

## Smart policy toward high-skill emigrants

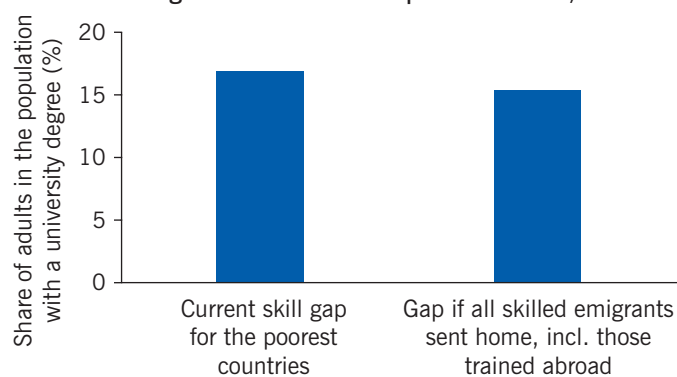
Many proposed policies on skilled migration do little to improve skill stocks or development outcomes, but promising options exist

Keywords: development, emigration, training, education, talent, brain drain

### ELEVATOR PITCH

Immigration officials in rich countries are being asked to become overseas development officials, charged with preventing skilled workers from leaving poor countries, where their skills are needed. Some advocates urge restrictions or taxes on the emigration of doctors and engineers from developing countries. Others urge incentives to encourage skilled workers to remain or return home or policies to facilitate their interactions with home countries. Regulations often reflect compassionate and political sentiments without clear evidence that the regulations achieve the desired development goals and avoid pernicious side effects.

Forcing skilled emigrants to return does little to reduce skill shortages in the most skill-poor countries, 2010



Source: Based on Figure 1.

IZA  
World of Labor

### KEY FINDINGS

#### Pros

- + Retention and return incentives in origin countries have shown promise to increase stocks of skilled workers in developing countries.
- + Bilateral agreements to share the financing and provision of training for skilled emigrants show some potential.
- + Experiments around the world with diaspora-engagement policies offer a variety of experiences to learn from.
- + Policies that focus on equitably sharing skilled migrants' training costs can address fiscal issues while preserving worker mobility.

#### Cons

- Restrictions on high-skill emigration do not address the main causes of skill shortages and have not been shown to reduce shortages in the countries of origin.
- Emigration restrictions greatly harm skilled workers, discourage skill acquisition, and limit access to technology, trade, and investment.
- There has been little rigorous evaluation to determine the effects of diaspora-engagement policy on technology transfer or investment.
- Transfers to developing countries to compensate for emigrants' training costs face problems of aid fungibility and are not shown to increase skill stocks.

### AUTHOR'S MAIN MESSAGE

Policies to restrict the emigration of skilled workers from poor countries, such as quotas and recruitment bans, harm skilled workers and isolate developing countries from global networks. Policies to compensate these countries through international taxes can be inefficient and inequitable. Instead, governments should pilot and rigorously evaluate policy experiments that have shown promise. These include compensation reform efforts and other retention-and-return incentives in origin countries, as well as new institutional arrangements, such as diaspora networks and bilateral training partnerships.

## MOTIVATION

Workers with university degrees are migrating from poor countries to rich countries in rising numbers. Those workers have skills that are scarce in the poor countries they depart, where health clinics are often poorly staffed and university lecture halls overcrowded. These facts have led to the widespread belief that the emigration of skilled workers is responsible for skill shortages in poor countries and is a major cause of underdevelopment and poverty. As a result, immigration officials are under pressure to take on a new responsibility for overseas development. Governments and advocates have proposed a range of policies to avert such harm by restricting the emigration of skilled workers or by compensating countries for such harm by taxing this emigration. These policies are typically justified by arguments for efficiency, equity, and ethics.

This paper summarizes the theory and evidence for various proposed regulations on skilled emigration, in both the destination country and the origin country. It does not discuss whether the emigration of skilled workers is generally good or bad—a fundamentally different question—for the same reason that discussing, for example, the effects of regulations on fertility is different from discussing the effects of fertility itself.

