

Global Skill Partnerships: A Proposal for Technical Training in a Mobile World

Michael A. Clemens

Abstract

Certain skills are in high demand in advanced economies, particularly in basic health care. Skilled migrants from developing countries are likely to fill part of that demand. This has aroused fears that skilled migration will harm development, by draining both human and financial resources from the countries migrants leave. This note reviews and critiques existing policy proposals to address the development effects of skilled migration. It then proposes a new kind of policy tool to regulate skilled migration in a way that benefits origin countries, destination countries, and migrants: Global Skill Partnerships. These are bilateral public-private agreements to link skill creation and

skill mobility in a mutually beneficial and equitable way. Countries of migrant origin and destination agree ex ante who will bear the costs of training skilled migrants, and allow a small portion of the large economic gains from skill mobility to foster skill creation in origin countries. The note describes how such an agreement might work in one profession (nursing) and one region (North Africa). Numerous related initiatives around the world offer lessons for proper design.

Special thanks to Manjula Luthria for her support. Marla Spivack, Tejaswi Velayudhan, Christian Meyer, Mercedes Pepper, and Wanqing He provided excellent research assistance. Helpful ideas also came from Steffen Angenendt, Stefan Bethé, Nancy Birdsall, Satish Chand, Stephan Hillebrand, Natasha Iskander, Benjamin Leo, Akiko Maeda, Francisco Marmolejo, Aaditya Mattoo, David McKenzie, Christal Morehouse, Mujobu Moyo, Çağlar Özden, Yann Pouget, Lant Pritchett, Andrea Riestler, Kaye Schofield, Anna Wittenborg, and Astrid Ziebarth, as well as with participants in seminars at AusAID, the Bosch Foundation, the German Ministry for Economic Cooperation and Development, Rutgers University, and the Université Internationale de Rabat. This research was generously supported by the World Bank ILM program at the Center for Mediterranean Integration, the John D. and Catherine T. MacArthur Foundation, the William and Flora Hewlett Foundation, the Nordic Trust Fund for Human Rights, and Good Ventures. The paper presents the views of the author only and does not necessarily reflect the opinions of the World Bank or CGD, their boards, or their funders.

CGD is grateful for contributions from Good Ventures in support of this work.

Michael A. Clemens. 2014. "Global Skill Partnerships: A Proposal for Technical Training in a Mobile World." CGD Policy Paper 40. Washington DC: Center for Global Development.
<http://www.cgdev.org/publication/global-skill-partnerships-proposal-technical-training-mobile-world>

Center for Global Development
2055 L Street
Fifth Floor
Washington DC 20036
202-416-4000
www.cgdev.org

This work is made available under
the terms of the Creative Commons
Attribution-NonCommercial 3.0
license.

1 Introduction

The richest countries show increasing demand for certain skilled services, and skilled workers from around the world are migrating to provide those services. But for some skills, particularly in health care, shortages are global—and skilled migration has the potential to exacerbate shortages in skilled migrants' countries of origin. Policy responses that involve blocking skilled migration may be difficult to implement effectively or ethically, and do little to resolve skill imbalances at the destination.

This note proposes a new kind of policy response to global skill shortages. A Global Skill Partnership is a bilateral public-private partnership to link skill creation and skill mobility in a mutually beneficial and equitable way. Countries of migrant origin and destination agree *ex ante* who will bear the costs of training skilled migrants, and allow a small portion of the large economic gains from skill mobility to foster skill creation in origin countries. Well-designed partnerships would eliminate and even reverse fiscal drain from origin countries due to new migration, while preserving workers' mobility and providing needed skills at the destination. This note focuses on one profession and one region: It offers examples of why and how a partnership for the training and mobility of nurses might work between North Africa and Europe. But such partnerships could in principle work in various professions and regions.

These partnerships take a dual economic opportunity and turn it into an engine of human capital creation for both origin countries and destination countries. The first opportunity to create value is the very large gap in the price of nursing services between migrant-origin countries and destination countries. Nursing services are worth 5–8 times as much, for example, in Western Europe as in parts of North Africa. The second opportunity is that the cost of nurse *training* at the migrant origin is a small fraction of the cost at the destination. It likewise costs at least 5–8 times as much to train a nurse in Western Europe as it costs in North Africa. Skilled migration can thus create enormous economic value. Global Skill Partnerships share that value in a way that origins, destinations, and migrants can agree to.

This proposal begins by describing global skill imbalances in nursing and discussing four traditional classes of policy response, each of which has important disadvantages. It then sketches why and how a Global Skill Partnership could do better than traditional approaches in some settings, and offers examples in the North African setting. It then lists several design features key to the success of such partnerships, and reviews global experience with related initiatives in the past.

2 Global skill mismatch and skilled migration: Nurses

Workers across the world are not acquiring some of the most important skills that their countries demand. This occurs in many sectors, but it is clearest for certain skills in health care. There is a global shortage of nurses, a shortage that takes one of two forms.

2.1 Two types of nursing shortage

The first form of nursing shortage is that many developing countries lack the nurses to provide basic coverage to their populations. While Western European countries typically have around 10 nurses per 1,000 population, their neighbors across the Mediterranean have far fewer. There are 3.3 nurses per 1,000 population in Tunisia, 2.0 in Algeria, and 0.9 in Morocco ([WHO 2014](#)). Just in these three North African countries, it would take tens of thousands of additional nurses to universally reach basic staffing levels recommended by the World Health Organization, and hundreds of thousands to meet Western European staffing levels. Similarly, [Verboom et al. \(2006\)](#) estimate that by 2025, India will confront a shortage of 740,000 nurses, while the shortage in sub-Saharan Africa will be well over 1 million.

The second form of shortage is that many developed countries will demand far more nurses than they are likely to train. Estimated Registered Nurse shortages within the next several years include over a million in the United States ([BLS 2012](#)), 600,000 in Western Europe ([European Commission 2012](#)), 100,000 in Canada ([Little 2007](#)), and about 100,000 in Australia ([HWA 2012](#)). All of these forecasts are sensitive to assump-

tions, but it is clear that training of nurses will not rise fully to the level of demand in many advanced economies.

Governments can respond to skill imbalances like these in many ways. Each of these responses faces limits. In health, governments can reduce credit constraints with funding for public training and incentives for private training of new health workers (WHO 2006). But rich countries face funding limits as populations age—raising health service demand while shrinking the tax base. Poor countries face even tighter constraints. Governments can also foster international trade in health services. They can make it easier for people to purchase health services in countries where costs are lower, known as “medical tourism” (Mattoo and Subramanian 2013), such as by reducing policy constraints on the portability of health insurance (Mattoo and Rathindran 2006).

2.2 Nurse migration—and its risks

An alternative response—fostering migration by skilled workers—is very likely to play a role in reducing some of these imbalances. Employment-based migration is controversial everywhere; but in health, it is already happening. Large fractions of the health workforce in some countries got their training in other countries. In the United States, 7% of registered nurses (Auerbach et al. 2012) and 25% of physicians (AMA 2010) were trained abroad. Governments from Germany to Japan have tested programs to attract health workers from abroad.

