

Problems and Prospects of Telecommunication Sector of Bangladesh: A Critical Review

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Abstract:

Communication is an integral part of human life. From the very beginning of human civilization people were tried to communicate each others to fulfill their social needs. Over the passes of time though the tools of communication were changed but still it is exist in the society. Currently cellular phone has brought a revolution in the field of communication. Telecommunication makes the whole world in a small village and by using this service life become more comfortable and easier. This sector plays a vital role in the economy of Bangladesh occupying the top positions among others. But recently this sector faces some crisis related to governmental SIM tax, corporate tax and also the competition in the market. For these reasons, last few years both governmental revenue as well as the growth rate of subscribers is decreasing. If the Government take necessary steps beside the privatization, the sector could move forward quickly, which will also help Government to generate the revenues and create job opportunity. Keeping all these issues in consideration, this paper discusses the present condition of the telecommunication sector of Bangladesh (which give special emphasis on the cellular phone), what are the major challenges faces by the operators, and also tries to find out the prospects of this sector. It also provides a set of recommendations based on this analysis. The study is explanatory in nature which is based on extensive literature review and secondary data sources.

Keywords: Communication, Telecommunication, Cellular phone, Privatization, Civilization.

1.0 Introduction:

Telecommunication is the science of communicating information over distance by electronic transmission of impulses, as by telephone, telegraph, television, satellites, and radio. Another way, it can be said, telecommunication is any process or group of processes that allows the transmission of audible or visible information or data over long distance by means of electronic or electric signals. But in our study, by Telecommunication we want to mean only the service of both private and Government mobile phone or cellular phone in Bangladesh. We totally separated cellular phone from other telecom services like telephone (land phone), telegraph, television, radio and others to make our selected sector more specific and understandable.

Once upon a time a “Telephone” was a symbol of status. It was quite difficult and lengthy process to have a telephone connection at home. Think about the time of emergency when someone needs to talk in abroad! There was so harassment in getting line, line was not clear, distance call rate was so high that sometimes poor people could not avail it easily. But now the situation is totally changed. Now-a-days technology is available in the hand of root level people. A drastically change has come in the life style of people. Life is very easy now. Employment opportunity has been increased. Government has also been benefited by the revenue from this sector. Information technology has got acceleration by mobile phone technology. New and modern technology is coming in the near future. These rapid changes have been possible only for the mobile company. A research institution in India reveals that if using of mobile phone increase by 10% in a developing country, government revenue increase by 1.12 % in a year. This sector is also contributing much more in our country. Moreover the call rate and the network of the telecom in our country is good enough and affordable for the customers. In 2006 the average call rate was tk 2.43/Minute. In 2011 it was reduced Tk.0.63 (Approximate) Minute which is the lowest call rate in the world.

1.1 objectives of the Study:

The broad objective of the paper is to make an extensive study on the telecommunication sectors of Bangladesh and also bring this sector near and familiar to the common people. The specific objectives are:

- To identify the problems, challenges and prospects of the sectors (SWOT)
- To find out the determinants that affects the expansion (growth) of the sector.
- To appraise the performance of our telecom sector and its contribution the development of the whole economy.
- To give some suggestions this may help to increase the govt. revenues and growth of the sector as well.

1.2 Rationale of the Study:

Telecommunication is an important sector of any country which can play vital role in the nation's economy. But we the people of our country don't know enough about the problems, roles, prospects, and challenges of this sector. It is not possible to know by individual study because there is not enough comprehensive and well organized study exist on it; this report is a small attempt to make the sector familiar to the common people and also the related persons of this sector.

1.3 Research Methodology: Sources of Data/ Data use:

The present study is descriptive as well as suggestive in nature. This study basically covers a period of 12 years starting from 1997 to 2008. An attempt has also been made to include the latest information whenever available. Both primary and secondary data have been used. However, the major reliance is on secondary data at national and international levels. Primary data were collected through interview and discussions with some officials and experts of different telecom service providers. Moreover annual reports of different telecom, articles published in newspapers, conference papers and seminars proceedings have been carefully studied to procure the needed information. The report only presents simple frequency and quantitative tables. The findings of the study should be viewed more in a quantitative focus than in absolute quantitative terms whenever necessary, various statistical tools and techniques have been applied for the analysis and interpretation of data.

