



RMMRU

Working Paper Series No. 30

**Circulation of Highly Skilled Professionals and
its Impact on Development of Bangladesh**

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Acknowledgement

This working paper was originally commissioned by Division for Africa, Least Developed Countries and Special Programmes (UNCTAD), Geneva

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Recommended Citation

Siddiqui, Tasneem & Nelofar Parvin (2012). *Circulation of Highly Skilled Professionals and its Impact on Development of Bangladesh*. (Working paper series no. 30, Dhaka: RMMRU)

INTRODUCTION

This paper focuses on the experience of highly skilled knowledge workers of Bangladesh who migrate to one or more countries stay there for a reasonable length of time and may or not take up citizenship of the country of residence. Some of them maintain frequent contacts with or move back and forth between Bangladesh and their country of residence. Again, a section of them at a certain point of time may decide to return permanently or temporarily to Bangladesh (RMMRU-DRC, 2005). The aim of this paper is to understand the effects of brain drain and circulation of highly skilled knowledge workers to the society and economy of Bangladesh.

The specific objectives of this study are:

- Who are the highly skilled knowledge migrants of Bangladesh, where do they go and how do they maintain links with Bangladesh?
- Does the migration of the highly skilled knowledge workers create a vacuum in delivering various services to its society and economy? What are the major sectors which suffers the most due to migration of the highly skilled?
- Do the highly skilled knowledge workers circulate between Bangladesh and countries of residence; do a section of them return for a short period or permanently?
- Along with pursuit of their personal interests, do their work and movement create networks at local and national levels that end up promoting social and economic development of Bangladesh? In other words, do they work as bridge between Bangladesh and their respective countries of residence or their migration experiences only produces situation of brain drain?
- Which are the sectors where the knowledge workers of Bangladeshi origin could contribute more?
- What role does the Bangladesh state play in encouraging the highly skilled knowledge workers to circulate and contribute and at the same time gain from their relationship with Bangladesh?

Impact of brain drain and circulation of knowledge workers can be studied in many areas. This paper mainly concentrates on education, investment, health, science and technology, culture and media.

Research Methods

Both primary and secondary research methods have been employed in preparing this paper hardly there exists any data on migration of highly skilled students and professionals from the country. Therefore, qualitative information gathering became the main instrument of this research. A few qualitative research on brain circulation, reports and workshop proceedings on related issues are available. Those articles, and reports constitute the secondary sources. In the global context, a good number of research article are available. They have also been consulted, particularly in developing the conceptual understanding. In order to offset the short coming of not having relevant data, case study method has been employed and primary data has been generated. Altogether 20 people were interviewed. Personal information on highly skilled knowledge workers have also been generated from different websites.

Structure of the Paper

This paper is divided into eight sections. Section II provides its conceptual understanding of linkage between circulation of highly skilled knowledge workers and development. It also defines the terms used in the paper. Section III sketches the nature of highly skilled knowledge workers of Bangladesh. Section IV, V, VI, VII and VIII present the experience of circulation and return of highly skilled migrants in five broad areas stated above. Section IX draws conclusion on these five issue areas and analyses the factors which have positively contributed to social and economic development. It also provides some policy recommendations targeting all the stakeholders, the Government of Bangladesh, the destination countries and bilateral and multilateral development partners.

Section II:

CONCEPTUAL ISSUES AND TERMS

In the twenty-first century, knowledge workers are seen as the driving force behind economic growth and development. The migration policies of industrialized and newly industrialized countries are competing with each other to attract the highly skilled knowledge workers from all over the world. Migrants desire to explore the best possible options for their lives and livelihood. Some of the highly skilled knowledge workers in developing countries may not have sufficient opportunities to utilize their skills in their

countries of origin and it is therefore natural that a number of them from developing countries continue to migrate.

Highly Skilled Knowledge Workers: OECD Canberra Manual (1995) defined highly skilled as those who completed an undergraduate education in a scientific or technological field; and/or employed in a science or technology-related occupation. When highly skilled workers move from origin to one or more destination countries they are termed as highly skilled migrants or knowledge migrants. This definition only incorporates highly skilled persons from science and technology background. It excludes highly skilled professionals of social sciences, humanities and business background. This paper defines highly skilled / knowledge workers as those persons who possess specialized knowledge and are involved in high value-added and high productivity jobs that are essential for the global knowledge society.¹

Brain Drain, Gain and Waste: From the perspective of the developing world in the 1960s migration of the highly skilled person was theorized as 'brain drain'. The brain drain seriously affected many countries, particularly those in Africa. Brain drain refers to a situation where a significant section of tertiary educated persons of a country emigrates permanently or for long-stays and their departure are not offset by the "feedback" effects of remittances, technology transfer, investments, or trade. However, recent studies have shown that a section of these highly skilled workers in the countries of destination acquire further specialized knowledge and skills. This group of workers through return and circulation create opportunity of collaboration with origin country. This results in positive economic and social impact that is termed as brain gain. They also bring back valuable knowledge and experiences. A survey of Silicon Valley immigrant professionals (Saxenien 2002) found that 80 to 90 percent of the Chinese and Indian migrants who have business relations in their home countries, travel home more than five times a year. They brought back skills, knowledge, resources and positive externality.

Brain waste is another situation in the discourse of highly skilled workers. Developing country labour market cannot employ and fully exploit the potential of the highly skilled workers (Mattoo, Neugu, Özden 2008). Likewise, in the countries of destination highly skilled workers may find themselves not getting jobs according to their specialization and involve themselves in low skilled jobs. Both situations are termed as brain waste.

¹ This definition has been developed and based on World Migration Report 2008.

Return: The United Nations defined return migrants or returnees as “Persons returning to their country of citizenship after having been international migrants (whether short-term or long-term) in another country and who are intending to stay in their own country for at least a year”. (ICM 1988:86). With their acquired knowledge, skills or capital they may begin a new career in their home country, others may simply come to retire. Their prospects to re-emigrate are no higher than the general desire to migrate. Returnee professionals play an important role in creating links and inter-personal networks that help the origin countries in many ways. They forge and sustain simultaneous and multi-stranded relationships that link their societies of origin and destination (Glick-Schiller et al, 1992). Cersse identified four causes of return: failure, conservatism, retirement and innovation. Wickramasekara (2003) identifies that the last group – the innovative return – is the most relevant for the development of home countries. Khadria 1999 asserts that the contribution of returnees or circular migrants in the host economy is more when the migrant returns or circulates after a reasonable period of time. Time allows them to acquire additional qualifications and skills, work experiences, accumulated resources and social capital such as network with those back in the host countries. The transfer of knowledge and skills through returnees is not a one-way flow, they also acquire new knowledge and experience when they are in their country of origin.

Transnationalism and Brain Circulation: Human beings voluntarily decide to move or stay put in order to express the full range of their creativity and reach the full potential of their humanity (Abella, 2008).² The current phase of integration in the global economy and advancement of communication technology, particularly the rise of internet use and social networking, has in effect the issue of distance somewhat redundant. A section of people are now maintaining personal and professional lives in two or more spaces simultaneously. This group of people is referred to as trans-nationals. Transnational migrants are those who have their stakes in one or more destination countries and his/her country of origin. They may be involved in economic and social activities that require them to share their time and efforts between two or more spaces. Transnationalism has uncovered a new horizon in migration discourse having replaced the conventional rigidity of the emigration and immigration dichotomy. Brain circulation is perceived as migration of the highly skilled not as an end in itself but as the start of a circular process leading to two-way flows of skills, capital and technologies between economies of origin and destination with different specialties. Appleyard (1991) referred to this group as *professional transients*. A short coming of this paper is that it only looks

² Of course, people are also sometimes forced to move due to lack of choices, restricted livelihood opportunities or fear of persecution.

into the impact of circulation and return of highly skilled to Bangladesh. It has not explored the social and economic impact on the reside country.

NATURE OF HIGHLY SKILLED BANGLADESHIS

Highly skilled migrants of Bangladeshi origin are constituted by a section of its Diaspora¹, transnational population, short-term contract migrants and students who have gone abroad to attain higher degrees. Unfortunately, there exists no information on number of the Diaspora and trans-national community of Bangladeshi origin. In 2004 Siddiqui study on Bangladeshi Diaspora estimated their number could stand around 1.5 million. This figure was an educated guess of various Bangladeshi missions. The US and the UK had the highest number, around 500,000 each; and the rest of the developed world hosted another 0.5 million.

