**Bangladesh Telecommunications Company Limited**

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# Abstract

Advances in telecommunication and information technology have done more than anything else to drive the last decade's economic boom and the integration of markets around the planet. Since telecommunication plays an important rule in the development of ICT as well as the socio-economic condition of a country, the development of telecommunication is essential.

Bangladesh T&T board which become Bangladesh telecommunication company limited on July 1, 2008, the only public sector telephone service provider is doing the best with its limited resources to provide the most advanced telecommunication service to its valuable subscribers.

BTCL has a firm policy to digitalize the complete network as soon as possible. Digitalization of BTCL network started back in the year 1983 and over the past few years, the installation of digital equipment has increased considerably. In the meantime, all the district H/Q & 377 upazilla's have been equipped with digital exchanges. Remaining upazilla will have digital exchange very soon.

In the age of information technology, a robust and efficient national transmission system is required to support telecommunication and data communication as well as the IT activities of a country. With this end in view, BTCL is gradually installing and expanding optical fiber network and SDH microwave links throughout the country. The initiative has been taken to install an optical fiber-based access network.

BTCL has started providing internet service, at present the service cover 64 district H/Q and 377 upazillas and 16 growth centers. A plan is underway to extend the facilities to all upazaillas H/Q very soon. BTCL is providing broadband data service and at present, there are 78 DDN nodes at 41 districts.

Consortium submarine cable has been formally inaugurated on 21st May 2006 and connected to the global information superhighway through the consortium, enabling better overseas gateway.

Facilities for data communication as well as voice communication for the public and private

operator. To connect the whole country with this submarine cable different activities are taken. Besides BTCL, ISP's & different organizations are enjoying the service of submarine cable.

BTCL is implementing 10 lacs T&T mobile phone project. A public ltd company namely Teletalk Bangladesh Ltd is providing mobile phone service to people. Programm has been taken to expand the service of the company.

BTCL is committed to expand the telecommunication network of the country by introducing latest technology and also to contribute a sizeable amount of revenue to govt exchequer. BTCL has taken a very big project one for development of intercommunication scenario & another for development of internet & data communication scenario are also under process. BTCL expects to maintain its leadership role in the telecom sector in the present multi-operator competitive environment.

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Chapter 1

# Introduction

**1.1 Origin of the report**

As the students of the Department of Computer Science Engineering, We required to do an Assignment paper in the course (CSE 315) & this paper is authorized by our honorable Mr. AKMMI Dr. A.K.M. Muzahidul Islam. This assignment paper is assigned on December 5th, 2018 and the submission date is January 10, 2019. As we are

required to do our assignment paper, we were selected for Bangladesh Telecommunications Company Limited BTCL), formerly BTTB.

**1.2 Objective of the Study**

the main purpose of this report is to work on the SWOT Analysis of BTCL, formerly BTTB and

give some strategic actions on the basis of the SWOT analysis.

**1.3 Scope**

In this "SWOT Analysis" report we are going to cover the following areas of Bangladesh Telecommunications Company Limited (BTCL):

• The general overview of the Telecommunication sector in Bangladesh

• Historical Background of Bangladesh Telegraph and Telephone Board (BTTB)

• SWOT Analysis of BTCL and possible strategic actions on the basis of SWOT information.

**1.4 Methodology**

To do the SWOT analysis of BTCL first we analyzed PESTL analysis and Michael Porter's five competitive forces model to find out the external and internal factors that affect the company directly and indirectly. Then analyzing these factors I did the SWOT analysis of BTCL and finally gave some recommendations that from my perspective will give BTCL competitive advantages over its competitors and BTCL will run more effectively than before.

to do the SWOT analysis of BTCL we gathered information from

• Company's annual report

• Internet

**1.5 Limitation**

•We could not gather all the necessary information due to time constraints.

