

# The Race for the Best: A European Perspective on the Brain Drain

The 'brain drain' has re-entered the development debate: Against the backdrop of a highly competitive global knowledge economy, highly qualified migration represents a major issue for both Organisation for Economic Co-operation and Development (OECD) countries and developing countries.

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## Definition, causes and consequences

The process of a brain drain implies the outflow of highly qualified workers, usually by transborder or transcontinental migration, and, hence, refers to both source countries and receiving countries. Europe itself did not become a region for immigration until World War II, and it has not only attracted, but also lost, highly qualified workers.

In recent years, terms like 'brain gain', 'brain circulation' or 'international mobility' have been introduced, alluding to the potential benefits of highly qualified migration, as compared to terms like 'brain waste', which imply loss of intellectual potential.

Highly qualified migration is basically driven by negative factors in the source countries (outflow) and positive incentives in the receiving countries (inflow). Motivations for people leaving their home countries are various and range from personal (poor career prospects, constraints on freedom) and economic (low wages, unemployment), to social (bad living and working conditions, social insecurity) and political (persecution, political instability and insecurity) reasons. Additionally, the north-south dominated flow of information provided by 'de-territorialised media' and accelerated 'cultural globalisation' following Western ideals (knowledge, consumption, individual liberty) leads especially young people in developing countries to consider emigrating to the Western world (Gebrewold, 2007, pp.97–102). Pull factors largely correspond to the scarcities found in source countries.

For sending countries, remittances, knowledge transfer, new or enhanced foreign trade relations, foreign education and values<sup>1</sup> are positive impacts of the brain drain, while loss of intellectual potential<sup>2</sup>, staff shortages (especially in strategically

important sectors like medical care, administration and education), loss of economic investment (cost of tertiary education) and loss of tax revenue<sup>3</sup> represent the negative consequences. By contrast, receiving countries 'accumulate skill', offset labour shortages, augment the 'average skill level' of their labour force and usually increase the economic profit ratio by increasing wage pressure in the national labour market (Exenberger, 2007, p.15).

The consequences of the brain drain cannot be generalised as they vary significantly according to conditions in source and receiving countries. As pointed out by Docquier et al. (2007), countries most vulnerable to brain drain are small, situated close to OECD territories and strongly tied to their former colonial powers. Religious fractionalization intensifies the negative impacts. A major factor in the extent of negative impacts is the amount of native human capital; this determines whether or not the brain drain causes an appreciable lack of human resources in strategic sectors such as health and education. Consequently, the brain drain is likely to benefit large populations and middle income countries, while significantly weakening small and less developed countries.

Finally, slowing migration has proved not to be as simple as imposing legal restrictions or reducing poverty (Gebrewold, 2007, p.101), because migration motives are manifold; people are willing to defy prohibitions (undocumented migration) and migration also implies costs (usually the poorest of the poor can't migrate). By contrast, in the case of highly qualified worker migration, increasing poverty causes growing numbers of emigrants (Exenberger, 2009, p.39) and migration happens, to a large degree, voluntarily and via legal channels (Kelo & Wächter, 2006, p.16). Regrettably, most data regarding international migration flows are unreliable and lack harmonisation, which makes analysis difficult<sup>4</sup>. Moreover, most statistics concentrate on education levels and neglect the professions of migrants in receiving countries. Indeed, as affirmed in the brain

waste debate, many qualified migrants work in low skilled jobs (Kelo & Wächter, 2006, p.17).

## Dimensions and flows

During the year 2000, of almost 22 million migrants living in the EU, 22 per cent had tertiary education.<sup>5</sup> Compared to 1990, this share has considerably increased (+7%), while the stock of primary educated migrants has relatively decreased. With respect to the population structure, the share of highly qualified migrants tends to be considerably higher than that of the average population in their home countries (Carrington & Detragiache, 1998, p.24)<sup>6</sup>.

According to Docquier (2007, p.11), the regions accounting for the highest outflow of highly qualified workers are the Caribbean (42.8% of total emigration is skilled migration), Central America (19.9%), Sub-Saharan Africa (13.1%), South-East Asia (9.8%) and the Pacific (48.7%). The disproportion between general and highly skilled emigration is considerable in Sub-Saharan Africa (1% general versus 13.1% highly skilled).