Health worker migration has raised important concerns about its potential effects on the countries of origin. A central concern is that the movement of health workers from less-developed countries will deplete the human resource base of already-weak health systems (WHO 2006). These concerns are so acute that the term “brain drain” is often used as a synonym for skilled migration, with health worker migration seen as its worst face (e.g. Grignon et al. 2012). Destination countries that allow migration have been accused of causing deaths in migrant origin countries by failing to limit these “fatal flows” (Joint Learning Initiative 2004, p. 102).

A separate concern is that health worker migration can deplete public coffers in the countries that migrants leave. Even when those countries are able to train replacements for those who migrate, this training often occurs at public expense. One country's taxpayers can, in effect, end up subsidizing other countries' health systems (WHO 2011). When the destination country is much wealthier than the origin country, this raises concerns about justice. It is estimated that tens of thousands of dollars in public subsidies are lost each time a Registered Nurse emigrates from Kenya (Kirigia et al. 2006) or Malawi (Muula et al. 2006). Mills et al. (2011) estimate a cumulative total training cost of US\$2.2 billion for African-trained physicians residing in Australia, Canada, the United Kingdom, and the United States.

This has led to something of an impasse: In nursing, rich countries face pressure to raise skilled migration in response to local shortages and demographic forces. But they simultaneously face pressure to limit skilled migration in response to concerns about development impacts overseas. The next section describes four existing classes of proposals to address this impasse—and their drawbacks. Thereafter the paper proposes a new approach.

3 Four existing approaches to limit the development impact of nurse migration

Broadly speaking, policymakers have four existing options to limit the development impacts of skilled migration. This section reviews those options for the case of nurse migration—and their drawbacks. Thereafter, the paper will propose a new, fifth option.

3.1 Limit migration?

The first class of policies seeks to limit the ability of skilled workers to choose migration. This can involve preventing destination-country recognition of migrants skills (e.g. Gish and Godfrey 1979), self-sufficiency policies at destination countries to prevent migrants from working there (e.g. WHO 2011, Article 5.4), and treating interna-

tional recruiters of skilled workers as unethical or even criminal (e.g. [Mills et al. 2008](#)).

All such proposals to obstruct migration are complicated by practical concerns. These policies have unknown effectiveness in limiting skilled migration. And even if they can succeed in limiting skilled migration, there is evidence that this would do little to address skill shortages at the origin. Suppose, for example, that OECD destination countries were to slash by half the immigration of doctors and nurses from Africa, as well as somehow force the return of half the African doctors and nurses who have immigrated in the past. Even this extreme and draconian act would only eliminate 6% of Africa's shortage of doctors and nurses, as estimated by the World Health Organization. The same figure for Southeast Asia is 5% ([OECD 2007](#), p. 178). Inside and outside the health sector, the roots of skill shortages lie in complex problems of economic and institutional development largely beyond the reach of migration policy. Partly for this reason, the countries in Africa with the lowest rates of physician and nurse emigration are those with the worst overall health conditions ([Clemens 2007](#)).

Proposals to obstruct skilled migration are also ethically complex: They may violate skilled migrants' rights under international law. Article 13.2 of the United Nations Universal Declaration of Human Rights endows all people with the unqualified right to leave any country. While it is often argued that bans on "active recruitment" do not limit migrants' right to emigrate for work abroad, this is not clear in legal or ethical terms. For example, most developed countries' courts would likely find that if governments were to ban firms from actively recruiting women, this would conflict with women's unconditional right to work outside the home. For the same reason, banning active recruitment of a Malawian nurse by a London hospital, when that nurse's profession is the only lawful basis for migration, would impinge upon the nurse's unconditional right to leave Malawi. This issue is far from settled under international law, but it is also far from clear that recruitment limits can be straightforwardly declared "ethical".

3.2 Compensation payments after migration?

Another way for governments to offset fiscal losses associated with skilled emigration is to demand cash compensation for costs incurred through subsidies to migrants' training (e.g. [Agwu and Llewelyn 2009](#); [Mills et al. 2011](#); [Chen et al. 2013](#)). These might come from destination-country governments or from migrants themselves.

Such policies also face important difficulties. The financial loss is difficult to calculate given that many skilled workers provide years of home-country service prior to migration, and send home important sums of money ([Clemens 2011](#)). It is unclear that the cost of basic education should be included, as [Mills et al. \(2011\)](#) suggest it should be, since most origin countries consider basic education a right that is not contingent on subsequent movement. Destination countries' priorities for human capital subsidies in origin countries might differ from origin countries own priorities, making compensation payments politically vulnerable ([Clemens 2009](#)). And aid flows are substantially fungible (e.g. [Pack and Pack 2009](#)), so even aid earmarked for human capital creation may not cause more human capital to be created.

3.3 Domestic efficiency measures?

Another way for policymakers to counteract the effects of skilled migration at the origin is to make the most of the human resources they are left with. For example, the effect of a health worker's departure on local health conditions can be mitigated by increasing the effectiveness of remaining health workers.

This is what rural areas of most developed countries do in order to build and empower effective human capital stocks despite domestic migration, without limits on rural-urban recruitment or ex-post compensation payments to rural areas. For example, many US states with shortages of highly trained health workers have adopted laws empowering qualified by lower-level health workers to do more for patients. Many rural US states with shortages of physicians allow nurse practitioners to make diagnoses or prescribe medicine without physician supervision (such as North Dakota, Wyoming,

Idaho, Iowa, and West Virginia), while all the states with the largest cities do not allow this (New York, California, Texas, Illinois). This allows rural states to get the most out of health professionals who are less likely to leave.

In low-income countries, there are likewise many ways to improve the effectiveness of skilled workers who choose not to migrate. In the health sector this can imply meaningful incentives to provide primary care in slums and rural areas; focusing training efforts on prevention and basic primary care rather than higher-level tertiary care; giving providers the medicines and tools they need to practice effectively; and dismantling domestic barriers to independent practice by well-trained nurses. Clemens (2009) explores several of these measures. Steps of this kind can reduce the effects of skilled workers' departure but not, of course, eliminate them.

3.4 Oblige return migration?

An alternative approach is to allow skilled workers to migrate for limited periods, then require them to return home. This does allow some movement by skilled workers, and can address temporary skill shortages in destination countries. Many countries have training programs of one sort or another that oblige skilled migrants to return to their home countries. Brazil and Turkey, among others, have mechanisms to pay for their nationals' graduate education overseas in exchange for a commitment of service in the home country.¹ Each requires a few years of service at the origin. The Fulbright Foreign Student Program sponsors graduate study for students from developing countries (and elsewhere) in the United States and obliges graduates to return thereafter to their countries of origin for two years.

A major limitation of obliging return migration is that skill shortages in many destination countries are long-term. The demographic transition will not reverse course in Germany and Japan; nurses will be needed there and elsewhere for the foreseeable future. Permanent migration best serves permanent need. Another important limitation

¹Brazil does this through its National Council for Scientific and Technological Development (CNPq), and Turkey through its Scientific and Technological Research Council (TÜBİTAK).

is the aforementioned unconditional right of skilled workers to emigrate permanently from any country. It is certainly sensible for countries that subsidize human capital formation to benefit from that human capital, but obliging people to live in one country or another is only one option to achieve that goal. Another option is shifting the burden of training subsidies from origin countries to destination countries—the subject of this note.

