INTERNATIONALIZING SUB-SAHARAN AFRICA'S EDUCATION AND HEALTH SERVICES

Nora Dihel and Arti Grover Goswami

World Bank

This paper summarizes the nature and determinants of trade in education and health services in a selected group of countries in Eastern and Southern Africa, using a combination of quantitative and qualitative methods. The paper presents results from new, innovative data collection methods, such as crowdsourcing, to shed some light on the magnitude, determinants, and restrictions on intra-African trade in education and health services. Assessments of trade and regulatory barriers, based on results from regulatory surveys conducted in selected East African countries, and case studies of success stories and less favorable experiences are then used to develop policy recommendations for using trade and regional integration more strategically to improve outcomes in education and health. The analysis shows that to turn these sectors around, policy action is required in the areas of education, domestic regulation, trade policy, labor mobility, and information and communications technologies at the national and international levels. To retain some of the scarce health workers in the region and enhance the region's competitiveness in providing education and health services, African countries should allow for freer mobility of teachers and health care professionals.

Keywords: trade, services, health, mobile survey, regulations, labor mobility, regional integration
JEL Classification: F1, F68, L84, I1, I18

Acknowledgments:
The authors would like to thank Richard Gicho, Borislava Marcheva and Carmine Soprano for useful contributions and suggestions. We would also like to thank Andreas Blom, Michael Engman, Miriam Schneidman, Karima Saleh, Thomas Farole, and Shawn Cole for helpful comments on earlier drafts. The authors are grateful to the donors of the Multi-Donor Trust Fund (MDTF) for their generous support to this work. TextToChange conducted the mobile phone surveys.

Introduction

Sub-Saharan Africa is witnessing high international mobility of students and health professionals. The latest United Nations Educational, Scientific and Cultural Organization (UNESCO) data suggest that in 2012, the outbound mobility ratio of students from the region reached 4.5 percent[1]—more than two times higher than the world average of 1.8 percent. In health services, the outflow of middle- and high-skilled professionals is significant in all African countries. The World Health Organization (2012) estimates that across 10 Sub-Saharan African countries, almost one-quarter (23 percent) of the locally trained doctors emigrated to various Organisation for Economic Co-operation and Development (OECD) countries. Views regarding the mobility impacts of African students and academic staff are mixed—ranging from reports that point out the benefits from "brain circulation" to views that emphasize "brain drain." There is, nonetheless, a general agreement that the massive outflows of health professionals exacerbate Africa's health workforce crisis.

The mobility of African students and health professionals recently has been complemented by the mobility of educational and medical programs and institutions. Innovative cross-border institutional arrangements create new commercial opportunities, such as franchising and twinning of academic programs and health services. There are also new forms of private sector involvement and increased foreign participation in the provision of medical services. Technological progress is facilitating various forms of distance education and health services supply such as telemedicine. These relatively new forms of trade are beginning to gain in importance in Sub-Saharan Africa and have high potential for further expansion, but data on such flows remain scarce on the African continent.

Trade in education and health services[2] also features high on the agenda of policy makers and regional organizations in Sub-Saharan Africa. For example, all five East African Community (EAC) countries have committed themselves to remove most explicit barriers to trade in education and health services as part of the 2010 EAC Common Market Protocol and other developments. Furthermore, the Southern Africa Development Community (SADC) countries included student and staff mobility in the 1997 SADC Protocol on Education and Training.

Yet, despite the increased international mobility of students, many technological developments with transformative impact, emergence of private education and medical institutions, and liberalization and regional integration agreements, the continent continues to face substantive skills and competencies shortages in both sectors. And several African countries remain excluded from international linkages in education and health.

Acute shortages of skills in the education and health sectors represent a major impediment to the attainment of the Millennium Development Goals in Sub-Saharan Africa. For instance, in 2012 in higher education institutions in Sub-Saharan Africa, the gross rate of tertiary education enrollment still stood at only 6.9 percent against a world average of 27.7 percent. Similarly, Africa bears one-quarter of the burden of disease around the world, but has only 3 percent of health workers. While greater investment is needed

[1] http://www.uis.unesco.org/Education/Pages/international-student-flow-viz.aspx.

[2] Education services include (i) primary education services; (ii) secondary education services; (iii) higher education services; (iv) adult education, which comprises education of adults outside the regular education system; and (v) other education services, which comprises education services at the first and second levels in specific subject maters not elsewhere classified (see the services sector classification list GATS W/120 in WTO (1991). Health services include (i) hospital services—including services delivered under the direction of medical doctors chiefly to inpatients aimed at curing, reactivating, and/or maintaining health status; (ii) other human health services—including ambulance services and residential health facility services other than hospital services; (iii) social services—including welfare services, child day care, and guidance and counselling; and (iv) other (see the services sector classification list GATS W/120 in WTO (1991).

to strengthen education and create incentives for education and health workers to remain in their countries, trade and regional integration can play a role in addressing the weaknesses in education and health. Indeed, recent continent-wide initiatives, such as the 2015 African Higher Education Summit,[3] have called for the articulation of clear and comprehensive policies on internationalization at the national, intracontinental, and intercontinental levels to revitalize Africa's educational systems and meet Africa's health worker crisis.

This paper summarizes the nature and determinants of trade in education and health services in a selected group of countries in Eastern and Southern Africa, using a combination of quantitative and qualitative methods. We present results from new, innovative data collection methods, such as a crowdsourcing, to shed light on the magnitude, determinants, and restrictions on intra-African trade in education and health services. Assessments of trade and regulatory barriers, based on results from regulatory surveys conducted in selected East African countries, and case studies of success stories and less favorable experiences are then used to develop policy recommendations for using trade and regional integration more strategically to improve outcomes in education and health.

A. Education and Health Services in Sub-Saharan Africa: How Can Regional Integration Help?

Given the personalized nature of education and health provision, the delivery of these services often requires proximity between consumers and providers.[4] Consumption of services abroad (Mode 2 in the General Agreement on Trade in Services (GATS) terminology) and the presence of services providers abroad to supply services (Mode 4 in GATS terminology) seem to be the predominant modes of supplying education and health services across borders. The movement of students to consume educational services abroad (Mode 2) and the movement of professionals to provide services abroad (Mode 4) are now being complemented by new channels for trade in such services. Thanks to recent advances in technological progress, it is now feasible to deliver lectures through distance learning programs and provide medical advice through video conferencing (Mode 1). In addition, educational institutions and hospitals are respectively establishing campuses and medical facilities in foreign countries to provide their services (Mode 3) right at the doorsteps of foreign consumers.

Combining qualitative and quantitative methods, this section attempts to shed some light on the nature and the determinants of trade in education and health services in Eastern and Southern Africa. We used crowdsourcing[5] to survey more than 2,000 health professionals, hospital representatives, and patients, as

[3] http://summit.trustafrica.org/.

[4] Trade in services occurs via four modes of supply:

- Mode 1. Cross-border supply. Services supplied from the territory of one country to the territory of another country via the use of information and communications technology (for example, distance learning or telemedicine).
- Mode 2. Consumption abroad. Services supplied in the territory of one country to the consumers of another country (for example, students and patients traveling abroad to buy education and health services).
- Mode 3. Commercial presence. Services supplied through any type of business or professional establishment of one country in the territory of another (for example, foreign universities or foreign hospitals established in a country).
- Mode 4. Temporary presence of natural persons. Services supplied by nationals of one country in the territory of another (for example, educators and medical professionals traveling abroad to provide services). Mode 4 includes independent service suppliers and employees of the services supplier of another country.

[5] Crowdsourcing is the process of obtaining information, work, or funding, usually online, from a crowd of people. Crowdsourced data come from the collective voices of consumers and can provide insights and opinions quicker and cheaper than more traditional data collection techniques. Given that social networking and applications of mobile

well as 1,967 providers and consumers of education services in nine Sub-Saharan African countries, namely, Cameroon, Ghana, Kenya, Malawi, Nigeria, Rwanda, Tanzania, Uganda, and Zambia. The surveys collected information on trade patterns, determinants of trade, quality of and satisfaction with various services, and barriers to trade in education and health services. The quantitative surveys and qualitative interviews placed a particular focus on regional linkages and the role of regional integration in filling unmet demands for skills and services in Africa's health and education sectors. The organizing framework described in annex A is used to gather information on and discuss the determinants of trade in education and health services by mode of supply.

B.1 Distance Learning and Telemedicine on the Rise

Distance learning and telemedicine are daring and disruptive technologies that are expected to make an important impact in Africa over the next 15–20 years. Anecdotal evidence confirms that the use of information and communications technologies (ICT) tools to improve access to services, including cross-border trade in services, is beginning to emerge on the continent, with several homegrown initiatives and apps taking off in recent years in Africa.

The African Virtual University (AVU) was established with the objective of building capacity in education and health in Africa. Eighteen African countries have signed the Charter establishing the AVU, which has trained more than 43,000 students since its inception in 1997. As the leading institution in the Pan-African e-Network Project, the AVU has acquired the largest e-learning network in Anglophone, Francophone, and Lusophone Africa, with more than 53 partner institutions in 27 countries.[6] Since its inception, AVU has been linked to a global network of leading universities, mainly based in North America and Europe, which have allowed imports of education services in 31 sites in 17 African countries.[7] Other examples of e-learning include the Virtual University of Uganda (box 1) and the University of South Africa (UNISA), Africa's leading distance-learning open institution, which offers internationally accredited qualifications to students from 130 countries. In 2012, 8.2 percent of all registered UNISA students came from African countries (other than South Africa).[8]

---

technology are dominant features of African mobile life, we used mobile phone surveys to gather information from providers and consumers of education and health services.

[6] For more details, visit http://www.avu.org/. The project is also equipped to support e-governance, e-commerce, infotainment, resource mapping, and meteorological and other services in African countries. See http://www.panafricanenetwork.com/.

[7] http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/AFRICAEXT/0,,contentMDK:20267251~menuPK:538760~pagePK:146736~piPK:226340~theSitePK:258644,00.html.

[8] See http://www.unisa.ac.za/default.html.

Box 1. Virtual University of Uganda

The Virtual University of Uganda (VUU) is the first online university in Uganda to be licensed by the Uganda National Council for Higher Education. The university uses multiple integrated forms of digital multimedia to deliver online education. These include video and audio clips, chat rooms, and discussion forums, as well as mandatory weekly audio conferencing. The university also provides access to an e-library that contains more than 50 million open-access items, including learning materials and video and audio resources from internationally renowned universities such as the Massachusetts Institute of Technology and John Hopkins University (among others). The online education is delivered through the university's Virtual Learning Environment (VLE) on a Moodle Platform that is hosted by Stoas Learning in the Netherlands. In 2014, VUU had about 600 students enrolled in its distance learning program. Foreign students from the Burundi, Democratic Republic of Congo, Rwanda, Somalia, and South Sudan account for 25 percent of total students. The university recruits local and international staff members, who also contribute through the VLE. Students submit their assignments online, and tutors review, grade, and give feedback on the assignments online. The assignments are screened through antiplagiarism software integrated into the VLE.

Source: World Bank 2014 and https://moodle.org/.

Telemedicine is also gaining traction in Africa. The Pan-African e-Network Project is one of the biggest projects for telemedicine in Africa and is based on the growing partnership between India and Africa (box 2). Several Indian universities and educational institutions are providing online education to about 10,000 students in Africa over a five-year period in various disciplines, including medicine. In addition, Indian medical specialists are offering online medical consultations to medical practitioners and patients residing in Africa.

Box 2. India's Partnership with Africa on e-Health and More

India is contributing to Africa's development by funding several projects, such as the ambitious Pan-African e-Network Project, for promoting online education and telemedicine programs across the continent. The project's objective is to link major universities and centers of excellence in Africa and India and thereby extend higher education to some 10,000 students in Africa over a five-year period. The project also aims to link major African hospitals to 12 super-specialty hospitals in India to improve medical training, online medical consultations, and other facilities. Under this project, India would connect 53 learning centers, 53 remote hospitals, five regional universities, and five regional hospitals in Africa to seven leading universities in India and 12 super-specialty hospitals via seamless and integrated satellite, fiber-optic, and wireless networks. This is by far the biggest project of distance learning and telemedicine ever undertaken in Africa. A total of 47 African countries have already joined the project, which is now in its second phase.

Source: http://www.panafricanenetwork.com/.

Other examples of telemedicine include the dissemination of information to doctors in Southern Africa through a medical library in Zambia, which partnered with a library at the University of Florida in the United States; the Africa tele-dermatology project, which provides dermatology support to local physicians, dermatologists, and health care workers in hospitals and clinics throughout Africa; and the participation of several African countries in the iPath-Network, a collaboration platform used in telemedicine to share information on consultations, teaching, and research among a group of medical specialists worldwide (Wamala and Augustine 2013).

The mobile phone surveys carried out by the World Bank in 2014/15 confirm that many hospitals in Kenya, Malawi, Nigeria, Tanzania, and Uganda use telemedicine on a regular basis (figure 1), with hospitals in Kenya, Malawi, and Tanzania appearing to be the most frequent users of telemedicine (figure 2). PwC and GSMA (2012) estimate that by 2017, Africa's mobile health revenue will reach US$1.2 billion (or 5 percent of the projected global mobile health market earnings of US$23 billion).

Figure 1. Use of Telemedicine in Selected Countries in Sub-Saharan Africa, April–July 2014 (%)

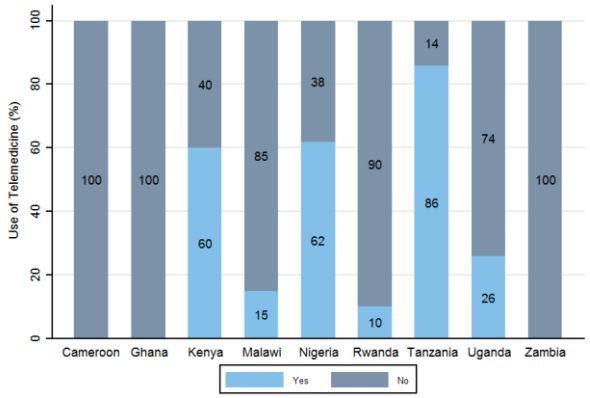
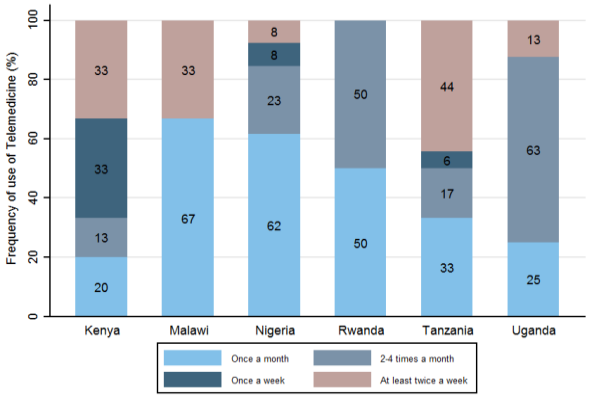


Figure 2. Frequency of Use of Telemedicine in Selected Countries in Sub-Saharan Africa, April–July 2014 (%)



Source: Calculations based on the results of the mobile phone surveys described in World Bank 2015.
Note: Data were compiled from hospital officials or medical professionals responding to choices in the World Bank mobile phone survey.

Although distance learning programs and online education are catching up in Africa, poorly developed Internet and telecommunications infrastructure still constrains the use of Mode 1 in exporting health and education services.

