CHAPTER-V

BANGLADESH-UNITED STATES
TECHNO-SCIENCE
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The word technology means knowledge or science of techniques of doing something and implies theoretical knowledge as well as skills. It is the system of applied science by which a society solves its problems and provides its members with those goods and services needed or desired. Technology in general improves the quality of life of the individuals concerned, through improving productivity per person. In particular, technology makes it possible for humans to cover space and time in an accelerated manner. It has made humans capable of handling a multitude of things in a faster and a more efficient way. An accelerated technological change results in economic growth and development which determines the social and cultural change in the modern world.

The difference between the developed and developing world is the quantum and quality of technology the former possesses, and the latter lacks. People in developed countries have been influenced by technology and their economic development is the outcome of their superiority in possession and application of technology.

In contrast, developing countries, lacks quantum and quality of technological possession and their application. This technological lag

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significantly affects their economic developments. It reflects the disparity in socio-economic and political status of a developing country and a developed country.

Technology transfer and cooperation from U.S. to Bangladesh is the outcome of technological gap between the US and Bangladesh. The US is a strong and efficient technologically country whereas Bangladesh lacks in technological capability. In the wake of this gap, over the years, THE US has transferred technological know-how to Bangladesh in various fields from agriculture to telecommunication and information technology.

US assistance between 1953 and 1971, an estimated $646.6 million was provided to East Pakistan. This support included Karnaphuli Hydroelectric Project units 1 and 2, $67.1 million for coastal embankment projects worth $81.5 million and support for Agricultural and Engineering Universities amounting $9.1 million.²

After independence, in agriculture sector, the US has supported and provided green revolution technologies. It includes HYV seeds, pest management techniques and off-farm and on-farm techniques. THE USID has supported research and policy analysis for food security and prudent stock management. In the wake of flood cyclones, THE US has transferred and supported physical infrastructural designs for food management. It has

rehabilitated and built godown and grain handling storage facilities (particular near Mongla port in Khulna). It helps government of Bangladesh in handling stocks, improve efficiency of unloading and grain movement and reduce storage losses. In addition, the US has technologically assisted in upgrading and expansion of food testing laboratories for improving quality and safety of food in storage.\(^3\)

The US has also provided sustainable analytical support for food security policy through strengthening of local institutions and capacity in Bangladesh. The US has provided additional analytical support for development of local institutions, researches (e.g. BIOS), FPMU (Food Planning and Monitoring Unit) and policy makers.

These programs outlined above are, therefore, some of the ways that the US has cooperated with Bangladesh for food security in Bangladesh, which has proven to be very fruitful in the past, continue to benefit the people of Bangladesh in the new millenium.

On 3 May 1999, the donors had agreed to provide technological and technical assistance for the production, processing and export of the shrimp in Khulna region. USAID and IFDC provided this assistance for a project named ATDP. In this regard, a group of representatives of the donors visited Khulna

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\(^3\) Bangladesh Documents, Ministry of Foreign Affairs, Government of Bangladesh, February 2000.+
region. The group of representatives included Dr. Ronald P. Black, Richard Rausseau, David Johnson and Habibur Rahman.4

Bangladesh is the most vulnerable country from flood and cyclones. In the last three decades after its independence, Bangladesh has faced several cyclones and floods. This is one of the major areas in which the US has technologically supported Bangladesh in prediction, rescue and rehabilitation during and aftermath of cyclones and floods. The US has therefore shared information and technology for combating and managing natural disasters. In social and health sector, the US has provided valuable technological assistance to Bangladesh. Being a vulnerable country of cyclones and floods, in general, Bangladesh faces many problems on health and social fitness. In health sector, the US provided know-how to Bangladesh on reducing the fertility level and improving the health status of the population. For reducing child-mortality THE US provided valuable assistance on Oral Rehydration Solution (ORS) therapy. As a result, Bangladesh has been able to witness a dramatic drop in the total fertility rate from over 7 children per family in 1974 to 3.3 in 1996-97.5

Defence is another area, in which THE US has continuously supported Bangladesh. Training and technological cooperation between Bangladesh and THE US has been growing steadily since independence. Bangladesh armed


forces personnel receive professional training assistance from THE US through International Military Education Training (IMET) program every year.\(^6\) Besides training cooperation covers sharing of know-how and information on medical, veterinary, special forces operation, public relation and humanitarian assistance, etc. The US has successfully transferred technologies on engineering construction, relief and disaster management and technological know-how and equipments for Bangladesh army. The US started cooperation from the very inception of Bangladesh Power Development Board (BPDB). In 1962 the country's first two Hydro Power Plants at Kaptol, each having capacity of 40 MW were constructed with the technical and financial assistance of the US. The third hydro plant of SOMW capacity was installed in the same place in 1989 with the assistance from the same source.\(^7\)

In rural electrification of Bangladesh, the National Rural Electric Cooperation of the US has been working as consultant in Rural Electrification Board since its inception. The US is now assisting financially and technically a TA project named rural power for poverty reduction program under REB. For improved performance of the energy sector in Bangladesh a draft on "Strategic Objective Agreement" is now under active consideration of both the

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governments. Discussion is underway with the US government for providing technical assistance for studying the potential of exporting electricity.