Destination-country governments have also tried creating incentives for return migration without obligation. Take-up tends to be low. Destination-country governments including Spain, Japan, and the Czech Republic have offered to pay immigrants cash to return home; very small percentages accept the offer [McCabe et al. \(2009\)](#). Their presence in a rich country is an asset that most value more highly than the few thousand dollars typically paid by such programs. Return migration of skilled workers has happened at substantial scale primarily when the country of origin creates the incentives for return—as occurred in Taiwan ([Chang 1992](#); [Saxenian 2002](#)). Most developing countries simply do not have the resources to launch such a program.

4 A new approach: linking skill creation to skill mobility

Policymakers have a fifth, barely-explored option to address the development effects of skilled migration while preserving its global benefits. Countries of origin and destination can enter a new kind of bilateral agreement, a Global Skill Partnership. Two governments in a Global Skill Partnership agree *ex ante* on how to share the costs and benefits of creating skills for both countries' needs, while preserving workers' freedom of movement. These partnerships could occur in any technical field that is in global demand, but this section focuses on their application to nursing.

4.1 Key elements of a Global Skill Partnership

The heart of a Global Skill Partnership is a pre-migration agreement between two countries. The governments and any private-sector partners agree on who at the destination

will help finance migrants' training, what portion of training will occur at the origin and to what standard, who will offer employment at the destination under what conditions, and how the benefits of skilled migration will support training for non-migrants. The agreement shapes the financing for training skilled migrants in such a way that it creates, rather than depletes, human capital in the origin country. At the same time it meets the needs of the destination country while opening opportunities for migrants.

One form of Global Skill Partnership could be a two-track technical school for nurses. Such a school would be a technical training institute in a developing country, where each student at entry must choose one of two tracks or courses of study. An 'away' track would train students to work abroad, in a developed country—permanently or temporarily. A 'home' track would train students to work in related jobs inside the country of training. Training for 'away' students could be financed either by destination-country employers or governments, or by graduates' future earnings through a form of migration-contingent student loan. This financing would contain a partial subsidy to the training of 'home' track students—a social training credit—fostering and financing a supply response to nurse mobility.

Such a partnership could take many forms, according to the division of rights and responsibilities between the partners. Training could occur entirely in the origin country, or could begin at the origin and conclude at the destination. Financing could occur through the destination-country government, destination-country firms, through the students themselves, or some mix of these. Support for origin-country training could be large or limited.

4.2 Two engines of human capital creation

A Global Skill Partnership creates a financial mechanism to realize and share the benefits of two large arbitrage opportunities—turning them into engines of skill creation at the origin and the destination. These opportunities are illustrated here for nurses who move from North Africa to Europe, but similar opportunities exist all over the world.

The first opportunity is that the market value of nursing services is several times higher in Europe than in much of North Africa. Monthly wages of professional nurses commonly fall in the range US\$400–500 in Morocco (Lebsir 2009) and Tunisia (Lautier 2005, p. 47).² Foreign-trained nurses can start at US\$2,500–3,000 per month and soon progress to \$4,000 in Germany and France.³ This means that the mobility of nursing services from North Africa to Europe creates enormous economic value, like all movements of goods and services across an arbitrage opportunity. In the absence of some form of Global Skill Partnership, this value accrues to migrants and destination countries.

The second opportunity is that the cost of nurse training in North Africa is a small fraction of the cost in Europe. A full three-year course of training in professional nursing can be had in the largest urban centers of Morocco and Tunisia for less than US\$14,000 total. In smaller cities the cost can be considerably less.⁴ The full cost of training a professional nurse in Germany or the United Kingdom falls in the range is US\$80,000–US\$100,000 total, or more, without living expenses.⁵ This likewise means that the mobility of nurse *training* from Europe to North Africa can create enormous economic value. And again, in the absence of a bilateral agreement, this value accrues to migrants' destination countries.

²Converted using exchange rates current at the time of each source's publication.

³German Medicine Net SARL [advertised on April 5, 2014](#) “nursing jobs in hospitals in all parts of Germany” for foreign-trained nurses, paying “ca. 1800–3000 Euros before taxes and social security/month depending on qualification and region, up to 3500 Euros/month with additional qualifications.” In 2012–13 the German Federal Employment Agency [offered](#) starting salaries in the same range to Filipino nurses through the Philippine Overseas Employment Administration (FM-POEA-04-EF-07-A). In France, the Syndicat National des Professionnels Infirmiers [reports](#) a similar range for starting and early-career wages in France.

⁴The private École Supérieure Privé de Nutrition et du Paramédical in Casablanca [currently charges](#) MAD37,000 per year, plus a one-time MAD3,500 registration fee, for its three-year *sciences infirmières* course—for a total three-year cost under US\$14,000. The private Institut Supérieur Privé des Sciences Infirmières de Sousse (ISEPSI) in Sousse, Tunisia [currently charges](#) TND2,500 or less for each year of its three-year professional nursing course, including registration fee, amounting to a total start-to-finish cost under US\$5,000.

⁵The University of Witten/Herdecke, a private university in Germany accredited as an *Universität* equivalent in quality to state-run universities, [charges €12,600 per semester](#) for its three-year Bachelors in Nursing Practice, for a total cost of €75,600. The King's College London Florence Nightengale School of Nursing and Midwifery [currently charges](#) £15,450 per year in tuition only to non-European foreign students for its three-year Bachelors in nursing, or (inclusive of fees) about US\$80,000 total. These figures do not include any living expenses.

These numbers imply that training at the origin followed by service at the destination creates tremendous economic value. Three years of training a single nurse in North Africa followed by five years of service in Western Europe can create on the order of US\$70,000–80,000 or more through the training cost differential and an additional US\$120,000–150,000 or more through the wage differential. This means that the total added value of the arrangement would exceed US\$200,000 even if the final year of training occurred in the destination country.

A Global Skill Partnership ensures that this added value is shared in a way that all parties can agree to. Without any agreement, value accrues exclusively to migrants and destination countries, and is widely seen as inequitable. In a partnership, origins and destinations agree *ex ante* that a small portion of the added value be directed toward nurse training at the origin—both for the migrants and to some degree for non-migrants. This lets the dual arbitrage opportunity play its role as an engine of human capital creation for the destination country while playing the same role at the origin.

4.3 Examples in a North African context

Here are schematic examples of how a two-track technical school might work in Tunisia, to prepare nurses wishing to work in Germany:

Maryam and Youssef are two young, low-income Tunisians interested in training to work as nurses. Maryam wants to work in Germany, Youssef in Tunisia. The federal government of Germany finances an intensive German language course for Maryam, after which the state government of Bavaria pays for one year of Maryam's technical coursework in nursing (partly in German) as well as one year of Youssef's coursework (in French or Arabic). All of this training occurs in Tunis. After this, Maryam moves to Bavaria to begin a two-year apprenticeship with a hospital, while Youssef completes his training in Tunis and works there. The Bavarian government saves money from the much lower cost of conducting Maryam's coursework in Tunis relative to a standard apprenticeship. A small portion of that savings goes to subsidize Youssef's training.

