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April 18, 2024

Hon. Richard L. Revesz
Administrator, Office of Information and Regulatory Affairs
Office of Management and Budget
725 17th Street NW
Washington, DC 20503

Re: Modernizing the Exchange Visitor Skills List (RIN: 1400-AF81)

Dear Administrator Revesz,

I write to ask you to seize a rare opportunity to reconsider some of the United States' well-intended but outdated barriers against skilled migrant workers. As one of the world's top 0.5% most-cited research economists, I believe modern research suggests that updating those barriers would serve the national interest while advancing global development abroad.

In President Biden's October 2023 "Executive Order on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence," the Secretary of State was instructed to consider establishing "new criteria to designate countries and skills on the Department of State's Exchange Visitor Skills List" and to "consider publishing updates" to the current Skills List, last updated in 2009. Following this instruction, in March of 2024, the State Department submitted to the Office of Information and Regulatory Affairs a final rule on the Exchange Visitor Skills List for review.

As I describe below, the literature on skill flow and development has grown tremendously in the last thirty years. Economists and other social scientists now have a much richer understanding about the complex relationship between economic development and the movement of skilled individuals than we did in the 1970s when the Skills List was first created. We now know that global networks of skilled migrants are a crucial conduit for ideas, investment, trade, and technological advance for migrants' countries of origin. We now know that the opportunity to use skills abroad has been a major engine of human capital *formation* across the developing world. In other words, we have uncovered a variety of ways that barriers to skilled migration can harm development at home.[1]

Unfortunately, these advances in our knowledge have never been adequately reflected in published Skills Lists, despite periodic revisions. The first Skills List was published in 1972. New lists have been majorly revised only three times—in 1984, 1997, and 2009—with various smaller revisions published in intervening years. While the State Department doesn't share how the Skills List is determined, other than that it is done in "consultation with foreign governments and overseas posts," it seems that prior

[1] I have a non-technical summary of the state of research as of 2009 in Michael Clemens, "Skill Flow: A Fundamental Reconsideration of Skilled-Worker Mobility and Development," *Center for Global Development* (2009). However, there have been important contributions to the literature since then. While I don't have space in this letter to cover recent developments at the level of detail they deserve, I will discuss them below.

updates have reflected an excessive and simplistic focus on “brain drain” that—though well-intended and thoughtful—is no longer supported by evidence.

As your office reviews the proposed rule, it should ensure that the new Skills List reflects new research we have about how movements of skilled people affect their countries of origin.

Background

I am unusual as a research economist focusing on international migration: I study both the effects of immigration on migrant-destination countries *and* the effects of emigration on migrant-origin countries. I have studied these global ripple-effects of migration for the last 19 years.

The development effects of skilled migration have been a key concern for several decades. As you know, the Skills List was first required by a 1970 amendment to the Immigration and Nationality Act (INA) that sought to limit the scope of the two-year home residency requirement by narrowing who it applied to and expanding the ability for migrants to get waivers. After section 212(e) of the INA was amended, the Skills List would be one of the remaining ways to subject exchange visitors to the requirement that they return home for two years. The new law provided that an exchange visitor would remain subject to the two-year home residency requirement if she was from a country which the State Department had “designated as clearly requiring the services of persons engaged in the field of specialized knowledge or skill in which the alien was engaged.”[2] In 1970, Rep. Feighan explained to the U.S. House that the new idea for a Skills List was intended to identify “persons from developing countries clearly requiring the aliens[’] skills.”[3] As Rep. Rodino explained, “it is not reasonable to force a person to return home to an atmosphere where he cannot utilize his abilities to the fullest extent,” except when letting them stay in the United States is “not in the interest of his home country.”[4]

This thinking reflects the research literature of its time: the 1970s. Economists had recently developed the concept of “human capital” and began thinking through how it was affected by migration. In 1966, Grubel and Scott argued that “the transfer of human capital occurring when highly skilled people emigrate between countries always reduces the economic and military power of the migrant’s native country,” though they maintained the effect was probably small in the long-run because replacements can be trained.[5] In 1968, Aitken published a reply pointing out an error in Grubel and Scott’s analysis (namely, that they were considering emigration of the marginal worker one at a time, not emigration of large numbers of workers at once) and concluded that skilled emigration will significantly reduce income in developing countries even in the long-run. Aitken also argued that these negative effects may be even larger when the effects of economies of scale (and other positive externalities) and the opportunity cost associated with training replacements are taken into account.[6] In an influential paper from 1974, Bhagwati and Hamada construct a model that suggests that another cost of “brain drain”

