Unilateral liberalisation of Services: A Case Study of the Mobile Phone Sector in Bangladesh

Mohammad Abu Yusuf

B.Com (Honours), M.Com (Bangladesh), MBA (Monash, Australia)

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Department of Management

Faculty of Business and Economics

Monash University, Victoria, Australia

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MONASH University

Addendum

P.8: Add at the end of line 3:

"Another reason for choosing Bangladesh as a case study is because it possesses unique feature as the first country in South Asia to liberalise its mobile phone service sector unilaterally. It was also a forerunner among LDC countries in liberalising unilaterally. Thus it (Bangladesh) had the longest history and experience of unilateral liberalisation and as such, more experience and insights were expected to be available than from other countries".

P.52: Add at the end of para 3:

"In this regard, it is notable that the regulatory institutions may promote service-based competition by mandating 'unbundling' of telecommunications services. Unbundling refers to a government's attempt to favour new entrants by requiring incumbent providers to rent their networks as unbundled network elements at low prices regulated by a government regulatory agency. This facilitates entry by not requiring new entrants to incur large fixed and sunk costs to build their own infrastructure. The objective of unbundling requirements is to improve service-based competition and increase the variety of new services. Local loop unbundling has been mandatory in the USA since 1996".

p.64: Add before the 2nd para of Conclusion (section 2.7) i.e., before the para starting with "A review of literature....in different countries".

"The concepts of liberalisation and unilateral liberalisation as found in the literature are comprehensive. The use of 'national economic interests' as a basis to pursue UL, as argued by Lindsey (2000) and Garnaut (2002a) seems especially plausible. However, some aspects of UL were not clarified in the definitions. For instance, reforms undertaken to conform to conditions imposed by international institutions such as by the IMF/World Bank are not unilateral".

P. 64 2nd para of Conclusion: Delete the last sentence (i.e. delete "The literature reports some examples of non-transparency... firms in some countries") and substitute "However, the interactions between different factors of liberalisation and their relative importance received very little or no attention in the literature. Furthermore, although the literature highlights different factors of liberalisation of the telecommunications sector, it did not precisely mention whether these factors were also relevant to unilateral liberalisation. Some factors of liberalisation found in literature are not applicable to the concept of UL. For example, external pressure is not a factor contributing to UL".

p.64: Add at the end of 2nd sentence in para 3 of Section 2.7 (Conclusion): i.e., after the sentence ended with "expected reduction of tariffs":

"However, the existing literature discussed the impact of liberalisation of telecommunications services sector (as a whole) on the users without focusing on the impact of unilateral liberalisation of the mobile phone services sector. This supports the case for study of UL of the mobile phone service sector."

p.64: Add at the end of last para (i.e., after the sentence "In some countries...practices to maintain high prices"):

"Although regulatory capture is believed to be a reality in developing countries due to inadequate accountability mechanisms, extant literature provides little evidence of 'regulatory *captures'* in the telecommunications services sector."

P.65: Delete the 1st para (i.e. delete "It has been found...in Section 2.7) and substitute
"With regard to the relationship between UL and GATS commitments, it has been stated that unilateral and multilateral liberalisations are not mutually exclusive; rather they are complementary (Sally, 2000). It has also been emphasised that a multilateral forum is important for securing the permanence of the reforms (such as liberalisation measures) undertaken unilaterally. However, the extant literature provides no evidence as to how UL of a particular service sector influence (or does not influence) a WTO member to undertake binding liberalisation commitments under GATS. This identifies a research gap to be addressed by the research questions in this study. On the basis of the literature review and identified research gaps, three research questions were developed and presented in Section 2.7."

p.145: Add at the end of para 4:

"It is to be noted that the five factors of the UL in Bangladesh seem to be interlinked. For example, the emergence of mobile phone technology created an enormous market opportunity for entrepreneurs to introduce the service and reap good profits from the new business. The lack of adequate telecommunications service facilities and huge demand from business and urban users for easy and affordable services also created immense market potential for the service. The market opportunity created by telecommunications capacity constraint and a supply-demand gap as well by emerging new technology led government to enable the injection of private capital which attracted FDI into the sector. Market opportunity and lobbying are also interrelated. If there were no opportunity for making good profit from the mobile phone business, no entrepreneur would have been interested and lobbied to enter the sector. Lobbying and huge market demands from users seem to have influenced the policy makers to make market-based reforms. Thus, it is seen that market opportunity, technological development, government policy shifts towards marketisation, attracting FDI and lobbying interacted to spur liberalisation.

p.145, para 4: Add at the end of 1st sentence (i.e., the sentence ended with '...contributed towards liberalisation of the sector.')

"These factors affecting unilateral liberalisation of the mobile phone sector in Bangladesh are largely compatible with the factors discussed in the literature in Chapter 2."

p.146: Add at the end of para 5 (i.e. before the section 5.3.1):

"These views about the impacts of mobile phone service sector liberalisation on accessibility, pricing, quality of services and diversity of services appear to be largely compatible with the impacts of telecommunications sector liberalisation found in the literature except that the consumers had to bear high call rates in the first 7-8 years following liberalisation in 1996-1997."

p.240: Add before the last sentence i.e., before the sentence started with "With a view to assisting...":

"All these initiatives of the re-constituted BTRC during the period of non-partisan caretaker government provide the basis to argue that the telecommunications regulator was able to work independently during 2007-08 in promoting competition and bringing discipline in the sector. It was possible because the non-political military-backed caretaker government initiated some significant measures to attack and remove corruption. The

BTRC leadership was changed to that view in mind because the telecommunications regulator BTRC was considered to be one of the more corrupt bodies in Bangladesh and its Chairman (Omar Farooq) earned a reputation of conniving with the political leadership to accept bribery to grant license to Warid (The Daily Jugantor, March 10, 2011), for being controversial (The Daily Star, June 07,2007), for being silent spectator while operators continued irregularities such as engaging in illegal international call termination (The Daily Star,2008f) and for taking illegal benefits from an operator (Khan, 2006). The appointment of the independent regulator thus did not reflect a change in the will of political leadership."

p.254: Add at the end of last sentence of last para (i.e. at the end of the sentence ended with "before it decided to commit in the WTO"):

"Although consumers could not reap the full benefits of competition before 2005, there were still some benefits in the period of 1996 to March 1997 (i.e., before the submission of GATS commitments to the WTO in 1997) such as quick accessibility, freedom to choose from among the operators, better service than what it was in the monopoly period, lower connection cost, compared with the long waiting periods and underhand payments previously associated with installation of a BTTB phone."

p.308: Add after Reference 'Mureithi, M. (2003). Self-destructive competition in cellular: regulatory options to harness the benefits of liberalisation *Telecommunications Policy, 27* 11-19)':

"Myers, M. D. (2009). Qualitative Research in Business & Management London, SAGE Publications Ltd.

p.316: Add after Reference 'The Daily Jugantor. (2010b, May 26). GP launched a handset of Tk. 1350 in the market':

"The Daily Jugantor (2011, March 10). Illegal transaction of Tk. 100 crores in granting License and frequency to Warid, Dhaka"

p.317: Add after Reference 'The Daily Star. (2008e, May 11, 2008). Warid to spend $250m on network expansion*, The Daily Star*, Retrieved from http://www.thedailystar.net.story':

"The Daily Star (2008f, September 09). 3 mobile operators get extra spectrum, Dhaka**:** B2."

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Abbreviations used in the Thesis

AAT	Administrative Appeals Tribunal
ACMA	Australian Communications and Media Authority
ADB	Asian Development Bank
ADP	Annual Development Program
AL	Awami League
AMTOB	Association of Mobile Telecom Operators of Bangladesh
ARPU	Average Revenue Per User
A T & T	American Telephone and Telegraph Company
BDT	Bangladesh Taka
BITs	Bilateral Trade and Investment Agreements
BNP	Bangladesh Nationalist Party
BR	Bangladesh Railway
BRAC	Bangladesh Rural Advancement Committee
BSCCL	Bangladesh Submarine Cable Company Limited
BT	British Telecom
BTA	Bangladesh Telecommunications Act
BTCL	Bangladesh Telecommunications Company Limited
BTL	Bangladesh Telecom Limited
BTRC	Bangladesh Telecommunications Regulatory Commission
BTS	Base Transceiver Station/ also Base telephone system
BTTB	Bangladesh Telegraph and Telephone Board
CDMA	Code Division Multiple Access
COO	Chief Operating Officer
CFO	Chief Financial Officer
DDR	Doha Development Round
DESA	Dhaka Electric Supply Authority
DSB	Dispute Settlement Body

DT	Deutsche Telekom
ECNEC	Executive Committee of the National Economic Council
EDGE	Enhanced Data Rates for Global Evolution
EISD	Economy International Subscribers' Dialing
EPZ	Export Processing Zone
FDI	Foreign Direct Investment
FG	Focus group
FGD	Focus group discussion
FnF	Family and Friends
FON	Fibre Optic Network
FY	Financial Year (also Fiscal Year)
GATS	General Agreement on Trade- in- Services
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
GM	General Manager
GNP	Gross National Product
GP	Grameenphone
GoB	Government of the People's Republic of Bangladesh
GPRS	General Packet Radio Service
GSM	Global system of mobile communication
HBTL	Hutchison Bangladesh Telecom Limited
HDI	Human Development Index
HIPC	Heavily Indebted Poor countries
IDD	International Direct Dialing
IFI	International financial institution
IMF	International Monetary Fund
IN	Intelligent Network
IPP	IPP- Independent Power Producers

ISD	International Subscribers' Dialing
ITU	ITU - International Telecommunications Union
IVR	Interactive voice response
LDC	Least-Developed Country
LOI	Letter of Intent
MA	Market Access
MFN	Most Favoured Nation
MLAs	Multilateral Lending Agencies
MMR	Maternal Mortality Rate
MMS	Multimedia messaging services
MNP	Mobile Number Portability
MoC	Ministry of Commerce
MoF	Ministry of Finance
MUHREC	Monash University Human Research Ethics Committee
MoU	Memorandum of Understanding
MoPT	Ministry of Post and Telecommunications
MTS	Multilateral Trading System
NBR	National Board of Revenue
NCB	Nationalised commercial banks
NIP	New Industrial Policy
NRA	National Regulatory Authorities
NT	National Treatment
NTP	National Telecommunications Policy
OECD	Organisation for Economic Co-operation and Development
PC	Personal communications service
PDA	Personal Digital Assistant
PFC	Priority foreign country
PM	Prime Minister