Chapter 2

# A general overview of the Telecommunication sector of Bangladesh

**2.1 The telecom sector in Bangladesh**

Bangladesh with an area of 1,44,000 sqr kilometers has currently more than 144 million populations. Dhaka its capital city with I2 million residents has a high demand for telecom services: the other metropolitan cities such as Chittagong. Sylhet. Khulna. Rajshahi and Barishal have a proportionately higher demand for telephone service a compared to the rest 56 district towns. The 460 thana headquarters and other commercially advanced places in the rural areas have also demand telephone service which all need to be brought under I well developed broad-based nationwide network of telephone service with easy access and connectivity with the global telecommunication system.

The telecommunications sector in Bangladesh is characterized by very low teIe-density. inefficiency, and under-capitalization. BTTB did not have sufficient interconnection capacity to meet the demands of the mobile service providers. Historically, the state-owned BTTB has been the monopoly telephone service provider. The inability and inefficiency of state monopoly, as well as the revolution in the telecom sector, provided policymakers a recipe for devising competitive telecom service provisions for citizens. Fixed telephone with analogous. digital, NWD, ISD, Cellular mobile phone, Internet service for data communication, VSAT services are and) operating in Bangladesh. BTTB is main player providing titted phone services. 5 mobile PHone services Operators in partnership with foreign investors are providing GSM phone genius some local and foreign companies are already in the race to opeRATe PSTN service in the rural areas. Mobile phone services through satellite It: also on the way of introducing service in Bangladesh. BTTB as the state-owned largest operator is providing the major services and is taking initiatives to expand the areas under its service network. fixed and mobile phone service. Approximately there are 9 lakh fixed telephone subscribers and 7 million mobile phone subscribers. 0n the commencement of the Bangladesh Telecommunication Act, 2001 BTTB became an operator like other private operators end he's to be corporatized within one year. Teledensity in Bangladesh is 0.5 lines per 100. High cost to access $341 connection fees for each telephone, one of the highest in the world, and a lengthy waiting period average waiting period for a new telephone connection varies from three months to 4 years.

**2.2 Historical Background of Bangladesh Telegraph and Telephone Board**

The telegraph branch under the Posts & deck-telegraph Depamnent was created in 1853 in the then British India and was regulated afterward under the Telegraph act of 1885 This was reconstructed in I962 in the then Pakistan as Pakistan Telegraph and Telephone Department. After the independence of the People's Republic of Bangladesh in I971. Bangladesh Telegraph and Telephone Department was set up under the Ministry of Posts and Telecommunications to run the Telecommunications Services in Bangladesh. This was converted into a corporate body named Telegraph and Telephone Board' by the promulgation of Telegraph and Telephone Board Ordinance. I975. ln Pursuance of Ordinance No. XII of I979 promulgated on 24th February. I979; Telegraph and Telephone Bond was converted to "Bangladesh Telegraph and Telephone Board" as a Government Board. Now it has become BTCL.

**2.3 service providing by BTCL**

BTCL provide land-line telephone services In urban areas. domestic long distance and International services. Though the Bangladeshi government has given out nationwide PSTN licenses. the lucrative Dhaka market (which account for the majority of the nationwide market) is still under the monopoly of BTCL.BTCL provides dial-up Internet access in all 64 districts of the country, making it the most-accessible Internet service provider in the country. As of January 2009, its total dial-up subscriber is 32,433. Since the beginning of 2007 BTC L has improved its Dial-up Internet service for better customer satisfaction. It also handles the .bd domain.

As of May 2008. the total number of subscribers of BTTB was 0.87 million. The BTCL also has plans to offer a wide range of broadband internet services soon. With this end in view, BTTB is gradually installing and expanding Optical Fiber network end SDH microwave links throughout The country. The initiative has been taken to install an optical fiber-based access network.BTTB now provides some valuable services as dial-up and leased line internet services,international private leased circuit(IPLC) services, Digital subscribers line(DSL), Telex service and packet switch data network(PSDN) services, The services offered by BTTB include public telephone services,telex,telegraphy,nationwide dialing,transmission links,trunk automatic exchange ,overseas communication services, international trunk exchange, data communication service,internet services,digital subscribers line and international private leased circuit.

