

Policy Brief

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Overview

Talent (combining creativity, education, skills, and knowledge) is associated with human capital and provides a very valuable economic resource. In the past, the emigration of human capital from developing countries raised fears because of the associated 'brain drain'. This is still a valid concern today although new forms and directions in the international mobility of talent call for renewed perspectives. The return mobility of expatriate 'technological entrepreneurs' to developing countries is a positive trend. However, the emigration of health professionals from low income countries is a source of concern. Global development needs an effective transfer of knowledge and human capital, including students, scientists, and cultural workers, to developing countries in order to support their growth and development process: a brain gain, or at least brain circulation.

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Mobilizing Talent for Global Development

THE GENERATION OF NEW IDEAS AND THEIR application for productive uses is an important engine for growth and development. This is an area in which developing countries usually lag behind developed countries and is where development gaps are more evident. Behind the generation of ideas, innovations, and new technologies there is 'human talent': an inner capacity of individuals to develop ideas and objects, some of them with a high economic value. The 'human factor' is critical to the success or failure of many endeavours. Several countries, particularly China and India, followed by Russia, Poland, and some Latin American countries, are becoming an important source of talented people with PhDs and degrees in science, engineering, and other areas that can lead to change in the international patterns of comparative advantages and reduce development gaps. Part of the new talent formed in developing countries goes to live and work to developed countries, typically the USA, UK, and other OECD nations. At the same time multinational corporations are outsourcing several of their productive and service activities, including research and development, to developing countries (China and India are main destinations) to take advantage of the (less expensive) talent being developed there. Today, therefore, we see a double movement of talent and capital around the globe: on the one hand talent from developing countries is moving north seeking better opportunities where people are equipped with more capital, technologies, and effective organizations. On the hand capital from the north pursues talent in the south; a process largely led by multinational corporations.

Talented individuals such as students, professionals, information technology experts, entrepreneurs, cultural workers, and others are now more internationally mobile in the world economy as a response to new opportunities (and risks) that are offered by globalization. This trend has been reinforced by the now greater information flows on economic opportunities and life-styles in different cities and countries across the globe and by lower transportation costs. The story is now of Indian and Chinese nationals that after graduating in the US became successful host country entrepreneurs (e.g. in Silicon Valley) and who are uniquely positioned to serve as bridges between Asian and American markets given their contacts and access to technology and capital in both markets and societies. In the 1990s and

early 2000s these entrepreneurs also started new productive ventures in their home countries, transferring technology and market knowledge. In the Latin American context, Chilean, Mexican, and Bolivian entrepreneurs are making successful inroads in biotechnology and cellular phone companies in North America, though the flows of 'return investment' are still to arrive in their home countries. Beyond the most positive story of entrepreneurs and engineers moving north to south a particularly dramatic case is the massive and persistent emigration of medical doctors, nurses, and other workers in the health sector from poor nations to developed countries that weaken the health sector in the home country.

Why Types of Talent Move

There are three broad types or groups of talent mobility in terms of their motivation and development impact, namely, the mobility of:

1. entrepreneurs, technical talent, technology innovators, and business creators
2. scientific and academic talent and international students
3. health professionals and cultural workers.

The first group of talent has a more directly productive impact through business creation and application of new technologies on host and source countries, particularly in this era of the information technology. The second group is related to the production of science and knowledge in general, although their productive applications for industry, the service sector, and government are more indirect. The third group is related to the provision of a critical social service, such as health services, with some complex impacts on the source countries; the mobility of cultural talent, in turn, reflects both an aesthetic value as well as the

manifestation of creativity that can be highly valued by individuals and markets.

The Impact on Development

The production and transfer of knowledge, productivity growth, international competitiveness, fiscal revenues, and the size of the middle class, among others, are all developmental effects of the international mobility of talent. Analytically, the emigration of human capital reduces the stock of human capital and output in the source country and increases it in the receiving one. In addition, there can be a loss of welfare for the remaining population in the home country because of externalities due to a loss of scarce skills. The externality occurs when the social marginal product of a highly skilled emigrant is greater than their private marginal product. Usually this is due to spill-over effects from knowledge to labour and capital productivity. From a global perspective, world income should be higher with more mobile human capital (talent), as the marginal productivity of human capital in the world economy increases when talent moves from countries with lower marginal productivity to countries with higher marginal productivity. As a result, there is global efficiency gains associated with an increased international mobility of talent. This analysis, however, has to be qualified as it does not consider the international distributional impact of the costs and benefits of such migration flows between sending and receiving nations. The gains and losses from the mobility of talent for sending and receiving countries depend on whether the international flow of people is temporary or more permanent, and on other factors.

