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BRAIN DRAIN IN AFRICA:

The Case of Tackling Capacity Issues in Malawi's Medical Migration

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THE AFRICAN CAPACITY BUILDING FOUNDATION

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This Occasional Paper shows that international migration reflects two capacity imperatives. First, it reflects differentials in the productive capacities of education systems and the absorptive capacities of local and foreign labor markets. Second, migration need not be a zero-sum game as source countries can benefit from brain circulation and brain gain if certain conditions are put in place. This suggests that countries need the capacity to track and monitor their own diaspora—identifying who they are, where they live, what they do, and what they might be interested in doing if they return to the homeland.

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FOREWORD

The past decade has seen developing countries losing large numbers of health care professionals to developed countries, including Malawi, one of the Sub-Saharan countries hit hardest by the brain drain of health workers, particularly nurses.

In this strategic paper, the African Capacity Building Foundation shows how African countries can tackle the brain drain by understanding the emigration of medical personnel from Malawi, which in ways mirrors the wider African experience but is also unique. Like much of Sub-Saharan Africa, Malawi has poor health indicators, reflecting its low capacity to deliver quality health care. This situation is due in part to the limited capacity for training physicians and in part to the massive emigration of health workers, especially in the 1990s and early 2000s.

The paper suggests that local training of medical personnel has neither plugged the capacity deficits nor increased retention rates. Given the economic realities in Sub-Saharan Africa and the allure of developed countries, many locally trained physicians choose to emigrate. The paper also finds that Malawi, like much of Sub-Saharan Africa, is a victim of regional developments. Owing to the migration of physicians from South Africa to OECD countries, Malawi has turned to recruiting doctors from other African countries, tightening capacity constraints elsewhere in the region. Now, after years of criticizing international migration, Malawi has begun devising programmes that seek to maximize benefits from this reality, culminating in a policy for diaspora engagement.

The paper's objectives are threefold. First is to understand the state and extent of the brain drain challenge in Africa with an appropriate country case study. Second is to map the strategies, approaches and initiatives countries undertake to address brain drain issues. Third is to identify lessons and good practices in addressing the key capacity needs, specifically defining the roles of state and non-state actors.

Important findings emerging include that international migration reflects differentials in productive capacities of education systems and the absorptive capacities of African and foreign labour markets. But migration need not be a zero-sum game. Source countries can benefit from brain circulation and brain gain if the right conditions are put in place. So, countries need the capacity to track and monitor their diaspora—identifying who is in their diaspora, where they live, what they do, and what they might be interested in doing if they were to return to the homeland.

In summary, beyond developing the requisite skills for the continent, coordinated capacity building efforts towards getting them to be harmonised, retained and utilised on the continent is critical for achieving the continent's development agendas.

Professor Emmanuel Nnadozie
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ABBREVIATIONS

ACBF	African Capacity Building Foundation
AU	African Union
DECMR	Development Economics, Migration and Remittances Unit
EHRP	Emergency Human Resources Programme
GDP	Gross domestic product
IOM	International Organization for Migration
MIDA	Migration and Development for Africa
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome
NHS	National Health Service
OECD	Organisation for Economic Co-operation and Development
RQAN	Return of Qualified African Nationals
SSA	Sub-Saharan Africa
TOKTEN	Transfer of Knowledge through Expatriate Nationals
UN	United Nations
UN DESA	United Nations Department of Economic and Social Affairs
UNICEF	United Nations Children's Fund
UK	United Kingdom
US	United States
USD	United States Dollar
WHO	World Health Organization

EXECUTIVE SUMMARY

Since the turn of the century, global migration has grown hugely. However, the past decade has seen developing countries losing large numbers of health care professionals to developed countries. The voluntary migration of health workers from developing to developed countries diminishes health systems in low-income countries. It also threatens the achievement of the health-related Sustainable Development Goals.

Malawi now faces severe staffing shortages in the health sector and high migration of health workers. Some estimates show that Malawi trains 60 nurses a year, but loses around 100, more than half of them going to the United Kingdom. Yet the country also had vacancies in all nursing and clinical cadres, with a horrific 75 percent vacancy rate for nurses. Only 28 percent of targeted clinical officers and 40 percent of targeted nurse midwife cadres were filled, yet they carry out the bulk of emergency obstetric care.

Changes in political and economic developments in the region in the past two decades have also affected the destination and composition of the stock of Malawian emigrants. In 1990, half of all Malawian emigrants lived in Zimbabwe, followed at some distance by Zambia (14 percent) and South Africa (11 percent). However, with the cessation of hostilities in Mozambique and the economic difficulties in Zimbabwe, the share of Malawian emigrants to Mozambique rose from 2 percent in 1990 to 20 percent by 2000 and to 25 percent by 2015—and the share of emigrants to Zimbabwe fell from 56 percent in 1990 to 34 percent in 2015.

Migration of Health Workers from Malawi

Until 1991, Malawian doctors who emigrated were almost entirely those who stayed in OECD countries after their training. The creation of Malawi's first medical school coincided with the political liberalization and economic turmoil of the 1990s. As soon as Malawi began local training of doctors, the nature of migration changed, but results remained the same. Two hypotheses. First, the first three years of training for the first cohorts of medical students in Australia and the UK may have reinforced an affinity for foreign medical traditions and the desire to work abroad after qualification. Second, due to a lack of postgraduate training facilities in Malawi, the historical legacy of using medical training as a self-empowerment tool persists because Malawian doctors still go abroad for specialist training.

In contrast, the migration of nurses became notable only after the collapse of the one-party regime in the early 1990s. Before 1993, Malawi still controlled the movement of people, and all civil servants needed government clearance to go abroad, even on holiday. Then, during the transition to democracy, the new government could not keep up with aggressive recruitment drives for nurses by UK recruiters.

Local training of doctors and upgrading of nurses sharply increased the output of health workers, but it was less effective as a scheme to retain skilled workers. Coupled with the low number of graduates from the country's only medical school, emigration tightened

staff shortages. In 2004, Malawi had 1.1 doctors and 25.5 nurses for every 100,000 people—so the entire country had only about 250 doctors. In comparison, neighbouring Tanzania had 2.3 doctors and 36.6 nurses per 100,000 population in 2004, while the regional density in Africa was 22 doctors and 90 nurses per 100,000 population. Such a low density of health workers impaired the coverage and quality of health services.

Emergency Human Resources Programme

In 2004, the government declared a "human resource crisis" in the health sector and launched a six-year Emergency Human Resources Programme (EHRP) the next year. At the time, Malawi had the lowest doctor staffing levels in Southern Africa and few Malawian-born specialists, with most specialist posts running at 80–90 percent vacancy rates and many positions filled by expatriate doctors. In addition, the disparity in the staff distribution was huge between urban and rural areas. Although more than 80 percent of Malawi's people reside in rural areas, half of Malawi's doctors worked in central hospitals, and an astounding 16 of 23 district hospitals did not have a single doctor.

The EHRP stemmed the outflows, especially of nurses, and increased the output from training institutions. Graduates from Malawi's four main health training institutions rose from 917 in 2004 to 1,277 in 2009. Physician graduates from the College of Medicine increased from 18 in 2004 to 31 in 2009, as the annual output of clinical officers doubled and that of laboratory technicians quintupled to 131. At the same time, the migration of nurses declined.

Although the creation of the Kamuzu College of Nursing and the School of Medicine increased production of nurses and doctors, the limited number of graduates cannot meet Malawi's capacity challenges, leaving Malawi still dependent on foreign medical expertise and volunteers. While local training of doctors and expanding nurses' training partially alleviates capacity deficits, both have had less effect as retention schemes. Locally trained doctors are just as likely to migrate as foreign-trained doctors. The EHRP demonstrated that targeted incentive schemes can retain skilled health workers, especially for lower cadres of health workers. But it requires huge technical and financial assistance from donors.

Prospects for Brain Circulation through Short-term Cyclical Migration

The potential to physically tap into the pool of diaspora resources depends on the repertoire of skills among the diaspora and on the strength of ties that the diaspora has with the homeland. On leaving Malawi, about 80 percent of emigrants were employed and the other 20 percent were either unemployed or below employment age. For the employed, the single largest category was public services (academia, civil servants, and public service—49 percent), followed by those in the private sector (30 percent).

There is no record that Malawi has made any serious effort or formulated any initiatives to tap into the diaspora as a source of any type of capital. Nor has the diaspora participated in initiatives to transfer skills physically, virtually or through mentoring. Of six PhDs and 20 Master's degree holders, only two

people said they had been involved physically in a skill transfer programme while one participated in a virtual skills transfer (supervising a PhD thesis).

Half the respondents were not willing or not sure about returning to Malawi permanently, but two-thirds were willing to return on a short-term basis as part of a skill transfer programme. Among the latter, 46 percent were willing to return for at most one month, 30 percent for one to two months and 17 percent for three to six months. Seven of the Malawians willing to come on a short-term basis had served as short-term technical experts in a dozen countries across Africa.

Over half the respondents who expressed willingness to return permanently indicated that although "the heart was willing" they saw several barriers to their return. The main barrier was economic uncertainty (lack of a foreseeable source of livelihood in Malawi) followed by the need to maintain legal status, citizenship and visa requirements in the country of residence, and by political or legal restrictions.

In the short term, cyclical migration of skilled people—brain circulation—will require serious programming and resource mobilization. Twenty-one of the 28 respondents willing to come on a skills programme expected some assistance from the government. The single largest requirement was a return air ticket, followed by accommodation and, to a lesser degree, medical insurance and local transport.

Malawi does not have the capacity to monitor migration, skilled or otherwise, for the destination, demographics and skill profiles of its diaspora.

Diaspora programmes are insufficient for engaging Malawians living abroad. Lacking capacity in policy development, Malawi relied on the International Organization for Migration to develop its diaspora engagement programme. It now lacks the capacity for policy implementation, reflected in part in the government's inability fully resource the diaspora section in the Ministry of Foreign Affairs for full-scale implementation of the policy.

Key Recommendations for Malawi

The government of Malawi needs to expand its output from health training institutions by increasing the capacity of existing institutions and creating new ones, taking into account domestic needs and allowing for attrition through internal brain waste and migration.

To strengthen the commitment to serve Malawi, the government needs to ensure that medical students from the new private medical school have fair access to the publicly funded Universities Loan Scheme at comparable terms and conditions, including bonding and residency.

Relevant civil service commissions, the Department of Human Resources Development and Management, and training institutions should work with the Ministry of Finance to anticipate and provide seamless absorption from medical schools for graduates from health training institutions.

The government of Malawi should prioritize globally competitive or endangered professions and transparently adjust their remuneration, within a context of fair civil service salary

structures (not alienating other professions). To the extent that Malawi's human resources for health gaps persist, the government should negotiate a successor program for continuing intervention.

Recommendations for Other African

Governments

Even with no external migration, Africa would still lack the capacity to meet its domestic demand for health workers, let alone WHO's minimum standards of quality of care. The output from Africa's 87 medical schools is insufficient to cover Africa's own requirements. In other words, while accepting that emigration of doctors imposes huge human and financial costs for sending African countries, international migration of doctors is neither the main cause of health care shortages in Africa, nor would its reduction be enough to redress the African human resource crisis.

African governments need to increase their support towards institutions that coordinate development of capacity for producing skilled cadres commensurate with individual economies' internal demand for special skills. Some skills could be internationally competitive and locally endangered, but the strategic aim is to satisfy local demand first.

African countries must boost their capacity to prioritize, nurture and manage globally competitive professions by increasing salaries and benefits, within a context of fair salary structures. The African Union as a cooperating forum should lead negotiations with major receiving nations, preferably through the OECD, for assistance on salary top-ups or such other allowances that increase sending countries' salaries and benefits.

In a globalized world, African countries need to transform the brain drain into export as an integral strategy of economic diversification. African countries must invest in labour market research and analysis to inform their diaspora support services and improve government engagements with diasporas.

If African governments choose to promote or manage migration, they first need to be clear about the portfolio of services to be offered before, during and after migration—and ensure that provision of diaspora services is cost-reflective. Engagement on return visits should reflect the true opportunity cost and value for money, because in the long run Africa cannot rely on donors to facilitate return trips.

* * *

In sum, international migration reflects two capacity imperatives. First, it reflects differentials in the productive capacities of education systems and the absorptive capacities of local and foreign labour markets. Second, migration need not be a zero-sum game—source countries can benefit from brain circulation and brain gain if certain conditions are put in place. This suggests that countries need the capacity to track and monitor their own diaspora—identifying who they are, where they live, what they do, and what they might be interested in doing if they return to the homeland.

INTRODUCTION

A Focus on Malawi's Emigration

The voluntary migration of health workers from developing to developed countries is a well-recognized contributor to weak health systems in low-income countries. It is also a primary threat to achieving the health-related Sustainable Development Goals. Although such movements occur within and across national borders, the "brain drain" relates to skilled workers moving across national boundaries.[1] The past decade has seen developing countries losing large numbers of health care professionals to developed countries, including Malawi, one of the countries in Sub-Saharan Africa feeling the brain drain of health care professionals in general—and nurses in particular—the hardest.

Malawi faces severe staffing shortages in the health sector and high migration of health workers. Densities of health workers to patients in 2009 were 0.019 physicians and 0.343 nursing and midwifery personnel per 1,000 population.[2] Some estimates show that Malawi trains 60 nurses a year, but loses around 100 nurses annually, more than half of them going to the United Kingdom (UK). Of Malawian nurses 17 percent were abroad in 2000, and 633 nurses had been "validated" to work overseas.

Yet the country recently also had vacancies in all nursing and clinical cadres, with a horrific 75 percent vacancy rate for nurses (Chimenya and Qi 2015). The 2010 needs assessment of emergency obstetric and new-born care services conducted by the Ministry of Health and its partners also found very high vacancy rates for mid-level providers: the posts of only 28 percent of targeted clinical officers and 40 percent of targeted enrolled nurse midwife and nurse midwife technician cadres were filled, yet these cadres carry out the bulk of emergency obstetric care (Ministry of Health, UNICEF, UNFPA, World Health Organization, and AMDD, 2010).

