

THE INTERNATIONAL JOURNAL OF HUMANITIES & SOCIAL STUDIES

Internationalization of Higher Education: A Case Study of Indian Student Mobility to the USA

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Abstract:

The role of education has changed in the recent years, now education has evolved as a tradable commodity in the global arena. This with the inclusion of education under the framework of GATS has made countries across the globe active participants in the ongoing internationalization of higher education. The process of internationalization of higher education is facilitated through the cross border trade. Trade in education through cross border takes place when a provider, course material or programme, teacher or student crosses the national boundaries to deliver the services. The most visible form of cross border trade in education is predominantly through the movement of students to foreign universities abroad termed as "Student Mobility". With each year increasing number of higher education opportunities to study abroad are contributing to the rising number of student mobility.

Therefore with the discussion on the issue of the internationalization of education services, paper comprehensively examines the recent pattern and composition of international student mobility globally and with respect to India. The paper particularly focuses on the streams witnessing majority of international students and looks into the underlying causes.

Keywords: Cross border trade, internationalization of higher education, student mobility, GATS

1. Introduction

The growing integration of economies across the globe has intensified the need for an education that meets the need of a competitive and quickly-changing marketplace. This together with large scale commercialization of the higher education industry and integration of the labour market, education evolved as a tradable service. With the role of education as a tradable service, internationalization of higher education (IHE) emerges in consequences. One of the key outcomes of IHE has been the phenomenal growth in international student mobility since 1998. The large flow of internationally mobile students not only fuelled the process but also the most visible form of the IHE currently.

Thus, paper attempts to address the issue of IHE and focuses on student mobility across the globe with particular reference to the student mobility from India. In this domain, USA is the most preferred destination for Indian students seeking education abroad. Therefore, paper deeply explores flow of Indian students to USA by looking at the current trend, pattern and composition of the flow. The paper is divided into five sections. First section deals with the introduction. The section 2 briefly describes the internationalization of higher education as a propeller of student mobility followed by the global trend of student mobility in section 3. Section 4 examines the trend, pattern and composition of student mobility from India. This section thoroughly analyse the flow of Indian student to its most popular destination USA and the underlying causes for the observed pattern. The last Section draws some conclusion.

2. Internationalization of Higher Education as a Propeller of Student Mobility

Today, knowledge is a key to economic growth and development, and a lack of it, is a major constraint for economic growth and social progress. It has been argued that productivity gains and growth rate of economies are determined by the performance of the knowledge based sectors (Chen & Dahlmans 2004). This is even more challenging for the countries which are lagging behind in terms of technology to catch-up with other well advanced countries in order to maximize their economic output (World Bank, 1999). These challenges can be converted into opportunities, if the countries rapidly adapt to the changes that are taking place keeping globalization particularly in mind. Globalization demands labour to have international and intercultural skills to be able to perform professionally in an international and multicultural global set up. This places more responsibility on institutions producing skilled labour i.e. higher education institutes. In response to this higher education system are expanding across the globe. Such expansion can be realised in terms of international exchanges and collaborations among academics, students and institutions. In addition, universities providing higher education have not only become global in their operation and orientation but have also become another sector offering investment opportunities for educational service for the global market. As a result internationalization of higher education (IHE) has emerged as a phenomenon to utilize all the emerging opportunities.

UNESCO defines IHE as “The higher education that takes place in situations where the teacher, student, program, institution or provider and course materials cross national jurisdictional borders” (UNESCO, 2006). One of the key components of IHE involves the movement of students from domestic to foreign countries termed as “Student Mobility” to foreign universities abroad. UNESCO (2006) defines internationally mobile students as “individuals who leave their country or territory of origin and travel to another for the purpose of studying there”.

Countries such as China, India and Korea rank high in terms of the number of students seeking cross border education. However, other forms of cross-border trade in education such as courses based e-learning, joint or branch campuses, franchising arrangements between foreign and local providers have also gained momentum.

3. International Students: A Global Picture

The market for international students is increasingly expanding as reflected by increasing enrolment figures for international students. Over the past three decades, the number of students enrolled outside their country of citizenship had risen dramatically, from 0.8 million worldwide in 1975 to 4.3 million in 2011, a more than fivefold increase (see figure 1). Projected by UNESCO this number may rise to 8 million international higher education students by 2025. This mobility of students brings intellectual and cultural diversity to the institutions and also a source of revenue for the receiving country. On the other hand a source of knowledge and skills for their home country upon their return.