It is also not known what percentage of this Diaspora population is highly skilled. Migration to the UK and the US was intimately connected to colonialism. Lowly skilled employment in the British merchant navy created opportunity of long-term migration from Bangladesh to UK, USA and many other port cities where the merchant ships sailed. Therefore, the Bangladeshi Diaspora to the UK and US was mostly constituted by less educated persons. Over the years, a section of the second and third generation British and American Bangladeshis availed themselves of higher education and may be termed as highly skilled Diaspora population of Bangladeshi origin. Again, arriving at a number of this group is difficult².

After the end of colonial rule the then Pakistan required highly skilled professionals in different sectors. Bilateral and multilateral scholarships, fellowships and bursaries facilitated higher training and education of teachers, doctors, engineers, chemists, other professionals as well as government functionaries. A large majority of them stayed back and secured employment in their host countries. They and a section of their offsprings constitute another significant portion of highly skilled knowledge workers of Bangladeshi origin.

¹ Diaspora is defined as communities of migrants settled permanently, may or may not have citizenship of host countries while at the same time aware of their origin and identity and maintaining varying degrees of economic, social, political and emotional ties with its country of origin and other diasporic communities of same origin (Singhvi, 2001). Diaspora of an origin country does not represent a homogenous identity. Diasporas could be marked by ethnic, political or class divide. Diaspora community may have opposing views on a single issue regarding country of origin.

² Many of the developed countries have ethnicity based data on education, health etc. it is possible to aggregate the approximate number of highly skilled Bangladeshi Diaspora. But further research need to be conducted to aggregate that.

After the oil price hike, the Gulf region along with other oil producing countries began to employ foreign workers as short-term contract workers. During the initial phase a majority of such workers were highly skilled professionals such as doctors, engineers, chemists and accountants. Over the years, however, Bangladesh lost the highly skilled market of the Gulf and mostly participates at the low skilled end. In 2011 only 0.08 percent of the migrants who went to the Gulf and other oil producing countries were highly skilled or professionals (BMET, 2012). In the following section we will try to understand the state of economic and social gains and losses through relationship with its highly skilled diaspora, trans-national, short-term and student migrants. Each section first present an overview of the issue area, then present a few case study and draws lesson from them. First we will look into the area of education.

Section III

EDUCATION

Scenario: Bangladesh has a population of around 152 million.³ Each year more than 500,000 students complete HSC (Higher Secondary Certificate) Examination. Outside this general system each year approximately 10,000 students complete school final under GEC O Levels, Senior Cambridge⁵ and Ivy system.

A small number of Bangladeshi students are doing their primary and secondary outside the country. Residential convent schools run by missionaries are the major destination. One estimate shows around one thousand primary level students go to India alone each year to study.⁶ A significant number of students also migrate to do undergraduate studies. Most of these students are product of English medium IGCSE, Senior Cambridge and Ivy system. They go to UK, USA, Australia, New Zealand and so on. Best and the brights of English medium products manage their funding through receipt of scholarship, a section of them receive financial aids mostly in American liberal art colleges. A section of business, political and professional families send their children to do undergraduate in different renowned universities as self finance students.

³ Projected Population on 16 July 2012 is 15,25,18,015, according to Population and Housing Census 2011 of Bangladesh Bureau of Statistics.

⁵ Interview of Education Officer, British Council, Dhaka, 28 May 2012.

⁶ Bangladesh News, 3 April 2008.

Unfortunately, aggregate data of those who are going abroad for higher secondary and undergraduate level are not available.

The number of students in the public universities is around 92,000 excluding those in the affiliated National University and Open University offering distance mode education. The numbers of students in the latter two were 800,000 and 437,500 respectively in the year 2004-05. Therefore, about 1.3 million pursue higher education in Bangladesh (UGC, 2005). At present, there are 54 private universities in Bangladesh. The total number of students enrolled in these universities is more than 30,000 (UGC, 2006).

A sizeable number of students who finish their undergraduate and Masters in public and private institution go to developed countries for doing Post-graduate studies, ie, Masters, PhD and Post-doctoral degrees. These group of students or academics also pursue their studies through own finance or full and partial scholarship as well as sponsorship. A number of developed countries encourage student migration for higher education through concrete policy interventions. They provide scholarship teaching assistantship and tuition fee waiver. Universities also attract full or partial fee paying students through policies of selling higher education. Most of those who go to study business and engineering are self financed. Commonwealth, Fulbright, Chevening, Australian Development Scholarship (ADS), DAAD, ADB-Japan scholarships are some of the important scholarship schemes. There are separate scholarship programmes for science and technology (engineering, agriculture, pharmacy and physics). A rough estimate indicates each year around 700 students and academics migrate for higher studies under these scholarship programmes. It is difficult to guess the number of self financed post-graduate level students.

No research is available which indicates what happened to those who have gone abroad at school level. Observation of school teachers different batches of students who went abroad to do undergraduate courses reveal that, only a handful of them returns after finishing their graduation. Most of them joins job market in the country of destination and another section continue their education at the higher level and subsequently join the job market. Majority of those who returned after finishing their studies are sons and daughters of business and professional houses who have their own enterprises to look after. In fact, they train their children in specific skills which their enterprises require.

A good number of academics and professionals who migrate from public universities and public services return after finishing their higher studies. Nonetheless a significant

number of them stay back. Self financed students who go to study particularly business schools hardly return.

A number of educational centers have surfaced particularly in UK. Mediocre students from different districts of Bangladesh as well as from the capital city both from *Bangla* and English medium background with a certain score in International English Language Testing System (IELTS) join these colleges and universities. They also hardly return. Majority of these groups treat student migration as a method of emigration to developed countries with the aim of permanent migration (Anthias, 2008).

Vacuum: It is natural that different stream of migration of educated population will create different types of outcome for the economy and society of Bangladesh. 90% of the funds of the public universities come from its annual national budgets. Again some of the scholarships offered by developed countries are derived from aid allocation of respective countries towards Bangladesh. Therefore when academics of public or private universities or government functionaries do not return after finishing their higher studies should be treated as grave financial loss to the country. Along with financial loss the country also misses out from the services of persons who have been transformed into a knowledge worker with state contribution. Non return of bright and the best definitely affect the quality of the educational institutions as well as service delivery by the public offices. No research has been conducted yet to quantify the loss through such brain drain. There is hardly any rigorous mechanism in operation to retrieve the cost from the person who stayed back and taken up employment in the country of education or any other third country.

A major gap exists in the education system of Bangladesh which results in non utilization of a section of knowledge workers in the mainstream public institutions. After the independence of the country in 1971 the new government changed its education policy and installed a system which aimed to use Bengali language in every stage of education and in public institutions. It stopped teaching English at initial school years and introduced it in class V. All strata of urban elite be it political, economic or social perceived this as detrimental for the young ones who will be participating in the global job market. Therefore, significant majority of the urban elite withdrew their children from mainstream educational institutions. Demand of urban rich and middle income families for an education system with strong footing on English language resulted in gradual growth of English medium schools in the private sector. The schools mostly followed British International General Certificate of Secondary Education (IGCSE) O Levels or Cambridge system. Their final examinations are conducted directly by the British Examination body, i.e. Edexcel International, Cambridge International Examinations etc.

We have seen each year ten thousands such students are passing out. These students mostly study in private universities or abroad. The student enrollment system of public universities discriminates them by miss judgment of their grades and syllabus of examinations. They can hardly enter Bangladesh Civil Service (BCS) as its Examination system is in capable to judge the knowledge base of this group of students. It is conducted on the basis of Bangla medium syllabus and course curriculum. This group of educated work force can only join private sector jobs such as multinationals, investment banks, telecom industry in Bangladesh. Most of those who have studied abroad do not feel encouraged to return knowing well that they can only join private sector jobs. Another opening of job they have is in the lower level of Bangladesh offices of international organizations. A few of them do take such jobs. Those who have studied Physics, Economics or Finance in the I V league universities of USA or top universities of Europe and Australia will not be interested in them. A comparison of the bureaucrats, teachers and scientists of pre independent and current Bangladesh show that in the pre independent period there was a good mix of rural and urban knowledge workers. Over the last 15 years complete absence of entry of knowledge workers with urban English medium background. They cannot contribute jointly with the Bangla medium knowledge workers in development of economic, social and cultural discourse of the country. In the long run, the system is deprived of services of these students educated in global standards.