In an alternative structure, the schools could be self-financing:

Maryam and Youssef train as nurses entirely in Tunis. Maryam plans to work

in Germany, Youssef in Tunis. Training each of them costs US\$10,000, and neither can afford it. A private hospital group in Germany finances all of Maryam's training and half of Youssef's, for a total of US\$15,000. In return, Maryam commits herself to work within its hospital network for at least four years. With just 12% of Maryam's earnings over that period, she pays back the entire US\$15,000. Alternatively, Maryam could 'buy out' her commitment to the original hospital group by switching employers and paying cash to offset her training costs.

And in another structure, training could be split between the two countries:

Maryam plans to work in Germany, Youssef in Tunis. Both train as nurses for one year in Tunis, while Maryam takes intensive German language classes that Youssef does not. The two then separate: Maryam completes two additional years of training in Germany, Youssef completes his training in Tunis. The German employer and public save US\$25,000 or more from covering the cost of Maryam's first year in Tunis rather than in Germany, as they would normally have to, even including the cost of Maryam's German-language training. They thus agree to share the savings with Tunisia—providing a US\$5,000 subsidy to cover half the cost of Youssef's full course of study in Tunis. From the standpoint of the German employer, Maryam is a normal trainee but for the attraction of her reduced training cost, and there is little doubt of her skill level since her training has mostly occurred at and has been completed at German institutions.⁶

These examples are merely illustrative and many details could change. But observe the consequences of any of the above arrangements (Table 1): Germany gains a nurse (Maryam) whose net earnings are still eight times what she could earn in Tunisia; the German employer saves money, ending up with less net expenditure on training than in an normal apprenticeship and gains a profitable employee; Tunisia gains a nurse (Youssef) with a sizeable free scholarship; two low-income Tunisians get professional careers that are otherwise inaccessible; Tunisia expands the capacity and quality of its nurse training facilities; and there is no cost at all to the German or Tunisian governments. Other benefits to Tunisia could arise if Maryam chooses to remit some of her earnings home, or return one day to work in Tunisia.

⁶Germany is currently piloting a partnership for geriatric nurses from Vietnam that resembles this arrangement in most aspects except the absence of a 'home' track or Social Training Credit. This is discussed below.

Table 1: How a Global Skill Partnership beats the status quo in skilled migration

Actor	Benefit
<i>Destination country</i>	<ul style="list-style-type: none"> • Workers for shortage occupations • Lower public training expenses
<i>Destination employer</i>	<ul style="list-style-type: none"> • Custom-trained workers • Reduced training expenses • Recruitment facilitated at origin
<i>Migrants</i>	<ul style="list-style-type: none"> • Professional employment • International-quality training • Access for students from low-income backgrounds • Large rise in earnings
<i>Origin country</i>	<ul style="list-style-type: none"> • Subsidized training for ‘home’ track professionals • Greater supply of professionals at origin • No fiscal drain from graduates’ migration • Stronger in-country training institutions • Remittances from ‘away’ track graduates

These all-around benefits are possible simply because the labor of a nurse is worth enormously more money in Germany than in Tunisia, and the cost of training a nurse is enormously lower in Tunisia than in Germany. A two-track school turns these price differences into an engine of human capital creation on both sides of the Mediterranean. And the framework could be flexibly adapted to different settings: First, two-track schools could include nursing assistants and personal care workers, in addition to or instead of full professional nurses. Second, they could begin with health professionals, but the same framework could later be applied to various types of training to fill semi-skilled and skilled labor shortages in Europe. Third, the arrangement for graduates to live and work in Europe could be temporary or permanent, according to the needs of the destination country or even decided on an individual basis.

Two-track schools could have financing mechanisms different from the above example. Initial finance could come either from destination-country governments, from private-sector employers, or both. Graduates could be required to pay back some or all of the training finance after graduation—but that could occur either through a fixed commitment of work, or through later cash payments, or some mix of these.

Regardless, two-track training requires little or no up-front cost to students and is thus accessible to North Africans of any income level. Training for migrants costs North African taxpayers nothing and subsidizes the creation of professionals in North Africa, reducing fears of ‘brain drain’. Graduates who do not migrate pay much lower tuition, heavily subsidized by a small portion of migrant graduates’ earnings. The essence of the financing mechanism resembles a new type of student loan—tailored to the international context, and contingent upon the ability to pay that arises through migration.

Why would students choose the domestic track? Large numbers of skilled workers (and health workers in particular) from developing countries simply do not wish to emigrate—for a range of personal and professional reasons. Earnings are far from the only factor in health workers’ migration decisions (e.g. [George et al. 2013](#)). In the Philippines, where overseas opportunities for nurses are widely available, so many nurses choose to stay and work in their home country that the Philippines has high nurse staffing ratios—more, per capita, than Great Britain and Austria ([Clemens 2009](#)). Even from very low-income countries, many health professionals do not wish to migrate. [Awases et al. \(2004\)](#) survey 2,382 nurses, doctors, and pharmacists in Cameroon, Ghana, Senegal, South Africa, Uganda, and Zimbabwe. They find that 51% of respondents have no intention of emigrating. [Avato \(2009, Figure 2\)](#) reports survey results on 3,834 workers in Tunisia, Egypt, Moldova, and Albania, from numerous professions. Among tertiary-educated workers, about one third of Tunisians and Egyptians have no intention of emigrating, as well as about two fifths of Albanians and two thirds of Moldovans. Large numbers of skilled workers in general, and health workers in particular, are interested in training to work in their countries of origin. Furthermore, developing countries participating in arrangements of this kind could cap enrollment in the ‘away’ track at any level desired.

4.4 Key elements of design

A two-track technical school like the one described above could emerge as a public venture and remain as such. Alternatively, it could eventually become privately profitable and self-sustaining, with no ongoing cost to taxpayers either in Europe or in North Africa. But in either scenario it would require careful attention and cooperation by policymakers of both origin and destination countries. Critical design features include the following.

- *Bilateral agreement.* The movement of skilled workers, particularly health workers, has often occurred in an atmosphere of distrust and contestation among policymakers. Policymakers at the origin are unlikely to cooperate unless they believe that it is truly designed to foster human capital formation for domestic service. Policymakers at the destination are unlikely to cooperate if they perceive their origin-country counterparts as a potential obstacle. A successful two-track school pilot may need to occur in the context of a bilateral intergovernmental agreement. Sáez (2013) reviews the latest research on bilateral labor agreements designed with development objectives.
- *Financing mechanism.* In a Global Skill Partnership, training finance is 1) supported by the governments, firms, or workers in the country of migrant destination and 2) provided up-front, to allow access to students of limited means. This means that the parties to transactions in training finance are separated by both distance and time. Such a financing scheme obviously requires secure records, contracts spelling out the obligations of each party, reliable payment systems, and a mutually-agreed division of the financial burden of training subsidies, among other elements.
- *Social training credit.* Parties would need to agree up front to what degree the value generated by migrants would subsidize the training of non-migrants.
- *Contingency plan.* There will certainly be students in the ‘away’ track who cannot or will not migrate, just as there may be students in the ‘home’ track that attempt to migrate. A successful two-track school will require a plan for how to ad-

dress these scenarios. Training credits to non-migrant 'away' track students might be fully or partially forgiven, with allowances made for these eventualities in the financial plan. Migration among 'home' track students may be limited if their training does not include extensive foreign-language preparation and placement assistance.