## DISCUSSION OF PROS AND CONS

In broad terms, policymakers have three alternative ways to shape the development effects of the emigration of skilled workers. They can eliminate options for skilled workers to emigrate, they can compensate for any harms arising from emigration, or they can create new options for skilled emigrants that increase the benefits and reduce the costs to the origin country. Eliminating emigration options is the goal of policies like quotas on skilled emigration and recruitment bans. Compensating for harms is the goal of policies like emigration taxes. Creating new options for skilled emigrants is the goal of policies like international training partnerships and diaspora engagement.

An analogy might clarify what separates these three policy approaches, and where the burden of proof should rest as the approaches are compared and assessed. Suppose it were known through research studies that the children of mothers who work outside the home are more likely to exhibit behavior problems such as juvenile delinquency. Hypothetically, policy might seek to reduce these problems in one of three ways. First, policy might try to restrict job options for some mothers—such as by banning firms from recruiting women or encouraging firms to fill available jobs with men. (This is a thought experiment, and by no means a recommendation.) Second, policy might place a special tax on the incomes of working mothers or the profits of firms that employ them, transferring the proceeds to local governments to finance programs to reduce behavior problems in children. A third alternative is to offer new options to working mothers that maximize the social benefits of their labor force participation decisions while minimizing the costs, such as maternity leave requirements for companies and subsidized child care.

While all of these regulations on female labor force participation are possible in principle, many in the first two categories, in particular, are likely to be totally unacceptable to most people. Analogous regulations have been proposed to reduce problems associated with skilled emigration, with analogous advantages and disadvantages—both economic and ethical.

## Policies intended to restrict emigration

The most straightforward regulation on the emigration of skilled workers is simply to obstruct it. If emigration of skilled workers is generally known to be inefficient, inequitable, or unethical, it is possible in principle that prohibiting emigration by some skilled workers might lead to more efficient, equitable, and ethical outcomes. Policies could limit the movement of skilled workers, ban their recruitment, or mandate national self-sufficiency in the fields that are popular among skilled emigrants.

Policies to limit the emigration choices of certain skilled workers include rich-country quotas on the admission of skilled workers from the poorest countries, which some development economists have advocated [1]. Policies also include return-migration obligations on the visas of some skilled workers, such as the US J-1 visa. Policies of this kind are coercive in that they prohibit certain emigration choices by skilled workers without altering the reasons workers make those choices.

A different policy in this class obstructs not movement itself but active recruitment by providing information to developing country professionals on job opportunities overseas. The UK National Health Service currently forbids its employees from recruiting in almost all developing countries, and there are proposals for sanctions including criminal punishment for recruitment of this kind [2]. These policies indirectly and coercively restrict emigration choices by skilled workers—for the same reason that banning all firms from recruiting women would indirectly and coercively restrict women’s work choices. Job opportunities abroad often provide the only legal means of emigration available to a skilled worker from a developing country.

Another way to block emigration by skilled workers from developing countries is for destination countries to pursue self-sufficiency in the industries in which skilled emigrants wish to work. Policies mandate that jobs that might be taken by foreign workers be filled by domestic workers instead. In the health field, the World Health Organization’s Global Code of Practice endorses self-sufficiency as a method of restricting emigration by health professionals. The goal of self-sufficiency is synonymous with an ideal of zero emigration, since the only way that all of a country’s jobs can be filled with non-migrants is if there are no immigrants (or immigrants never work).

Policies to obstruct skilled emigration have symbolic political importance in many rich countries. But do policies to obstruct skilled emigration actually encourage development in poor countries? The research literature is very thin on this point. For example, there is no serious research demonstrating that the UK National Health Service’s recruitment ban has substantially reduced health-worker emigration from any poor country, has substantially raised health-worker stocks in any poor country, or has substantially improved health outcomes in any poor country. More generally, there is no credible research for any poor country demonstrating that barriers to the emigration of scientists, professors, or entrepreneurs have been sufficient to reduce shortages of those workers or to stimulate innovation, improve education, or create new companies. Countries with larger stocks of skilled workers living in diaspora do not have smaller stocks of skilled workers at home, and even the obligatory return of all skilled emigrants would only slightly reduce skill shortages in the poorest countries (see the illustration on p. 1 and Figure 1).

