

NARESH KUMAR

National Institute of Science Technology & Development Studies,
New Delhi, India
e-mail: nareshkumar@yahoo.com

***ALLAKHVERDYAN ALEXANDER***

Institute of the History of Science
and Technology, Russian Academy of Sciences
e-mail: sisnek@list.ru



The Cross-Border Mobility of Students: a perspective from BRIC Countries

Policies of economic liberalization have transformed the socio-economic structure across the world. This has led to a flow of knowledge and ideas by increasing the cross-border mobility of students, in particular, from developing countries to developed countries. It has also affected higher education and students from developing countries who are looking towards the USA and Europe for their studies. Though the mobility of students to other countries for higher education is not a recent phenomenon, it has recently increased significantly. Consequently, host countries are making efforts to attract more foreign students to their universities. We observe that newly industrialized countries, such as India and China, are a major source of international students and are the largest recipients of US science and engineering doctoral degrees. Therefore, in this paper we attempt to analyse the emerging pattern of student migration for higher education from BRIC countries (Brazil, Russia, India and China) to the USA and vice versa. The analysis indicates that BRIC countries offer a big market for flow of students to the USA, which could affect future pathways of international students' mobility.

Keywords: Student mobility, Host countries, BRIC, Liberalization, Cross-border migration, International education

Introduction:

There has been much attention given to the mobility of students and the number of students going abroad for post secondary education. The migration of students and scholars has existed since ancient times; for example, the exchange of scholars between India and China was prevalent from the first millennium. Recently, however, the process of globalization has accelerated the mobility of students from developing and Sub-Saharan African countries to the U.S. and Europe. According to the United Nations Educational Scientific and Cultural Organization (UNESCO), students from Sub-Saharan Africa are the most mobile where one in 16 is studying at an overseas university, while only one out of every 250 students in North America (the US, Canada and Mexico) goes overseas for higher education (Rizvi). The major share of international mobility of students is from developing countries, particularly from

China and India, due to the push and pull factor (Altbach, 2004). Therefore, globalization of education has opened the doors to a global market for higher education. Foreign education is a growing sector of the international economy. It is significant that only India has spent nearly 0.5 billion US dollars every year on foreign education. Consequently, many countries are trying to open up markets for foreign students by laying an emphasis on attracting more foreign students and maximizing the market potential of foreign study. The flow of students to foreign universities may have economic implications in the future that need appropriate analyses. Since Brazil, Russia, India and China (BRIC) are countries with emerging economies, and they are a big source of the international market for foreign studies (Kumar, 2008), an attempt has been made here to analyse the mobility of BRIC students to the US and vice versa.

BRIC constitutes a diverse political, economic and cultural entity. So it is not an easy task to make cross-country comparisons. India and China are very large countries, whereas Russia and Brazil are not as large in terms of population. Although BRIC is categorised as *developing*, there is variation in their national educational capacities and propensity for international education. However, the economies of these countries are growing so that part of the middle class is able to access education from foreign providers because domestic education is inadequate in quantity as well as quality. They are linking large education markets with Anglophone and European countries, which are the major recipient of foreign students, particularly the USA and Europe. Moreover, the processes of globalisation and economic development have influenced post secondary education, as globalisation is viewed in terms of growing interconnectedness. In industries at the cutting edge of the knowledge economy, such as ICT, financial management, research, science and engineering, the pool of globally mobile labour is expanding (OECD, 2002). As a result, the mobility of students is growing as demand for highly skilled professionals is increasing (OECD, 2004). Further, the cross-border mobility of students for higher education has become a vital source of revenue for host countries as migration of students has become a market driven activity. Recent trends indicate that cross-border mobility of students is usually toward the USA and Europe from developing countries. Among European countries, the UK is the top destination for foreign students, followed by France and Germany. However, Australia, New Zealand and Canada are also attracting a substantial share of foreign students, as given in Figure 1. China is on top for attracting foreign students in Asia. Thus, it is evident that the cross-border mobility of students for higher education is an emerging and budding sector.

