Education and Migration: A Study of the Indian Diaspora

N. V. Varghese

Abstract
The Indian diaspora consists of low- and semi-skilled migrants mainly to the Middle-East; migration of the highly-skilled to developed countries; and cross-border students who seek employment and remain in their host countries. India initially viewed the migration of the best educated from its prestigious institutions as ‘brain drain’. However, with the reverse flow of these professionals the diaspora came to be seen as ‘brain gain’. The highly-skilled Indian diaspora assumed positions of responsibility in the corporate world, in academia (including Nobel laureates), and in the political and social spheres in some host countries, thereby enhancing India’s image abroad.

Key words: India, skilled migration, human aspirations, brain drain, brain gain

La diaspora indienne se compose de migrants peu et semi-qualifiés, principalement vers le Moyen-Orient; migrations de personnes hautement qualifiées vers les pays développés, et d’étudiants transfrontaliers qui cherchent un emploi et restent dans leur pays d’accueil. L’Inde a initialement considéré la migration des plus instruits de ses prestigieuses institutions comme une «fuite des cerveaux». Cependant, avec le flux inversé de ces professionnels, la diaspora a fini par être considérée comme un «gain de cerveaux». La diaspora indienne hautement qualifiée a assumé des postes de responsabilité dans le monde des entreprises, dans les universités (y compris les lauréats du prix Nobel) et dans les sphères politique et sociale de certains pays d’accueil, renforçant ainsi l’image de la marque de l’Inde à l’étranger.

ABOUT THE AUTHOR: N. V. VARGHESE, National Institute of Educational Planning and Administration, India. Email: nv.varghese@niepa.ac.in
The article is presented in eight sections. Section two discusses some of the issues relating to migration and development, while the third section traces the evolution of diaspora policies in India. Section four elaborates on the changing composition of the Indian diaspora and sections five and six analyse the linkage between education and the growing size of the Indian diaspora. Section seven discusses the diaspora’s contributions to India and the final section draws conclusions.

Migration and Development

Migration has become an integral part of the development process and has been influenced by various factors in different regions and at different points in time. The slave trade marked the beginning of the largest labour migration in history. The flow of slaves was mainly from Africa to America, Europe and the Caribbean. The abolition of the slave trade in Britain (1807) and the US (1865) gave rise to slave breeding. The next stage in migration was the system of indentured labour and the source countries were mainly China and India. While the favoured destination for Chinese migrants was the US to work on the gold mines and railways, most Indian migrants worked on plantations in the British, Dutch, French and Portuguese colonies. Job losses due to industrialisation, and the potato famine encouraged large scale migration from Europe to the US, Canada, Latin American countries, Australia, New Zealand and South Africa (UN, 1997). In all these instances, the economic benefits accruing to the host countries defined the rationale for and the direction of the flow of migration.

Family reunion, asylum seeking, employment and studying are important reasons for migration (UN, 1998). It can be argued that the economic rationale remained the driving force behind voluntary migration in most instances. During the colonial period, the economic needs of the imperial powers determined the direction of the flow of migrants. The movement of people during the post-colonial period has been influenced by the economic benefits accruing to both migrants and their hosts in the country of destination.

Employment is a major factor influencing voluntary migration, with wage differentials and currency exchange rates promoting this phenomenon. Wage differentials between the migrant’s country of origin and destination motivate migration (Harris and Todaro, 1970). This is true even when migrant workers’ wages are relatively low compared to those of native workers in host countries (Todaro, 1976). Furthermore, the currency exchange rate between their country of origin and country of destination means that, even at relatively low wage levels, remittances converted into home country currencies are substantially more than what they could have earned in their own countries.

Migration due to wage differentials has two elements. Firstly, it is used by households to diversify sources of income and to minimise the risk
of poverty (Stark, 1991). This is particularly true of poor households and low-skilled migrants. The large-scale migration of unskilled and semi-skilled Indian workers to West Asia (mainly from Kerala) is a case in point (Prakash, 1998). However, skilled workers generally come from better-off families. While they enjoy employment opportunities at home, they migrate, especially to the developed world, for better jobs. The US attracts the largest number of educated migrants from India, with around two million Indian migrants living in that country.