B.2 Students and Patients without Borders: Revitalizing Education and Health Systems in Sub-Saharan Africa

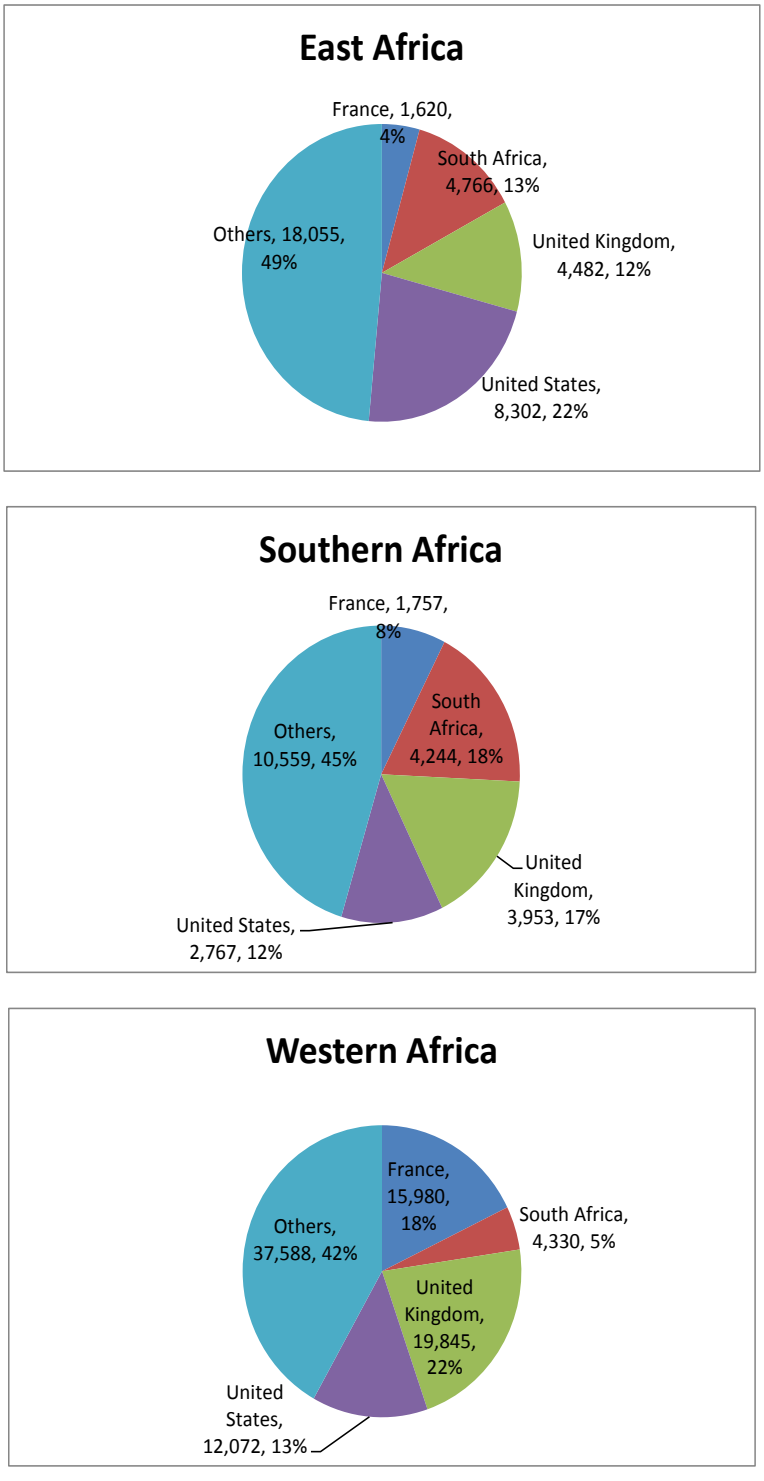
Although information on students studying abroad and patients receiving treatment abroad is partially captured by International Monetary Fund balance of payments statistics under expenditure on travel services, these data are patchy, especially for African countries. The limited available data suggest that despite the continent's weak educational systems, several African countries are exporting education and health services (annex B, table B.1, and annex C, table C.1). However, most African countries remain importers of education and health services (annex B, table B.2, and annex C, table C.2).

UNESCO provides additional information on students studying abroad. Angola, Mauritius, South Africa, and Uganda are successfully exporting education services, primarily to the region. Burkina Faso, Burundi, Cameroon, and Ghana are also starting to participate in exports of education services.[9] Most African countries are importing education services, either regionally or from other developed countries.

Recent data show that France, South Africa, the United Kingdom, and the United States represent the top destinations for African students who travel abroad for studies (figure 3).

[9] UNESCO online database on international student mobility in tertiary education: http://data.uis.unesco.org/.

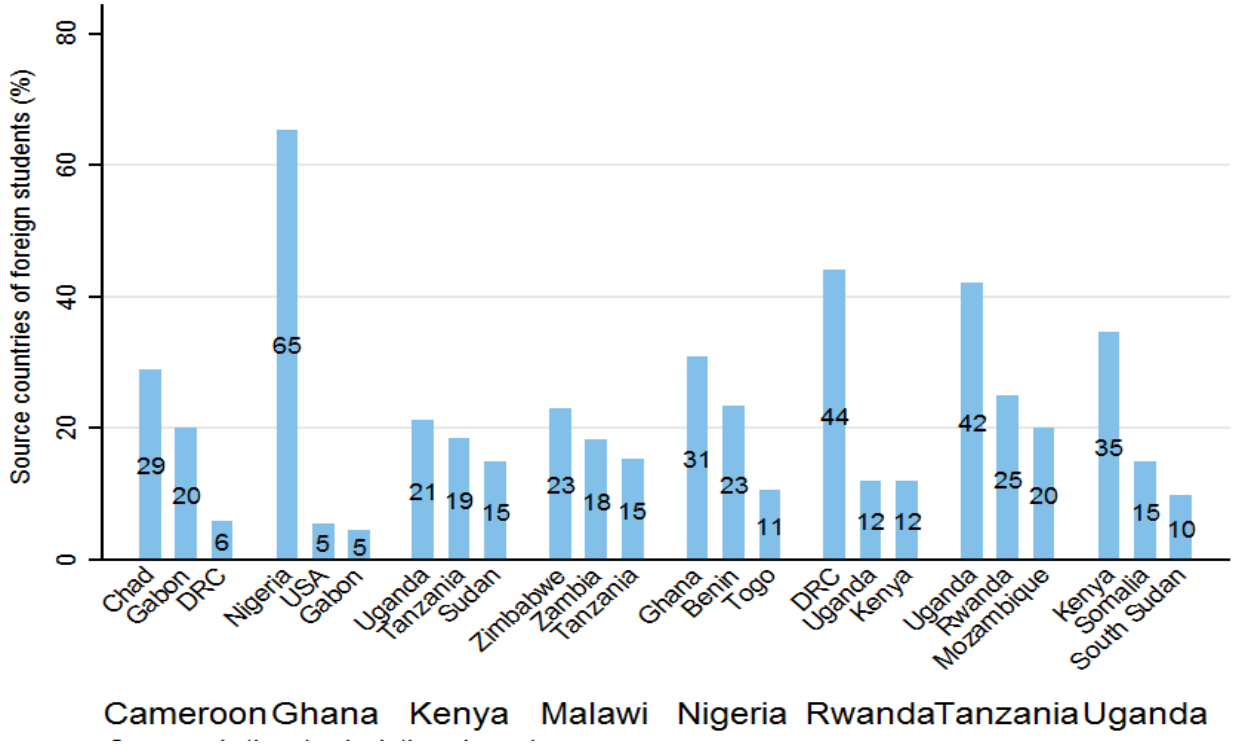
Figure 3. Top Four Destinations for African Students Who Travel Abroad to Study, Selected African Countries, 2011



Source: Data from UNESCO's UIS.Stat (http://data.uis.unesco.org).

The World Bank mobile phone surveys are congruous with the UNESCO data. For Francophone countries, France and Morocco appear to be the most important destinations, while Canada, South Africa, the United Kingdom, and the United States seem to be the dominant destinations for Anglophone countries (figure 4). However, the World Bank mobile phone surveys also show that many African countries are importing education services from within the region. The data confirm statistical and anecdotal evidence about the increasing importance of regional trade flows in education services in Africa.

Figure 4. Top Three Source Countries of Foreign Students in Selected Countries in Sub-Saharan Africa, April–July 2014



Source: World Bank 2015.

Note: Data were compiled from students responding to choices in the World Bank mobile phone survey. DRC stands for Congo, Democratic Republic and USA stands for United States of America

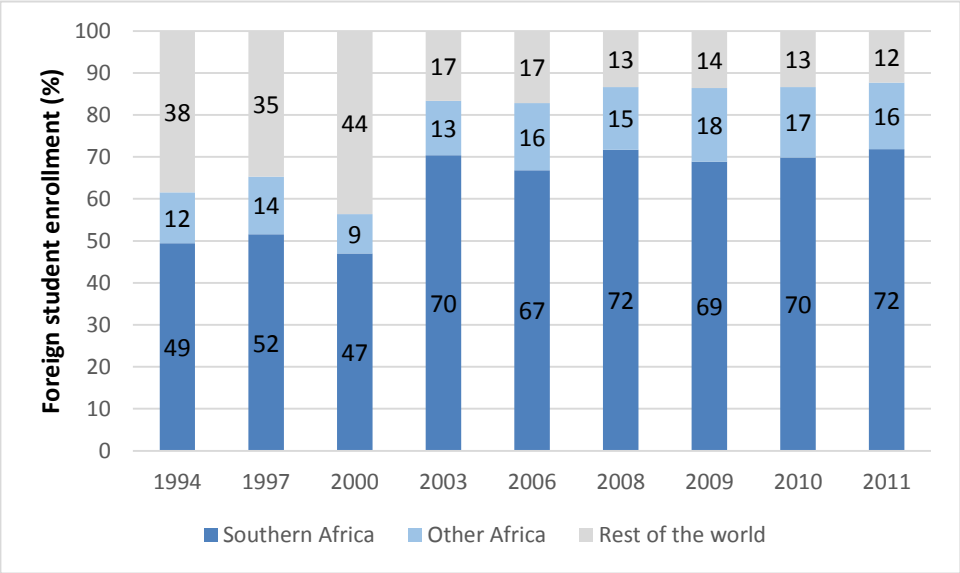
Indeed, in recent years, Africa has started to diversify its import destinations in education services. For example, in 2000, African students represented only 8 percent of all international students in Malaysia (UNESCO online data, 2011[10]). During the last decade, however, the enrollment of African students increased dramatically to 23 percent of total foreign students in Malaysia in 2011. Of this, Nigerian students accounted for about 30 percent, followed by Botswana, Sudan, and Libya, each representing over 10 percent of African students in Malaysia in 2011.

Until 2004, Sub-Saharan Africa hosted a negligible number of foreign students in comparison with all other regions of the world. In addition, this small number of foreign students was declining over time (Bashir 2007). South Africa was an exception; the number of foreign students in South African universities grew from about 13,000 in 1994 to nearly 54,000 in 2006, and increased further to more than 70,000 by 2011. Notably, in most years, the share of international students from Southern Africa has been on the rise, reaching 72 percent of South Africa's total foreign student enrollment in 2011. Since 2003,

[10] http://data.uis.unesco.org

more than two-thirds of foreign students in South Africa have been from SADC countries. Between 13 and 17 percent of international students have been from the rest of Africa, and 14 percent from the rest of the world (figure 5).[11]

Figure 5. Foreign Student Enrollment in South African Universities, 1994–2011 (%)



Sources: South Africa Department of Higher Education and Training for 1994 and 1997 data (http://www.doe.gov.za); UNESCO's UIS.Stat (http://data.uis.unesco.org) for 2000 onward.

According to the most recent data from UNESCO's UIS.Stat, Angola, Burkina Faso, Burundi, Cameroon, Côte d'Ivoire, Ghana, Madagascar, Morocco, Niger, South Africa, and Uganda are among the education services exporters on the continent, with regional flows dominating these exchanges (table 1).

Table 1. Top Education Service–Exporting Countries in Africa, 2010–12

Host country	Year	Inter-national students	Of which from within Africa	% of within-Africa students	Main source countries
South Africa	2011	70,428	61,764	87.7	Botswana, Democratic Republic of Congo, Lesotho, Namibia, Nigeria, Swaziland, and Zimbabwe (about 25,000)
Uganda	2011	15,035	n.a.	n.a.	Details n.a. at source
Ghana	2012	9,132	8,636	94.6	Congo (300), Côte d'Ivoire (400+), Gabon (400+), and Nigeria (6,000+)

[11] Zimbabwe is the top source country, accounting for 38 percent of total foreign African students in South Africa in 2011. Other important source countries include Botswana, Democratic Republic of Congo, Lesotho, Namibia, and Swaziland.

Morocco	2010	8,694	6,988	80.4	Mauritania, Guinea, Mali, Niger, and Senegal
Angola	2010	6,530	6,530	100.0	Democratic Republic of Congo (1,300), Cape Verde, and São Tomé and Príncipe (2,000 each)
Burkina Faso	2011	2,187	n.a.	n.a	Details n.a. at source
Cameroon	2010	1,854	1,848	99.7	Chad (1,300), Congo, and Gabon (100+ each)
Côte d'Ivoire	2010	1,818	1,699	93.5	Benin, Burkina Faso, and Togo
Burundi	2010	1,813	1,813	100.0	Congo (1,000) and Rwanda (700)
Madagascar	2011	1,432	1,384	96.6	Comoros (1,200+)
Niger	2010	1,125	1,121	99.6	Mali (300) and Nigeria (200+)

Source: UNESCO's UIS.Stat (http://data.uis.unesco.org).
Note: Data are for the latest available year (2010 or 2011). Data for Ghana are from 2012. n.a. = not available.

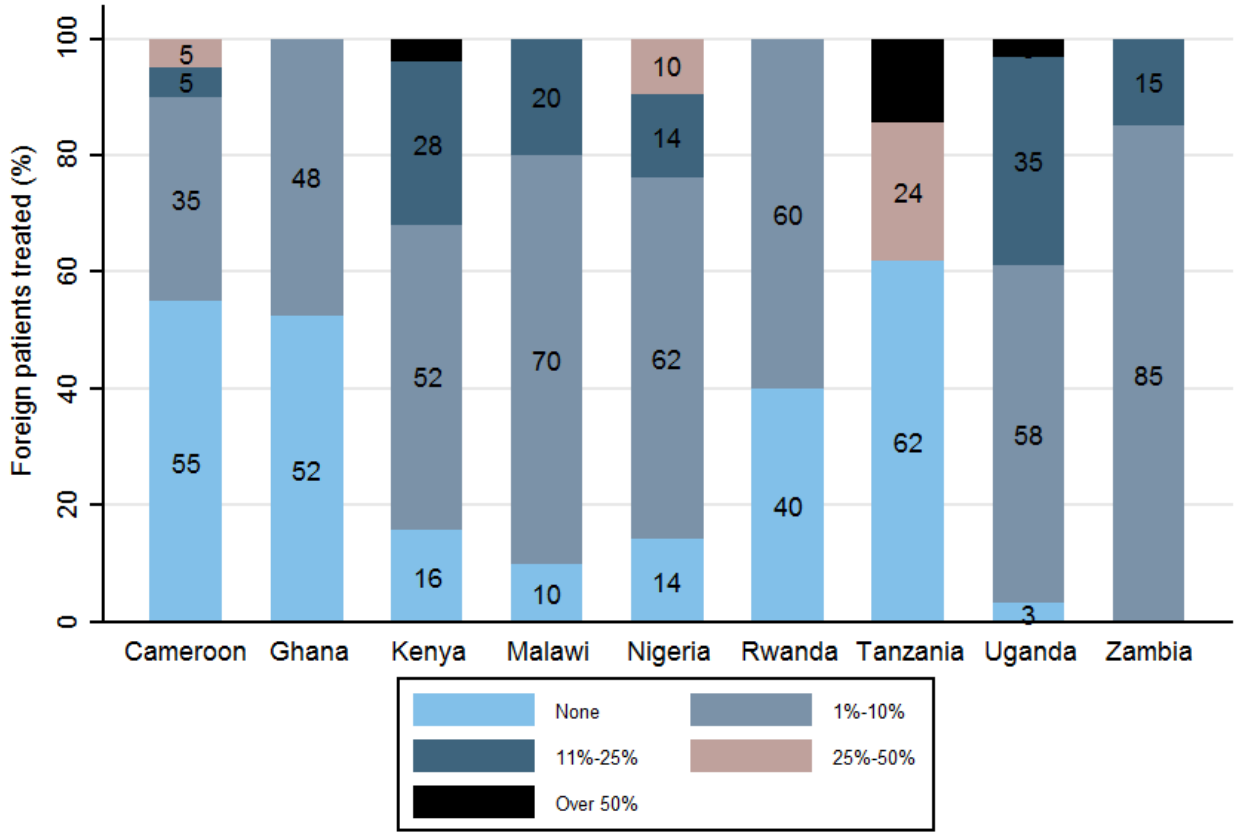
In East Africa, Kenya and Uganda are hosting many African students. Major policy developments in Uganda, such as the Universal Secondary Education initiative and the liberalization reforms of the late 1990s, facilitated active private sector participation in the education sector. The National Council for Higher Education (NCHE) estimates that exports of education services yielded US$36 million in 2010.[12] Othieno and Nampewo (2012) note that foreign student entries in Uganda have been growing at an average rate of about 7 percent annually.[13] International students are mostly found in private universities, with many public universities lacking the capacity to take on international students. For many private universities, the international students market represents a new segment, of growing interest.[14] Most of the foreign students come from neighboring countries, including the Democratic Republic of Congo, Kenya, Rwanda, Sudan, and Tanzania. The EAC and the Common Market for Eastern and Southern Africa regions are, thus, Uganda's major education services export markets.[15] Angola and Ghana are also hosting international students. Intraregional student flows are the main source for these exports; African students in both countries represent 100 and 95 percent, respectively, of all international students. The latest UNESCO data suggest that in Ghana, Nigerian students represent 71 percent of all international African students, while in Angola, students from Cape Verde and São Tomé and Príncipe represent 60 percent of total international student enrollments.