**2.4 Vision Mission Core values**

**2.4.1 BTCL’s vision**

Build a globally respected and enduring business consulting and information technology institution that partners with clients to enable them to transform their business so that they get closer to realizing their vision and become a leader in their industry.

**2.4.2 BTCL’s Mission**

Help customers improve their company performance by providing world-class solutions via business and IT capabilities that leverage our globally integrated team of thought-provoking passionate professionals.

**2.4.3 BTCL’s Core Values**

***Customer Partnership:*** We approach every client with a view to building a professionally enduring relationship.

***Integrity & Accountability:*** We have the intellectual honesty to refuse opportunities that we cannot fulfill to the satisfaction of our clients, but once we commit we stand accountable.

***Result Orientation:*** We leverage technology and embrace innovation with a single-minded focus on delivering leadership results for our clients.

***Flexibility:*** We adapt our service and solutions to enable us to exceed our client’s expectations.

***Care for the Individual:***We value the cultural diversity of our employees, that every individual with respect, and encourage all to realize their fullest potential.

***Global Autonomy:*** We ensure global standards while enabling local autonomy, to deliver high quality, responsive and personalized service.

**2.5 The organizational structure of BTCL**

Bangladesh T&T board is run as a govt establishment under the Ministry of posts and Telecommunication(MOPT). The Board comprises of one chairman, four full-time members, and three part-time members, all are appointed by the Government of the People's Republic of Bangladesh.

**2.5.1 Privatization & Regulatory structure of Telecommunication services**

The telecommunication sector of the country has been liberalized for private investment. Bangladesh T&T board provides all types of telecommunication service in urban and rural areas while the mobile, paging and radio trunk services are offered by private operators. Recently a mobile phone service is being provided through public ltd. Co-named Teletalk under the management of the Govt. Public/Private operators were also given license to install and

Operate digital exchanges in rural areas and they would install telephone exchange in phases table-1 shows the list of private & public operators in 2005-2006.

**Private Cellular Telecom. Operator in Bangladesh**

|  |  |  |
| --- | --- | --- |
| Sl no | Name of the operators | Function |
| 1 | Pacific Bangladesh Telecom Ltd. | Provide cellular radio telephone service |
| 2 | Grameen phone ltd | Provide cellular radio telephone service |
| 3 | Seba telecom ltd | Provide rural telecom service in 199 upazilla’s and cellular mobile radio telephone systems |
| 4 | Telecom. Malaysia international Ltd | Provide cellular mobile radio telephone systems |

**Public limited Co**

|  |  |  |
| --- | --- | --- |
| 1 | Teletalk Bangladesh | Provide cellular mobile radio telephone systems |

**2.6 physical & technological resources**

**2.6.1 Telephone Exchange Status of The Bangladesh T&T Board**

the Telegraph branch under the Posts and Telegraph Department was created in 1853 in the then British India and at the end of 2005-2006 fiscal year, Bangladesh T &T Board had 731 telephone exchanges with a total capacity of 1203,057 lines. BTTB started operating digital local exchanges

after installation of six NEC- NEAX 61E exchanges in the Dhaka Telecom. Region Network in 1990-91 fiscal year with an initial total capacity of 26,000 lines. Up to 2005-2006 financial year

one hundred forty-one, seventy-three, one hundred twelve, fifty-three, sixty-seven and thirty-eight local digital exchanges were installed in Dhaka (SIN/E/W/Cen), Chittagong, Khulna, Rajshahi, Rangpur & Sylhet Telecom. Regions respectively. These were supplied and installed by NEC (Japan), Alcatel (France), Italy (ltaly), Ericsson (Sweden & Mexico), Netus (Turkey), CMEC, GDT and ZTE (China).