Migrants were welcomed by developed countries as they met the demand for unskilled temporary labour at the bottom of the employment hierarchy. Studies have shown that most low-skilled migrants occupy 3-D jobs – Dirty, Dangerous and Demanding - which natives avoid (UN, 2000). Declining fertility rates and the native youth’s reluctance to enter the low paying secondary labour market enabled the continued flow of migrants to the developed world and the Middle East. Furthermore, in many instances employing natives is more expensive than engaging migrant workers. Migrants’ low wages and high productivity increased employers’ willingness to engage them. These factors have led to an influx of migrant workers in the secondary labour market in developed countries.

Skilled migration has more serious economic implications. Recipient countries benefit from migration of skilled workers. A UN study (UN, 1973) conducted in the 1970s showed that international migration enabled developed countries to reduce the cost of educating their native population in specialised areas. Migrants are better educated, their productivity is higher, salaries are relatively lower and they make substantial contributions to research. It is against this background that the UNCTAD III conference in Santiago in 1972 referred to brain drain as reverse transfer of technology (Mundende, 1989).

Countries of origin benefit from migration in various ways. Remittances are a major incentive for source countries to encourage migration and they have become the single largest source of external financing in many least-developed countries. The World Bank notes that annual remittance flows increased to USD 689 billion in 2018. Low- and middle-income countries account for more than 75% of global remittances and they exceed FDI flows (World Bank, 2019).

In 2018, India received the highest level of remittances at USD 79 billion, followed by China ($67 billion), Mexico ($36 billion), the Philippines ($34 billion), and Egypt ($29 billion). While they accounted for 2.7% of India’s GDP, the percentage is much higher in some smaller countries. For example, in 2018 remittances accounted for nearly 36% of GDP in Tonga, 34% in Kirgizstani, 32% in Tajikistan and 28% in Nepal (World Bank, 2019).

The economic rationale became a mutual and more prominent factor in migration in the later decades of the 20th century, particularly with regard to the migration of highly skilled people from developing to developed countries. Most migrants were of working-age and became a positive asset for their host countries. In 2019 more than 74% of the global migrant population was between the ages of 20 and 64 (UN, 2019). Young migrants are well educated and contribute to the depleting stock of human capital and the technological base in the country of destination. Indeed, the migrant population helped many greying economies to grow in recent decades. It is estimated that migrants accounted for nearly half of the increase in the workforce in the US and nearly 70% in Europe in the current century (OECD, 2012). Europe hosts the largest number of international migrants (82 million), while North America is home to 59 million (UN, 2019). These two regions together hosted more than half (52%) of the global diaspora in 2019.

It was previously believed that, the brain that migrates is a brain lost for the country of origin. Given subsidisation of the education system, professionals represent a form of national wealth and human capital whose returns to the national economy would have been higher had they stayed in their own countries. However, recent trends in the diaspora’s contributions indicate that many economies have gained from them. A related question is: would these professionals have had better opportunities for their growth and development had they stayed in their own countries? It is difficult to make a conclusive statement on this issue. It may be more realistic to argue that the host country benefits from the higher educational levels and the resultant increased productivity of migrant workers and professionals, while their countries of origin benefit from the remittances and technology transfer facilitated by the diaspora. In other words, if managed well, migration becomes mutually beneficial to the countries of both origin and destination.

Diaspora Policies in India

While Indian migration during the colonial period was involuntary, it became voluntary following independence. The Indian government was a dormant player rather than an active agent of change in migration policies until the 1990s. However, a major shift has occurred, from the government regarding the Indian diaspora as a source of brain drain to seeing it as an asset that needs to be capitalised on. Three factors seem to have influenced this change in approach. First, the economic liberalisation policies of the 1990s saw the diaspora as a reliable source to promote trade, investment and technology transfer. Secondly, remittances by the Indian diaspora increased dramatically, with the country currently receiving the highest level of such, exceeding foreign direct investment (FDI).
Third, members of the Indian diaspora have taken up positions of power and prestige abroad and are regarded as informal channels to exercise soft power and diplomatic relations to enhance India’s global presence and strengthen ‘Brand India’. Examples include the prime ministers of Ireland (Leo Varadkar) and Portugal (Antonio Costa), and the vice president of Suriname (Ashwin Adhin). Moreover, Indian IT professionals, biotechnologists, financial managers, scientists, architects, lawyers, and teachers and professors have become successful figures in all the countries where they have settled. The German Green Card, the American H1-B visa, the British work permit, the Canadian investment visa, the Australian student visa, and New Zealand citizenship all attracted Indian talent in the form of employees as well as students.