In health services, most African countries remain importers, as patients travel abroad for treatment. Nonetheless, some African countries are exporting health services by treating foreign patients in their

[12] Uganda is exporting education services via online distance learning institutions (Mode 1) as well. Recently, NCHE, the statutory regulator for higher education in Uganda, licensed and chartered two virtual universities, namely; The Virtual University of Uganda and the Uganda Technology and Management University (UNCTAD 2013).
[13] http://www.studyinuganda.com/index.php?option=com_content&task=view&id=121.
[14] Kampala International University leads with 6,715 students, followed by Makerere University (2,444), Bugema University (862), the Islamic University in Uganda (767), the Makerere University Business School—MUBS (671), and the Busoga University (575).
[15] Kenya is the most important source of international students in Uganda, contributing over 60 percent of foreign student enrollment at the secondary level and 71 percent of international student enrollment at the university level. Tanzania follows next with 16 and 12 percent, respectively. Other source countries include Burundi, the Democratic Republic of Congo, Republic of Congo, Rwanda, and Sudan. See Maseruka (2010) and Uganda Bureau of Statistics (UBOS), Statistics Abstract, 2010, p.113. http://www.ubos.org/onlinefiles/uploads/ubos/pdf%20documents/abstracts/Statistical%20Abstract%202010.pdf.

home countries. The World Bank mobile phone survey reveals that most responding hospitals in the selected countries do treat foreign patients, with several hospitals in Kenya, Tanzania, and Uganda reporting that foreign patients represent more than 50 percent of their total patients (figure 6). Top source countries of foreign patients in order of importance are India, Kenya, Uganda, Tanzania, Sudan, Rwanda, China, Somalia, United States, Nigeria, and Togo.

Figure 6. Proportion of Foreign Patients Treated by Hospitals in Selected Countries in Sub-Saharan Africa, April–July 2014 (%)



Source: World Bank 2015.
Note: Data were compiled from hospitals responding to choices in the World Bank mobile phone survey.

As with trade in education services, the regional dimension is becoming increasingly important in health services in Africa. For instance, the number of medical tourists to South Africa grew from about 300,000 to more than 500,000 between 2006 and 2009, contributing about US$9 billion in revenue (SAMP 2011). Interestingly, 88 percent of medical visitors over the period 2006–10 originated from the African continent itself, with Botswana, Lesotho, Mozambique, Swaziland, and Zimbabwe being the top five source countries.[16] Anecdotal evidence suggests that medical tourists in Rwanda and Uganda are mainly from the Burundi, Central Africa, and the Democratic Republic of Congo. Some Kenyans are seeking treatment in Rwanda, given the availability of certain specialists, such as ophthalmologists employed by Dr. Agarwal's Eye Hospital. In Kenya, most foreign patients are from other EAC member states, with

[16] Regional patients mainly seek specialist consultations, such as scans, tests, health screenings, cardiac surgeries, orthopedics, cancer treatment, fertility treatments, and oncology.

some patients coming from Central Africa and the Democratic Republic of Congo (World Bank 2014 qualitative interviews). Box 3 presents some of the strategies for attracting medical travelers within Africa.

Box 3. Encouraging Medical Tourism within Africa

International Medical Group

The International Medical Group (IMG) is a group of health services companies based in Uganda. IMG integrates different health care services segments and drives quality in health care service delivery through international certification standards, including International Organization for Standardization (ISO) certification. IMG has developed strategic partnerships with reputable health services providers such as Lancet Laboratories and Resolution Insurance, with presence in Eastern, Central, and Southern Africa. IMG member companies include International Hospital Kampala (IHK), which mainly treats Ugandan nationals and foreigners residing in Uganda. However, IHK also sees cases of medical tourism from neighboring countries, including Burundi, the Democratic Republic of Congo, Rwanda, and South Sudan. Part of IMG's success arises from making full use of the insurance companies and having a business model that encompasses the local and the international market.

Netcare

Netcare, a hospital investment firm based in South Africa, has developed a network of agents to promote medical tourism through its South African hospitals. The firm makes arrangements for accommodation and recuperative care for medical tourists from African countries. Established centers in Johannesburg assist foreign patients and their families with transport, visas, accommodation, and medical treatment. Netcare employs interpreters that speak English, French, and Portuguese, and clearly targets African patients (Cattaneo 2010).

Source: World Bank 2014.

B.3 Borderless Hospitals and Campuses: Expanding Access to Foreign Medical and Education Services

Given the large scale of investments involved in setting up an educational institution abroad, not many African countries are establishing branch campuses in other countries. But several regional tertiary institutions have established satellite campuses in neighboring countries in response to the high demand for services from African students. For example, Mount Kenya University operates from several countries in East Africa (box 4), Cavendish University Uganda has Zambian origins, and the Jomo Kenyatta University of Agriculture and Technology has a presence in Rwanda. Kenyan tertiary institutions have been aggressive in their regional expansion. Most affiliates have located in Rwanda due to the ease of doing business and establishing a foreign-based institution in the country.

Box 4. Intra-African Linkages: Mount Kenya University

Mount Kenya University, established in 2008, was fully chartered in 2011 with operations in Kenya, Uganda, Rwanda, Tanzania, Burundi and Somaliland. The university offers a wide-range of academic and professional courses, through various flexible modes that include virtual learning, evening classes, and weekend classes. It is widening access to higher education in East Africa through a well-structured network of campuses in Nairobi, Nakuru, Eldoret, Kitale, Kakamega, Kisii, Kabarnet, Lodwar, Mombasa, Nkubu, Kigali and Hargeisa.

Source: World Bank 2014.

Evidence of services trade in East Africa is seen in the presence of international higher education institutions with satellite campuses; international high schools teaching foreign curricula; international language schools, usually affiliated with an embassy; and international research institutions in Kenya, Rwanda, and Uganda.

Secondary institutions providing internationally certified programs, such as the Cambridge International General Certificate of Secondary Education (IGSCE), have had great success in the region. Such schools offer international curricula. Initially they targeted members of the international community temporarily working and living in the region, but more recently they have catered to a growing number of local students demanding an international education. The schools offer a variety of curricula depending on the school's orientation, such as an American curriculum, the French system, the Cambridge IGSCE, and so on. Growth in student enrollment is driven mainly by referrals and recommendations of other parents and students. Several internationally-based institutions have expanded in the region, such as the Aga Khan Schools in Kenya, Tanzania, and Uganda; the Light Academy with Turkish origin in Kenya and Uganda; and GEMS Cambridge International Schools with Indian and United Arab Emirate ownership in Kenya, Tanzania, and Uganda.

In tertiary education, there are further examples of African countries importing education services via Mode 3. For instance, several foreign universities' campuses—such as Monash University from Australia and Stenden Hogeschool from the Netherlands—have established a presence in South Africa. Other examples include the Lancaster University campus in Ghana, and the campus established by the Limokokwing University from Malaysia in Botswana. The Government of Rwanda has also been pursuing innovative partnerships with international institutions that are leaders in technology programs and research. Carnegie Mellon University is the first U.S. Ivy League institution to have a campus in Africa (box 5). The Rwandan government has allocated the university space in the newly planned technology hub in Kigali to establish a full campus.

Box 5. Global Linkages: Carnegie Mellon University in Rwanda

Carnegie Mellon University, in partnership with the Government of Rwanda, established Carnegie Mellon University in Rwanda in 2012. This is the first U.S.-based research university conferring degrees with an in-country presence in Africa. Carnegie Mellon University has other campuses worldwide, including in Australia, Greece, Japan, Portugal, and Qatar, among others. Carnegie Mellon University in Rwanda is open to applicants from all over the world (not only Rwandan students). Currently, the university employs 15 full-time faculty staff and has 44 students. The majority of the students are Rwandan; however, there are some students from neighboring countries such as Kenya and Uganda.

Carnegie Mellon in Rwanda charges the same tuition as in the United States, approximately US$20,000, and retains the same high entry criteria as its other campuses worldwide. The Rwandan government supports a scholarship program that provides 50 percent of the tuition fees for Rwandans and East African Community (EAC) residents. Rwandan students, unlike their other EAC counterparts, can access additional government loan programs through the Rwanda Education Board to cover 50 percent of the remaining tuition fees. The stringent admission and qualification criteria and expensive tuition put the university program out of range for the majority of East Africans.

Source: World Bank 2014.

Health services in Africa appear to offer many commercial opportunities. At this stage, however, trade in medical services via commercial presence in developing countries is limited. Generally, health-directed foreign direct investment (FDI) is controlled by governments and is a politically sensitive issue. The African Development Bank notes that "Investments in health services reportedly account for 0.2 percent of FDI stock entering developed countries and 0.1 percent entering countries of the South" (AfDB 2013). Nevertheless, there are a few examples of foreign hospitals, including from other developing countries, supplying health services in Africa (box 6).

Box 6. South-South Linkages: Dr. Agarwal's Eye Hospital in Rwanda

Rwandans and residents from other African countries have historically been dependent on seeking eye treatment in South Africa, Europe, and other countries such as India. The cost of treatment is high and involves additional costs of travel and accommodations for the patient and accompanying persons. The Government of Rwanda facilitated the partnership between Dr. Agarwal's Eye Hospital and the Rwanda International Institute of Ophthalmology by providing favorable conditions for obtaining the necessary licenses, business registrations, visas, and work permits.

Dr. Agarwal's Eye Hospital has its headquarters in Chennai State, Southern India. It was established in 1957 and now has a network of 60 hospitals worldwide (including in India, Madagascar, Mauritius, Mozambique, Nigeria, the Seychelles, and the United Kingdom), with more than 350 consultant ophthalmologists. Dr. Agarwal's Eye Hospital in Rwanda was established in 2011 and began operations in 2012. The cost of specialized treatment at the hospital is between US$2,000 and US$3,000, compared with US$10,000 in India or South Africa (including the cost of travel and accommodations). Currently the hospital serves foreign patients from Burundi, the Democratic Republic of Congo, and Uganda. The hospital receives about three patients from Burundi and the Democratic Republic of Congo daily, about one Ugandan patient weekly, and two to three patients from Kenya every quarter. Most foreign patients come for highly specialized surgeries, such as retinal surgery or cornea transplants.

Source: World Bank 2014.

Other examples of medical institutions that have a footprint in several EAC countries include the Aga Khan Hospital University (with presence in Kenya, Tanzania, and Uganda); health insurance companies such as UAP, Resolution Health, Jubilee Insurance, and Britam insurance that are present in most EAC countries; and laboratory services providers such as Lancet South Africa with presence in Kenya and Uganda.

B.4 Brain Drain or Circulation: Do Educators and Medical Professionals on the Move Exacerbate Africa's Skills Shortages?

Africa also exports education services via the movement of its educators. Examples include Zimbabwean educators who teach in South Africa or Tanzanian Swahili teachers who provide education services in the Democratic Republic of Congo or Uganda. Systematic information on teachers and educators traveling abroad to provide services is largely absent, which prevents analyses of education services exports via Mode 4. Because of the lack of reliable data in Africa, recent studies use the receiving countries' teacher registration data to provide an indication of the extent of teacher migration from selected African countries (Bhorat, Meyer, and Mlatsheni 2005; Kok et al. 2006; Morgan, Sives, and Appleton 2005). The latter study suggests that in 2003, 1,492 South Africans held teaching permits in the United Kingdom, or close to 30 percent of teaching permit holders in the country.

South Africa seems to be an equally important importer of education services via the temporary movement of providers, mainly from the region. According to the South African Council of Educators, the intake of foreign teachers in South Africa has increased dramatically, from 1.2 percent of total educator registrations in 2006–07 to 28 percent in 2009–10 (SACE 2011). South Africa attracts teachers primarily from Lesotho and Zimbabwe (Wentzel and Tlabela 2006). In Botswana, nearly 5 percent of all teachers are foreigners (Manik, Maharaj, and Sookrajh 2006). The World Bank interviews conducted as part of this study also reveal that many Kenyan and Ugandan teachers are providing education services in Tanzania, often informally.

In health services, the movement of health providers to supply medical services in the country of the patient (Mode 4) seems to be as important as the consumption abroad by domestic patients (Mode 2). The migration of health professionals from Africa to other parts of the world has received particular attention, as it is considered an important contributor to Africa's shortage of health workers. For instance, Ratha et al. (2011, chapter 3) show that in 2004 there were about 25,000 African-trained physicians in OECD countries, almost one-fourth the total number of physicians in Africa that year (based on information from Bhargava and Docquier 2008). The migration of African physicians, estimated at between 10 and 15 percent, is much higher than for other African professionals and tertiary educated workers (Docquier and Marfouk 2006). Furthermore, the number of African-trained doctors working in OECD countries also rose by 91 percent between 1991 and 2005. By contrast, the increase in the number of African-trained physicians working in Africa during the same timeframe was comparatively low, at 61 percent.

Many African countries are witnessing the migration of physicians, nurses, and other medical professionals primarily to Canada, South Africa, the United Kingdom, and the United States.[17] For example, 43 percent of Liberia's and 30 percent of Ghana's trained physicians are providing health services in Canada and the United States (Cattaneo 2010). This figure exceeds 50 percent in Malawi, Tanzania, Zambia, and Zimbabwe (SAMP 2008). Earlier evidence suggests that approximately 200 doctors left Zimbabwe for Botswana and South Africa in 1992 (SAMP 2002). Similarly, a study of 115 emigrant Zimbabwean doctors in 2008 revealed that 36.5 percent of them were based in South Africa, while 3.5 percent were based in other African countries (SAMP 2011). Although the migration of African

[17] Whether these movements are temporary or permanent is not studied in any detail, so we are not able to comment on the exact volume of exports of health services via Mode 4.

doctors to OECD countries has historically been perceived as brain drain (see, for example, Chen and Boufford 2005), a recent study by Ozden and Phillips (2015) adds a new dimension to this debate.

