

The picture from the data on skilled (i.e. tertiary educated) nationals is mirrored with healthcare works and particularly doctors (see Bhargava and Docquier 2007; Clemens and Pettersson 2008). Healthcare workers are a group that has received a disproportionate amount of attention particularly in the media, but also in the academic literature.

Again, a large number of doctors are abroad, resulting in a high patient to doctor ratio in the home country. However, even if all those doctors return and there is nothing done about the total supply of doctors, the patient–doctor ratio will improve but will still be exceptionally bad relative to international standards. In a few years the 2010 censuses will be out; it is not yet clear how different the picture will be from that obtained from the 2000 data.

## Remittances

One important aspect of the emigration of Africans is the level of remittances sent back to the source countries. Many statistics seem to indicate that this level is extremely high.

For some countries the remittances represent major fractions of foreign exchange receipts of the country. A big issue here, of course, is the quality of the data. It is often hard to obtain data on remittances, since these are often given in cash and are also outside the formal banking system. The main sources of the data are official balance of payments statistics (World Bank, World Development Indicators), national central banks, and also a number of surveys (e.g. the United Nations International Fund for Agricultural Development, IFAD). Many surveys and estimates indicate that the level of remittances is very high for many African nations—indeed, so high that it often dwarfs foreign development aid.

One interesting question in the literature is whether it is the skilled or unskilled who send larger remittances home, with some arguing that it may be the unskilled (see Faini 2007).

## Return of the skilled, and brain circulation

The data on the brain drain really represent snapshots, or moments in time, of stocks of human capital residing abroad versus in the home country. They do not measure return flows or circulation. It is also clear that the returned migrants have big impacts on their countries. Both Nnamdi Azikiwe, Nigeria's first President, and Kwame Nkrumah, Ghana's first President, studied in the US, and hence at some time were counted in the snapshot of the brain drain, but returned to be instrumental in their respective country's independence movements. An early study of the more recent return of skilled personnel is that by Pires, Kassimir, and Berhane (1999), which investigated the return of African PhDs from 1986 to 1996. Their data seem to suggest that for many countries the return probability is significant. For example, they suggest that, of the Africans obtaining their PhDs in US institutions, almost two thirds return to their country of origin. Their data show within-country differences, though: return rates of around 80% in for Uganda and Tanzania, versus 34% for Ghana and Nigeria.

Much more data work is needed to provide a better and fuller picture of return and brain circulation. Casual observation seems to indicate that the recent dynamism in many African countries owes much to recent returnees who come with new skills and new ideas (Ghana's top non-governmental, non-secular university, Ashesi University, and its top indigenous investment bank, Databank, are examples of these). There is also a lot of research looking into the role of diaspora and migrant networks abroad as channels of transfer of technology, especially internet and communication technologies, into the home countries.

## NPV computations

Easterly and Nyarko (2009) take the data one step further and perform calculations which compute the costs and benefits of the higher education, taking explicit account of migrations out of the local economy due to the Brain Drain. The computation takes into

account the remittances, returned migrants with better skills, and the costs of tertiary education. These calculations seem to suggest a positive return to tertiary education. In particular, since those who leave return remittances and/or return with skills, there could be a net positive on the costs and benefits of tertiary education even in the face of large brain drain probabilities.

There is also the recent phenomenon of unemployment among the skilled labour force. This might make one pause when arguing that the brain drain is an unmitigated problem in Africa, as those who are educated do not always seem to be adequately employed.

## Incentives

Many authors have also pointed out that there is an incentive effect related to the potential migration of skilled workers. When there is the possibility of leaving the local economy and presumably making significantly more money abroad, there is more investment in education (either the time and work effort of individuals, or the money or foregone earnings used when embarking on tertiary education). It is possible that this incentive effect is so strong that even after some have migrated, the number of skilled left behind exceeds that which would have existed if the brain drain and its incentive effects were absent (see e.g. Stark 2004).

This is not unlike what is now the African ‘foot drain’, where top African soccer players migrate to play in European teams. Many more Africans are investing in soccer education and training, and it is possible that this has resulted in many more top soccer players than would have been the case if there was, for example, a ban on African soccer players playing abroad.

This short chapter has focused on source country issues. In the West, there is currently some competition for talent in the US and EU. The European Union is currently debating the concept of a ‘Blue Card’ to compete with the US’s Green Card in attracting skilled migrants from abroad.

## Conclusion

Many African countries face high percentages of skill emigration. Stocks of skilled nationals (at home and abroad) are exceptionally low. However, skilled migration is a means of skills acquisition and human capital development, provides remittances, and is a powerful incentive for human capital investments at home. A major concern in the current financial crisis is that the pipeline for Africans studying abroad will be closed; paradoxically, this could potentially have bad consequences for increasing the stock of human capital in Africa.

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