Brain drain

‘Brain drain’ is a term used to describe the sustained migration of highly qualified personnel from less developed to more developed countries.

The expression ‘brain drain’ was first coined by the British Royal Society in the 1950s to describe the outflow of scientists and technologists to the US and Canada. There is no uniform system of recording the number and characteristics of international migrants so it is difficult to measure brain drain precisely. It is clear, however, that the OECD countries, and especially the US, profit through such migration, while many developing countries lose their best human capital. Apart from intakes into the OECD countries, which have over the past decades obtained thousands of doctors, engineers, accountants, academics and scientists from less developed countries, there is a sizeable flow of professionals from the Indian subcontinent to the oil-producing Middle Eastern countries. During the 1980s, due to strong demand in the information technology and other science and technology sectors, brain drain intensified. In addition, the countries with regular immigration intakes have had increasingly selective immigration policies. These have been pursued with most success in Australia, the country with the highest share of foreign-born in high-skilled employment (25 per cent).

Asia and the Pacific are the most significant sources of the highly educated migrants into the OECD countries. The largest drains are from the Philippines, China, India and Korea. More than 75 per cent of Indian emigrants and 53 per cent of Korean emigrants are tertiary educated. In the US in the 1990s, 69 per cent of employer-sponsor visas were issued to persons from India, China, Japan and the Philippines. Iran has also had a substantial brain drain, and so have Pakistan and Taiwan. In the Western hemisphere, the relatively largest brain drain comes from Jamaica and Trinidad and Tobago. In South America, the brain drain champion is Guyana while in the rest of the region the phenomenon is less significant. Anecdotal evidence suggests there is substantial brain drain from the former Soviet Union and Eastern Europe, because of the acute imbalance between highly educated populations and underdeveloped homegrown technology sectors which employ them. Poland, Hungary, the Czech Republic, Estonia and the Balkan States have the biggest brain drains of young tertiary educated people because of high unemployment. As a safety valve for unemployment, brain drain involves the high price of losing the best human capital, as the most talented are most likely to emigrate. However, associating brain drain exclusively with the movement from less developed to more developed countries is a simplification: developmental differential is usually, but not necessarily, present. For example, the drain of scientists with doctoral qualifications from northwestern Europe to the US cannot be attributed to a developmental differential.

The factors that determine brain drain can be classified as ‘macrostructural’, ‘intermediate’ and ‘individual’. At the macrostructural level, brain drain is caused by economic and developmental differential between countries. The ‘intermediate’ factors pertain to conditions specific to a particular country at a given time. For example, the Nazi regime in Europe in the 1930s to 1940s caused a brain drain, especially of Jewish intellectuals, to the US, and during the 1980s and 1990s, the crisis and dissolution of Communism prompted the migration of the highly skilled to the West. Many highly skilled people have been forced to leave their homes as a result of war, persecution or civil unrest. Internal imbalances such as the lack of high-level employment opportunities and the lack of meritocratic promotion can also be intermediate causes of brain drain. The third tier of causes is personal; ultimately, the decision to emigrate is made on the basis of consideration of personal and family circumstances. On this level, the lack of opportunities translates into an imbalance between expectations and achievements, along with an assessment that emigration would fix this imbalance. Those most likely to emigrate are people with excellent professional records, without family responsibilities, and with networks outside their countries of origin.

The second- and third-tier factors are the best way to explain the current migration of top academics and scientists from Western Europe to the US. Many Western Europeans who further their scientific and academic careers in the US quote the attraction of scientific pre-eminence and the entrepreneurial culture of American universities and research institutes, as well as higher levels of funding for research and development in the United States. Also at play are factors such as high
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expectations and high mobility of the well-off, and political and cultural closeness between the two regions. According to Time magazine, 400,000 European science and technology graduates live in the US. Canadians deem their brain drain to the US to be small but significant. However, skilled migration between advanced countries is often temporary and there may be a gain for everyone involved from the ‘brain circulation’ and professional cross-fertilisation. In addition, the brain drain from other OECD countries to the US has been compensated for by large intakes of the highly skilled from developing countries.

The outflow from developing countries is a more serious problem, as migrants from these countries are more likely not to return. Seventy-nine per cent of 1990/91 PhD graduates in science and engineering from India and 88 per cent of those from China were still working in the US in 1995, while only 11 per cent of Koreans and 15 per cent of Japanese did. Africa seems to be the hardest hit by brain drain. The UN estimates that between 1960 and 1989, 127,000 African professionals left the continent. According to the International Organization for Migration, Africa has been losing 20,000 professionals each year since 1990. African graduates leave, or fail to return home at the end of their studies at Western universities, and this may be one of the greatest obstacles to Africa’s development. There are more African scientists and engineers in the US than on the entire African continent. The biggest migratory flows from Africa are from Ghana, Egypt and South Africa. To fill the expertise gaps created by brain drain, Africa employs up to 150,000 expatriate professionals at a high cost.

The interpretations of the causes and consequences of brain drain are not in unison. Most authors agree that brain drain represents a loss for sending countries, but many see this loss mitigated by potential gains. For example, the sending country can benefit economically through migrant remittances, and culturally and scientifically through a possibility of brain circulation and collaborative projects. The Economist emphasizes that the ‘whole world benefits’ from the ‘brightest global talent working at the US universities and high-tech industries’. Some authors emphasize that the migration of highly trained persons to developed countries reflects the incapacity of their countries of origin to employ them to the greatest effect, and therefore their migration can be viewed as an ‘overflow’ of brain surpluses rather than a drain. Some take a global rather than a nationalistic position and see the migration of the highly skilled as a positive exchange and inevitable balancing of the global labour market. In contrast, the authors most critical of the brain drain see it as another facet of neocolonial exploitation which widens the developmental gap between the First and the Third Worlds.

Some sending countries have tried to decrease their brain drain. The most drastic example was the closed borders of Eastern European and other Communist countries over the period 1945–89. However, the borders remained more or less porous. It is nearly impossible to stop labour mobility by administrative means if push and pull factors are strong enough. In the increasingly global labour market, the highly skilled remain the most globally connected and mobile.

In a historical perspective, brain drain has increased in magnitude with the increased global mobility of people over the past century and a half, since the development of transportation made long-distance travel possible on a larger scale, combined with an increase in the education levels of populations. Its relevance has grown with the fact that neither land nor financial capital is nowadays the most crucial developmental resource. In the knowledge-based economy, the highly skilled are the crucial resource in global competition. Globalization, with the established global market of talent, brings a new edge to the brain drain/gain dynamic. However, brain drain from the sending countries does not always result in a brain gain to receiving countries: a considerable number of highly skilled migrants from developing countries experience occupational down-grading due to structural barriers, a lack of formal qualification recognition, language and cultural barriers, and discrimination in the labour market. In this case, what occurs is a brain waste.

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