**2.6.2 Public Telephones**

Several years back, public telephones services used to be provided through Coin boxes in the urban areas and landline/wireless public call offices(P.C.O's) in the rural areas. Service quality of these public telephones had been far from satisfactory. To improve the public telephone service, cardphone system was introduced in 1992 with programs of replacing the old coin boxes and P.C.O's. By June 2006 about 1056 card phone booths were installed in different parts of the country. All cardphones have access to nationwide dialing while 271 of them have international direct dialing facility. Due to better and easy public access to a telephone, this cardphone service has become popular in the country. A program of installing card phone has been taken to cover all upazilla's and rural growth centers of the country.

**2.6.3 Nation Wide Dialing(NWD) services**

In Bangladesh nationwide long distance telephone dialing system was first introduced in 1983 employing NEAX-61E version of NEC exchange to link all the major cities of the country. Before that, there were subscribers trunk dialing(STD) service based on analog EMD toll

**2.6.4 Transmission System in Bangladesh**

Bangladesh is a riverine country, as the country's long-distance transmission system is mainly composed of microwave, UHF and VHF radio links. The optical fiber is also used in the city & some district headquarters areas for interconnecting local exchange ad Remote switching units(RSU) in multi-exchange networks and also for interconnection between switching exchange and microwave stations. BTTB's major microwave radio links, as listed in Table 6.

**2.6.5 Optical Fiber link**

High capacity optical fiber system is in operating in the country from the year 1998. Optical fiber network between DHAKA-COMILLA-Feni-Chittagong-Cox's Bazar, Comilla-Brahmanbaria, Lakshmipur-Maizd-Choumohani-Feni, Kustia-Meherpur-Chuadanga, Mymensingh-SHerpur,Mymening-Netrokona, and Bogra-Punchagarh have been completed in June 2006. The installation work of optical fiber network between Dhaka-Bogra & Brahmanbaria-Sylhet is in progress. After completion of these networks, BTTB will have a complete backbone optical fiber network from Chittagong to Panchagarh. BTTB's optical fiber links are shown in

**Optical fiber links on 30th June 2006**

|  |  |  |
| --- | --- | --- |
| Links | Type of links | Made by |
| Dhaka-Comilla-Feni-Chittagong-Cox’s bazar | STM-1 | Alcatel |
| Dhaka-Comilla | SDH STM-16 | Alcatel |
| Comilla-B.baria | STM-1 | Alcatel |
| Feni-Begumgonj | STM-1 | Alcatel |
| Begumgonj-Laxshmipur | STM-1 | Alcatel |
| Maizdi-Begumgonj | STM-1 | Alcatel |
| Betbunia- Rangamati | STM-1 | Shanghai Bell |
| Teknuf- Chittagong | STM-1 | Alcatel |
| Chittagong-Betbunia | STM-1 | Alcatel |
| Rangpur-Palashbari-Bogra | SDH-STM-1 | Alcatel |
| Rangpur-Saidpur-Dinajpur-thakorgaon-pacnhgarh | SDH-STM-1 | Alcatel |
| Rangpur-Saidpur-nilphamari | SDH-STM-1 | Alcatel |
| Rangpur-lalmonirhat | SDH-STM-1 | Alcatel |
| Rangpur-kurigram | SDH-STM-1 | Alcatel |
| Pabna-shahjadpur | STM-1 | Alcatel |
| Kushtia-meherpur-chuadanga | PDH STM-1 | Alcatel |
| Satkhira-Khulna | STM-1 | Alcatel |
| Mymensingh-sherpur | SDH STM-1 | Alcatel |
| Mymensingh-netrokona | STM-1 | Alcatel |
| Naogaon-Shantahar | SDH STM-1 | ZTE |