When the 'brightest and the best' go abroad 'for good' (permanent

About the Author



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migration) the outflow of talent can retard economic development in sending nations by adversely affecting the development of local science and knowledge thereby affecting productivity, comparative advantages, and growth. In turn, the receiving countries can benefit from increased knowledge gained from the immigration of talent, creating a virtuous circle in which foreign talent combines with domestic talent and capital, strengthening the overall human capital base in the host country. For example, the US benefited greatly through the twentieth century with the development of science (and then technologies) by the inflows of foreign talent in the 1930s and 1940s from leading scientists coming from Europe to escape Nazism and war, and later from talent coming from developing countries and other nations.

of talent can also have positive effects for the source countries in terms of remittances flows, mobilization of fresh capital accumulated by emigrants, exposure to new technologies and managerial techniques, contacts abroad, and so on, brought by return migrants and by the general transfer of technology and the general flows of ideas. The return migration of 'technology entrepreneurs', in which successful expatriate entrepreneurs born in developing countries but who studied and established companies in the north expand their business reach to their home countries, brings capital, technology, and market knowledge.

For the case of scientists, international students, and scholars we see a movement south–north, but then not all who study in the north (North America is the largest recipient of international students, scientists, and other foreign professionals) remain

International Mobility of Talent

The project of International Mobility of Talent undertaken by UNU-WIDER in Helsinki in collaboration with UN-ECLAC in Santiago put in place a team of experts to examine the various dimensions of the international mobility of human talent in several fields and their development implications on both source nations (often developing countries), on recipient nations (often rich countries), and on international development. The traditional ideas of brain drain, and now brain circulation, were examined in light of the increasing interdependence among countries.

Gains and losses from the mobility of talent depend on whether the move is temporary or permanent

Who Stays, or Returns

However, a permanent emigration of the highly qualified may amplify international disparities in the endowments of human resources capabilities between source and receiving countries. In fact, the evidence suggests a considerable concentration of the world stock of qualified human resources, measured as people with tertiary education, in a few high per capita income countries, chiefly the USA followed by the UK, Australia, Canada, and other OECD nations. The OECD is the main destination region for talent such as information technology experts, health professionals, scientists, students, and others coming from developing countries. The emigration

there after graduation. The evidence shows large cross country variation in the return rates of PhDs graduated in the US: high for students coming from countries such as Indonesia, Korea, Brazil, and Chile, but low for Chinese and Indian students who tend to stay in the USA after graduation.

Regarding medical doctors and nurses the negative side effect of the mobility of health professionals is the weakening of the health sector in the source countries. This is particularly serious in the case of some Caribbean countries in which a high percentage of their health professionals reside abroad. Another serious case is sub-Saharan Africa where AIDS, malaria, and other diseases impair the development

potential and cause great loss of human lives.

Cultural workers are a segment of significant international mobility. This is a heterogeneous group that ranges from high-pay, winners-takes-all artists from developing countries, to artisans, handicraft workers, and other lower earning cultural workers.

Economic Growth in Receiving Countries

The relation between growth and international migration of talent in the country that receives the migrants can reflect a mutual causality: rapid growth, expanding opportunities, technological

with entrepreneurial capacities and a favourable attitude towards risk-taking contributed to business creation, resource mobilization, colonization, and innovation – all factors that supported rapid economic growth – in the countries of the New World in the first era of globalization (pre-1914).