Experience of return: The highly skilled knowledge workers those who migrated though state sponsored scholarship during the 50s, 60s, or 70s for higher education hardly returned or circulated. It is only since mid 90s one witnesses movements of a significant number of professionals who are at their mid careers from developed countries to Bangladesh. Private universities, technical institutions, research bodies, Non-government organizations provided a launching pad for temporary or permanent return or circulation of highly skilled knowledge workers (Siddiqui, MacPhee, 2007). Research organizations provided opportunities for collaborative research among academics of Bangladesh and academics and researchers of Bangladeshi origin currently employed in the developed countries. According to administrations of five leading private universities, number of applications from the highly skilled professionals from the developed countries for permanent vacancies increased manifold over the last five years. In the mid 90s majority the application they received from professionals abroad was for short term appointments. Rahman (2010) in his qualitative research on return of professionals in private universities show that the returnee's professionals played a significant role in attaining certain standards of education by the private universities.

Some of these returnees have brought in resource for research on important social and economic areas by using their network in their countries of destinations. Public universities have not been successful in attracting highly skilled professionals from developed countries. Limited opportunities of lateral entry, political influence on recruitments, bureaucratic red-tapism discourage the highly skilled to return in the public universities. Skeldon (2005) poses an important question, did the return of highly skilled generated developmental outcome in these countries or highly skilled receives opportunity to return or circulate as certain level of development has already taken place in the country of origin. In the following two case studies have been presented to reflect on the above question.

Case Studies

Omar Rahman: Professor Omar Rahman is the Vice-chancellor of one of the leading private universities in Bangladesh, the Independent University of Bangladesh (IUB). He can be treated as a knowledge worker who studied and worked at Harvard University. He left Bangladesh at the age of 18 and came back when he was 46. At the time of return, he spent more time abroad than what he spent in Bangladesh.

For the last 12 years Omar Rahman is contributing to the development of a competitive private university first as pro-vice chancellor and now as vice chancellor. The university now has 4000 undergraduate and graduate students. According to him, desire to have a greater impact on society is one significant reason at least for some people to return. Compared to the academic world where he worked in the US, Bangladesh is a smaller pond with a fewer institutional infrastructure. Thus, when one is setting up something in Bangladesh one can have more of an impact.⁷ Omar Rahman believes that Bangladesh has reached a social and economic stage where return and circulation of knowledge worker is sustainable (RMMRU-DRC, 2005). Therefore, the question still remains which come first, certain level of economic development in the home country attract highly skilled to return or highly skilled persons contributing in a way that leads to socio-economic development of the origin country.

Omar Rahman successfully developed collaborative research relationship with different US and UK universities. The university is hosting climate change and community based adaptation centre, The International Centre for Climate Change and Development in collaboration with the Institute for Environment and Development, the Independent University, Bangladesh, and the Bangladesh Centre for Advanced Studies. Dr. Salimul

⁷ Interview of Omar Rahman, 5 June, 2012.

Haq, who used to be the Dhaka university Chemistry professor, along with his colleague founded the pioneer organization on environment BCAS, then served at IEED, UK for around 10 years. Rahman successfully negotiated with IEED UK and now hosting the centre in IUB. Professor Saleemul Haq splits his time between the Centre and IEED.⁸ In true sense, Saleemul Haq is a transnational Bangladeshi and Omar Rahman a highly skilled returnee.

Zafar Iqbal: Dr. Zafar Iqbal migrated to the US to pursue higher studies. Iqbal completed his PhD from the University of Washington. He did a post-doctoral research fellowship at the California Institute of Technology (Caltech) from 1983 to 1988. Then he joined the US private sector and was working in Bell Communications Research (Bellcore) of Bell Labs, now titled Telcordia Technologies, as a Research Scientist. His wife Yasmeen Haque, is also a highly skilled migrant from Bangladesh who was serving as a physicist in New York. In 1994, Iqbal and Yasmeen jointly decided to return to Bangladesh when they were offered positions in Shahjalal University of Science and Technology.⁹ Iqbal joined the department of Computer Science and Engineering and Yasmeen joined the department of Physics.

Zafar Iqbal also a children literature specializing on science fiction. Upon return Iqbal not only contributed immensely in the development of the Computer Science department of the Public university, through his writings and social activism he became one of the ideal hero of Bangladesh whom everyone respects for his conviction to help the process of nurturing the creative minds of young Bangladeshis and transform them into idealistic and enlightened human being.¹⁰ He is part of the nationwide campaign to encourage young students to concentrate on science and mathematics through competition, science fair etc. He has been a part of the technical committee which prepared the draft national education policy. Zafar Iqbal is perhaps one of the few returnee migrants who got involved in influencing national policies through basing himself in a public university.

Policy Achievement of Two Highly Skilled Returnees in Education: BRAC and GSS are two national level NGOs in Bangladesh. The founding leaders of these two organizations went to UK as students. One studied Charter Accountancy, after finishing

⁸ Interview of Salimul Haq, 6 June , 2012.

⁹ Interview of Zafar Iqbal, 3 April , 2012.

¹⁰ Mukto-mona (2008) Introducing Dr. Muhammed Zafar Iqbal - Bangladeshi Academician, Scientist, 9 September, Webpage: <http://groups.yahoo.com/group/mukto-mona/message/49785>, Accessed : 4 June 2012.

his studies he joined the job market in the UK. He came to Bangladesh, the then East Pakistan to distribute relief after the 1970 cyclone. When the war of liberation broke out Mr. Fazle Hassan Abed stayed back and continued his relief work as a freedom fighter. Dr. F. R. M. Hassan finished his PhD in UK, came back and founded GSS. Abed is well known globally for his model of bottom up rural development which combines training and service delivery with microcredit. However, his organization BRAC and GSS led by Hassan, both made immense contribution in institutionalizing non-formal primary education in Bangladesh. Models developed by these two organizations, later was replicated by the government at a national level with World Bank funding.

Analysis: Cases presented above are success stories of return. One cannot generalize on the experience of return from these few cases. Nonetheless, it can be said that private universities and research bodies did attracts a large number of long term migrants as well as fresh post graduates to return. The salary structure is double in private universities, compare to public universities. However, even with half the salary many academics would have been interested to teach in the public universities because of their desire to stimulate intellectual growth of the students from all economic strata. Zafar Iqbal is a good example of this. Although recruitment in each position of public universities is open for anyone to apply yet lateral entry on the basis of merit is completely nonexistent. Few lateral entries from other universities within Bangladesh do take place but in almost all cases they are politically influenced appointments.

The scenario of return in private universities makes it clear that certain development has to take place in the origin country to attract the long term migrants. Of course once they return they can speed up the growth and development of enterprises. In this case they have contributed in making the private initiatives of establishing universities viable.

Section IV

HEALTH

Scenario: In many developing countries particularly in the context of Africa, experience a brain drain caused by skilled medical professionals moving to developed countries. IOM estimated that between one-third and one-half of all medical school graduates in South Africa emigrate to the United Kingdom or United States in every year. In 2003, over one-fifth of the public health sector posts were vacant in the majority of South African's provenances (IOM, 2007). The government of the Philippines officially

promotes migration of nurses through creating 450 nursing institutions.¹¹ However, permanent emigration of health workers does create problem in providing healthcare the Philippines. Skeldon (2005) however suggests that migration is just one factor in accounting for losses of personnel in health sector. In different African countries, a number of doctors and nurses were inactive or unemployed at the same time.

Bangladesh faces several challenges in the health sector. Perhaps the most critical challenge faced by the health system in Bangladesh is scarcity of trained workers compare to its population. There are 32,498 physicians, 19,000 nurses and 45,000 hospital beds for 150 million people. It means that 1 physician for 4,000 people, 1 nurse for 7,368 person and 1 hospital bed for 2,832 person (Mabud, 2004). There are thirty two medical schools in Bangladesh. Thirteen of them are public educational institutions and the rest are private. There is an Institute of Postgraduate Medicine and Research (IPGMR) in Dhaka. Total number of physicians produced per year is about 2,000 (Bangladesh Bureau of Statistics, 2004). Among them the government output being about 1300 and the rest are produced by the private medical colleges.