Through this paper, the African Capacity Building Foundation (ACBF) seeks to understand how African countries can tackle the brain drain by focusing on emigration of medical personnel from Malawi, which in part mirrors the wider African experience but is also unique. Like much of Sub-Saharan Africa, Malawi has poor health indicators, reflecting low capacity to deliver quality health care. This lack is blamed in part on limited capacity for training physicians and on the massive loss of capacity due to emigration of health workers, especially in the 1990s and early 2000s. At independence in 1964, the country did not have a university, let alone a medical school, and relied on foreign training of physicians resulting in high "defections" and low retention rates.

This paper suggests that, like most countries in Sub-Saharan Africa, local training of medical personnel has neither plugged these capacity deficits nor increased retention rates. Given the economic realities in Sub-Saharan Africa and the allure of countries in the Organisation for Economic Co-operation and Development (OECD), many locally trained physicians migrate.

[1] See the Annex.
[2] Global Health Observatory (http://www.who.int/gho/en/).

The paper also finds that, like much of Sub-Saharan Africa, Malawi is victim of regional developments. Owing to growth in migration of physicians from South Africa to OECD countries, Malawi has turned to recruiting doctors from other African countries, exacerbating capacity constraints elsewhere in the region.

Finally—like much of Sub-Saharan Africa—after years of criticizing international migration, Malawi has accepted it as a *fait accompli* and begun devising programmes that seek to maximize benefits from this reality, culminating in the development of a policy on diaspora engagement (Government of Malawi, 2015).

Reversing the Brain Drain

Since the turn of the century, global migration has grown hugely. In 2015, the global immigrant population stood at 243.7 million, an increase of 41 percent from 2000 (UN DESA, 2015). For regions hosting migrants, Asia's fast growth of 52 percent since 2000 has led to parity of its immigrant population with Europe (about 76 million each), while North America comes a distant third (55 million). In 2015, the population of migrants of African origin across the world was 32.5 million, for a 53 percent increase after 2000. Africa's share of the global migrant population marginally increased from 12 percent in 2000 to 13 percent in 2015.

Although we cannot estimate how much of the global or African migration is of skilled workers (the brain drain), Docquire and Marfouk (2006) suggested that the brain drain was more extensive than ever before. Whereas total migration to OECD countries increased by 28 percent between 1990 and 2000s, that of skilled workers to OECD countries surged by 70 percent.

With growth in general migration and migration of skilled persons continuing unabated, governments have shifted their attitudes to the role of their diasporas in national development. After being ignored in or rejected from national debate for many years, populations abroad are sometimes now judged as "heroes" rather than "traitors". Instead of attacking receiving countries and trying to insist that their citizens return home permanently, governments of sending countries are gradually realizing that the permanent stay of some of their population abroad can be an asset for development (World Bank, 2011).

Governments are rushing to reinforce the legal and social links between themselves and the population abroad in several ways. Recent efforts have sought to design programmes that provide diaspora support services that strengthen ties between the diaspora and home countries, especially encouraging institutional change for philanthropy, tourism, knowledge networks and capital funds. In the political realm, many states with effective electoral systems are redesigning structures of representation, extending political rights to their population abroad through the right to vote, the right to have dedicated representatives and the right to be elected. Populations abroad are being increasingly included as informal diplomatic actors (Ragazzi, 2014).

In Sub-Saharan Africa, the health sector is the most affected by the migration of professionals. The sector is both an

input into and an outcome of sustainable development interventions, key to which are human capacities and skilled workers. For successful implementation of Agenda 2063 of the African Union (AU) and the 2030 Agenda for Sustainable Development, health and related issues, which are all inextricably woven into other sustainable development outcomes, need special attention.

Evidence shows that, though critical health care shortages exist in all developing countries, Sub-Saharan Africa concentrates them: of the 57 countries that the World Health Organization (WHO) recognizes as having such shortages, 36 are in Sub-Saharan Africa. African countries carry 24 percent of the global burden of disease, but have access to just 3 percent of the world's health care workers and less than 1 percent of its financial resources. A key reason for the shortage of Sub-Saharan Africa health personnel is that large shares of doctors and nurses now work abroad. Malawi is among the countries worst affected by the shortage of health human resources and migration as a proportion of the health workforce. For instance, WHO (2006) shows that out of 4,000 nurses active in Malawi in 2005, 453 who had been trained in the country were reported to be working in OECD countries. Similarly, of the roughly 250 doctors who had graduated from the University of Malawi—College of Medicine between 1992 and 2005, 10 percent were reportedly registered with the UK General Medical Council.

So, what capacities are required to retain skilled professionals, reverse the brain drain or ensure a net socio-economic benefit from it? It is against this background that ACBF is conducting a study on the "Brain Drain in Africa: Tackling the Capacity Issues in Malawi's Medical Migration".

Objectives of the Study

The main objective of the study was to document Malawi's experience of the medical brain drain and draw some lessons for other African countries, paying particular attention to the just-mentioned capacities. The specific objectives were to conduct a mapping of the strategies, approaches and initiatives undertaken by countries to address brain drain issues; identify the specific capacity arrangements (including institutional, systems and processes, human) and/or challenges with respect to the issue; identify the lessons learned using the case of Malawi and beyond; and suggest ways forward on key capacity needs and the roles of state and nonstate actors.

2. GLOBAL AND AFRICAN MIGRATION TRENDS

Global Migration

Global migration has grown tremendously and as it has, developing countries have increasingly become immigration destinations in their own right. In 2015, the global immigrant population stood at 243.7 million, an increase of 41 percent from 2000. Although the majority of immigrants still lived in developed countries (58 percent), immigrant populations in developing countries grew faster (up 49 percent) than those in developed countries (up 36 percent—Table 1). Traditional destinations for migration still dominate, but Asia's steep growth of 52 percent after 2000 has led to immigrant population parity with Europe, while North America follows with 55 million people (Table 1).

Table 1. Global Distribution of Immigrant Populations, 2000–2015

Area	2000 (millions)	2015 (millions)	Change (millions)	Change (%)
World	172.7	243.7	71.0	41
Developed Countries	103.4	140.6	37.2	36
Developing Countries	69.3	103.2	33.9	49
Europe	56.3	76.1	19.8	35
Asia	49.3	75.1	25.8	52
North America	40.4	54.5	14.1	35
Africa	14.8	20.6	5.8	39
Latin America and the Caribbean	6.6	9.2	2.6	39
Oceania	5.3	8.1	2.8	53
US	34.8	46.6	11.8	34
Germany	9.0	12.0	3.0	33
Russian Federation	11.9	11.6	-0.3	-3.0
Saudi Arabia	5.2	10.9	5.7	110
UK	4.7	8.5	3.8	81
United Arab Emirates	2.4	8.1	5.7	238
Canada	5.5	7.8	2.3	42
France	6.2	7.8	1.6	26
Australia	4.3	6.8	2.5	58

Source: UN DESA (2015).

Asia has experienced the fastest growth in emigrant population (i.e. people living abroad), accounting for six of the top 10 sending countries. Between 2000 and 2015, India's emigrant population grew by 7.7 million (97 percent) to lead all countries with a stock of 15.6 million emigrants. In 2015, other countries with many emigrants included Mexico, Russia, China and Bangladesh. The impact of the war in Syria is also evident, resulting in a 641 percent increase in emigration from that country. In relative terms, countries with the highest percentage of people living abroad in 2015 included Jamaica (39 percent), Bosnia and Herzegovina (38 percent), Trinidad and Tobago (27 percent), Armenia (27 percent), the West Bank and Gaza (26 percent) and Kazakhstan (25 percent) (UN DESA 2015).

Although new destinations have led to new migration "corridors", traditional corridors still dominate. In 2015, the Mexico–United States corridor remained the largest in the world, with 12 million migrants. The India–United Arab Emirates corridor, with 3.5 million people, is now the second largest, replacing the Russia–Ukraine corridor (3.3 million), followed by the Ukraine to Russia corridor (3.2 million) and the Bangladesh– India corridor (3.2 million) (UN DESA 2015). For corridors in the former Soviet Union, many natives became migrants without moving when new international boundaries were drawn.

Emigration in Africa

Countries in Africa are the main destinations for Sub-Saharan Africa migrants. For other African migrants (including those from North Africa), destination countries outside Africa are equally important. Africa's emigrant population has continued to grow in absolute and relative terms with net migration increasing from 7 million to 12 million. In 2015, the population of migrants of African origin across the world was 32.5 million, a 53 percent increase from 2000. In 2015, Africa hosted 20.6 million immigrants, a 39 percent increase from 2000. Africa's share of the global population increased marginally from 12 percent in 2000 to 13 percent in 2015.

The five Sub-Saharan countries with the most immigrants in 2015 were South Africa, Côte d'Ivoire, Nigeria, Kenya and Ethiopia (Table 2). Since 2000, there have been significant changes in the stock of migrants in Africa with the bulk of this increase (62 percent) accounted for by these five countries, led by South Africa and Nigeria. South Africa's stock comprises economic migrants, but Kenya's and Ethiopia's have a very large refugee component.

Table 2. African Countries with the Most Immigrants

	Host Region/Country	2000 (million)	2015 (million)	Change (million)	Change (%)
	Africa	**14.8**	**20.6**	**5.8**	39
1	South Africa	1.00	3.14	2.14	214
2	Côte d'Ivoire	1.99	2.18	0.19	10
3	Nigeria	0.49	1.20	0.71	145
4	Kenya	0.70	1.08	0.38	54
5	Ethiopia	0.61	1.07	0.46	75
6	South Sudan	0.00	0.82	0.82	
7	Libya	0.57	0.77	0.2	35
8	Uganda	0.63	0.75	0.12	19
9	Burkina Faso	0.52	0.70	0.18	35
10	Congo Dem. Rep.	0.74	0.55	0.19	26

Source: UN DESA (2015).

Owing to their proximity to Europe and the Middle East, and to their colonial ties, North African countries dominate Africa's emigration and the former colonies still send significant numbers of emigrants to what used to be the "mother country". In 2015, Egypt had the largest number of emigrants (3.27 million) followed by Morocco (2.83 million) and Algeria (1.76 million each). In the 15 years, there has been a huge increase in emigration due to economic developments as well as civil strife, especially from Zimbabwe (up 177 percent), Sudan (120 percent), Egypt (92 percent) and Nigeria (82 percent) (UN DESA 2015).

Economic Impact of Educated Migration

Migrants' remittances are the most tangible and least controversial link between migration and development of the homeland. In countries with established migration traditions, remittances are important for reducing the incidence and severity of poverty. They help households diversify their sources of income while providing a much-needed source of savings and capital for investment. Remittances are also associated with increased household investments in education, entrepreneurship and health, all of which frequently have high social returns. Remittances from many countries are relatively stable, and may also behave countercyclically to the economic cycle of the recipient country.

Although Africa's share of officially recorded global remittances is low and has declined, its share in remittances still exceeds its share in global migration stocks. Global remittances have surged over the past three decades from an annual average of USD92 billion in the 1990s to USD553 billion in the 2010s (Table 3). In 2015, although Africa accounted for just over 8 percent of global migrant stocks, it averaged 11 percent of global remittances (USD30.45 billion). Still, between 1980 and 2015, although Africa's remittances grew in absolute terms from USD6.4 billion to USD62.4 billion, Africa's share of global remittances fell, from a high of 16 percent in the 1980s (see Table 3).

Table 3. Trends in Officially Recorded Global Remittances, 1980–2015

	(USD billion, annual)			
	1980–89	1990–99	2000 – 09	2010–16
World	**40.96**	**92.15**	**273.38**	**552.54**
Africa	6.36	10.62	27.95	62.37
Asia	10.66	25.55	102.25	257.72
Caribbean	0.70	2.98	12.18	20.84
Europe	19.01	39.30	89.44	154.51
North America	2.15	6.73	24.42	32.27
Oceania	1.59	2.92	3.45	4.57
South America	0.49	4.05	13.67	20.17

Source: World Bank (2016)

Remittances to Africa

Although Africa's absolute officially recorded average remittances have been growing, they are inequitably distributed and remain a small fraction of receiving economies' gross domestic product (GDP). Three countries (Nigeria, Egypt and Morocco) accounted for three-quarters of Africa's remittances receipts of USD60.8 billion in 2015 while the top seven countries, with remittances of more than USD1 billion, accounted for 85 percent of Africa's remittance receipts that year (Table 4).

Table 4. Migrants' Officially Recorded Remittances to Africa

Region/Country	(USD million, annual)		Share of Remittances in GDP
	2000–2009	2010–2016	2015
World	**273,377.13**	**552,539.71**	
Africa	**27,017.76**	**60,803.51**	
Nigeria	9,425.80	20,427.14	4.0
Egypt	4,879.62	17,163.24	6.0
Morocco	4,606.45	7,064.56	7.0
Algeria	1,679.10	1,997.69	1.0
Ghana	83.17	1,799.69	6.0
Senegal	775.89	1,598.52	12.0
Kenya	387.70	1,244.46	2.0
South Africa	563.10	977.39	0.0
Uganda	432.80	925.15	4.0

Source: World Bank (2016)

Africa's remittance receipts grew by 125 percent between the two periods (2000–2009 and 2010–2016). Ghana saw the fastest growth, followed by Egypt and Kenya. However, Senegal aside, remittances make a minor contribution to GDP in the major receiving countries. Yet several small African economies are overly reliant on remittances: in 2015, seven countries derived more than 10 percent of their GDP from remittances, led by Liberia (31.2 percent), the Gambia (22.4 percent) and Comoros (20 percent). In Southern Africa, Lesotho is the most reliant, mainly from cyclical migration to South Africa.

Holding constant the number of emigrants, remittances receipt depends on the dominant migration corridors that a country is involved in and the proximity of the country to its former colonial power. For continental Africa as whole, countries receiving high amounts of remittances are in North Africa and all participate in migration beyond the continent. Algeria is in the largest migration corridor for an African country: the Algeria–France corridor accounted for 1.4 million people in 2015; Morocco is involved in two major corridors, Morocco–France with 926,466 migrants and Morocco–Spain with 700,000; Egypt is also involved in two major corridors: Egypt–Saudi Arabia (728,608) and Egypt–United Arab Emirates (351,985).