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[2] 8 USC 1182: Inadmissible aliens.
[3] Congressional Record, House of Representatives, March 3, 1970.
[4] Ibid.
[5] Grubel, Herbert B., and Anthony D. Scott. “The International Flow of Human Capital.” *American Economic Review* 56, no. 1/2 (1966): 268–74.
[6] Aitken, Norman D. “The International Flow of Human Capital: Comment.” *American Economic Review* 58, no. 3 (1968): 539–45.

would be in unemployment as workers overinvest in skills as a ticket to leave.[7] Bhagwati recommended a tax on skilled migrants to offset what he saw as the *necessary* harm they inflict on low-income countries by their decision to depart.

In short, the Skills List emerged against a background when leading economists studying the issue were in basic agreement that the emigration of skilled workers would tend to reduce the per-capita income of people in developing countries. They disagreed among themselves about the magnitude of the negative effect, the effect it had on total social welfare (i.e., because the benefits to the migrant might outweigh losses to their home country), and the correct policy response. Nevertheless, the basic consensus at the time was that people who were left behind would be negatively affected. Regulations on skilled migration were fundamentally viewed as trading off migrants' *individual* freedoms against the ostensible *social* harms of migration. But that position is no longer supported by mainstream economic research.

The evolving literature on skill flow and development

Starting in the late 1990s, there has been a sea change in our understanding of the effects that skill flows have on developing countries. This development has been called the "new economics of the brain drain."[8] The fundamental insight of this literature is that origin countries can benefit from international flows of skilled workers, including by their permanent emigration. This is because international flows of technology, entrepreneurship, trade, and investment typically flow through networks of *people*, networks that depend on skilled migration, and because the prospect of emigrating induces more people to invest in acquiring skills. This has brought leading development economists to speak of "brain gain" rather than "brain drain".

In 1997, two theoretical papers were published that made an important contribution to analyzing how emigration affects development: they model how living standards are affected by emigration if human capital can have positive economic spillovers.[9] The result is that when more people choose to invest in acquiring skills, this can increase growth and living standards in the source country. In the first decade of the 21st century these debates finally began receiving much-needed empirical investigation, confirming that skilled emigration often increases skills in a country of origin in the real world.[10] The result has been an explosion of both theoretical and empirical research, with hundreds of articles written on the subject in the second half of that decade—twice as many as in the preceding 15 years.[11]

Perhaps the strongest evidence from this empirical work has been quasi-experimental papers showing that in practice, skilled emigration has caused the formation of *greater* skill stocks in numerous developing countries—even net of departures. For example, Batista, Lacuesta, and Vicente find that

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[7] Bhagwati, Jagdish and Koichi Hamada, "The Brain Drain, International Integration of Markets for Professionals and Unemployment: A Theoretical Analysis." *Journal of Development Economics* 1 (1974):19-42.
[8] Stark, Oded, "The New Economics of the Brain Drain." *World Economics* 6, no. 2 (2005): 137-140.
[9] Mountford, Andrew, "Can a Brain Drain be Good for Growth in the Source Economy." *Journal of Development Economics* 53, no. 2 (1997): 287-303. See also Stark, Oded, Christian Helmenstein, and Alexia Prskawetz, "A Brain Gain with a Brain Drain." *Economics Letters* 55, no. 2 (1997): 227-234.
[10] For example, see Beine, Michel, Fréderic Docquier, and Cecily-Oden-Defoort, "A Panel Data Analysis of the Brain Gain," *World Development* 39, no. 4 (2011), 523-532.
[11] Gibson, John and David McKenzie, "Eight Questions about Brain Drain." *Journal of Economic Perspectives* 25, no. 3 (2011): 107-128.

increased migration opportunities in Cape Verde would lead to significant human capital gains.[12] In a recent paper with Satish Chand, I found that a surge in skilled emigration from Fiji caused enough additional skill formation there to fully offset the skills lost to departure.[13] In another new and ground-breaking study, Abarcar and Theoharides find that changes in U.S. demand for nurses caused nine more nurses to be licensed *in the Philippines* for every one that came to the United States.[14] The very possibility to emigrate raises workers' return to investing in skill, causing them to invest in higher skill—*even for those who do not end up leaving*.