Vacuum: In Bangladesh, it is estimated that about 300 physicians migrate per year. Bulk of the physicians (80%) out migrating from Bangladesh goes to Middle East. USA, UK and other developed countries receives the rest 20% of total out migrant (Rahman and Khan, 2006). The numbers of Bangladeshi physician who migrate are less compared to other origin countries. Nonetheless, according to Rahman (2006) the best and bright leave. The Dhaka Medical College (DMC) receives the best students. It is perceived that they produce the best doctors. Numbers of those who leave for permanent residency in developed countries disproportionately belong to DMC. The quality of medical research and intellectual development at the top institutions in the country do suffer (Rahman and Khan, 2006).

Bangladesh is loosing on the best and the bright physicians, Nonetheless, the country is also deprived from extracting the services from the doctors it trained who remain in the country. A significant number of doctors join the NGOs and work administrators of health and other programmes. Some joined public service such as foreign service, administration and so on. A section of them leave medical profession as they are not willing to go and serve in the districts or upazilas outside the major cities. This they attribute to lack of decentralization, inability to stay with family in the districts or upazilas

¹¹ It is estimated that 100,000 nurses left the Philippines between 1994 and 2003 and 4,000 doctors also migrated from their country to developed countries (Siddiqui, 2012).

due to lack of quality educational facilities for their children and less scope of private practice. There is a major waste of talent and capacity inside the country. A section of those who have migrated to developed countries may not been practicing medicine in Bangladesh.

Since independence Bangladesh made impressive gains in public health sector. Life expectancy, the infant mortality rate declined from 145 in 1970 to 52 in 2007, under-5-mortality rate declined from 239 in 1970 to 65 in 2007. Immunization of children increased, fertility rate which was 6.3 in 1971-1975 was 6.3 it became 2.7 in 2007.¹¹ These figures compare favourably to other countries in South Asia (Bangladesh Bureau of Statistics, 2004). These achievements in health section have been attained by NGOs and paramedics. Bangladesh should also think in terms of increasing the number of paramedics to serve the remote areas and increased connectivity of remote areas with hospitals to avoid brain waste within the country. One can therefore argue that health and other broader policies are important reason for brain drain and waste along with migration.

Experience of Return: The following section looks for evidences where long term migrant physicians of Bangladeshi origin worked as initiator of exchange of knowledge, technology and service between their origin and residence countries. Review of available literatures and interview of concern persons reveals that experience in the collaboration in the health sector can be divided under four broad headings. These are: Semi or permanent return of individuals enriching medical services in Bangladesh, health philanthropy conducted by an individual or group of individuals, establishment of medical institutions and providing services through formal network. Each case study represents one of the above types of participation.

Case Studies

Philanthropy by Individual Permanent Settlers: A section of physicians of Bangladeshi origin organizes different services directly for the poor patients or medical institutions. A section of doctors mixes their social visit with philanthropy. When they come to Bangladesh for visit, they go to their respective village and provide one time health care services that include offering treatment and holding of eye camps. Their friends, family and local health service providing institutions in organizing such programmes.¹²

¹¹ New Age, 7 April 2007.

¹² Interview of Omar Rahman, 5 June, 2012.

Return of a Highly Skilled Doctor: Dr. Amer Wahed, a young successful physician specialising in hematology and pathology was trained at the Houston Medical Centre in Texas, USA. He served as the Chief Resident at the Department of Pathology and resident and fellow in related department in the same institution. Leaving such lucrative career Wahed chose to return to Bangladesh. He desired to use his expertise in pathology in Bangladesh. Upon return he joined as a consultant at Ibrahim Cardiac Hospital and Research Institute (ICHRI) and Popular Diagnostics. ICHRI is a sister concern of the largest diabetic hospital in Bangladesh. Popular is one of the diagnostic centre of Bangladesh which has four centres in Dhaka and Narayanganj. Both the organizations belongs to private sector.

Wahed's aim is to improve the quality of pathology test in Bangladesh. There are only a few individuals in the country with exposure to pathology in the western world. Pathology is one of the most technology dependant branches of medicine and modern medicine is heavily dependent on pathology for diagnosis of various diseases. He thinks Bangladesh has a lot of catching up to do in this area, and he is trying to help as per his own capacity.¹³

Establishment of Medical Institutions: Few Bangladeshi doctors after finishing their post-graduate studies in Japan returned to Bangladesh. They opened a hospital named Japan Bangladesh Friendship Hospital (JBFH) in 1993. It is now considered one of the leading hospital with its 100 bed premise located in Dhanmondi, Dhaka. Dr. Sardar A. Nayeem and Dr. Jonaid Shafiq established this hospital in partnership with Japanese doctor friends.¹⁴

Japan Bangladesh Friendship Hospital initiated a grassroots programme entitled “*Krishoker Sashto Seba*” (health care for farmers). It is being conducted in the remote areas of Bangladesh in order to provide healthcare facilities to the farmers since 2006. JBFH also organizes innovative programmes such as Freedom Fighter's Healthcare, National Immunization Day and celebrates international health days to provide healthcare facilities to the marginal and underprivileged people. Beside healthcare service JBFH also organizes different types of workshop on first aid training, awareness

¹³ See details, Mistry, R. (2005) Return of the Natives, *Star Weekend Magazine*, 25 March.

¹⁴ See details, Welcome to Japan Bangladesh Friendship Hospital, www.jbfh.org , Accessed 3 June, 2012.

or different types of common diseases and so on. It has won a "FOBANA" Outstanding Community Service Award of 2012".

Network of Diaspora Doctors: Bangladeshi physicians in North America have created an association named Bangladesh Medical Association of North America (BMANA) in 1980. In 2007 it had a membership of 300 doctors. The type of support given by the organization includes organizing visits of medical teams to provide training and technology transfer, donation of books, computers, and journals to medical colleges and universities in Bangladesh. BMANA aims to participate in development of the health sector of Bangladesh. At individual level, its members have been participating over the years in sporadic educational and service delivering activities. The obvious choices are transfer of knowledge and training in terms of cutting edge advances in medical specialties, the provision of subsidized/pro-bono specialized clinical services, and the donation of medical equipment and journals. It collaborates with Bangladeshi counterpart institutions and conducts surgery, plastic surgery, advanced cardiac interventions and so on, to those who cannot afford.¹⁶

Dr. Dhiraj Shah, a member of BMANA regularly deliver lectures in different institutions. The annual convention of the Neurologists in Bangladesh is one of them. He also performs free vascular surgery including carotid bypass in several hospitals in Dhaka. Dr. Showkat Hussain, another member of BMANA regularly comes to Bangladesh. He donates many dialysis grafts and catheters and is performing, as well as providing training in, vascular surgery procedures in a few centers in Bangladesh. Dr. Ziauddin Ahmed and Mohammad M. Zaman organises seminar on Infection control in Bangladesh. They were instrumental in assisting the infection control center at the Ibrahim Medical College. Another two members Dr. Ekramul Kabir and Dr. Ehsan Haq organizes vocational programmes in rural areas of Bangladesh and cleft lip surgery camp in Bangladesh (Rahman and Khan, 2007). A section of the highly skilled physicians has initiated transfer of knowledge and services. Now the Bangladesh State has to come with projects to allow that interaction to grow large through institutional support.

¹⁵ FOBANA is the federating body of Bangladeshi associations in North America.

¹⁶ See details, Bangladesh Medical Association North America, www.bmana.org, Accessed 3 June, 2012.

Analysis: Examples of collaboration in health sector also highlights the role of private sector. Public sector does not possess the flexibility which can attract short term return of doctors. Private sector can attract both permanent and short term returns for many reasons. For their institutional interest they innovatively accommodate the programmes of short term returnees and attract long term returnees with much better salary package.

Section V

INVESTMENT AND ENTERPRISE

Scenario: India, China, Taiwan and South Korea have experienced investment of its diaspora population particularly the highly skilled ones who resided in the US. A section of the students originating from these countries became successful entrepreneurs in the US as well as in their home countries. The origin countries have on their part initiated various policy reforms to attract diaspora investment. The government of India in 2003 created a new ministry to look after the interest of its diaspora. Since then the ministry has been celebrating 19th January as diaspora day. On that day the government of India honours its diaspora for their contribution. The government reduced hindrances from property purchase by diaspora in India. It withdrew restriction from opening of repatriate-able accounts by diaspora and provided tax incentives. The central bank of India floated special bonds targeting diaspora investment. In 2011, India received highest amount of remittance among the developing countries (\$64 billion). In 2010 the country received additional US \$ 31 billion as savings deposit from its diaspora.