Apart from Nigeria, Sub-Saharan countries have low remittance receipts because of their involvement in regional and low-return migration corridors. The largest corridor with a Sub-Saharan country is the Burkina Faso–Côte d'Ivoire corridor, involving some 1.3 million people, followed by the reverse Côte d'Ivoire–Burkina Faso corridor, involving 540,779 people. Due to recent economic problems in Zimbabwe an emerging corridor in Southern Africa is the Zimbabwe–South Africa corridor involving 475,406 people in 2015. Nigeria presents a peculiar case of fairly balanced and diversified migration by destination: of its 1.1 million emigrants, 237,000 live in the US and 400,000 in Europe (of whom some 250,000 are in the UK, the former "mother country").

Key Messages

Given rising volumes of remittances to Africa in absolute terms, which exceed official development assistance received by African countries, there is need for Sub-Saharan Africa to better tap diaspora remittances. If well-managed and efficiently used, these can help to finance development goals. In the same vein, human and institutional capacities need to be built to mobilize and use the flows of remittances while linking them to the creation of businesses and trade networks, and the stimulation of human capital formation at home.

3. MIGRATION FROM AFRICA: A FOCUS ON MALAWI

Some History

Post-Colonial Migration in the Single Party Era, 1964–1993

Malawi's structure of production, composition of economic output and nature and pace of economic development have long reflected international migration, principally of unskilled labourers to South African and Zimbabwean mines. The record suggests that for over a century (1880s–1980s), the South African Chamber of Mines, through the Witwatersrand Labour Services (WENELA) recruited Malawian labour until the practice was stopped in 1988. Besides those who migrated on official contracts, significant undocumented migration is also suspected to have occurred and at its peak in the early 1970s the stock of migrant labour was estimated at 400,000, equivalent to 10 percent of Malawi's population at that time (Christiansen and Kydd, 1983).

The dynamics of Malawian migration have been underlaid by private economic factors and national political-economy considerations. Whereas the impetus for labour migration in the colonial period came from push factors due to imposition of the "hut tax" by the colonial government and Malawi's labour reserve status in the Federation of Rhodesia and Nyasaland, in independent Malawi, the dynamics of labour migration have been much related to political-economy factors.

For instance, subsequent to an airplane crash that killed 74 returning miners in Francistown, Botswana in 1974, the Malawi government unilaterally banned all formal labour recruiting activities by WENELA. At the time, some 130,000 Malawians were working in South Africa of whom 119,000 were under the Chamber of Mines (Christiansen and Kydd, 1983) and remittances represented Malawi's third-highest foreign exchange earner. Apart from foreign reserves, migration had a fiscal impact as well: labour contracts stipulated that part of the wages would be paid in South Africa and the Chamber of Mines would withhold the other part of the wages and severance payments to be remitted to Malawi via consular channels, and the migrants got paid in local currency, net of taxes.

Although official labour recruitment would resume in 1977 under a new labour agreement managed by the Employment Bureau of Africa, the number of migrants was capped at about 15 percent of the pre-ban levels. In March 1988, the South African Chamber of mines finally banned labour recruitment because Malawi refused to conduct pre-recruitment HIV tests on miners going to South Africa. While the government lost a source of exchange and tax revenues, the socio-economic impact was more significant, particularly for diversification of the rural economy, resulting in increases in rural–rural migration to estates in Malawi.

Migration in the Multiparty Era, After 1993

With the political and economic liberalization of the 1990s, formal cyclical international migration of unskilled

labour was replaced by informal migration of vendors and by skilled migration. In 2015, the number of Malawians living in other countries stood at 302,515, equivalent to only 2 percent of the total population but a 120 percent increase from the 136,566 recorded in 1995. The bulk of these emigrants (93 percent) not only lived in Africa but in Malawi's "neighbourhood" with three countries— Zimbabwe (102,849), Mozambique (77,488) and South Africa (76,605)—accounting for close to 85 percent of the stock of Malawian emigrants.

Europe is the main overseas destination, hosting some 19,557 Malawians in 2015 (equivalent to 6.5 percent of all Malawian emigrants). The bulk of this stock was based in the UK, whose stock has grown from roughly 11,744 in 1995 to 19,557 in 2015. This increase masks the relative decline in migration abroad. Between 1990 and 2015, the share of migrants to Europe (UK) declined from 9 percent to 6 percent of all Malawian migrants. Other migrants abroad in 2015 included those in Canada (1,266) and Australia (981—Table 5).[3]

Table 5. Stock of Malawian Emigrants, 1990–2015

	Year					
Host	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**
World	**121,005**	**138,566**	**184,770**	**224,606**	**271,159**	**302,515**
Africa	**109,794**	**126,476**	**170,951**	**208,653**	**252,001**	**280,881**
Zimbabwe	68,618	67,945	92,989	102,611	103,281	102,849
Mozambique	2,013	19,997	35,695	55,058	74,598	77,488
South Africa	13,336	17,067	25,638	30,697	48,994	76,605
Zambia	17,073	12,382	6,938	9,665	13,467	11,258
Tanzania	7,218	7,121	7,098	7,048	7,011	6,907
Botswana	713	1,150	1,709	1,579	3,459	4,596
Europe	**10,915**	**11,744**	**12,867**	**14,660**	**17,433**	**19,557**
UK	10,474	11,110	11,934	13,376	15,908	17,871
Others						
Canada	293	338	391	529	699	981
Australia	360	468	550	750	1,000	1,266

Source: UN DESA (2015).

Changes in political and economic developments in the region in the past two decades have also affected the destination and composition of the stock of Malawian emigrants. In 1990, half of all Malawian emigrants lived in Zimbabwe, followed at some distance by Zambia (14 percent) and South Africa (11 percent). However, after cessation of hostilities in Mozambique and economic difficulties in Zimbabwe, within a decade the share of Malawian emigrants to Mozambique rose from 2 percent of migrants in 1990 to one in every five by 2000 and to one in every four by 2015. The share of migration to

[3] Perhaps the greatest weakness of the UN DESA dataset, from the Malawian viewpoint, is the absence of data on Malawians in the US for all years. The dataset, "North America," is Canada only.

Zimbabwe declined from 56 percent in 1990 to 34 percent in 2015 (see Table 5).

Migration of Health Workers from Malawi

Background

Unlike its partners in the Federation of Rhodesia and Nyasaland at independence, Malawi had no school of medicine, let alone a university. The colonial government was reluctant to train doctors in Malawi, and at independence the country had just five doctors of all races (Lwanda, 2002). Malawi's first two medical graduates, Dr Malikebu (who graduated in 1917) and Dr Kamuzu Banda (1925) were prevented by the colonial government from returning to Malawi. Dr Malikebu remained in the US eight more years before being allowed to return while Dr Banda only returned 33 years after graduation. The rationale for barring them was purely racist. By virtue of their qualification, these African doctors were more qualified than some of the whites who were serving in hospitals, and the debate was whether European nurses should serve under a black doctor and whether African doctors would be afforded access to social amenities that at the time were reserved for whites only. To avoid this debate, until 1953 no single African doctor, registered nurse, health inspector or member of any other senior professional cadre had been trained or employed by the colonial government.

Although Malawi's first president was a medical doctor, it took the country a quarter of a century to begin training its own physicians. After the breakup of the Federation, Malawian students were even less likely to benefit from Zimbabwean and Zambian medical schools, and Malawi had to depend on the UK for training its doctors. Dr Banda's proposal to introduce cost sharing in Malawian hospital immediately after independence ran counter to pre-independence nationalistic rhetoric and generated a cabinet crisis, in which over half his cabinet was either fired—or resigned in sympathy with those fired. This experience fostered some resistance to any further reforms of the health care system, including efforts for Malawi to have its own training institutions. Training abroad depended on the good grace of the UK government, and most years fewer than 15 qualified. Efforts to establish a Malawian medical school did not bear fruit until 1991, by which time the ambition of most would-be doctors appeared to be to "qualify and work abroad" (Lwanda, 2002).

An equally sad story can be told about the training of state registered nurses, because it took Malawi 15 years after independence to start training registered nurses to diploma and degree levels. Hitherto, the health system relied on auxiliary health personnel, like paramedics, and enrolled nurses/midwives, who practised with certificates. In 1979, Malawi created the Kamuzu College of Nursing, which later joined the University of Malawi initially as a diploma-awarding institution and later as a degree-awarding college. Today it remains the only nursing college that trains nurses to degree level. The bulk of Malawi's nursing personnel are nurse technicians trained in colleges owned by the Christian Association of Malawi and the government's own Malawi College of Health Science, a collection of government health training institutions for clinical officer, nurse and midwife technicians and medical assistants.

While the creation of the School of Medicine and the College of Nursing were steps in the right direction, they do not fill Malawi's capacity needs, leaving the country dependent on foreign medical expatriates and volunteers. In their first decade of operation, the College of Medicine graduated an average of 18 doctors a year and the Kamuzu College of Nursing about 60 nurses. Considering even internal migration to the private sector and civil society, the public health indicators remained very low. Combined with output from college run by Christian Association of Malawi and the Ministry of Health, Malawi still produces fewer than 1,000 nurses a year.

Until 1991, Malawian doctors who emigrated were almost entirely those who stayed after training in OECD countries. The creation of Malawi's first medical school coincided with political liberalization of the 1990s and economic turmoil such that as soon as Malawi began local training of doctors the country the nature of migration changed, but results remained the same. Lwanda (2002) offers two hypotheses: first, the fact that the first three years of training for the first cohorts of medical students was in Australia and the UK may have reinforced affinity for foreign medical traditions and the desire to work abroad after qualification. Second, due to lack of postgraduate training facilities in Malawi, the historical legacy of using medical training as a self-empowerment tool persists to this very day because at some point Malawian doctors still go abroad for specialist training.

In contrast, migration of nurses only became notable after the collapse of the one-party regime in the early 1990s, for two reasons. First, before 1993 Malawi still controlled movement of people and all civil servants needed government clearance to go abroad, even on holiday. Second, during the transition to democracy, the new government could not keep up with aggressive recruitment drives for nurses by UK recruiters.

Local training of doctors and upgrading of nurses sharply increased the output of health workers but it was less effective as a scheme to retain skilled workers. Coupled with the low number of graduates from the country's only medical school, emigration led to tight staff shortages. The World Bank (2008) suggest that in the first decade of its existence, the emigration of physicians trained in the country varied from 13.3 percent to 59.4 percent— for example, by 2002, 59 percent of the 493 doctors born or trained in Malawi were working abroad. By 2004, Malawi had 1.1 doctors and 25.5 nurses for every 100,000 people—meaning that the entire country only had about 250 doctors. In comparison, neighbouring Tanzania had 2.3 doctors and 36.6 nurses per 100,000 population in 2004, while the regional density in Africa was 22 doctors and 90 nurses per 100,000 population. The Malawi Ministry of Health reported a near 80 percent vacancy rate for registered nurses in 2003 and 65 percent in 2006. Such a low density of health workers heavily affected the coverage and quality of health services.

Emergency Human Resources Programme

In 2004, the government declared a "human resource crisis" in the health sector and launched a six-year Emergency Human Resources Programme (EHRP) the next year. At the time,

Malawi had the lowest doctor staffing levels in Southern Africa and had few Malawian-born specialists, with most specialist posts running at 80–90 percent vacancy rates and many positions filled by expatriate doctors. In addition, there was a huge disparity in distribution of the staff between urban and rural areas. Although over 80 percent of Malawi's population resides in rural areas, half of Malawi's doctors worked in central hospitals, and an astounding 16 of 23 district hospitals did not have a single doctor.

Emigration of health personnel was not the only reason for this dire situation. Others were the state's inability to train and employ enough health care workers; HIV/AIDS attrition among health workers; and difficult working conditions, poor resources and few career opportunities (MSH, 2010).

The EHRP was designed primarily to address the health crisis, and had massive technical and financial assistance from donors. It sought to match Tanzania's staffing levels (2.3 doctors per 100,000 population) by 2010. Central to this commitment was a need to improve staffing levels and increase the production of health workers through a coherent package of financial incentives and investments in local health training institutions. The programme had five elements (Table 6).

Table 6. Scope of the Emergency Human Resources Programme

Element	Description
1	Improving incentives for recruitment and retention of Malawian staff in government and mission hospitals through a 52 percent taxed salary top-up for 11 professional cadres, coupled with a major initiative for recruitment and re-engagement of qualified Malawian staff
2	Expanding domestic training capacity by over 50 percent overall, including doubling the number of nurses and tripling the number of doctors and clinical officers in training
3	Using international volunteer doctors and nurse tutors as a stop-gap measure to fill critical posts while more Malawians are being trained
4	Providing international technical assistance to bolster capacity and build skills within the Ministry of Health's human resources planning, management and development functions
5	Establishing more robust monitoring and evaluation capacity for human resources in the health sector, nested within existing health management information systems, which were strengthened to support the Essential Health Package

The EHRP stemmed the outflows, especially migration of nurses, and increased output from the training institutions. Total graduates from Malawi's four main health training institutions (Christian Association of Malawi, Malawi College of Health Sciences, Kamuzu College of Nursing, and College of Medicine) showed an annual overall increase of 39 percent (from 917 in 2004 to 1,277 in 2009). Physician graduates from the College of Medicine increased from 18 in 2004 to 31 in 2009 representing a 72 percent increase while annual output of Clinical Officers and Laboratory Technicians saw major gains, with the former doubling and the latter increasing five-fold to 131. Migration of nurses declined. During the EHRP, the number of pre-recruitment qualification validations for nurses fell from 98 a year in 2005 to 25 in 2008, and to 8 in 2009 (Table 6).

Table 7. Nurses Validated by Nurses Midwives Council of Malawi

Year	Number
2000	90
2001	111
2002	90
2003	81
2004	85
2005	98
2006	30
2007	23
2008	25
Total	**633**

Source: Chimenya and Qi (2015)

UK's National Health Service (NHS) suggest that a high share of Malawi's health professional emigrants to the UK may actually be part of the "brain waste" as they may be working in areas below their qualifications. According to the Global Commission on International Migration (2005), it is estimated that there were more Malawian doctors practising in the northern English city of Manchester than in the whole of Malawi. Moreover, the Guardian's online database shows that, in 2014, 479 Malawians were health professionals in the NHS's Hospital and Community Health Service, including 138 professionally qualified clinical staff and 108 qualified nurse/midwives from Malawi. In other words, although at least 633 nurses may have migrated to the UK in the 2000s, only 108 nurse/midwives were officially recorded as working in the NHS.