The Indian government’s new approach and positive attitude to the Indian diaspora is reflected in many of its recent initiatives. In 1999, India introduced the Person of Indian Origin Card (PIO card) for Indian citizens and their non-Indian-born descendants up to four generations. In 2005 the government introduced Overseas Citizenship of India (OCI) for those whose parents or grandparents were citizens as at January 26, 1950. These cards grant parity with nationals in terms of their right to own property and operate businesses. However, they do not extend electoral rights to members of the diaspora.

In 2003, the government organised the first diaspora conference (Prawasi Bharatiya Divas) to serve as a platform for interaction among the diaspora, the government and the corporate sector. This not only became an annual feature, but many state governments started organising similar events. The events include the bestowing of awards on members of the diaspora for their contributions to India’s development.

India established a Ministry of Non-Resident Indians’ Affairs in May 2004 (renamed the Ministry of Overseas Indian Affairs (MOIA) in September 2004). Its main objective is to connect the Indian diaspora community to India. The Ministry launched several programmes in this regard, including the ‘Know India Programme’ (KIP) which aims to familiarise Indian diaspora youth with their ancestors. Thousands of young people in the diaspora aged 18 to 26 have visited India under this programme.

In 2007, the government established the Overseas Indian Facilitation Centre to promote investment in India by Indian diaspora. A scholarship programme for diaspora students to study in India was started in 2007. Another programme, ‘Tracing the Roots’, was launched in 2008 to help PIOs to trace their roots in India.

In 2015, the PIO and OCI cards were merged under the OCI. Furthermore, from 2015 onwards, the government decided to treat NRI/OCI holders’ investment as domestic investment rather than FDI. These measures confer more rights on the diaspora in India. In 2016 the MOIA merged with the Ministry of External Affairs.

The attitude of the diaspora towards India also changed and they became eager to establish on-going relationships with their homeland for various reasons. Some seek economic relations to strengthen their business interests, while others are interested in social and cultural relations. For example, the Indian diaspora in the developed countries focus on investment opportunities, those in the Gulf countries look to welfare measures and the descendants of those that migrated to colonies as plantation workers are keen to reconnect with India for cultural reasons.

The Indian diaspora promotes technology and knowledge transfer through trade and FDI and also by means of informal networks that are interested in promoting scientific and economic development in their home country. Skilled migrants also facilitate the adoption of foreign technologies in their home country. Many governments are keen to exploit these opportunities provided by the diaspora. The government of India launched the Global Initiative for Academic Network (GIAN) in 2017/18 to attract foreign faculty members, including Indian diaspora to teach for short periods in Indian universities. It attracted around 1,800 scholars from 36 countries to offer courses from 2017/18 to 2018/19. The Scheme for Promotion of Academic Research and Collaboration (SPARC) was launched in 2018 to promote research collaboration between reputed institutions abroad and Indian institutions. This programme also attracts members of the Indian diaspora who help to enhance the academic credibility of domestic institutions, and to increase Indian faculty’s academic publications in international journals.

The Changing Skills Composition of the Indian Diaspora
When migration from India began in the 1830s, it took place within the context of the indentured labour system, mainly in the British, Dutch, French, and Portuguese colonies. The first shipment of Indian workers left India’s shores in 1834 bound for Mauritius. Others were sent to East Africa and South Africa, the Caribbean Islands (Guyana, Surinam, Trinidad and Tobago), to Asian countries (Burma and Malaya) and to Fiji in the Pacific. Most Indian migrant workers were illiterate and were employed on plantations. Around 30 million people left India during the 19th century. Apart from migration to the colonies, migrants, mainly from Punjab, worked in agriculture in the US state of California in the 19th and early 20th centuries (Khadraria, 1999).

The next stage of mass migration occurred between India and Pakistan during partition. It is estimated that between 12 and 18 million people crossed borders from 1947 to 1950. About half the migrants (mainly
Muslims) moved from India to Pakistan, while the remainder (mainly Hindus and Sikhs) moved from Pakistan to India (UN, 1973). Similarly, during the war in East Pakistan in 1971 which led to the formation of Bangladesh, around 10 million refugees crossed the border to India. All these were instances of involuntary migration.