To attract diaspora investment Chinese government brought about widespread and meaningful economic reforms. It provided stable investment environment good infrastructure and flexible labour policy. Along with economic incentives packages the Chinese government decentralised the decision making authority up to the lowest possible administrative unit. 70 percent of foreign direct investment to China came from its diaspora. Labour intensive export processing sector and real estate are the two major areas where the diaspora investment has taken place.

Bangladesh also had framed a positive policy environment to attract its diaspora investment. As early in 1978 It offered dual citizenship to those who are residing in developed countries of Europe, America and Australia. It has created a separate ministry (Expatriates' Welfare and Overseas Employment) two years before India and the Philippines. Its diaspora investment friendly economic policy package includes

special price incentives in selling of nationalized state enterprises. Forty percent reduction is offered to diaspora if the enterprise is purchased in foreign currency. Government has floated special investment bond in US dollar and Bangladesh taka account and also launched housing projects.¹⁸

Experience of Diaspora Investment: Over the years Bangladesh also experienced diaspora investment in some sectors. Housing, establishment of Theme Park, Hospital, Garments manufacturing and pharmaceuticals industries are some examples. Nonetheless, compare to India, china or Korea these examples are not that significant. Moreover, the investment ventures are through private initiatives. They didn't have much relationship with state incentives. Bureaucratic hindrances, including unnecessary paperwork and other formalities, have resulted in the breakdown of some large-scale investment ventures by members of the Bangladeshi diaspora. De-nationalisation of chatok cement factory is a good case in hand. British Bangladeshi entrepreneur became the highest bidder yet could not buy off the factory from the government due to corruption.

On the other hand, trade of certain type of Bangladeshi products has begun with the countries where Bangladeshi diaspora and short term migrant resides. Mittelman (2000) pointed out that ethnic imports in the form of purchasing nostalgic goods are a diaspora way of maintaining cultural traditions of their country of origin. Gulf, Southeast Asian and some of the European and North American countries have become new markets for a section of Bangladeshi entrepreneurs once a sizeable number of Bangladeshi diaspora settled there. Food products such as Bangladeshi rice, sweat water fish, lentils, puffed rice, native snacks, sweats, molesses, tamarind, cooking spices, special vegetables and fruits are exported to those countries at a large volume. Traditional Sharees, kamiz, fatuas, jewelries, have found their ways in different ethnic shops in those countries. In the big cities such as New York, LA, Chicago, London, Tokyo, Kua Lalumpur, and Singapore, some of the renowned catering houses and sweatshops have open their branches.

All these initiatives are private initiatives. However, government changed certain policies to allow such trades. Initially there were restrictions on export of certain food items and vegetables. This was based on the understanding that it may create scarcity of those items and effect nutrition of relatively poorer people of Bangladesh. Successful policy

¹⁸ Interview of Kazi Abul Kalam, Deputy Secretary, Ministry of Expatriates Welfare and Overseas Employment, Government of People's Republic of Bangladesh, 10 May, 2012.

advocacy by the exporters associations resulted in lifting of such restrictions. Interestingly production of some of those items has gone up manifold when export market expanded.⁴ The availability of certain food products, particularly cash crops have increased manifold in local market as well.

Case Study

Iqbal Z. Quadir: Professor Quadir was born in Jessore district of Bangladesh and moved to the United States in 1976 he can be called a transnational Bangladeshi who splits his job and circulates between US and Bangladesh. He did his undergraduate in Swarthmore College (1981), and Masters (1983) and M.B.A. (1987) from the Wharton School of the University of Pennsylvania. He took the citizenship of the US and started his career as a consultant for the World Bank at Washington, D.C. Gradually he chose a career of investment banker and worked for different investment banks and Capital Corporation. After working for about seven years in Wall Street he suddenly decided to return to Bangladesh and bring foreign investment there. He believed that '*connectivity is productivity*'. Therefore, Bangladesh needs telecommunication service which can be availed by everyone. Even in the early 90s, telecommunication in Bangladesh was extremely poor and whatever services available were expensive. Quadir's vision, deemed radical at the time, was to create universal access to telephone service in Bangladesh and to increase self-employment opportunities for the rural poor through connectivity. In 1993, Quadir started a New York-based company named *Gonofone* which later became the launching pad for Grameenphone. The expatriate convinced a Norwegian telecom company, Telenor, to take a 51% stake in Grameen Phone. With the help of Japan's Marubeni Corporation and \$65 million in loans from aid agencies and development banks, the new company started its operations. Soon after its inception, Grameenphone revolutionised the communication system of Bangladesh. Grameen Phone Ltd, is still the largest telephone company in Bangladesh. It has sixteen million subscribers providing telephone access to more than 100 million people covering 60,000 villages. It generates revenues close to \$1 billion annually.¹⁹

Quadir did not stop there. Recently, he founded Emergence BioEnergy to increase electricity production in Bangladesh. He is currently the Founder and Director of the Legatum Center for Development and Entrepreneurship at the Massachusetts

⁴ Speech of ex governor of the central Bank of Bangladesh Dr. Farasuddin Ahmed at a conference on diaspora and development, organized by RMMRU at CIRDAP Auditorium, June 2007.

¹⁹ Isenberg, D. J., et al. '[Iqbal Quadir, Gonofone, and the Creation of GrameenPhone \(Bangladesh\)](#).' Harvard Business School, 12 March 2007.

Institute of Technology and member of Advisory Board at Shahjalal University of Science and Technology. Quadir is also the founding co-editor of *Innovations: Technology, Governance, Globalization*, a journal published by MIT Press.

Nandan: *Nandan* is successful venture of Bangladeshis, British Bangladeshis and Indian investor.²⁰ It has already successfully implemented two large scale projects in greater Dhaka. In a 60 acre of land area of Chandra it established the first amusement park in Bangladesh. The second venture is *Nandan* chain departmental store. Currently there are many departmental chains in Bangladesh, but *Nandan* began this. To materialize a dream of doing something large, it is now building the country's largest resort which costs of Tk. 1.20 billion in 40 kilometers north-west of the capital of Bangladesh.²¹

Mashrur Chowdhury is the CEO of Nandan. He thinks that Nandan project became successful mainly because it could develop effective partnership with British Bangladeshi and Bangladeshi entrepreneurs. Many British Bangladeshis went back without successfully opening business as they pursued them alone. To do business in Bangladesh one needs social connection. Many of the British Bangladeshis who came to invest did not have that connection with different ministries. Therefore got stuck in Bureaucratic red tapism, rent seeking etc. In some other cases the British Bangladeshi investors developed partnership with locals. Unfortunately local partners did not respect the partnership and gradually transformed the enterprise as their own.

Sayeed Siddiqui, Ashrafun Siddiqui and Cats Eye: Sayeed Siddiqui and his wife Ashrafun Siddiqui set up Cat's Eye a leading Bangladeshi brand of men's wear. Both of them are returnee migrants from Canada where they worked in retail sector.

Sayeed Siddiqui and his wife immigrated to Canada in 1974. Although Siddiqui migrated with the aim to study English literature, over the years he ended up in full time job quitting university. In Sayeed's own word, 'My life changed the day I met Mr. Low a French Canadian who owned more than a thousand stores worldwide. He taught me that nothing was impossible and everything is doable.'²² Sayeed learned how to manage a store and his wife, how to replenish the merchandise. He dreamt of running similar business in Bangladesh and in 1980 they returned and opened their first store

²⁰ Interview with Masrur Chowdhury, 14 May 2012, Chairman and Chief Executive Officer of Nandan Group, Bangladesh.

²¹ The Financial Express, 11 September, 2009.

²² Interview with Sayeed Siddiqui, 3 June, 2012.