As touched on, several factors militate against the retention (or return) of Malawian doctors, including poor infrastructure of the Malawian medical system, which makes it unattractive to foreign and locally trained doctors alike. Although African doctors will practise under severe resource constraints, physician training models are based on the availability of laboratory and investigative equipment. Other factors include for doctors poor salaries, poor terms of service, and poor schooling facilities and prospects for their children; the difficulties that returning doctors would face in adjusting to changes in standards of living; reluctance to leave a secure job abroad; political aspects that manifest themselves as professional insecurity, intra-professional jealousies, restriction of academic and intellectual freedom, and the constraining of policy initiatives by political dogma or politically motivated priority setting (Chimenya and Qi, 2015).

In short, Malawi continues to implement human resource policies that frustrate medical graduates and encouraged emigration, even to equally poor countries in the region, *with* the sympathy of the average citizen. Although the government supports doctors' training, when 51 doctors graduated in 2015, the government announced that it had no resources to employ them during the 18 months of mandatory residency at a government hospital. Lacking a unified voice, the new graduate doctors appealed to the paramedics association to voice their case, but to no effect. The government only rescinded its decision a month later after a public outcry when Lesotho offered to hire 21 of the graduate doctors, and by which time the damage had been done, and some degree of patriotism eroded.

The reticence of Malawian doctors to return is also in part due to environmental and institutional conditions within the country's medical establishment. During one-party rule, a number of doctors stayed away out of fear, although attempts by some to return after the end of one-party rule faced overt and covert opposition from some Malawi-based senior doctors who feared that the return would dilute their incomes and their research and travel opportunities (Lwanda, 2002). That some medical power brokers were in private practice was, in the context of a small middle class, another limiting factor, as was the dominance of their voice. Finally are the effects of research funds emanating from external agencies, as well as the mechanisms, policies and networking systems that tend to deprive indigenous doctors of research opportunities, funding and international contacts.

Impact of Doctors' Migration

International migration has asymmetric benefits and costs for receiving and sending countries. For receiving countries, the benefits from doctors' immigration is self-evident—they get short-term relief from labour shortages, increase their human capital, and save on educational and training costs as they free-ride on developing-country investment. Importing the right people can also stimulate capacity for innovation and increase global competitiveness, and allow them to staff some of their under-served areas.

Although benefits for sending countries exist, one would be hard pressed to argue that they ever begin to offset the huge losses. The first benefit is that, in principle, source countries may eventually benefit from skills transfer, if their doctors return to their country of origin, so that migration can be viewed as an investment. In reality, though, the vast majority of migrating professionals do not return with their skills to their countries of birth. Second, source countries can benefit from financial gains through remittances. However, these do not (or would not) compensate for the loss because financial remittances are largely private, do not necessarily target or benefit the health sector and, if they do, do not aim to provide health as a public good.

Emigration of doctors imposes, of course, huge human and financial costs for sending countries, some whom rank among the world's poorest and are least capable of meeting these burdens. The obvious cost of doctors' migration to Africa is heavy, especially the loss of intellectual or human capital. It is estimated that lost human capital cost Africa more than USD5 billion in the decade after 1997 (IOM, 2007).

Perhaps the most crucial cost, however, is loss of returns on investment. When graduates leave their country of origin to practise medicine abroad, the financial impact on a country's health or education budget could be considerable. It has been estimated that the total monetary loss by developing countries when losing the health care workers they have trained is roughly USD500 million a year. For instance, estimates of the annual costs of providing medical education to governments are USD9 million in Ghana and USD20 million in Nigeria. At the micro level, the Kenyan Ministry of Health has estimated that in Kenya it costs about USD40,000–50,000 to train a doctor, and around USD25,000 to train a nurse. Compounded over 32 years of expected service, the estimated loss to society of an emigrant health worker a decade ago was almost USD518,000 per doctor and about

USD340,000 for a nurse. Similar costs were found for Malawi (Panulo et al., 2006).

Depending on the economic status of the country, the emigration of health personnel in one country can have knock-on effects on health sector capacity in other countries (Box 1 below).

While the link between migration and health outcomes is mainly anecdotal, it is commonly believed that migration has led to inequities in health care and condemned Africa to some of the world's worst health outcomes. Although Sub-Saharan Africa has 12 percent of the world's population, it controls about 1 percent of global economic resources and accounts for 27 percent of the world's burden of disease. In addition, Africa has just 3.5 percent of the world's health workforce and 1.7 percent of the world's physicians (Orelo and Yumbya, 2015). Africa has about 13 doctors per 100,000 population—the US and UK have 21 and 13 times as many doctors per 100,000 population.

The large exodus of doctors and other health workers is therefore likely to have hurt the training of new doctors and the quality of health services delivery, weakened health systems, lowered quality of care and resulted in loss of confidence in institutions that provide health and that train health workers.

The Global Response

The global community has undertaken initiatives, although their full impact on doctor migration is yet to be realized. Following the criticism of the UK by President Mandela of South Africa, the UK led in adopting the Commonwealth Code of Practice issued in 2003, and that for its NHS Code of Practice, issued in 2001 and revised in 2004. The latter requires NHS employers not to recruit actively from developing countries, unless an agreement with those countries' governments exists, and provides a list of agencies approved for ethical recruitment purposes.

The issue of doctor migration has been discussed at multiple international meetings, including the Kampala Meeting in 2008 and subsequent World Health Assemblies. Following the mandate given to the WHO to develop a protocol to stem the migration / physician / health worker crisis, in 2010 the World Health Assembly adopted the WHO Code of Practice on the international recruitment of personnel as a global framework for dialogue and cooperation.

Across OECD countries, governments are expanding education and training capacity and increasing intake in medical colleges, although the objective is not necessarily "self-sufficiency" but avoidance of excessive dependence on foreign health personnel to fill domestic needs. In the 2000s, the number of nursing graduates increased by at least 50 percent in Australia, France and the UK and doubled in Canada. In Australia, the number of places in medical schools doubled, while in Canada it increased by more than 50 percent. Receiving countries are also pursuing other policies to make the best use of the existing health workforce, including improving retention, enhancing integration in the health workforce, adopting a more efficient skills mix and improving productivity.

Although the solutions to Africa's migration of doctors seem to be self-evident, African governments lack the capacity to carry them out. Some have tried to provide realistic remuneration packages to enhance retention; incentives such as car loans, housing loans; regular appraisal for promotion; use of a quota system to recruit students from rural and marginalized areas; and a shift from bonding student doctors for a year or two after their training to serve in remote government hospitals.

However, there is a limit to which African governments can go, financially. Table 8 shows that although some African countries have increased doctors' salaries in the past decade, they cannot bridge the wage differential with major OECD countries. A doctor from Malawi or Zimbabwe can get 10 times their salary by moving next door to South Africa and, with a little more effort, get at least 20 times more in some OECD countries. Given economic conditions in Africa's smaller economies, there is not enough economic incentive to keep a determined doctor from migrating.

Table 8. Average Salaries for Doctors, Selected African and OECD Countries

Country		Average monthly wage (US D)	
		2004	2015
1.	Uganda	67	700
2.	Liberia	228	1,500
3	Kenya	250	1,400
4	Malawi	151	610
5	Ghana	473	1,200
6	Zimbabwe	250	400 + partner support
7	South Africa	2,836	7,282
8	UK	7,676	12,122
9	Canada	8,472	12,918
10	US	10,554	15,000

Source: Orelo and Yumbya (2015)

Although from a financial perspective improving retention in developing countries is challenging—lower-income countries are simply not in a position to close the wage gap with higher-income countries—other measures have been shown effective to lift retention rates, such as improving working conditions and health workforce management, providing better equipment, and facilitating professional development (Box 1). Scaling-up domestic training of health workers is often also required. These policies require better governance and long-term financial commitments that, in many cases, will not be achievable without support from the international community.

Box 1. The Medical Brain-Drain Pass-Through: South Africa

South Africa offers a peculiar case of medical brain drain. While it is losing thousands of health care workers to OECD countries, it remains a popular destination country, even as a "holding ground" for health care professionals from other African countries who intend to eventually migrate to an OECD country.

The Problem

Estimates of doctors' migration from South Africa vary from 17 to 25 percent of the stock of doctors. A survey of medical migration to eight OECD countries revealed that the bulk of South African doctors emigrate to four countries led by the UK with 43 percent of the emigrant stock (3,509 doctors), followed by the US (24 percent), Canada (19 percent) and Australia (13 percent).

Drivers

Although traditional push and pull factors rank high among the reasons for migration, a survey of South African doctors based in Australia suggests that push factors (from South Africa) played a much greater role than pull factors (to Australia) did. However, South Africa's push factors are more peculiar to its history. Apart from financial reasons, a major factor for those who left before 1990 was opposition to apartheid, while for those emigrating after 1990, crime and safety issues were the biggest push factor.

Initiative to Deal with Emigration of Doctors

The South African government has worked bilaterally and on its own to stem the outflow of doctors. Following President Mandela's criticism of the aggressive and unethical recruitment of nurses from South Africa by the UK, the two countries entered into bilateral agreements. The South Africa–UK Memorandum of Understanding on the Reciprocal Educational Exchange of Healthcare Concepts and Personnel of October 2003 promotes the recognition of qualifications of South African health professionals and enables them to work for a specified period in organizations providing NHS services in the UK. They then return with newly acquired skills and experience. In return, over 80 UK health professionals would work in South Africa's underserved rural areas.

South African government's domestic initiatives seeking to retain doctors or slow their migration have included a policy on compulsory community service and improving salaries through "scarce skills" and rural allowances. Recently, nonstate actors have experimented with more innovative approached to assuring commitment to serve in hard to reach rural areas. The University of Witwatersrand (Wits), through the Wits Centre for Rural Health, has begun recruiting students from rural areas who are jointly selected by Wits and the district. Although the first cohort is now in its final year and the programme is yet to be evaluated, government efforts are afoot to replicate the programme to other schools

Lessons on Capacity Issues

1. **South Africa's migration reflects capacity of its training institutions.** Although Sub-Saharan Africa Africa has 87 medical schools, at the turn of the century 10 schools accounted for 79 percent of Sub-Saharan Africa-trained doctors who migrated and registered to practise in the US. Five of these 10 were in Nigeria, three in South Africa and one each in Ghana and Ethiopia. On numbers of doctors qualifying, the University of the Witwatersrand was top (1,053 graduates), the University of Cape Town second (655) and the University of Pretoria 10th (132).

2. **South Africa's loss of capacity in the health sector has knock-on effects on other countries' capacity.** As South Africa began losing doctors and seeing its own shortages in the 1980s, it began recruiting foreign doctors, especially from Zimbabwe and Cuba, the latter to work in the under-served rural areas where newly qualified doctors since 1999 had to undertake community service. In turn this affected Zimbabwe's capacity, because between 1991 and 2001 of the 1,200 physicians trained, only 360 remained in the country, with 60 percent of the doctors migrating ending up in South Africa and Botswana.

3. **Regulatory incentives can go only so far.** A more recent phenomenon is that the country is losing 17 percent of its qualifying doctors every year. In a system where the Health Professions Council of South Africa requires mandatory community service for accreditation to practise in South Africa, the choice not to serve is puzzling. Of the 5,689 doctors who qualified between 2005 and 2009, about 4,702 registered and the rest did not register to work.

Source: Clemens and Petterson (2008); Bezuidenhout et al. (2009).

Migration of Other Skilled Malawians

Malawi's low overall emigration rate masks the class and sectoral dimensions of new emigration. At the turn of the century, while emigration for the whole population stood at 2 percent, the rate among tertiary-educated Malawians was far higher, estimated at 9.4 percent (World Bank 2008). The government has further observed migrant differentiation: unskilled migrants still dominate and trek to South Africa and Mozambique, but skilled emigrants target both South Africa and OECD countries.

Distribution of Tertiary Students Abroad

Obtaining qualifications that allow one to work in another country is a good first step towards emigrating there. A good predictor of the destination for skilled migrants is the stock of students pursuing tertiary courses in particular countries. In the 1980 and 1990s, the destination for most emigrants was OECD countries; recent movements suggest more diversified emigration, with Southern Africa a growing destination. Of the 1,755 officially recorded Malawian tertiary students studying abroad in 2013, the majority (914 or 52 percent) were enrolled in South African institutions, followed by the UK (436) and the US (264—Table 9). The appeal of South Africa is understandable given that Malawian students pay tuition at a Southern African Development Community rate, which is the same as the home rate. It is unclear how many of these students returned to Malawi.

Table 9. Malawian Tertiary Students by Destination, 2013

Region	Number	%
World Total	1,755	100.0
Of which		
South Africa	914	52.1
UK	436	24.8
US	264	15.0
Australia	98	5.6
Saudi Arabia	43	2.5

Source: UNICEF (2012) Institute for Statistics, http://stats.uis.unesco.org.

Migration of Academics from Chancellor College

Malawi's preoccupation with migration of medical personnel gives a distorted view of skilled migration, especially in other social sectors like education. Using Chancellor College of the University of Malawi, we find significant emigration of staff. A review of administrative records (from the registry) and interviews with heads of department suggest that at least 67 members of staff have left in the past 20 years (Table 10). Because most leavers could be traced, their destination and institutional affiliation are less certain, while we are more certain about their field of specialization. Although the college has five faculties, the distribution suggests

that the Faculty of Science accounted for 53 percent of the college's emigration led by Mathematics (10), Chemistry (7) and Statistics (6). With the exception of lecturers in Economics and Public Administration, the Social Science and Humanities show a fairly low brain drain.