There were two forms of Indian migration during the 1950s and 1960s. First, a large number of workers migrated to the UK to meet the demand for low-skilled labour. Second, a large number of Indians migrated from the countries they had settled in as migrants during the colonial period. For example, the ‘Africanisation’ policy in the post-colonial period drove many Indians from Africa to Britain. Similarly, a large number of Indian diaspora from Surinam migrated to the Netherlands; from Indo-China, Madagascar and Mauritius to France; and from Angola and Mozambique to Portugal (GOI, 2002). A good part of these migrations was involuntary.

By the 1970s, Indian migration had become largely voluntary and involved migration to developed countries and the Middle East in search of better job opportunities and higher wages. Semi-skilled and skilled labourers mainly migrated to the Middle East to take advantage of the booming oil industry (Rajan and Zacharia, 2020). By the 1980s, Indian migration to Middle East countries accounted for more than 90% of the Indian diaspora (Prakash, 1998).

Most of those that left for the Middle East were from poor households and were motivated by wage differentials which helped households to diversify their sources and level of income (Stark, 1991). The largescale migration of unskilled and semi-skilled Indian workers to the Middle East (mainly from the state of Kerala) is an example of this category of migration (Sasikumar, 2019). The Middle East countries encouraged large scale migration, with non-nationals exceeding nationals in some countries. For example, 76% of the population in Qatar, 65% in Kuwait and 73% in United Arab Emirates (UAE) were non-nationals by the turn of the century (UN, 2000).

The professionals that migrated from India came from better-off families and most migrated to the developed world – mainly to English-speaking countries. Their favoured destinations have been the US, UK, Australia and Canada. Such migration increased in the 1990s, when it is estimated that nearly 0.65 million Indian professionals migrated to the US. These migrants consisted of graduates from the most prestigious institutions. It is estimated that more than 30% of graduates from all subject areas and 80% of those in Computer Sciences from the prestigious Indian Institutes of Technology (IITs) migrated to the US during the 1990s (GOI, 2002).

In 2019 India had the largest number of nationals living abroad – a total of 17.5 million. Of this 14 million are non-residents who still hold Indian passports. The UN (2019) notes that India has the largest diaspora with around 17.5 million people spread over 146 countries, accounting for 6.4% of the total global migrant population. Four countries are home to more than half of the Indian diaspora, namely, UAE, the US, Saudi Arabia and Kuwait.

**Education and the Diaspora: Highly Skilled Migration**

The better educated are more likely to opt for voluntary migration since it offers opportunities to maximise the return on education. There is a positive association between the propensity to migrate and the level of education. Accordingly, people with no education migrate the least; those with primary education migrate twice as much as those with no education; those with secondary schooling migrate three times, and those with tertiary education migrate four times more than those with no education (UNESCO, 2018). In many instances, the migrant’s mean education level is higher than that of those in the country of origin and in the country of destination.

The Council for Scientific and Industrial Research (CSIR) created a National Register of Scientific and Technical Personnel in the late 1940s and included a section on ‘Indians Abroad’ in 1957. This register maintained a database of Indians living abroad and holding postgraduate degrees in science, engineering, medicine, agriculture and social sciences. Highly educated Indians’ main destination has been the US, followed by OECD countries. According to a UN estimate (UNDP, 2001), about 100,000 Indian professionals applied for American work visas every year.

It can be argued that the migration of skilled Indians reflects the growing gap between the products of higher education and domestic industry’s requirements. In the early decades of independence India established prestigious institutions of technology (IITs) and Indian institutes of management (IIMs). However, industrial development lagged behind and failed to absorb highly qualified graduates from these institutions (Blaug et al., 1969). Apart from migrants’ economic incentives, this was one of the reasons for the migration of skilled workers. This situation changed with the acceleration of economic development in the country. The emergence of business process outsourcing (BPO) in the 1990s saw many multinational corporations moving to India and many Indians that had settled abroad returned to the country. The movement of the highly skilled between countries changed perceptions of the diaspora from a source of ‘brain drain’ (in the 1960s and 1970s) to ‘brain gain’ in the 21st century.