- *Employer leadership.* The destination country must work directly with employers to understand their unmet needs and design training around those needs; craft visa policy that allows graduates to reliably enter the country; and cooperate to seek repayment from any graduates who might not fulfill post-graduation work commitments. A two-track technical school is inherently a public-private partnership.
- *Skill recognition.* It is essential that students in the 'away' track receive recognition of their qualifications, skills, and any work experience *both* in the destination country and the origin country. Some past initiatives in this genre (see below) have foundered either because they did not include adequate mechanisms for recognizing migrant graduates' skills at the destination, or because they provided for skill recognition exclusively at the destination and did not serve the needs of those who for any reason did not or could not migrate.
- *Language training.* Many types of skilled work, certainly including all nursing and personal care work, require excellent skills in the language of the destination country. This must be a major focus of training in the 'away' track, including provision of technical training in the destination-country language.
- *Integrity of the 'home' track.* Migrating as a nurse is quite difficult; migrants face important barriers of skill recognition, language, and work visas, among others. For these reasons, students in the 'home' track of a two-track school would be unlikely to migrate if the program were carefully designed. The case studies below illustrate that graduates of any such program are unlikely to successfully migrate if their skills are not custom-designed for accreditation at the destination, if they receive no specialized language training, and if their work visas are not facilitated in the context of a bilateral agreement. A two-track system could ensure that no such facilitation occurs in the 'home' track, and that entrants agree to these con-

ditions up front.

- *Interministerial working groups.* A two-track school arrangement for health workers would likely require cooperation or at least assent from numerous ministries in order to function properly. These would include ministries of health, development cooperation, labor, immigration, and foreign affairs, and possibly also ministries of education and planning.
- *Portability between employers.* Employers that participate in financing training in the 'away' track deserve a return on that investment. But there are dangers in tying employees exclusively to a single employer for many years, since an important protection for workers' rights is their ability to leave a job. A successful arrangement should allow for graduates to have the option to 'buy out' their commitment to an employer by working for a second employer and paying making pre-set cash payments to the first.
- *Quality control.* There must be clear mechanisms for monitoring and assessing the quality of training. A great deal of infrastructure already exists. All major migrant-destination countries already have systems for testing foreign-trained health professionals' skills, such as the National Council Licensure Examination (NCLEX) in the United States and the Overseas Nurses Program in the United Kingdom. US studies of foreign-trained nurses ([Cortés and Pan 2012](#)) and doctors ([Norcini et al. 2010](#)) find them to be of comparable quality to their US-trained counterparts.
- *Training customization.* There must be channels for destination-country employers to work directly with origin-country training centers to customize training according to employers' needs. This will help ensure graduates' successful placement, as well as exerting upward pressure on training quality at the training institute more generally, including in the 'home' track.
- *Destination-country labor involvement.* It is critical to design programs of this kind in cooperation with labor unions or employees' associations at the destination. It is normal for destination-country employees to perceive added competition from trainees of a program like this. In the nursing and personal care sector, for example, workers' associations at the destination are likely to express a legit-

imate interest in the effects of foreign trainees on their own working conditions and negotiating power. When two-track training focuses on truly shortage occupations, conflict is less likely.

- *Startup capital.* While a well-designed two-track school could be financially self-sustaining, startup capital may be required for launch.

The next section briefly reviews examples of related initiatives around the world. These highlight the importance of several of the above design features.

5 Promise and pitfalls in related initiatives worldwide

Nothing exactly like a Global Skill Partnership now exists. But numerous initiatives around the world, both private and public, have shown that certain features of such a partnership can work. This section describes a number of existing initiatives, public and private, that foster skill mobility or skill creation. Many of these have faced challenges that can inform attempts to build future programs to link skill mobility with skill creation.

5.1 Many initiatives now link skill mobility and skill creation

It is not a new idea to link skill creation and skill mobility in some form. Governments have done this for decades, in a different way. Brazil and Turkey, as mentioned above, finance graduate education abroad with a link to service at home. Global Skill Partnerships are simply the mirror image of those programs. In the Brazilian and Turkish arrangements, an entity at the origin finances training at the destination in exchange for service at the origin. In a Global Skill Partnership, it is the reverse: An entity at the *destination* helps finance training at the *origin* in return for service at the *destination*. These experiences show that many of the key design issues identified above can be satisfactorily resolved. For example, there is a contingency plan for people who participate in the program but change their migration plans: Brazilian scholarship recipients have a mechanism to ‘buy out’ their home service commitment with cash payments.

More recently the world has seen the development of various initiatives that link training at the origin with service at the destination. Nurses Now International (NNI) is a Mexican firm that conducts and finances the training of nurses in Mexico for temporary service in the United States (Squires and Beltrán-Sánchez 2013). NNI selects Mexicans with basic nursing training and provides six months of intensive training in advanced nursing methods and English language in the city of Monterrey and elsewhere. NNI finances the entire cost of training plus a stipend during training. Graduates are then placed at one of many partner hospitals in the US for two months of additional training followed by three or four years of nursing work, utilizing the ‘TN-2’ (‘Treaty NAFTA’) visa. This migration typically raises their earning potential by roughly 1,000%—from about US\$400/month in Mexico to US\$4,500/month in the US—and 5–10% of those earnings are used to pay back the cost of their training (Hora Cero 2009). At the time of writing, the program has scores of successful placements. Notably, NNI also trains nurses to serve in Mexico caring for medical tourists from the United States. Created in 2007 with support from the US firm Blue Equity LLC, NNI has received certification from the Alliance for Ethical International Recruitment Practices.

Other, related initiatives receive some type of public facilitation, even if they are partially or even fully financed by employers. In Germany at the time of this writing, a suite of agreements is being piloted by the German Society for International Cooperation (GIZ) together with employers in eldercare and nursing. In one of these, employers are working with GIZ and the German Ministry for Economic Affairs to provide German-language training and nursing skills training for 100 Vietnamese young people in Vietnam, followed by an abbreviated two-year apprenticeship in geriatric nursing in Germany. By allowing Vietnam-acquired nurse training to substitute for the first year of the German apprenticeship, this program represents an innovative internationalization of the apprenticeship model. Like most German apprenticeships, it is jointly financed by employers and the government.

In Finland, the surgical wards of Helsinki University Central Hospital have recruited nurses from the Philippines in a way that divides their training between the two countries (Wildau 2011). Entrants to the program already have nursing degrees from the

Philippines, and must complete one year of additional training at the Laurea University of Applied Sciences while undergoing intensive Finnish language training. Because the Laurea program normally lasts three and a half years for Finnish entrants, training from the Philippines substitutes for two and a half years of Finland-based training. The end result is that, in effect, these nurses' training is taking place partly in the Philippines and partly in Finland. The private Finnish firm Attendo has likewise recruited Filipinos already qualified as nurses to undergo language training and additional vocational training in Helsinki, financed in part by the Trade Union for the Public and Welfare Sectors, JHL (Jokinen 2013). Here, again, the recruits' preparation as nurses is in effect split between the Philippines and Finland.

