Global Talent Mobility: Trends, Challenges and Proposed Global Governance Solutions

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Abstract A compelling case can be made that *talent migration makes a very significant contribution to global economic development*, but the *global governance of talent migration has been sorely neglected* compared to other economic sectors such as international trade and finance. This essay makes the case for *the value of creating a new global infrastructure for talent migration*. The focus of this new agency would be on the *optimal management of talent migration* to realize its great potential for the mutual benefit of all mankind. Global migration, especially of highly skilled talent, has pushed forward scientific and technological discoveries. However, many existing *challenges impede global talent migration*. Meanwhile, the world economy has reached a critical point in which many *major economies with aging populations and declining birth rates might lose the engines that drive economic development*. Competition for talent has become increasingly fierce and the accumulation, or loss, of talent can have a significant impact on the balance of power in international relations. In the short term, the physical mobility of international talent has been limited by COVID-19. In the long term the frequency of *online intellectual mobility provides an alternative way to replace physical international mobility*.

Keywords Talent migration in global economic development • Global governance of talent migration • New global infrastructure for talent migration • Optimal management of talent migration • Challenges to global talent migration • Engines that drive economic development • Online intellectual mobility

1 The Need for International Infrastructure to Optimize Talent Migration

There is a compelling case to be made that talent migration makes a very significant contribution to global economic development. But the global governance of talent migration is very neglected compared to other sectors of the economy such as the management of international trade and finance. This essay makes the case for the

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value of creating a new global infrastructure for talent migration, the focus of which would be on the development of the great potential of optimal management of talent migration for the mutual benefit of all mankind.

Since the end of World War II, global flows of goods, capital, and human resources have become an increasingly free, driving development and boosting mobility of talent around the world. According to the United Nations International Migration Stock 2019, the total number of migrants worldwide was expected to reach 272 million in 2019. That makes up around 3.5% of the world's population, which is an increase from 173 million in 2000 and 222 million in 2010. Global migration, especially of highly skilled talent, has pushed forward scientific and technological discoveries. It has also raised new issues for global governance, which must be addressed to promote the overall welfare of the global community.

The study of global talent migration and its governance can be traced back to the “push-pull” theory,¹ which views talent migration as driven by the dual effects of a “push” out of origin countries and a “pull” towards destination countries. Later, the theory of transnational migration emphasized the rapid development of transportation links and communications technology, which allows for highly mobile migrant groups to travel more frequently between their homelands and new destinations, forming a kind of “brain circulation.” These highly mobile migrants engage in a variety of economic, cultural and political activities, including processes of learning, communication and exchange.² Transnational migration theory highlights “de-borderization” and migration networks in the context of globalization and is particularly prevalent among groups of highly skilled migrants.

Many countries have adopted specific policies and measures to adapt to the emerging trends of global migration in the 21st century. The goals of these practices include nurturing human capital, especially highly skilled workers, and attracting international talent with professional experience or certain qualifications through policies that emphasize skilled labour and investment. These countries usually offer a pathway to permanent residency and eventually full citizenship. Countries like Australia, Canada and New Zealand also continuously refine immigration policies to integrate new immigrants into their labour markets. These include regulations that support international students to accumulate work experience, which facilitates their transition from short-term to permanent residence. In China, government, business and educational institutions have been active in launching new policies to attract international talent. Many Chinese nationals that have studied or worked abroad have returned to China for career opportunities, resulting in recent waves of “return migration” and “brain circulation”³

While there has been significant progress in both theoretical work and practical application regarding global talent migration and its governance, many existing challenges still impede global talent migration, limiting the potential contribution that these human resources could make toward economic and social development. This

¹www.futurelearn.com/info/courses/migration-theories/0/steps/35073.

²Dutt-Ballerstadt (2010), Tsuda (2012).

³Lu and Zong (2017), Lu (2009).

points to the need for an international infrastructure to facilitate discussion and address a range of crucial questions, including how to better leverage the role of globally mobile talent; how to ensure and regulate reasonable talent mobility; how to balance the interests of origin and destination countries and so find ways to resolve current and future problems.

2 Global Talent Mobility

While transnational movements of talent have existed as long as nation-states, the scale, modalities and characteristics of these migration flows have varied greatly during different historical periods. Over the past 20 years, enhanced links among countries through globalization has enabled the rapid expansion of transnational talent flows in both scope and scale. According to the 2018 Global Talent Mobility and Wealth Management Report by Forbes, the four most common forms of international talent migration were overseas study and employment, skilled migration, periodic migration and return of talent. In recent years, with the development of the global economy, transnational talent mobility has demonstrated the following distinct characteristics.