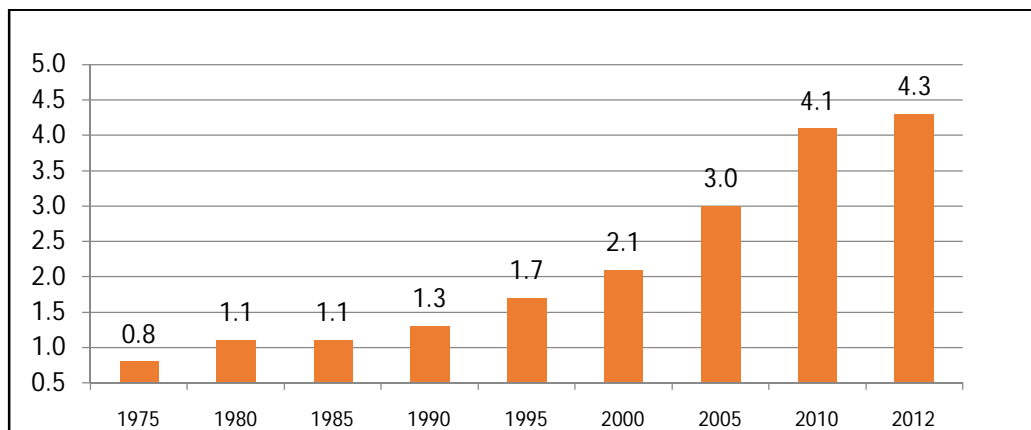


Figure 1: International Students Worldwide, Selected Years (in millions)
Source: OECD Education at a Glance, 2013

Other significant features explained by data is the phenomenal growth in the number of international students over the last decade, i.e., from the year 2000 to 2012. The number of foreign students has grown double from 2.1 million in 2000 to 4.3 million in 2012 (Education at Glance, OECD 2013). For the year 2012-13 countries hosting the highest percentage of international students are United States of America, United Kingdom, China, Germany, France and Australia (see figure 2). USA is the most preferred destination with 19% of total international students followed by UK hosting 11 % of international students and China at third place with 8 % of total international students.

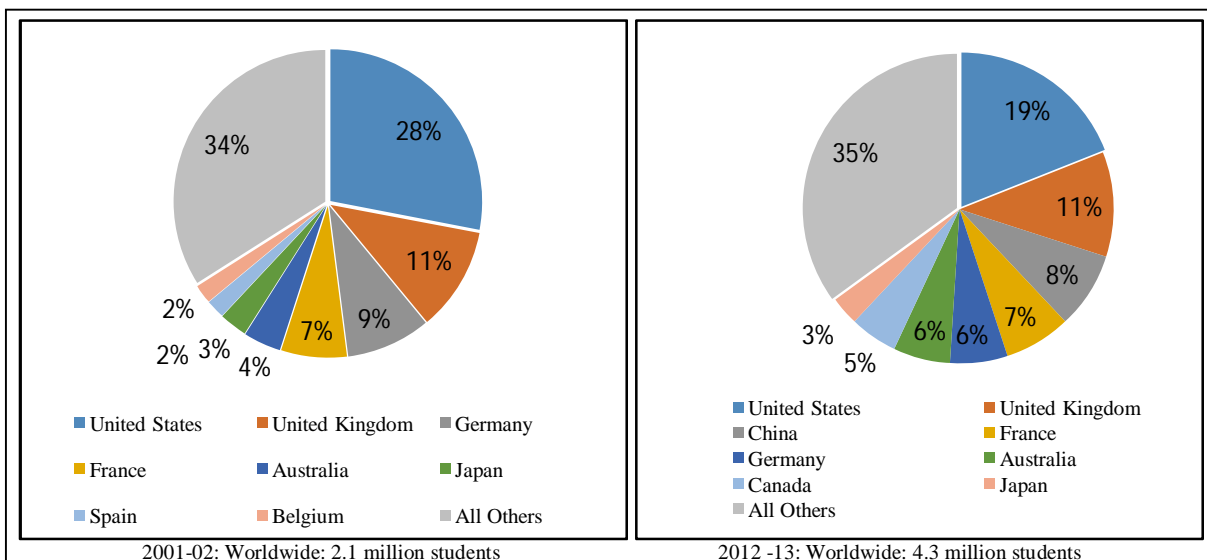


Figure 2
Source: Atlas of Student Mobility, 2013

Another important revelation from data is the expansion of the range in destinations for study abroad. For instance, US hosted 28% of world's mobile students in the year 2000, but this figure dropped to 19% for the year 2012, though absolute number of mobile students in the USA, increases from 5,47,867 in 2000 to 8,19,644 in 2012. This is mainly attributed to the emergence of other countries like, China, France, Australia, Canada and Japan as a popular destination for international students.