Ozden and Phillips (2015) show that of a total of nearly 20,000 "African" doctors in the United States, about 48 percent were not only born in Africa, but also trained in Africa, while 44 percent were born in Africa but trained abroad. The migration of African-born and trained doctors varies widely across the continent. For instance, 307 of 374 Sudan-born doctors in the United States were educated in Sudan, but only 52 of 378 Ugandan doctors in the United States were born and trained in Uganda. The authors suggest the extent of loss of human capital investment in medical education from African countries may have been overstated. In addition, the demand for health workers in Africa largely surpasses the number of African health professionals working in OECD countries. For instance, in 2000 all African-born nurses and doctors working in OECD countries represented about 12 percent of the total shortages for the region (OECD 2010). This shows that while international migration may exacerbate shortages in Africa's medical sector, it is not the main cause of the continent's health human resource crisis. Nevertheless, international and regional cooperation between countries or regional health institutions can help manage migration and enhance integration in Africa's health workforce.

The regional migration of health professionals has been explored by several studies. For instance, it was found that although half the Cameroonian health professionals intend to migrate, only 4 percent of them think of migrating to other African countries such as Senegal or Côte d'Ivoire. Similarly, in Senegal, only 2.6 percent of health care practitioners intend to migrate to other African countries. By contrast, in Uganda and Zimbabwe, about 20 percent of health care workers intend to migrate to other African countries (WHO 2004).

Anecdotal evidence suggests that foreign medical professionals have been temporarily working in Kenya, Rwanda, and Uganda on a regular basis. Frequent temporary medical professional trade within these three countries is mostly in areas with acute shortages of medical specialists, such as surgery (including neurological and cardiac surgery), specialist reviews, and second opinion consultations. Movement of medical professionals is also seen in medical camps, short-term research, and teaching assignments.

Given the shortage of health professionals in Africa[18] and their tendency to migrate to high-income countries, developing incentives for retaining such professionals in the continent is a high-priority issue for most governments.

B. Determinants of Trade in Education and Health Services

Typical determinants of trade include differences in endowments, as well as differences in the cost and quality of services and institutions providing the services.

C.1 Cost over Quality: What Matters More?

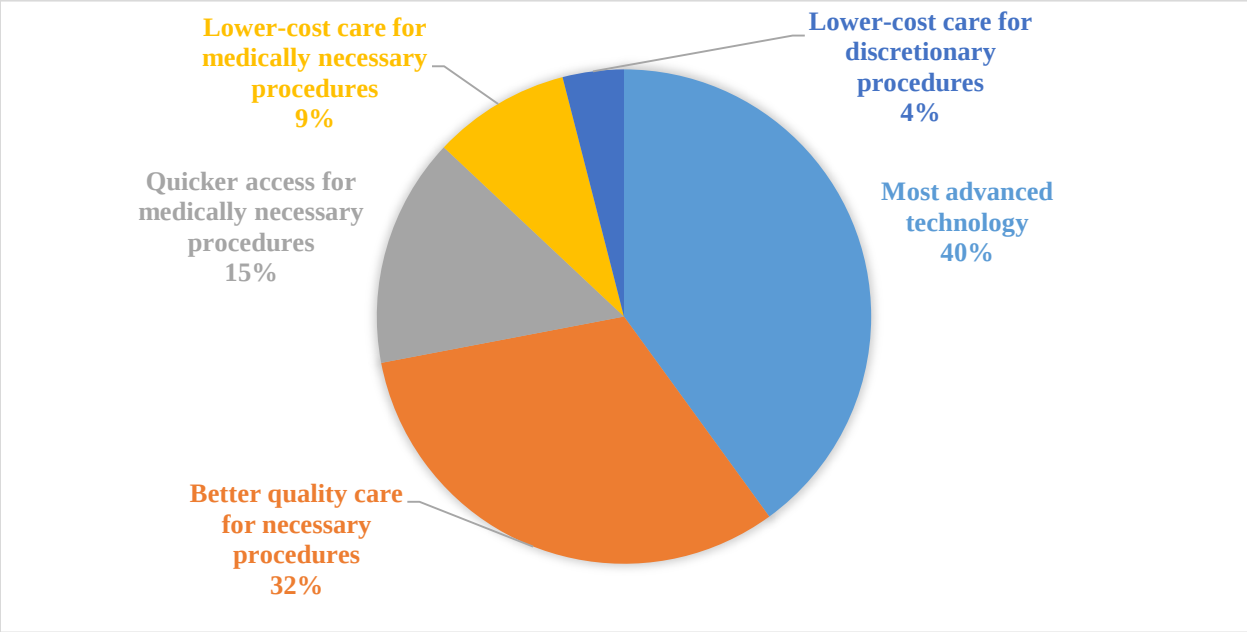
Many studies show that cost is an important determinant of education and health services trade. For instance, South African institutions of higher learning charge lower fees than high-income nations and have a lower cost of living.[19] MacGregor (2007) argues that the South African government subsidizes SADC students at par with local students (as per the SADC agreement). This might explain the higher proportion of SADC students in South African universities. Similarly, in the case of Uganda, Othieno and

[18] For instance, only South Africa and Tunisia have more than 75 physicians per 100,000 people. At the other extreme, Tanzania and Malawi have 1 and 2 physicians per 100,000 people, respectively.

[19] http://www.studysa.

Nampewo (2012) find that on average, Ugandan universities charge less for tuition than comparable universities in the region.[20] In health services, the five most important drivers of medical tourism are advanced technology, better quality of care, quicker access to care, lower cost of vital procedures, and lower cost for discretionary procedures (McKinsey Global Institute 2008). Quality seems to be more important than cost when it comes to the determinants of travel abroad to consume medical services (figure 7).

Figure 7. Motivations for Medical Travel Abroad from the United States



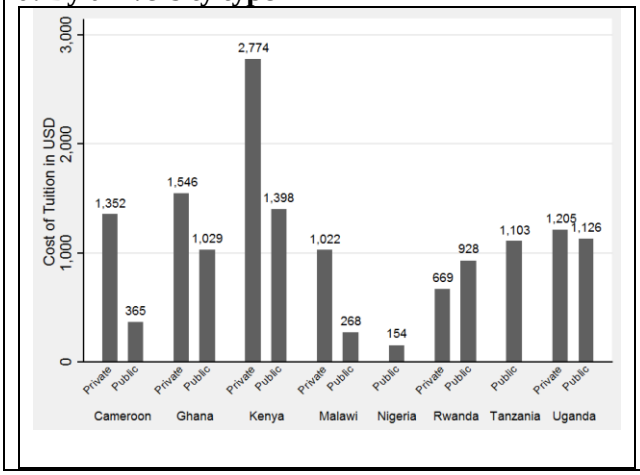
Source: McKinsey Global Institute 2008.

The 2014 World Bank mobile phone survey confirms that universities in several African countries have managed to attract foreign students despite higher costs (figure 8).

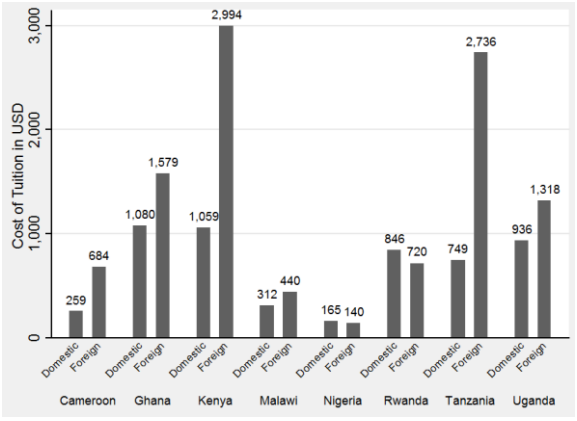
[20] The tuition per year for a Bachelor of Commerce is about US$1,464—well below fees for a similar program in major universities in other EAC partner states. Similarly, Makerere University charges the lowest tuition for surgery and medicine courses (US$1,977 per year) and agriculture and food science (US$1,971 per year). In comparison, the National University of Rwanda charges US$2,208 per year, and the University of Nairobi for Surgery and Medicine charges US$5,042 per year.

Figure 8. Cost of University Tuition in Sub-Saharan Africa, 2014 (US$)

a. By university type



b. By domestic and foreign students



Source: World Bank 2015.

These data suggest that quality matters when it comes to education services exports. In general, foreign students base the choice of a destination on the quality of education offered. For instance, South African education services exports are based on the quality and size of its higher education sector, which is easily accessible and offers internationally recognized qualifications (Hahn 2005). South African universities dominate in the top 10 rankings of universities in the region (table 2).[21] In addition, South Africa's 2013–14 Global Competitiveness Index on the quality of education and training is 3.9, only slightly below the United Kingdom's index of 5.5.[22]

Table 2. Top 10 Ranked Universities in Africa, 2009

University	Country	African ranking	World ranking
University of Cape Town	South Africa	1	398
University of Stellenbosch	South Africa	2	566
University of Pretoria	South Africa	3	718
University of Witwatersrand	South Africa	4	720
Rhodes University	South Africa	5	738
University of South Africa	South Africa	6	1,449
University of Western Cape	South Africa	7	1,553
America University of Cairo	Egypt, Arab Rep.	8	1,826
North West University	South Africa	9	1,857
University of KwaZulu Natal	South Africa	10	2,214

Source: Marko 2009.

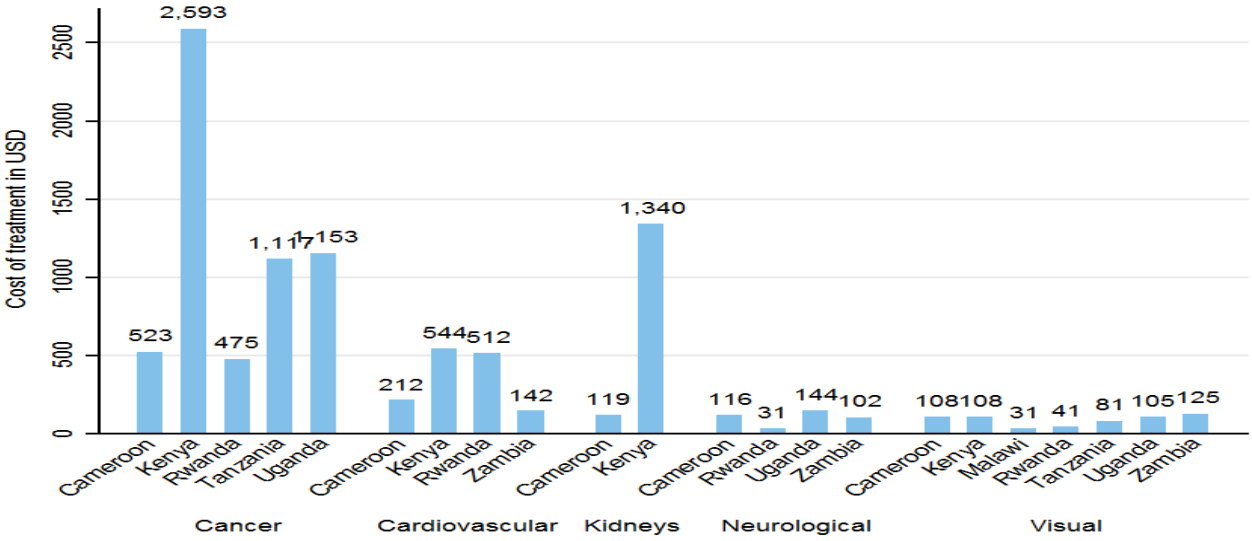
[21] In addition, South Africa has set up the South African Qualifications Authority board, which helps in attaining internationally recognized qualifications. In South Africa, staff at most universities are offered attractive research incentives for promoting better-quality teaching and education (Kwaramba 2009).

[22] The Global Competitiveness Index indicator is derived from the following indicators: (i) secondary enrollment, (ii) tertiary enrollment, (iii) quality of the educational system, (iv) quality of math and science education, (v) quality of management schools, (vi) Internet access in schools, (vii) local availability of research and training services, and (viii) extent of staff training. The 2013–14 report is available at http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2013-14.pdf.

Similarly, lower tuition and good university rankings make Uganda much more competitive than other regional partner states (Othieno and Nampewo 2012).

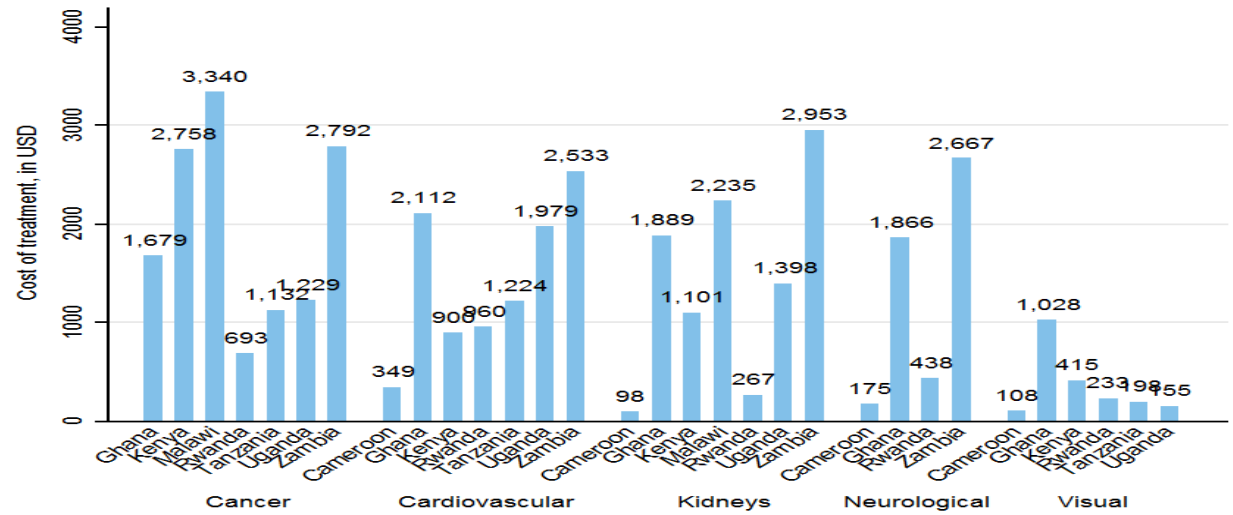
In health services, the findings of the 2014 World Bank mobile phone survey show that in several cases domestic patients from the surveyed countries pay more for treatment received abroad than do foreign patients undergoing treatment in the selected countries (figures 9 and 10). Again, this may suggest that the cost of medical services is not the decisive factor for trade in health services.

Figure 9. Cost of Treatment Received by Foreigners in Selected Countries in Sub-Saharan Africa, April–July 2014 (USD)



Source: World Bank 2015.
Note: Data were compiled from foreign patients responding to the World Bank mobile phone survey.