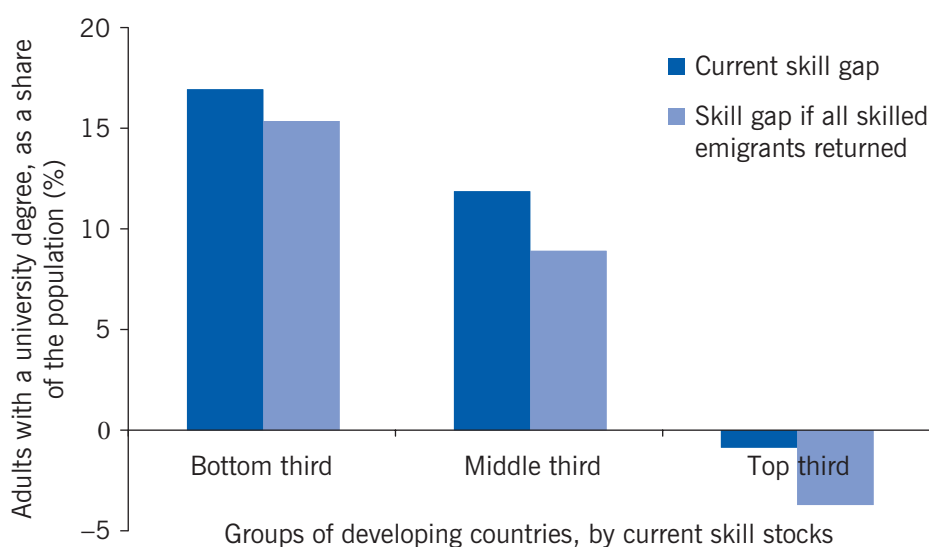
The rationale for these policies—that development can be sparked simply by prohibiting the departure of skilled workers—remains speculative. Proponents of this hypothesis often cite “human capital externalities,” which refer to the theoretical positive effects of typical skilled

workers on society, above and beyond the benefits that those workers capture for themselves. But there is little evidence in rigorous economic research that such externalities play an important role in the economic development of the poorest countries, the countries often targeted for barriers to skilled emigration. This is not to say that such effects are nonexistent, but rather they have not been shown to be sufficiently large to reliably alter the development trajectories of poor countries, given the other constraints they face. Those other constraints include lack of access to essential tools and technology, distorted incentives in public service, poor incentives to innovate, career uncertainty, corruption and cronyism, and low quality training.

What is clear in the research literature is that obstructing skilled emigration does great harm to skilled workers. Preventing a professor, engineer, or doctor from moving to another country can eliminate 60–95% of the professional’s earning power (Figure 2). This is effectively a tax on earnings, by far the largest form of taxation faced by any worker.

Research has had difficulty demonstrating harm to emigrants using arguments resting on efficiency, equity, or ethics. In most cases, restricting the emigration of skilled workers is a globally inefficient way to build up local stocks of skilled workers. For example, a Malawian nurse blocked from emigrating to London must forgo hundreds of thousands of dollars in lifetime earnings, while the Malawian state would forgo less than \$5,000 to train a replacement nurse [3]. Both policies—blocking emigration and training a new nurse—have the same effect: each places a nurse in Malawi who otherwise would not be there. But blocking emigration is by far the less efficient option. Equity arguments encounter related troubles: why is it more equitable to force Malawian nurses to incur this loss than to force nurses in London to incur the same loss by coercing them to serve the poor in Malawi? The latter option would have the same impact on global equity, but it is rarely suggested as policy. Ethical arguments face similar objections. If it is ethical to force skilled people to live where their skills are clearly needed, it should be ethical to force skilled workers in rich countries to work in a poor country—yet few