PBTL	Pacific Bangladesh Telecom Ltd
PSTN	Public Switched Telephone Network
QoS	Quality of Service
RIP	Revised Industrial Policy
RQ	Research Question
SAP	Structural Adjustment Program
SAR	Special Administrative Region
SIM	Subscriber Identification Module
SMS	Short Message Service
SOE	State-Owned Enterprise
STK	SIM Tool Kit
TAM	Technology Acceptance Model
TBL	Teletalk Bangladesh Limited
TFP	Total Factor Productivity
TIB	TIB- Transparency International Bangladesh
TIO	Telecommunications Industry Ombudsman
TRAI	TRAI- Telecommunications Regulatory Authority of India
T & T	Telegraph and Telephone
UL	Unilateral liberalisation
USA	United States of America
VAS	Value Added Services
VPP	Village Phone Program
VOiP	Voice-over-Internet Protocol
VSAT	Very small aperture satellite
WTO	World Trade Organisation

Glossary of Terms Used in the Thesis

Term	Definition
Clientelism	Denotes a system of personal favours and patronage in return for loyalty and support between patron and clients (Støvring, 2004).
GATS	General Agreement on Trade in Services. The GATS consists of a comprehensive legal framework of rules and disciplines to promote orderly and transparent trade and investment liberalisation in services. It covers 161 service activities across 12 classified sectors. These include activities as wide ranging as telecommunications, financial, maritime, energy, business, education, environmental, and distribution services. But, it excludes services which are supplied in the 'exercise of governmental authority'. It entered into force on January 1, 1995 (Chanda, 2003).
GATS commitment	Means the level of opening granted under market access and/or national treatment, for a given service and a given mode of supply. It may range between a full commitment, indicated by the term 'none', and no commitment, indicated by the term 'unbound' in the schedule of commitments (International Trade Centre, 2010).
Interconnection	It compromises the commercial and technical arrangements under which service providers connect their equipment, networks and services to enable customers to have access to the customers, services and networks of other service providers (Kaushik, 1999).
Liberalisation	Liberalisation is the lowering of barriers to trade and investment.
Lobbying	Lobbying is a legitimate way for interest groups to articulate their concerns in a democracy (Boehm, 2007). In this thesis, lobbying has been used to describe a situation where a person or a firm with a very narrow interest influenced the policy maker to get a favour.
Most-favoured-nation (MFN)	The MFN treatment principle refers to the concept of non-discrimination among WTO members. According to this principle , a country is not allowed to discriminate between its trading partners (WTO,2010a)

Member checking	Testing the data with the members of the group from which they were collected (Driessen, Van Der Vleuten, Schuwirth, Van Tartwijk, & Vermunt, 2005).
Modes of service delivery under GATS:	Cross-border supply (mode 1) : when a service crosses a national frontier e.g. telecommunications, distance learning; Consumption abroad (mode 2): when the consumer travels to the territory of a service supplier to buy. e.g. tourism, education; Commercial Presence (mode 3): when a service supplier of one country establishes a branch or subsidiary in another country to provide service. It involves foreign direct investment; and Presence of Natural persons (mode 4): when independent service providers or multinational employees temporarily move to another country (Brown, Cloke & Ali,2008)
National Treatment	The principle of giving others the same treatment as one's own nationals. GATS Article 17 deal with national treatment for services (WTO 2010).
On net and off-net calls:	Calls that terminate on the same network are called 'on-net calls' while calls that terminate on another service provider's network are known as 'off-net calls' (Berger, 2004). For example, when a Grameen Phone customer calls another GP customer, it is an 'on-net call' and when a GP customer calls a Banglalink Customer, it is an 'off-net call'.
Patron-clientelism	Patron-clientelism refers essentially to an asymmetrical relationship in which a powerful person provides reward to and protection for a weaker person or persons in return for loyalty, service and support (Islam,2006 p.3)
Regulatory capture	Involves the regulatory process becoming biased in favour of particular interests (Jalilian, Kirkpatrick, & Parker, 2007). With regulatory capture, the regulator either lost, or never had, the independence to make professional decisions on their merits because of undue influence either from politicians, politically driven Ministries, or the regulated firms (Zhang,2001)
Reference Paper (RP)	RP provides regulatory guidelines to respect in order to create conditions for actual competition. The RP has five

	sections: (1) Prevention of anti-competitive practices such as cross-subsidization (2) Interconnection with the major suppliers should be provided at any technically feasible point in the network; it should be timely, cost-based, transparent, and on non-discriminatory terms so that the new entrants' customers can connect with incumbents' clients (3) universal service obligations to be administered in a transparent, non-discriminatory and competitively neutral manner (4) Licensing criteria, terms and conditions to be made public. Reasons for denial of a licence must be provided. (5) Independent regulatory body- the independence and impartiality of the regulatory body to be ensured (Blouin, 2000)
Schedule of commitments	The tables of commitments which contain each member offers to provide market access and national treatment to foreign companies providing services in their countries, whether from outside or inside the country.
Stakeholder (Interest group)	An 'stakeholder' or 'interest group' is an individual or group of individuals "who has a self- interest in the outcome of some government action or policy, and that self-interest is sufficiently intense that the individual or group will try to influence that outcome" (Mesher & Zajac, 1997 p.185). In the thesis, the two terms stakeholder and interest group are used interchangeably.
Telecommunication	'Telecommunication' means transmission and reception of any speech, sound, sign, signal, writing, visual image or any other intellectual expression by way of using electricity or electro-magnetic or electro-chemical or electro-mechanical energy through cable, pipe, radio, optical fibre or other electro-magnetic or electro-chemical or electro-mechanical or satellite communication system (Bangladesh Telecommunication Act,2001) .
Teledensity	Teledensity is defined as the number of main telephone lines per 100 persons in a country. However, in view of the explosive growth of the mobile phone sector in the past decade, Lam and Shiu (2010) modified the definition of 'Teledensity' as the "number of fixed-line and mobile phone subscribers per 100 persons" (p.188). In this thesis, 'teledensity' has been used to refer to the number of fixed-line and mobile phone subscribers per 100

	persons.
Unilateral liberalisation	Sally (2000) defines unilateral liberalisation as the "Liberalisation of quotas, tariffs, licencing arrangements, restrictions on FDI and state trading monopolies by governments independently and not as part of international agreements" (pp.403-406). Consequently, the costs of being a WTO member would not be incurred and the protection of the WTO against WTO-inconsistent practices by members would not exist (Duncan, 2008).
Universal Service	Universal service usually means that a specified telecommunications service, or a group of services, is widely available and priced low enough that all or nearly all potential customers can afford it. Initially, the focus on universal service was to extend basic telephone service to nearly everyone. Over the years, with change in technology and society, services such as access to long distance, access to emergency services, toll restriction, call blocking, and other services were often included in universal service. The definition of universal service varies across countries (Levin, 2010).

The above definitions were adopted from the following sources:

Berger, (2004); Boehm, (2007). Brown, Cloke and Ali, (2008); Blouin (2000), Chanda, 2003; Driessen, Islam, (2006), Lam and Shiu, (2010); Duncan (2008); Bangladesh Telecommunications Act,2001; International Trade Centre (2010); Jalilian, Kirkpatrick and Parker (2007); Kaplan and Maxwell (2005); Kaushik (1999); Levin (2010); Mesher, & Zajac,(1997) ; OECD, (1998); Sally, (2000; Støvring, 2004; Van Der Vleuten, Schuwirth, Van Tartwijk, & Vermunt, (2005); WTO (2010), Zhang (2001)

Abstract

Unilateral liberalisation of trade in goods and services has been considered an important policy objective. Most trade in services liberalisation in the developing world has taken place unilaterally; but it is not common among Least Developed Countries (LDCs). Among LDCs Bangladesh is a forerunner in pursuing unilateral liberalisation of mobile telephone services.

There is a dearth of empirical studies on Bangladesh's unilateral liberalisation of mobile phone services and its impact on users. Furthermore, no scholarly studies are known on the influence of unilateral liberalisation on undertaking binding liberalisation obligations under the General Agreement on Trade in Services (GATS) framework of the World Trade Organisation.

This study examined factors that motivated Bangladesh's unilateral liberalisation of mobile phone service and its impact on users. It also investigated how unilateral liberalisation influenced Bangladesh to undertake binding liberalisation commitments under the GATS.

The study applied a qualitative research design to address the research questions.

Primary data were obtained from three different sources: informants from mobile phone firms, senior managers across the six mobile phone firms, trade experts, telecommunications analysts, policy makers, the telecommunications regulator, public officials and private sector representatives. Focus group discussions with different mobile phone users were conducted to determine the impact of unilateral liberalisation of mobile services.

In the first 6-7 years after unilateral liberalisation of the sector, there was a lack of competition, mobile phone tariffs were high, quality of service was unsatisfactory, and the diversity of services was limited, which affected the growth of the sector. The competitive landscape of the sector changed dramatically after the state-owned firm and another large private operator commenced mobile phone service operations in 2005. Stiff competition took

hold, which resulted in cheap and easy accessibility, a drastic reduction in mobile phone tariffs, and improved quality and variety of services.

The main implications of the study are: (1) An unfettered market is detrimental to consumer benefits**.** A powerful independent regulatory body, which is held accountable for its actions, is needed for a free market to operate in the broader public interest; (2) Unilateral liberalisation is a 'necessary condition' and provided a foundation for the government of Bangladesh to undertake binding liberalisation commitments under WTO GATS.

Declaration

I declare that this thesis is my own work and has never previously been submitted at Monash University or any other university or tertiary institution for any other degree or diploma. To the best of my knowledge and belief, any previously written or published materials used in this thesis are duly acknowledged.

Mohammad Abu Yusuf

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brothers-and sisters-in-law (in particular, Noor Mohammad and Chanchal) who always supported my studies deserve a special vote of thanks.

Papers Arising from this Study

Listed below are the publications completed during the course of the PhD. These publications are based on the information gathered and analysed for this research.