More recently, in the 1990s, entrepreneurial immigrants from India, Taiwan, and China in to Silicon Valley in the US have provided a valuable human resource in the creation of high technology industries, both in hardware and software in the receiving country. They have engaged in business creation and output growth in the high-tech

Return migration brings capital, technology, and market knowledge

discoveries, and land/natural resource availability in the host country generates a capacity for unskilled labour and for talent as the domestic supply of those human resources may be insufficient to meet the increased demand. Then, growth and opportunities may precede the mobility of talent. Historically this was the case of Argentina, the USA, Canada, Australia, and other countries of the New World at the end of the nineteenth century, which received large contingents of European migration; both of workers but also of people with entrepreneurial capacities. Argentina experienced rapid rates of output growth and net immigration, mainly from Spain and Italy. Much expansion was financed, largely, with foreign capital from England. In turn, massive immigration allowed the mobilization of the large natural resources of the receiving countries and was the key engine in their growth process, sustaining and reinforcing the dynamics of growth and prosperity. Thus, the immigration of people

sector contributing to economy-wide growth. And their return migration has helped to drive the acceleration in growth in recent years in some of these countries.

Economic Effects in Source Countries

In the source countries an outflow of entrepreneurs may depress innovation and growth. Likewise an outflow of people with high educational levels also reduces the stock of human capital with a potentially negative effect on domestic growth. This is the traditional brain drain effect. However, this is not the end of the story as emigration raises the returns on investment in human capital (under decreasing returns as the stock of human capital is lower) thereby inviting more investment in education with future positive growth effects. In this case, the 'brain drain effect' of emigration of talent has to be counter-balanced with the 'brain gain effect'. At the same time, if emigration follows a cycle and the emigrant returns home bringing

fresh capital, contacts, and knowledge we have a positive development effect for the home country. In Taiwan in the 1980s and 1990s, the formation and development of the Hsinchu Science-based Industrial Park (HSIP) benefited greatly from return immigrant Taiwanese entrepreneurs and engineers from Silicon Valley. In fact, several successful Indians and Taiwanese in the high-tech industry in the US also set up hardware and software companies in their home countries contributing to growth in the source countries.

A Policy Research Agenda

From the previous discussion we can identify the following elements of a policy and research agenda on talent mobility for global development:

- First, we need better numbers on the size and direction of the mobility of qualified people and in timely fashion. Filling the information gap, particularly in developing countries, on the magnitude and characteristics of talent mobility is a priority. Many developing countries simply do not know how many scientists, technology experts,

Type of talent/areas	Impact on source country	Impact on receiving country
Science and technology (scientists and technicians)	Initially, the development of science and productivity can decline. Patterns of comparative advantage may change. Returning immigrants bring new knowledge, skills and contacts.	Increase in human resources for the development of science and productivity. Comparative advantages in high-tech sectors can get stronger.
Health professionals (medical doctors, nurses, health sector workers)	The health sector is affected by emigration of scarce specialized human resources. Quality of services rendered may decline.	The health sector is benefited by the inflow of specialized human resources from abroad.
Entrepreneurs and investors	Business creation can be diminished by emigration of entrepreneurs. Return migration can boost business creation in more technologically advanced sectors. Fiscal revenues are affected (unless there is 'universal taxation' in place).	Business creation can be increased by immigration of entrepreneurs. Fiscal revenues are likely to increase.
Professionals in international organizations	Affect availability of professionals for domestic public policymaking and government.	Most important international organizations are located in developed countries.
Students, and small middle scale entrepreneurs	Knowledge acquisition. Size of the middle class.	Import of talent useful for science, technology and other areas. Business development.
Cultural talent (artists, writers, performers)	Impact on local art and literature. Effects on cultural identity.	Increased variety in cultural activities.

physicians, university professors, entrepreneurs, and artists are abroad. In developed countries the statistical base on human resources mobility is better. For example the OECD has developed a system of recording and of building a statistical and analytical base of the Human Resources devoted to Science and Technology (HSHR) within their region. Developing countries need to strengthen their statistical capabilities on the mobility of highly skilled and educated individuals.

increase the international circulation and mobility of capital, knowledge, technology, and managerial capacities. To attract human and financial capital back home, it may be necessary for some favourable tax treatment in the initial stage. Land grants for setting up new companies and other subsidies of a temporary, performance-based nature can also be helpful. For scientists and researchers, increased connections among universities and research institutes at home and abroad is

Talent circulates in many directions, although the 'south–north migration' of talent predominates

• To add to the development agenda the topic of talent mobility, it is necessary to recognize that the increased mobility of high-skill individuals often implies that developing countries are exporting talent (unless in certain phases of their development process) and that part of their most qualified stock of human wealth is beyond their national borders. As with financial capital, human capital emigrates when the incentives structure at home are distorted and the value of talent is not properly recognized. Future research on the topic should identify sound policies to attract talent to the developing countries.