2.1 Unprecedented Scale and Speed

The world economy has reached a critical point in which many major economies with aging populations and declining birth rates might lose the engines that drive economic development. Foreseeing such challenges, many countries have introduced measures to attract international talent to fill in the demand for human resources. At the same time, the extensive outreach of transnational corporations that have integrated human capital on a global scale propels more frequent movements of talents across borders.

Meanwhile, advances in transportation infrastructure have also provided the conditions for increasingly convenient international travel. By the end of 2018, there were 15,684 scheduled passenger flights between China and other major countries each week, and the number of international routes opened in a single year exceeded the total opened in 30 years before the launch of reform and opening-up.

According to the latest United Nations report, the total number of transnational migrants reached 258 million in 2017, of which 71% went to high-income countries and 74% were workers aged between 20 and 64.

2.2 *High Demand and Intense Competition for High-Tech Talent*

As big data and artificial intelligence enter a phase of wider application and pioneer the development of Industry 4.0, the demand for high-tech talent is increasing in the global labour market and leading to a shortage of capable individuals in related fields.

According to the Global AI Talent Report released by LinkedIn,⁴ the number of AI positions published on LinkedIn skyrocketed from 50,000 in 2014 to 440,000 in 2016, which is a nearly eight-fold increase. Meanwhile, in 2016 China's Ministry of Industry and Information Technology disclosed to the media that China faced an AI talent shortage of over 5 million.

Aiming to win in the global competition for talent, many countries have implemented talent development strategies, such as the "Strengthening American Competitiveness for the 21st Century" program in the United States, the "2.4 million Science and Technology Talent Development Comprehensive Promotion Plan" in Japan, the "Innovation and Skills Plan" in Canada, the "young professional system" in Germany⁵ and the "Brain Korea 21 Program for Leading Universities & Students" in the Republic of Korea. This reflects an intensification of the competition to attract international talent in different countries.

China has also made great strides in making its talent pool more international, whether in terms of cultivating new talent, attracting talent from abroad or how talent is being used and incentivized, particularly high-tech talent. However, you 'cannot change the plant without changing the soil' and China must create a more international 'soil' for talent to grow and thrive. China must also ultimately cultivate more "renaissance scholars"—those that are not driven by the singular goal of being a scientist or economist but have a range of interests that inspire them to innovate and create in technology and other fields.

2.3 *Widespread "Brain Drain"*

Global North–South competition for skilled workers such as scientists, engineers, professors, administrative talent and start-up entrepreneurs is not a new thing. Better living and working conditions and strong policies to attract talent give developed countries an advantage in the battle for talent, while developing countries continue to lose many skilled workers because of their lack of competitiveness.

In countries such as Angola, Burundi and Kenya, 33–55% of people with higher levels of education have left to work in member countries of the Organization for Economic Co-operation and Development (OECD). As a Canadian economics

⁴<https://economicgraph.linkedin.com/blog/global-ai-talent-trends-looking-back-at-ai-impact-in-2019-to-understand-the-challenges-and-opportunities-ahead>.

⁵www.asis-germany.org/en/nachwuchsfoerderung.

professor once wrote in the Wall Street Journal, “Plundering the most talented people, especially from small and poor countries, may damage the political and economic development of these countries, and even ruin them in the worst scenario.”

At the same time, it should be noted that “brain drain” also exists in developed countries. Approximately 400,000 high-end skilled workers from the European Union work in the United States, while the rapid development of emerging economies such as China and India has caused a brain drain even in the United States. However, this problem is mild compared with developing countries due to the massive inflow of talent that developing countries enjoy.

2.4 Linkages Between Global Talent Migration and International Relations

Many countries recognize talent as a strategic resource in international rivalry. Competition for talent has become increasingly fierce and the accumulation or loss of talent can have a significant impact on the balance of power in international relations. Issues related to sensitive technical expertise can even trigger friction between countries.

These changes in geopolitics increasingly affect global talent migration. For example, China-US trade friction that started in 2018 has spread to the field of talent. The United States has made changes in policies related to Chinese students, limiting visas for Chinese students majoring in sensitive fields such as robotics, aerospace and high-tech manufacturing, to one year, while the FBI has started to scrutinize Chinese-American scientists or even American scientists who are part of China’s Thousand Talents Plan. We will touch more on this later.