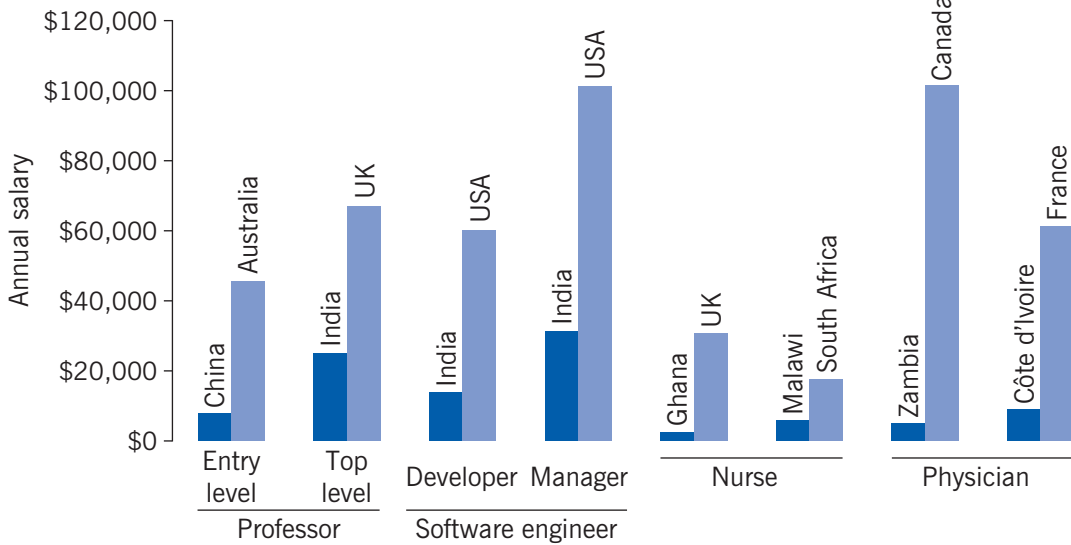
Figure 1. Skill gap between groups of developing countries and the richest countries, 2010



Notes: Groups of developing countries are ranked by share of the adult population with a university degree. “Richest” are high-income OECD countries. “Skill gap” measures the difference between average share of adults with a university degree in the poorest countries versus the richest.

Source: Based on Clemens, M. A. *Losing Our Minds? New Research Directions on Skilled Migration and Development*. IZA Discussion Paper 9218, 2015.

Figure 2. Skilled workers in different countries have vastly different real earnings, mid-2000s



Note: The salary data are adjusted for cross-country price differences to reflect differences in real purchasing power.

Source: Calculations based on data from Clemens, M. A. "A case against taxes and quotas on skilled emigration." *Journal of Globalization and Development* 5:1 (2014): 1–39.

I Z A  
World of Labor

would consider that requirement to be ethical. Further ethical issues arise because mobility bans are enforced by people who enjoy, usually by birthright, earning power vastly greater than the skilled workers in poor countries whose movement they restrict.

The research literature has also revealed important negative side effects of blocking the emigration of skilled workers. Skilled migrants abroad transfer new technologies [4] and substantially increase flows of international trade [5] and foreign direct investment [6] to their country of origin. They also transfer democratic norms and political institutions [7] and send home more money than lower-skill migrants do [8]. All of these effects occur through networks of people that are created exclusively by skilled migration. Beyond these positive side effects of emigration by skilled workers, research shows that the very prospect of earning more abroad induces more young people in developing countries to acquire a university education in the first place, whether they eventually emigrate or not.

Policy interventions in this area face massive informational problems. Cross-country analysis has convincingly shown a correlation between stocks of low-skilled workers and emigration of the high skilled, but correlation is not causation: many factors could affect both of these simultaneously—poverty, war, corruption, and disease, among others. Causation is notoriously difficult to demonstrate in cross-country data; in other words, noting that poor countries have many skilled emigrants is not the same as demonstrating that keeping skilled workers from emigrating, all else being equal, would make their countries less poor.

### Policies intended to compensate for emigration

A second class of policy seeks not to obstruct skilled emigration but to obtain compensation for any harm it produces in emigrants' countries of origin. Such proposals have taken two principal forms: emigration taxes and publicly funded compensation to the government in origin countries.

Skilled emigrants can be directly charged a tax for emigrating, either as a one-time fee or as a percentage of their earnings abroad, that is transferred to the government of their country of origin. Such taxes rest on a variety of justifications, including compensation for training costs or pure redistribution from high-earning emigrants to low-earning non-emigrants. This proposal is associated with one of its chief proponents, economist Jagdish Bhagwati. Rather than taxing emigrants, the governments in destination countries can draw on general tax revenue to finance compensation payments to the governments of origin countries. These payments are usually advocated as compensation for training costs.

These proposals are similar in that they advocate large transfers to compensate for the ostensible net harm of skilled emigration. The two proposals differ mainly in how to finance those transfers: whether by taxing emigrants or by taxing all residents in the destination countries.

