

Development Research Group

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International Migration and Development

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About 180 million people (3 percent of the world's population) live outside their country of birth. This includes millions of highly educated people who moved to developed countries from developing countries, many of which already suffer from low levels of human capital. The flow of formal remittances to developing countries exceeds \$188 billion annually, surpassing foreign aid and representing the largest source of foreign exchange for some countries – and this does not include the substantial informal remittance flows. In the case of North-South migration, pressures for international migration are expected to continue and even increase, driven differences in real incomes and demographic patterns such as population growth rates and age distribution profiles.

Reflecting their rapidly rising economic, political and social significance, migration has become an increasingly important policy question for both developing and developed nations. Policy debates and recommendations have been hampered a lack of detailed empirical analysis, in part as a result of the absence of comprehensive and comparable time series data on migration. The World Bank research program in this area has generated several unique databases and associated analysis that have stimulated a better understanding of the impacts of migration on both host and source countries.

What does past research tell us?

The most important impacts of international migration are the boost in world income and the reductions in the level and severity of poverty

By allowing workers to move to where they are more productive, migration allows an increase in aggregate output and income. Early analysis suggested that free migration could double world income,¹ and more recently it has been estimated that increasing immigration into OECD countries by the equivalent of just 3 percent of their work forces would generate gains of more than \$150 billion a year.² These gains would be fairly evenly split between developed and developing countries and owe more to the mobility of less-skilled than of more-skilled workers. Major gains accrue to the migrants themselves, to consumers and complementary factors of production in the recipient countries (capital, land, and labor, other than the mobile type), and to remittance recipients and labor in the sending country.

Remittances generally reduce poverty and alter the distribution of income, but the extent and direction of these effects depends on who receives them. The evidence on this from a variety of countries (the Philippines, Egypt, Pakistan, Mexico, and India) is somewhat mixed though it is generally positive. Among the more convincing studies are those based on household surveys. For example, the 2003 Mexico National Rural Household Survey suggests that internal and international remittances have an equalizing

effect on incomes in high-migration areas but not in low-migration ones, that international remittances reduce rural poverty by more than internal remittances, and that the larger the share of households with migrants in a region, the more favorable the effect of changes in remittances on rural poverty.³

Another study of 12 Latin American and Caribbean (LAC) countries confirms that remittances reduce poverty levels and that this result is robust to the use of counterfactual scenarios that include the potential contribution that the migrant might have made at home. This study also reveals significant country heterogeneity in terms of the poverty alleviation impact of remittances. Factors that may lead to a particular outcome in a given country include the percentage of households receiving remittances, the share of those with remittances belonging to the lowest quintiles of the income distribution, and the dollar amount of remittances relative to GDP.⁴

Remittances increase investments in human (education, health) and physical capital

Increased remittances to the Philippines led to enhanced human capital accumulation and entrepreneurship in origin households, with greater child schooling, less child labor, more hours worked in self-employment, and a higher rate of entry into capital-intensive enterprises.⁵

Similar findings have been obtained for other countries. Thus, a LAC study shows positive impact on educational expenditures among middle and upper-class households and in households with low parental schooling. Detailed evidence from Pakistan shows that children from migrant households are more likely to attend school, stay in school during the age range of peak dropout rates, have higher completed grades, and progress through school at a significantly higher rate than children in nonimmigrant households. A key finding in Pakistan is that these positive impacts on educational attainment are substantially larger for girls than boys.⁶

Remittances have a positive effect on child health (weight for age, height for age, child delivery by a doctor and vaccinations) in Nicaragua and Guatemala. Households in Guatemala receiving remittances improve all health measures and inputs, while doctor-assisted child delivery increases in Nicaragua. The same findings are confirmed in Pakistan, where gains in health outcomes again are greater for girls than for boys.

Migration also affects incentives to invest in physical capital. In Pakistan, investments in nonfarm enterprises, major farm machinery, and agricultural land all declined while migration was ongoing but increased substantially once the migration episode was concluded and the migrant returned home.⁷

The destination of migration may affect source country fertility differentially

A recent study from the Middle East and North Africa region shows that there are statistically significant differences between migration and source country fertility depending on the destination of migrants.⁸ Morocco and Turkey, where migration is mainly to Western Europe, have experienced a decline in fertility, while Egypt – whose migrants have mostly gone to Persian Gulf states, a more conservative region – has not.