Refereed Journal Publications

1. Alam, Q. Yusuf, M.A. and Coghill, K. (2010). Village Phone Program, Commodification of Mobile Phone Set and Empowerment of Women, *The Journal of Community Informatics*, 5(3) and 6(1)
2. Alam, Q. Yusuf, M.A. and Coghill, K. (2010), Unilateral Liberalisation and WTO GATS commitment: the case of the telecommunications sector in selected countries', *Asian-pacific Economic Literature'*24(1). pp. 43-64
3. Alam, Q. Yusuf, M.A. and Coghill, K. (forthcoming) 'Does unilateral liberalization promote WTO GATS commitment? Cross-country evidence from the telecommunications sector' *Journal of the Asia Pacific Economy*, 16(1), Feb 2011
4. Yusuf, M.A. Alam, Q. and Coghill, K. (forthcoming). Mobile Phone Market in Bangladesh: Competition Matters' the '*Journal of Asian and African Studies*'.
5. Yusuf, M.A. & Alam, Q.(2008), 'An assessment of Entry Mode choice of Mobile phone firms: the Bangladesh Scenario', *European Journal of Management*, 8(1), pp.180-195

Published Peer-review Conference Proceedings

1. Yusuf, MA. Alam, Q. and Coghill, K. (2009). Does Unilateral Liberalisation Promote GATS Commitment In the Telecom Sector? A Case Study of Bangladesh Commitment in the Mobile Phone Sector presented at 23rd ANZAM conference held in Melbourne, Australia on 1-4 December

2. Yusuf, M.A., Alam, Q. & Coghill, K. (2009), Politics, Accumulation and Mobile Phone Licencing- A Untold Story, held on 6-8 July *BAI Conference*, in KualaLumpur, Malaysia.

3. Alam, Q. , Yusuf , M.A. & Coghill, K.(2009), Liberalisation and Quality of Service- The Mobile Phone Sector of Bangladesh' presented in *ANZIBA Conference,* held on 16-18th April, 2009 in the University of Queensland, St. Lucia Campus, Brisbane

4. Yusuf, M.A., Alam, Q. & Coghill, K.(2008), The Empowerment of Women through Commodification of Mobile Telephones: the case of the Village Phone Program model in Bangladesh, has been presented in the *ASAA 17th Biennial Conference* held on 1-3 July in Melbourne.

5. Yusuf, M.A & Alam, Q.(2008), An Assessment of Entry Mode Strategies of the Mobile Phone Firms: the Bangladesh Scenario presented at the International Academy of Business and Economics (IABE)-2008 Stockholm, *Sweden Summer Conference* held on June 6-8

6. Yusuf, M.A. and Alam, Q. (2010), The influence of Regulatory Environment on Mobile Phone Service Quality: The Case of Bangladesh. Annual Asian Business Conference held in Dhaka, Bangladesh on 1-2 January 2010

Seminar Paper

1. Yusuf, M.A.(2009), Internationalisation of Telecommunications Services Sector in Bangladesh: From Cartel to Competition, *International Business*

Research Group (IBRG) Seminar, Department of Management, Monash University, held on 24 April.

Dedication

I dedicate this thesis into the memory of my late father, Mohammad Sekandar Ali, for his love and immense sacrifice for us, his family, though he did not live to see me reach this stage.

Chapter 1: Introduction

1.1 Background of the research

One of the most pronounced features of the international economy in the last fifty years has been trade openness between nations. Especially during the last two decades, significant reforms have taken place in the global trade and investment regime. Reduction in tariffs, dismantling of restrictions on investment, privatisation of state-owned enterprises and the significant increase in the number of regional trade agreements in recent decades (Egger, Larch, & Pfaffermayr, 2007) demonstrate the features of that openness.

The widespread adoption of market-based policy options can be attributed to the forces such as (a) the influence of multilateral lending agencies (MLAs) and powerful countries such as the United States of America (USA), (b) the influence of key politicians advocating the free market policies, (c) The influence of private interests (multinational companies) and some public officials also advocating market liberalism, (d) a policy response to the exigencies of the global economy such as globalisation of the market and production (Larner, 2009), and (e) unilateral action to pursue national interests.

International financial institutions (IFIs), especially the International Monetary Fund (IMF), the World Bank, the Asian Development Bank (ADB), the US government and private interests such as corporations sought to impress upon developing countries the benefits of reform that embraced neo-liberal approaches towards a more open market, such as improved economic efficiency, economic growth, efficient allocation of resources, reduced costs and variety of choice. There were also pressures on developing countries to 'leapfrog' a statist development paradigm in favour of market-led growth (Bartle, 2002; Hundt, 2005; Hyun & Lent, 1999). IFI and related views held that the state should be relegated to a supervisory role in the overall development of the economy. Most developing countries liberalised their trade and investment regimes due to the pressure from aid/loan giving agencies, as well as to further their national economic necessity (Funk, 2006; Jho, 2007; Morrissey, 2004; Titumir & Ahmed, 2009).

Political leaders advocating neo-liberal reforms argued that the market was a better way of organizing resources. This conviction of the leaders also contributed towards the adoption and propagation of neo-liberal reforms.

The policy makers in leading economies argued that market[1]economy model can facilitate economic growth and development by removing inefficiencies in public sector, reducing waste, allocating resources effectively, enhancing economic efficiency and ameliorating international competitiveness (Alexander, 2005; Freeman, Martin, & Parmar, 2007; Larner, 2009; Leung, 2003; Li & Xu, 2004). A policy reform program that emphasised managerialism favoured space for unfettered operation of markets with a view to ensuring social wellbeing (freedom of choice, efficiency and low cost).

In addition, countries such as Australia, New Zealand, the United Kingdom (UK), Israel, Japan, the US, Chile, France, Germany, Mexico and Argentina adopted unilateral reforms in their trade and investment regimes to pursue national economic interests (Baldwin, 2006; Edwards & Lederman, 1998; Garnaut, 1997, 2002b; Nogues & Gulati, 1994; Soltys, 2002; Tovias, 2008).

The World Trade Organisation (WTO) (previously GATT) also played a vital role in trade liberalisation. As a result of previous WTO Rounds, and with the implementation of Uruguay Round commitments, average *ad valorem* tariffs in industrial countries generally came down to around 3 per cent for developing countries. The *ad valorem* tariff varies from between 3 per cent and 4 per cent to a high of more than 20 per cent in developed countries (Francois, Meiji, & van, 2005).

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[1] The market is considered the best- or at least a good- way to organise factors of production such as what to produce, how to produce it, how much to produce and for whom to maximize wellbeing of market participants. This *orthodox view* relies on the assumption that market conditions (such as a level playing field and a functioning regulator to check anti-competitive practices) are empowered and respected.

The global neo-liberal wave also impacted on the services sector, which has usually been more restrictive than goods trade. In the services sector, most reforms took place in the telecommunications sector in the form of privatisation of the state-owned monopoly and the opening of markets to foreign investment during the 1980s and 1990s (Fink, Mattoo, & Rathindran, 2003; Madden, Savage, & Ng, 2003).

Developed countries such as the UK, the USA, Australia, New Zealand, France, Germany, Japan and Canada, and some developing countries such as Chile, Argentina, India, Sri Lanka, Korea and the Czech Republic opened up their telecommunications services by liberalising foreign direct investment (FDI) unilaterally[2] (Bartle, 2002; Garnaut, 2002b; Hoekman, Mattoo, & Sapir, 2007; Koebberling, 1993; Madden, et al., 2003; Sally, 2000; Soltys, 2002; Sunada, 2005; White, 2002). Developed countries and super sensible governments[3] actively promote unilateral trade and economic liberalisation at home (Bartle, 2002; Bosworth & Duncan, 2002 p.13; Soltys, 2002).

In reforming trade and investment regimes, different countries however, followed different approach. In other words, neo-liberal policies are applied differentially by different countries in what are termed 'varieties of capitalism'. For example, in the telecommunications sector, some countries privatized the state-owned providers before allowing in private sector providers, while others undertook deregulation and privatisation simultaneously.

In privatizing state-owned enterprises (SOEs), most countries followed a gradual approach but each had its own model of privatisation and imposed different constraints on foreign providers in ownership, local content requirements, technology transfer requirements, industry development, location requirements and 'golden share'[4] provisions to keep government control of foreign firms even after

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[2] Singapore unilaterally liberalised services sector through reduction of protectionist barriers in some services sectors in the period after the Asian Financial Crisis (Sally & Sen, 2005).

[3] Super sensible governments resist protectionist pressures and implement ongoing trade reforms that substantially exceed their WTO commitments.

[4] Through this, the government can exert special voting rights to protect national interest criteria. For example, the UK government maintained a "golden share" provision when BT was privatized.

privatisation. For example, the UK has no restrictions on foreign ownership, while foreign shareholding in Telecom New Zealand is limited by the 'Kiwi share' rules. The government owns the Kiwi-shares in order to retain control of the privatised entity (Joseph, 1995).

Although many developed countries – and some developing countries – have undertaken reforms in the telecommunications sector unilaterally since the 1980s (Macharia, 2007), reforms of the sector in other countries was often advocated and facilitated by donor agencies (Bull, 2005; Titumir & Ahmed, 2009). Despite significant reforms initiated in the sector by many countries in the last two decades, serious barriers still persist, especially in least developed countries (LDCs) and in some developing countries (Hoekman, et al., 2007). These countries have restricted private investment in the telecommunications sector in the fear[5] that they will lose out to foreign providers if the service sector is liberalised. The reason is that their services sector is inefficient and non-competitive (Hoekman, et al., 2007; Hufbauer & Wada, 1998; Whalley, 2004).

In Bangladesh, the World Bank was a partner in restructuring the Bangladesh Telegraph and Telephone Board (BTTB) for private sector participation. It provided loans, recommendations and expertise to ensure that private-sector participation resulted in a significant increase in competition in the telecommunications sector under a regulatory framework (Bhuiyan, 2004).

The factors of the unilateral liberalisation of telecommunications services and the impacts of liberalisation on accessibility, pricing, quality-of-services (QoS) and diversity of service have been studied for many developed and developing countries (Bodammer, Pirie, & Addy-Nayo, 2005; Bortolotti, D'Souza, Fantini, & Megginson, 2002; Davids, 2005; Gao & Rafiq, 2009; Gruber, 2001b; Jho, 2007; Ojiako & Maguire, 2006; Patrick, 2005; Samarajiva, 2000; Singh, 2005; Xavier, 2006). No comprehensive

[5] Many countries fear the side effects of investment liberalisation- job loss in the national telecommunications firm and foreign ownership in the strategic sector. Smaller countries are particularly susceptible to such fear (Hufbauer & Wada, 1998).

study on the factors of unilateral liberalisation of mobile phone services in Bangladesh and its impacts on the users have been found to date.

As an LDC, Bangladesh suffers from poor and unaccountable governance, an inefficient and irresponsive state, political interference, patronage and corruption (Alam & Teicher, 2010; Haque, 2001b; Parnini, 2006; Sobhan, 2007a). A calculus of personal advantage displaces institutional purpose in Bangladesh. The country is also plagued with weak and inadequate institutions. It does not have competition policy, a trade practices act, consumer protection laws, independent regulatory body and a truly independent anti-corruption commission to support free market economy functions properly. Institutions tend to be hollow shells, devoid of the critical informal rules, norms, values and resources that are so essential to their effective functioning (Kochanek, 2000). The private sector remains underdeveloped. In such a political, institutional and regulatory context, it is vital to assess how the liberalisation of the sector impacted on user interests over the years. Furthermore, there remains a complete dearth of study on how unilateral liberalisation of the mobile phone sector can influence a country's undertaking of commitments in the sector under the General Agreement on Trade in Services (GATS) of the World Trade organisation (WTO).