Such proposals have not been enacted on any substantial scale. Both measures have the advantage of preserving workers' mobility. Carefully designed and monitored, they might offer a new source of finance to cash-strapped training institutions in developing countries from which emigration by skilled workers is most intensive.

However, there are many practical obstacles to implementing compensation schemes. First, calculating the proper amount of compensation for training costs is complex. Compensation should be reduced by the amount of service provided in the country of origin, which is often substantial. For example, the average African-trained physician working in Canada and the US provided years of service in their country of origin after graduating and before emigrating—a fact ignored by proposals to compensate for the full training cost [3], [10]. Beyond this contribution, emigrants' families have often paid large portions of the training costs through excise taxes, value-added taxes, property taxes, and import tariffs embodied in goods prices over the course of their children's upbringing. Such proposals likewise fail to account for other benefits that skilled emigrants provide to the country of origin, which can include remittances, technology transfer, increased trade, increased investment, the transfer of norms and institutions beneficial to development, and increased incentives to acquire a university education.

Second, it is unrealistic to assume that anywhere near the full amount of compensation payments transferred to governments in the origin countries would be devoted to the intended purpose of training replacement professionals. This problem is deeper than the simple diversion of those funds through corruption. The research literature shows that aid payments are partially fungible. Thus, a government receiving compensation payments could reduce its own financing of professional training and transfer the funds to other budget items. For example, the cumulative public training cost of all the publicly trained physicians who ever emigrated from Nigeria totals less than \$200 million [10]—an amount that the government budget could cover with just five days of its annual oil revenue. If public funds in Nigeria are not now effectively financing physician education, due to either corruption or fungibility, it is unclear why compensation payments would change that.

### **Policies intended to raise the net benefits of emigration to origin countries**

A third class of policies seeks not to obstruct skilled emigration or to compensate for assumed harm but to maximize the net benefits to countries of origin by creating additional options for skilled emigrants. Policies of this third class are an area of active research and include:



- *Incentives for return migration or for non-migration.* Destination-country and origin-country governments can offer incentive payments and reintegration assistance for skilled workers in the hope of inducing them to remain in or return to their countries of origin.
- *Diaspora engagement.* Governments can assist non-returning skilled emigrants in destination countries to interact with each other and with their counterparts in the origin countries. This has the potential to increase the transfer of technology, capital, and norms.
- *Innovations in education finance.* Origin- and destination-country governments can agree in advance about which will cover the costs of training for skilled emigrants trained in the country of origin. This arrangement would allow countries of origin to capture the benefits of skilled emigration while reducing or eliminating the fiscal costs arising from lost training subsidies.

The research literature suggests some promise for policies to strengthen the incentives for skilled emigrants and non-emigrants to remain at home or to return home, but principally for incentives that are designed to shape conditions in the origin country rather than in the destination country. A 2006 reform that substantially raised physicians' wages in Ghana succeeded in deterring their emigration and retaining them in public service, despite the fact that it did not come close to matching wages available abroad [9]. And the Taiwanese government successfully fostered high-skill return emigration by creating a cabinet-level office to assist skilled emigrants with home-country job placement, business investment, housing, children's schooling, and even airfare [10]. For small countries with high rates of emigration of skilled workers, a promising policy focuses on pooling resources to create regional centers of excellence that are likely to enable emigrants to maintain active ties with origin countries—such as the multi-country University of the South Pacific.

In contrast, “assisted voluntary return” programs executed by destination countries have a limited record of affecting skilled workers' emigration decisions. Cash payments and other return incentives offered by destination countries are largely ineffective—absent large improvements in economic conditions in emigrants' countries of origin [11].

Diaspora engagement has been the subject of a wide range of experimental policies across the developing world. These include efforts to foster interactions with diaspora investors and innovators by the Ethiopian Investment Agency, the Lebanese Business Network, and the Mexican Talent Network. While the effects of diaspora connections on development are well documented [12], the effects of policies to encourage those connections are not. Almost none of the diaspora engagement programs has a clear strategy to compare outcomes under the program with what would have happened without it [13].

Innovations in education finance are a subject of current research, with little practical experimentation to date. One proposal, called a “global skill partnership,” seeks to structure the provision and financing of training for skilled emigrants in such a way that emigration increases the supply of skilled workers in developing countries and adds revenue to origin-country governments.