Small and low-income countries suffer disproportionately from brain drain

A new global brain drain database produced by the migration research program shows a huge brain drain from small poor nations in the Caribbean, Sub-Saharan Africa and the Pacific regions. The highest rates are found in the Caribbean, with over 80 percent of university graduates from Guyana, Jamaica and Haiti living outside their country of origin.

One of the most debated migration issues is the impact of physicians and nurses from disease-burdened developing countries migrating to high-income nations. A recent World Bank database on physicians' emigration for the period 1991-2004 has shed greater light on this "brain drain" problem.⁹

Research using these new data concludes that small and low-income countries are also the most affected by medical brain drain and that it drastically increased during 1991-2004. The most affected regions are the Middle East and North Africa, South Asia and Sub-Saharan Africa. Twelve of the 30 most affected countries in 2004 are located in Sub-Saharan Africa, with severe increases in the emigration rates of physicians in Malawi, Togo, Zambia and Zimbabwe.

Migrants earn a wage premium upon return to their home country and are more likely to do so as economic and political conditions there improve

Out-migration from Norway increases, and return of migrants to Norway declines, as economic and political conditions in source countries improve.¹⁰ Evidence from Egypt shows that those migrants who return home earn close to 40 percent more than non-migrants.¹¹ This finding suggests that temporary migration could provide a "win-win-win" opportunity where host countries benefit from importing needed labor for a period of time, source countries benefits from the enhanced human capital of return migrants, and migrants benefit from higher incomes in the host country as well as upon their return to their country of origin.

Ex-ante job offer requirements have little impact on migrants who are well-connected in the destination country

Many countries have policies limiting migration, often seeking to attract more productive workers. Research on New Zealand finds that requiring potential migrants to have a job offer as a condition for entry is reduces migration for those with little or no connections in the host country but favors those that do have such connections: a disproportionate share of accepted migrants obtained job offers from family members or others with whom there was a prior relationship.¹² Host countries need to consider whether their specific migration policy measures are designed to take into account such selection effects and do not work at cross-purposes.

Current and future research directions

Improving data to allow better policy research and analysis

A major contribution of the Bank's research program on migration has been the development of several new databases. The first is the most comprehensive database on the brain drain to date. It provides consistent measures of the brain drain from individual sending countries to individual destination countries—i.e., bilateral measures of the brain drain—as well as regional and global aggregations.¹³ This database includes information on educational attainment of migrants. Various extensions of this database are ongoing, including adding data for earlier periods, and disaggregating it by gender and by the country where education was acquired.

A second database centers on migration of health care workers (physicians) for 192 countries for the period 1991-2004.¹⁴ Another global database compiled by the Bank migration research team in collaboration with Sussex University contains a matrix of bilateral migrant stocks for 226 countries for the year 2000/2001.¹⁵ This database is the first to include bilateral data on South-South migration and according to the different legal definitions of a *migrant* used by governments and multilateral agencies. These data are being extended on several dimensions, including additional time periods, age of migrants and their gender.

These databases are complemented by efforts to include migration modules in household surveys. To date, the program has completed three surveys with information on migrants (Brazil, Ghana and Pakistan) and has commissioned two supplementary surveys (Kerala [India] and Sri Lanka). These surveys provide very detailed household data which are used as a basis for analyses of migration and remittance patterns, and of the determinants and development impact of migration, including poverty alleviation, investment in human and physical capital, labor market participation decisions and remittance patterns.

Notwithstanding the above, data on migration is still poor and significant resources need to be invested in this area in order to better understand the nexus between migration and development.

Another major contribution of the Bank's migration research program relates to improvements in survey design and empirical methodology. For instance, in the context of Japanese-Brazilian families of potential migrants to Japan, three types of surveys were conducted in order to examine how well the cheaper (snowball and intercept) surveys perform relative to the much more expensive census-based representative survey, in terms of information on migrant and household characteristics, remittances and return migration. Second, a household survey in Tonga to study migration to New Zealand and the impact of its migration lottery enabled a comparison of the results of a natural experiment and those of the best empirical methodology available. Third, panel data in household surveys that include a migration module are very valuable but extremely rare. Such a database is being put together for the Indian state of Kerala.