**2.6.6 Telecommunication Satellite & Earth Stations**

A single telecommunication satellite in geostationary orbit 36000 km above the earth can provide telecom services to one-third of the entire world. Advanced digital transmission technologies and more sophisticated use of radio wave in recent years have facilitated a large volume of satellite transmission around the globe. To facilitate transmission of incoming & outgoing overseas calls through satellite. BTTB has established 4 earth stations of which three earth stations are still in operations. The first earth station was installed at Betbunia near Chittagong in 1975. At present 856(voice 874+VFT 3+ Data 6) international with 12 countries are working through this earth station. The second earth station was installed in 1982 at Talibabad. This earth station has been taken out of operation. The third earth station which consists of the largest International circuit facilities was installed in 1994 at Mohakhali.4244(Voice 3950+ VFT 2+ Data 259) international circuits with 17 countries are working through this earth station. The fourth earth station was established in Sylhet in 1995 by British Telcom assistance to facilitate only BT-Sylhet traffic. 120 international circuits are working through this earth station. Moreover, 131 Terrestrial international circuits of 2 countries are working via Microwave. These earth stations operating with INTELSAT satellite which are located in the Indian Ocean region. The location details of these earth station are given below:

|  |  |  |  |
| --- | --- | --- | --- |
| Name of E/S | Name of E/S | Carrier | Working with INTELSAT |
| Betbunia | A | IDR | 60◦E IOR |
| Mohakhali | A | IDR | 64◦ E IOR |
| Sylhet | F3 | IDR | 62◦ E IOR |

**2.6.7 International Switching Centers**

International switching centers are mainly responsible for immediate selecting and connecting the appropriate circuit for outgoing calls and sending the necessary information to the receiving country's switch to complete the calls. At present BTTB has three international switching centers (ISC) of which two are located at Mohakhali and one at MOghbazar. ISC's of Moghbazar is of type NEAX-61K and NEAX-61E & ISC at Mohakhali are of NEAX-61E & AXE-10 type.

**2.6.8 Internal & Data network**

BTTB is now providing internet access service to its valued subscribers. These services include dial-up access service, leased access services for enterprises, access for local ISP's mail, web hosting and .bd name registered DNS services. Subscribers are all 64 district H/Q and 371 upazilla's/growth centers having Digital telephone facility is now under internet coverage. It has internet backbone connectivity of 2 STM-1 (155 Mbps each) through Singapore and France. Capacities of existing Nodes of the digital data network are expanded to 70 in 41 districts.

**2.6.9 Submarine cable**

Bangladesh has officially connected to the information superhighway through submarine cable since May 2006. Presently 5055 voice circuits are in operation with different countries through submarine cable and 2-STM-I is designated for internet backbone through Singapore and France. 3 IPLC circuit has been opened with three companies. In the meantime 66 ISP have been connected through the submarine cable system. Bangladesh is earning revenue from submarine cable. Besides, these installation of ITX, TAX, Access network, and VOIP platform under this project are under process.

**2.6.10 International Correspondence**

International telecommunication also depends on counting sharing their information with the rest of the world. Close working relationships among different international organization and a spirit of international cooperations are essential in this regard. By strengthening the relationship with various international organizations BTTB aims to contribute to the advancement of international telecommunication in Bangladesh. In this context BTTB maintains relations with international and regional groups line international telecommunication union. Intelsat INMARSAT, APT, SEA-ME-WE-4

**2.7 Financial Structure of BTCL**

**2.7.1 Revenue income for 2005-2006**

Revenue collection in the financial year 2005-2006 was TK 13162.75 million against the target revenue of TK 17720.00 million. There was a shortage of TK 4557.25 million from the target amount. This collected revenue was 8.62% less than the collected revenue of 2004-2005 financial years.

**2.7.2 reasons for the fall of revenue are as follow**

1. From the fiscal year, 2003-2004 NWD & international call change have been reduced substantially.
2. Telegraph service is diminishing day by day
3. Telex service has already been closed from 1st April 2006
4. Telephone revenue is falling down since 2001-2002 due to following reasons:

* The growth of mobile phones and the introduction of private land phones
* Royalty and fees of frequency charges used to be collected by BTTB are now collected by BTRC
* International incoming calls are reducing due to illegal call terminated and VOIP however in spite of these limitations, BTTB achieved a satisfactory level of revenue during the fiscal year 2005-2006

**2.7.3 Revenue Collecting**

A statement showing billed amount revenue collection and receivable for the year 2004-2005 and 2005-2006 are shown in table 12. Table 13 shows the service wise revenue collection for the year 2004-2005 and 2005-2006.