4. Indian Student Mobility

Asia as an epicentre for international students, accounts for total 1,915,283 students which constitute nearly 54 percent of all internationally mobile students in 2012 (UNESCO, 2012). China and India are the dominant sources of student mobility. Together these two countries account for more than a quarter of all students studying outside their home countries. Overall, India sources the largest number of internationally mobile students after China. A total of 8, 83,837 students from India and china were studying outside their country, out of which china provides 6, 94,365 students to world and India provides total 1,89,472 students in 2012 (UNESCO). In 2012, Indian students constituted 5.5 percent of all international students which was 6 % in the previous year (see table 1). The data indicates that there has been an increasing trend for the percentage of Indian students in total international students both in world and in Asia. The increasing enrolment implies that there has been a steady demand for foreign higher education in India. In consequences this has made India one of the key markets targeted by the leading providers of higher education. However the trend started declining though minimally from 2010 onwards. This can be due to the increasing enrolment of international students from other parts of countries as well.

	India	South-Eastern Asia	World	Asia	India's Growth	% of World	% of Asia
1999	55670.0	144554.0	1712750.3	756776.9		3.3	7.4
2000	62575.6	133906.0	1788132.8	776640.0	12.4	3.6	8.1
2001	74501.8	137806.9	1892650.7	829377.0	19.1	4.0	9.0
2002	100522.0	154672.4	2139181.9	978757.9	34.9	4.8	10.3
2003	119157.6	161134.1	2355448.6	1114430.9	18.5	5.1	10.7
2004	134082.4	153663.0	2382864.3	1190472.2	12.5	5.7	11.3
2005	146267.1	154679.1	2500087.6	1271747.9	9.1	5.9	11.5
2006	145772.6	158131.9	2510249.8	1270245.6	-0.3	5.9	11.5
2007	161741.3	173114.0	2668319.4	1368383.7	11.0	6.1	11.8
2008	183910.1	189582.3	2839865.6	1501901.6	13.7	6.6	12.2
2009	203496.6	208288.8	3051656.9	1637882.6	10.7	6.7	12.4
2010	209017.6	216680.6	3239355.9	1742691.7	2.7	6.5	12.0
2011	204249.0	221172.1	3429881.5	1862360.9	-2.3	6.0	11.0
2012	189472.0	224482.9	3509708.2	1915282.9	-7.2	5.5	9.9

Table 1: Number of Indian Student Abroad

Source: UNESCO

4.1. Countries Receiving Indian Students

Internationally mobile Indian students are particularly concentrated in English speaking host countries like the USA, the UK, and Australia. Where USA is the prime destination receiving 51 percent of all Indian students in 2012 (see figure 3). Despite attracting over half of all Indian students, US has lost a considerable portion of its market share, as its share reduced from 88.9 % in the year 2000 to 51 % in the year 2012 (number of Indian student in USA in 2000 increased from 55,664 to 96,754 in 2012 whereas total number of Indian students abroad increased from 62,575 to 1, 89,472 for the same period). This can be attributed to the fact that other countries like UK and Australia have succeeded in attracting more Indian students over time and expanded their presence in the Indian student market. Countries like Germany, France, Canada and New Zealand are also becoming attractive destination for Indian student but unable to catch the popularity that USA has gained (see figure 3).