India has emerged as the most sought-after country for the supply of knowledge workers in developed countries and those like Singapore and Malaysia in South-East Asia. The Indian diaspora’s success in the domains of science and technology has prompted many countries to offer easy visa facilities to Indian professionals. The German Green Card, the American
In 2007 Indian professionals received the largest number (138,000) of total H-1B visas. Mass migration of Indian IT professionals is an indication of this trend. An analysis of Indian persons naturalised in the US indicated that 73% were in computer related professions, followed by 9% in engineering related occupations and 4% in administrative positions (Saxena and Banerjee, 2008). The concentrated settlement of the Indian diaspora reaffirms their professional accomplishments, with more than half of those in the US residing in five states - California (20%), New Jersey (11%), Texas (9%), and New York and Illinois (7% each) (Zong and Batalova, 2017).

In general, the mean educational level of the Indian diaspora in the US exceeds that of native white Americans. In 2015, 77% of Indian adults (aged 25 and over) had a bachelor's degree or above compared to 29% of all immigrants and 31% of native-born adults. More than half of the first university degree holders from India had an advanced degree. Another reason for preferring Indian migrants is that highly educated Indians are more likely to be proficient in English than other foreign-born populations (Zong and Batalova, 2017).

Indian migrants' high educational levels are also due to the two channels they commonly rely on to enter the US. Many enter through the H-1B visa, which requires a university degree. As noted previously, Indians constitute the largest group of recipients of H-1B visas annually. Nearly 75% of the 345,000 petitions (initial and for continuing employment) approved by the US Citizenship and Immigration Services (USCIS) in 2016 were university graduates from India. The other route taken by Indians is to seek opportunities for higher education in US; this is discussed in the following section.

Education and the Diaspora: Migration for Education

The new generation of young migrants is generally better educated than older settlers. The number of immigrants with tertiary qualifications in OECD countries increased by 70%, reaching a total of almost 30 million in 2010/11. This trend is mainly driven by Asian migration, with more than two million migrants with such qualifications originating from the Asian region having arrived in the OECD in the first decade of the current century (OECD, 2012). These migrants have become part of the highly educated workforce in Canada, the US and Europe (OECD, 2014), especially in the health-care sector and science, technology, engineering and mathematics (STEM)-based occupations.

In the recent past, study abroad programmes have been an important route for migration of professionals. One of the characteristics of Indian students abroad is that they prefer to work in the host country after graduation. The return plans of doctoral graduates from US universities revealed that nearly 90% of Indian students would prefer to stay in the US (Kapur and McHale, 2005). A more recent survey by the US National Science Foundation revealed that about 80% of students from India and other Asian countries choose to remain in America after completing their graduate and doctoral studies. Furthermore, students from India accounted for 14% of all temporary visa holders earning doctorates at US colleges and universities in 2015 (Zong and Batalova, 2017). These surveys reinforce earlier findings that cross-border education, especially student mobility, has become fertile ground to recruit the highly skilled workers of the future in many developed countries (Tremblay, 2002).

In 2017 nearly 44% of Indian cross-border students studied in the US and they accounted for 16% of international students in the country. Nearly 80% of Indian immigrant students are enrolled in STEM disciplines. Employment is one of the top reasons why Indian students pursue a degree abroad (Varghese, 2013). Countries like the US and Canada offer attractive job prospects for the postgraduates and their flexible immigration policies allow them to seek employment on completion of their studies. Admission to India's top-ranking institutes is highly competitive given the large number of prospective students and few places. Study abroad programmes are safety valves for students from well to do families who may not be admitted to these prestigious Indian institutions (Choudaha, 2019).

Globally the number of students pursuing study programmes in other countries has increased tremendously in this century (Varghese, 2017). While cross-border student enrolment increased from 0.30 to 1.9 million from the 1960s to the year 2000; by 2017, this figure had increased to 5.09 million (UIS, 2018), an annual average increase of 0.19 million. Similar to skilled migration, the most common direction of cross-border student flow is from developing to developed countries. A group of nine countries in North America and Western Europe hosts nearly 60% of cross-border students (UIS, 2018). The US hosts the largest share at nearly a million cross-border students, followed by the UK, Australia, France and Germany. The most important sending countries are China, India, Saudi Arabia and the Republic of Korea.