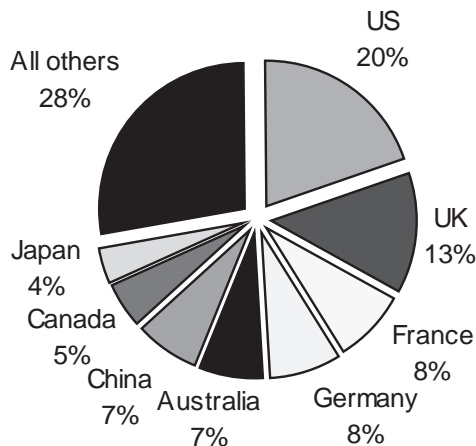


Figure 1 : Global destination for international students at post secondary level (2008)

Source: <http://www.atlas.iienetwork.org/?p=48027>

Mobility of students

In most developing countries the demand for higher or post secondary education is increasing. The factors responsible for this change may be pull and push factors along with demographics and growth of the knowledge economy. It is impossible to fulfil the rising demand for higher education with existing universities and resources. Therefore, alternative new ways to provide education are being recognized in the form of cross-border education. Thus, mobility of students from developing economies to developed economies can be understood from two different perspectives (Knight, 2005): (I) a vertical shift downwards from student mobility to programme and provider mobility and (II) a second horizontal shift which signifies substantial change in orientation from development cooperation to competitive commerce. This latter approach varies from country to country, however; few countries have adopted a full-blown trade approach so far. Studies show that economic development depends upon its capacity to produce and absorb knowledge (Varghese, 2008) because knowledge is considered a commodity to be traded with faster movement than any other commodity. So, higher education has become a market-oriented commodity that attracts foreign capital and makes profits more than other conventional sectors. This has led to the internationalization of education by increasing the cross-border migration of students.

Recently cross-border mobility of students has received growing attention, as more and more students are migrating to other countries for higher education. Many developed countries look at cross-border education as an emerging market and focus on the possible benefits of internationalizing their education in terms of economic perspectives. Governments of these countries are prepared to make strategies that will reap the benefits of cross-border education by assuring education quality. Universities in developed economies, such as the US, Germany, Australia, France and the UK, attract a large number of foreign students, and some of these universities earn a considerable amount of foreign capital. It was estimated that nearly 3.0 million students were studying abroad, and the market for higher education is continuously increasing internationally. Studies (Bohm et al., 2002) show that the demand for cross-border higher education will increase to more than 7.0 million by the year 2025. Thus, there is a huge market potential of higher education in the coming years.

The USA is the largest recipient of foreign students, followed by the UK and France. In 2006–07, the US received about 163,433 students from BRIC countries compared to the total number of 582,984 international students. It shows that the US receives approximately 28 % of its total international students from BRIC. According to the International Institute of Education, developing countries like Brazil, China and India, which constitute part of the BRIC block, are major senders of students to the US. Figure 2a shows the emerging mobility trends of students from BRIC countries to the US. It is evident from the figure that India is the largest sender of students to the US, followed by China, Brazil and Russia. So, the mobility of students can be understood as a process of internationalizing higher education.

It is not only students from developing countries like BRIC that prefer the US for higher education, but a reverse migration of students is also happening. Lately a good number of students from the US have been coming to Brazil, China, India and Russia (Figure 2b), though the numbers are not high. It is significant that India is among the largest senders of students to the US, while it receives the least students in return. However, the flow of students seems to be increasing from the US to India after 2006.