1.4 Limitations of the Study:

Major limitation of the study is lack of available information and previous workings on the topic. We don't have enough supportive articles to make an extensive literature review. Besides this the persons whom we interviewed for primary data they also felt reluctant to provide the proper information. Moreover, most of the secondary data we used were scattered.

2.0 Telecommunication Sector of Bangladesh: At a Glance

There is many ups and down in the mobile phone industry in Bangladesh. At present there are six mobile operators in our country. According to the number of subscribes and profitability Grameen phone Ltd is in the top position among six operators. Except teletalk though their local names are Grameenphone, Banglalink, Robi, Airtel, Citycell but their main companies are the world's famous and big organization. They have invested a lot and also they have more plans for investment. There is no doubt that their key objective is to earn profit. Government should create an environment and principles for profit. Besides these government should preserve consumer's right.

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2.1 Market Share Analysis of Telecom in Bangladesh:

At present the total number of Mobile Phone Active Subscribers has reached 72.959 million at the end of March 2011. Among the operators at the end of March 2011, Grameen phone grab the highest subscriber with 31.982 Banglalink is in the second positions with the total subscriber base of 20.126million and then Robi with 13.259million subscribers stands as the third largest mobile phone operator in Bangladesh .Airtel, Citycell, and Teletalk possess 4th, 5th and 6th position respectively. (Airtel Bangladesh had 4.607million subscribers, Citycell's total mobile subscriber base is 1.787million, TeleTalk is the 6th largest mobile phone operator in Bangladesh with 1.198million subscribers.

The total number of Mobile Phone Active Subscribers has reached **72.959 million** at the end of **March 2011**. The Mobile Phone subscribers are shown below:

Operators Name	Active Subscribers (2011, March)	Active Subscribers (December 2010)	Active Subscribers (Dec 2009)
Grameen Phone Ltd. (GP)	31.982	29.970	23.26
Orascom Telecom Bangladesh Limited (Banglalink)	20.126	19.327	13.87
Robi Axiata Limited (Robi)	13.259	12.368	9.29
Airtel Bangladesh Limited (Airtel)	4.607	3.956	2.99
Pacific Bangladesh Telecom Limited (Citycell)	1.787	1.811	1.95
Teletalk Bangladesh Ltd. (Teletalk)	1.198	1.211	1.07
Total	72.959	68.643	52.43

Source: <http://www.btrc.gov.bd>

The number of active subscribers as on March 2011 can be seen at a glance in the following table and graph:

Name of Operators	Active Subscribers (2011, March), Million	Market Share (%)
GP	31.982	44
BL	20.126	28
Robi	13.259	18
Airtel	4.607	6
City Cell	1.787	2
Tele Talk	1.198	2
Total	72.963	100

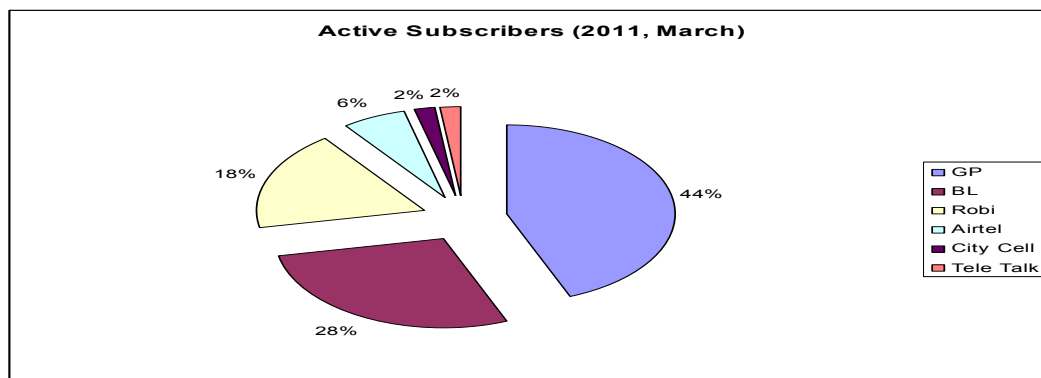


Table and Figure 1: Market share analysis of telecommunication sector in Bangladesh

** This figure in March 2011(BTRC)

2.1.1 Forecasted Straight-line trend of Subscriber (Using Least square Time Series Analysis):

The following calculation present the total number of actual and forecasted subscribers of different mobile phone company of Bangladesh for last five years:

Year	Subscriber In million (y)	(x)	xy	X ²	Ye = a + bx
2007	34.37	-2	-68.74	4	34.37
2008	44.64	-1	-44.64	1	44.49
2009	52.43	0	0	0	54.61
2010	68.643	1	68.643	1	64.73
2011	72.959	2	145.92	4	74.85
N=5	$\sum y=273.042$	$\sum x=0$	$\sum xy=101.183$	$\sum x^2=10$	$\sum ye=273.05$

$$a = \frac{\sum y}{N} = \frac{273.042}{5} = 54.61, \quad b = \frac{\sum xy}{\sum x^2} = \frac{101.183}{10} = 10.12$$

SL	Year	Expected Subscriber(in millions): ye = a + bx
1	2007	54.61 + 10.12 × (-2) = 34.37
2	2010	54.61 + 10.12 × (-1) = 44.49
3	2013	54.61 + 10.12 × 4 = 95.09
4	2016	54.61 + 10.12 × 7 = 125.45
5	2019	54.61 + 10.12 × 10 = 155.81

Here,
 a = 54.61
 b = 10.12
 x = -2,-1,4,7,10

**The above subscribers' numbers are declared by the mobile operators

2.2 Investment perspective of telecom in Bangladesh:

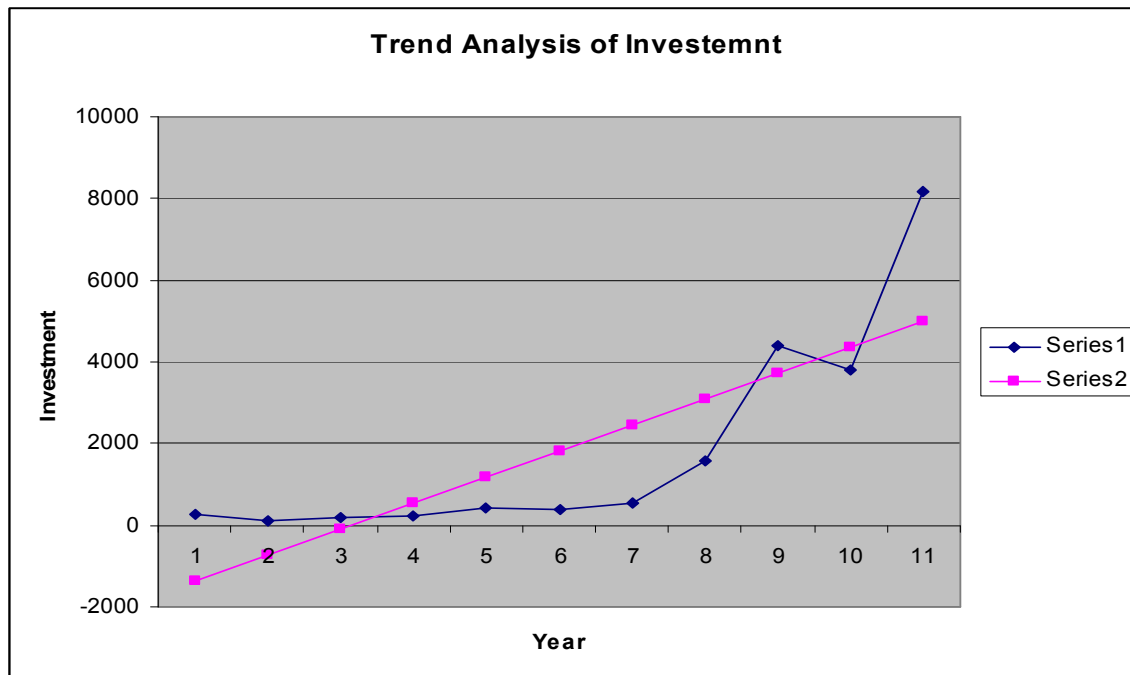
Mobile phone sector is the top sector for foreign investment and source of government revenues. Enormous investment is made as well as government earns huge revenues from this sector. The position of Bangladesh in attracting the foreign investment is not in satisfactory level. But Bangladesh is one of the top ten countries in the world for investment in this sector. From 1997 to June 2008 total investment in this sector is Tk. 229.56 billion. The scenario is as follows-