• To enable talent circulation for global development may require action on several fronts. As mentioned, countries such as India, Taiwan, and others have been successful in starting to build a domestic high tech industry that is internationally competitive, helped by the critical contribution of expatriate entrepreneurs and technology experts who have been successful in the US, UK, and in other developed economies. Increasing the connectivity among expatriate entrepreneurs, engineers, and scientists with their home country can

needed. This may involve cooperation in research projects, organization of joint conferences, institutional agreements, fellowships programmes, and other measures.

• In the cultural sector, international initiatives such as concerts, exhibitions, shows, and cultural exchanges can also promote cooperation and enhance the circulation of talent.

• A more general point is the need for developing countries to reassess their rewards structure for talent. Poor remuneration, lack of recognition, the absence of professional tracks in public administration, and obstacles for business creation and innovation are all factors that lead to talent outflows and the brain drain from north to south.

• National tax systems also affect the international mobility of talent as international net income differentials may reflect differences in personal or corporate income tax rates across countries.

• The relation between education and talent and its effects on the international mobility of professionals needs further study. From a practical point of view, that mobility is affected by the

(lack of) international compatibility and recognition of university degrees and professional titles earned in various universities around the world. The integration of higher education would need some common framework that enables the comparability of diverse national education systems (like for instance the 'Bologna process' in the European Union).

• The international mobility of health professionals from poor to rich countries requires an adequate and cooperative policy response that balances the human resources needs of the source countries and of the receiving countries, and acknowledges the individual roles of the health professionals. Ethical standards for recruitment and compensation schemes are possible tools to deal with this phenomenon.

Recognition, Rewards, and Restructuring

In the 1960s and 1970s the discussion on talent mobility was dominated by concerns about the brain drain. The dominant view at the time was that the permanent emigration of talent from developing countries had adverse consequences for national development and autonomous policymaking. In the early twenty-first century, the international circulation of talent has increased significantly; a cause and product of greater economic interdependence and lower transportation costs. The direction of this talent circulation is multiple: south–north, south–south, north–north, and north–south; although, as the substantial difference in the levels of development between rich and poor countries remains, the 'south–north migration' of talent predominates. Still, an interesting trend is the movement of capital from north to south in search for local talent in the later, a trend that can change the comparative advantages

towards high-tech goods in certain developing countries.

Individuals with talent move from country to country in response to economic incentives, and clusters of expertise and capital that concentrate in certain locations. This talent may eventually return home if the appropriate conditions for work and investment exist in their source country. International investment and talent mobility can also be a complementary rather than a substitute processes. The causes of the outflow of certain types of talent often reflect failures in rewarding talent in source (developing) countries as well as superior pay structures and better work opportunities in receiving (developed) economies. A particularly relevant case is that of health sector professionals. Distortions of reward structures that gear against innovation and productive activities may produce a sub-allocation of talent in growth-oriented activities and/or in an outflow of talent to another country that provides better opportunities for wealth creation. Rent-seeking, patronage, and the politicizing of professional appointees in national and international public administration is another deterrent for talent interested in pursuing public policy. To tackle these issues, we have considered items for an agenda whereby the international mobilization of talent can promote global development.



The World Institute for Development Economics Research (WIDER) was established by the United Nations University (UNU) as its first research and training centre and started work in Helsinki, Finland in 1985. The Institute undertakes applied research and policy analysis on structural changes affecting the developing and transitional economies, provides a forum for the advocacy of policies leading to robust, equitable, and environmentally sustainable growth, and promotes capacity strengthening and training in the field of economic and social policy making. Work is carried out by staff researchers and visiting scholars in Helsinki and through networks of collaborating scholars and institutions around the world.

INSIDE: Policy Brief *“Mobilizing Talent for Global Development”*

The challenge is to align the mobility of talent, attracted by income and opportunity, with the need for sustained and equitable development of source countries.

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