Table 10. Emigrants of Academics from Chancellor College by Specialization

	Field of Specialization	Faculty	Emigrants	Total
1	Education Economics	Education	1	
2	English	Humanities	4	
3	Music	Humanities	2	9
4	Fine Art	Humanities	2	
5	Law	Law	4	4
6	Biology	Science	3	
7	Chemistry	Science	7	
8	Computer Science	Science	4	
9	Geography	Science	2	37
10	Mathematics	Science	10	
11	Physics	Science	5	
12	Statistics	Science	6	
13	Demography	Social Science	3	
14	Economics	Social Science	7	
15	Public Administration	Social Science	5	17
16	Psychology	Social Science	1	
17	Sociology	Social Science	1	
	Total		**67**	**67**

Source: Malawi Diaspora Survey (2017)

The bulk of academics who left Chancellor College went to universities in the region, led by South Africa (42 percent). From the University of Malawi's viewpoint, South African migration is particularly costly because most academics who emigrated to that country were fully qualified PhDs trained in Europe or the US with a number of years of experience in university teaching. In contrast, the 18 percent and 15 percent of emigrants in the US and UK are typically "stayers" (they went to study and never returned)

Table 11. Emigration of Academics from Chancellor College by Initial Destination Country

S/N	Country	Number	Percentage
1	Australia	1	1
2	Botswana	4	6
3	Ethiopia	2	3
4	Germany	1	1
5	Kenya	1	1
6	Namibia	3	4
7	South Africa	28	42
8	Tanzania	1	1
9	UK	10	15
10	US	12	18
11	Unknown	2	6
	Total	**67**	**100**

Source: Malawi Diaspora Survey (2017)

Key Messages

Before and after independence, Malawi long relied on organized migration of unskilled labourers to South Africa. Yet Malawi lacks capacity to produce certain cadres of personnel and for the few that it produces there is no corresponding framework for retaining them, let alone regulating their migration. Reliance on foreign training and associated stay rates have created a sense of helplessness at home, especially as the share of skilled migrants, mostly physicians and academics, has grown.

Malawi faces several acute capacity constraints. First, it has no capacity to meet skill needs for the domestic labour market at many levels and will continue to rely on foreign training especially for skills health and higher degrees needed to work in academia. Second, its public sector lacks the absorptive capacity for the few skilled personnel produced by the system. The government's initial failure to recruit 51 new graduates speaks volumes about national and sectoral planning and prioritization. Malawi's inability to retain its few skilled personnel reflects weakness in the human resources policies and management capacity, especially for special skills.

More generally, the problem of migration of health personnel reflects capacity deficits in developed and developing countries.

- Whereas immigration reflects short-run capacity bottlenecks in the labour markets for health workers in OECD countries, it also reflects long-run structural bottlenecks in developing countries. Facing growth in health care demand, coupled with restricted admissions to medical schools, OECD economies lack the capacity to produce enough nurses and physicians to meet their own domestic demand in the short run.
- Without external migration, Africa would still lack the capacity to meet domestic demand for health workers. Production of health personnel from Africa's 87 medical schools is insufficient to cover Africa's own requirements.
- While the global community has undertaken initiatives to stem the flow of doctors to OECD countries, African governments have done little to increase their capacity to produce health workers at a rate commensurate with their needs and, for the few initiatives undertaken, the impact on capacity and retention is yet to be seen.

Along the same lines, three findings about human resources for health capacity emerge from Malawi.

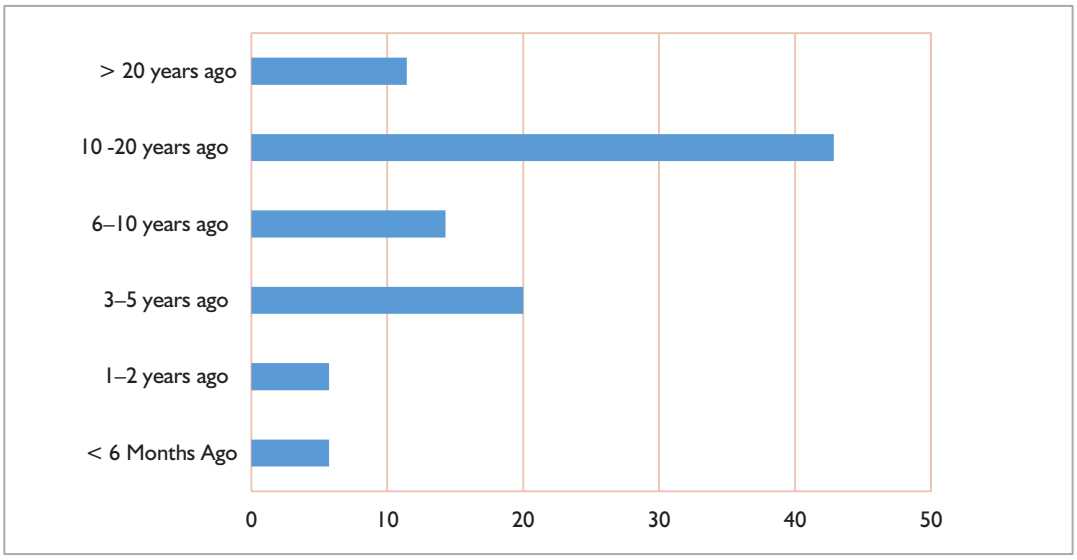
1. Although the creation of the Kamuzu College of Nursing and the School of Medicine increased production of nurses and doctors, the limited number of graduates cannot meet Malawi's capacity challenges, leaving Malawi still dependent on foreign medical expertise and volunteers.
2. While local training of doctors and expanding nurses' training partially alleviates capacity deficits, both have had less effect as a skilled worker retention scheme. Locally trained doctors are just as likely to migrate as foreign-trained doctors.
3. The EHRP demonstrated that with targeted incentive schemes, retention of skilled health workers can be feasible, especially for lower cadres of health workers, but requires huge technical and financial assistance from donors.

4. SOME HIGHLIGHTS OF MALAWI'S DIASPORA

Demographics

The Malawian diaspora of just over 302,000 in 2015 mainly comprises first-generation migrants who were born and raised in Malawi. Two-thirds of respondents are middle aged (age range 30–49) and although slightly over half (54 percent) left Malawi over 10 years ago, cumulatively around 70 percent of the diaspora have lived abroad for over six years (Figure 1). Most of the diaspora were born in Malawi (95 percent), grew up in Malawi (88 percent) and have maintained strong ties to the homeland, with 77 percent maintaining Malawian citizenship. In addition, a slight majority (53 percent) visit Malawi at least once a year, some visited every two or three years (37 percent), and a few (9 percent) have never visited since they left. These visits are usually short, ranging from two to four weeks, primarily to visit friends and relatives.

Figure 1. Time of Migration for Respondents

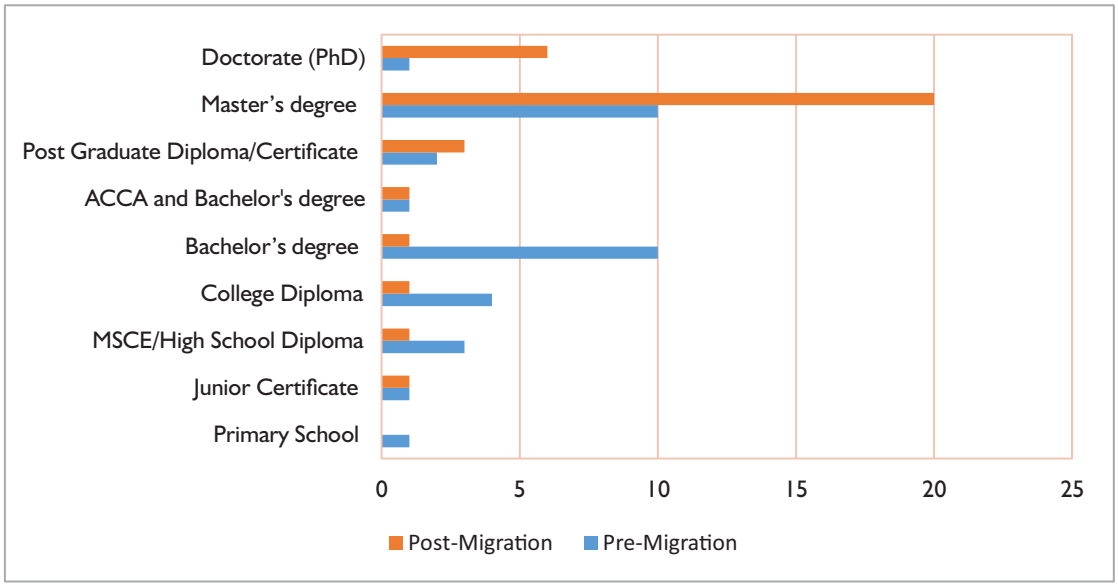


Source: Malawi Diaspora Survey (2017).

Since the 1990s, factors driving migration from Malawi have changed, and the drivers are more pull than push factors. During one-party rule, political persecution and lack of intellectual and academic freedom were major push factors. Since the arrival of multi-party politics, economic reasons dominate and the single largest reason for leaving was that respondents had secured a job abroad (34 percent) followed by those who left for studies and decided to stay after completing them (xx percent). Those who left Malawi in search of a job were a minority (17 percent).

For a country where the population with a tertiary education is still under 1 percent, Malawian emigrants are highly qualified, and during their stay abroad, most Malawian respondents have upgraded their qualifications (Figure 2). The pre-migration distribution of education qualifications had equal shares of holders of Bachelor's and Master's degrees; post-migration, the proportion of those with Master's degrees doubled and those with PhDs increased five-fold.

Figure 2. Education Status of Respondents, Pre- and Post-Migration



Source: Malawi Diaspora Survey (2017).

Prospects for Brain Circulation through Short-Term Cyclical Migration

The potential to physically tap into the pool of diaspora resources depends on the repertoire of skills among the diaspora and on the strength of ties that the diaspora has with the homeland. On leaving Malawi, about 80 percent of emigrants were employed and the other 20 percent were either unemployed or below employment age. For the employed, the single largest category was public services (academia, civil servants and public service—49 percent), followed by those in the private sector (30 percent).

There is no record that Malawi has made any serious effort or formulated any initiatives to tap into the diaspora as a source of any type of capital. Neither has the diaspora participated in initiatives to transfer skills physically, virtually or through mentoring. Of six PhDs and 20 Master's degree holders, only two people said they had been involved physically in a skill transfer programme while one participated in a virtual skill transfer (supervising a PhD thesis).

Half the respondents were not willing or not sure about returning to Malawi permanently, but two-thirds were willing to return on a short-term basis as part of a skill transfer programme. Among the latter, 46 percent were willing to return for at most one month, 30 percent for one to two months and 17 percent for three to six months. Seven of the Malawians willing to come on short-term basis had served as short-term technical experts in a dozen countries across Africa.

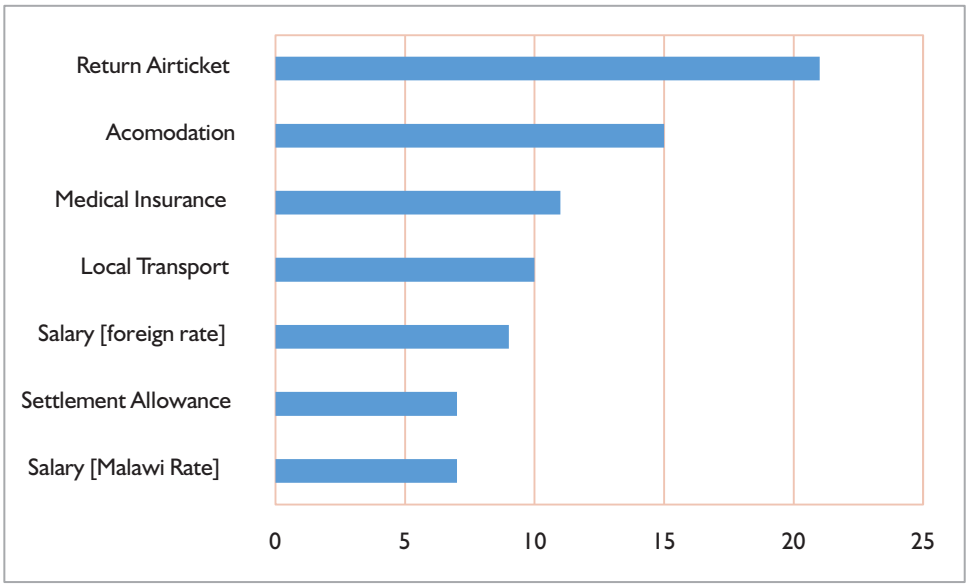
Over half the respondents who expressed willingness to return permanently indicated that although "the heart was willing" they saw several barriers to their return. The main barrier was economic uncertainty (lack of a foreseeable source of livelihood in Malawi) followed by the need to maintain legal status, citizenship and

visa requirements in the country of residence, and by political or legal restrictions.

In the short term, cyclical migration of skilled people—brain circulation—will require serious programming and resource mobilization. [4]Twenty-one of the 28 respondents willing to come on a skills programme expected some assistance from the government. The single largest requirement was a return air ticket, followed by accommodation and, to a lesser degree, medical insurance and local transport.

These requirements may well therefore be contentious; even more so—and one that would generate resistance from local experts if not entirely derail any brain circulation programme—is their salary requirement. Sixteen respondents indicated that they would expect a salary (nine expected a foreign salary equivalent seven a salary at Malawian rates). The burden on the government and indeed on any sponsor will be to demonstrate the value for money in such a programme relative to the use of local experts.

Figure 3. Types of Assistance Required by Respondents on a Skills Transfer Programme



Note: The base is 28 respondents willing to return to Malawi on a skills transfer programme.