The actual and forecasted investment in the telecom sector of Bangladesh has got the following picture for the last few years:

Year	Actual Investment In Crore (y)	Deviation from 2002 (x)	xy	X ²	Ye = a + bx Forecasted
1997 (1)	259.3	-5	-1296.5	25	-1347.641
1998 (2)	112.1	-4	-448.4	16	-712.8528
1999 (3)	181.3	-3	-543.9	9	-78.0646
2000 (4)	235.1	-2	-470.2	4	556.7236
2001 (5)	413.1	-1	-412.1	1	1191.5118
2002 (6)	395.1	0	0	0	1826.3
2003 (7)	533.3	1	533.3	1	2461.0882
2004 (8)	1583.3	2	3166.6	4	3095.8764
2005 (9)	4397.9	3	13193.7	9	3730.6646
2006 (10)	3788.8	4	15155.2	16	4365.4528
2007 (11)	81.90	5	40950	25	5000.241
N=11	$\sum y=20089.3$	$\sum x=0$	$\sum xy=69826.7$	$\sum x^2=110$	$\sum ye=20096.35$

Here, ye = a + bx;

$$a = \frac{\sum y}{N} = \frac{20089.3}{11} = 1826.3, \quad b = \frac{\sum xy}{\sum x^2} = \frac{69826.7}{110} = 634.7882$$



- Series 1 indicates the Actual investment where as series 2 is forecasted investment
- Using Least square Time Series Analysis

Table and Figure 3: Trend Analysis of actual and forecasted investment

SL	Year	Expected Investment (in crore): $ye = a + bx$
1	1997	$1826.3 + 634.7882 \times (-5) = -1347.641$
2	2000	$1826.3 + 634.7882 \times (-2) = 556.7236$
3	2003	$1826.3 + 634.7882 \times 1 = 2461.0882$
4	2006	$1826.3 + 634.7882 \times 4 = 4365.4528$
5	2009	$1826.3 + 634.7882 \times 7 = 6269.821$
6	2012	$1826.3 + 634.7882 \times 10 = 8174.182$
7	2015	$1826.3 + 634.7882 \times 13 = 10078.545$
8	2018	$1826.3 + 634.7882 \times 16 = 11982.911$
9	2021	$1826.3 + 634.7882 \times 19 = 13887.311$

Here,
 $a = 1826.3$
 $b = 634.7882$
 $x = -5, -2, 1, 4,$
 $7, 10, 13, 16, 19,$

From the above table and graph we can see the actual and projected investment of different telecom company for the last few years. It indicates the actual investment cross the estimated investment after fourth year of their operations. Actually it was out of our imagination that we will have any investment in this sector in the year of 1997-2000 that's why it indicates the estimated investment is negative. By using the least square time series analysis we just estimated some year ahead up to 2021 to assess what will happen to achieve the Government vision 2021.

2.3 Government's Revenues from Telecom Sector of Bangladesh:

The contribution of Telecom sector in country's total GDP is around 1.46%. The major portion of the contribution comes from mobile phone sector. Revenue is also increasing every year from this sector. Again this sector is contributing about 10% of the total revenues.

The actual and the forecasted revenues from the telecom sector of Bangladesh can be shown in the following table:

Revenue forecasting: Straight line trend (Using Least Square Time Series Analysis)

Year	Actual Revenue (y)	(x)	xy	X ²	Forecasted: Ye = a + bx
1997	62	-5	-310	25	-884
1998	53	-4	-212	16	-425.018
1999	109	-3	-327	9	33.964
2000	288	-2	576	4	492.95
2001	447	-1	-447	1	951.93
2002	707	0	0	0	1410.91
2003	951	1	951	1	1869.892
2004	1846	2	3692	4	2328.874
2005	2174	3	6522	9	2787.856
2006	3250	4	13000	16	3246.838
2007	5639	5	28195	25	3705.82
N=11	Σy=15520		Σxy=50488	Σx ² =110	Σye=155200.16

Ye = a + bx, $a = \frac{\sum y}{N} = 1410.91,$ $b = \frac{\sum xy}{\sum x^2} = (50488 \div 110) = 458.982$