In the case of European-born adults, almost half of the outflow of highly qualified workers emigrate to North America, while EU immigration inflows of foreign-born amount to 47.8 per cent from Africa, 24.9 per cent from North America and 22.4 per cent from Oceania (IOM, 2008, p.63, Table 2.2). In absolute terms, the US is the most favoured country, attracting almost 55 per cent of all highly qualified workers from developing countries, while migration of low educated Africans is negligible (Carrington & Detragiache, 1998, p.14).

In highly qualified migration flows, asymmetries are visible. In the case of Europe, three major directions are apparent:

1. From developing countries to the EU
2. Inter-European (East-West flows)
3. From Europe to the US, and, more recently, to developing countries

### *Developing countries to the EU: The case of health workers*

The brain drain of health workers proceeds on two different levels; firstly, from developing countries to OECD countries and, secondly, from the public to

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1 Dirk Kohnert (cited in Gebrewold, 2007, p.40) argues that African elites with European tertiary education "played a decisive role in many liberation movements".

2 The brain drain has delayed the growth of an African middle class and, consequently, the development of sustainable structures within civil society (Kohnert, cited in Gebrewold, 2007, p.40).

3 For the Bhagwati Tax debate see Wilson (2005).

4 Migration data are vague because it is difficult to estimate the amount of illegal migration. Migration of highly qualified workers is more transparent, but, nevertheless, there are only a few harmonised international data sets on migration by country of origin and education level (Docquier & Marfouk, 2004, Non-Technical Summary and p.4).

5 Data includes only EU Member States that are also members of the OECD (19 of the 27 EU Member States).

6 For a global overview see Docquier et al. (2009).

the private sector. Particularly Sub-Saharan African and some Caribbean countries suffer from serious outflows of medical personnel on a life-threatening scale. The vulnerability of the local health system depends on the size of the source country and the occurrence of large-scale epidemics like AIDS, malaria or tuberculosis.

Over the last 20 years, Zambia experienced an outflow of two-thirds of its doctors, Benin lost more than half to France (Akokpari, cited in Exenberger, 2009, p.38) and, in 2006, one-third of all doctors working in the United Kingdom (UK) had been trained abroad (WHO, 2006, p.98). Some industrial countries offer health service provisions to developing countries, which – as in the case of Ghana – can be rather inadequate. In 2004, it is estimated that Ghana lost around 35 million pounds of its training investment in health professionals to the UK, while the UK saved about 65 million pounds in training costs by recruiting Ghanaian doctors, which clearly outstripped the provision of an estimated 37 million pounds by the UK to Ghana (Mills et al., 2008, pp.687–88).

The active recruitment of health workers from fragile health systems (especially in Sub-Saharan Africa) by high income countries has in some cases become a “systematic and widespread problem [...] and a cause of social alarm”, and, hence, could “be viewed as an international crime” (Mills et al., 2008, p.687). Moreover, an internal brain drain in the health sector of developing countries arises from migration to cities and an inflow to the private health sector, both of which severely impact on the public health care system and distress those who rely on this system. Persistent incentives favouring the outflow of health workers are occasionally intensified by salaries (up to 5 to 20 times higher than public remuneration) and working conditions provided by sending countries (Pfeiffer et al., 2008, p.2137).

The EU intends to tackle this problem with a directive that contains guidelines and tools to turn the brain drain into brain circulation. In order to monitor implementation and to avoid brain waste, Member States are requested to send relevant data to the Commission (Council, 2007, §§.22–24).

#### *Within the EU: The East-West flow*

Before the 1990s, East European migration mostly targeted overseas countries. Selective pro-migration programmes and the 2004 enlargement initiated an increase in East-West migratory flows, especially to Britain and Ireland, which together with Sweden immediately opened up their labour markets to the new Member States (Kaczmarczyk, 2006, p.23). Post-accession emigration might be only temporary, and, thus, also offers considerable opportunities for brain gain (European Commission 2008, pp.5–6). Theories of a widespread ‘brain exodus’ (Kaczmarczyk, 2006, p.22) and mass migration have not eventuated (see Pijpers, 2008; Kraus & Schwager, 2004).