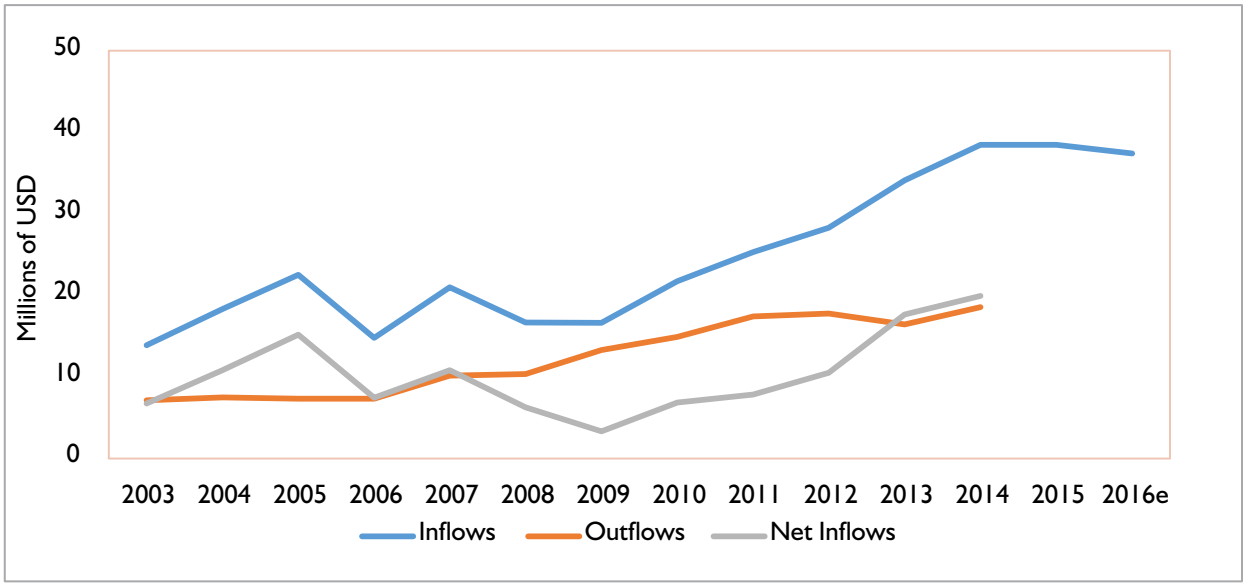
Source: Malawi Diaspora Survey (2017).

[4] See the Annex

Remittances to Malawi

Given the lack of precision of migration estimates, information on remittances is equally sparse. Migrants to the region use uncharted routes and have no valid papers, and the vast majority use unofficial channels to send remittances home. The size of officially recorded remittances suggests that remittances to Malawi are small in absolute terms and relative to GDP and even foreign exchange import cover. According to the World Bank's database on remittances (Figure 4), official remittance inflows to Malawi were estimated at USD38 million in 2015, up from USD14 million in 2003. Given some 302,000 Malawians in the diaspora, official remittances came to USD126 per head. In 2015, remittance inflows were equivalent to 0.6 percent of GDP, roughly comparable to Zambia (0.2 percent), Tanzania (0.9 percent) and Mozambique (1.3 percent)—and equivalent to just one week of import cover.

Figure 4. Trends in Remittance Inflows and Outflows



Source: World Bank (2016)

Officially recorded remittance outflows are even lower, suggesting use of unofficial channels. In 2014, they were estimated at USD20 million, up from USD7 million in 2003. Consequently, Malawi is a net beneficiary of remittances, with net inflows rising from USD3 million in 2009 to USD20 million in 2014.

The World Bank acknowledges, though, that official recorded remittances grossly understate the true size due to non-inclusion of unrecorded flows through formal and informal channels. In 2015, officially Malawi had 233,000 immigrants mostly from three countries, Mozambique (58,000), Zambia (45,797) and Zimbabwe (39,732). The only migrants likely to send remittances home via official channels were the 8,000 South Africans and 1,500 British nationals.

Malawi's Diaspora Engagement Programme (2012) and Policy (2015)

Although the Malawian diaspora has long organized itself in destination areas, these associations have been more for social welfare and less of an organized effort to help development of the homeland. Government efforts to engage the diaspora began in earnest in 2012 when Malawi created a Diaspora Unit in the Ministry of Foreign Affairs and International Development and formally adopted a Diaspora Engagement Programme and institutional framework. The programme's concept paper is clear about the focus, asserting that "... the country's Diaspora programme should focus on remittances, business investments, and capital markets" (Government of Malawi, 2012). Between 2012 and 2015, with technical assistance from the International Organization for Migration (IOM), Malawi finalized its Diaspora Engagement Policy.

The policy's goal is to develop and strengthen a mutually beneficial and lasting relationship between Malawi and its Diaspora, in order to empower Malawians abroad to make substantive contributions to the sustainable development of their homeland. The policy is organized around maximizing three types of transfers: social remittances (ideas, behaviour, identities and social capital); financial remittances (funds transferred from migrants to relatives or friends in Malawi); and virtual transfers (the process by which highly skilled expatriates share their expertise with colleagues in Malawi without being physically present). Table 12 summarizes the policy's eight priority areas.

Table 12. Malawi's Diaspora Engagement Policy: Eight Priority Areas

	Priority Area	Problem	Solution
1.	Creation of the Umodzi Diaspora Network	Lack of comprehensive database of professional, skilled and semi-skilled diaspora Malawians	• Create a comprehensive database of professional, skilled and semi-skilled diaspora Malawians
2.	Diaspora Mapping	Lack of information ondiaspora location and skill and capacities	• Introducea diaspora census
3.	Diaspora Direct Investment and Mobilization of Diaspora savings	Insufficient engagement in investment by the diaspora Laws and regulations that inhibit financial transaction	• Involve the diasporain national development financing • Lobby for introduction of special incentive schemes to encouragediaspora investment • Lobby for laws and regulations to facilitate issuance of diaspora bonds and use of foreign currency denominated accounts
4.	Brain Circulation, Knowledge, Skills and Virtual Transfer	Malawi not using the skills of its diaspora	• Leverage technology to turnthe brain drain into brain circulation • Create knowledge platforms witha focus on health, higher education,and science and technology
5.	Diaspora Philanthropy	Low involvement in public service provision dueto insufficient information	• Engage the diaspora and aligntheir involvement with the national development agenda
6.	Financial Remittances	Lost opportunity to tap into diaspora savings for national development	• Maximize receipts of remittances by changing financial laws and regulations to make Malawi a more accommodating destination
7.	Supporting the Diaspora	Lack of consular services for diaspora and facilities to support returning diaspora members	• Promote research to establish needs and plight of Malawian emigrants • Develop facilities and initiatives to support returning Malawians • Assist Malawian diasporamembers in normalizing their migration status in destination counties
8.	Dual Citizenship	Diaspora members forced to renounce citizenship	• Lobby for change of laws to allow some form of dual nationality or citizenship

Source: Authors.

Diaspora Engagement Policies: A Three-Country Comparison

Here we benchmark Malawi's Diaspora Engagement programme with those of Ethiopia and Kenya, which have longer migrant traditions, larger emigrant populations and initiated their diaspora engagement programmes before Malawi's. In analysing the coverage of diaspora polies and strategies, we assess whether the policy explicitly promotes diaspora engagement in the following seven areas (4.5.1 to 4.5.7).

Brain Circulation

A diaspora can be an important source and facilitator of research and innovation, technology transfer and skills development. The idea now is not to keep skilled people at home but to

encourage those nationals abroad to participate in the development of their countries, both at home and abroad. A critical area for encouraging brain circulation is whether the government has policies encouraging its nationals to return or to use their skills for the benefit of the sending country. Examples of success in return programmes and networks include Japan, the Republic of Korea, and Taiwan; Pack and Page, 1994. African countries have yet to replicate Asia's success.

Table 13 shows whether the three countries have diaspora engagement strategies for brain circulation.

Table 13. Brain Circulation

Strategy	KEN	ETH	MLW
Organizing temporary returns of skilled people	✓	✓	X
Organizing permanent returns of skilled people	✓	✓	X
Recognize skills and qualifications of diaspora	✓	✓	✓
Matching diasporas skills with job offerings in homeland	X	✓	X
Allow diaspora members to hold jobs reserved to citizens and residents	X	X	X
Supporting virtual exchanges with skilled diasporas (i.e. online seminars, mentorship projects)	✓	✓	✓
Offering educational and exchange programmes for diaspora youth	✓	✓	✓

Source: Authors.

Malawi has the fewest strategies in this area (three). Ethiopia has six and Kenya five. Three strategies for are common to all three countries.

Return and Reintegration

The literature suggests that holding dual or multiple citizenship provides an important link between diasporas and their home countries (IOM, 2006), and as such is a "global benchmark strategy". In addition, in many states with effective electoral systems, the structures of representation are also being re-designed, with governments extending political rights to their population abroad through the right to vote, the right to have dedicated representatives and the right to be elected. Dual (or multiple) citizenship confers economic benefits for sending countries in two ways: it can improve a diaspora's connection with its origin country and its integration into the destination country. In turn, migrants who become citizens of the host country can access jobs reserved for citizens, which can improve their earnings and thus their ability to send remittances and invest in their country of origin.

Table 14 lists the use of seven strategies that may affect whether migrants return. All three countries provide for strategies in four of the areas. Only one strategy is common across the countries, while one is apparently anathema to all countries.

Table 14. Return and Reintegration

Global Benchmark Strategy	KEN	ETH	MLW
Offering dual or multiple citizenships	✓	X	✓
Allow transferability of pension and health care benefits	✓	X	X
Offering a one - stop shop for informing to returning diasporas including referrals to relevant services	X	✓	X
Grant special privileges to returning diasporas (i.e. tax breaks, land compensations)	✓	✓	✓
Give right for diasporas to vote in national elections	✓	✓	X
Design policies to facilitate return of diasporas (i.e. multiple re - entry permits, long-term visas)	X	✓	✓
Supporting diaspora participation in political processes (i.e. peace negotiations, forming of political parties)	X	X	X

Source: Authors.

Remittances

Global benchmarks point to eight possible strategies for encouraging remittances from the diaspora. All three countries fail to domesticate many strategies (Table 15). Malawi has adopted four and Kenya and Ethiopia three each. Only two strategies are common across the three countries. Three are glaringly absent in all three countries.

Table 15. Remittances

Global Benchmark Strategy	KEN	ETH	MLW
Supporting policies to reduce money transfer costs	✓	X	✓
Informing diasporas about existing remittance transfer mechanisms	✓	✓	✓
Negotiating bilateral agreement with host countries on remittances	X	X	X
Enhancing access to financial services by diasporas through partnerships with stakeholders	✓	✓	✓
Supporting financial literacy programme for remittance senders and recipients	X	X	X
Supporting the collection of data on remittances	X	X	✓
Offering incentives to the private sector to develop financial products tailored to remittance recipients	X	✓	X
Securitizing remittance flows	X	X	X

Source: Authors.

Direct Investment, Entrepreneurship and Capital Markets

Although financial remittances have traditionally been viewed as the natural channel through which emigrants help their homeland, through informal engagement in relationships with diaspora institutions and the creation of more formal umbrella organizations, sending states are increasingly using their diaspora. Recent diaspora engagement by Asian countries suggests that migrants can also engage in serious foreign direct investment and participate in capital markets.

Diaspora members can invest (and encourage others) because they possess information that can help identify investment opportunities. The literature identifies 10 possible areas for diaspora engagement. Malawi is the most engaged, pursuing seven strategies; Ethiopia has five and Kenya three (Table 16). All three countries provide two strategies, but no country is working in three.

Table 16. Direct Investment, Entrepreneurship and Capital Markets

Global Benchmark Strategy	KEN	ETH	MLW
Identifying local projects for diasporas investments	✓	✓	✓
Introducing tax exemptions on diasporas' investments	X	X	X
Organizing business events or trips for diaspora members	X	X	X
Providing non -financial support to set up enterprises (i.e. technical assistance, links to sources of funding)	X	✓	✓
Organizing easy access to capital for diaspora investors (i.e. loans, grants, business incubators)	X	✓	✓
Matching local entrepreneurs or business owners with seasoned diaspora experts and business leaders	✓	✓	✓
Raising finance from the diaspora through diaspora bonds	X	✓	✓
Allowing diaspora to hold savings in foreign currency or in domestic -denominated accounts	X	X	✓
Offering international loans to diasporas and their families	X	X	X
Promoting diaspora investments towards basic public social services (health, education, etc.)	✓	X	✓

Source: Authors.

As an aside (not featured in the table), the literature identifies two channels through which migration can affect trade. First, nostalgic trade arises when immigrants have a preference for their native country's goods and services. Second and more important, migrants can also increase the availability of market information essential for trade by helping origin-country exporters. Yet the above focus on direct investment and capital market participation has come at the cost of exclusion of traditional trade: no country has a strategy to use the diaspora to expand direct trade.

Philanthropy

In Africa philanthropy has yet to gain momentum as a viable channel for diaspora engagement and the older strategies have little to say on the matter: there is only one strategy common to the three countries. Ethiopia provides for tax deduction for diaspora charitable donations while Malawi promotes a Bhagwati-type tax[5] by seeking to pursue bilateral tax agreement with host countries to grant fiscal privileges for diaspora charitable donations (Table 17).

[5] See the Annex

Table 17. Philanthropy

Global Benchmark Strategy	KEN	ETH	MLW
Offering tax deduction for diaspora charitable donations	X	✓	X
Informing diasporas on tax advantages and strategic donations	X	X	X
Pursuing bilateral tax agreements with countries of destination to grant fiscal privileges for diaspora charitable donations	X	X	✓
Offering matching grant programmes of diaspora charitable donations	X	✓	✓
Supporting diaspora participation in humanitarian aid delivery	✓	✓	✓

Source: Authors.

Tourism

African countries have not strategically focused on tourism and cultural reintegration. Two main strategies have been adopted globally: encouraging return visits of diaspora members as tourists and promoting medical tourism by them, though the latter hardly applies to most of Africa given the state of its health sector. However, it is striking that Africa's tourism drives focus on non-nationals, and neither Malawi nor Kenya's policies have any strategies for the former.

Protection

Most diaspora engagement policies aim to maximize benefits to the country of origin and not the migrant. Beyond nostalgic appeal, most programmes do not have a value proposition for the diaspora (what's in it for the migrant?). We find that diaspora engagement policies for all three countries acknowledge the need for African countries to provide direct support at destination through provision of critical services such as access to health care and legal aid. In addition, Kenya and Ethiopia's policies provide for pre-departure services, including orientation for departing migrants and post-return services.

Yet these policies can scarcely be called programmes. Malawi's—the most recent and set up with technical assistance from the IOM—seems consistent with most international benchmarks, but even there the government's Diaspora Unit has only three staff members.

Key Messages

The majority of Malawian diaspora is reticent about permanent immediate return, in part because the economic conditions have deteriorated and conditions that pushed them persist to this very day. Malawian diaspora are willing to visit on short term capacity building assignment. However, facilitation of temporary return will require financial capacity since at a minimum government has to provide for air tickets, salaries and medical insurance.