3 The Effect of COVID-19 on Talent Mobility

The relentless onslaught of the COVID-19 pandemic over the past year has also had a massive impact on talent mobility. In the short term, the focus has been on limiting physical mobility of international talent to prevent the spread of the pandemic. In the long term, however, with the development of digital links, the pandemic has contributed to an increase in online intellectual mobility, which may provide an attractive alternative to physical international mobility in the future. This trend provides huge potential for enhancing communication and cooperation among international talent pools across borders.

3.1 The Stagnation of the Physical Mobility

With countries closing their borders and taking measures to prevent the spread of the virus, the flow of talent across borders has been affected in a number of ways. These include regulatory barriers such as visa and travel restrictions, as well as social barriers due to stigmas attached to the pandemic.

Perhaps the most direct impact on talent mobility has been the limitations placed on travel and entry into nearly every country around the world, preventing talent from moving across borders in a practical, physical way. Since countries closed their borders, issued travel restrictions and stopped issuing visas, international travel has nearly reached a standstill, ranging from a complete barring of international flights to an extremely low number of flights with limited capacity. Statistics from the Civil Aviation Administration of China show that the number of passengers travelling on international routes hit a low of only 77,000 in April 2020, compared with 6.08 million the year before. For scientists and researchers worldwide, limited physical mobility due to extended periods of lockdown has led to the restricted access or loss of access to laboratories and research facilities, irregular communication patterns under mandated isolation requirements, cancellation of academic conferences and field works and disruptions in supply chains for essential equipment, which has altogether had an adverse impact on their productivity.

In addition, regulatory policies that were designed to halt the further spread of the corona virus and to safeguard public health became a major barrier for global talent mobility. These strict visa restrictions set up by many countries along with stringent testing and quarantine procedures have made it extremely difficult for talent to move across borders. This is especially relevant for China, which in early 2021 once again restricted all entry from medium and high-risk countries, given the third wave of infections fuelled by the new variants sweeping across Europe and America.

Another element of public administration is the ongoing shift towards restrictive immigration policies in education, which will have even more far-reaching consequences for talent mobility and is underpinned by a complex political-economic nexus. China is the largest source for international students in higher education and the US has maintained its status as their top destination country, but the number of Chinese students who choose to study and stay after graduation in the United States has fallen over the last decade and declined even more dramatically during the pandemic. Before the COVID-19 crisis, there were already instances of students being wrongfully accused of espionage by Trump administration officials, who threatened to cancel or revoke their visas. This inflammatory rhetoric has created a hostile climate and affected 3,000–5,000 Chinese students currently studying in the US.

Although border control measures were initially adopted to curb the spread of the COVID-19, in some countries political leaders with an explicit anti-immigration position have used the pandemic as an opportunity to criminalize international migration and garnered public support to restrict future flows. In recent months, the international community has witnessed a significant increase in racial discrimination and

hate crimes targeting Chinese and other people of Asian descent in western countries, particularly in the United States. This rise in xenophobia and isolationism is inextricably linked to the systematic demonization of China, where COVID-19 transmission was first reported, not only by the media but also in political and public rhetoric. Negative public opinion and overt discrimination make potential talent hesitant to settle in areas where such a social climate is present and ultimately prevents them from contributing towards the host country in the long term.

3.2 The Development of Online Intellectual Mobility

To offset the negative impacts caused by the physical stagnation of talent exchange, the frequency of online intellectual mobility has increased considerably over the past year. The ongoing transition to remote working is expected to become the new normal, while the rise of online learning, lab-sharing, virtual webinars and conferences, which enable long-distance study, research and communication, are fostering new patterns of international talent mobility. This trend makes it easier for international talent to cooperate and overcome the limitations of geographic boundaries.

The broad application of online tools that have facilitated international talent mobility, which has grown rapidly over the past year, has not only improved online intellectual mobility but also improved a huge potential to make life easier for international talent in foreign countries. For example, the city of Hangzhou in eastern China has created smart phone applications that provide civil services such as housing, health care and public transportation for both domestic and foreign residents. These developments make all aspects of life more convenient for those living and working there.

While we can expect to see a gradual return to the physical mobility of international talent following large-scale vaccination programs and effective control of the pandemic, online intellectual mobility will also play an increasingly important role in the post-pandemic era because of its convenience. Throughout this process, the advancements in digital links, along with the digitalization of civil services, could be utilized to facilitate the integration of international talent in foreign countries and increase the competitiveness of country's ability to attract international talent.