Chapter 3

# Conclusion

**3.1 Recommendations**

Given the institutional hold of corruption within BTCL, radical changes and drastic measures will be needed to redress the situation. To date no govt. has demonstrated the political will to take on the powerful nexus composed of dishonest workers, corrupt officials in the agencies and the ministry, opportunist traders, lobby groups and most certainly political leaders. A govt. having the required the political conviction might have considered the following options:

1. BTCL should make the connection process easier and cheaper for the subscribers so that the waiting time for getting connection becomes shorter.
2. Establish a regulatory body to monitor, coordinate, regulate and facilitate the functions of BTCL and ensure that consumer rights are protected.
3. Proper investments in promotional activities in advertisement and CSR activities to create a good impression in consumer's mind and hence increase the organization image.
4. Arrange sufficient funds for golden handshakes to all corrupt employees whose assets do not match their legal income in order to clean the slate in one go.
5. Conduct intensive training programmes for skill improvement in all function of BTCL to give superior services to subscribers.
6. Allow BTCL total freedom to handle own procurement without having to go to the ministry or the cabinet purchase committee with provision for regular external audits built into the system.
7. Rationalize the staffing of utility organizations, revise salaries and allowances making them commensurable with the cost of living and provide employment on a contract basis with the flexibility of hiring and firing
8. Bring an end to BTCL monopoly in the nationwide long distance services and rationalize tariff of BTCL's digital data network for the mass market.
9. Convert BTCL into limited companies with private sector participation and allow them to functions as normal private companies without interference from the govt.
10. Establish the Bangladesh telecommunication regulatory commission independent of govt control and political influence.
11. Allow voice over internet protocol, abolish the provision permission from the ministry of posts and telecommunications prior to leasing the capacity from Grameen phone's optical fiber network. VSAT operating license should not limit bandwidth
12. Through teletalk, BTCL can offer superior value-added services and other facilities like the other mobile companies
13. To penetrate the untapped rural market BTCL can offer a low-cost mobile set with RUIM as citycell does
14. Creates customers care centers for the subscribers go give instant help to the subscribers like other private phone and mobile companies
15. Introduce official pricing policy for the ISP’s to give internet facilities available for all at a reasonable lower price

**3.2 Concluding Remarks**

Public service such as availability of telecommunication is vital to the effective functioning of a society. At the household level, its availability can help raise productivity both immediate and latent. Without consistent supplies and with continuing service failure uncounted hours are wasted in waiting for household/industrial equipment to work, complaining, satellite the bills, or even finding the complaint center to help make things right. Clearly, if customers complaints are not taken seriously, they will be dishearted, dissatisfied and angry. It is imperative, that BTCL spares no effort to avoid failing the general public over and over again to gain their confidence and trust. That effort would be greatly appreciated and would go a long way to save the citizenry from having to bear the dissatisfaction derived from harassment, ineptitude, billing miseries and concomitant failures.

The findings suggest how the service of BTTB/BTCL can be significantly improved. After 37 years of independence they must realize that they represent public service; i.e they have been established to serve the needs of the public and not the reverse. It is important for them to restore faith in the public service delivery system. It is high time for the public to see better customer service from the public providers who are built and financed by the taxpayer's resources.BTCL is responsible to this constituency and must serve them consciously and conscientiously. To do so, service must be maintained and enhanced every step of the way by improving process, training and human resource dimensions. The numbers presented in this report also ought to serve as a benchmark against which the quality of service BTTB/BTCL must be calibrated regularly and shared with the public to determine whether there be any improvements in the future. Otherwise, the change in organizational form will be seen as merely gratuitous.

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