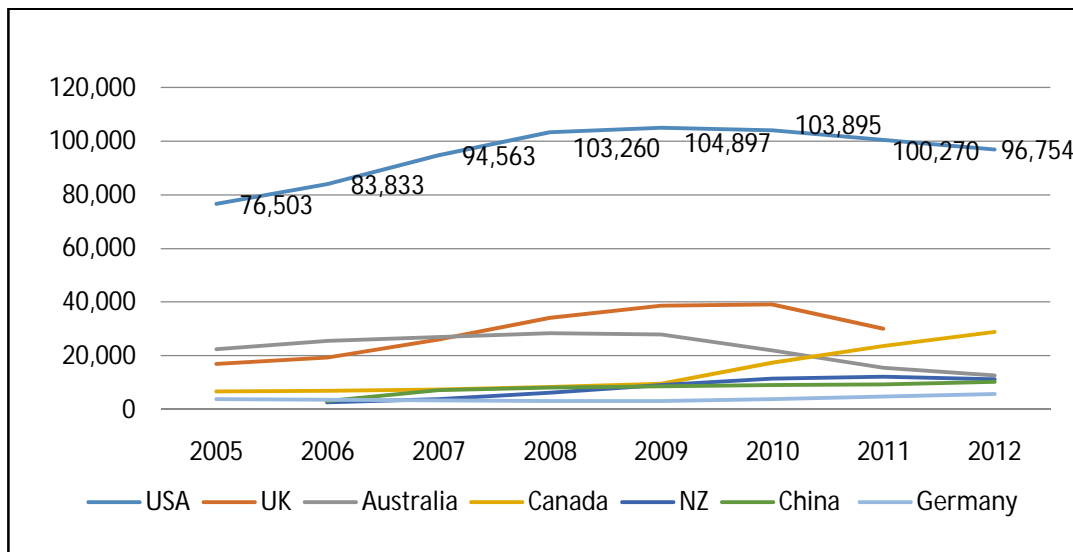


Figure 3: Indian Students in Top Destination Countries

Source: IIE Open Door, UK Higher Education Statistics Agency, Australia Education International, Citizenship and Immigration Canada, New Zealand Ministry of Education, China Scholarship Council, DAAD/HIS (Germany)

4.2. Indian Students in the US

Large numbers of Indian students have sought an overseas education over the past two to three decades. Many of these mobile students have been drawn to the USA because of its highly regarded higher education system, availability of funding (especially at the graduate level), and the use of English language as the medium of instruction. In the US there are now 40 percent more international students studying at USA colleges and universities than a decade ago, and the rate of increase has risen steadily for the past three years (IIE, Open Door). More than one-third (38.5 per cent) of all foreign students enrolled in the USA were from two ‘Rising Southern Economies’ (RSE) countries, viz., India and China (IIE, Open Door). India ranked first in the number of international students enrolled in USA universities for eight consecutive years from the academic year 2001-2002 to 2009-10, but there was reversal of trend after that. In 2009-10, the increases levelled off, and China became the top sender and remains in that position. In 2012-13 Indian students in the USA dropped 3.5% compared to the previous year, marking three consecutive years of decline (see table 2). However, data for the latest year i.e. 2013-14 shows that the number of students increased by 6.1% from previous year reaching a total number of 102,673 students for the year 2013-14.

Year/Country of Origin	China	India	Korea	World
2000-01	59,939	54,664	45,685	5,47,867
2001-02	63,211	66,836	49,046	5,82,996
2002-03	64,757	74,603	51,519	5,86,323
2003-04	61,765	79,736	52,484	5,72,509
2004-05	62,523	80,466	53,358	5,65,039
2005-06	62,582	76,503	59,022	5,64,766
2006-07	67,723	83,833	62,392	5,82,984
2007-08	81,127	94,563	69,124	6,23,805
2008-09	98,235	1,03,260	75,065	6,71,616
2009-10	1,27,628	1,04,897	72,153	6,90,923
2010-11	1,57,558	1,03,895	73,351	7,23,277
2011-12	1,94,029	1,00,270	72,295	7,64,495
2012-13	2,35,597	96,754	70,627	8,19,644
2013-14	2,74,439	1,02,673	68,047	8,86,052

Table 2: Foreign Student by Countries of Origin in the USA (for selected years)

Source: Compiled from IIE, Open Door

Reasons for this increase in Indian mobile students vary from improving socio-economic situation, higher aspirations to other attractive factors such as more and better employment opportunities, social status, lifestyle and chances for migration. At the same

time favourable policies adopted by USA to attract more and more Indian students are also contributing in the increasing enrolment of Indian students in the USA.

4.2.1. Indian Students in the US by Academic Level and Field of Study

- Academic level: “Enrolment by academic level varies by place of origin, with students from South and Central Asia more heavily concentrated at the graduate level, and students from Southeast Asia more concentrated at the undergraduate level, while students from East Asia are almost evenly split between undergraduates and graduate students” (IIE Open Door Report). For the academic year 2013-14, Students from India are primarily studying in degree programs at the graduate level (59.5% of the total), and at the undergraduate level (12.3 %), with the 27 percent studying in Optional Practical Training¹ (OPT) and rest 1.2% in non-degree programs. The percentages of students are increasing in graduate programs (this figure was 56.4% in the year 2012-13), whereas for the OPT the figure has declined as compared to last year (it was 18.7% in 2009-10 and reached to 28.8% in 2012-13). However, undergraduate programme is also facing decline but only minimal i.e. from 14.5 in 2009-10 to 13.2 in the year 2012-13 (see table 3).