3.3 The Growth of Stronger Collaborative Efforts in Science and Innovation

While the pandemic has exacerbated the divisions in global politics and eroded international systems meant to respond to the crisis, the immediacy and urgency of global challenges has strengthened connections within specialized scientific networks. This began with Chinese scientists publicly sharing the genomic sequence of the new

virus and was immediately followed by international cooperation and exchanges of data and genetic and viral material among research institutions. A number of online platforms backed by publishers, foundations, firms and research labs have also committed themselves to the open access of analytical tools, scholarly articles as well as epidemiological, clinical and genomic data. According to the OECD, more than 75% of the 75,000 scientific publications on COVID-19 in the past 11 months have been made open to the public. International cooperation was also essential for vaccination research and clinical trials, allowing countries with scientific resources to acquire robust data from different regions, particularly developing countries with large vulnerable populations and limited preparedness, and accelerate the development of potential vaccines.

It is worth highlighting that while the pandemic broke out in the midst of a tense geopolitical climate that was trending toward de-globalization, the scientific community continued to actively work against isolationism. For example, in the initial months of the crisis, hundreds of Chinese and American scholars signed open letters appealing to the US government to allow cooperation with China to develop a framework for a shared global response. Despite disagreements on foreign policy, trade and technology, the United States and China, as the top producers of COVID-19 research, have had the most collaborators working on co-authored papers. Despite the influence of the pandemic and geopolitical factors, the global cooperative network created by scientists has set an example for the significant value of better and more extensive collaboration among global talent, which has to some extent laid the foundation for the creation of an international organization to coordinate and promote global talent mobility.

4 Regulation of Global Talent Migration Today

Mechanisms of global governance are not yet fully capable of dealing with the increasingly fierce global competition for talent, which has resulted in a dearth of regulation in the field of global talent migration and in the long term may result in the under-uses of talent and adversely affect sustainable development. Specific challenges facing the regulation of global talent mobility are outlined below.

4.1 Lack of a Common Consensus on Global Talent Cooperation

With the ever-expanding reach of globalization, division of labour and cooperation on a global scale is increasingly prevalent. Today, more than 35% of scientific papers are produced through joint efforts by academics from different countries. Break-throughs and innovation often come from teams made up of talented individuals

from multicultural backgrounds. Venkatraman Ramakrishnan, winner of the Nobel Prize in Chemistry and President of the United Kingdom's Royal Society, once told the media that, from the perspective of scientific research, scientific progress as a whole benefits from global talent migration. The response to this trend should not be to limit the flow of labour, but to foster a research environment in which people are willing to work in many different places.

However, individual countries are often more concerned about the competitive aspect of global talent migration. Relatively little attention, or research, focuses on the value of cooperation in international talent, leading to a lack of consensus on the topic. However, competition and cooperation are two sides of the same coin in global talent migration and, from the overall perspective of human development, cooperation is extremely important and should not be overlooked.

4.2 The Need for Dialogue, Coordination and Cooperation Mechanisms in Global Talent Migration

Currently, at the global level, there is a lack of mechanisms for the promotion of dialog and coordination on talent migration. Differences in labour policies and the lack of mutual recognition of professional qualifications show the need for enhanced cooperation and coordination. Some mechanisms have been implemented within the European Union and the Association of Southeast Asian Nations (ASEAN), while China and the European Union have launched the EU-China Dialogue on Migration and Mobility Support Project, but these mechanisms remain limited to the regional level, lack stability, and are often limited to certain governmental agencies.

4.3 Lack of Data and Resources on Global Talent Migration

Despite the increase in global talent migration, precise data on the scale, gender, age and professions of migrants is incomplete, which hinders the ability of policymakers and researchers to perform accurate analysis and develop appropriate policies.

In recent years, the rise of LinkedIn has helped to fill in this data gap. With 645 million users, LinkedIn provides a wealth of talent data. However, its status as a business also means that access to this data is restricted.

5 This Regulatory Void Calls for a Global Institutional Solution

The previous sections highlighted the barriers to talent mobility on various levels, which include a lack of international consensus, cooperation mechanisms and available resources regarding the management of global talent flows. This section outlines a proposed solution to address this gap, namely, an international non-governmental organization to promote global talent exchange and cooperation on talent flows. The vision for this organization is an inclusive international platform that can address challenges facing global talent migration and will resolve the following needs: facilitating dialogue between existing organizations working on talent-related issues; developing common standards; fostering innovative global governance solutions and promoting best practices.

5.1 Concept and Goals of the Proposed International Organization

The purpose of this organization would be to promote international talent mobility; strengthen talent cooperation; provide basic protections for talent and research support for developing countries; reinforce talent cooperation in key fields with developed countries; and improve talent mobility and talent creation in member countries.