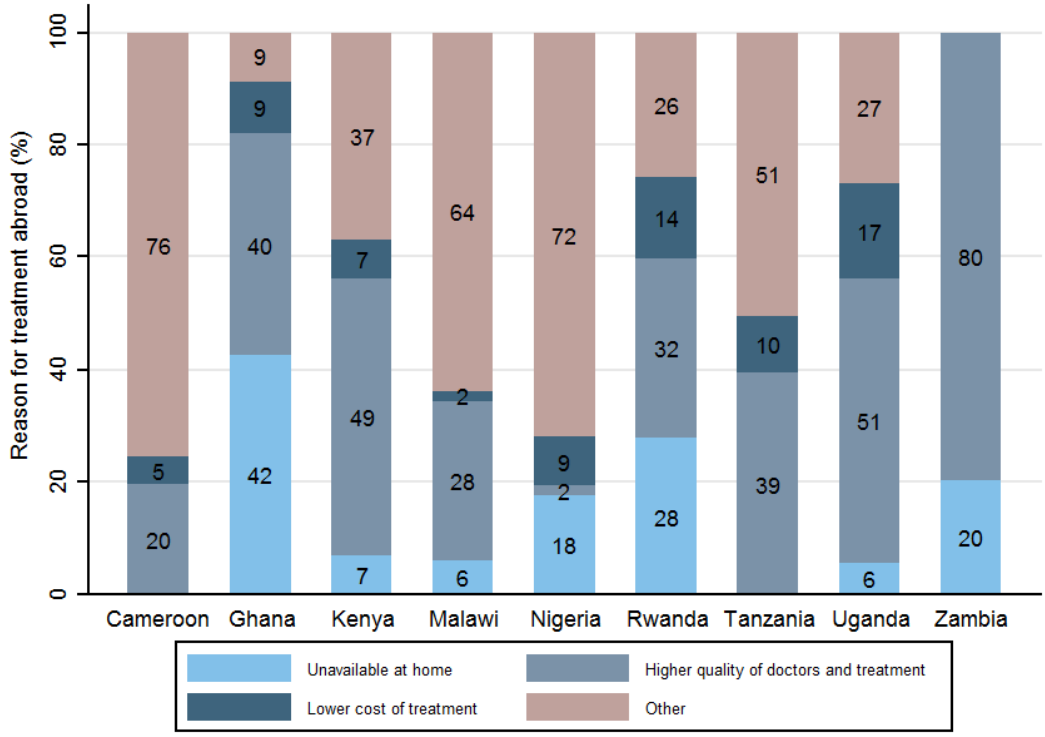
Figure 10. Cost of Treatment Received by Patients Abroad in Selected Countries in Sub-Saharan Africa, April–July 2014 (USD)



Source: World Bank 2015.
Note: Data were compiled from patients responding to the World Bank mobile phone survey.

Although differences in the quality of services may explain this outcome, the nonavailability of certain specialized cures (within the broader treatment category) could be an additional explanatory factor (figure 11).

Figure 11. Reasons Domestic Patients Seek Treatment Abroad in Selected Countries in Sub-Saharan Africa, April–July 2014 (%)



Source: World Bank 2015.
Note: Data were compiled from patients responding to choices in the World Bank mobile phone survey.

Differences in government expenditure in the health sector, size of the health services infrastructure, and diversity of services determine the extent of intra-African trade in health services. Other drivers include the cost and quality of services, availability of state-of-the-art equipment, and availability of specialists. Specifically, drivers of medical tourism in the region include the recognition of transnational disease patterns, growing patient mobility (facilitated by low-cost airlines and advances in information technology), and growing development of the industry. Other drivers of medical tourism in the region include lack of local specialist health services (such as facilities and specialist consultants) and cheaper regional travel and accommodation compared with travel to Asia, Europe, or the Americas. The costs of specialist procedures in Africa are comparable with costs in India; however, the cost of travel and accommodation is higher.[23]

C.2 Geography, Language, and Cultural Proximity: Can They Support the Regional Advantage?

Geographical proximity and language similarity play an important role in attracting foreign students and patients. For example, Lesotho, Namibia, and Zimbabwe are the largest source countries for South

[23] For example, the cost of eye surgery in India and Rwanda is about US$2,500 per treatment; but including the cost of travel and accommodation, a patient who sought treatment in India would spend close to US$10,000.

Africa's education services exports because of their geographical proximity, or their shared colonial relationship and history. The country's universities use English as the primary language of instruction, which helps attract students from several Anglophone African countries.

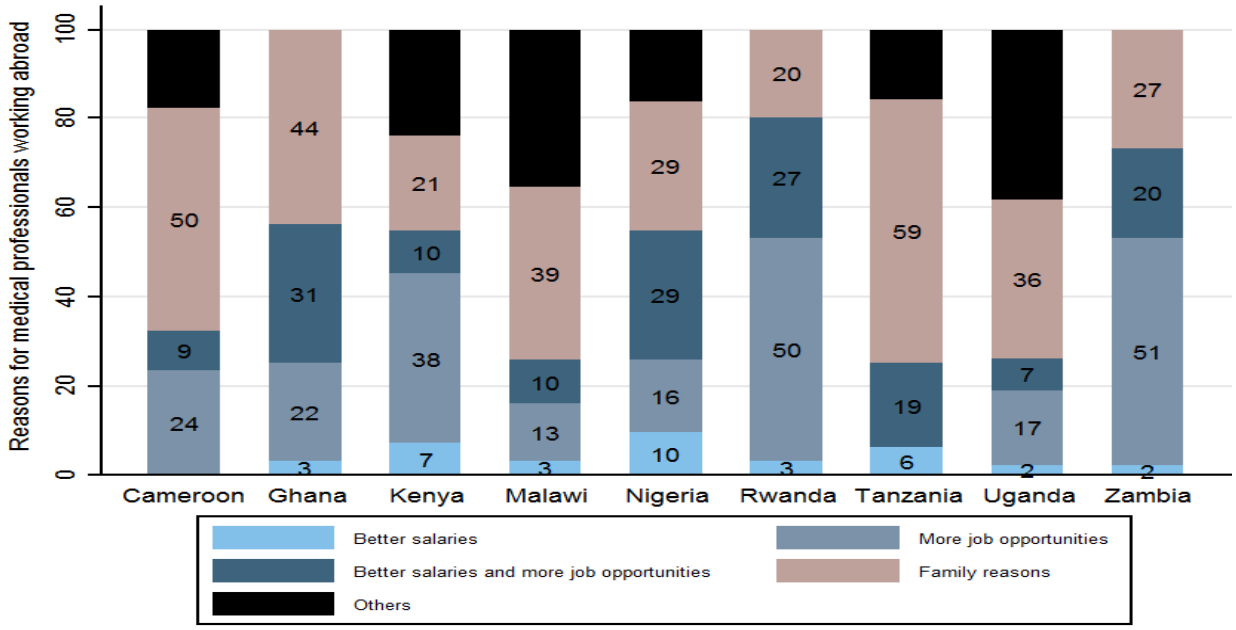
Similarly, in East Africa, most foreign students come from the subregion. During the colonial era, most universities were established to serve the region; for example, Makerere University (formerly known as the University of East Africa) was established to train students from Kenya, Tanzania, and Uganda. After independence, the remnants of the colonial education system were still prevalent and several universities were renowned for excellence in various fields. For instance, many leading legal sector professionals in the region attended the University of Dar es Salaam; the University of Nairobi was known for the quality of its courses in economics and engineering; and Makerere University had a leading role in producing medical professionals.

The proximity of providers is equally important in health services. For instance, the contribution of Algeria and Libya to Tunisian exports of health services amounts to 70 percent of the country's total health services exports (AfDB 2013). Eighty-seven percent of medical tourists in Jordan are from neighboring countries, and in Thailand, 89 percent of the foreign patients treated in 2002 were local expatriates or Asian nationals (Lautier 2008). In the same decade, the volume of foreign patients arriving from neighboring countries was similar for Germany (88 percent), Singapore (84 percent), and the United Kingdom (61 percent) (Lautier 2005; Mortensen 2008; Obermaier 2009).

C.3 What Explains Mobility in Education and Health Services?

The push and pull factors that drive the migration of African education and health professional broadly mirror those that apply to highly skilled workers in general. Such factors include inadequate remuneration in the home country, the desire to work in better educational or managed health systems and to continue education and training, and family reasons. These factors encourage African teachers and health care professionals to seek employment abroad, leading to trade through temporary presence (Mode 4) or to permanent migration. The 2014 World Bank mobile phone survey reveals that family reasons are equally if not more important than other factors for the mobility of African health professionals (figure 12). Additional pull factors, such as shortages of doctors and nurses in the host countries, further encourage the outflow of African health professionals.

Figure 12. Reasons for Working Abroad for Medical Professionals from Selected Countries in Sub-Saharan Africa, April–July 2014



Source: World Bank 2015.
Note: Data were compiled from medical professionals responding to choices in the World Bank mobile phone survey.

Two key points emerge from this overview. First, available data, including the results from the World Bank mobile phone survey on trade in education and health services, as well as anecdotal evidence highlight the importance of regional trade flows. Furthermore, the data suggest that the cost is not decisive; rather, the availability and quality of services seem to be more important for trade in health and education services than other types of services.

C. Regulatory Hurdles and Explicit Trade Barriers Affecting Trade in Education and Health Services

The information on the determinants of trade presented in the previous section is complemented in this section with a more systematic discussion of domestic regulations and explicit trade barriers that affect trade in education and health services. Concrete examples and policy recommendations based on regulatory surveys carried out in four East African countries round up this regulatory analysis.

D.1 Domestic Regulations

Education and health services have traditionally been subject to a high degree of regulation aimed at addressing information asymmetries between patients and doctors, negative externalities generated by skills shortages and skills mismatches, and concerns related to access to medical services. The typical regulatory measures in the health sector are put in place to (i) ensure the quality of services, (ii) minimize brain drain, and (iii) pursue equity.

Ensuring quality. A major concern in the education and the health sectors is the need to ensure that services meet a minimum standard of quality to protect the interests of the consumers (the students or the patients) and the integrity of the providers (the education system or the medical institutions). In general,

quality assurance and accreditation mechanisms are put in place to achieve such objectives. In addition, the mutual recognition of qualifications plays an important role in addressing quality issues related to trade in education and health services. Regional accreditation bodies can perform a critical role in setting standards and maintaining quality.

Trade in education and health services can help ensure that demand is better satisfied and financial resources become available to improve the quality of the institutions providing such services. However, increased trade, particularly through Modes 1 and 3, can also accentuate the potential quality risks in both sectors. For example, in education services, existing national frameworks for quality assurance or accreditation in higher education often focus exclusively on services provided by domestic institutions. Such frameworks are inadequately prepared to address new challenges from trade and private provision of services. Furthermore, many African countries would have difficulty developing and implementing appropriate quality standards or accreditation and recognition mechanisms that (i) ensure that patients and students remain protected from fraudulent or poor quality providers, and (ii) reassure international providers that the standards and accreditation are based on objective criteria and adequate verification procedures. Finally, given that health- and education-related quality criteria differ across countries, the resulting diversity in quality assurance and accreditation systems across the continent further complicates the matter.

Minimizing brain drain. The benefits from trade in education and health services can be offset by the permanent emigration of students or health professionals. This represents a significant loss of investment in African sending countries. Governments have used various policies to encourage students or health professionals to return to their home countries, with varying degrees of success. Some countries have tried restrictive policies, such as compulsory national service, to render migration more difficult. These policies have not proven very effective, since they represent only temporary deterrents to migration. Another dimension is the development of policies and incentives for the return of highly qualified migrants, including international students and health professionals. This approach requires a combination of better economic conditions at home along with improved university and health facilities.

Several developing countries have attempted to incentivize the return of qualified migrants through the use of policies, such as tax rules on remittances, which foster inward investment and research and development. Other measures include setting up knowledge networks among skilled expatriates linked to their country of origin, with the aim of mobilizing their knowledge and expertise for the development of their country without physically relocating. Such initiatives implemented at the national and/or the regional levels can create new incentives for retaining the scarce skilled professionals on the continent.

Pursuing equity. Trade in education and health services can intensify the existing inequity of education and health systems in Africa, given that foreign services tend to be more expensive than domestic ones. Therefore, the regulatory analysis will examine existing mechanisms to guarantee the necessary support to low-income or disadvantaged (for racial, religious, or gender-related reasons) patients and students unable to meet the cost of education or health services. Funding arrangements for poor students; the relationship between the cost of medical treatment and individuals' contribution, including rules and practices governing the reimbursement of patients under various insurance schemes that affect insurance portability; and the ability of patients to purchase medical services need to be examined in conjunction with the trade policy measures applied in the medical and education sectors.

D.2 Explicit Trade Barriers

Typical barriers on Mode 1 are restrictions on the electronic transmission of educational materials or medical services/telediagnosis, restrictions on the types of courses or treatments that may be offered, quotas or economic needs tests in place that restrict the number of suppliers of education and health

services, restrictions on payments and transfer of funds abroad, and local accreditation and recognition requirements. Trade in education and health services via Mode 2 is usually constrained by barriers imposed by both home and host countries on the mobility of students and patients, and restrictions on the portability of scholarships or medical insurance schemes. For example, many home countries require exit visas or impose foreign currency controls in the home country. In addition, there might be limitations concerning the coverage by public medical insurance schemes of services provided abroad. And foreign degrees obtained abroad might not be recognized in the students' home country.

In terms of Mode 3, there are limitations on the numbers of permitted suppliers of education and health services and their legal form (including joint venture requirements), foreign equity capital limits, and discriminatory tax/fiscal measures. Burdensome immigration requirements, quotas on numbers of service suppliers, nationality or residence requirements, and labor market tests (horizontal measures or specific restrictions that apply to education and health professionals traveling across national borders to provide services) often impede trade in health services via Mode 4.

D.3 Addressing Regulatory Hurdles and Trade Barriers: A Case Study of East Africa[24]

To maintain a certain level of quality in education and medical services, all the examined East African countries impose qualification and academic degree requirements for practitioners in these fields. For example, Kenya, Rwanda, and Uganda require that all doctors possess a university degree to be able to practice. Doctors are also required to have completed one year of internship before becoming a full member of the medical profession. Nurses do not need a degree, but require a certificate or a diploma with mandatory practical training and a minimum set of subjects to practice as a nurse. Similarly, in education services, teaching at higher education institutions in Kenya, Rwanda, Tanzania, and Uganda requires at a minimum a master's degree from an accredited university and some working experience. For teachers at the secondary and primary levels, a degree is not required to practice.

The training program curricula for teachers, professors, nurses, and doctors are determined by the relevant government education bodies. Professional associations assist in the development of programs by articulating the current skills needed by employers and making recommendations to the relevant government bodies.

The ministries of education are responsible for the overall delivery of each country's national development mandate with regard to education. Within each ministry, statutory bodies are responsible for the implementation of government strategies and policies in education. They ensure that standards and quality are met and maintained. Kenya and Uganda have different government bodies covering primary and secondary education levels and the higher education level. Rwanda does not have stand-alone institutions responsible for service delivery in education like Kenya and Uganda. Instead, the Rwanda Education Board oversees overall sector regulation and the implementation of education sector policies. Professional qualifications obtained outside the respective jurisdictions are recognized in the examined countries. At the higher education level, the university or college is responsible for vetting the qualifications of foreign-trained professors and lecturers and ensuring they meet the country's equivalency standards.

In medical services, the curriculum for continuous professional education (CPE) in all three countries is solely determined by the medical boards and nursing councils. The nurses' councils in each country are responsible for developing and administering continuous professional education for nurses. For doctors to be licensed and registered, CPE is mandatory in all the examined countries.

[24]Regulatory surveys were carried out in Kenya, Rwanda, Tanzania, and Uganda between May and September 2014 (World Bank 2014).

Furthermore, doctors and nurses in the examined countries must be licensed with the mandated medical board before being permitted to practice. The same also applies to medical service institutions. The licenses are conferred by the respective medical and dental practitioners' boards/councils and the nursing councils. These institutions are mandated by government to register practitioners, set standards, administer and monitor CPE, and enforce compliance and discipline. In education services, the licensing of teachers is handled by teachers' service commissions in Kenya and Uganda. In Rwanda, teacher licensing and regulation are the responsibility of the Department of Teacher Education, Management, and Professionalization under the Rwanda Education Board. In Kenya, teachers in the public sector are required to undergo a nine-month practical training course before being licensed.

When it comes to domestic regulation affecting the operations of educational and medical institutions and professionals, we find that education services seem to be subject to fewer restrictions related to price controls, advertisement prohibitions, or stringent standards than medical services.