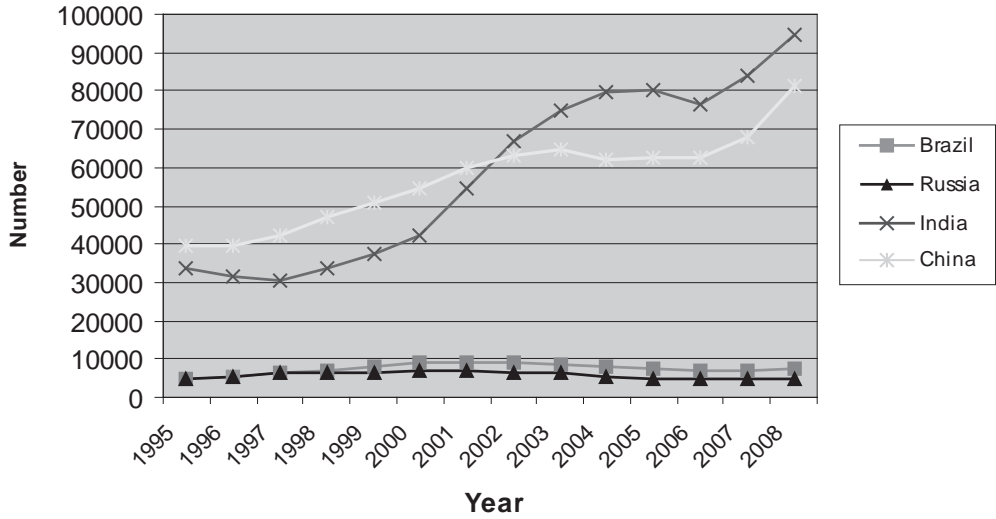


Figure 2a: Mobility of students from BRIC to US

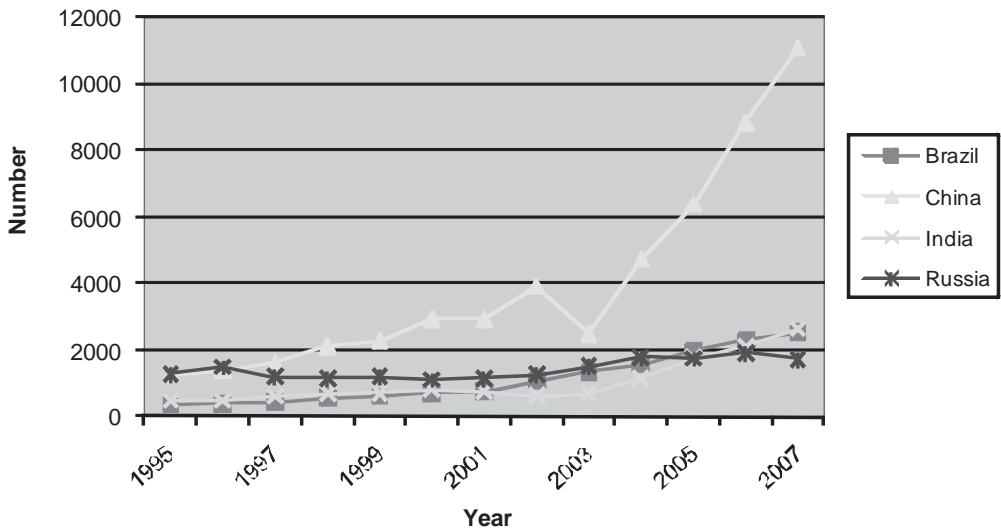


Figure 2b: Mobility of students from US to BRIC countries

Relevance of the Study and Methodology

The globalisation of higher education can be seen as a commodity for trade. Recent trends indicate that mobility of students is higher from developing countries to developed countries. Since BRIC countries are the fastest growing economies, this explains why they are the largest senders of students to the US. Therefore, a suitable analysis is needed to capture a reliable pattern of the cross-border flow of students from BRIC countries to the US and vice versa. Data (Open Doors, 2008) pertaining to the mobility of students is collected

for the period 1995–2008 and analysed using a substitution model. To analyse the competitive mobility trends of students, the Fisher-Pry (Fisher and Pry, 1971) substitution model is applied. The model is represented mathematically as:

$$\log\left(\frac{f}{1-f}\right) = a + bx$$

where f is the fraction of new technology or commodity and $(1-f)$ is a fraction of older one at any time. The model is based on the following assumptions:

Technological advances can be considered as competitive substitutions of one method of satisfying a need for another.

If a substitution has progressed as far as a few per cent, it will proceed to completion.

The rate of fractional substitution of new for old is proportional to the remaining amount of the old left to be substituted.

Assuming that the mobility of students is a function of the respective country's economy and is similar to competing technologies or commodities, which behave in a similar manner, the technology substitution model is applied in the study. Studies show that substitution tends to proceed via a constant percentage. A nonlinear least square method is applied to estimate the model parameters using a SYSTAT package (SYSTAT, 1994). Model parameters are obtained by a quasi-Newton iterative technique (Table 1a-1b).

Table 1a: Parameter estimates for mobility of students to US

Country	a	B	MS	CRs
Brazil	-2.448	-0.042	0.026	0.601
China	0.029	-0.030	1.427	0.705
India	-0.667	0.057	1.379	0.775
Russia	-2.443	-0.074	0.018	0.826

Using the values of parameter estimates, the shares of students from Brazil, China, India and Russia are made up to the year 2015 (Figure 3a). Similarly, projections for the inflow of students from the US to BRIC countries are also made for the same period, as illustrated in Figure 3b.