To accomplish this, the first goal would be to create a platform for dialogue on fair competition in international talent exchanges. This means promoting global and regional conversations on the following topics: global talent migration; improving understanding of the relevant opportunities and challenges; developing and refining effective policy measures; and identifying comprehensive methodologies and measures that can support international cooperation.

The second goal of the organization would focus on the welfare of people around the world and encourage the international movement of talent. Different levels of development at the regional level mean that the available pool of international talent varies between countries. Countries blessed with an abundance of talent should support and work with less developed countries to locate and cultivate the talent needed to drive economic development through talent sharing and exchange platforms. This requires support from governments, non-governmental organizations, skilled workers and other stakeholders to utilize human capital more efficiently and promote the flow of talent between countries.

The final goal is to work to protect the rights and interests of individuals and address current gaps in the governance of global talent. Existing international organizations in this area include the International Organization for Migration, which focuses more on issues related to vulnerable groups of migrants like refugees and internally displaced persons. There is also the International Labor Organization,

which works towards the protection of workers' rights. However, an organization focusing on the cultivation and sharing of highly skilled talent would ultimately be responsible for coordinating between these institutions to better guide and regulate efforts by local organizations to protect the rights and interests of international talent to ensure fair, equal and reasonable treatment.

6 Work That Needs to Be Done

As a platform for dialogue and cooperation on international talent mobility, the specific work carried out by such an organization would cover a wide range of far reaching issues. There is currently a paradox in the field of international talent mobility: despite the pandemic, the world is more interconnected and mobile than at any other moment in history. The importance of this work on talent mobility, which will provide a foundation for the next stage of globalization and economic development, places it on par with other issues like trade negotiations, environmental issues and health crises that the world is currently facing.

The first bit of work this organization would need to carry out would be to forge a consensus. As a coordinating body for international talent, it would be the role of this organization to establish a general consensus for the international community to follow in order to expand exchanges on international talent and promote international cooperation.

Once this consensus is reached, the second step for this organization would be to set up mechanisms for dialogue, coordination and cooperation. These mechanisms would first focus on the active promotion of discussion and research on various aspects of global talent cooperation and development through a Global Talent Conference and Summit. This would set the stage for discussions that would feed into the development of actual services. For example, mutual recognition of academic qualifications; certification of professional qualifications; quotas on future immigration and management of international students.

Finally, this organization would assess and guide policies and development efforts to promote the orderly flow of talent through a range of services centred on the collection and sharing of information.

The results produced by these efforts must also be made available on a platform that would: (1) collect information on talent pools and demand, serving as an official point of access for data, information and guidance; (2) publish annual reports on developments in global talent and related industries; (3) manage a database on global human resources, country statistics and services; (4) post-event information on annual meetings, conventions, forums, trade fairs and other activities; (5) facilitate and strengthen exchange and cooperation among members, cities and even countries on topics of talent development and mobility and (6) organize training to cultivate talent, improve talent management and enhance talent services provided by governments and institutions.

One last key function of such an international organization would be to collect and integrate information. Specifically, this task relates to the analysis of various aspects of international talent that leverage big data and internal, as well as external database resources, to provide authoritative information on global talent. This information would serve governments in policy making and the development of methodology, as well as approaches and tools to improve the governance of international talent.

Talent is one of the most valuable resources in promoting international dialogue and cooperation, which is essential to the promotion sustainable development and tackling global issues such as climate change, food security and public health. The exceptional collaboration during the development of the COVID-19 vaccine has proven the great value of enabling easy exchange of ideas across borders. This trend can be even further leveraged through the creation of the international organization proposed in this essay. This agency would provide a permanent international infrastructure for cooperation in international talent and could potentially overcome the friction and tensions of geopolitics and policy issues that we currently face by enabling the free flow of ideas and talent; by enabling scientists, researchers and entrepreneurs alike to better communicate with each other; promote the development of science and technology and tackle global issues in a better way. The outcome can be a positive return, which might promote multilateral cooperation between nation states and contribute to a more sustainable future.

To conclude, whether in terms of goods, capital or talent, globalization is a trend that we are confident will continue to build momentum in the long-term. The challenges to talent mobility that currently exist are partially due to short-term global events or changes in policies and attitudes in certain countries. But evidence shows that the broader trend is toward increased exchanges and cooperation in the field of talent development. This requires an administrative body to coordinate between the various countries and regions among which talent is shared. Only by establishing standards and channels for communication can talent better be allocated and applied, which will ultimately benefit not only the host country, but individuals as well.

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