In addition to the "new economics of the brain drain," there are additional mechanisms economists have identified by which skilled emigration can improve development prospects, including:

1. *Trade networks*: Migration can create new networks that create opportunities for trade, investment, technological diffusion, and other phenomena that can benefit source countries. Dany Bahar and Hillel Rapoport, two of the world's leading economists studying migration and development, have shown that skilled migrants are a crucial catalyst for transfers of modern technology to arrive in and spark economic growth in developing nations. Countries with larger stocks of skilled emigrants *abroad* are much more likely to start producing and exporting products that are common in the migrant-destination countries but that the origin countries have never produced and exported before.[15] In other words, the ideas that spark economic growth don't just travel through the ether, they travel through networks. Those networks are built by skilled emigration.

2. *Entrepreneurship*: In granular case studies, sociologist AnnLee Saxenian has documented how the high-tech export industries that have been so crucial to economic development in India and Taiwan got their start through global networks of highly skilled emigrants from those countries. In other words, all the jobs that those industries created in the home countries were made possible by skilled emigration from those countries.[16]

3. *Capital flows*: The volume of remittances to the developing world are a major source of finance for development. Back in the 1970s, official foreign aid was several times larger than remittances. Today it is the reverse: migrants' remittances are roughly triple the size of all official foreign aid combined. And highly skilled migrants remit more than less skilled migrants do.[17] The same is true for capital flows by private enterprise: Migrant networks cause more Foreign Direct Investment to flow to developing countries, and this effect is largest for highly

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[12] Batista, Catia, Aitor Lacuesta, and Pedro C. Vicente, "Testing the 'Brain Gain' Hypothesis: Micro Evidence from Cape Verde." *Journal of Development Economics* 97, no. 1 (2012): 32-45.c

[13] Chand, Satish and Michael Clemens, "Human Capital Investment Under Exit Options: Evidence from a Natural Quasi-Experiment." *Journal of Development Economics* 163 (2023): 103-112.

[14] Abarcar, Paolo and Caroline Theoharides, "Medical Worker Migration and Origin-Country Human Capital: Evidence from U.S. Visa Policy," *The Review of Economics and Statistics* 106, no.1 (2024):20-35.

[15] Bahar, Dany, and Hillel Rapoport. "Migration, knowledge diffusion and the comparative advantage of nations." *Economic Journal* 128, no. 612 (2018): F273-F305.

[16] AnnaLee Saxanian, *The New Argonauts: Regional Advantage in a Global Economy*, Harvard University Press (2007).

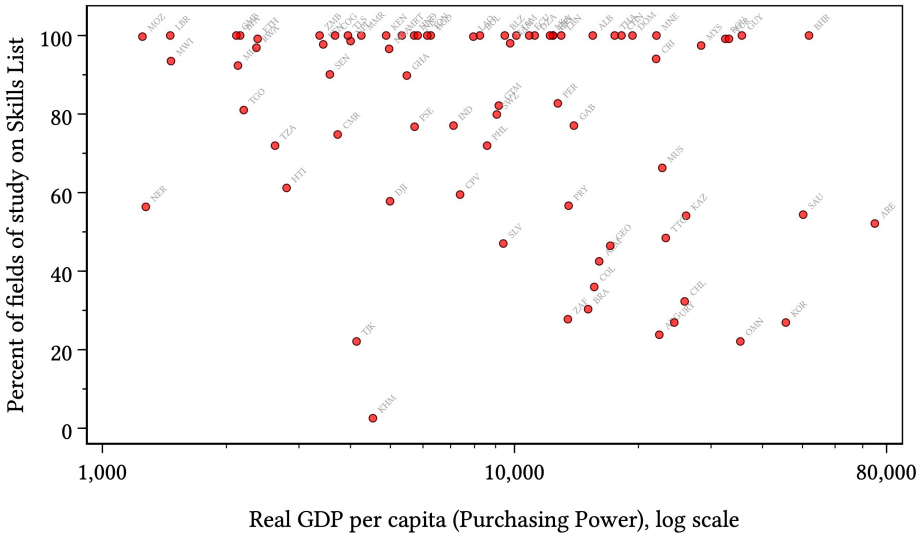
[17] Bollard, Albert, David McKenzie, Melanie Morten, and Hillel Rapoport. "Remittances and the brain drain revisited: The microdata show that more educated migrants remit more." *World Bank Economic Review* 25, no. 1 (2011): 132-156.

skilled migrants.[18] Put differently, this evidence implies that restricting international migration by skilled workers costs developing countries the very finance that they need to kickstart development.