Nearly 305,000 Indian students were pursuing higher education abroad in 2018, with the country’s share of international students increasing from 2.3% in the year 2000 to 6% in 2015. The US, Australia, Canada, the UK, UAE and New Zealand host more than 70% of Indian students abroad (Varghese, 2017).

Post-study visa facilities and employment opportunities are the main factors influencing students’ decisions in choosing a destination country (Varghese, 2013). This is evident from the decline in the student flow to UK
when the post-study visa rules changed and the fact that the flow increased dramatically when the country revised these rules in 2019 (Varghese, 2019). A foreign degree enhances employment opportunities and returns on investment when the student is employed in the host country.

**The Diaspora’s Contributions to India**

The diaspora makes significant contributions to India’s development in many respects. The most visible form is remittances. Global remittances reached USD 689 billion in 2018, with India accounting for USD 79.0 billion (World Bank, 2019). Although India accounts for only 6% of the global diaspora population, it receives nearly 11.5% of global remittances. On average, remittances by the Indian diaspora increased by nearly USD 2.9 billion annually in the past three decades. This reflects the high levels of income of the skilled Indian diaspora.

In 2017, three states accounted for 65% of remittances to India. Kerala received 40%, Punjab 12.7% and Tamil Nadu 12.4% (World Bank, 2019). The state of Kerala, which has the largest migrant population in India experienced an increase in remittances in the second decade of the 21st century, even though the number of people migrating declined, especially to the Gulf countries (Rajan and Zacharia, 2020). Once again, this is due to the high remuneration received by highly skilled migrants.

Technology transfer is another major aspect of the Indian diaspora’s contributions. The majority of IT professionals who migrate come from India. While this benefits their host countries, at a later stage, many contribute to the advancement of the knowledge based economic sectors in India. The development of hubs such as Bangalore, Gurgaon and Hyderabad would not have been possible without the Indian diaspora’s technological contributions and investment.

The Indian diaspora has also boosted India’s image abroad. The success of Indian IT professionals globally and in the US in particular, created credibility and trust in India’s intellectual abilities. Indian IT professionals, biotechnologists, financial managers, scientists, architects, lawyers and professors have helped to create an image which brands Indians as well-educated, hard-working professionals with a global outlook. This has also enabled Indian graduates to take up leadership positions in renowned companies and outsource to companies located in India.

The Indian diaspora has also boosted India’s social and political image. As noted earlier, members of this diaspora have become Prime Ministers, Presidents and Vice Presidents in some of their host countries, and occupy high positions in the corporate world.

The contribution of these ‘social remittances’ (Levitt, 1998) has been substantial. The diaspora has influenced political decision making in India, with the introduction of market-friendly reforms in the 1990s in India reflecting such influence. The Indian diaspora’s socialisation in mature market economies influenced pro-market economic policies in their home country, including in the education sector. India started establishing private universities from the year 2000 and the private sector currently accounts for nearly 78% of higher education institutions and nearly two-thirds of student enrolment. Many private universities in India collaborate with institutions abroad.

**Concluding Observations**

The Indian diaspora has a long history. It includes involuntary migration during the colonial period and voluntary migration in post-colonial times. Post-independence, there were three major channels of migration, namely, low- and semi-skilled migration, mainly to the Middle East; migration of the highly skilled to developed countries, especially to the US; and cross-border student mobility to seek higher education and to remain in the host countries to become part of the Indian diaspora.

India initially regarded the diaspora from the perspective of ‘brain drain’ since the best educated from prestigious public higher education institutions were the first to migrate to developed countries. However, it now regards this phenomenon as an asset that is part of ‘brain gain’. Highly skilled Indian diaspora have assumed positions of responsibility in the corporate world, in academia (including Nobel laureates) and in the political and social spheres in some of their host countries. They have also promoted technology transfer and invested in many sectors of the Indian economy.

India receives the highest share of remittances, which have increased substantially in the past decades, reflecting the high levels of income of skilled Indian diaspora. Such migration is dominated by IT professionals who have contributed to the development of technology-based economic sectors. The technological hubs in Bangalore, Gurgaon and Hyderabad are visible examples of the diaspora’s contributions.

Indian professionals’ success at the global level has created a new image of India and enhanced trust in the country’s intellectual abilities and professional competencies. The social and political roles played by the Indian diaspora have also helped to improve India’s global image.

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