The objective of this research is to investigate the factors that facilitated unilateral liberalisation of the mobile phone services in Bangladesh, the impacts of liberalisation on accessibility, pricing, the QoS and diversity of services.

The research also attempts to explore how unilateral liberalisation influenced Bangladesh in undertaking liberalisation commitments in the telecommunications sector under GATS.

This chapter consists of seven sections. First, a background of the thesis is presented. Second, the rationale of the research is highlighted. Third, research objectives and the research questions are presented. Fourth, a brief overview of the research approach is spelled out. Fifth, the limitations of the research are discussed. Sixth, the chapter organisation of thesis is outlined. Section seven provides a conclusion.

1.2 Rationale of the Study

The telecommunications sector has experienced significant reforms in the last two decades. Indeed the sector may be considered a laboratory for reforms experiments. In line with major reforms, significant research has been conducted on the sector at the global level. However, much of these research and comprehensive studies on the telecommunications sector have been in the context of other countries such as the US, Japan, the European Union, Sri Lanka, Mexico, China, India, Africa, South Korea, Singapore, the Philippines, Ghana, Jordan and Kenya (Balasooriya, 2007; Camarena Osorno, 2007; Dokeniya, 1999; Du, 2001; Guan, 2003; Hamilton, 2002; Jho, 2003; Macharia, 2007; Osei-Mensah, 1996; Paule, 2004; Perez-Chavolla, 2002; Prasirtsuk, 2001; Theophile-LaFond, 2007; Tomaira, 2008; Wook, 2009). Boylaud and Nicoletti (2000) studied effects of liberalisation and privatisation on productivity, prices and quality of mobile telephony services but the study was also done in 23 OECD countries. These studies, however, did not address the factors and impacts of unilateral liberalisation. A review of literature found no empirical study on the factors of unilateral liberalisation of mobile phone services in Bangladesh and its impacts on accessibility, price of mobile service, QoS, and diversity of services.

This study, then, is particularly motivated by the dearth of studies of the Bangladesh telecommunications sector.

Furthermore, in the past, research has focused on the impact of the telecommunications commitments of the WTO on the credibility of unilateral reforms (Siope, 2009). No previous study is found which has examined how unilateral liberalisation influences a WTO member in undertaking GATS commitments. Hence a gap in the literature exists as to the relationship between unilateral liberalisation and GATS liberalisation commitments. The current study has addressed this deficiency by investigating how unilateral liberalisation influenced Bangladesh in undertaking GATS commitments in the mobile phone services sector.

As the study takes a case study approach, the findings of this study will add significant insights for the policy makers in Bangladesh that they may use in pursuing reforms in other services sectors and elsewhere in the South Asian region in particular. The

study also contributes to the literature by examining the relationship between unilateral liberalisation and multilateral liberalisation commitments.

Why Bangladesh has been chosen?

The following realities motivated me to research on Bangladesh. Unlike other developing countries, no previous scholarly work on reforms in the telecommunications services sector in Bangladesh is known.

Bangladesh undertook unilateral liberalisation in the telecommunications sector. Telecommunications is the only sector where Bangladesh undertook liberalisation commitments spontaneously under the GATS. Bangladesh also undertook commitments in the 5-star hotel sector but that was taken as a pre-condition to becoming a WTO member. This raised questions such as to why Bangladesh opened up its telecommunications sector unilaterally. How did it impact on the benefits of users? And how did unilateral liberalisation shaped Bangladesh's position on liberalisation commitments in the telecommunications sector under the GATS?

The governments of Bangladesh (both political and military) have not shown allegiance to any particular economic ideology but rather have entered upon an eclectic journey. After independence in 1971, Bangladesh adopted some features of a socialistic economy and over time it adopted neo-liberal reforms under successive governments. Although the private sector has permeated a considerable number of services and manufacturing sectors with the adoption of neo-liberal economic policies, the role of the state in the economy is still highly manifested at different levels such as employment (the public sector is a large employer), ownership of major manufacturing and utility industries such as the jute industries (although many jute industries have been privatized to date), sugar industries, fertiliser factories, water and sanitation services, the largest fixed line telecommunications provider, health services, power and gas, transport (railway) services, education services and fire services, to name but a few.

Indeed, the role of the government sector in delivering basic services remains essential in Bangladesh (Haque, 2004). Investment in infrastructure (inflows of project aid and grants come through a government ministry) and ownership in large

enterprises of the economy are still state-owned. The mixed or pragmatic nature of the Bangladesh economy paves the way for an analysis of the mobile phone services liberalisation that allows this study to move beyond ideological explanations.

1.3 Research Objectives and Research Questions

Unilateral liberalisation is not a new concept. Developed countries such as Australia, New Zealand, the USA, the UK and some developing countries including Chile, Ghana, Zambia, Mexico, Korea, Morocco, the Philippines, Israel and Turkey have resorted to unilateral liberalisation of trade in goods (Dornbusch, 1992; Legrain, 2007; Tovias, 2008). In the services sector, developed countries such as the USA, the UK, Japan, Australia, New Zealand, Mexico and few developing countries such as Hong Kong, India and Chile have unilaterally liberalised their telecommunications sector but most[6] still retain control over their dominant incumbent carriers (Cho & Lee, 1998). No LDC, however, has liberalised its mobile phone sector unilaterally ahead of Bangladesh. Most research has focused on unilateral liberalisation of goods (Bagwell & Staiger, 2002; Edwards & Lederman, 2002; Evans & Richardson, 2002; Josling, 1993; Kennes, 2000) and some on services in developed countries such as Australia, France, Germany, New Zealand, the UK, and the USA (Garnaut, 2002; Soltys, 2002; White, 2002). There is a dearth of research that focuses on determinants and impacts of unilateral liberalisation of mobile phone services and how unilateral liberalisation influences a country's undertaking of multilateral commitments from an LDC perspective.

As such, this study aims to contribute to this research gap by investigating the factors and impacts of unilateral liberalisation as well as how has this liberalisation influenced Bangladesh's commitment under the WTO. A conceptual framework based on empirical findings has been suggested that identifies why Bangladesh, unlike other LDCs, unilaterally liberalised its mobile phone sector, and how this impacted on competition in the sector. Exploring these issues is crucial, not only in providing a better understanding about unilateral liberalisation in the mobile phone sector and

[6] Chile, Mexico, Australia and New Zealand have privatised a controlling percentage of shares

its bearing on undertaking multilateral liberalisation commitments, but also in assisting policy makers in undertaking reforms in other utility sectors, such as power and water and in taking an informed position in multilateral negotiations.

This study will also contribute to providing new insights into whether unilateral liberalisation of the sector has any influence on undertaking liberalisation commitments under the WTO. The framework may be extended in other LDCs having a similar level of telecommunications infrastructure and service development. In order to examine the issues related to the unilateral liberalisation of mobile phone services and Bangladesh's commitments in the telecommunications sector under the GATS agreement of the WTO, the following Research Questions (RQ) have been developed:

1. What factors are perceived to have contributed towards unilateral liberalisation of the mobile phone sector in Bangladesh?

2. What impact did the unilateral liberalisation have on accessibility, pricing, QoS and diversity of services in the mobile phone sector?

3. How did unilateral liberalisation influence Bangladesh's undertaking of binding liberalisation commitments (i.e., submission of a Schedule of Commitments) in the telecommunications sector under the GATS of the WTO?

This thesis relies on a number of key concepts which are examined in detail in the literature review. These key concepts are: Unilateral liberalisation; Interconnection; Universal service; On net and Off-net calls; Stakeholder; GATS; Modes of service delivery under GATS; Teledensity; Regulatory Capture; Most Favoured Nation; National Treatment (NT); GATS commitments; Schedule; Reference Paper and Member checking and Patron-clientelism A brief description of these key concepts is presented in the Glossary.

To help address the research questions, four theories are considered relevant for this study- Neo-liberal Theory, Tollbooth Theory, Capture Theory and Technology Acceptance Model (TAM).

Neo-liberal theory is used to explain in part, why the Government of Bangladesh chose to liberalise its mobile phone sector. Tollbooth theory has been used to explain

time consuming procedures and the bureaucratic tangles created by the Ministry of Post and Telecommunications (MoPT) and the other public officials in each stage of new mobile phone service providers. Capture Theory been used to explain the reasons for the regulatory ineffectiveness and/or failure[7] in the enforcement of regulations to protect collective interest. TAM is chosen to explain how technological development influenced massive expansion of mobile phone services.

1.4 The Research Approach

The research began with a comprehensive review of the literature in the telecommunications sector. The literature review helped define initial settings of the research questions. This research investigates the factors that drove unilateral liberalisation of the mobile phone sector in Bangladesh and its impacts on consumer benefit. The study also focuses on how unilateral liberalisation has influenced undertaking of GATS commitments in the sector.

The focus of the literature review was in three main areas:

1. The state of the telecommunications sector in Bangladesh in a historical context, the longstanding dominance of the public sector provider and its performance over the years. Changes in the economic policy of the government over the years and the changed role of the state from being sole provider of goods and services to facilitating private sector service delivery under a market-led economy were also reviewed. The relevant theory that explains liberalisation, challenges after liberalisation in bringing competition and technology adoption are also covered in the literature review.

2. The impacts of unilateral liberalisation on accessibility, pricing, QoS and diversity of services, and the role of the regulatory regime in promoting competition, globally are reviewed.

3. Unilateral liberalisation and its relationship with GATS commitments with specific focus on telecommunications sector is reviewed.

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[7] Bangladesh has experienced intuitional failures in recent times affecting regulation (Balasooriya, Alam, & Coghill, 2010).

The unit of analysis of this study is the mobile phone sector. The unilateral liberalisation of the mobile phone sector is studied in order to address the research questions stated above. A qualitative case study approach has been followed to investigate the unilateral liberalisation of the mobile phone sector in Bangladesh. The reason for adopting a case study approach is because a case study places emphasis on understanding processes alongside organisational and other contexts (Hartley, 2004p.324). As this study aims to explore the whole process (including factors) of unilateral liberalisation of the mobile phone sector and GATS commitments in the context of Bangladesh, a case study method has been considered most appropriate. Furthermore, case studies are widely used in business education, public administration and public policy, together with interactive question-and-answer discussion (Clark & Corbett, 1999). The current study, being focused on public policy (telecommunications policy) process and its impacts, warrants use of a case study strategy. Case study analysis also allows use of multiple methods of data collection such as observations, interviews, focus group meetings and documentary analysis.