Malawi does not have the capacity to monitor migration, skilled or otherwise, in terms of destination, demographics and skills profile of its diaspora. Finally, its Diaspora Engagement Policy needs to be reinforced to stay abreast of those in Ethiopia and Kenya.

5. SELECTED INITIATIVES TO TACKLE AFRICA'S BRAIN DRAIN

How the Brain Drain Features in Global Goals

Although the need for initiatives to address the brain drain have long been recognized, efforts to understand and formulate concrete remedies for addressing the problem are of fairly recent vintage. Despite globally emerging consensus, the Millennium Development Goals, for example, did not consider international migration.

Since then several high-profile fora and initiatives have sought to highlight migration, and most notably with the adoption of the Sustainable Development Goals (SDGs), migration issues, including the brain drain, have been brought into UN development goals and targets. The SDGs have two migration-specific targets: "Facilitate orderly, safe, regular and responsible migration" (10.7), and "By 2030, reduce to less than 3 per cent the transaction costs of migrant remittances" (10.C). There are also migration-related targets highlighting the need for "training and retention of the health workforce in developing countries" (3.c), and to "substantially expand globally the number of scholarships available to developing countries" (4.b).

The SDGs also call for eradication of human trafficking (5.2, 8.7 and 16.2), protection of labour rights of migrant workers, and the creation of disaggregated data by migratory status (17.18). The Addis Ababa Action Agenda of 2015 spells out measures to implement migration-related SDGs.

While some receiving countries, especially those in the OECD, have developed initiatives that seek to attenuate the flow of migrants through co-development, these initiatives have yet to have any discernible impact on migration. A number of European countries (Germany since 1972, the Netherlands since 1975, France since 1977, and Spain since 2008) have encouraged return migration by providing money to immigrants and financing projects to employ returnees. But few migrants have taken them up on their offers, and most projects have been unsuccessful. Incentives for return or co-development have had limited success due to flawed assumptions about migrants' motivation and ease of reintegration. First, the assumption that migrants would return home permanently and establish new firms has not proved correct (World Bank, 2011; and see section 4.2, *Prospects for "Brain Circulation"*). Several developed countries' policies have been too tightly conditioned on migrants' permanent return or have assumed that all migrants are entrepreneurs. The new focus is more on migrants' mobility, which implies virtual (Internet-based) short-term return.

Initiatives to Stem the Brain Drain

Over the decades, African governments and the international community have undertaken initiatives to minimize the costs and maximize the benefits of migration, or at least reverse the losses. [6] Under the aegis of the World Bank's

[6] For a comprehensive review of the initiatives, see Kiggundu and Oni (2004).

African Diaspora Program, since 2007 the AU has partnered with client countries, donors and African diaspora professional networks and hometown associations to enhance the contributions of African diasporas. The IOM has also spearheaded initiatives seeking to encourage the return of skilled diaspora to their native countries. Diaspora options cover a wide range of initiatives all designed to turn the brain drain into a brain gain, by encouraging emigrants to return or by redirecting the services of their professional expertise to their community or country of origin.

Most diaspora options are driven by the international community, especially the specialized agencies of the United Nations system working with national governments. Three examples are now given**.**

The Transfer of Knowledge Through Expatriate Nationals Programme

This programme, TOKTEN, was initiated and managed by the United Nations Development Programme in the early 1980s for developing countries. Its purpose was to recapture some of the experience of highly skilled expatriate professionals living outside their countries of origin. The programme targeted those nationals who had outstanding levels of expertise and who were willing to make their expertise available to institutions in their countries of origin. Consultations lasted between two weeks to three months and could be repeated in subsequent years. By January 1988, 25 countries had participated in 1,850 consultant assignments. The most active African countries were Egypt, Uganda and Benin. The programme was discontinued due to lack of funds and failure to demonstrate generalizable impact or effectiveness (Kiggundu and Oni, 2004).

The Return of Qualified African Nationals Programme

RQAN started in 1983 as a pilot of the IOM with grants from the European Commission and the US government, with objectives similar to those of TOKTEN. Developed and managed by the IOM, RQAN was designed to assist peaceful African countries, to reduce the gap between their underperforming economy and the fast-growing international market by using services of their citizens in the diaspora (Kiggundu and Oni, 2014). For 16 years (1983–1999), the programme returned a total of 1,857 professionals to about 15 African countries—fewer than 10 returnees per country a year. RQAN was discontinued because it was too expensive.

Migration for Development in Africa

Based on experience gained in RQAN, the IOM launched MIDA to strengthen its capacity-building efforts in assisting African countries to benefit from the investment they have made in their nationals. The objective is to assist in strengthening the institutional capacities of African governments to manage and realize their development goals through the transfer of skills, financial and other resources of Africans in the diaspora. An innovative feature is that the IOM sought to collaborate with regional blocks to develop customized-programmes to manage migration. But like many earlier initiatives, MIDA has had limited impact, because of institutional and systemic problems and inability of African governments to collaborate in good faith with the IOM.

Kiggundu and Oni (2004) identified reasons for MIDA's failure. First, the conditions that sparked the brain drain have deteriorated rather than improved in the emigrants' countries of origin: doctors and nurses find run-down health programmes with obsolete or unrepairable equipment; teachers return to find schools with poor learning environments and grossly lacking in basic facilities; university lecturers have to work with intolerably large classes, a lack of equipment and poor research facilities, including lack of research funds; and returning migrants with capital and entrepreneurial skills cannot afford to invest in a risky economic environment. Their immediate reaction is predictable: they simply re-migrate. Second, the public service, which is targeted to benefit from return migrants, sign the provisions of their agreements with the IOM or other parties but hardly adhere to them. Third, even those returning to retire find a shocking homecoming where relatives expect gifts from them rather than being open to collaborate in whatever innovations might be appropriate.

Government Initiatives

A number of governments are reaching out to the diaspora, formulating diaspora engagement frameworks and launching plans to incorporate their diaspora communities as partners in development projects. Several African countries have also put in place initiatives and established institutions to foster interaction with the diaspora. These initiatives have taken various forms, ranging from the creation of dedicated ministries to deal with migrant communities to adding specific functions to the ministry of foreign affairs, ministry of interior, ministry of finance, ministry of trade, ministry of social affairs, ministry of youth, and so on. In addition, some governments have established institutions such as councils or decentralized entities that deal with migrant community issues. However, several of these initiatives have not maintained their momentum or have been discontinued with a change of government.

Regardless of the spatial distribution of their emigration populations, African governments' diaspora engagement seems to be focused on OECD countries—that is, they have zero impact for more than half the African diaspora. And although the diaspora contributes many other forms of capital, diaspora engagement initiatives of most African countries emphasize increasing financial capital (remittances) rather than other potential contributions.

Key Messages

Many countries have formulated diaspora policies and frameworks for diaspora engagement and created specialized diaspora units, but the stress is nearly always on the country's benefits, not migrants' welfare.

Development of diaspora programmes is insufficient for engaging the diaspora. Lacking capacity in policy development, Malawi, like numerous other countries, relied on the IOM to develop her diaspora engagement programme. It now lacks the capacity for policy implementation, reflected in part in the government's inability fully resource the diaspora section in the Ministry of Foreign Affairs for full-scale implementation of the policy.

Although the AU is spearheading efforts to provide a platform for mainstreaming migration and diaspora initiatives, individual countries need to be capacitated to domesticate migration-related dimensions of Agenda 2063. Despite the common positions on migration, there is no suite of common policies that African governments can easily adapt for domestication.

6. FINDINGS AND RECOMMENDATIONS

For Malawi

Malawi lacks the capacity to satisfy skill needs for the domestic labour market at many levels and will continue to rely on foreign assistance (in training and expertise), especially for special skills in health and academia. Although the creation of the Kamuzu College of Nursing and School of Medicine increased the production of nurses and doctors, the limited number of graduates cannot meet Malawi's capacity challenges, leaving Malawi still dependent on foreign medical expertise and volunteers. After 38 years of operation, the nursing school produces about 120 nurses a year. After 26 years, the medical school produces about 60 physicians a year. The recent introduction of a private medical school, while potentially increasing domestic capacity, runs the risk of producing "freelance doctors" who will have no contractual attachment to any government programme or bonding conditions, and hence be free to migrate.

Recommendation

The government of Malawi needs to expand its output from health training institutions by increasing the capacity of existing institutions and creating new ones, taking into account domestic needs and an allowance for attrition through internal brain waste and migration.

To ensure commitment to serve Malawi, the government needs to ensure that medical students from the new private medical school have fair access to the publicly funded Universities Loan Scheme at comparable terms and conditions, including bonding and residency conditions.

The public sector is the Malawi's single largest employer. Yet owing to a weak economy it has limited absorptive capacity even for the few skilled workers produced by the system. The declared failure by Malawi, which has only some 300 doctors in all (and 160 in government hospitals) to absorb new graduate doctors reflects poor national and sectoral planning. Doctors take about six years to train and one would expect that the government would have anticipated this and accordingly provided for their employment. This failure also reflects capacity deficits in government human resources planning and management.

Recommendation

Relevant civil service commissions (e.g. the Health Service Commission), the Department of Human Resources Development and Management, and training institutions should work with the Ministry of Finance to anticipate and provide for graduates from health training institutions to ensure seamless absorption from medical schools.

Targeted intervention can stem migration of health personnel and there is scope for replication of such schemes to other special skills. The EHRP demonstrated that with targeted incentive schemes retention of skilled workers in Malawi is feasible, especially for lower cadres. More widely, receiving countries can compensate sending countries for their loss of investment and capacity by funding remedial

schemes intended to replace that capacity whether though training, retention schemes or temporary and permanent return.

Recommendation

The government of Malawi should prioritize globally competitive or endangered professions and transparently adjust their remuneration, within a context of fair civil service salary structures (i.e. a structure that does not alienate other professions). To the extent that Malawi's human resources for health gaps persist, there is need for continued intervention. The government should negotiate a successor program.

Diaspora engagement programmes are not sufficient for integrating the diaspora in national development. Lacking capacity in policy development, Malawi, like numerous other countries, relied on the IOM to develop its diaspora engagement programme. It now lacks the capacity for policy implementation, reflected in part in the government's inability to fully resource the diaspora section in the Ministry of Foreign Affairs for full-scale implementation of the policy. Malawi therefore lacks the capacity to monitor migration—skilled or otherwise—by destination, demographic group and skills.

Recommendation

The government should resource and capacitate its Diaspora Unit or seek appropriate capacity building from IOM or such other competent body.

For Other African Governments

Even with no external migration, Africa would still lack the capacity to meet its domestic demand for health workers, let alone WHO's minimum standards of quality of care. With 87 medical schools, output from African medical schools is insufficient to cover Africa's own requirements. In other words, while accepting that emigration of doctors imposes huge human and financial costs for sending African countries, international migration of doctors is neither the main cause of health care shortages in Africa, nor would its reduction be enough to redress the African human resources crisis.

Recommendation

African governments need to increase capacity for producing skilled cadres commensurate with individual economies' internal demand for special skills. Some skills could be internationally competitive and locally endangered, but the strategic aim is to ensure that local demand is satisfied first.

Push factors that result in migration of skilled personnel are a manifestation of capacity deficits that African countries have, especially the capacity to nurture and manage special skills. Terms of service in Africa are such that they frustrate and eventually push out professionals that had originally committed to serving their countries. Low wages and salaries, lack of academic freedom, and the lack of infrastructure, equipment, basic utilities and other necessities impede professionals'

ability to deliver according to their training and capabilities. This initially results in an internal brain waste and frustration, loss of morale and eventually migration.

Recommendation

African countries must lift their capacity to prioritize, nurture and manage globally competitive professions by increasing salaries and benefits, within a context of fair salary structures.

The AU as a cooperating forum should lead negotiations with major receiving nations, preferably through the OECD, for assistance on salary top-ups or such other allowances that increase sending countries' salaries and benefits.

Due to historical legacies, the African education system (including health education) has retained a heavy dosage of western orientation leading to a culture that encourages graduates to practise in the west. First, the pre-service training that African health professionals receive often fails to prepare them for the conditions in which they will actually practise. Second, training focuses excessively on practice and on use of advanced technology that will rarely be available in the settings in which they end up practising. Third, lack of post-graduate training opportunities means that many African professionals attend graduate training programmes abroad, where they become attracted to work conditions unavailable in their own countries.

Recommendation

African governments should ensure that training institutions should adjust their curricula to prepare graduates for the conditions in which most will practice in Africa and to the extent feasible, African countries should consider initiating or improving upon existing graduate training programmes.

Where a culture of professional migration exists, African governments should develop programmes that "evangelize" students on the virtues of serving their countries and seek to persuade faculty to encourage students to remain in country.

Recommendation

African governments need to lobby developed nations to develop strategies to address developed countries' domestic professional skills shortages so as to minimize developed nations' reliance on foreign professionals. To the extent that Africans are still emigrating, it is necessary to lobby receiving countries to promote and incentivize training in professions with glaring shortages, and increase graduates from professional training institutions, commensurate with projected demand.

In addition to the factors that are pushing professionals out of Africa, conditions in and practices of high-income countries lure African professionals and contribute to their ability to work abroad. Instead of nurturing their own workforces, high-income countries are increasingly looking abroad as cheap and faster ways to meet their personnel needs, due to significant shortages of professionals in these countries. In addition, developed countries recruit using non-governmental agencies, which usually bypass African governments, leading to unmonitored and uncontrolled brain drain.

African countries can reap the most benefit from migration if they plan and internalize the entire migration value chain in their development strategies. Malawi's earlier cyclical migration of unskilled labour to South Africa was, in the main, regulated under agreements with the South African Chamber of Mines. There was an institutional framework that guided recruitment, placement and welfare and return. African countries must plan labour (brain) exports and put in place institutional frameworks to send and track emigrants and remittances.

Recommendation

In a globalized world, African countries need to be strategic and seek to transform the brain drain into brain export as an integral strategy of economic diversification. African countries must invest in systematic labour market research and analysis to inform their diaspora support service and improve governments' engagement with diasporas.

It is difficult to promote return of emigrants, particularly permanent return because most African countries have not resolved the conditions that pushed out their skilled workers in the first place. It is imperative for African countries to improve local socio-economic conditions to encourage their professionals to stay. Malawi's EHRP demonstrates that even a token increase in wages and improvement in other conditions of service, though not even close to international pay parity, can go a long way in attenuating departures and retaining professionals.