While the theoretical possibility still exists for emigration to set back the economic development at some times in some countries of origin, the mounting empirical evidence suggests that this is more the exception than the rule.

The arbitrariness of the current Skills List

The restrictions in the current Skills List do not bear a clear, systematic relationship with the development process. Nor do they account for the many countries and fields in which skilled migration can contribute to development. To visualize this, I graph below the relationship between the fraction of all fields of study that appear on each country's Skills List, against the real income per capita of each country:



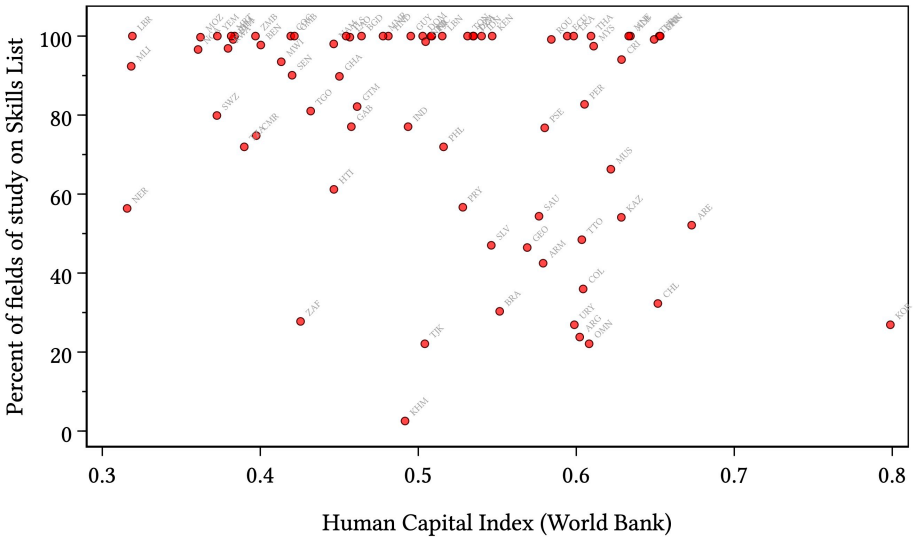
There is a very weak tendency for countries at higher levels of development (at the right) to have a lower fraction of all possible fields-of-study on the Skills List than countries at lower levels of development (at the left). But there is enormous variation by level of development.

Skilled migrants from relatively well-developed countries face similar or even greater restrictions than migrants from some of the poorest countries on earth. Out of the 353 fields of study that can be included on the Skills List, countries at radically different levels of development find all or essentially all fields included on the list. Very poor Ethiopia and Mozambique, ranked 69th and 78th respectively by income, find themselves with nearly all fields of study on the list. But the same barriers exist for some of the most developed emerging markets, like Turkey and Romania, ranked 7th and 8th respectively by income. On the flip side, Niger and Haiti are only restricted in three out of five fields of study, despite

[18] Javorcik, Beata S., Çağlar Özden, Mariana Spatareanu, and Cristina Neagu. "Migrant networks and foreign direct investment." *Journal of Development Economics* 94, no. 2 (2011): 231-241.

being some of the poorest countries on earth, and despite Mauritius—with ten times their real income per capita—facing *more* restrictions.[19]

I do know that income per capita is just one measure of development, so below I create the analogous graph where the horizontal axis shows instead the Human Capital Index estimated by the World Bank—a comprehensive measure of skill stocks in each developing country.[20]



Here, too, the weak relationship between skill stocks and coverage on the Skills List conceals enormous and unexplained variation. Thailand and Malaysia, with very well-development human capital stocks and education systems at home, face *higher* barriers than Mali or Senegal. Barriers are similar for Niger and the United Arab Emirates. 93 percent of the cross-country variation in Skills List coverage (vertical axis) is unexplained by the strength or weakness of skill stocks at home (horizontal axis). Something other than the weakness of skill stocks at home is explaining almost all the variation in Skills List coverage. This analysis raises the possibility that improvements to the Skills List could be mutually beneficial for the US national interest and for the broader cause of global development.