Cat's Eye. Cats Eye designs and manufactures its own product and retail them. It was very difficult for them in the first ten years but now it has 42 outlets in Dhaka, Sylhet and Chittagong, Khulna, Narayanganj and many other districts of Bangladesh.²³ Introduction of the Cats Eye brand in the early 1980s changed the notion of shops in Bangladesh. The concept of chain fashion stores were first implemented in Bangladesh by Sayeed Siddiqui. Along with Cats Eye, he set up two other chains Monsoon Rain and Cat's Eye Unlimited. Cats Eye is now expended in Sri Lanka under the name of Still Blue.²⁴ It has already registered itself as a business entity in Malayasia. In near future it will have its own stores in Malayasia. Siddiqui and Ashrafun's experience show that highly skilled knowledge workers should not only be defined on the basis of education, skilled attained through job experience should be treated as another important criteria in defining highly skilled.

Forward Looking Entrepreneur Culture: There are not very many examples of large scale investments where diaspora played a significant role. But returnee highly skilled Noble laureate Dr. Mohammad Yunus and Mr. Fazle Hassan Abed have done something unique. Through their micro credit work, they have successfully instilled entrepreneurial spirit among less well of Bangladeshi population who were traditionally known to represent subsistence farmer culture. Rahman (2010) argues that over the course of four decades since independence a personality revolution has touched the critical segment of the society. A forward looking entrepreneurial culture has taken root in rural and urban Bangladesh. The forerunners of micro-credit movement Professor Yunus's and F. H. Abed's played catalytic role in changing the identity of a large number of rural Bangladeshis. Both these persons are highly skilled professionals, one returned from US and the other from the UK.

Both the person can be termed as entrepreneurs with a social objectives. At present, Grameen Bank and BRAC together has employed 100,000 people all over Bangladesh.

Analysis: Discussion on Investment and enterprises of diaspora reveals that government did frame certain policies to encourage diaspora investment. However, large scale investment of diaspora has not taken place. Bangladeshi diaspora community of US and UK identified bureaucratic red tapism, corruption, political turmoil as major hindrance in the process of their investment (Siddiqui; 2004). Few case studies of successful diaspora enterprises again highlight that these are spontaneous

²³ See, Cats Eye, www.catseye.com.bd, Accessed 2 June, 2012.

²⁴ Interview of Riyad Siddiqui, Director Cats Eye Limited, 15 April, 2012.

private initiatives. Expansion of nostalgic trade in the countries of destination is led by demands of diaspora. Initially government policies acted as hindrance in their growth, later government helped growth of such trade by reducing restrictive policies.

Section VI

SCIENCE AND TECHNOLOGY

Scenario: OECD estimates 10 percent of the highly skilled persons from the developing world live in either North America or Europe. In as early as 1999 India constituted 16 percent and Chinese constitute 20 percent of the foreign born US Doctorates in Science and engineering (Khadria, 2004). The experience of engineers and programmers from India settled in Silicon Valley in developing backward linkage with Bangalore is the most popularly known success stories of economic gain of both origin and destination countries at the sometime (The Global Online, 2010).

It is estimated that Bangladesh has about 50,000 scientists and technologists with postgraduate qualifications and over 100,000 lower level scientific and technological personnel. There are about 60 science and technology institutions including seven universities in Bangladesh. Among the universities, Dhaka, Rajshahi, Chittagong and Jahangirnagar considered as general university. Bangladesh University of Engineering and Technology (BUET) in Dhaka and Bangladesh Agricultural University (BAU) in Mymensingh are two specialized universities. Engineering education is also provided in four Institutes of Technology (BIT) and agricultural education by an Agricultural College in Dhaka.²⁵

Vacuum: According to Fakhrul Amin⁵ a professor of Bangladesh University of Engineering and Technology (BUET) science and technology sector of Bangladesh is the most hard hit by brain drain. A large number of engineers, computer scientists, physicists and agriculture scientist leave the country for higher education and also for employment. Those who go with job hardly returns as many of them go abroad with the aim of attaining permanent residency in developed countries. Majority of those who go for higher studies also try to stay back by taking employment. A case study of BUET reveals that 25% of those who finish graduation in engineering go abroad straightaway. Some go by availing scholarships, some others by taking jobs. The department of Electrical Engineering and Computer Science are the most hard hit. Each year this

²⁵ *Banglapedia* (2006) Science and Technology, *National Encyclopedia in Bangladesh*, www.banglapedia.org/httpdocs/HT/S_0161.HTM, Accessed: 5 June, 2012.

⁵ Interview of Professor Fakhrul Amin, Department of Civil Engineering, Bangladesh University of Engineering and Technology (BUET), Dhaka, 15.07.2012

department takes 8-10 new graduates as faculty. Within years they leave for higher studies. 80-90% of them stay back. 50% of the teachers who go for higher studies from the department of Civil Engineering returns and the rest stay back.⁶ The top ten percent from the department of Applied Physics, Computer Science, and Pharmacy leave the country for higher studies and hardly returns. The scientific officers from Bangladesh Council for Scientific and Industrial Research (BCSIR) also go abroad for training and almost half of them do not return or line up jobs after returning.

Experience of Collaboration and Return: The following section looks into if there is any attempt on the part of the government to gain from its knowledge workers who have gone abroad and attains certain level of knowledge which is needed in Bangladesh. It is interesting to note, the government of Bangladesh framed its Science and Technology Policy almost a decade ago. The main aim of this policy is to become self reliant in science and technological need of the country and to contribute global scientific knowledge. The policy discusses the need for developing strategic relationship with the scientific organizations of developed and developing countries and other regional bodies. Unfortunately, it does not look at the diaspora scientific human resource of Bangladesh as a source for developing connection and network for accessing scientific development that are taking place in developing countries.²⁶

There are some renowned research bodies in Bangladesh. Bangladesh Atomic Energy Commission, Bangladesh Agricultural Research Council, Bangladesh Medical Research Council (BMRC), Rice Research Institute (BRRI), Institute of Nutrition and Food Science (INFS) of the University of Dhaka, Bangladesh Institute for Research and Rehabilitation in Diabetes, Endocrine and Metabolic Disorders (BIRDEM) and the International Centre for Diarrhoeal Disease Research (ICDDRDB) are some of the important one. Some collaboration takes place with highly skilled diaspora and these institutions. Maqsoodul Alam is a good example for institutional collaboration.

Case Study

Scientist Dr Maqsoodul Alam: Dr. Alam, a professor in University of Hawaii has decoded (mystery of origin of jute) the jute's genome with his research team in Bangladesh. He migrated to USSR in the early 1970s to do his Masters and later PhD on Microbiology. He did another PhD on Biochemistry from Max Planck-Institute, Germany in 1987. He worked Russia, Germany and US as scientist. The Malaysian

⁶ The figures are estimated guess made by Professor Fakrul Amin of BUET.

²⁶ National Science And Technology Policy : Bangladesh,
<http://www.saarcnet.org/news/saarcnet/govtpo...techpolicy.html>, Accessed: 5 June, 2012.

government invited Dr Alam to decode the country's most important economic plant, rubber, with state-of-the-art lab facilities. By that time Dr Alam's success in decoding the papaya fruit genome had already earned him fame in the global scientific fraternity.²⁷

While working in Malaysia, Dr. Alam craved to innovate something that would benefit the economy of his own country. He believed if the jute genome could be sequenced, Bangladesh will be benefited greatly. With the help of Global Network of Bangladeshi Biotechnologists (GNOB), Alam developed a partnership with Bangladeshi researcher Dr. Kamal Uddin, Professor Haseena Khan, and Mahboob Zaman,²⁸ in collaboration with Centre for Chemical Biology, University of Science, Malaysia and University of Hawaii, USA. This team has successfully decoded the jute genome in 2010.²⁹

A genome sequence allows scientists to identify and understand how genes work as organic whole and pursue functions of growth, development and maintenance. The discovery of genome sequencing of jute would facilitate better pest control and better finished industrial products out of jute. In Alam's word, "This is a great accomplishment not only for Bangladesh but for the world." He thought it was possible because of the partnership with young and talented Bangladeshi research team. With the successful sequencing of the jute genome, Bangladesh becomes the second country after Malaysia, among the developing nations, who could decode genome. Experts hope that by 2015 local farmers could start reaping the benefits of the scientific breakthrough of decoding the jute plant genome and make the country at the forefront of global revival of natural fibre.

Mustaq Habib: Mushtaque Habib, is an engineer trained in the University of California, Berkeley. He left Bangladesh in 1972 when he was first year undergraduate student in BUET. He was based in California. He worked all over the world on large projects in several countries such as Spain, Italy, Switzerland, Korea, Taiwan and Japan. He worked as director of engineering for a company that was listed in Fortune's 500 companies in the US. He enjoyed every minutes of his professional life in the US. He led construction on 60 storied building in San Francisco, a power plant in Europe.