Certain countries seem to impose more severe restrictions in both sectors. For instance, while most countries do not regulate the prices and fees for educational or medical professionals, the Tanzanian government imposes binding minimum prices for all health services based on cost sharing and binding maximum prices for all services provided by private practitioners. Similarly, the Government of Tanzania established a unit cost for higher education to guide fee setting. The government is also working on unit costs for secondary education. Currently, school fees are set by schools, confirmed by school boards/committees, and approved by Regional Education Officers. Tanzania also regulates the advertising by medical professionals and hospitals through regulatory bodies (such as the Private Health Facilities Advisory Board), by imposing restrictions on the nature of advertisements as well as the content and location of billboards. Uganda has similar restrictions on advertisements by medical professionals and hospitals. Lastly, all the countries impose stringent standards to ensure high quality of medical services.

When it comes to explicit trade barriers, education services, across most modes, are less restricted than medical services. For instance, in most cases, the qualifications obtained by students via distance learning (Mode 1) or through study abroad (Mode 2) are recognized by all the surveyed countries. In Tanzania, however, the certificates need to be approved by the Tanzania Commission for Universities (TCU) (table 3).

Table 3. Regulations Affecting Distance Learning (Mode 1)

Regulation	Kenya	Rwanda	Tanzania	Uganda
Need to demonstrate the lack of domestic availability?	Yes	No	No	No
Qualifications obtained through distance learning recognized?	Yes	Yes	No	Yes
Restrictions on the content and/or duration of permitted programs?	No	No	n.a.	No
Local accreditation and recognition requirements?	Yes	Yes	Yes	Yes

Source: World Bank regulatory surveys, 2014.
Note: n.a. = not available.

By contrast, in health services, there seem to be stringent restrictions on telemedicine (Mode 1) or medical tourism (Mode 2) in all the examined countries. Although a domestic resident hospital/individual can obtain medical services directly from a foreign professional/hospital located outside their country, the insurance policy limits coverage if diagnosis and medical services are provided on a cross-border basis.

All the surveyed countries have special restrictions on importing medical services via Mode 1 or 2. For example, in Kenya the insurance needs to have a regional footprint, and special provisions also apply on the type of ailment that restrict the services and level of coverage. Similarly, in Tanzania there are restrictions on referral cases facilitated by the government (table 4).

Table 4. Regulations Affecting Telemedicine (Mode 1)

Regulation	Kenya	Rwanda	Tanzania	Uganda
Allowed to obtain services from a foreign professional/hospital?	Yes	Yes	Yes	Yes
Need to demonstrate lack of domestic availability?	No	No	No*	No
Limits on insurance policy coverage?	Yes	Yes	Yes	Yes
Restrictions on the range of services?	Yes	Yes	Yes	Yes

Source: World Bank regulatory surveys, 2014.
*Some restrictions apply.

Trade in education services via branch campuses of foreign universities (Mode 3) seems relatively open in East Africa. Not only are foreign universities allowed to set up branch campuses, but also there are no limits on ownership shares, or on the legal form of higher education institutions. In none of the surveyed countries is the management or the board of directors of a foreign university required to include locals or residents of the host country. Unlike medical services, foreign professors and lecturers who are not locally licensed or practicing under a limited license are permitted, although not required, to engage in commercial association with fully licensed professors (lecturers to undertake education work). Moreover, there are no restrictions on repatriation of earnings by foreign educational institutions or on franchise and twinning arrangements, in which the education program is offered through a local partner without requiring a "bricks and mortar" investment by the foreign institution. Finally, there are no limits on financial assistance or loans for students at foreign educational institutions or on the student population that can be enrolled in such institutions. In most cases, except in Tanzania where the certificates need to be approved by TCU, there are no restrictions in recognizing the diplomas/degrees provided by foreign educational institutions (table 5).

Table 5. Regulations Affecting the Establishment of Universities from Abroad (Mode 3)

Regulation	Kenya	Rwanda	Tanzania	Uganda
Foreign commercial presence of universities allowed?	Yes	Yes	Yes	Yes
Limits on numbers suppliers, legal form, and equity capital?	No	No	No	No
Restrictions on legal form of higher education institutions?	n.a.	No	No	No
All types of legal entities allowed as for domestic institutions?	Yes	Yes	Yes	Yes
Nationality requirements on staff, number of students?	No	No	No	No
Restrictions on branch campuses/different regulatory frameworks?	No	No	No	No
Limits on ownership/control for non-licensed professionals?	No	No	n.a.	No
Non-locally-licensed allowed to engage in commercial association with fully licensed professors and lecturers to undertake education work?	Yes*	Yes*	n.a.	Yes*
Requirements regarding composition of the board of directors?	No	No	n.a.	No
Requirements regarding management?	No	No	n.a.	No
Restricted from providing services to a few groups?	No	No	n.a.	No
Restrictions on repatriation of earnings?	No	No	No	No
Restrictions on franchise?	No	No	No	No
Limits on financial loans for students at foreign educational institutions?	No	No	No	No
Restrictions on the student population that can be enrolled?	No	No	No	No
Restrictions on recognizing diplomas/degrees provided?	No	No	No	No

Source: World Bank regulatory surveys, 2014.
Note: n.a. = not available.
*Permitted, but not required.

There are significant restrictions on imports of medical services via the establishment of foreign hospitals (Mode 3). Although a foreign medical services provider can enter and establish a commercial presence in an East African country, several restrictions hinder the complete integration of such services. For example, there are restrictions on the legal forms of entry of hospitals in countries such as Tanzania and Uganda. In Tanzania only limited liability partnerships and corporations (private limited liability companies) are allowed for foreign hospitals, while in Uganda domestic and foreign hospitals are allowed only as sole proprietorships or corporations (private limited liability companies). Furthermore, Tanzania and Uganda issue only a temporary license for foreign hospitals. Tanzania has additional restrictions with respect to the management of foreign hospitals, whereby only fully registered local doctors can take over the position of a medical officer in charge. The country also limits the number of beds a hospital can have, depending on the type of health facility. In none of the surveyed countries are foreign doctors with

foreign degrees permitted to engage in commercial associations with fully licensed health professionals to undertake medical work (table 6).

Table 6. Regulations Affecting the Establishment of Hospitals from Abroad (Mode 3)

Regulation	Kenya	Rwanda	Tanzania	Uganda
Foreign commercial presence of hospitals allowed?	Yes	Yes	Yes	Yes
Limits on numbers of suppliers, legal form, and equity capital?	No	No	Yes*	Yes*
All types of legal entities allowed as for domestic hospitals?	Yes	Yes	No*	Yes*
Nationality requirements on staff or number of patients?	No	No	Yes*	Yes*
Limits on ownership/control for non-licensed professionals?	No	No	Yes*	No
Non-locally-licensed allowed to engage in commercial association with fully licensed professors and lecturers to undertake medical work?	No	No	No	No
Requirements regarding composition of the board of directors?	No	No	No	No
Requirements regarding management?	No	No	Yes*	No
Restrictions on repatriation of earnings?	No	No	No	No
Limits on number of beds?	No	No	Yes*	No
Restrictions on range of services?	No	No	No	No

Source: World Bank regulatory surveys, 2014.
*Some restrictions apply.

For repatriation of earnings, the policies vary across the examined countries. In Kenya, repatriation of capital and profits is allowed after payment of the relevant taxes. In Uganda, the institution is required to attain approval from the Bank of Uganda to repatriate profits and dividends. In Rwanda, institutions that fulfill the requirements on investment promotion are eligible for tax-free repatriation of profits. There do not seem to be any restrictions on the range of services that a foreign hospital can provide or the use of public medical insurance in foreign hospitals. In general, there are no limits on ownership or control in a foreign medical institution by medical professionals (individuals) who are not even licensed to practice in the host country.

Trade in education and medical services via the temporary movement of people (Mode 4) seems to be more restricted than other modes of supply. In general, a medical professional needs to fulfill stringent academic and professional qualifications to be eligible to practice in her or his own country, but these requirements multiply many fold in a foreign country because of the large number of regulations. First, access to the medical profession is strongly regulated through compulsory licenses issued at the national or subnational level. For instance, in Tanzania, a foreign medical professional who is licensed to practice in a foreign country cannot enter the country temporarily to provide medical services. A local license needs to be obtained before beginning even to apply for a work permit and visa. The duration of the license is one calendar year for the examined countries. However, there are efforts to change the license duration for foreign doctors from one year to the intended duration of stay in the country. For instance, if

a doctor is in the country for a five-day medical camp, then the doctor is granted a license for five days, not one year (table 7).

Table 7. Regulations Affecting the Temporary Movement of Health Professionals (Mode 4)

Regulation	Kenya	Rwanda	Tanzania	Uganda
Requirements other than academic qualifications?	Yes	Yes	Yes	Yes
Practical training requirements (months)?	Yes (12)	Yes (12)	Yes (12)	Yes (12)
Foreign licensed professionals allowed to practice temporarily?	Yes; with visa and work permit	Yes	No	Yes; temporary license
Is there a minimum wage/salary or wage parity requirement?	No	No	No	No
Burdensome immigration requirements (initial limit, months)	3	12	24	3
Burdensome labor market tests?	Yes	No	No	No
Quotas or limits on number of candidates?	No	No	No	No
Foreign academic qualifications/licenses recognized?	Yes*	Yes*	Yes*	No
***Preferential recognition to EAC member states and unilateral recognition**				

Source: World Bank regulatory surveys, 2014.
*Preferential recognition to EAC member states and unilateral recognition.

The cost of a host country's license is often higher for a foreigner than for nationals. In Tanzania and Uganda, foreign doctors are issued only a temporary license, while nationals can be issued a license of three years for nurses and midwives and one year for doctors.[25] Although licenses from other jurisdictions are recognized unilaterally in Kenya and Uganda and preferentially in Rwanda for the EAC member states, language is a big constraint. English and the national language are most often requirements to obtain a full license. In Tanzania, restrictions are most stringent, as foreign licenses are not recognized and local licenses are not easily attainable. Permanent residency or citizenship is required for obtaining a Tanzanian license for nurses, midwives, and doctors.

Movement of educators across borders in East Africa is slightly more liberal as far as licensing regulations are concerned, especially compared with regulations for medical professionals. Unlike the health services sector, access to the education profession is not regulated through compulsory licenses or registration issued at the national or subnational level. There are no nationality, language, or residency requirements for obtaining an educator's license in any of the surveyed countries in East Africa. However, Tanzania does not recognize licenses obtained in any foreign jurisdictions, while Kenya, Rwanda, and Uganda recognize licenses preferentially for EAC member states (table 8).

[25] Plans are underway to have licenses issued in accordance with the requirement—for example, a five-day license for a five-day medical camp.

Table 8. Regulations Affecting the Temporary Movement of Education Professionals (Mode 4)

Regulation	Kenya	Rwanda	Tanzania	Uganda
Foreign licensed professional allowed to practice temporarily?	Yes	Yes	Yes	Yes
Minimum wage/salary or wage parity requirement?	No	No	No	No
Burdensome immigration requirements (initial limit, in months)	3	12	24	3
Quotas or limits on number of candidates?	No	No	No	No
Burdensome nationality or residence requirements?	No	No	No	No
Burdensome labor market tests?	No	No	No	No
Burdensome horizontal restrictions specific to educators?	No	No	No	Yes, experience requirements (2 yrs. for lecturer; 10 for prof.)
Foreign academic qualifications/licenses recognized?	Yes*	Yes* but test required	Unilateral recognition	Yes*

Source: World Bank regulatory surveys, 2014.
*Preferential recognition to EAC member states and unilateral recognition.

Most visa and immigration procedures are similar across the two examined sectors. Burdensome immigration requirements, visa regulations, and restrictions on work permits are typical barriers that hamper the movement of educational and medical professionals within Africa. Countries such as Kenya and Uganda issue visas and work permits for a period of 90 days. The cost of a visa in East Africa varies significantly across countries. Rwanda issues a one-year work visa with no additional requirements to obtain a work permit at US$83, while Tanzania issues a two-year work visa at US$550. Educational and medical professionals also need to obtain a work permit to practice in Kenya and Uganda, which imposes an additional cost. These work permits cost US$114 in Kenya and US$75 in Uganda. Kenya and Uganda issue a work permit for a three-month period only. Although visas and work permits for educators and medical professionals are renewable, they impose large, recurring fixed costs (table 9).

Table 9. Regulations Regarding Visas and Immigration Requirements Affecting Education and Health Professionals

Regulation	Kenya	Rwanda	Tanzania	Uganda
Cost of obtaining visa (US$)	50 (single); 100 (multiple)	83	550	130 (multiple)
Initial length of validity of work permit (months)	3	12	24	3
Average processing time for visa application (days)	30	2	7-21	3-5
Renewal of visa permitted?	Yes	Yes	Yes	Yes
Renewal of work permit permitted?	Yes	Yes	Yes	Yes
Allowed to switch employers?	No	No	Yes[a]	No
Explicit work permit application fees (US$)	114	0	550	75
Average processing time for a work permit (days)	n.a.	x	7-21	30

Source: World Bank regulatory surveys, 2014.
Note: n.a. = not available; x = no separate work permit required.
a. With notification to the Commissioner of Immigration.

Kenya and Tanzania impose labor market and economic needs tests before hiring educators from abroad. Given the short duration for visas and work permits and the high cost of getting an entry visa (and renewal), these restrictions may critically limit trade in education services. Further, academic and professional qualifications are not automatically recognized; but there is preferential recognition of degrees obtained from other EAC member states only. In Tanzania, by contrast, academic and professional qualifications are recognized only unilaterally according to a codified process based on substantive criteria.

On the positive side, none of the surveyed countries, except Kenya, requires a labor market test or an economic needs test prior to hiring a medical professional. There seem to be no quotas or limits on the number of candidates that can be admitted at professional examinations. The practical training and internship requirements are the same for foreign and domestic medical professionals, although many more procedures are involved to have professional qualifications recognized in any given African host country (table 10).

Table 10. Regulations Affecting Education and Health Professionals

Regulation	Kenya	Rwanda	Tanzania	Uganda
Competition law applicable?	**Yes**	**Yes**	**Yes**	**Yes**
Redress options when business practices perceived to restrict their activity?				
Health	Yes	Yes	Yes	n.a.
Education	Yes	Yes	n.a.	Yes
Treated at par with domestic professionals regarding taxes or eligibility for subsidies?	**Yes**	**Yes**	**Yes**	**Yes**
Quota/limit defining the maximum number?	**No**	**No**	**No**	**No**
Fees regulated in any way?	**No**	**No**	**Yes**[a]	**No**
Regulations on prices and fees apply equally?				
Health	Yes	n.a.	Yes	Yes
Education	Yes	Yes	Yes	Yes
Advertising and marketing prohibited or regulated?				
Health	n.a.	No	Yes	No
Education	No	No	No	No
Regulations on advertising apply equally?				
Health	n.a.	Yes	Yes	Yes
Education	Yes	Yes	Yes	Yes
Allowed to use the name used in their home country?	**Yes**[1]	**Yes**	**Yes**	**Yes**
Regulations on location and diversification?	**No**	**No**	**No**	**No**
Regulations on location apply equally?	**Yes**	**Yes**	**Yes**	**Yes**
Special instruments to assess and monitor quality?				
Health	Yes	Yes	Yes	Yes
Education	No	Yes	Yes	Yes
Compulsory licenses?				
Health	Yes; 3 years for nurses & 1 year for doctors	Yes; 3 years for nurses & 1 year for doctors	Yes; 3 years for nurses & 2 year for doctors	Yes; 3 years for nurses & 1 year for doctors
Education	No	Yes	No	No
Nationality requirement?				
Health	No	No	Yes; temp license	No (nurses); Yes (doctors;

				temp license)
Education	No	No	No	No
Language requirement?				
Health	Yes	Yes	Yes	Yes
Education	No	No	No	No
Residency requirement?				
Health	No	No	Yes	No
Education				
Licensing criteria apply equally to foreign professionals?				
Health	Yes	No	Yes	No
Education	No	No	No	No
Compulsory membership in professional association automatically granted with required qualifications?	**No**	**No**	**No**	**No**
Limited licensing system for foreign providers?	**No**	**No**	**No**	**No**
Recognition of licenses obtained in other jurisdictions?				
Health	Yes (unilateral)	Yes*	Yes	Yes (unilateral)
Education	Yes*	Yes*	No	Yes*

Source: World Bank regulatory surveys, 2014.
Note: n.a. = not available.
a. With notification to the Commissioner of Immigration.
*Preferential recognition to EAC member states.