For example, consider this hypothetical example of a global skill partnership. Germany and Moldova negotiate a bilateral agreement on the training of Moldovan nurses who will emigrate to Germany. Suppose that a German hospital network and a local government agree to finance the training of one emigrant nurse in Germany and one non-emigrant nurse in Moldova, at German standards, in exchange for a few years of service in the German hospital

network by the emigrant nurse only (or a payment financed by work at a different employer, if the emigrant wishes to change jobs). A remarkable feature of the relationship is that nurses earn more than ten times in Germany what they typically earn in Moldova, while the cost to train a nurse in Germany is likewise roughly ten times the cost to train a nurse in Moldova.

Note the potential for a mutually beneficial exchange: Germany acquires nurses that its aging population requires, recruits them ethically, and experiences a very large saving in the cost of training nurses (even after including the free training provided for each non-emigrant). Emigrant nurses have no restrictions on their mobility and gain access to life-altering career opportunities, as well as free education. Moldova ends up with more nurses than it would have had Germany simply recruited a graduate nurse, with new revenue to finance the training of both nurses, and with expanded training facilities strengthened by the transfer of technologies and norms required to train at German standards. This model remains untested, though related programs suggest that some aspects of such arrangements are feasible.

## LIMITATIONS AND GAPS

The scientific evidence base for any policy to regulate skilled emigration for development is generally poor, and academic research in this area is just beginning. There is strong evidence that restrictions on skilled emigration typically harm skilled emigrants, and some evidence that such restrictions reduce the incentive to acquire skills in the origin country and lower trade and investment flows and the transfer of technologies and institutions to some developing countries. But there is no credible evidence to demonstrate that real-world restrictions on skilled emigration have had the effect of improving skill stocks or any resulting development outcomes, for example job creation or higher life expectancy, in origin countries, net of their side effects. There is also no agreement about the proper size of any compensation payments for skilled emigration or evidence that payments of this kind can result in broadly increased skill stocks.

Economists' understanding of the social benefits of skilled workers—"human capital externalities"—is limited, and attempts to measure those externalities in poor countries have yielded ambiguous results. Likewise, few attempts to increase the net benefits of skilled emigration, through policies like diaspora engagement and innovations in training finance, have been rigorously evaluated. In general, the research literature offers extensive evidence that skilled workers benefit development when numerous other factors are also present, but very little evidence about how policies to shape the movement and presence of skilled workers—without changes in other factors—affect the development process.

## SUMMARY AND POLICY ADVICE

Development policy proposals to regulate the emigration of highly skilled workers focus on restricting movement or on compensating origin countries for the fiscal effects of such emigration. The research literature has not demonstrated that policies of this kind can typically improve skill stocks or development outcomes in poor countries. While blocking the emigration of a skilled worker can be the proximate cause of the worker remaining in a poor country, there are at least two undesirable effects. First, the environment in the country can limit the development impact of retaining the would be emigrant. Second, blocking the movement of emigrants can reduce incentives to acquire a higher education, lessen trade and investment ties abroad, and forestall the transfer of technologies and institutions from



abroad. While requiring compensation payments for skilled emigrants may provide funds to train new workers, such payments have not been shown to expand the stock of human capital once the fungibility of aid is taken into account. And the popularity of assisted voluntary return programs has not been accompanied by evidence that they effectively ameliorate skill shortages in the country of origin.

Lack of evidence does not mean that some of these policies are useless or detrimental. But it is not more obviously correct to regulate skilled emigration until it is proven harmless to origin countries than it is obviously correct to regulate female labor force participation until that is proven harmless to women and their families. Sweeping regulations bear the burden of proof, and development benefits claimed for many regulations on emigration should be greeted with skepticism until those benefits are proven. Calls for policy interventions in this area should be tempered by the possibility of numerous unintended side effects, by the paucity of research demonstrating cost-effective impact of any emigration policy on skill stocks and development outcomes, and by the ethical complexity of interventions that have the potential to inflict direct harm on emigrants seeking the same professional opportunities that are enjoyed by many policymakers in destination countries.