²⁷ Rashid, M. (2012) Bangladesh decoded Jute's genome sequencing: Golden Fibre to Redeem the Lost Glory, Bangladesh Textile Today, 8 June.

²⁸ The researchers of this team was composed of Dr. Kamal Uddin, Director General, Bangladesh Jute Research Institute, Professor Haseena Khan, Department of Biochemistry and Molecular Biology, University of Dhaka and Mahboob Zaman, Managing Director, Data Soft Systems Bangladesh Ltd.

²⁹ See details, Ahmad, R. (2010) Decoding the Golden Fibre, *Star Weekend Magazine*, 25 June.

After 25 years, he returned to Bangladesh permanently. His foremost reason of the return was family. Being only daughter his wife had responsibility towards aging parents. He and his wife also wanted to bring their children close to their roots. Mustaq Habib had a burning desire to take up the challenge of doing large scale infrastructural projects in Bangladesh (RMMRU-DRC, 2005). He returned without lining up any job in Bangladesh. It is through his social network; he got employed in construction of the North South university campus in Dhaka and successfully completed that. This is the largest private university in Bangladesh. Now he is responsible for constructing the campus of International Asian University in Chittagong. He noted, the planning and construction of an University campus in Dhaka far exceeded the satisfaction of executing a sixty-storey building project in California.³⁰

Analysis: The section shows that Bangladesh is producing a good number of scientists, agriculturists, physicists and engineers each year. The state is unable to retain the top scorers. Government policy on science and technology didn't think of any ways to benefit from the Bangladeshi knowledge workers who are now well established in destination countries in their own fields. The case study of collaboration among Bangladeshi scientists residing in Bangladesh and scientist of Bangladeshi origin decoding of the jute genome again reveal individual initiative. State didn't play any role in facilitating such collaboration. The case studies presented give enough evidence that such collaborations are possible. Therefore, the government of Bangladesh can design specific project and ask for joint proposals of scientists of Bangladeshi and its diaspora.

Section VII

CULTURE AND MEDIA

Cultural activists and media present a good example of questioning the traditional concept of highly skilled knowledge worker. It was seen in the conceptual section that educational qualification and occupation and certain technical skills mainly define the highly skilled. People involve in creative professions such as art, culture and advertising world may or may not possess degree but they are repositories of specialized creative knowledge. Due to specific qualities as composer, musician, lyricists, cinematographer, painter, actor and market demand for their trade, they should be treated as knowledge worker. Following section presents some case studies which highlight the contribution of returnee knowledge worker in cultural arena and media.

³⁰ Interview of Mustaq Habib, 3 April, 2012.

Case Study

Bibi Russel: Bibi Russel is an internationally renowned model and fashion designer. She left Bangladesh and went to Europe in 1972 after completing her graduation. She was the first Bangladeshi woman to gain admission to the London School of Design where she did a four year diploma in fashion design. In 1975 she modeled her own graduation show and was immediately offered modeling assignments with international fashion houses. Throughout the late 1970s and 1980s she dominated as a top model, modeling for Karl Lagerfeld and Armani, appearing in *Vogue*, *Cosmopolitan*, *Harpers' Bazar* among other magazines. After achieving so much in 1994 she returned to Bangladesh to pursue her long standing dream to promote traditional Bangladeshi fabrics and built international reputation for locally crafted textile.³¹ To this end she worked tirelessly and in November 1998 made her US debut.

Russel's work has been internationally recognized. She received the 'Honorary Fellowship' of the London Institute in 1999. In the same year, Bibi Russell was made "UNESCO Special Envoy: Designer for Development." She also received the title 'Artist for Peace' by the UNESCO in 2001 and the Peace Prize 2004 by the United Nations Associations of Spain.

Bibi Russel's story shows that a person can migrate to another country, built an international reputation, return to country of origin and again take regional identity and make positive contribution.³²

Tareque Masud: Tareque Masud was an award-winning film maker of Bangladesh who played the historic role of archiving immensely valuable films on Bangladesh's war of independence through collecting documents on war of liberation from a US journalist and later producing the magnificent film on war of liberation- *Muktir Gaan* (The Sound of Freedom) with real life footage of 1971 with his wife and work partner Catherine Masud. He completed the whole film *Muktir Gan* in the US. Tareque Masud is an example of migration to US through marriage. Being born in a family of film maker Masud dreamt of making socially conscious movies. In his own word: 'My exposure to different culture allowed me to know my own culture better (RMMRU-DRC, 2005). I wrote the script of my film *Matir Moina* (Clay Bird) in the US where my target audience

³¹ Interview of Bibi Russel, 3 April 2012.

³² See details, Bibi Russell: [Weaver of Coloured Dreams](#), *Star Weekend Magazine*, 27 February, 2004.

automatically became global.' After ten years of stay in New York, Masud returned to Bangladesh. The beauty and strength of return according to Tareque Masud, 'You are not the same person. A bit of you return and another bit stays in the destination and eventually you are here and also there.'

During the time he spent abroad Tareque Masud mixed with different people from diverse background, learnt different techniques of film making through institutional learning, all these contributed in development of his finer skills of filmmaking.

His first full-length feature film, *Matir Moina* received International Critics Award at the Cannes film Festival in 2002, as well as the FIPRESCI Prize for Directors' Fortnight for "its authentic, moving and delicate portrayal of a country struggling for its democratic rights. All his films were on different aspects of war of independence of Bangladesh. Tareque Masud courageously filmed the struggle of Urdu speaking *Biharee* community in Bangladesh for establishing their citizenship rights in his film *Norsundor* (The Barber). The *Biharee* community in Bangladesh were treated by the mainstream society as 'collaborators of Pakistan army'. His film was quite successful in changing the mainstream psyche and established that not all *Biharees* were collaborator. His other important films are: *Adam Surat* (The Inner Strength), *Anteryatra* (The Journey within).³³

Bangladesh lost Tareq Masud in a road accident on 13 August 2011. His death is a great loss for the nation. He was posthumously awarded *Ekushey Padak 2011*, the highest civilian award of Bangladesh.³⁴

The New Generation Composer: Habib and Fuad

Habib Wahid and Fuad al Muqtadir are two extremely popular Bangladeshi composer and singer. Within months of releasing some of their albums sold approximately 1 to 1.5 million copies. Fuad, popularly known as 'New York Fuad' left Bangladesh for the USA in 1988 at the age of eight and started junior high school there. Fuad Mixes different genres of music and creates a sound that is consumed by everyone. He formed the band *Zefyr* in 1993 with his American and Bangladeshi friends. They released the albums *Maya 1* and *2*, which became overnight hits in Bangladesh and in New York among the Bangladesh diaspora.³⁵

³³ Interview with Tareq Masud, Excerpts from interview taken in Paris in January, 2002.

³⁴ See details, '15 personalities receive *Ekushey Padak*., bdnews24.com, 20 February 2012.

³⁵ Muqtadir, F., Wikipedia, http://en.wikipedia.org/wiki/Fuad_al_Muqtadir, Accessed: 2 June, 2012.

Habib on the other went to UK and studied music production at the London School of Audio Engineering. While studying there he got to know a lot of young British Bangladeshis. Habib was amazed to see that young students who were born and brought up in England had a strong connection with the folk music in Bangladesh. In his own the music that we listened in the villages of Bangladesh, not in urban areas. Habib was more surprised because contemporary Bangladeshi musicians were not that acquainted with those folk songs.³⁶ When Habib was in UK, he composed the music and few British born Bangladeshis performed those songs.³⁷ When he returned to Bangladesh he released those albums. Within six months hundred thousand copies were sold. In UK, the British Bangladeshis, especially those between 15 to 20s bought those CDs. Gradually, the British Bangladeshi singers and Habib together started performing all over the world.

Experience of Habib and Fuad shows that music and other cultural activities not only create link among the children of diaspora and that of country of origin, it also opens up huge business opportunity in both origin and destination. Electronic media and cultural organizations situated in Bangladesh as well as destination countries such as UK, US, Germany, Canada, France, Saudi Arab, UAE, Malaysia now organise mega cultural events in those countries where Bangladeshi and its diaspora artists perform together. These programmes have become a huge money earning ventures. It involves a series of products, selling of tickets of the show, sponsorship of business brands, sell of CDs and sell of the programmes to different TV Channel.