D. Policy Action

This paper shows that although most countries in Sub-Saharan Africa import education and health services to address skills shortages and improve access to services, exports in these sectors are beginning to emerge on the continent. But despite increasing trade flows, including at the regional level, Sub-Saharan Africa continues to faces serious shortages of education and health professionals and access to education and medical services often remains a problem. To turn these sectors around, policy action is required in the areas of domestic regulation in education and health, trade policy, and labor mobility at the national and the international levels.

E.1. Fundamentals

Given the large education and medical skills shortages in Africa, investment in educational institutes for medical training, and continuous updating of research in the field are quintessential for developing successful education and health care sectors. Weaknesses in African education systems mean that students are ill-equipped to acquire market-relevant skills, so enhancing the quality of educational institutions should be a key item on the policy agenda. Most countries in Africa are far from the required level of medical training infrastructure to serve their own population. For instance, in all of Sub-Saharan Africa there are a total of 168 medical schools, and 24 of the 47 countries have only one medical school; 11 have no medical school at all (Mullan et al. 2011). Thus, investment in training, whether publicly funded or through foreign investment, would be key not only for improving access to better health services within the country, but also for exporting such services.

E.2. Domestic Regulatory Reforms

Domestic regulatory reforms need to focus on incremental, qualitative improvements that increase access to education and medical services for all, ensure the quality of these services, and address skills shortages. Concrete examples for domestic regulatory reforms could include:

- *Eliminating disproportionate restrictions that limit competition*. For example, price regulations are supported and introduced by education and medical associations or the government, who claim that the regulations are useful tools to ensure affordable services and access to all income groups. But regulated prices prevent markets from efficiently allocating resources, increase shortages, and cause deteriorating quality, while stifling innovation and diverting education and medical care to informal markets. The countries that impose such regulations need to adopt less restrictive mechanisms, such as better access to information on services and service providers, which can accomplish the same goals at lower economic cost.

- *Strengthening incentive systems for education and health care professionals to remain in the home country.* While restrictive policies, such as compulsory national service to render migration more difficult, have not proven effective, since they represent only temporary deterrents for migration, countries could focus on developing incentives such as work autonomy, flexible hours and scheduling, recognition of work, coaching and mentoring structures, and support for career development to retain education and health professionals. Addressing inefficient management structures and highly centralized decision making on human resources for health could also help alleviate skills shortages. Other measures could include the setting up of knowledge networks among skilled expatriates linked to their country of origin, with the aim of mobilizing their knowledge and expertise to the development of their country without physically relocating.

- *Putting in place a regulatory framework that supports trade.* In general, rules and regulations related to qualifications and licensing requirements for education and health professionals and institutions, rules related to insurance schemes, as well as rules regarding the provision of services to economically disadvantaged groups are among the most relevant regulations for trade. Countries need to ensure that such regulations are not too cumbersome while pursuing legitimate regulatory objectives that deal with information asymmetries, negative externalities, and equity issues.[26] Public-private partnerships[27] to deliver education and health services could be also considered.

[26] A comprehensive regulatory guide for health care is provided by the World Bank Group's Investment Climate Private Health Policy Toolkit: https://www.wbginvestmentclimate.org/toolkits/public-policy-toolkit/.

[27] For example, the Government of Lesotho entered into a long-term public-private partnership with a private sector consortium comprised of a mix of national and regional actors to establish and operate a national referral hospital and mini health care network of filter clinics in the greater Maseru area. The consortium assumed responsibility for providing the following services: (i) clinical services; (ii) clinical support services, including biomechanical

E.3. Trade Policy Reforms

Trade policy reforms ideally would include the removal of trade barriers on a most favored nation or nonpreferential basis, since such an approach would generate the largest welfare gains. Steps need to be taken to relax the explicit trade barriers applied by EAC countries; this would facilitate the movement of consumers (students and patients) and providers (teachers, professors, nurses, and doctors), the cross-border supply of education and health services, and the commercial presence of education and health institutions. Examples of possible trade reforms are:

- *Eliminating restrictions on the portability of insurance*. Often private and public insurers are prohibited to finance consumption of health care abroad. Therefore, medical tourism is mainly financed by out-of-pocket payments, making its cost disproportionally high and inaccessible for poorer segments of the population. Removing such restrictions on portability and permitting insurance companies to sell a policy that covers treatment in the foreign country would lower the costs of health services for all.

- *Minimizing restrictions on the forms of establishment allowed.* Underinvestment is a primary cause of poor education and health services in Africa. To improve the availability and quality of human and physical resources in this sector, expenditures on health care need to be increased and allocated efficiently, in line with local needs and priorities. In this regard, easing the inflow of foreign investment in the education and health care sectors has several benefits. One, it can generate additional resources for investment in and upgrading of infrastructure and technologies. Two, foreign investment can generate employment of teachers and health personnel. Three, it would easily provide expensive and specialized education and medical services. Four, the availability of private capital could reduce the total burden on government resources, helping to reallocate government expenditure toward the public education and health care sectors. In this regard, partnering with reputed education and health service institutions in other developed countries or countries known for their exports can also help to improve service facilities and introduce superior management techniques and information systems (Chanda 2002). Taxes collected from foreign-owned commercial hospitals, for example, could be reinvested in the public health system as well as in the training of health care professionals. Thus, the strategy of welcoming foreign investment in the short run is likely to pave way for exports of health care services over time.

- *Developing a transparent and consistent framework for accepting education and health professionals with foreign qualifications*. The main regulatory challenge for exporting health services via Mode 4 is related to cumbersome entry requests and procedural requirements for recognizing, or requiring specific forms of, qualification and professional licensing (Smith et al. 2009). African countries should allow freer mobility of education and health care professionals to enhance the region's competitiveness by articulating the economic and social motivation for economic needs tests and working through the mutual recognition and harmonization of qualifications and expedition of visa applications.

E.4. Immigration Reforms

The removal of explicit trade barriers needs to be complemented by reforms of immigration laws and rules on the hiring of foreign education and medical professionals. Visa and travel formalities inhibit trade in education and medical services. Such entry requirements and visa costs translate into government-

---

engineering, laboratory, and pharmacy; and (iii) non-clinical services, including administration, facilities management, and ICT.

imposed barriers to trade, which can be overcome by international and regional cooperation. Many successful exporters of medical services have eliminated such visa requirements. Other countries have adopted a more gradual approach and changed their visa requirements to encourage medical tourism and better integrate health care services with tourist facilities. For example, in India, the new medical tourist visas, "M-visas" are valid for a year and are also issued to the patients' companions. Similarly, hospitals such as Bangkok's Bumrungard have an "in-house visa extension center" for facilitating visa extensions for patients (Bookman and Bookman 2007). In some cases, medical tourists receive government assistance to expedite visa procedures. There also needs to be a transparent and clear framework for allocating work permits to medical professionals.

The SADC Protocol on Education and Training (signed in 1997) could provide a useful example to be refined and followed by other subregions for *immigration formalities and rules on hiring education professionals*. Although the implementation of the protocol is far from perfect,[28] it has done much to relax immigration formalities and facilitate freer movement of students and staff within the SADC region. For instance, the SADC protocol has facilitated access to affordable student visa permits and allowed foreign students to be engaged in formal-sector employment in their institutions of learning to improve their livelihoods (Kwaramba 2009). By treating SADC students like home students in terms of fees and accommodations, countries such as South Africa have encouraged foreign student enrollments from neighboring countries. The removal of immigration barriers and the development of enabling policies for the mobility of students, patients, and education and health professionals throughout the continent are crucial for the improvement of Africa's educational and medical systems.

E.5. Regional Regulatory Cooperation

Deeper regional integration, through regulatory cooperation with neighboring partners who have similar regulatory preferences, can usefully complement nonpreferential trade liberalization. *Admission requirements and policies on the transfer of academic credits and recognition of academic and professional qualifications* for education and health professionals are equally important for the mobility of consumers and providers of education and health services. At least two regional organizations are actively involved in quality assurance in Africa: the African and Malagasy Council for Higher Education (French acronym: CAMES), and the Inter-University Council for East Africa (IUCEA). The World Bank Group is currently supporting CAMES in the design and implementation of a mechanism for regional accreditation of higher institutions in its 19 member states as part of the Regional Institutional Accreditation Initiative. In East Africa, IUCEA plays an important role in the following:

- Facilitating networking among universities within and outside the region
- Developing adequate education standards so as to promote the region's competitiveness in higher education
- Enhancing curriculum development strategies and university leadership skills and competencies
- Mainstreaming ICT into institutional core functions and general support operations
- Strengthening higher education quality assurance processes in university institutions and eventually establishing an East African system of quality assurance
- Establishing an East African qualification framework to facilitate harmonization of education and training systems, student mobility across the region, and harmonization of skills, competencies, and qualifications, so as to simplify mutual recognition of the latter among others.

[28] To understand how the protocol fails in some instances, we consider the example of study permits for Zimbabweans. A study permit is issued by the Department of Home Affairs as a basic requirement for international students. The Immigration Act warrants that study permits be applied for in the student's home country. In practice, this unreasonable requirement is often waived for migrants already in the country, but not for Zimbabweans (SAMP 2011). This requirement hinders the flow of Zimbabweans into South Africa for higher education.

The medical boards/councils in the EAC have started to collaborate and share registers to recognize licenses from other EAC member countries. In addition, nurses and midwives, pharmacists, medical doctors, and veterinaries are currently developing a roadmap for the preparation of *Mutual Recognition Agreements (MRAs) of Professional Qualifications to deepen regional integration* in the sector and create new incentives for retaining the scarce skilled professionals on the continent. Such MRAs would need to be effectively implemented in the EAC and could be negotiated and implemented by other subregions in Africa. Opening up regional boundaries and establishing MRAs would facilitate integration in education and health services. For example, some of the health professionals interested in providing their services across borders may choose to stay in the region rather than traveling to further OECD destinations.

When implementing MRAs, countries need to learn from the previous experience with such agreements in professional services. For example, EAC stakeholders as well as the EAC Council of Ministers have recognized some broader issues that have prevented existing MRAs in accounting, architectural, and engineering services from being truly effective. Reflections are underway on how commitments on free movement of skilled professional workers, which are essential to the success of the MRAs, can be de-linked from the wider issue of free movement of workers. But limited progress on this issue hampers the free movement of service providers as well as further negotiations on services liberalization and reform.

Because of the rapid expansion of private universities and colleges driven by the growing demand for education services, regional interventions that promote the emergence of quality educational institutions are a high priority on the continent's education agenda. There are concerns that the burgeoning increase in the number of universities may lead to the proliferation of unregulated courses (box 7).

Box 7. Expansion of Private Education Institutes: Are They Diluting Quality?

One of the greatest challenges facing the higher education sector is a scarcity of qualified PhD holders in the East African Community (EAC). Demand from the expanding higher education sector far outstrips the number of qualified academics.

Kampala International University (KIU) began offering unaccredited PhDs in Humanities in 2007, two years before it was awarded the right to confer such degrees. Furthermore, a total of 132 doctorates awarded by KIU between 2011 and 2013 were declared invalid by the Uganda National Council for Higher Education (NCHE). Of the 42 graduates scheduled for graduation in 2012, 30 were Kenyans. In 2013 the regulator for higher education in Kenya, the Commission for University Education (CUE),[a] announced that it will not recognize qualifications from KIU until a thorough review had been conducted.

Red flags were raised when KIU graduated as many PhDs as Uganda's largest University, Makerere University. The Uganda NCHE set up a taskforce to investigate whether KIU had the capacity to offer the programs. The findings of the taskforce revealed that of the 66 PhDs awarded in 2013, "all were substandard: eight needed minor corrections, 36 needed major revisions, and 22 were beyond revision" (Spaull 2015). Since the thorough review of the taskforce, 22 PhDs have been approved by the NCHE. Other findings by the taskforce showed that several supervisors held PhDs from universities not recognized by the regulator, and still other supervisors did not have PhDs.

The Inter-University Council for East Africa (IUCEA) largely plays an oversight role in the region but does not have the power to accredit all institutions and programs in the region. Local regulators, such as CUE and NCHE in Uganda or NCHE in Rwanda, accredit institutions and programs in their respective jurisdictions. Unfortunately, the rate of growth of private institutions in the EAC outstrips the capacity of local regulators, in terms of facilities, finances, and human resources, to effectively and adequately cover all institutions in terms of academic management and quality assurance.

Sources: Spaull 2015; Ssembatya 2012; Waruru 2014.
a. CUE replaces the Commission for Higher Education. CUE advises the government on university education policy, undertakes accreditation inspections, monitors and evaluates the state of university education, and ensures compliance with set standards.

Weaknesses in African education systems mean that students are ill-equipped to acquire market-relevant skills. Therefore, *enhancing the quality of educational institutions* should be a key item on the policy agenda. *Trade liberalization needs to be coordinated with regulatory reform and cooperation at the regional level*. While the IUCEA already provides a forum to start addressing regional quality issues, a continental quality assurance agency—built for example on the work of the African Quality Assurance Network or the African Quality Rating Mechanism—could support the activities of regional bodies.

In addition to quality assurance, reforms would need to focus on *developing new and expanded means of financing higher education*, such as student loan schemes, and *developing well-articulated, diversified, and differentiated higher education systems* that contain vocational and technical colleges as well as research universities. Cooperation among countries in terms of sharing information and experiences to increase the recovery rate of student loans while increasing students' access to higher education could improve the impact of educational loan schemes in East Africa. In general, the fragmentation of the regional market for education by differences in regulation can prevent the emergence of regional hubs for higher education. Thus, smoothing these regulatory differences can lead to a greater variety of higher

education services becoming available at lower costs for students in Africa. The Centers of Excellence[29] approach implemented by the World Bank in Africa may provide a useful model to spearhead such regulatory cooperation.

Similarly, in health services, the East Africa Public Health Laboratory Networking approach focuses on establishing a network of efficient, high quality, accessible public health laboratories for the diagnosis and surveillance of tuberculosis and other communicable diseases in Ethiopia, Kenya, Rwanda, Tanzania, and Uganda. This approach can provide guidance to create a platform for knowledge sharing, training, and regulatory cooperation.

In addition to traditional student, patient, and health and education staff exchanges, African countries need to *facilitate the emergence of innovative forms of cross-border exchanges*. Technological innovations can facilitate the expansion of distance learning and provide health care solutions such as combating malaria. Such innovations can provide free essential health care information that is updated daily, or diagnose and monitor symptoms of diseases in rural areas. Distance learning requires extensive ICT infrastructure, complemented by extensive policies to support such innovative cross-border exchanges.

Finally, *Africa's diaspora needs to be mobilized* to play a role in the internationalization of education and health services in Africa. For example, recent initiatives in education services have been undertaken as part of the "Mobilize the Diaspora" project. The project aims to engage 10,000 diaspora scholars in African higher education and encourage collaboration with local professionals across a number of disciplines, such as research, curriculum development, graduate student teaching, and mentoring.

E. Conclusions

This paper used quantitative and qualitative surveys to assess the importance of regional integration in promoting education and health services in Africa. Mobile-based data collection methodology was deployed to examine the magnitude, determinants, and restrictions on intra-African trade in education and health services. Survey results suggest the following conclusions:

- The regional dimension is prominent in education and health services.
- Although differences in the quality of services may explain educational exchanges and medical tourism within Africa, the nonavailability of certain specialized cures could be an additional explanatory factor for trade in health services.