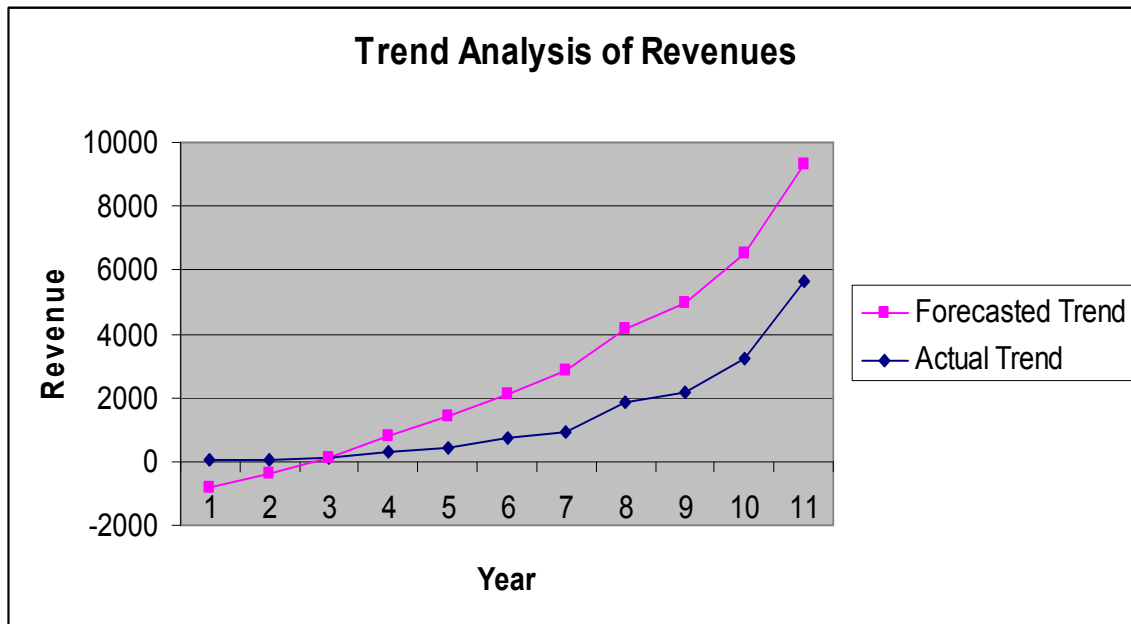


Table and Figure: Trend Analysis of actual and forecasted Revenues.

Expected (forecasted) Revenues from Telecom Sector of Bangladesh:

SL	Year	Expected Revenues (in crore): ye = a + bx
1	1997	1410.91 + 458.982 × (-5) = - 884
2	2000	1410.91 + 458.982 × (-2) = 492.95
3	2003	1410.91 + 458.982 × 1 = 1869.892
4	2006	1410.91 + 458.982 × 4 = 3246.838
5	2009	1410.91 + 458.982 × 7 = 4623.784
6	2012	1410.91 + 458.982 × 10 = 6000.73
7	2015	1410.91 + 458.982 × 13 = 7377.676
8	2018	1410.91 + 458.982 × 16 = 8754.622
9	2021	1410.91 + 458.982 × 19 = 10131.568

Here,
 a = 1410.91
 b = 458.982
 x = -5, -2, 1, 4,
 7, 10, 13, 16, 19,

The above table, calculation and graph presents the actual revenues what Bangladesh Government has got from the telecom sector and what were the expectation for last few years. It also indicates the actual revenues were less than the forecasted revenue. By using least square time series analysis we also tried to forecast what will be the Government's revenue in the year of 2021 when the Government want to achieve their vision 2021.

3.0 Problems and Prospects of Telecom Sector of Bangladesh:

Actually problems and prospects of any business sector is related to its strengths, weaknesses, opportunities, threats (SWOT) and also political, economical, socio-cultural and technological (PEST) issues of any country as well as the organization. Though telecommunication sector of our country face a lots of problems, it's also a prospective field till now.