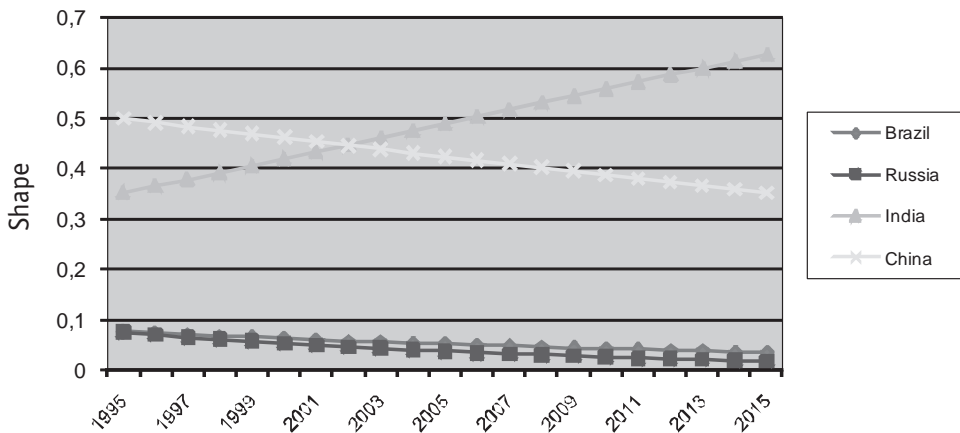


Figure 3a: Projections for mobility of students from BRIC to US

Table 1b: Parameter estimates for mobility of students to BRIC

Country	a	b	MS	CRs
Brazil	-2.134	0.046	0.132	0.451
China	-0.494	0.066	0.160	0.660
India	-1.806	-0.006	0.120	0.023
Russia	-0.372	-0.128	0.389	0.867

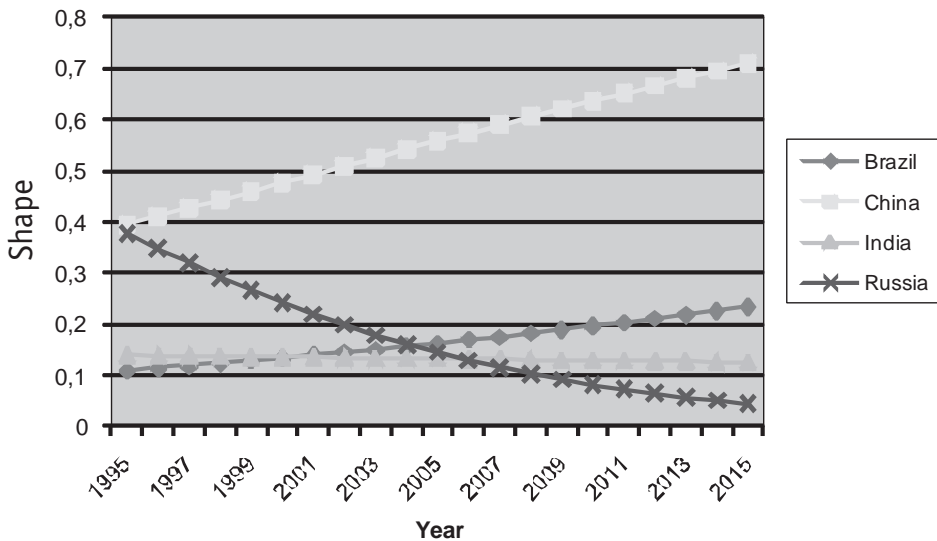


Figure 3b : Projections for mobility of students from US to BRIC

Analytical perspective of mobility and discussions

It is apparent from Figure 2a that India and China are major source countries for the flow of students to the US. It is also evident that the mobility of students from China was higher than India prior to the year 2002, but that after this China registered a reverse trend. The reason for this may be that in the process of globalisation India has shown significant economic growth. Further, it has produced a large number of secondary students that may compete in English speaking countries. On the contrary, Brazil and Russia send a comparatively smaller number of students to the US. China receives more students from the US in comparison to India, which is a matter of concern in India. This is manifest in that India receives even fewer students from the US than Brazil, though the mobility of students from the US to Brazil and Russia is comparable. Our analysis reveals that the flow of students from India to the US may increase sharply in the near future, whereas China, Brazil and Russia are showing declining trends. Conversely, students coming to Russia may sharply decline, followed by India. It is also expected that the mobility rate of students going to China may boost in the future. Similarly, the mobility of foreign students going to Brazil indicates a positive trend too.