On 6 February 1999 an arrangement between the Ministry of Energy & Mineral Resources and the US Department of Energy was signed for the exchange of energy information. The salient features of the arrangement are as follows:

(i) Exchange of energy market statistics;
(ii) Exchange of other related data and information concerning fuel characteristics, etc.;
(iii) Exchange of information concerning statistical methods, analytic techniques and system documentation;
(iv) Exchange of information about electronic information dissemination.

In 1998 itself, an action plan on US-Bangladesh program for cooperation in clean energy, was prepared by USDOE.

In recent years (post-1990s), MNCs from the US are massively investing in energy and oil and natural gas exploration, production and distribution. The MNC investment in Bangladesh is not only responsible for transfer of fund, but also for techniques of production, managerial and marketing expertise, products, advertising and business practices. Multi National Companies (MNCs) are engaged in oil and natural gas exploration conducting reismic survey, drilling oil

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8 Ibid.
well, development of gas field, construction of gas transmission pipeline power stations, offshore gas production, consulting on environment and safety.

A proposal for Petrobanga and USGS to jointly study and estimate hydrocarbon potentials of Bangladesh is under examination.  

Cooperation and technology transfer in Telecommunication and Information Technology is an emerging phenomenon. Until 1989, the Bangladesh Telegraph and Telephone Board (BTTB) had a monopoly on Bangladesh's telecommunications sector. But in 1990s this sector was opened for private investment and foreign investment. US companies have done fairly well in supplying equipment to the private sector, which dominates the more technically-advanced telecommunications services, US companies are also supplying telecommunications services and equipment to the two private rural telecommunications providers. In coming years, prospects for selling AMPS and GSM based cellular systems from the US are good. Wireless local loop, PCS and CDMA-based technology should also be of great interest to private operators.

In Bangladesh, the approximate market size for computer hardware, peripherals and software is $20 million and increasing at a 20-25 per cent rate per year. The US share of this market is about 60 per cent. In the wake of

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9 Ibid., p.7.
growing market recently, Microsoft (US company) has opened a computer training school. It aims to increase skilled computer personnel.\textsuperscript{10}

On 13 January 2000, Bangladesh and United States were going to set up a joint software company in Bangladesh. This was the first software company under joint venture. In this regard, an agreement was signed between Anirban of Bangladesh and Private Capital Investment (PCI) of the US.\textsuperscript{11}

The US companies are providing architectural, construction, engineering services, mainly design and supervision consultancy in Bangladesh. In infrastructure, their technological and financial support is significant. Many US companies are engaged in road, bridge, port and airport construction.

According to the shipping ministry on 4 June 1998, the government has given a go-ahead to the biggest the US container port operator, Stevedoring Services of America (SSA) to set up an international container terminal near the Chittagong port at a cost of about the US $500 million.\textsuperscript{12}

Therefore in sum, we can say that in post-globalization phase, technology transfer between THE US and Bangladesh has qualitatively and quantitatively grown tremendously. Beginning from technology transfer in agriculture, rural infrastructure, energy and manufacturing sector, it is spreading to new areas like

\textsuperscript{10} Bangladesh Documents, n.3.
\textsuperscript{11} BFPS, Quarterly, BLISS Publication, Vol.6, No.1, January-march 2000, p.16.
\textsuperscript{12} Ibid., Vol.4, No.2, April-June 1998, p.19.
telecommunication, information technology, space science and remote sensing, biotechnology and genetic engineering.

For effective and sustained cooperation in the field of science and technology between Bangladesh and the US, conclusion of a bilateral agreement was considered. The Ministry of Science & Technology (GOB) proposed through Ministry of Foreign Affairs to conclude such an agreement in late 1917. Science & Technology cooperation between Bangladesh and the US in the form of joint research, exchange of scientists and scientific information, HRD and R&D may take place among others in the following fields:

(a) IT infrastructure development and software,
(b) Biotechnology and genetic engineering,
(c) Renewable energy,
(d) Coastal and oceanic resource management,
(e) Space science and remote sensing,
(f) Environmental management and bio-diversity,
(g) Plant medicine,
(h) Meteorology.

