

Quantifying the Impact of Highly-Skilled Emigration on Developing Countries

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Executive summary

Skilled migration is a key component of the globalization process. Recent theoretical literature shows that such migration affects the source countries in a number of ways. In particular, it has been suggested that remittances, return migration, network effects favoring international transactions and technology diffusion, as well as brain gain channels, may compensate the sending countries for their loss of human capital. These channels have been examined in the recent empirical literature, but have never been quantified so as to make them comparable. The purpose of this paper is to bring them together in an integrated framework and attempt to quantify the global impact of the brain drain on sending countries. We first provide a set of original indicators documenting the magnitude of highly skilled migration. We present data on emigration rates to the OECD by educational attainment, expand the coverage of this database by introducing non OECD host countries, study the gender dimension and the age of entry structure of skilled emigration, and document the brain drain of scientists and of healthcare professionals. We then review and test the theoretical mechanisms at work. We cover the “human capital”, “screening-selection”, “productivity” and “institutional” channels through which skilled emigration affects developing countries present and future economic performance. We also analyze the links between brain drain and remittances. The development of a simple partial equilibrium model allows us to combine these various mechanisms in an integrated setting. Using numerical experiments and parameters taken from existing empirical studies, we quantify the costs and gains of the brain drain for developing countries. At the macroeconomic level, the brain drain generates short-run and long-run positive net gains for many developing countries, while adverse overall impacts are found only in a small number of countries exhibiting very high skilled emigration rates.

We then discuss the various policy implications of our empirical and simulation results. We first address the likely and optimal responses to the brain drain in terms of education policy in home countries. For countries experiencing a beneficial brain drain, we recommend investment in public education quality and for an openness of the higher education market to private education provision, while for countries experiencing a detrimental brain drain we recommend for a large outsourcing of higher education to OECD countries and reliance on aid and development program (e.g., of the “training and return” type) for obtaining the professional skills needed, and redeployment of public resources to primary and secondary education, and to post-secondary education just for a few professions such as teachers and other civil servants with intermediate skills). Second, we discuss the likely policy responses in terms of immigration policies in receiving countries, and ask whether the current international competition to attract talent and move towards more selective immigration policies are compatible with OECD countries’ aid and development policies. We answer by the affirmative in the case of host countries receiving skilled immigrants from developing countries which have characteristics favoring a beneficial brain drain, which is mostly the case for the origin-mix of immigration to countries such as Australia, Canada, and to a lower extent, the US and the UK, and by the negative in the case of continental Europe, where most skilled immigrants come from countries already experiencing an excessive brain drain. In the case of the EU, we therefore recommend to look for an increase supply of skills and talents mostly through creating a more talent-friendly environment, and through policies aiming at repatriating exiled EU researchers, and curbing the current exodus of European researchers to the United States. In general, we also oppose to the creation of blacklists of professions and/or countries from which receiving countries should be prevented from recruiting skilled immigrants. This is substantiated by both moral and economic considerations. Finally, we discuss whether the time has come to think afresh about the Bhagwati tax proposal, and propose a number of guiding principles according to which, in our view, such a tax on brains should be based.

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