3.1 Problems of Telecom Sector of Bangladesh:

- a) *High Competition:* High competition in mobile or telecom sector in our country is one of the main problems. If we have a look in the primary stage of our telecom sector, we had only city cell and Grameen phone and they were operating their business in own way. They took the first mover advantages but when Banglalink, Robi, Teletalk, Airtel come to compete in the market then the market became more competitive and still there exist a high competition in this sector. So to face this competition/ challenge some of the operators are thinking to merge their business to survive in the market
- b) *Poor Economic Background:* As a least developed or developing country Bangladesh has a poor economic background where a major portion of our people are living under the poverty line. So it is difficult to operate such type of business in Bangladesh with making a remarkable profit. By considering this economic background, the telecom sector is to fixed the call rate, should reduce tax on SIM and sacrifice more to operate their business.
- c) *Instable Political Situation:* Our previous history tells that Bangladesh is not a politically stable country. Different types of political violence, pressure of army, corruption and many more problems make our country instable and also has made this sector insecure. If we have a look last few year our democracy had face many ups and downs, as we don't have any foreign direct investment (FDI) in any of the sector.
- d) *High Rate of Corporate Tax:* As the economic condition is not good of Bangladesh, the telecommunication sector is not able to make profit. Moreover they are to pay high corporate tax which is 40%-45%. It is another major problem or challenge to operate challenging day by day
- e) *SIM Tax:* In Bangladesh the mobile operator is to pay Tk. 800-1200 as tax in each SIM from fiscal year 2005-06. Firstly it was Tk 1200 and later on by considering different facts it is fixed as tk 800. Though tax is to paid by the subscribers directly but the company give incentive to continue the sell the SIM at a lower price in the competitive market to hold their position. But now it become impossible for their all the company to carry on this burden. As the growth rate of the subscriber has been declined, the companies are in challenging position.
- f) *Import Tax:* In case of technological perspective, Bangladesh is not good enough. So mobile phone operators is to transfer or import technologies, hand sets and other equipments related to the telecommunication and for this they are to pay 35% import tax on it. It is also a great problem for this sector to make profit and survive in the market.

3.2 The Telecom market of Bangladesh & Michel Porter's 5 forces:

In Bangladesh telecom industry, there are already 6 giant companies trying to find their niche. It has been clearly noticed that as the market is growing, proportionately all the companies are getting new subscribers depending their nation wise coverage. So, it is assumed that if even the bargaining power of customer seem to be high due to high growth rate of market each company is some how getting benefited. Bargaining power of supplier is low as there are lot of telecom supplier is available. The presence of six competitors makes high competition. Supplier power is low as there is available telecom supplier. The presence of 6 competitors in the market makes high availability of substitute & competition as entry barrier is also low because of their high investment & easy entry policy. The following way we can present the summary of the porter's five forces compare with the telecom industry in Bangladesh:

Market forces	Challenges
Entry barrier	Low
Competitive Rivalry	High
Threat of Substitute product	Moderate
Power of buyer	High
Power of supplier	Low

We can also present the Michel Porte’s five forces model in relation with our telecom industry like as follows-