Besides, the following priority items may also be considered for discussion:

(a) Use of peace corps volunteers from scientists, technologists and science managers.
(b) Closer collaboration between NSF, US and Ministry of Science and Technology and between Bangladesh Atomic Energy Commission and USNRC.

(c) Participation VITA volunteers in both urban and rural areas of Bangladesh to support suitable technology transfer.

In sum, the US-Bangladesh science-technology cooperation is not satisfactory. The US government did not transfer their technology as much as it was needed for a developing country. Although there is much cooperation in the energy, science and technology sectors in 1990s comparatively during cold war period. The discoveries of natural gas and oil field in Bangladesh have enhanced the investment and technology transfer in the country.

Cultural Relations between two Countries:

Cultural relations are one of the important component of relationship between two countries. It aims to develop understanding and build confidence between two countries. Furthermore, cultural exchange programs are often instruments of foreign policy employed by states to strengthen relations with friendly nations and contribute to a relaxation of tension between peoples of potentially hostile countries. Under cultural relations, a country allows another country to express their cultural heritage, legacies, forms and symbols in its own country and in return expresses its cultural heritage, legacies, forms and symbols in another country.
The US and Bangladesh (East Bangladesh) maintained cultural exchange programs in pre-independence period. The US government have provided support for Agricultural and Engineering Universities amounting $9.1 million. During liberation phase and immediately after it (phase of hostility) there were hardly any cultural exchange between the US and Bangladesh. But once normal relation was reestablished Bangladesh, the US restarted their cultural exchange in the field of art, music, education, missionary work, etc.

Under cultural exchange programs the US provides scholarship to students pursuing higher studies in the US. Two such scholarships are Fulbright and Hubert Humphrey. The Hubert H. Humphrey Program provides a basis for establishing lasting ties between citizens of the United States and their professional and counterparts of Bangladesh, fostering an exchange of knowledge and mutual understanding. During their fellowship year, Humphrey fellows participate in programs that combine academic course work with professional development activities. Throughout the year, fellows participate in workshops and conferences that provide interaction with leaders from the US federal, state and local governments.

The Fulbright program in Bangladesh started in early 1980s. After the war of independence it resumed in 1975. Since then about 100 Bangladeshi scholars have been awarded Fulbright grants to teach and undertake research and

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14 Prochure, Humphrey Program, USIS, Dhaka, Bangladesh.
advanced study in the United States. During the same period, about 40 US professors and students have come to Bangladesh on Fulbright scholarships to teach and study indifferent fields. Apart from these graduates, post-graduates and research scholars exchange program, the H.H. Humphrey fellowship program provides governmental and non-governmental professional training program from Bangladesh to the US for 10 months which covers two scholars every year. This scholarship provides $1,500 per month to each scholar.

The international visitor program is also a scholarship, which is given to the highly professional people from the different fields of the society. These include expert in trade, foreign policy, non-governmental organization, journalists, lawyer, teacher, politician etc. About 15 persons avail these opportunity every year. This is three week training program.

In an interview with a cultural councillor representing USIS (United States Information Agency), it was found that there was decrease in number of scholarships in post 1990s period in educational field. According to him it has happened in the wake of Educational Budget cut by the American Congress.

Apart from Government scholarships, there are a number of private institutes and consultancy firms fostering ties between the US-Bangladesh in the field of education, social, economic and politics.

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16 Interview during my field trip visit on 20 October 2000.
Institutes like American Institute of Bangladesh Studies (AIBS) invites students and scholars from the US to study cultural, socio-economic aspects of Bangladesh in particular and South Asia in general. In this institute around 20 students come to Bangladesh under self-financing program.

Moreover, on the education front, there is an increasing tendency among the Bangladeshi students to study at US colleges and universities. According to the Institute for International Education (IIE), in 1993-94 there were a total of 3,236 Bangladeshi students enrolled in American colleges and universities – 60.3 per cent in under-graduate program, 37 per cent in graduate program and 2.7 per cent in other programs. This represents an increase of 10.3 per cent over the 2,933 students recorded for 1992-93.\textsuperscript{17}

Furthermore, cultural exchange programs are often instruments of foreign policy employed by states to strengthen relations with friendly nations and to contribute to a relaxation of tension between peoples of potentially hostile countries. In the cultural field between Bangladesh and the US, there used to be exchange of artists, musicians, theatre groups, pioneers, exhibitions from the US to Bangladesh to perform their culture. But 1990s the trend is on decline. In 1999 there were two groups of musician left, but in 2000 that has come to one. After 1995 there were no American exhibitions in Bangladesh. The reason for this as said by Mr. Mahatabuddin Ahmed, Director, USIS, is that there has been constant cut in the Congressional budget for this cultural activities in the 1990s.