From our analysis, a hypothetical inference can be drawn for discussion. The mobility pattern of students from and to BRIC countries reflects the national characteristics of the economy and the priority assigned to the education sector. This supports international sys-

tem theories, which suggest that national characteristics can be important factors in determining and explaining educational internationalization. Therefore, students from developed economies are opting to go to BRIC nations for their higher education. It is noteworthy that China was an emerging contender with 7 % of the global market of students in 2008, despite the US and the UK, which comprise 20 % and 13 % shares of foreign students respectively.

Estimates suggest that China will be a big market for international education in the future. This substantiates the fact that in 1997 there were only 39,000 foreign students in China, while in 2007 there were nearly 195,000 foreign students; a 5-fold increase in 10 years. This is due to China offering competitive packages to attract foreign students, e.g. living stipends, health insurance and sometimes travel expenses. In addition, the China Scholarship Council awarded 10,000 full scholarships — at a cost of 360 million Yuan (\$52 million USD) — to international students in 2007, and the Council aims to double the number of awards by 2010¹. However, India is struggling to become an attractive destination for foreign students. The new government is making efforts by proposing to open new world-class institutions. Therefore, to attract more students to BRIC requires the development of a world-class higher education system in line with the internationalization of higher education.

It is assumed that the recent market for education abroad has benefited from two points. The first one is the constant growth of developing economies, particularly in China and India, which therefore directly or indirectly impact the common family. The second point is related to the fact that in recent years, the UK, the US, Australia and Canada have all adjusted their policies one after another, relaxing visa restrictions, adjusting the percentage of new students admitted and cutting down the threshold for enrolment. This stimulates the mobility of students from BRIC countries to go abroad. Further, students studying abroad become more diversified and opt for a foreign destination to study due to the high pressures and great competition of university entrance examinations in their home countries, especially in those such as China and India. The difficulty of gaining admission in these countries makes it relatively easier to study at a foreign university.

Besides a host country's immigration policy for foreign students, the possibility to work while studying or to remain in the country upon completion of studies may be among the main reasons for the mobility of students for higher education. Employment possibilities in a host country in contrast to the students' country of origin also contribute to cross-border migration. Further, recognition of skills and foreign qualifications in the country of origin and the host country are reasons together to study abroad. Moreover, the degrees and qualifications obtained in a host country may enjoy greater international recognition (OECD, 2005). Thus, the present realities include the fact that commercial interests drive cross-border education, though the mechanisms to recognize qualifications and to ensure the quality of academic courses are still not in place in many countries. These realities present major challenges to the educational sector. In any case, we have shown that there is a huge market potential for cross-border education in the BRIC region.

References:

- Albatch, P. G. Higher education crosses borders, *Change*. March–April 2004, pp. 1–11.
Bohm, A. A. Davies, D. Meares, D. and Pearce. *Global Students Mobility*. IDP Education, Sydney, 2002.

¹ <http://globalhighered.wordpress.com/2008/09/17/china>

Fisher, J. C. and R. H. Pry. A simple substitution model for technological change. *Technology Forecasting and Social Change*. Vol. 2, 1971, pp. 75–78.

Knight, J. Cross-border Education: An Analytical Framework for Programme and Provider Mobility. In J. Smart and W. Tierney (eds.), *Higher Education: Handbook of Theory and Practice*. Springer Academic Publishers, Dordrecht, the Netherlands, 2005.

Kumar, N. International flow of students — An analysis related to China and India. *Current Science*. Vol. 94, No. 1, 2008, pp. 34–37.

OECD. Cross-border post-secondary education in the Asia-Pacific region in Internationalisation and Trade in Higher Education: Opportunities and Challenges. OECD, 2004; <http://www.oecd.org/dataoecd/38/29/33730064.pdf>.

OECD. Guidelines for Quality Provision in Cross-border Higher Education. Paris, 2005; <http://www.oecd.org/dataoecd/27/51/35779480.pdf>.

OECD. International Mobility of the Highly Skilled, OECD, Paris, 2002.

Open Doors: Report on international educational exchange. 2008; <http://www.opendoors.iie-network.org/>

Rizvi, H. Education: Students in strange land, <http://www.ipsnews.net>.

SYSTAT, SYSTAT Inc., USA, 1994.

Varghese, N. V. Globalisation of higher education and cross border students mobility. UNESCO, IIEP, Paris, 2008.