Level/Year	2013-14	2012-13	2011-12	2010-11	2009-10
Undergraduate	12.3	13.2	13	13.5	14.5
Graduate	59.5	56	58.9	61.2	65.1
OPT	27	28.8	26.7	23.7	18.7
Other	1.2	1.6	1.5	1.5	1.7

Table 3: Indian Students in the USA by Academic Level (% of Total Students)

Source: IIE, Open Door (various years)

- Field of Study: The favoured fields of study for Indian students going abroad for higher education include science, technology, engineering, and mathematics (STEM). This can be easily seen from table 4 showing the enrolment of Indian students in the USA for the last five year. The breakup of enrolment into STEM and Non-STEM shows that only a quarter of Indian students take admission in Non-STEM programmes. Interestingly, STEM fields are popular fields within the country itself.

Recent data for the year 2013-14 shows that out of total number of students enrolled in USA, Engineering field received majority of the Indian student making this percentage at 38 %, followed by Mathematics and Computer science with 26 %, while Business and Management received 11.7%. When Science, Technology, Engineering & Math (STEM) considered together, this account for 78.6% of total students enrolled. Other fields which received major number of students from India include physics and life sciences (10 %) and health professions (4.7 %). Fields like education, humanities and intensive English are not so popular among students, witnessing low number of enrolments (see table 4). For China and South Korea majority of the students opt for business/management with 28% and 17 % respectively. Field of engineering is the second choice for Chinese students (19.8%) and for Korean students it is fine and Applied Arts (12.8%). However, engineering field is also witnessing majority of Korean students (12.7 %). Comparison of student enrolment in STEM courses with China (41.6%) and Korea (29.7%) indicates that India (78.6%) is the major supplier of students in such advanced courses in the USA.

Field of Study	2009-10	2010-11	2011-12	2012-13	2013-14
TOTAL STUDENTS	1,04,897	1,03,895	1,00,270	96,754	1,02,673
STEM	73.7	73	74.6	74.6	78.7
Engineering	38.8	36.9	36.7	35.6	38
Health Professions	4.9	4.9	4.8	4.7	4.7
Math/ Comp. Science	19.8	19.8	21.7	23.1	26
Physical/ Life Sci.	10.2	11.4	11.4	11.2	10
Business/ Mgmt.	15.3	15.2	14.1	13.7	11.7
Education	0.7	1	0.6	0.5	0.5
Fine/ Applied Arts	1.4	1.3	1.3	1.7	1.4
Humanities	0.6	0.6	0.7	0.5	0.5
Intensive English	0.2	0.7	0.1	0.1	0.2
Social Science	3	3	3.2	3.5	2.7
Other	4.2	4.7	4.3	4.6	3.4
Undeclared	0.9	0.5	1.1	0.8	1.1

Table 4: Fields of Study for Indian students in USA (% of Total Students), 2013-14

Source: IIE (2014), Open Doors

8 Optional Practical Training (OPT) is a benefit of the student visa which allows students one year of work authorization, normally following the completion of a degree.

4.2.2. STEM Field as a Key Driver of Indian Student Mobility to the U.S

Innovation primarily through the invention, development, and profusion of new technologies determines economic progress and development of any country. Technical innovation which in turn is a key driver of economic growth usually requires the expertise of specialists in the fields of science, technology, engineering, and mathematics (STEM). Thus, workers with knowledge in STEM fields play a direct role in driving economic growth and development. USA is the most popular destination for STEM programs among mobile students across the globe. The share of STEM enrolments among all the international students in the USA (37%) is the largest, followed by the UK (26%), Canada (25%) and Australia (21%). In fact, total enrolment of international students in STEM fields in the USA (3, 00,898) in 2013 is more than the aggregate of that in the UK (1, 11,795) Australia (69,459) and Canada (46,863). In 2013, more than one in three international students in the USA were enrolled in STEM (IIE, Open Door, 2013). This translates to over 3, 00,000 international students, a 27 percent increase from five years ago (2, 37,000).