Recommendation

Through an appropriate multilateral forum, African governments should negotiate with major receiving nations, especially OECD members, for creating a fund to assist on salary top-ups or such other allowances that assists in narrowing differentials between work conditions in sending and receiving countries for endangered skills.

Diaspora return initiatives, even for temporary return, are likely to be very expensive and Africa's reliance on volunteerism can only take brain circulation so far. The costs associated with, for example, the TOKTEN, RQAN and MIDA programmes were underwritten by international organizations and the cost per assignment was very high. Similarly, Malawians who expressed willingness to participate in short-term skills transfer programmes expect assistance including salary, accommodation and medical insurance. Yet skills transfer strategies in Malawi, Kenya and Ethiopia's diaspora engagement policies seem to be anchored on volunteerism.

Provision of diaspora support services is critical for involving the diaspora but requires investment in systematic labour market research and analysis by governments of sending countries. African governments seek to engage and economically benefit from a diaspora whose departure they did not approve, nor would have supported in the first place, and have at times even denounced as unpatriotic.

Recommendation

If African governments choose to promote or manage migration, then as a matter of principle, they first need clarity about the portfolio of services to be offered before, during and after migration and ensure that provision of diaspora services is cost reflective.

Engagement on return visits should clearly reflect the true opportunity cost and value for money, because in the long run, Africa cannot rely on donors to facilitate return trips.

Recommendation

African countries need to invest in market research and develop marketing strategies to inform, involve and inspire the diaspora to engage with their homeland and feedback on impact of diaspora initiatives.

The status of diaspora members, especially citizenship or residency rights, is particularly important in determining the diaspora's engagement and participation in the home country, whether in investment, knowledge transfer or trade. Brain circulation rests on ease of coming into a country and maintenance of legal status in both countries. Although the literature suggests that holding dual or multiple citizenship provides an important link between diasporas and their home countries, about half of African countries still force their citizens to trade their nationality for economic pragmatism.

Recommendation

African countries need to work towards regularizing the status of emigrants if they are to transform the current brain drain into brain circulation, which will in turn engender a brain gain.

For OECD Countries

OECD countries should develop strategies to address domestic professional skills shortages that minimize their reliance on foreign professionals. It is imperative that receiving countries promote and incentivize training in professions with glaring shortages, and increase graduates from professional training institutions, commensurate with projected demands.

OECD countries should end active non-official recruitment of professionals from African countries, except with agreement with those countries. Beyond the WHO Code of Practice, and the Roadmap, an Africa–OECD strategy on ethical international recruitment of professionals, grounded in human rights principles, must be developed and adopted by the AU.

ANNEX I. GLOBAL PERSPECTIVES ON THE BRAIN DRAIN

Perspectives on Migrants and the Diaspora

Migration statistics use two different types of definition of a migrant: those "living not less than 12 months in a country other than that of their usual residence" or those "living not less than 12 months in a country other than that of birth". The first refers to "home" (the usual residence); the second does not, and includes people who have never moved from their "home", but because of a change of borders find themselves living in another country (as with, for example, successor states of the Soviet Union).

Populations abroad are now often symbolically counted as constituent elements of national populations. The classification of a *migrant* as *diaspora* seems to depend on the dimensions considered: at a minimum, whether current country of residence differs from one of birth and whether one maintains links to the country of birth or ancestry.

The African Diaspora Center definition of diaspora, for example, is general and evokes biblical imagery when it defines the diaspora as "individuals, groups and communities of people dispersed from their original homeland to reside in other lands different from their own" (African Diaspora Center, 2011). In this case migrant and diaspora member are more or less the same. However, in much of the literature, the term "diaspora" itself has now proliferated as a positive signifier to designate *populations abroad* and their *symbolic link to the homeland* (Green and Weil, 2007). Along this line of thinking, the World Bank has defined diaspora as people "who have migrated and their descendants who maintain a connection to their homeland" (World Bank, 2011). The International Organization for Migration defines diaspora as "members of ethnic and national communities who have left their homelands, but maintain links with the homelands."

The concept of diaspora is not without political restrictions, however. For instance, under the preceding definitions, African migrants living on the continent qualify as diaspora members, which contrasts sharply with the African Union's pan-territorial position and defines the African diaspora as "consisting of people of African origin living outside the continent, irrespective of their citizenship and nationality and who are willing to contribute to the development of the continent and the building of the African Union." Yet this latter definition glosses over certain realities and raises practical problems for remedying the intra-African brain drain because, as the discussions on Malawi show, recent trends in educated migration point to migration of skilled personnel mainly within the continent, often to South Africa.

In its definition of the diaspora, the government of Malawi uses the concept of citizenship to combine both definitions. It defines diaspora members as (a) Malawian citizens, collectively, residing outside the country for an indefinite period of time whether for employment, business, education or any other purpose; or (b) Persons of Malawian origin residing outside the country, holding citizenship of another country(s) but *still having interests* in Malawi

(Government of Malawi, 2012). Under (a), anyone with a Malawian passport, regardless of links to Malawi, is a Malawian diaspora member. Under (b), for people of Malawian ancestry no longer citizens, it must be buttressed by *interest*.

Conceptualizing the Brain Drain

The expression "brain drain" was first used in the 1950s by the British Royal Society to describe the post-war outflow of scientists and technologists from Europe to North America. Today the term is pejorative, and refers to the flow of skilled migrants—educated human capital—which is seen as damaging to the country that has invested in their education, particularly when this is a developing country. The term here suggests that the promotion of migration of educated people is a form of exploitation of poor countries by rich ones (Podemski, nd). Other authors have proposed a balance sheet view of brain drain, arguing that instead of concentrating on outflows of skilled migrants from a country, "the term Brain Drain is normally used as a synonymous of the movement of human capital, where the net flow of expertise is heavily in one direction". Other authors augment that definition with a flow concept in which it is argued that "use of the word 'Drain' implies that this rate of exit is at a greater level than 'normal' or than what might be desired" (Bushnell and Choy 2001).

Related to the issue of brain drain has been the emergence of other words related to migrants' socio-economic status or skills use in receiving countries. The concept of "brain gain" expresses the potential for beneficial brain drain and is understood as either the development of education in the sending country owing to the higher salaries of educated migrants or as a return of human capital and all complementary investment from rich to poor countries (Podemski, nd). Brain gain (and its cousin "brain circulation"), can be also understood as the reverse of brain drain to the profit of the sending country (Phillip, Abella, and Kuptsch, 2006). In contrast, the concept of "brain waste" is now understood as a situation where educated migrants earn less than equally educated natives, or when their work duties in the destination country are below their qualifications.

Models of Migration and Brain Drain

Skilled labour, in all its forms, continues to migrate from developing to developed countries and, as it does, different explanations are proffered to explain it, especially migration from developing to developed countries. Developing-country migration has been exacerbated by developed countries' adoption of cherry-picking immigration policies where most of their visas are meant to import skilled workers for their high-technology sectors (Commander et al., 2004). Economic opportunities and global capitalism have enhanced global intellectual migration, most importantly from developing countries to developed ones, generating three theoretical perspectives on brain drain: internationalist, nationalist and globalization (Ansah, 2002).

The internationalist (or cosmopolitan) theory follows the neoliberal rationalistic logic of human capital theory. It argues that human beings voluntarily seek the highest reward that corresponds with their education and training, and migration trends reflect

voluntary choices made by migrants. This however, leaves out issues such as political repression (especially on academicians who act as think tanks and platforms for policy discourse), institutional and structural factors, even in the midst of satisfactory remuneration. The theory assumes that migration responds to demand and supply forces in the labour market and how workers make use of their acquired skills.

Internationalists argue that countries where skilled labour emigrates from are not affected because the countries suffer no real losses to those left in these countries. That is because migration of highly qualified personnel creates a "brain bank" in the developed countries and developing countries can draw fiscal and human capital for nation building (Johnson, 1968). As such the brain drain is perceived as a mutually beneficial exchange of human and fiscal capital in a contemporary global labour market. However, internationalists overlook the fact that emigration of highly skilled labour is likely to cause economic losses in the short run until their replacements can be trained. And even the replacements tend to leave too, thereby continuing rather than alleviating the problem. Internationalists fail to recognize the grave problems created by the migration of high-qualified personnel, especially in developing countries.

The nationalist approach seems to vary on the emphasis placed on protective and restrictive labour and migration policies, from preserving domestic jobs for natives to preventing outflows of home-trained professional migrants (Ansah, 2002). This approach is based on the view that producing skilled labour is expensive, usually financed by public funds. As such, the loss of this labour through migration represents a "gift" from a poor country that cannot afford it to a rich country that does not need it (Adams, 1986). He emphasizes that each nation must generate and use its own human capital and argues that a brain drain is harmful to emerging economies and disproportionately benefits recipient countries. The flight of human capital hinders the ability of a nation to acquire and protect economic and political sovereignty and well-being. Therefore, proponents of the nationalist approach regard migration of skilled workers to developed countries as deliberate exploitation of intellectual resources by rich western countries to continue neo-colonial dependency on former colonial masters, which aggravates underdevelopment because the highly skilled personnel needed in poorer countries leave (Pantinkin, 1968). They particularly criticize the selectiveness of recipient countries as a mechanism that perpetuates the problem by sifting out the skilled labour from the source, leaving the nation impoverished and burdened with unskilled labour.

The more recent globalization theory aims at resolving the conundrum by asserting that migration need not be a zero-sum game as all countries involved in brain drain can benefit from the mobility of skilled labour. Premised on the understanding that globalization can be employed in circulating intellectual resources for the benefit of all countries involved, the globalization approach speaks of brain "circulation" rather than brain drain while assuming that circulating intellectual resources requires globalization. Often, the issue of brain drain is perceived as an economic phenomenon, with solutions ranging from better remuneration and technological equipment for the highly qualified.

However, complex issues such as intellectual, gender, intra-continental, social, and professional dimensions to the brain drain remain unaddressed. In fact, in this literature some have argued that, instead of vilifying migrants or receiving countries, people ought to acknowledge that "brains go where money is", or that "brains go where the challenge is".

Evolution of Issues and Solutions

As the concept and models associated with brain drain have evolved, so has the lens through which issues are perceived and the remedies proposed (Table A1). Following the typology derived by Giannoccolo (2006), the literature shows that as the models of migration have evolved so has the definition issue and proposed solutions.

Earlier perceptions of brain drain as a development problem have given way to a view of skilled migration as a mutually benign endeavour with potential for positive externalities for economic development in both sending and receiving countries if certain conditions are met. In the 1950s there was consensus in the literature, which viewed the main motivations to migrate as mostly political and social; the effects of these migrations were negative either for welfare or for the social structure of the sending countries; the solution lay in creating and fortifying the role of international organizations and institutions for managing migration flows.

In the 1960–1970s, the view became that the main motivation to migrate was incompleteness of labour markets and their inability to absorb highly skilled workers: the effects of these migrations were still negative for the development of the sending countries, but the solution was to fortify the coordination between sending and receiving countries and to introduce brain drain taxes to compensate the sending countries for the negative externalities. According to Bhagwati, a brain drain tax would punish developed countries and reduce their free riding on developing country investment and would constitute monetary compensation from developed countries to developing countries for the "draining of their cultural and scientific elites."

Following the emergence of the endogenous growth literature from the mid-1980s, immigration of skilled migrants began to be viewed as stimulating for the dynamics of economic growth. The human capital literature suggested that the main motivation to migrate was the greater productivity (and higher income) of skilled workers in developed countries; the effects of these migrations were still negative for growth of the sending countries; in the long run, migration would increase the divergence between developed and developing countries; and the solution was to create incentives for workers to return to their homelands by increasing the opportunity to work in developing countries and by narrowing the productivity's gap.

Table A1.1 Typology of the "Brain Drain" Literature, 1950–2000s

	1950s	1960s–1970s	1980s	1990s–2000s
Topics	Social welfare	International commerce, labour markets, public goods and taxes	Human capital and growth (LDCs and HDCs) + macro aspects	Innovation, technology and growth + micro aspects
Regions	UK, Western Europe, US and Canada	LDCs and HDCs (few)	LDCs and emerging countries	HDCs and LDCs
Motivation to Migrate	Political and social	Market incomplete or inadequate to employ skilled workers	More productivity (and so income) of skilled workers in HDCs	Individual motivation (income, vote with their feet, social, etc.)
Effects	Bad—on welfare, social structure and population	Bad effects on the economy and on the development (short-run effect on taxes, unemployment, etc.)	Bad effects on the economy and on growth (long-run effects, increase of the divergences between LDCs and HDCs)	Bad effects and good effects (brain gain)
Solutions	International organizations and institutions	Coordination among states and brain drain taxes to compensate the externalities	Incentives to coming back and increases in opportunities to work in LDCs	Individual incentives set the conditions to have a brain gain

Note: LDCs stands for lower developed countries; HDCs for higher developed countries.
Source: Giannoccolo (2006).

Since the mid-1990s a new view has emerged, suggesting that migration of skilled persons can actually be negative at worst but also mutually beneficial under certain conditions. This literature focuses on investigating the conditions and the transmission mechanisms under which the brain drain can become a brain gain (see e.g. Özden and Schiff, 2006; Kapur and McHale, 2005). These studies maintain that the main motivation to migrate are linked to individual aspects (income, voting with their feet, and social, private, etc. reasons) and other push factors. However, the effects of migration on growth are not certain, in that they can be bad (as in brain drain) or good (brain gain) depending on how sending countries position themselves to benefit from their diaspora. The solution is then to create individual incentives for workers to come back and an international coordination institutional framework to create the conditions to have a brain gain.

Conclusions

International migration reflects two capacity imperatives. First, it reflects differentials in productive capacities of education systems and absorptive capacity of local and foreign labour markets. Second, the argument that migration need not be a zero-sum game—source countries can benefit from brain circulation and gain provided that certain conditions are put in place—suggests the need for capacity for countries to track and monitor their own diaspora—identifying who they are, where they live, what they do, and what they might be interested in doing if they return to the homeland.

[9] See discussion in Bhagwati and Hamada (1977).

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