Women's migration- magnitude, trends and impacts

About half of the world's migrant population is female. Available evidence suggests that migration flows and their impacts are strongly gendered. However, relatively little gender analysis has been done in the economic literature on international migration and development. Bank research is ongoing on international migration of women, including an in-depth study of the magnitude, consequences and impacts of women's migration in Sri Lanka.

Brain drain of Physicians: An in-depth study of Ghana

There are several reasons why the brain drain of health care workers particularly constitutes a net loss for developing countries. At the outset, there is a direct financial loss for countries since the training of doctors and nurses is almost always publicly funded. In most countries, government resources are already quite limited and higher education consumes a very large portion of it. However, the main social cost of the migration of health professionals is the loss of the social positive externalities they provide by delivering healthcare services to their societies. This is especially critical at a stage when many countries are suffering from some of the most challenging healthcare problems of the last century.

In order to further our understanding of the dynamics of the brain drain of health care workers, a case study of Ghana (and potentially other African countries) is planned. The goal is to illustrate and clarify many economic, social, labor market and institutional mechanisms impacting the migration decisions of health care workers. This study aims to survey Ghanaian medical students and physicians who live in Ghana as well as those who have emigrated and live abroad. In order to provide insights into potential policy options for increasing the retention rates of physicians and nurses in developing countries through economic incentives and other mechanisms.

What is the impact of brain drain on institutional development?

In addition to its fiscal impact and the externalities on productivity and health the brain drain is likely to have a profound impact on the countries suffering from it, including their institutional development. However, little systematic evidence exists on these issues. Based on new datasets, we are planning to explore the empirical relationship between brain drain and institution building. On the one hand migrants may provide their home countries with new ideas and funding for institutional development, on the other hand a massive brain drain may deprive home countries from the people needed to implement reforms and institutional improvements.

How large are the gains from temporary migration?

Temporary movement of persons for the delivery of services, i.e. Mode 4 of the General Agreement on Trade in Services (GATS), is an area where there is both great demand for policy advice and great potential for welfare gains from liberalization. This has so far served primarily to facilitate exploratory business visits and the movement of high-level personnel within multinational corporations, but developing countries are now

pushing for greater openness for independent professionals and for less-skilled workers. The issue is among the most actively debated in the WTO. Initial estimates of the mutual benefits stemming from the liberalization of the temporary movements of natural persons from developing to industrial countries found them to be significantly larger than those from trade liberalization.¹⁶ These estimates are being updated with newly collected data on bilateral migration flows.

One key issue identified by potential host countries is concern about migrants overstaying as illegal migrants and creating social and economic burdens. Research is examining measures to create incentives for return migration at the end of their contracts and thus make the policy more attractive to destination countries.¹⁷

Preliminary research suggests that the temporary movement of persons under Mode IV is superior to guest-worker programs, and that a combination of permanent and temporary migration policies is preferable to only implementing one or the other.¹⁸

What are the linkages between trade, FDI, and migration flows?

Another area of ongoing research is the relationship between migration, FDI, and trade. For example, in the special case of the Chinese diaspora, research has found significant positive spillovers between migrant networks and trade flows, due to information flows and other network externalities.¹⁹ There are similar examples regarding the role of Indian engineers in establishing links between their home country and Silicon Valley.²⁰

Based on the literature on immigrants building the key information and contractual networks to conduct international transactions, a major effort is starting to compile a database combining trade, migration (Mode 4), and FDI in both manufacturing and service sectors. Preliminary analysis shows that outflows of U.S. FDI from a specific sector to a specific country are significantly increased by the existing share of employees in that sector from that country.²¹

Migration is potentially a major contributor to development but one that, because of political sensitivities and lack of quality data, has been under-researched by economists. Several organizations are working to correct this omission, and through its own program the Bank is both enhancing the quality and influencing the focus of this global effort.

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Endnotes

Most Bank documents cited in this summary are available through the documents and reports portal of the World Bank <http://www-wds.worldbank.org/> and on the website for the research program on International Migration and Development at <http://www.econ.worldbank.org/programs/migration>. The word “processed” describes informally reproduced works that may not be commonly available through library systems.

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