From India more and more number of students are taking admission in STEM programs in the USA. The current need for workers with specialised skills in STEM fields provides a promising employment prospects to the students graduating from these fields. A study on employability of Indian graduates² finds that only 19 per cent engineering graduates in India are employable and only 5 per cent graduates from other streams are fit for employment. In such scenario foreign education in advance courses like STEM plays a very promising role in providing better employment opportunities. India occupies first position in terms of total students enrolled in STEM programs in the US followed by china with 41.6% and South Korea by 29.7%. Nearly seven out of 10 students from India enrolled in a STEM program in 2013 (see Table 2). Total 41.1% students are enrolled in STEM programmes in the USA whereas India provides 78.7% STEM students. Majority of international students (58.9%) in the US are enrolled in the Non STEM programmes while Indian students accounts for only 21.3% Non- STEM students in the USA. This implies that STEM programmes are more popular field for foreign education among Indian students (see Figure 4).

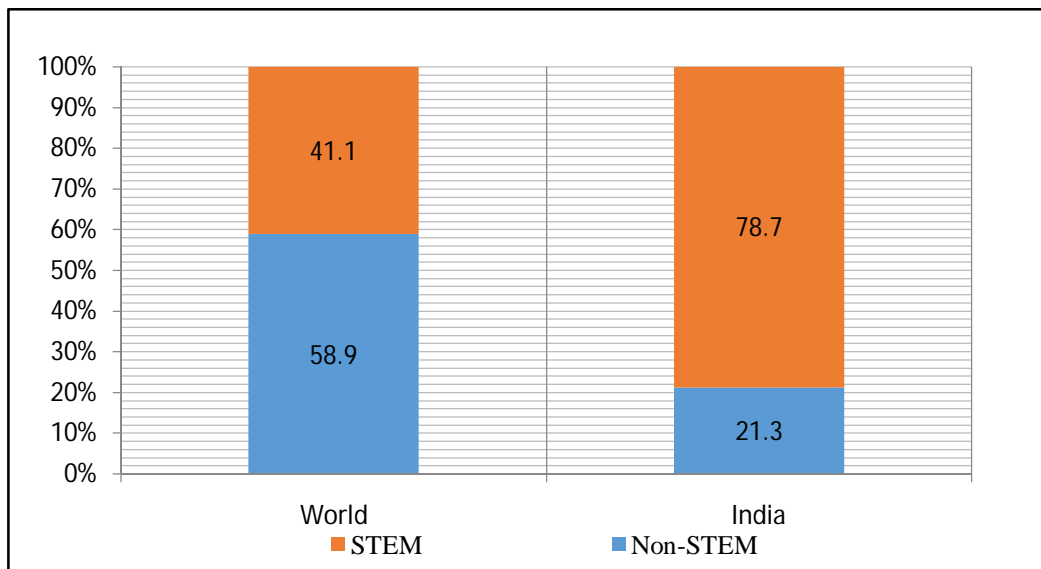


Figure 4: Enrolment of Indian Students in STEM field vs. Total International Student in the USA by Field of Study (2013-14)
Source: IIE (Open Door), 2014

Within STEM programmes India provides as much as twice students (38%) in engineering programmes compared to total international students enrolled in engineering fields in the USA (19.2%). The engineering field followed by mathematics and computer sciences with 26% Indian students while this figure for all international students in the USA is 10.3%. Physical and life sciences (10%) and Health profession (4.7%) together accounts for nearly 15% of total Indian students while all international students in USA accounts for nearly 12% in these programmes (see Figure 5).

² According to a latest report by Aspiring Minds, India's Leading Employability Solutions Company, 47% graduates in India are not employable in any sector (Aspiring Minds' National Employability Report, Graduates (Annual Report 2013)).