Data were collected in two major ways: secondary data (published and non-published documents publicly available) and primary data (in-depth interviews, and focus group discussions) with a view to addressing the research questions. A theoretical framework was developed during the course of the research through extensive review of existing literature to facilitate addressing the research questions. Design of questions appropriate for the qualitative case study was searched in the literature review and then a set of questions was developed in order to conduct face-to-face in-depth interviews with mobile phone firms, policy makers and public managers, the telecommunications regulator and private sector representatives. Another set of broad questions was developed to guide focus group discussions with the users.

1.5 Limitations of the Study

This study has investigated unilateral liberalisation of mobile phone sector and whether unilateral market opening has influenced Bangladesh commitments in the WTO. In investigating these under-researched issues, the Bangladesh mobile phone sector and its GATS commitments has been used as a case study. Despite all attempts

to make the study a comprehensive one, the study still has some limitations: The factors that facilitated unilateral liberalisation have been explored on the basis of interview findings, focus group discussion and secondary sources. The process of liberalisation and the political philosophy and motivations (if any) of liberalisation are not usually documented elsewhere. The researcher believes that the concerned policy makers who were interviewed have revealed the factors and motivations that drove unilateral liberalisation.

1. As per WTO services sectoral classification list the telecommunications sector has 15 sub-sectors (WTO, 1991). The number of services is constantly emerging in the telecommunications sector where technological changes happen very quickly (Chand & Duncan, 2008). This study focuses only on the mobile phone services that falls under the 'voice telephone services' sub-sector.

2. In investigating the impacts of the unilateral liberalisation of the mobile phone sector, this study was confined only to the consequences it had on accessibility, pricing, QoS and diversity of services. Considering the time and cost constraints, this study did not attempts to analyse the full gamut of impacts of unilateral liberalisation, such as on the national economy, employment and the cost of doing business.
3. As regards cellular mobile phones, there are no QoS parameters to measure the quality of service in Bangladesh. The discussion on the QoS in this study is based on the reaction and QoS experience of the users which may not be fully reliable. In Frempong and Atubra's (2001a) view, experiences of mobile phone users do not provide a good impression about the QoS of operators. Furthermore, their reporting about the QoS may be based on memories which are not infallible.

4. Access to data and scarcity of documentation in the public domain has been a limitation of the research. The lack of a comprehensive database in Bangladesh has resulted in the adequate availability of data. However, every effort has been made to access available data and make the research more accurate, up-to-date and self-contained.

1.6 Thesis structure

Chapter One provides an overview of the study and the rationale and objective of undertaking the study. The key concepts and terms used in the thesis are defined. The chapter also has a section that contains the limitations of the study.

Chapter Two provides a review of the literature in three main areas, namely: (a) the factors of liberalisation of the telecommunications sector with a special focus on mobile phone services; (b) the impacts of liberalisation on accessibility, pricing, QoS and diversity of services; and (c) the concept of unilateral liberalisation and how unilateral liberalisation affects undertaking of binding liberalisation commitments under the WTIO. The review highlights the gaps in the literature, especially those relating to the lack of research in understanding the factors and consequences of unilateral liberalisation in an LDC context and the influence of unilateral liberalisation on undertaking multilateral liberalisation commitments. It also sets the contexts for the conceptual framework for the thesis. The chapter concludes with research questions that will be addressed in the thesis.

Chapter Three explains the research design and the methods used to investigate the research. The justification for using qualitative methods and the methods of data collection are dealt with in this chapter. The analytical techniques that were used for data analysis and limitations of the research method are also explained.

Chapter Four provides an overview of the Bangladesh context of the study in detail, including the country's socio-economic and political history, demography, economic reforms undertaken in different phases since its independence, an overview of the telecommunications industry, its history, evolution, character and reforms undertaken in the sector with special reference to unilateral liberalisation of the mobile phone sector.

Chapter Five presents findings focused on three main research questions. The findings were gathered from qualitative data collected through in-depth face- to-face interviews of key stakeholders of mobile phone firms, public officials, policy makers, industry experts, trade experts, telecommunications regulator and private sector representatives. Data were also gathered from mobile phone users through focus

group discussions. The findings were thematically arranged and reported linking with the Research Questions.

Chapter Six provides a detailed discussion and assessment of the findings of this study. Of the three research questions developed for this study, Research Questions 1 and 2 are discussed in detail to understand (a) the factors that led Bangladesh to unilaterally liberalise its mobile phone sector, and (b) the impacts of unilateral liberalisation on consumer welfare, in terms of accessibility, pricing, QoS and diversity of services. This chapter also incorporates theoretical underpinnings in analysing the factors of unilateral liberalisation and the impacts unilateral liberalisation has had on users, based on findings. The regulatory role has also been highlighted to analyse the differing competitive outcomes in the different phases after liberalisation.

Chapter Seven analyses the findings of Research Question 3 and presents a detailed analysis on how unilateral liberalisation of the mobile phone sector has influenced Bangladesh to undertake GATS liberalisation commitments.

Chapter Eight is the final chapter of the thesis and provides a brief summary of the study. The implications and contributions of the research are also discussed. The chapter also provides suggestions for further research.

1.7 Conclusion

This Chapter has provided an overview, the background and the rationale of the study. Also the objectives and the research questions developed for the purpose of providing specific and detailed answers to the aim of the thesis have been outlined. The research is to investigate the factors that influenced Bangladesh to unilaterally liberalise mobile phone sector in Bangladesh ahead of many of the nation's peers. It also aims to investigate how unilateral liberalisation influenced Bangladesh position in the WTO in terms of undertaking liberalisation commitments under the GATS.

The main objective of the study, however, has been to contribute to the knowledge how unilateral liberalisation in an LDC can (or cannot) improve telecommunications sector performance. The study also contributes to enhanced understanding about

how a unilateral liberalisation experience shapes a country's liberalisation position and commitment in a multilateral forum.

This chapter also defined the key terms used in this study, followed by a brief section on research methods. It outlines the limitations of the study, followed by a brief outline of the eight chapters forming the thesis.

The next chapter (Chapter 2) presents the literature review relevant for this study.

Chapter 2: Literature Review

2.1 Introduction

Liberalisation is the dismantling of barriers to trade and investment. Unilateral liberalisation means liberalisation of the trade and investment regime undertaken by a country spontaneously to pursue its national interest and not as a binding commitment under any international agreement bilateral, regional or multilateral.

The objective of this chapter is to integrate a comprehensive review of literature on telecommunications sector liberalisation, factors influencing liberalisation of the sector and the impact of liberalisation on accessibility, pricing, quality of service (QoS) and diversity of services in general and in the context of an LDC country in particular. A comprehensive review of extant literature on telecommunications sector liberalisation, its impact on consumer interests and the relationship between unilateral liberalisation and GATS commitments, is essential to identify the research gap. It would also helps to determine the variables necessary for formulation of a conceptual framework to address the research questions.

This chapter is divided into three main sections. Section 1 explains the concept of liberalisation and its impact, the liberalisation of services through the multilateral trading system and a brief overview of mobile phone sector liberalisation. Section 2 presents a detailed account of factors that spurred liberalisation of the telecommunications services, Section 3 briefly introduces Neo-liberal theory, Tollbooth Theory, Capture Theory and the Technology Acceptance Model (TAM), which explain the rationale for liberalisation, the problems encountered in the liberalisation process, the poor competitive outcomes and the reasons for massive growth of mobile phone services. A discussion about the impacts of telecommunications services liberalisation follows in section 4. Section 5 describes the relationship between unilateral and multilateral liberalisation to identify whether unilateral liberalisation has any role in promoting World Trade Organisation (WTO) GATS commitments in the telecommunications sector, unilateral liberalisation of the Bangladesh mobile phone sector and GATS commitments undertaken in the sector.

Section 6 delineates the research questions on the basis of the literature review. The conceptual framework is presented in Section 7. Section 8 summarises the chapter.

2.2 Liberalisation of trade and services and their impacts

Liberalisation refers to the free flow of goods and services through reduction or dismantling of barriers to trade and investment.

2.2.1 Trade liberalisation

Trade liberalisation refers to opening up markets to the free flow of goods and services (Stiglitz, 2006 p.15). It is in effect, a tax cut; it cuts trade and investment barriers which act like a tax (OECD, 1998). Liberalisation promotes competition, leads to a more efficient allocation of resources, helps to remove inefficiency of domestic sectors, forces domestic producers to concentrate on enhancing quality and deliver a better product, reduces prices of goods and contributes to economic growth (Alam, 2007; Egger, et al., 2007; Eswaran & Kotwal, 2007; Pattanaik, 2006; Santos-Paulino, 2005; Stiglitz & Charlton, 2005).

The impact of trade liberalisation on developing countries is mixed. Some studies suggest that trade liberalisation has resulted in improved export performance, accelerated real income, improved growth and a reduction in poverty (Bhagwati, 2002a; Dollar & Kray, 2004; Legrain, 2007; Parikh, 2007) while others find that liberalisation was unsuccessful in promoting growth and, reducing income inequality in poor countries and its impacts were often unbalanced (Attanasio, Goldberg, & Pavcnik, 2004; Stiglitz, 2006). Greenaway, Morgan and Wright (2002) find that liberalisation positively affects growth of real GDP per capita but only modestly and with a lag. Krueger (2004) argues that free trade is a win-win situation. Duncan and Quang (2003) state that there is an empirical evidence of an association between trade liberalisation and economic growth, but the direction of causality is not agreed. Vamvakidis (2002) finds that the estimated relationship between tariff rates and growth may vary across time, switching from positive to negative. Other studies argue that there is little evidence of any relationship between trade liberalisation and economic growth (Greenaway & Sapsford, 1994; Rodrik, 2001). Discussing the impact

of liberalisation on trade, Parikh (2007) argued that trade liberalisation has resulted in an initial increase in imports and a subsequent surge in exports. On the whole, increased imports were higher than increased exports which led to increases the trade deficits. Rapid liberalisation was sometimes followed by large capital inflows but it often ended up in a financial crisis such as massive capital outflows (reversal of capital inflows), collapse and overshooting of exchange rates, cuts in imports and a deep economic contraction (Parikh, 2007).