In another German pilot called the "Triple-Win Project", GIZ helps employers recruit qualified health workers from Serbia, Bosnia, the Philippines, and Tunisia. In this project, GIZ helps arrange professional training, language training, and integration assistance in the country of origin—before migration—which is fully financed by the workers' future employers in Germany. Beyond these, Germany is also the setting for multiple initiatives of this kind in the private health sector. The Arbeitgeberverband-Pflege—a private nursing home network—is supporting the training of eldercare workers in China for both German language and technical training.

Numerous other institutions around the world successfully finance technical training in developing countries for overseas service. The German shipping firm Döhle runs a training center in Manila to train seafarers for service outside the Philippines. The Kiribati Marine Training Center also trains seafarers with support from various shipping firms as well as the governments of Australia and New Zealand. The Qatari firm Silatech conducts and finances technical training of Yemeni workers in Yemen for temporary work in Qatar. All of these partnerships have required the formation of working international systems to finance training—across time and across legal jurisdictions.

Many initiatives at the interface of skill mobility and skill creation have faced challenges of various kinds. The following subsections review some of these experiences to gather lessons for the successful design of Global Skill Partnerships.

5.2 Challenges of demand or recognition for skills formed abroad

A Global Skill Partnership cannot function as intended unless it creates skills that employers proactively demand—in both countries—and provides mechanisms for the mutual recognition of those skills. Employers must be directly involved from the beginning, for few other actors are likely to push sufficiently hard against political and administrative barriers against labor mobility. This is shown by two related initiatives that have resulted in very little labor mobility, one from the Pacific and one from North America.

The first case is the Australia Pacific Technical College (APTC). The APTC is a network of five technical training campuses in the developing Pacific Island states of Vanuatu, Samoa, Fiji, Papua New Guinea, and the Solomon Islands. It was created in 2007 to offer Australia-recognized training qualifications for electricians, chefs, hospitality workers, and other skilled tradespersons. It was designed and heavily subsidized by AusAID to serve two goals: to build up human capital on the islands, and to provide skilled workers for shortage occupations in Australia. In this role it internationalizes skill creation. The second of these goals has been largely discarded as the APTC evolved. Just 1.2% of the APTC's roughly 5,000 graduates have moved to Australia or New Zealand since the College was created.

[Clemens et al. \(2014\)](#) explore the reasons for this shift away from international mobility for skilled graduates. Some of these are the following: 1) Beyond their Australia-recognized diploma, graduates also need Australian recognition of work experience to qualify for most temporary and settler visas. The process for this recognition is difficult and expensive and the APTC has no involvement. 2) The APTC was largely the personal initiative of one Prime Minister, and it received substantially less support when he left office shortly after it was created. It was not created at the insistent demand of other Australian interest groups, especially employers. 3) The curriculum was not built around occupations with critical shortages: Resistance from Australian nurses' unions led planners to excise nursing and personal care training from the APTC curriculum at the outset, despite large Australian shortages in these areas. 4) At the behest of migrant-

origin countries, APTC training has focused on providing upskilling for older, established, employed workers who are less likely to be interested in moving overseas. 5) Training costs are high, since most teachers have thus far been Australian expatriates.

The second case that illustrates these challenges is a nurse training program negotiated between Canada and Jamaica. In late 2009, the Canadian and Jamaican governments created a program to train Licensed Practical Nurses in Jamaica for service in Alberta, Canada. The course of study was 18 months. Training was conducted at the Pre-University School in Kingston, Montego Bay, and Portmore, and was accredited by NorQuest College in Alberta. It was created by an agreement between the Canadian High Commission and the Jamaican Ministry of Labor, brokered by the private firm Marmicmon Integrated Marketing and Communications. Students covered the cost of training and recruitment with the expectation of high earnings in Canada.

The Canada-Jamaica program was discontinued in late 2011. There is no publicly-available independent evaluation of the causes of this closure. [Reid \(2012\)](#) reports that of the 156 students who had completed training by May 2011, only 30 had departed for Canada. NorQuest canceled its contract with the Pre-University School in 2011. Even students who did not migrate were required to pay up front J\$270,000 tuition, C\$1,500 to Marmicmon and C\$300 to NorQuest. A central problem was that many of the students were unable to complete practical portions of their training in Jamaica—required for licensing in Canada—because the Pre-University School had accepted students unable to enter practical training for technical reasons ([Reid 2011](#)). There also appear to have been unexpected delays in placing even fully qualified graduates with employers in Canada, disagreements over cost sharing between Canadian and Jamaican partner institutions, and a lack of employer participation in training finance to diminish students' risk exposure.

In both of these programs, the APTC and the Canada-Jamaica agreement, there was insufficient coordination between employers at the destination and training institutions at the origin to ensure substantial labor mobility for trainees. These initiatives may have had many benefits apart from labor mobility—for example the APTC essentially

evolved into a training program for island nations and has created about 5,000 skilled graduates there. It thus has become a program for internationalizing skill formation, but not skill mobility.

5.3 Challenges of a robust financing mechanism

Global Skill Partnerships require a mechanism for training costs to be shared fairly between employers, destination countries, origin countries, and skilled migrants. There is danger when multiple parties are engaged in long-term financial transactions across different legal systems. The canceled Canada-Jamaica partnership described above illustrates one form of that danger.

Issues in the financing mechanism appear to have arisen in another innovative initiative of this type. Hamburg, Germany private hospital group Asklepios recently worked with the Ministry of Foreign Affairs to create a nurse migration partnership with Tunisia called the TaPIG Project. Groups of Tunisian students arrived in Hamburg in late 2012 and early 2013 for six months of German language and culture training (paid by the Foreign Affairs Ministry) to be followed by three years of apprenticeship training in nursing, paid by Asklepios. The financing mechanism involved an additional component of a student loan to cover other expenses of the students, such as room and board during the language and culture training. Complications with those loans appear to have led to suspension of new entries in the the TaPIG Project at the time of this writing (though Asklepios intends to continue the training of previous entrants). The TaPIG experience suggests that the precise financing mechanism may be critical to progress in arrangements of this genre.

5.4 Challenges of labor opposition at the destination

The arrival of foreign workers in destination countries, even in critical shortage areas, is likely to create concerns among labor organizations such as unions and employee associations. Global Skill Partnerships must be designed with buy-in from these groups, requiring mutual concessions, or they will face problems down the road. One example

is the aforementioned opposition of nurse associations to the inclusion of nursing in the APTC curriculum. A further example comes from Japan.

In 2008, Japan began a program of attracting candidates for nursing positions in Japan from Indonesia and the Philippines under Economic Partnership Agreements or EPA (Ohno 2012; Ogawa 2012). These programs attract entrants who already have training and experience as nurses or care workers, and the program does not include a component to finance that origin-country training. But the Japanese government does pay for recruitment, travel, and living expenses of participants, while employers pay for six months of Japanese language training. Once arrived in Japan, program entrants become nursing and certified care-worker “candidates”, working legally without a license until they pass a stringent licensure examination of technical skills and Japanese language ability.