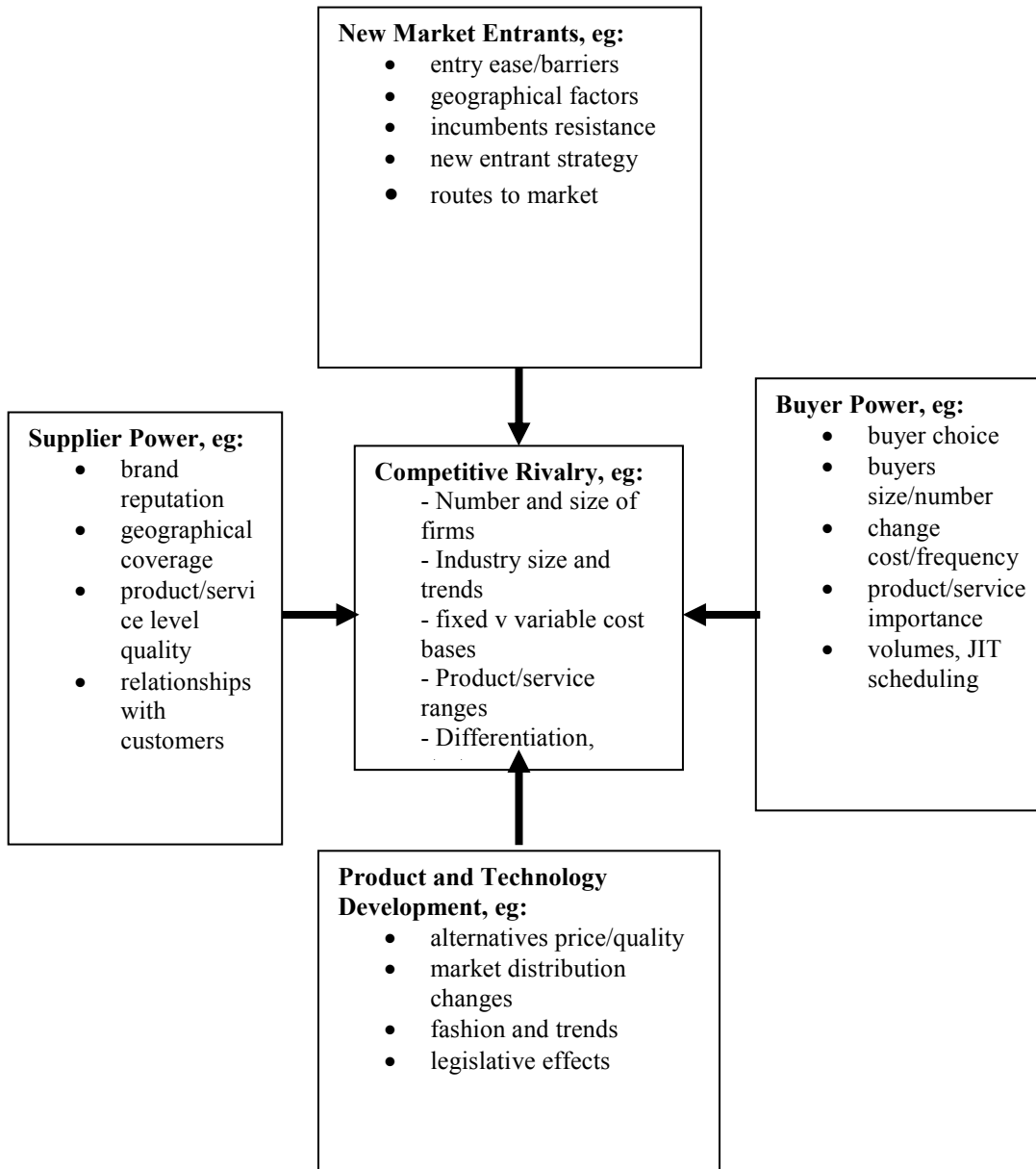


Figure: Michel Porter’s Five Forces Analysis

Source: Cahrles W. Hill, Book: International Business, Page 159, Fourth edition.

3.3 Prospects (Growth) of Telecom Sector of Bangladesh:

Though there are lots of problem exists in the telecom sector of Bangladesh; it is also a prospective sector both for the investors as well as the Government. Till now it has a potential market as more than two third of the population are out of this services. Let’s have a look on the rate for the last few years.

The Growth Rate of Subscribers in 2004 was 117.57%, in 2005 123.31%, in 2006 124.44% and in 2007 it was 65.25%.but the worst situation is in 2008.in first quarter the growth rate was 13.27%, in second quarter it was 13.25%, in third quarter 3.18% and in last quarter of the year there was no growth rate rather it was

downward. The scenario of progress indicates that such type of growth rate can be maintained within next 10-15 years Bangladesh will be a tele- density country.

Previously it was that mobile phone users will increase by 10% every 100 people when government establishes telecommunication principle. At that time mobile phone user was less than 1/100 people which was .04. By analyzing the current growth rate of mobile phone of BTRC, it could be tell that by 2011, total number mobile phone will be increase at above 5.5 crore and tele-density will be more than triple than expectation which is 34/100 people. The obvious reason is only the mobile company and the users. The operators expect that Bangladesh has potential to reach more than a 55% penetration rate in the next 5 years if Government relaxes tax policy.

4.0 Role of Telecommunication Sector to Bangladesh Economy:

In Bangladesh the largest structure of privatization become possible due to the investment of different telecommunication companies. The FDI in this sector till September 2008 was Tk. 30 thousand crore. Due to the global recession it may slightly decrease in the financial year 2009-10. **According to a report of world famous Auditing Institution Deloitto**, "In developing country, if using of mobile phone increase by 10%, government revenue will increase by 1.2% in a year." Moreover it plays a significance role to develop the economic condition of Bangladesh.

4.1 Job Creation and Reduced Unemployment:

To reduce unemployment problem telecom industry plays a vital role by creating employment opportunities in Bangladesh. A study show, till 2008 6 lakh 75 thousand people of our country are directly or indirectly involve in this sector for job and among them 15% are women. So it also can say this sector also help to empower the women in our country.