\textsuperscript{17} Special Release, USIS (Dhaka, 22 February 1995).
But I think, in the post-cold war era or in the age of privatization liberalization and globalization, where geo-economic aspects is most important for a country, the US does not concern about their ideological expansion. Even now, there is no threat of communism.

One of the most important things which I came across during my field trip in Dhaka, that the Dhaka University students and other people were filling the form for the lottery which provided citizenship of America to 3,740 Bangladeshi every year. I intended a student regarding this system, he said that at least one crore senior secondary passed students can apply for this lottery system. The American government distribute the visa on the lottery based system, without any further charge. This system has played an important role in cultural cooperation between two countries. Even the Bangladeshi citizens in America have performed well, or the credibility of Bangladeshi have taken concrete form. For instance, a Bangladeshi citizen is US ambassador in

Other aspect of cultural exchange between US and Bangladesh is presence of US peace force in Bangladesh. In 1960 there was a brief presence of US peace corps volunteers in Bangladesh. Following independence, the US peace corps expressed interest to send volunteers to Bangladesh to work in development areas. An agreement was signed between Bangladesh and the US. On 13 July 1978 the US peace corps program in Bangladesh began. However the 1978 agreement which included a program of rural development in
Bangladesh was never put into operation.\textsuperscript{18}

On 5 July 1998, a Memorandum of Understanding (MoU) was signed between the US peace corps and Bangladesh Government to implement peace corps program in Bangladesh. The first 25 peace corps volunteers are working in primary training institutions around the country to enhance English language training for primary school teachers of Bangladesh. The second group of 35 peace corps volunteers also reached Dhaka in February 2000.\textsuperscript{19}

Finally, no portrait of Bangladeshi-US relations would be complete without some description of the critical roles that have been played by unofficial US ambassadors of goodwill: members of diverse Protestant and Catholic missionary groups and such voluntary agencies as planned Parenthood, CARE, Save the Children the US, the Ford Foundation, the Asia Foundation and Catholic relief. Their work, dedication and accomplishments over the years have been invaluable to the strengthening of informal through critical ties, despite US government policy.\textsuperscript{20}

In fact, the oldest and in many ways the most enduring of US ties was forged by missionaries at the start of the 19\textsuperscript{th} century. Then after years of being prevented by the East India Company from entering Bengal, a group of Baptist established an outpost at Serampore near Calcutta, where they set up a

\textsuperscript{18} Ehsanul Haque, n.15 , p.247.
Christian printing press. Ultimately this press helped rejuvenate modern Bangla and began spreading Christian teachings through Bengal. Controversies surrounding the written word, especially polemical exchanges over religion, not only helped rejuvenate the Bangla language but also helped spark the Bengali enlightenment. It was in the midst of this rhetorical battle that the Brahmo religion, the reformed Hinduism described earlier, was created. The legacy of the early US Baptists endures, because those missionaries supported the British backed Brahmo movement. They also built schools and hospitals that either have upon which to build. Indeed, the work of these missionaries in education and medicine, receives too the attention in the histories of Bengal.  

Likewise, major contributions have been made by two branches of the Catholic Church's Holy Cross order. Thus in the mid 19th century, when French Jesuits abandoned their mission in Dhaka, the Pope called upon France's Holy cross order to take up the burden. As it turned out, the main burden fell to the US and Canadian branches. Several colleges, including Notre Dame and Holy Cross, named for the schools in South Bend, Indiana, were created in Dhaka. Still considered the best schools for pre-university training, they are run now mostly by aging Holy Cross priests, who Bangla is tinged with a distinctly Midwestern twang. 

Today these priests, who have devoted their lives to East Bengal/Bangladesh, some having lived there more than thirty years, continue to uphold, the highest standards of quality and incorruptibility – standards which make their schools the most desirous and thus the hardest to enter. Sponsoring or running schools, hospitals, health clinics, and orphanages, these religions operate throughout the country, sometimes alone, offering not only an education but often food and other forms of aid. Their enduring legacy is evident everywhere, as their choice. Many, albeit those from relatively wealthy families, go to universities overseas. And while, like their parents, many gravitate to England, increasing numbers are choosing the United States, where they can be found around the country, at such prominent schools as Harvard, Princeton, Williams and Boston University, as well as at such lesser lights as Indiana University of Pennsylvania, to name a popular one. Since most eventually return home, often to become leaders in diverse field, Bangladesh's relation with the United States thus have been growing warmer with time. 23

In the conclusion, the cultural cooperation between US and Bangladesh has become less important than cooperation in economic field. During cold war period, the US government had emphasized on more cultural exchange to check the expansion of communism in third world countries. By this exchange the US always wanted to make them aware of its ideology. In 1990s the cultural exchange has comparatively declined.

23 Ibid., p.203.