When so little is known, the best policy response is small-scale innovation paired with rigorous evaluation to inform scale-up. For example, governments should not scale up recruitment bans as development policy until rigorous evaluation of small-scale experiments—such as the UK National Health Service ban on foreign health worker recruitment—has shown that they build up skill stocks and improve development outcomes in origin countries and that these benefits are sufficient to offset the direct costs of those policies. On the other hand, governments should pilot and rigorously test policy experiments that have shown promise—such as Ghana’s reform of physician compensation, the effect of which on skill stocks in Ghana has been carefully demonstrated. Governments should also encourage and pilot new institutional arrangements designed to raise the net benefits of skilled emigration for origin countries, such as diaspora networks and training partnerships. Discussions in leading development policy forums—the World Bank, the OECD, the United Nations Development Programme, and the Global Forum on Migration and Development—signal strong global interest in hatching and incubating new ideas.

## Acknowledgments

The author thanks two anonymous referees and the IZA World of Labor editors for many helpful suggestions on earlier drafts. The author also thanks Hannah Postel. Financial and other support from Good Ventures and the William and Flora Hewlett Foundation is gratefully acknowledged. The views expressed here are those of the author and do not necessarily represent the view of the Center for Global Development, its board, or its funders.

## Competing interests

The IZA World of Labor project is committed to the *IZA Guiding Principles of Research Integrity*. The author declares to have observed these principles.

© Michael A. Clemens

## REFERENCES

### Further reading

Clemens, M. A. "A case against taxes and quotas on skilled emigration." *Journal of Globalization and Development* 5:1 (2014): 1–39.

Clemens, M. A. *Losing Our Minds? New Research Directions on Skilled Migration and Development*. IZA Discussion Paper No. 9218, 2015.

### Key references

- [1] Collier, P. *Exodus: How Migration is Changing Our World*. Oxford: Oxford University Press, 2013.
- [2] Mills, E. J., W. A. Schabas, J. Volmink, R. B. Walker, N. Ford, E. Katabira, A. Anema, M. Joffres, P. Cahn, and J. Montaner. "Should active recruitment of health workers from sub-Saharan Africa be viewed as a crime?" *The Lancet* 371:9613 (2008): 685–688.
- [3] Muula, A. S., B. Panulo, and F. C. Maseko. "The financial losses from the migration of nurses from Malawi." *BMC Nursing* 5:9 (2006).
- [4] Kerr, W. R. "Ethnic scientific communities and international technology diffusion." *Review of Economics and Statistics* 90:3 (2008): 518–537.
- [5] Felbermayr, G. J., and T. Farid. "Revisiting the trade-migration nexus: Evidence from new OECD data." *World Development* 40:5 (2012): 928–937.
- [6] Javorcik, B. S., Ç. Özden, M. Spatareanu, and C. Neagu. "Migrant networks and foreign direct investment." *Journal of Development Economics* 94: 2 (2011): 231–241.
- [7] Spilimbergo, A. "Democracy and foreign education." *American Economic Review* 99:1 (2009): 528–543.
- [8] Bollard, A., D. McKenzie, M. Morten, and H. Rapoport. "Remittances and the brain drain revisited: The microdata show that more educated migrants remit more." *World Bank Economic Review* 25:1 (2011): 132–156.
- [9] Antwi, J., and D. C. Phillips. "Wages and health worker retention: Evidence from public sector wage reforms in Ghana." *Journal of Development Economics* 102:1 (2013): 101–115.
- [10] Chang, S. L. "Causes of brain drain and solutions: The Taiwan experience." *Studies in Comparative International Development* 27:1 (1992): 27–43.
- [11] Thiel, D., and K. Gillan. "Factors affecting participation in assisted voluntary return programmes and successful reintegration: A review of the evidence." *Home Office Research Report* 29. London: UK Government Publications, 2010.
- [12] Saxenian, A. *The New Argonauts: Regional Advantage in a Global Economy*. Cambridge, MA: Harvard University Press, 2007.
- [13] Agunias, D. R., and K. Newland. *Developing a Road Map for Engaging Diasporas: A Handbook for Policymakers and Practitioners in Home and Host Countries*. Geneva, Switzerland and Washington, DC: International Organization for Migration and Migration Policy Institute, 2012.

### Online extras

The **full reference list** for this article is available from:

<http://wol.iza.org/articles/smart-policy-toward-high-skill-emigrants>

View the **evidence map** for this article:

<http://wol.iza.org/articles/smart-policy-toward-high-skill-emigrants/map>