This program has faced difficulties because almost all entrants have failed the licensure exam. A total of 1,360 candidates entered Japan during 2008–2011. Of the first migrants who took the exam in 2010, just 1.2% passed. In 2011, 4.0% passed. This licensure exam was instated at the request of the Japan Nursing Association out of concern for “the potential effects on the domestic labor market” (Ogawa 2012) and it has been alleged that the Association designed the exam to keep the passing rate low as a protectionist measure (Ohno 2012, p. 550). Inoue (2013) concludes,

“The low ratio of success is the result of conflicting policy interests in a single political arrangement. At the administrative level, the MOFA [Ministry of Foreign Affairs] and the MHLW [Ministry of Health, Labor, and Welfare] take ... different positions to the EPA. The MOFA thinks that the EPA contributes to the international exchange of persons and inviting highly skilled persons. However, the MHLW emphasized that the EPA was not regarded as the solution for local staff shortage. Such MHLW’s position was parallel to that of the Japanese Nursing Association (JNA), one of the occupational interest group in the health-care sector. The JNA places a special emphasis on protecting the national labour market ...”

This experience highlights the importance of close coordination with destination-country labor organizations to prevent political conflict from damaging the program.

In the context of acute nursing shortages, for example, there will be ways to fill nursing positions with newly-trained migrants in ways that do not undermine working conditions for native nurses. But programs of this kind are likely to be perceived as a threat and substantial involvement of labor organizations will be required to build trust. [Ogawa \(2012\)](#) predicts that “if Japan continues to enforce the condition for the foreign workers to pass the national exam . . . the care facilities may eventually stop accepting them because of the large financial and human cost incurred.”

5.5 Challenges when trainees do not finish or receive no placement

Any program to link training and mobility requires a contingency plan for graduates who, for one reason or another, do not migrate. Students might enter the ‘away’ track of a two-track school but later wish to switch to the ‘home’ track. Graduates from the ‘away’ track might conceivably be unable to secure work at the destination, or might get fired. Any Global Skill Partnership requires a plan for such cases, especially for where financial responsibility for such graduates’ training will fall.

The Canada-Jamaica partnership discussed earlier aptly illustrates the need for contingency planning. Another example, from the Pacific region, is the Kiribati Australia Nursing Initiative (KANI). In 2006, Australia created KANI to train i-Kiribati students as nurses in Australia and for service in Australia. To date, scores of students have been trained to date at Griffith University in Australia. The program is not broadly perceived as promising and appears unlikely to continue. Many graduates have had difficulty in passing licensure examinations and securing professional employment in Australia, despite nursing shortages there. Officials familiar with KANI suggest in personal communications that the project could have benefited from more stringent up-front selection of students. But there is no publicly-available independent evaluation that would clarify its lessons for other programs.

Employers and financiers involved in any such partnerships would need assessments of the risks involved and provisions for unintended outcomes. Two of the German initiatives described above—the TaPIG Project and the Arbeitgeberverband-Pflege

partnership—built into their initial designs a provision for trainees who are either unable to migrate, unable to remain, or unable to complete satisfactory work.

5.6 Lessons

Any Global Skill Partnership must have a plan for addressing the above challenges. The experience of the APTC points to the importance of mechanisms for skill/experience recognition under bilateral agreements. Both Australia's APTC and KANI and Japan's nursing program underline the need to involve destination-country employers and the relevant labor groups in design of Global Skill Partnerships. Both the APTC and the Japanese EPA highlight the importance of interministerial coordination in receiving countries: In Australia there was little coordination between the implementer AusAID and the Department of Immigration to facilitate migration; in Japan there was insufficient agreement between the Foreign Affairs Ministry and the Health Ministry regarding measures to protect Japanese nurses from foreign competition. The closure of the Canadian Licensed Practical Nursing Program suggests the importance of ensuring that training programs comply with all domestic regulations for training and practice (not just overseas requirements), and the importance of financing mechanisms and contingency planning to protect graduates from undue financial risk.

These previous partnerships also illustrate what is possible. Brazil and Turkey's experience with overseas scholarships highlights the feasibility of providing contingency plans to enact when individual graduates' migration decisions change. The German public and private initiatives also have already proven some necessary components of a successful Global Skill Partnership, though their experience has underlined the importance of working out key features of the financing mechanism. Setting aside the other challenges they face, the GIZ and Asklepios projects were able to form partnerships with policymakers in Vietnam, the Philippines, and Tunisia—showing that willing and capable origin-country counterparts are available. The German and Japanese programs have shown that destination-country employers can be willing partners as well. The Mexican firm NNI has shown that working systems of international, migration-linked nursing education finance are possible.

6 Conclusion

More and more skilled workers will move from poor to rich countries in the years to come. There is little question that large-scale movement will happen; the question is on what terms it will happen. Skilled people will move, particularly nurses, but there need not be a choice between allowing that movement and stopping fiscal drain at the origin. This note proposes a new form of public-private training partnership to help skilled migration happen on terms more beneficial for origin countries, destination countries, and migrants: Global Skill Partnerships.

The two-track technical school is one form of Global Skill Partnership that maximizes the benefits to everyone involved. Designed correctly, a two-track school can provide destination countries with the skilled workers they will need and good jobs for youths from developing countries, while at the same time helping strengthen human capital stocks and public coffers in migrants' countries of origin. Innovative partnerships like these are better ways to address concerns about skilled migration than alternative policies such as enforcing limits on migration or post-migration compensation payments. Those policies have attempted to reconstruct a world without migration. Global Skill Partnerships, in contrast, are a tool to help policymakers plan for a mobile world.

References

- Agwu, Kenechukwu and Megan Llewelyn**, “[Compensation for the brain drain from developing countries](#),” *The Lancet*, 2009, 373 (9676), 1665–1666.
- AMA**, “[International Medical Graduates in American Medicine: Contemporary challenges and opportunities](#),” A position paper by the AMA-IMG Section Governing Council, American Medical Association 2010.
- Auerbach, DI, DO Staiger, U Muench, and PI Buerhaus**, “[The Nursing Workforce: A comparison of three national surveys](#),” *Nursing Economics*, 2012, 30 (5), 253–260.
- Avato, Johanna**, “[Migration Pressures and Immigration Policies: New Evidence on the Selection of Migrants](#),” SP Discussion Paper 930, World Bank 2009.
- Awases, M., A. Gbary, Nyoni J., and Chatora R.**, *Migration of Health Professionals in Six Countries: A Synthesis Report*, Brazzaville: World Health Organization AFRO Regional Office, 2004.
- BLS**, “[Employment Projections 2010–2020](#),” Technical Report, U.S. Bureau of Labor Statistics 2012.
- Chang, Shirley L.**, “[Causes of brain drain and solutions: The Taiwan experience](#),” *Studies in Comparative International Development*, 1992, 27 (1), 27–43.
- Chen, Peggy G, David I Auerbach, Ulrike Muench, Leslie A Curry, and Elizabeth H Bradley**, “[Policy Solutions To Address The Foreign-Educated And Foreign-Born Health Care Workforce In The United States](#),” *Health Affairs*, 2013, 32 (11), 1906–1913.
- Clemens, Michael A.**, “[Do Visas Kill? Health Effects of African Health Professional Emigration](#),” CGD Working Paper 114, Center for Global Development 2007.
- , “[Skill Flow: A Fundamental Reconsideration of Skilled-Worker Mobility and Development](#),” CGD Working Paper 180, Center for Global Development 2009.
- , “[The financial consequences of high-skill emigration: lessons from African doctors abroad](#),” in Sonia Plaza and Dilip Ratha, eds., *Diaspora for Development in Africa*, Washington, DC: World Bank, 2011, pp. 165–182.
- , **Colum Graham, and Stephen Howes**, “[Skill Development and Regional Mobility: Lessons from the Australia-Pacific Technical College](#),” CGD Working Paper, forthcoming, Center for Global Development 2014.
- Cortés, Patricia and Jessica Pan**, “[Relative Quality of Foreign Nurses in the United States](#),” Discussion Paper 31/12, Centre for Research and Analysis of Migration (CReAM), Department of Economics, University College London 2012.
- European Commission**, “[Commission Staff Working Document on an Action Plan for the EU Health Workforce](#),” SWD(2012) 93 final, European Commission 2012.
- George, Gavin, Millicent Atujuna, and Jeff Gow**, “[Migration of South African health workers: the extent to which financial considerations influence internal flows and external movements](#),” *BMC Health Services Research*, 2013, 13 (1), 1–8.
- Gish, Oscar and Martin Godfrey**, “[A reappraisal of the ‘brain drain’—With special reference to the medical profession](#),” *Social Science & Medicine. Part C: Medical Economics*, 1979, 13 (1), 1–11.