[29] The World Bank Group's Africa Higher Education Centers of Excellence Project is currently supporting 19 tertiary education institutions in seven West African countries to promote regional specialization in S.T.E.M. (Science, Technology, Engineering, and Mathematics), agriculture, and health. The key project objectives are to (i) enhance quality research-based education in high-demand areas, and make it available to national and regional students; (ii) promote partnerships between the newly-established African Centers of Excellence (ACEs) and companies and governmental and nongovernmental organizations, through internships, training, etc.; and (iii) improve teaching and research conditions and strengthen the capacity of the beneficiary institutions. In addition, the project will support a range of regional activities to (i) enhance coordination among ACEs, for example, through joint lessons; (ii) undertake regional monitoring and evaluation activities of the selected institutions, for example through tracer studies, technical audits, collection of academic data, etc.; (iii) assist regional bodies, including the Economic Community of West African States (ECOWAS) and the West African Economic and Monetary Union (WAEMU), in regional policy making on regional higher education; and (iv) support the provision of higher education services (for example, training, scholarship, faculty visiting, etc.). (See http://www.worldbank.org/projects/P126974/strengthening-tertiary-education-africa-through-africa-centers-excellence?lang=en.)

- Medical professionals are motivated to seek employment abroad (Mode 4) mainly because of inadequate remuneration, poorly managed health systems in the home country, and the need to continue education and training in their field.
- Trade in education and health services is hampered by the high cost of travel and visas and limited availability of insurance; movement of education and health professionals is limited by lengthy and costly processes of recognition of degrees obtained abroad.

A systematic, qualitative analysis, including results from regulatory surveys conducted in selected Eastern and Southern African countries, complements the quantitative surveys to derive policy recommendations aimed at addressing the key constraints affecting trade in education and health services in Africa. The analysis shows that to turn this sector around, policy action is required in the areas of domestic regulation, trade policy, and labor mobility at the national and international levels. A key challenge faced by many African countries is the emigration of their scarce health professionals. To retain some of these health workers in the region, it is important to ease the procedural requirements for recognizing their qualifications and professional licensing. Several regional trade arrangements between source and destination countries work through the mutual recognition and harmonization of qualifications and expedition of visa applications. These include the Caribbean Community and Common Market (CARICOM), the Caribbean Free Trade Association (CARIFTA), the North American Free Trade Agreement (NAFTA), and the European Union in Europe. African countries should also allow for freer mobility of health care professionals to enhance the region's competitiveness in providing health care facilities.

References

AfDB (African Development Bank). 2013. "The Growth of International Trade in Health Services: Export Prospects in North Africa." Economic Brief. AfDB, Abidjan, Côte d'Ivoire.

Bashir, S. 2007. "Trends in International Trade in Higher Education: Implications and Options for Developing Countries." World Bank, Washington, DC.

Bhargava, A., and F. Docquier. 2008. "HIV Pandemic, Medical Brain Drain, and Economic Development in Sub-Saharan Africa." *The World Bank Economic Review* 22 (2): 345–66.

Bhorat, H., J. B. Meyer, and C. Mlatsheni. 2005. "Skilled Labour Migration from Developing Countries: Study on South and Southern Africa." *International Migration Papers* 52: 1–40.

Bookman, M., and K. Bookman. 2007. *Medical Tourism in Developing Countries*. Basingstoke: Palgrave Macmillan.

Cattaneo, O. 2010. "Health without Borders: International Trade for Better Health Systems and Services." In *International Trade in Services. New Opportunities for Developing Countries,* edited by O. Cattaneo, M. Engman, S. Saez, and R.M. Stern. Washington, DC: World Bank.

Chanda, R. 2002. "Trade in Health Services." *Bulletin of the World Health Organization* 80 (2): 158–63.

Chen, L. C., and J. I. Boufford. 2005. "Fatal Flows—Doctors on the Move." *New England Journal of Medicine* 353 (17): 1850–52.

Docquier, F., and A. Marfouk. 2006. "International Migration by Educational Attainment 1990-2000." In *International Migration, Remittances and Development*, Edited by C. Özden and M. Schiff. New York: Palgrave Macmillan.

Hahn, K. 2005. "Towards a SADC Area of Higher Education." NEPRU Research Report No. 30. Namibia Economic Policy Research Unit (NEPRU), Windhoek, Namibia.

Kok, P., D. Gelderblom, J. Oucho, and J. Van Zyl, eds. 2006. *Migration in South and Southern Africa: Dynamics and Determinants.* Cape Town: HSRC Press.

Kwaramba, M. 2009. "Internationalization of Higher Education in Southern Africa with South Africa as the Major Exporter." Research Paper submitted to University of Mauritius, Moka, Mauritius.

Lautier, M. 2005. "Les exportations de services de santé des pays en développement: Une analyse à partir du cas de la Tunisie." *Notes et Documents* n 25. Paris: AFD.

———. 2008. "Export of Health Services from Developing Countries: The Case of Tunisia." *Social Science and Medicine* 67 (1): 101–10.

MacGregor, K. 2007. "South Africa: Huge Growth in Foreign Students." *University World News,* Issue No: 9. http://www.universityworldnews.com/article.php?story=20071206163532421.

Manik, S., B. Maharaj, and R. Sookrajh. 2006. "Globalisation and Transnational Teachers: South African Teacher Migration to the United Kingdom." *Migracijske i etničke teme* 22 (1-2): 15–33.

Marko, K. 2009. Internationalization of Higher Education in Southern Africa with South Africa as the Major Exporter. Services Sector Development and Impact on Poverty Thematic Working Group. http://www.tips.org.za/files/11.Internationalization_-_SSD.pdf.

Maseruka, J. 2010. "Uganda: Govt to Earn $60 Million From Foreign Students Annually." *allAfrica*, September 27. http://allafrica.com/stories/201009280119.html.

McKinsey Global Institute. 2008. Accounting for the Cost of US Health Care: A New Look at Why Americans Spend More. http://healthcare.mckinsey.com/sites/default/files/MGI_Accounting_for_cost_of_US_health_care_full_report.pdf.

Morgan, W. J., A. Sives, and S. Appleton. 2005. "Managing the International Recruitment of Health Workers and Teachers: Do the Commonwealth Agreements Provide an Answer?" *The Round Table* 94 (379): 225–38.

Mortensen J. 2008. "International Trade in Health Services. Assessing the Trade and Trade and the Trade-offs." DIIS Working Paper No. 2008/11. Danish Institute for International Studies (DIIS), Copenhagen, Denmark.

Mullan, F., S. Frehywot, and F. Omaswa. 2011. "Medical Schools in Sub-Saharan Africa." *The Lancet* 377 (9771): 1113–21.

Obermaier, A. J. 2009. "Cross-Border Purchases of Health Services: A Case Study on Austria and Hungary." Policy Working Paper No. 4825. World Bank, Washington, DC.

OECD (Organisation for Economic Co-operation and Development). 2010 "Medical Tourism: Treatments, Markets and Health System Implications: A scoping review." Directorate for Employment, Labour and Social Affairs, OECD Publishing, Paris.

Othieno, L., and D. Nampewo. 2012. "Opportunities, Challenges and Way Forward for Uganda's Trade in Education Services within the East African Community." Economic Policy Research Centre (EPRC), Kampala, Uganda.

Ozden, C., and D. Phillips. 2015. "What Really Is Brain Drain? Location of Birth, Education and Migration Dynamics of African Doctors." Global Knowledge Partnership on Migration and Development (KNOMAD) Working Paper #4. KNOMAD, Washington, DC.

PwC and GSMA. 2012. "Touching Lives through Mobile Health: Assessment of the Global Market Opportunity."

Ratha, D. Sanket Mohapatra, Caglar Ozden, Sonia Plaza, William Shaw, and Abede Shimeles. 2011. "Leveraging Migration for Africa: Remittances, Skills, and Investments." World Bank, Washington, DC. http://siteresources.worldbank.org/EXTDECPROSPECTS/Resources/476882-1157133580628/AfricaStudyEntireBook.pdf.

SAMP (Southern African Migration Project). 2002. "Thinking about the Brain Drain in Southern Africa." Migration Policy Brief No. 8. SAMP, Kingston, Canada and Cape Town, South Africa.

———. 2008. "The Haemorrhage of Health Professionals from South Africa." Medical Opinion, Migration Policy Series No.47. SAMP, Kingston, Canada and Cape Town, South Africa.

———. 2011. "The Engagement of Zimbabwean Medical Diaspora." Migration Policy Series No.55. SAMP, Kingston, Canada and Cape Town, South Africa.

SACE (South African Council of Educators). 2011. "Teacher Migration in South Africa: Advice to the Ministries of Basic and Higher Training." Report prepared for the Ministries of Basic and Higher Training, South Africa

Smith, Richard, Rupa Chanda, and Viroj Tangcharoensathien. 2009. "Trade and Health 4: Trade in Health-Related Services." *The Lancet* 373: 593–601.

Spaull, J. 2015. “PhD Crisis in Uganda’s Private Universities.” Africa’s PhD Renaissance series, SciDevNet Global Edition. . http://www.scidev.net/sub-saharan-africa/education/feature/phd-crisis-uganda-private-universities-1.html#sthash.esexodZk.dpuf.

Ssembatya, V. 2012. “The Careers and Productivity of Doctorate Holders (CDH) Survey: Uganda Report 2012.” Uganda National Council for Science and Technology, Kampala, Uganda.

UNCTAD (United Nations Conference on Trade and Development). 2013. “Services Policy Review: Uganda.” UNCTAD, Geneva.

Wamala, D.S., and K. Augustine. 2013. A Meta-Analysis of Telemedicine Success in Africa. *Journal of Pathology Informatics* 4: 6.

Waruru, M. 2014, “Unhappiness over Lack of Qualifications' Recognition.” *University World News*, January 17, Issue No: 124.

Wentzel, M., and K. Tlabela. 2006. “Historical Background to South African Migration.” In *Migration in South and Southern Africa: Dynamics and Determinants*, edited by P. Kok, D. Gelderblom, J. Oucho, and J. Van Zyl, 71–96. Cape Town: HSRC Press.

World Bank. 2014. “Regulatory Surveys and Interviews Covering Education and Health Services in Eastern Africa.” Internal report submitted by Richard Gicho. World Bank, Washington, DC.

———. 2015. “Indicators to Monitor Deeper Regional Trade Integration in Africa.” Mobile Phone Surveys. .Report No: AUS7670, World Bank, Washington, DC.

WHO (World Health Organization). 2004. “Migration of Health Professionals in Six Countries: A Synthesis Report.” WHO, Regional Office for Africa.

———. 2012. “Global Health Indicators.” Published by World Health Statistics. http://www.who.int/healthinfo/EN_WHS2012_Part3.pdf.

WTO (World Trade Organization). (1991). Services Sectoral Classification List. MTN.GNS/W/120. www.wto.org/english/tratop_e/serv_e/mtn_gns_w_120_e.doc.

———. 1998. Council for Trade in Services. Education Services, Background Note by the Secretariat. S/C/W/49. www.wto.org/english/tratop_e/serv_e/w49.doc.

———. 2010. Council for Trade in Services. Education Services, Background Note by the Secretariat. S/C/W/313. www.wto.org/english/tratop_e/serv_e/w313.doc.

Annex A. Trade in Education and Health Services:

Modes of Supply and Examples

Mode of supply	Education—examples/forms	Health—examples/forms	Main features
(a) Cross-border supply (Mode 1)	Distance education Online education Commercial franchising/twinning of a course	Telemedicine and telediagnosis Laboratory or claims processing Hospital management functions Back-up advisory services Contracting of clinical and nonclinical services such as medical evacuations, cancer treatment, specialized surgeries	Program (service) mobility
(b) Consumption abroad (Mode 2)	Students abroad	Patients abroad for specialized or surgical care Cosmetic surgery health and wellness	People (student/patient) mobility
(c) Commercial presence (Mode 3)	Establishment of an educational institution or satellite campuses Branch campus, including joint ventures with local institutions	Health insurance companies Medical/physician practices Diagnostics facilities	Institution mobility
(d) Presence of natural persons (Mode 4)	Professors. lecturers, teachers, and researchers providing services abroad	Health personnel providing health services or health consulting assignments abroad	People (education or health professionals) mobility

Sources: Adapted from WTO 2010, 1998.

Annex B. Volume of Education Services Trade Recorded in IMF Balance of Payments Statistics

Table B.1. Volume of Education Services Exports, USD and %

Country	Education services exports (USD)	Share in total travel services (%)	Share in personal travel services (%)
Botswana	4,334,233	3.9	4.0
Burundi	108,890	7.6	7.6
Malawi	2,011,543	6.0	14.3
Mozambique	2,466,154	1.2	1.3
Namibia	2,493,240	0.6	0.7
Swaziland	18,757,132	37.1	85.8
Uganda	30,187,828	2.6	4.3

Source: UNSTATS (http://unstats.un.org/).
Note: The sample of countries is based on data availability in UNSTATS in recent years, after 2010. The latest year available for Mozambique and Swaziland is 2010; for Burundi and Malawi, 2012; and for Botswana, Namibia, and Uganda, 2013.

Table B.2. Volume of Education Services Imports, USD and %

Country	Education services imports (USD)	Share in total travel services (%)	Share in personal travel services (%)
Botswana	18,358,836	39.0	42.1
Burundi	12,136,509	49.0	93.6
Lesotho	14,615,975	70.4	100.0
Malawi	17,554,292	25.2	63.9
Mozambique	14,473,751	5.8	8.8
Namibia	2,389,355	1.9	2.0
Nigeria	2,566,589,952	41.5	47.9
Seychelles	8,634,920	23.1	25.9
Swaziland	9,867,440	16.1	20.1
Uganda	2,102,048	0.5	1.1

Source: UNSTATS (http://unstats.un.org/).
Note: The sample of countries is based on data availability in UNSTATS in recent years, after 2010. The latest year available for Mozambique, Seychelles, and Swaziland is 2010; for Burundi, Lesotho, Malawi, and Nigeria, 2012; and for Botswana, Namibia, and Uganda, 2013.

Annex C. Volume of Health Services Trade Recorded in IMF Balance of Payments Statistics

Table C.1. Volume of Health Services Exports

Country	Health services exports (USD)	Share in total travel services (%)	Share in personal travel services (%)
Botswana	1,207,478	1.10	1.11
Burundi	18,206	1.27	1.27
Malawi	99,477	0.29	0.71
Mozambique	735,355	0.37	0.37
Namibia	207,770	0.05	0.06
Swaziland	3,097,611	6.13	14.17
Uganda	11,952,399	1.01	1.71

Source: UNSTATS (http://unstats.un.org/).
Note: The sample of countries is based on data availability in UNSTATS in recent years, after 2010. The latest year available for Mozambique and Swaziland is 2010; for Burundi and Malawi, 2012; and for Botswana, Namibia, and Uganda, 2013.

Table C.2. Volume of Health Services Imports

Country	Health services imports (USD)	Share in total travel services (%)	Share in personal services (%
Botswana	4,407,360	9.4	10.1
Burundi	836,451	3.4	6.4
Malawi	2,476,478	3.6	9.0
Mozambique	13,738,397	5.5	8.3
Namibia	1,558,275	1.2	1.3
Nigeria	1,042,369,984	16.8	19.4
Seychelles	8,506,110	22.7	25.5
Swaziland	5,696,519	9.3	11.6
Uganda	627,235	0.1	0.3

Source: UNSTATS (http://unstats.un.org/).
Note: The sample of countries is based on data availability in UNSTATS in recent years, after 2010. The latest year available for Mozambique, Seychelles, and Swaziland is 2010; for Burundi, Malawi, and Nigeria, 2012; and for Botswana, Namibia, and Uganda, 2013.