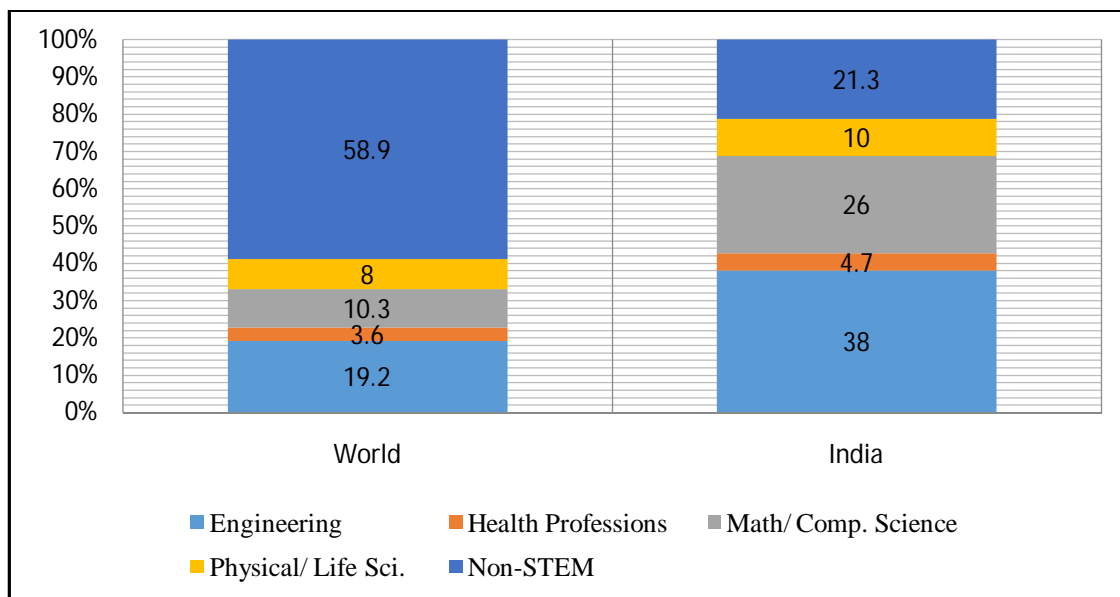


Figure 5: Enrolment of Indian Students in STEM field vs. Total International Student in the USA by Field of Study (2013-14)
Source: IIE (Open Door), 2014

Due to demand for skilled workforce each year more and more number of Indian students are taking admission in STEM programmes. But supply side factors also contribute in promoting enrolments in such programmes. In the presence of worldwide competition for talent, higher education institutes aim to attract more STEM students to their institutions. In USA, policies focused on attracting STEM students, exemplified by the extension of Optional Practical Training (OPT) to a maximum of 29 months for international graduates with STEM degrees. In addition to this, provision like granting additional visas/green-cards³ for students with STEM from USA institutions under section S. 744 can be associated with USA aspiration to promote and retain such high number of skilled students in their labour markets itself which also broadens the opportunity for students who want the permanent settlement after completing their course in USA.

5. Conclusion

The process of globalization initiates with the continued growing interdependence between the countries resulting from the increased economic integration via trade, foreign investment, foreign aid, and international migration of people and ideas. This has also broadened the horizon for cross border consumption by moving to the location of the service provider. The emergence of multilateral trade negotiations like GATS, further widen the scope for the trade in services and for the first time in the history of trade negotiations, services were included under the negotiations. Tariff and other barrier to trade in goods and investment have also been substantially reduced in recent years.

The inclusion of service sector into the trade negotiation has produced a realistic range of migration option based on increasing opportunities to travel, live, study or work abroad. The international migration from India not only constitutes the movement of high skilled professional but also the large number of students for overseas education. Fields like science, technology, engineering and mathematics (STEM) are among the favourite choices for these students. The interesting point is to note that these subjects are also the top choices in the India too. In the current era developed countries are witnessing the shortage of skilled labour force especially in the STEM fields. Given this shortage the developed continuously contesting for skilled human capital and the situation is rightly referred as “war for talent” in some recent literature.

This has major implication for the India at both fronts: STEM scholars and STEM workers. These STEM scholars are the potential labour force in the future labour market. Also, as India has comparative advantage in the skilled labour force in the technical field, therefore a, major source of export of services through both the GATS modes: cross border supply and movement of natural persons. These skilled labours are also a major source of income and remittances for the Indian economy. In such situations, USA lucrative offers as a major draw card to attract students in the technical fields can possibly results into the permanent residency of students there. Therefore it will be another addition in the pool of drained skilled labour from India. Hence, the migration of these Indian students for offshore education should be considered as “Drain Not Avoidable” (DNA). This has a major policy implication for the government that is to tap their potential.

³US bill on immigration legally known as “Legal Immigration under the Border Security, Economic Opportunity and Immigration Modernization Act 2013” proposed up to 25,000 more visas/green-cards to be allotted to foreign students who have earned a master’s degree or above in science, technology, engineering or math (STEM).

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