- Grignon, Michel Louis, Yaw Owusu-Ansah, and Arthur Sweetman**, “[The International Migration of Health Professionals](#),” IZA Discussion Paper 6517, Institute for the Study of Labor (IZA) 2012.
- Hora Cero**, “[Bilingües y capacitadas, igual a un sueldo en dólares](#),” Nuevo León 2009.
- HWA**, *Health Workforce 2025*, Canberra: Health Workforce Australia, 2012.
- Inoue, Jun**, “[Healthcare: The Case of Japan](#),” *Migration Letters*, 2013, 10 (2), 191–209.
- Joint Learning Initiative**, *Human Resources for Health: Overcoming the Crisis*, Cambridge, MA: Harvard University Global Equity Initiative, 2004.
- Jokinen, Heikki**, “[JHL gives grants to Philippine practical nurses](#),” July 10, JHL: The Trade Union for the Public and Welfare Sectors 2013.
- Kirigia, Joses M, Akpa R Gbary, Lenity K Muthuri, Jennifer Nyoni, and Anthony Seddoh**, “[The cost of health professionals’ brain drain in Kenya](#),” *BMC Health Services Research*, 2006, 6 (1), 89.
- Lautier, Marc**, “[Les exportations de services de santé des pays en développement: Le cas tunisien](#),” Notes et Documents, Numéro 25, Agence Française de Développement 2005.
- Lebsir, Morgan**, “[La fuite des blouses blanches](#),” Accessed April 5, 2014, Syndicat National des Médecins du Secteur Libéral 2009.
- Little, Lisa**, “[Nurse Migration: A Canadian Case Study](#),” *Health Services Research*, 2007, 42 (3), 1336–1353.
- Mattoo, Aaditya and Arvind Subramanian**, “[Criss-crossing migration](#),” Policy Research Working Paper 6539, Washington, DC: World Bank 2013.
- **and Randeep Rathindran**, “[How Health Insurance Inhibits Trade In Health Care](#),” *Health Affairs*, 2006, 25 (2), 358–368.
- McCabe, K., Lin S.Y., H. Tanaka, and P. Plewa**, “[Pay to Go: Countries Offer Cash to Immigrants Willing to Pack Their Bags](#),” Migration Information Source feature story, Washington, DC: Migration Policy Institute 2009.
- Mills, Edward J, Steve Kanters, Amy Hagopian, Nick Bansback, Jean Nachega, Mark Alberton, Christopher G Au-Yeung, Andy Mtambo, Ivy L Bourgeault, Samuel Luboga et al.**, “[The financial cost of doctors emigrating from sub-Saharan Africa: human capital analysis](#),” *BMJ: British Medical Journal*, 2011, 343.
- **, William A Schabas, Jimmy Volmink, RB Walker, Nathan Ford, Elly Katabira, Aranka Anema, Michel Joffres, Pedro Cahn, and Julio Montaner**, “[Should active recruitment of health workers from sub-Saharan Africa be viewed as a crime?](#),” *Lancet*, 2008, 371 (9613), 685–688.
- Muula, Adamson S, Ben Panulo, and Fresier C Maseko**, “[The financial losses from the migration of nurses from Malawi](#),” *BMC Nursing*, 2006, 5 (1), 9.
- Norcini, John J, John R Boulet, W Dale Dauphinee, Amy Opalek, Ian D Krantz, and Suzanne T Anderson**, “[Evaluating the quality of care provided by graduates of international medical schools](#),” *Health Affairs*, 2010, 29 (8), 1461–1468.
- OECD**, *International Migration Outlook: SOPEMI 2007 Edition*, Paris: OECD Publishing, 2007.
- Ogawa, Reiko**, “[Globalization of Care and the Context of Reception of Southeast Asian Care Workers in Japan](#),” *Southeast Asian Studies*, 2012, 49 (4), 570–593.

- Ohno, Shun**, “Southeast Asian Nurses and Caregiving Workers Transcending the National Boundaries: An Overview of Indonesian and Filipino Workers in Japan and Abroad,” *Southeast Asian Studies*, 2012, 49 (4), 541–569.
- Pack, Howard and Janet Rothenberg Pack**, “Foreign Aid and the Question of Fungibility,” *The Review of Economics and Statistics*, 2009, 75 (2), 258–65.
- Reid, Tyrone**, “Suspended: Charles halts Canadian nurses training programme,” May 15, Jamaica Gleaner 2011.
- , “Nurses seek new remedy,” March 4, Jamaica Gleaner 2012.
- Sáez, Sebastián**, *Let Workers Move: Using Bilateral Labor Agreements to Increase Trade in Services*, Washington, DC: World Bank, 2013.
- Saxenian, AnnaLee**, “The Silicon Valley connection: transnational networks and regional development in Taiwan, China and India,” *Science Technology & Society*, 2002, 7 (1), 117–149.
- Squires, Allison and Hiram Beltrán-Sánchez**, “Strengthening Health Systems in North and Central America: What role for migration?,” Report of the Regional Migration Study Group, Washington, DC: Wilson Center and Migration Policy Institute 2013.
- Verboom, P, T Tan-Torres Edejer, and DB Evans**, “The costs of eliminating critical shortages in human resources for health,” Background paper for the *World Health Report 2006*, World Health Organization 2006.
- WHO**, *World Health Report 2006: Working together for health*, Geneva: World Health Organization, 2006.
- WHO**, *The WHO Global Code of Practice on the International Recruitment of Health Personnel*, Geneva: World Health Organization, 2011.
- WHO**, “Global Atlas of the Health Workforce,” Technical Report, Geneva 2014.
- Wildau, Bjarne**, “Filipino Nurses Receive their Finnish Nursing Degrees,” June 2, ScandAsia.com 2011.