Liberalisation in some instances creates hardship for some workers, firms, and the communities in which they are located (Stiglitz, 2002). Some segments of society experience adjustment pains in the form of job and income losses or income declines in the short and medium term (Bance, 2007; Pattanaik, 2006; Stiglitz, 2002). In one study it has been found that adjustment costs such as lost earnings suffered by dislocated workers that stemmed from trade liberalisation account for 4 per cent of the gains from liberalisation (WTO 2002 cited in Stiglitz & Charlton, 2005).

2.2.2 Service and Services liberalisation

Services under WTO GATS can be delivered and traded in four ways (WTO, 2008). These are called four modes of service delivery:

- Cross-border supply (mode 1) : when a service crosses a national frontier e.g. telecommunications, distance learning;
- Consumption abroad (mode 2): when the consumer travels to the territory of a service supplier to buy. e.g. tourism, education;,
- Commercial presence (mode 3): when a service supplier of one country establishes a branch or subsidiary in another country to provide service. It involves foreign direct investment e.g., the ANZ bank operating in India; KFC operating in Bangladesh; and
- Temporary Movement of Natural persons (mode 4): when independent service providers or multinational employees temporarily move to another country (Brown, Cloke, & Ali, 2008). It presently covers only highly skilled workers such as doctors (Duncan, 2008).

Services liberalisation refers to the reduction of barriers to services trade, such as elimination of restrictions on foreign equity, movement of capital and dismantling of behind the border measures. It involves free movement of factors of production (capital, labour and technology) to the location of the consumer (Konan & Maskus, 2006; Mattoo, Rathindran, & Subramanian, 2006). For example, in the case of services such as hair-cuts, services have to be consumed at the point of production; now if a barber wants to provide services abroad, (s)he needs to have the free mobility in that foreign country; without mode 4 liberalisation i.e., liberalisation of the immigration regime, cross-border delivery of hair cuts as well as other services of this nature, is less likely. But the movements of unskilled labour are severely opposed by countries which fear that foreigners might displace domestic workers and contribute to unemployment (Stiglitz & Charlton, 2005). Thus the issue of trade in services is inextricably linked to the movement of capital and labour. Restrictions on factor mobility needs to be dismantled or modified in order to have meaningful liberalisation of services (Whalley, 2004).

Service liberalisation reduces cost, improves behaviour of service renderers and enhances quality in key service industries such as telecommunications, transport, energy and finance (Barajas, Steiner, & Salazar, 2000; Stiglitz & Charlton, 2005), resulting in overall reduction in costs of doing business. This is because services are essential production inputs for most goods and many other services including financial services.

Since the late 1950s, a shift towards liberalisation of both trade and investment has been occurring worldwide. The liberalisation efforts taken by different countries are evident from the reduction in tariffs and the significant increase in the number of bilateral trade and investment agreements during the last few decades (Egger, et al., 2007). The huge burden of external debt and dependency of developing countries for loans and grants on agencies especially the IMF and WB and the conditionality attached to these loans, has put them under pressure to adopt neoliberal policy reforms (Haque, 2008; Jara & Dominguez, 2006; PenElope, 2005; Rodrik, 1992). Rodrik (1992) rightly argues that the ideological shift towards liberalism by new

leadership in some countries has practically driven countries to undertake reforms in their trade regimes.

The WTO also played a vital role in trade liberalisation. With the implementation of Uruguay Round commitments, average *ad valorem* tariffs in the industrial countries generally are around 3 per cent for developing countries' this varies between 3 to 4 per cent to a high of more than 20 per cent (Francois, et al., 2005). Compared to trade liberalisation, liberalisation in the services sector has been minimal (Hoekman, et al., 2007). Many countries showed their unwillingness to open up their service sector due to resistance by interest groups that benefit from protection and on the presumption[8] that their services sector is inefficient and non-competitive and they will lose their business if service sector is liberalised (Hoekman, et al., 2007; Whalley, 2004). Of the services sector, the telecommunications sector has experienced more liberalisation than other services. In line with the global shift from state control to a market-based economy, reforms such as privatisation of the state-owned monopoly and the introduction of competition through liberalisation of markets to foreign investment took place in the telecommunications sector in most developed and many developing countries during the 1980s-1990s (Fink, et al., 2003; Madden, et al., 2003; Spiller & Cardilli, 1997).

Liberalisation can be pursued in two ways: (1) as part of international binding commitments or (2) on one's own terms and not as a binding commitment under any international agreements. The next section deals with liberalisation of services under the Multilateral Trading System (MTS) of the WTO.

2.2.3 Liberalisation of Services through the Multilateral Trading System (MTS) and Unilateral Initiative

The multilateral trading system is an attempt by governments to make the business environment stable and predictable. It is the non-discriminatory rule-based

[8] Many countries also fear job loss in the national telecommunications firm and foreign ownership of the essential communications system.

arrangement for international trade which came into existence with the GATT in 1947 and is now represented by the WTO system (WTO, 2010).

Although the stated goal of the MTS is to promote liberalisation of trade and investment regimes, little progress took place in services liberalisation. The reasons for this lack of progress are:

- Because of the intangibility of services' nature, it is difficult for service consumers to judge the quality of service, due to information asymmetry. In many cases, the asymmetry between buyers and sellers of services creates a necessity to regulate services in order to protect consumers. Thus in practice service activities are subject to more domestic regulations in order to meet public policy objectives such as public welfare (Pattanaik, 2006). The measures of domestic regulation, such as technical standards (or 'behind the border measures') (Van Den Hende, 2007) often act as impediments to trade and investment (Kirkpatrick & Parker, 2005). Getting rid of these regulations is difficult as concerns are often expressed by countries that GATS provisions on domestic regulations threaten their ability to regulate effectively in the pursuit of the public interest (Brown, et al., 2008; Singham, 2007).
- Reluctance and resistance to liberalise the services regime means that consumers and regulators in developing countries often suffer from the fear that reforms in the services sector will lower their welfare or threatened their jobs in telecommunications. They are fearful because of the relative inefficiency of developing country service providers and the possibility of discontinuation of the subsidy regime of low prices[9] for certain services. For example, in many cases the prices of local telephone calls are kept lower than the costs of their provision through cross-subsidization so that ordinary people can access these services (Green & Teece, 1998; Xavier, 2006). Developing countries also ruled out direct talks on FDI long ago, largely because of their fears about rich invaders'(The Australian Financial Review,

[9] The low prices are subsidized prices and not determined by market.

2008). Telecommunications employee unions opposed privatisation of telecommunications service in many countries, including Australia in the fear that they will lose their jobs in telecommunications (McElhinney, 2001).

Furthermore, liberalisation through the WTO has been slow as there are divergences of interests among its Members. The little progress made in liberalising trade such as agriculture, textiles and services through the WTO induced many countries to adopt unilateral liberalisation (Hoekman, et al., 2007). In this regard, Stiglitz and Charlton observe:

> The absence of a multilateral agreement has not prevented substantial unilateral liberalisation of investment regimes. Between 1991 and 2001, a total of 1393 changes were made to national investment regulations and more than 90 per cent of these were liberalising (2005 p.149).

The prospect of large gain also has been a factor in driving services liberalisation to be mostly unilateral over the last two decades (Hoekman & Mattoo, 2000). For example, India unilaterally liberalised its banking, construction and related engineering services, distribution (wholesale services) and transport (in maritime and road transport) services (Hoekman, et al., 2007). South Korea unilaterally liberalised its banking sector by relaxing restrictions on activities of foreign banks during the 1980s (Kwon, 2004). Singapore and Taiwan also undertook unilateral liberalisation in the financial services sector. Similarly, countries such as Chile, New Zealand, Australia, the USA, the UK, Sri Lanka, Sweden, Japan, Malaysia and Argentina opened up some of their services sector such as telecommunications for FDI unilaterally (Bjorvatn, 2000; Funk, 2006; Garnaut, 2002; Soltys, 2002). Developing countries undertook unilateral liberalisation in their own national interest as stated in Stiglitz et al:

> Developing countries have seemingly acted responsibly in their own interests, without the need for multilateral compulsion" (2005p.104).

Bangladesh, as an LDC has also taken initiative to do so in the telecommunications sector.

The next section deals with liberalisation of the telecommunications sector (specifically the mobile phone sector).

2.2.3.1 Liberalisation of the Telecommunications Sector

Historically the telecommunications sector has enjoyed a natural monopoly and has been highly regulated. Three features unique to the sector have allowed the sector to enjoy a natural monopoly until the 1980s: (i)economies of scale i.e., a single firm could deliver telecommunications services more efficiently and cheaply (Dokeniya, 1999), (ii)the requirement of the physical presence of such installations as telecommunications network made it difficult for citizens to accept more wires to connect their households with different telecommunications operators (Nemec, Sagat, & Vitek, 2004), and (iii) the high investment requirement in the sector makes it difficult for more than one operator to recover its investment in network building and be profitable (Dokeniya, 1999).

Before the 1980s, entry into telecommunications markets was strictly limited, even in the most developed countries (Uhlenbruck, Rodriguez, Doh, & Eden, 2006) and the sector was dominated by public ownership (Balssooriya, Alam, & Coghill, 2006). Reforms in telecommunications began in the 1980s (Giray, 2006; Li & Xu, 2002; Lien & Peng, 2001). In the USA, telecommunications sector reforms began in the early 1980s. The A T & T was privatized in 1984. Parallel to this, reforms in the UK began in 1981 with the privatisation of British Telecom (BT) and the entry of Mercury. Under the privatisation scheme, 50.2 per cent of the equity of BT was sold in 1984; the remaining shares were sold in 1990 and 1993 (Borsch, 2004). The liberalisation of mobile services followed the privatisation of BT. Unsatisfactory performance of the state-owned telecommunications providers played a vital role during the 1980s and early 1990s in transforming the telecommunications sector (Davids, 2005).

At around the same time Denmark, Sweden, Chile, Netherlands, Japan, New Zealand and Australia undertook reforms (liberalisation and privatisation) in the sector unilaterally (Balssooriya, et al., 2006; Davids, 2005; Viani, 2004). In 1997, the government of Australia partially privatised Telstra by selling off 33 per cent of its shares. The government sold a further 16.6 per cent of Telstra shares in 1999. In 2006, the government sold 35 per cent of Telstra shares and transferred the remaining shares to the Future Fund to complete the privatisation of Telstra (Fairbrother, Paddon, & Teicher, 2002; Ross & Bamber, 2009). Unlike the UK and

Australia (which adopted partial privatisation), New Zealand adopted full privatisation in one go and sold Telecom New Zealand in 1990 for NZ$4.25 billion (Joseph, 1995). Pushed by huge infrastructure demands and new technological developments, developing countries particularly in the Asia-Pacific regions (Soltys, 2002) undertook significant unilateral reforms in the form of liberalisation and privatisation. These reforms were initially slower and of more limited scope (Symeou & Pollitt, 2006). In Latin America, privatisations of state telecommunications enterprises were completed in Chile (1987), Argentina (1990), Mexico (1990) and Venezuela (1991). LDCs were mostly conservative in opening up the sector.

