

Migration of the highly skilled: a tentative quantitative approach

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Abstract

Globalisation and migration of the highly skilled

Migration in a globalising world is on the increase, especially migration of the highly skilled. The central problem of globalisation seems to be the tension between *cultural homogenisation* and *cultural heterogenisation*. Global cultural flows make up a complicated playing field of five dimensions: the ethnic dimension, the media dimension, the technology dimension, the financial dimension and the ideological dimension. These dimensions are the building blocks of all possible worlds for people in their imagination of locality and globality (Appadurai, 1996). Migration seen as an attempt of individuals to improve their lives in the world is facilitated by these flows which are driven and directed by increasingly complex relationships between money flows (as organised by the really global capital market) political possibilities and the availability of skilled labour (Castells, 1997, 1999, 2000 and Appadurai, 1996). However how effective technology can be applied locally depends primarily on local quality, of which the quality (and diffusion) of governmental and physical infrastructure are important elements (Chong & Calderon, 2000). Because there are huge differences in the 'allocation' of this infrastructure among countries of the world it is quite clear that people will move to places that have an effective infrastructure in place in which they can apply their skills more profitable. In this paper we will concentrate on cultural proximity¹, technology, knowledge and on the characteristics of the local infrastructure defined as the quality of the physical infrastructure and the quality of local governance as relevant factors that explain whether highly skilled people will stay or will move abroad, the other dimensions are left out of the analysis.

Brain drain, brain strain or brain circulation?

It is quite natural that given certain possibilities, people look for opportunities and chances to improve their lives. Especially when the better educated leave their country in large quantities to try their chances abroad it was labelled in the 1960's as 'brain drain' stressing the negative welfare impact on the countries of origin (European at that time). However not always is the impact of migration negative for the country of origin and therefore 'brain drain' turned into 'brain gain' when it was seen from another perspective. Indeed destination as well as origin countries may profit from migrating highly skilled people (IOM, 2005). The road in the middle is called 'brain strain' emphasising that out migration can be either positive or negative for the origin countries (Lindsay-Lowell cs., 2004). A synthesis has been found in perceiving migration of the highly skilled in the more neutral phrase 'brain circulation' (Saxenian, 2002). Brain circulation perceives

¹ Cultural proximity - a term coined by Straubhaar (1991) – is rooted in cultural-linguistic ties between people. This concept from the communication sciences assumes that shared linguistic and historical experiences give rise to cultural commonalities creating a sense of closeness in audiences. Specific values and historical proximities are often seen as tied to the locally spoken language.

migration of the highly skilled not as an end in itself but as the start of a circular process in which everyone might be better off: in this view the knowledge worker in the age of globalisation turns into a real cosmopolite.

Providing the missing migration data

Despite an enormous literature on migration it is impossible to draw a systematic global quantitative picture of migration of the highly skilled. Therefore discussions in terms of brain drain, brain strain or brain circulation are either theoretical or end unresolved. Empirically only a part of the picture can be drawn with the help of data on South-North migration of the highly skilled (Docquier and Marfouk, 2004). Data on other directions of migration like South-South and North-South is not systematically covered by the international statistical institutes. Given this situation it is the aim of this paper to include as many as possible countries in the data on migration of the highly skilled in order to illustrate the major effects related to migration for human capital in origin as well as destination regions. This is possible by using UNESCO data on international students; this source facilitates estimations of the missing migration flows, as will be explained below.

Description of the methodology

With data sources on cultural proximity², the local knowledge and physical infrastructure estimates can be produced about the missing migration flows such as South-South and North-South flows. The methodology is as follows: OECD data on migration of the highly skilled, UNESCO data on international students (i.e. students studying abroad) a selection of the World Development Indicators regarding infrastructure, World Bank data on quality of governance (Governance Matters V) and data on cultural proximity are used to estimate the missing bilateral flows. Note that OECD data only has observations for the migration towards OECD countries and that the estimates will show how accurate migration to OECD countries can be reconstructed. Regression results are then used to estimate missing flows.

Provisional results

Provisional result suggest that countries like Russian Federation, South Africa, Ukraine, Malaysia, Jordan and Saudi Arabia are, apart from the traditional immigration countries also important destination countries. This estimation procedure eventually yields a destination/origin matrix of migration of the highly skilled for all countries. Aggregation of this matrix into 8 regions reveals the (in and out) flows of highly skilled migrants for the Arab States, Central and Eastern Europe, Central Asia, East Asia and the Pacific, Latin America and the Caribbean, North America and Western Europe, South and West Asia, Sub Sahara Africa.

Assessment of the cost and benefits of migration of the highly skilled

By imposing differences in cost of education and income levels on this matrix a first and rude impression of the welfare effects can be obtained: the cost of education and the subsequent welfare gain of migration of the highly skilled. First provisional estimates

² Measured with the languages spoken in a country, this information is taken from <http://members.fortunecity.com/mikecolley/atlas/>.

learn that the cost of education is lower in all regions except one (North America and Western Europe) due to migration: Welfare gains in are carried by migrants from all regions of origin, but migrants from East Asia and the Pacific and Central and Eastern Europe contribute more than other regions of origin. These welfare gains are realised mainly in one region North America and Western Europe.

The paper ends with suggestions of a framework for further research in order to improve the estimates of the welfare effects and their distribution with the help of additional information such as remittances and the incidence entrepreneurial activities in the regions of origin.

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Literature

Appadurai, A., (1996), *Modernity at Large, Global dimensions of Globalization*, Public Worlds, Vol 1, University of Minnesota Press, Minneapolis, London.

Castells, M. (2000), in: *The Information Age: Economy, Society and Culture, Vol I, The rise of the Network Society*, Second Edition, 2000, Blackwell Publishers, Oxford., quotes his own work: Castells, 1972, *La Question Urbaine*, Paris: Maspero.

Castells, M., (1997), *The Information Age: Economy, Society and Culture, Vol II, The power of identity*, Blackwell Publishers, Oxford.

Castells, M. (1999), Information Technology, Globalization and Social Development, *UNRISD Discussion Paper* No. 114, September 1999, United Nations Research Institute for Social Development

Chong, A., & C. Calderon, (2000), Causality and feedback between institutional measures and economic growth, *Economics and Politics*, Vol 12, March 2000, No1.

Docquier, F. and A. Marfouk, 2004, *WPS3381*, Measuring the international mobility of skilled workers (1990-2000): release 1.0

IOM, 2005, Mainstreaming Migration into Development Agendas, International Organisation for Migration, Geneva, Switzerland, available at: http://www.ppl.nl/books/ebooks/IOM_Red_Book_08.pdf

Lindsay-Lowell B., A. Findlay and E. Stewart, *Brain Strain, Optimising highly skilled migration from developing countries*, Asylum and Migration Paper 3, August 2004

Saxenian, A-L, 2002. Brain Circulation: How High-Skill Immigration Makes Everyone Better Off. *The Brookings Review* 20(1) (Winter): 28-31.

Straubhaar, J., (1991). Beyond media imperialism: Asymmetrical interdependence and cultural proximity. *Critical Studies in Mass Communication*, 8, 39-59.