Performers of British-Bangladeshi, American-Bangladeshi and Bangladeshi origin has become transnational in nature. They circulate not only among Bangladesh, US and UK but all over the world where people of Bangladeshi origin reside.

The Daily Star, S.M. Ali and Mahfuz Anam: SM. Ali, icon of journalism of Bangladesh was an inspiring portrait of a journalist along with his esteemed junior colleague in UNESCO, Mahfuz Anam, launched the socially responsible newspaper *The Daily Star* in 1991.³⁸

SM Ali as a reputed Asian journalists worked in various regional publications in the then West Pakistan, Hong Kong, Thailand and Singapore. He retired as an regional communication advisor in Asia and Pacific in United Nations Educational, Scientific and

³⁶ Interview of Habib Wahid, 7 April, 2012.

³⁷ Wahid, H. , Wikipedia, http://en.wikipedia.org/wiki/Habib_Wahid

³⁸ Khasru, S. M. (2010) 'S.M. Ali: The man and the journalist', *The Daily Star*, 5 December.

Cultural Organisation's (UNESCO) and returned to his country of origin – Bangladesh in 1989. Mahfuz Anam also worked with UNESCO since 1977 in various public affairs and media capacities in Paris, New York and Bangkok. In December 1999 he resigned from his UNESCO job as regional media and public affairs representative for Asia and Pacific covering 31 countries and returned to Bangladesh in 1990.³⁹

SM Ali and Mahfuz Anam launched the newspaper as founding editor and executive editor respectively. Aim of these two veteran returnee journalists was to establish with a sense of challenge and a feeling of humility to serve this nation as a truly independent newspaper.⁴⁰ Within a few years of taking this challenge SM Ali died in 1993. Under the able leadership of his colleague, Mahfuz Anam their dreams has been fulfilled to a great extent. Over the years, The Daily Star has become country's largest circulated English daily. Mahfuz Anam and his team at Daily Star defined their objectives of journalism are to strengthen democracy, freedom of expression and freedom of media and fundamental rights. In a bi-partisan political environment in Bangladesh, *Daily Star* provides an avenue to conscious civil society activists to voice alternative thinking in different areas. As per the definition of return of highly skilled they can be turned as successful returnees making huge contribution to the democratic process of Bangladesh.⁴¹

Analysis: This section shows that diaspora and returnees made contribution in culture and media. This finding leads us to question the western notion of highly skilled knowledge workers and argues for incorporation of social skills and creative professionals in the definition.

CONCLUSION

This paper attempted to conceptualize all possible forms of circulation of brain ranging from short term and permanent return, networking and joint collaboration of diaspora and Bangladeshi experts and circulation of brain from countries of residence to Bangladesh. This paper could not look into type of results the Bangladeshi diaspora produces through their movement on the countries of their residence.

The paper highlighted the problem of paucity of data on the nature and extent of Bangladeshi diaspora in general and its knowledge worker community in particular. It gave a general idea through identification of knowledge workers. A section of its

³⁹ Haque, S. B. (2011) 'Remembering S.M. Ali', *The Daily Star*, 5 December, 2011.

⁴⁰ Interview of Mahfuz Anam, 2 June, 2012.

⁴¹ See details, 'About Us', *The Daily Star*, 6 September, 2007.

diaspora transnational population, students who go abroad to attain higher degrees and professional section of the short term contract migrants are described as highly skilled knowledge workers.

In order to offset the problem of lack of data and published research the paper followed case study method and tried to generalize some of the features of impact of brain circulation in Bangladesh. It concentrated on five broad heads. These are education, investment, health, science and technology, and culture and media.

In the section on education it was seen that a large number of students, professionals and academics migrate to the developed western countries from Bangladesh to do higher degrees and training. A large section of them do not return. Therefore, the incidence of brain drain is quite significant. At the same time as highly skilled workers have migrated from Bangladesh for the last 60 years. They have attained knowledge, experience and skills which Bangladesh has the capacity to absorb.

The education sector experienced circulation and return of highest number of knowledge workers from developed countries. In the 1990s the growth of universities in the private sector in Bangladesh created opportunities for the return of the highly skilled. Public universities on the other could not produce such result. The highly skilled returnees have made their mark in the education sector. They have successfully contributed to the growth and development of private universities, gainfully utilized their network with western universities and developed research collaboration. Some of them contributed to the framing of the new education policy of the country. Non-formal primary education model of Bangladesh which has been replicated all over the country by government has been the result of experimentation done by returnees from UK and USA.

Migration of the highly skilled doctors created a vacuum in delivery of health care services. Nonetheless, the paper demonstrates that brain drain is one of the reasons behind such vacuum. There are other complexities. The unwillingness of a section of doctors to go outside the main cities and their preference to get employment in public services of government and NGOs instead of practicing medicine are equally important reasons behind this.

A section of physicians of Bangladeshi origin are linking with Bangladesh in four major ways; these are personal philanthropy, return, establishment of medical institutions and sending assistance to existing medical hospitals. It seems larger contribution could be made through medical doctors association such as that of BMANA. Specialized trainings, equipment and book donation to library and organizing surgery could be done

smoothly through involvement of the associations. Nonetheless, quantitative information is required to measure their contribution in value terms.

Bangladesh's science and technology sector suffers the most from brain drain. In recent years some circulation in physical science and engineering are taking place. Interestingly most of the returns of scientists are due to personal reasons. Invention of jute genome by a team of micro biologist constituted by knowledge worker of Bangladeshi origin and young Bangladeshi scientists is a unique example of what can be achieved through linking with knowledge workers. Here as well private network of bio-technologists played the important match making role.

Most of the examples of investment of diaspora and returnees also highlight personal initiatives. In the cases presented the state played a little role. Establishment of Grameen Phone, theme park, chain departmental store are some inspiring examples of returnees and knowledge transnational Bangladeshis contribution.

The role of diaspora or highly skilled in enriching Bangladeshi cultural identity and in development of independent media helps us to question some of the traditional findings. How to we incorporate artists, musicians and composers in the definition of knowledge workers? How do we incorporate the role of retired returnees? Traditional literature highlights that retired returnees do not contribute in a major way. The Daily Star set new standard in Bangladesh in independent journalism. It was established by a retired journalist along with his colleague who also returned to Bangladesh after a long time. Music played a very useful role in linking the young Bangladeshis and second and third generation British and American Bangladeshis. A group of musicians constituted by diaspora and Bangladeshis has become circular migrants who take Bangladeshi music all over the world.

All these examples highlight that so far the state and public sector has failed in a major way to link knowledge workers with Bangladesh's development. Personal initiatives and individual's desire to do 'something' in the country of origin were the key driving forces which produced some developmental outcomes. These personal initiatives and outcomes can be institutionalized at a larger scale if relevant organs of state develop targeted policy and action plan. It was also seen that different types of social and professional networks facilitated circulation of brain. The state needs to support such network.

Major conclusion of the paper therefore is that diaspora on their own did not produce development in Bangladesh. They became interested to take part in the development of Bangladesh once the country reached certain stage and demonstrate certain potential.

Diaspora may have speeded up development once it is initiated by different actors of country of origin.

Recommendations

A method has to be developed to generate information on approximate numbers of all types of long term migrants, diaspora, second generation people of Bangladeshi origin, non-resident Bangladeshis. Data also needs to be maintained on the number of people going abroad for higher studies and returning. National census may include information on family members who are outside the country.

The Ministry of Expatriate's Welfare and Overseas Employment (MoEWOE) needs to develop a plan of action to facilitate circular migration of knowledge workers. It can use the information provided in this research to assess the needs and identify methods in development of such action plan.

The government may encourage collaborative research among highly skilled knowledge workers of Bangladeshi origin and researchers of Bangladesh on important national issue areas through allocating research grants.

Multilateral agencies can design empirical research to provide quantitative understanding on contribution of circulation of highly skilled to the economy of Bangladesh.

Networking and partnership that has already begun in the health sector should be facilitated and institutionalized.

Enterprise development experience of Bangladeshi diaspora indicates that pro-active policies of origin countries are important; so is the investment climate. The political climate of the country has to be improved significantly to attract diaspora investment.

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