In the last two decades, telecommunications companies in many countries adopted foreign standard and technology. For instance, DDI Cellular of Japan adopted TACS and successfully used this foreign technology in analogue cellular. In 1998 it adopted a second foreign technology known as CDMA (Funk, 2006). At about the same time, huge amounts of FDI went into the developing country telecommunications sectors to reap market opportunities in liberalised countries such as in China, India, Malaysia, the Philippines, Vietnam, Indonesia, Tunisia, Romania, Brazil, Ghana, Jordan and Chile (Bonciu & Williams, 2006; Maciel, Jason, & Meer, 2006; Salazar, 2006/2007; Singh, 2005). A significant amount of these FDI went into the mobile phone services sector.

2.2.3.2 Liberalisation of the mobile phone segment and licence to operate

Among the various segments of the telecommunications sector, the mobile segment was opened first to competition, in some cases years ahead of other services (Findlay, Lee, Sidorenko, & Pangestu, 2005). Developed countries (the USA, the UK, Australia, New Zealand, Japan) and some developing countries (Malaysia, India, Singapore, the Philippines, South Korea, Indonesia, Sri Lanka) opened their market for mobile phone services by 1998 (Fink, et al., 2003; Madden, et al., 2003; Singh, 2000; Valletti & Cave, 1998). Most Least Developed Countries (LDCs) kept their mobile phone services market closed until the Negotiating Group on Basic Telecommunications were successful in concluding the Agreement on Basic Telecommunications (ABT) in 1997.

As states hold the licensing power to allow entry to the previously restricted telecommunications sector, mobile firms were granted licences in the liberalisation process to allow them to operate in the mobile phone sector. The licence awarding

process varied largely between countries; in some cases, the licence awarding process was competitive and transparent, while in many other cases it lacked transparency and competition. Non-market forces such as relationships and nepotism got their way in granting telecommunications licences. For example, PT Satelindo received a telecommunications operator licence to operate in the international telephone services market because it was owned by President Suharto's son. Similarly, awarding of cellular mobile licences in 1997 to Suharto's daughter's firm Selnas and to Indophone, an organisation close to Suharto was non-transparent transparency (Pangestu, Aswicahyono, Anas, & Ardyanto, 2002). In Malaysia politically connected businessmen lobbied senior politicians and obtained licences to operate telecommunications services. Their lobbying also shaped the way liberalisation was implemented by the state (Salazar, 2007). In the Philippines, PLDT-Smart merger was possible because of the blessings of the then President Estrada. It has been revealed that Estrada received $US 20 million as a kickback to facilitate the transaction (Salazar, 2007). In South Korea, charges of nepotism in awarding cellular mobile telecommunications to influential *chaebol* by previous governments came under intense public and judicial scrutiny (Singh, 2000). These incidents indicate that the telecommunications liberalisation process has not always been fair or transparent.

The following section describes the factors that are considered to have contributed towards telecommunications sector liberalisation.

2.2.4 Liberalisation phases and factors affecting telecommunications liberalisation

The telecommunication services industry has witnessed spectacular growth and rapid structural change over the last two decades. The liberalisation of the telecommunications sector in the Asia Pacific region and early liberalising countries can be grouped in three phases as shown in Table 2.1

Table 2.1 Phases of Telecommunications liberalisation worldwide

Liberalisation phase & form of liberalisation	Country	Reasons
Stage 1: 1980s mostly privatisation and limited competition: • The 1984 divestiture of A T & T in the US • Partial privatisation of State-owned Nippon Telegraph and Telephone (Japan in 1985) In the UK; Cellnet and Vodafone started mobile phone operation in 1985 (Valletti & Cave, 1998)	Stage one was led by the most developed countries: USA, UK, Japan, Australia, New Zealand.	• Pressure from the corporations and users • Adoption of neo-liberal telecommunications policies (Jin, 2005) • Bandwagon effect- dozens of nations adopted reforms following the US and UK
Stage 2 : From the early 1990s Partial privatisation of • PT Indosat (Indonesia) • Korea Telecom • Singapore Telecom • Telecom Malaysia	Korea, Malaysia, Philippines, Indonesia, Sri Lanka, Chile (Madden, et al., 2003)	• Demand and need for telecommunications service • Policy shift towards market-based reforms
Stage 3: Since mid 1990s	Stage three began in Less developed countries such as PR China, India (1991) Pakistan, Vietnam, Romania (1993,1995) (Bonciu & Williams, 2006) Bangladesh (1989-1996)	• National interest led unilateral liberalisation • Pressure, persuasion and coalition efforts in signing WTO Basic Telecom Agreement

Source: Madden et al.(2003) ; Ives (2003); Jin (2005); Valetti and Cave (1998)

Widespread market opening, such as the privatisation of the state-owned enterprises and liberalisation in the telecommunications sector has been driven by several factors. The factors varied from country to country depending on the context and the level of telecommunications development of each country.

2.2.4.1 Telecommunications Users' demand

Historically, telecommunications services have been provided by state-owned monopoly providers who in most cases were inefficient and incapable of meeting growing telecommunications demand (Laffont & Tirole, 2000; Wallsten, 2001). Inefficiency was manifested in long waiting times (4-10 years) to obtain telephone connections, poor call completion rates, higher call charges, poor network and service quality, low teledensity and inaccurate billing (Bhuiyan, 2004; Bodammer, et al., 2005; Burr, 2000; Wolcott & Cagiltay, 2001).

Telephone access costs and tariffs were higher in LDC and developing countries compared to developed countries as the inefficiencies of the SOEs were disguised in the monopoly tariff (Bandias & Vemuri, 2005; Bhuiyan, 2004). For instance**,** the average telecommunications revenue per subscriber line per year in Europe is about $US770 while the average in LDCs is roughly the double of that at $US1460 (Mbarika, Byrd, & Raymond, 2002). The rise of global user demand[10] to overcome higher telecommunications prices and enjoy better services pushed liberalisation of the sector. Both urban users[11] and large businesses[12] as well as professional users raised their demand for liberalisation in countries such as the EU countries, India, Malaysia, the Philippines, Thailand, South Korea, Pakistan, and Brazil with an expectation for lower charges, better service and more choice (Adlung & Roy, 2005; Bhuiyan, 2004; Davids, 2005; Gruber, 2001b; Humphreys & Padgett, 2006; Loo, 2004; Nemec, et al., 2004; Petrazzini & Krishnaswamy, 1998; Schmid, 2005; Singh, 2000; Thatcher, 2004; Wilson 2004; Woll, 2007; Zhao, 2007).

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[10] The globalisation of user demand and the ability of operators to respond to such demand contributed to increasing liberalisation and competition. The result was extensive international investment by major telecommunications companies in both developed and developing countries. In the telecommunications services sector, demand was growing (but had not matured) in developed and developing countries; thus new market opportunities appeared both in developed and developing countries.

[11] Urban users have exerted pressure through the media and civil society groups.

[12] These international and domestic businesses are termed a 'liberalisation coalition' by Singh (2000)

In particular, it was powerful business groups such as the International Telecommunications Users Group, the Telecommunications Managers Association and Chaebols business conglomerates who demanded mobile phone services and put pressure on government to open up the sector for competition (Laffont & Tirole, 2000; Mesher & Jittrapanun, 2004; Singh, 2000; Wymbs, 2002). Zhao (2007) observes that institutional and urban middle class users in China pushed aggressively for market-oriented reforms in the sector demanding better and more diverse services. It is to be noted that the scope to provide international telecommunications services through successful operation in other European markets motivated the historical operators, such as British Telecom (BT), Deutsche Telekom (DT), and France Telecom (FT) to support and accept liberalisation (Bance, 2007; Bartle, 1999).

However, not all state-owned telecommunications service providers were inefficient and failed to deliver services. The Singapore and South Korean telecommunications sectors were efficient and able to meet user expectations, eliminate waiting lists, reduce costs and increase teledensity, even they were in the public sector (Singh, 2000). Singapore's telecommunications sector was liberalised in the late 1980s as a part of broad economic liberalisation program. The liberalisation program was driven more by SingTel's desire to be a regional and international telecom player (Singh, 2000) and enhance its global competitiveness in the sector (Thangavelu & Toh, 2005). The South Korean government adopted comprehensive policies to introduce and implement an information society.

It is to be noted here that inefficiency of the telecom sector was not a developing country phenomenon only; the developed country telecommunications sectors were also poorly run. The breaking up of AT&T (in the USA) in 1984 and the selling of Telecom New Zealand in 1989 to introduce competition in the early 1990s were due to their inefficiency and unsatisfactory performance (Erakovic & Wilson, 2006; Hamilton, 2002). Similarly, Australian's state-owned telecommunications company Telstra's productivity performance was much lower by international standards up to 1992-93 (Brown, 1997). The Total Factor Productivity (TFP) growth rates for Telstra were much higher in the post-reform period compared to the pre-reform period. Telstra achieved astonishing growth in its aggregate output after the introduction of

competition in the telecommunications market in 1992 (Rushdi, 2000). It was not only user demand but also the significant market opportunity which was prevalent for mobile service business that pushed reforms in the sector.

2.2.4.2 Market Opportunity

As has already been stated, the inability of the fixed line provider to meet customer demand created a large gap between supply and demand of telecommunications services. Vagliasindi, Guney, and Taubman note:

> The lack of well-developed traditional fixed line telecommunications services in less developed countries makes mobile technologies an important alternative (2006 p.351).

The supply-demand situation in the fixed line phone was one of the aspects of creating market opportunity for private sector providers to reap good profits. Other factors such as increasing information intensity of economic activity and globalisation of capital flows, manufacturing and trade, the need for convenient mobile service and lack of entrepreneurial and service orientation of the monopoly national providers also created significant opportunity for telecommunications business nationally and internationally (Sarkar, Cavusgil, & Aulakh, 1999; Stiglitz, 2006). Hamilton (2003) rightly observes that mobile phones does not just fill the slack where demand for fixed lines is unmet; its market exists beyond reducing the waiting list for land-based phones. The market opportunity that was being created due to the factors outlined above has prompted rapid market reforms in the telecommunications sector (Ojiako & Maguire, 2006; Sarkar, et al., 1999).