4.2 Sources of Government Income and Revenue:

It is one of the largest sectors for government to get revenue. The contribution of telecom sector in our country's total GDP is around 1.46% and the major portion of this contribution comes from the mobile phone companies. Till September 2008 the contribution of this sector to our economy was tk 20 thousands crore which was about 8% of the total revenues.

4.3 Listed in Stock Market in Bangladesh:

Though telecom started its business in private sector but currently phone has been listed in stock market and offered shares to the public about tk 486 crore which is a good sign of this sector. This will also help to operate their business and increase public image to the mass people in our country. Shareholders of Grameen phone became profitable which can also help our economy.

4.4 Dramatic Changes in Communication System:

Cellular phone has brought a dramatic change in the communication system in our society. Life has become fast, easy and comfortable in terms of business and society. By using this device we can connect with all over the world within short period of time and also can share information and sophisticated technology.

4.5: Develop Corporate Culture and Make more Competitive:

Telecom sector specially phone company is the pioneer to establish the corporate culture in Bangladesh. Now a day, most of the private organization as well as some public organization are practicing this culture which make the market more competitive and the employee, people and government can be benefited from this cultural environment.

4.6 CSR and Telecommunication:

The telecommunication section also plays important role by contributing to health, education, environment sports and all other social sector as corporate social responsibility (CSR).it is contributing to cancer hospital, scholarship for the students and arranging different types of training programs for human development. It also contribute to the beautification of our different cities, provide relief in different area, health line and service, make people aware to the environment and doing different types of social works. This sector acts as a member of society.

5.0: Conclusion and Recommendation:

From the above discussion it can be said that the Bangladesh telecom market has lot of potential to offer considering strategically ignorable or somehow alterable threats. The market seems to be very potential & prospective. Lots of opportunities are waiting. Bangladesh has cheap labor Communication infrastructure is in good condition. Customer demand for telecom product is also high. Govt. policies are also becoming liberal. Though telecommunication sector plays a vital role in our economy by creating job, generating revenues and contributing different type of social programs but our tax system and market structure makes it a non-profitable sector. So it is essential to establish an ICT industry immediately to get continuous support from this sector. To expand this sector we need to ensure a friendly environment and monitoring and control system which will take

care and give suggestions to solve the problems of this sector. More over the aims and objectives of national telecom policy (NTP)/1998 and Bangladesh telecommunication act (BTA)/2001 must have to apply properly to ensure the friendly environment and solve the existing problem of this sector. Besides this the Government should reconsider their tax policy. One study shows, if the tax on SIM and imported equipments is totally reduced, the subscribers will increased 9.5 crore and business will increase form 30% to 56%. As result government can earn additional tk 50 billion So our government should think and reconsider the tax policy which also can help to ensure their election commitment/ agenda of “Digital Bangladesh by 2021”

References:

- Ahmed Jashim, Akhter Afsana & Dilshad Segufta (2007), “The Impact of Information Source on SIM Purchase Behavior” D.U Journal of Marketing, Vol 10
- Anand Nitin & Mukharjee, “A study on telecom market”
- Cooper R.D & Schindler, P.S (2003). Business Research Methods. McGraw-Hill.International Edition.
- Islam Ifiti, “A study on Bangladesh telecom sector”
- M Abul Eusuf, Mokammel Karim Toufique. -“Trade development & Poverty linkage: A case study of cellular phone in Bangladesh”
- Malakar Bipul, Khan Morshed, Ahmed Sabbir & Chowdhury Nusrat, “Factors Affecting clients buying behavior towards mobile phone operator”
- http://en.wikipedia.org/wiki/Airtel_Bangla
- <http://en.wikipedia.org/wiki/Citycell>
- <http://en.wikipedia.org/wiki/Grameenphone>
- <http://en.wikipedia.org/wiki/Robi>[1]
- <http://en.wikipedia.org/wiki/Teletalk>
- <http://www.btrc.gov.bd/>
- <http://en.wikipedia.org/wiki/Banglalink>
- “The Daily Prothom Alo” 11th May, 2009, P. 14
- “The Daily Samokal”17th May, 2009, P. 10-14 (Special Supplement of World Telecommunication and Society Day-2009)

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