In addition to considerable gains from the brain circulation of students (knowledge transfer) and expert migration (remittances contribute 5.5% to the GDP in Bulgaria and Romania, and 1.5% to Poland [Council of the European Union, 2009, p. 6]), the case of Poland also illustrates the dangers that may arise from low salaries in the health sector, heavy foreign demand for specialised medical personnel and a minor ability to attract foreign talent due to a poor immigration tradition (Kaczmarczyk, 2006, p. 23). Similar to the case of developing countries, brain circulation could be a chance for brain gain in Eastern Europe, but the outflow from sensitive sectors such as health entails serious risks.

#### *EU to the US and developing countries*

For many years, the EU has feared the brain drain from the EU to the US. In 2008, four per cent of all European scientists worked in the US (Bosch, 2008, p.2210). Three in four European born researchers with a PhD from an American University decide to stay, while only three per cent of US born scientists intend to work outside their home country (Dente, 2007, p.17). In addition, the rise of international cooperation in China (for example, between the Chinese Academy of Sciences and the Max Planck Society in 2005), the establishment and expansion of interesting faculties and institutes (for example, the School of Life Science at Fudan University) and attractive scientific funding, not only bring Chinese researchers back to their home country, but also commit European and American talents to China (Dente, 2007, pp.15–6). In the future, this may also be the case in India as well. Rising unemployment due to the current global economic crisis and China and India’s tremendous need for talent (see Yin & Choi, 2005) may reinforce flows of highly qualified workers from Europe and the US to the emerging economies of China and India.

#### **The brain drain and EU policy**

Although the US still receives the largest share of global highly qualified worker flows, Docquier et al. (2005) affirm that the EU is the preferred migrant receiving region for highly qualified workers from several African countries, thus accounting for substantial human capital losses in one of the weakest regions of the world.

Although the Amsterdam Treaty moved asylum and migration policies from intergovernmental cooperation (third pillar) to supranational community policies (first pillar), inconsistencies remain. While general migration policy increasingly emphasises security issues and migration control, in highly qualified migration, the EU aims to increase its global share of highly qualified human capital.

This is done by attracting highly qualified workers to the EU, as well as by preventing the loss of its own human capital. The Council expressed this as to invest in “people and [...] labour markets”

as well as in “knowledge and innovation” (target investment of 3% of GDP in research and development), the latter to be achieved by activating private investment (Council of the European Union, 2008, p. 61). The 7th Framework Programme for Research and Technological Development (2007 to 2013, with a budget of more than EUR 50 billion) represents a major instrument for attracting and retaining researchers. Out of this Framework, a 30 month project (MOREBRAIN) was approved, which analyses interrelations between information transfer and the brain circulation of European talent (see CORDIS, 2008).

Targeting highly qualified workers, the EU intends to introduce a selective immigration process called the Blue Card (approved by the Council in May 2009, to be implemented by 2011). The proposal, comparable to the US Green Card, plans more restrictive terms of admission. Beside the common instrument, Member States will retain national sovereignty to decide on a case-by-case basis.

By contrast, the EU’s development cooperation policy views brain drain from developing countries as a danger, placing at risk the achievement of the MDGs. To avoid this, concepts of ‘circular migration’ and ‘mobility partnerships’ have been introduced (European Commission, 2007), whereby both sending and receiving countries will benefit from highly qualified migration. However, assumed

#### **BOX 3: EU Blue Card for highly qualified immigrants**

On 25 May 2009, the Council of the European Union adopted a directive aimed at facilitating conditions of entry and residence in the EU for third-country nationals for the purpose of highly qualified employment: the so-called Blue Card.

The EU Blue Card Directive lays down a harmonised admission procedure based on common criteria set by EU Member States: Blue Card holders must have an employment contract, professional qualifications and earn a certain minimum salary. The card is valid for between one and four years, with a possibility, under certain conditions, to extend it or migrate to another EU Member State. The Directive also guarantees that holders will enjoy equal treatment to nationals and foresees favourable conditions for family reunification.

EU Member States have two years from the adoption of the Directive to transpose the provisions into their national law before they will be fully applicable in practice.

Members of the European Parliament and various civil society organisations have criticised the Council Directive as there are no firmly statements and measures to ensure that developing countries will not suffer from brain drain as the Blue Card is, in effect, a tool to attract highly qualified workers.

mutual benefits are questionable, as Triandafyllidou (2009, p.2) points out, as “these partnerships [...] reflect power relations where the EU sets the rules of the game and third countries have to abide by these rules”. ■

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