The future of the Skills List

As the State Department considers new criteria for the Skills List, it should be discriminating about including skills and countries given that the best evidence suggests that much of the time, some skilled emigration is beneficial for developing countries. An evidence-based Skills List would reflect the specific factors that predict when skilled emigration would actually set back development and when return is "clearly required."

The literature points to some country-specific factors that would suggest skilled emigration is more likely to impose losses on the country of origin:

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[19] I use four-digit fields of study from the NCES Classification of Instructional Programs 2010, as given in 74 FR 20108, and the most recent available real GDP per capita at Purchasing Power Parity from the World Bank.
[20] World Bank. 2018. *The Human Capital Project*. Washington, DC: World Bank.

1. **Inflexible educational institutions.** Countries are more likely to benefit from increased migration prospects if their educational institutions are flexible enough to accommodate the increase in people who want to study. For example, research on the positive effects on emigration from the Philippines point to its ability to scale up nursing education as a key factor to its success.[21] If the incentives for investing in human capital increase but the educational institutions can't expand to meet them, the benefits will be muted. This suggests that countries with flexible private and public training institutions should have limited presence on the Skills List. Countries with uncommon constraints on their ability to expand training capacity should be considered for designation more seriously.

2. **Small population size.** Larger countries can absorb shocks more easily.[22] Suggestive correlations by Beine, Docquier, and Rapoport show the six largest countries—China, India, Indonesia, Brazil, Egypt, and Bangladesh—all gaining from skilled emigration.[23] However, small population should not be considered a sufficient condition for return being "clearly required"—after all, some strong empirical evidence for the benefits of emigration comes from small countries like Fiji and Cape Verde. Small countries have small internal markets and have the greatest need for international trade and investment to develop; skilled migrant networks are crucial to the formation of trade and investment links.

3. **High-human capital and high-emigration rates.** If both human capital and emigration are already high, then there is less room for positive benefits.[24] One study finds that the "optimal" skilled emigration rate is about 10%.[25] Another study suggests net skills accumulation occurs when skilled emigration stays below 20–30%, suggesting countries with lower emigration should not have a large presence on the Skills List.[26]

Conclusion

A crucial mission of the State Department is to advance the economic prospects of developing countries while advancing the US national interest and technological leadership, seeking opportunities for cooperation and shared benefit. Its approach to designating countries and skills on the Skills List must be updated to account for the recent revolution in economists' understanding of the relationship between skilled migration and development.

I understand that the home residency requirement is a matter of law, as is the discretionary authority for the State Department to designate skills and countries to the Skills List. I hope this letter can help inform decision making so that the Skills List does what it is supposed to do: designate when the return

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[21] Abarcar, Paolo and Caroline Theoharides, "Medical Worker Migration and Origin-Country Human Capital: Evidence from U.S. Visa Policy," *Review of Economics and Statistics* 106, no.1 (2024):20-35.
[22] Docquier, Frédéric, "The Brain Drain from Developing Countries," *IZA World of Labor* 31 (2014).
[23] Beine, Michel, Fréderic Docquier, and Hillel Rapoport. "Brain Drain and Human Capital Formation in Developing Countries: Winners and Losers." The Economic Journal 118, no. 528 (2008): 631–52.
[24] *Ibid*.
[25] Docquier, Frédéric, "The Brain Drain from Developing Countries," *IZA World of Labor* 31 (2014).
[26] Beine, Michel, Fréderic Docquier, and Cecily Oden-Defoort, "A Panel Data Analysis of the Brain Gain," *World Development* 39, no. 4 (2011), 523-532.

of individuals would be “clearly required” for the developing countries, while considering carefully when the return of other individuals to other countries might serve to derail development.

Economists who study development have moved past the prior generations’ assumption that international skill flow must hinder development; I hope the Skills List can too. I would be delighted to speak in person on this crucial matter if I can be of service.

With sincere best wishes,

Michael A. Clemens

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cc: Julie Stufft, Deputy Assistant Secretary for Visa Services, U.S. Department of State