Technological progress worldwide has conditioned some changes and inspired new entrants to emerge in various segments of the telecommunications industry.

2.2.4.3 Technological developments

The profound technological developments in the telecommunications industry, such as the introduction of mobile telephony, advances in fibre optic cables, and integration of computers into telecommunications drove the opening of the telecommunications market to competition (Adlung & Roy, 2005; Hultkrantz, 2002; Jordana & Sancho, 2005; Ku & Kim, 1997; Low, 2001). Technological innovation calls

for a policy of deregulation and competition as an incentive to risk taking including investment in new technology (Bodammer, et al., 2005; Miller, 2001). The demonstration of the benefits of new technology such as better services at a low level of capital has resulted in internal demands for the elimination of protectionist telecommunications policy in countries who were lagging behind in technology (Adlung & Roy, 2005; Bhagwati, 2002b; Blackman, 2007; Camp & Anderson, 2001; Garbacz & Thompson, 2005; Kerf & Geradin, 2000; Laffont & Tirole, 2000; Lee, 2002; Malathy & Ellepola, 2005; Nemec, et al., 2004; Soltys, 2002; Vagliasindi, et al., 2006). Technological developments altered costs and challenged established beliefs that telecommunications is a natural monopoly, thereby forcing policy makers to realise that telecommunications could no longer be restricted to a nation's boundaries (Cabanda & Ariff, 2002; Cave, Prosperetti, & Doyle, 2006; Thatcher, 2004). Indeed, technological development has changed the configurations of suppliers and customers of telecommunications services as Trebilcock notes:

> Technological innovation may upset the existing political equilibria that have sustained traditional regulatory policies by introducing new participants or potential participants on the supply-side of these markets, often through reductions in economies of scale and scope, and by stimulating new configurations of customers on the demand side, demanding access to the new services. This is most clearly true in the telecommunications sector (1999, p.264).

National economic motives such as attracting FDI were also a factor in many cases, as detailed in the next sub-section.

2.2.4.4 Attracting FDI

Telecommunications is a capital intensive industry and the room for investment for modernisation of the sector depends on available funds in the governmental budget. But not all countries have sufficient funds to modernize and expand this sector. This is especially the case for governments in developing countries (Davids, 2005) who could not allocate enough money for the expansion and modernisation of its telecommunications sector after meeting the demands of other sectors (Bhuiyan, 2004; Davids, 2005; Wilson & Wong, 2003). The pace of globalisation, the increased mobility of labour, capital and the internationalisation of business require improved

and modern telecommunications services (Jebuni, Larbi, & Laryea, 2005). Cash-strapped Latin American and Caribbean countries and governments under fiscal pressures like Chile and Mexico were forced to privatise and liberalise their telecommunications sectors to promote bringing foreign investment (FDI) into the sector and thereby helped improve their telecommunications sector (Gutierrez, 2003b; Hatton, 2007; Rattoo- Nielsen, 2004; Singh, 2005). Liberalisation of telecommunications brings significant amounts of domestic and foreign investments in the sector (Bonciu & Williams, 2006; Encyclopedia.com, 2007; Singh, 2005; Verikios & Zhang, 2004).

Moreover, inexpensive, reliable and readily accessible telecommunications services have become a precondition for attracting FDI (Wilson & Wong, 2003) in other sectors. Liberalisation and competition can foster affordable, easy and reliable telecommunications services to foreign investors. Based on time series data (1990-99) for 71 developing countries, Rossotto et.al., find that a one per cent improvement of the telecommunication services availability indicator increases FDI by 0.75 per cent (Rossotto, Sekkat, & Varoudakis, 2005). This is because good telecommunications services lower transaction and production costs and thus create a supporting environment for investment (Gholami, Lee, & Heshmati, 2006).

2.2.4.5 Policy shift towards marketisation

A global policy shift to the right favouring pro-market reforms took place from the 1980s. In the developed world, it started even earlier than that. In Britain, the Conservative government[13] adopted radical reforms from 1979 (Bartle, 2002). Following the USA and UK example of pro-market reforms, the Dutch government changed its ideology of keeping everything under state control and withdrew itself from many economic activities, including telecommunications (Davids, 2005).

Since the mid-1980s, most developing countries have shown a marked shift in their trade and industrial policies by gradually adopting more liberal and export-oriented

[13] The privatisation of British Telecom was government- led as the central thrust for privatisation came from ministers driven by neo-liberal ideas with little outside pressure even from large users

trade and investment policies away from inward-looking industrial policies (Kim, 2002; Krueger, 1997; Li & Xu, 2002; Milner & Kubota, 2005; Rahman, 2005; Stiglitz, 1999; Tarzi, 2005; Trebilcock, 1999). Milner and Kubota (2005) and Bartle (2002) argue that economic reforms took place in countries due to changes either in political leaders or in the ideas they espoused about economic development. Unilateral liberalisation by the Philippines, Zambia, Mexico, Chile, Bangladesh, Ghana, South Korea, and Morocco represents their ideological shift towards a liberal market economy (Haque, 1999; Milner & Kubota, 2005; Rattoo- Nielsen, 2004). In China, neo-liberal minded government officials and academics pushed aggressively for market-oriented reforms in the telecommunications sector (Zhao, 2007). The leadership in China responded pragmatically to the new realities of the constantly changing global economy. China's desire to become a major economic player and establish sustainable business links with external market were other factors for undertaking reforms.

2.2.4.6 External pressure

International pressure for telecommunications liberalisation has been one of the factors in many developing countries (Courtright, 2004; Hyun & Lent, 1999; Lee & Findlay, 2005; Singh, 2000; Wolcott & Cagiltay, 2001). Ghana, Indonesia, South Korea, Japan and the Philippines (Bodammer, et al., 2005) liberalised their telecommunications sectors under pressure from donor agencies and influential countries (Jho, 2007). Hyun & Lent noted:

> United States efforts to open the Korean telecommunications market have been incessant and tenacious to the extent that Korea is the only country to be twice (in 1989 and 1996) designated by the US as a priority foreign country (PFC) (1999 p.389).

When a country is designated as a PFC, it becomes subject to investigation which may lead to trade sanctions under Section 301 of the US Trade Act of 1974 (Malkawi, 2010). As such the US could have retaliated against Korean products in the US market. Indonesia, under pressure from the IMF and other donor agencies expressly communicated its intention to reform the telecommunications sector in a Letter of Intent (LOI) addressed to the IMF (Lee & Findlay, 2005). Foreign governments put pressure on China to open up its telecommunications sector and made it a key

condition for China's accession to the WTO (Zhao, 2007). The Japanese government awarded two new mobile phone licences and allowed foreign firms to invest in the newly licensed firms (Funk, 2006) partly as a result of *Gaiatsu* (or 'foreign pressure') by the United States,. These external pressures were difficult to ignore in some cases.

2.2.4.7 Emulating other countries

Emulating other countries' experience also contributed to expediting reforms in the sector. The economic success following telecommunications sector liberalisation in countries such as the USA, the UK, Singapore, Hong Kong, South Korea, Malaysia, Thailand and Indonesia influenced countries like the Netherlands, Bangladesh, Cambodia, India, Myanmar, Pakistan and Vietnam to join the bandwagon in opening up their markets (Davids, 2005; Razzaque, 1998).

In addition to the factors explained, stakeholder lobbying and clientele pressure also worked in some instances in telecommunications sector reforms and trade decisions (Bhatnagar, 1999; Mesher & Zajac, 1997; Salazar, 2007; Woll & Artigas, 2007). Bartle (2002) finds that the globalisation of markets, networks and services have all created pressures for the convergence of the national policies and contributed to telecommunications sector reforms.

It is thus evident that the reforms in the telecommunications sector cannot be reduced to a single factor. Rather a number of factors either individually or combined have influenced liberalisation of the telecommunications sector. For example, in China, the interplay of four forces such as government considerations to provide universal coverage, foreign government's pressure, the urging of foreign firms operating in China and the massive domestic demand has led to the liberalisation of the sector (Loo, 2004; Zhao, 2007). Most of the studies, however, reveal that large user demand due to inability and inefficiency of the public sector monopoly telecommunications provider, immense market opportunity and development of mobile phone technology were the main factors that contributed towards telecommunications services reforms. Extant literature also suggests that the policy shift towards market-led development, attracting FDI into the sector and external pressure also induced governments to introduce competition in the sector. The

efficacy and relative role of each factor hinge on how policy-makers perceive the relative importance of the factors.

It has been found in existing studies (Mariscal & Rivera, 2005) that reforms in the telecommunications sector took place in two forms: privatisation or corporatisation of state-owned telecommunications providers and liberalisation of the sector to allow private participation. In the case of privatisation, governments in most cases adopted a gradual approach in selling its stake gradually in different phases over a number of years with a great deal in variation in transaction details[14] (Chu, 2001; Li & Xu, 2002; Wallsten, 2004)

2.3 Relevant Theoretical Explanations

This study is mainly focused on factors facilitating unilateral liberalisation of the mobile phone sector, its impacts on user welfare and on undertaking binding liberalisation commitments under the WTO GATS agreement. The aim of liberalisation is to introduce competition in economic activities through private sector participation for 'improving economic efficiency', stimulating growth, reduction of cost of goods and services, providing choice and quality of services. But there remains a gap between liberalisation and competition as liberalisation does not necessarily generate competition. There are many theories that can help explain why competition may not take hold in a liberalised market. This section covers only the key concepts of 'Capture Theory' and the 'Tollbooth Theory' that explain this. It also covers the 'Neo- liberal Theory' which supports private sector participation in economic activities. The Technology Acceptance Model is addressed to explain in part, the growth and adoption of mobile technology.

The following section briefly reviews these theories, which have implications for liberalisation, competition and growth of technology. The purpose is to investigate the factors of liberalisation, and to assess if the benefits of liberalisation as spelt out

[14] For example, Jamaica granted 25 year exclusive period for fixed service to the Jamaica Telephone Company after privatisation while Chile, Bolivia and Brazil did not provide any such exclusivity period. The share of the firm sold to private investors also differs significantly as well. The Brazilian government sold its entire stake in its telecom firms, while the Mexican government initially sold only 20.4 per cent. Pakistan sold only 12 per cent of Pakistan Telephone and Telegraph to the public

in neo-liberal theory have been achieved in the mobile phone sector of Bangladesh. In particular, Capture theory and Tollbooth Theory assist in understanding the impediments that stood in the way of competition in the context of Bangladesh.

2.3.1 Neo-Liberal Theory

Liberalisation as a concept has its root in neo-liberal economic theory which principally argues for liberalisation, deregulation and privatisation. In brief, it advocates pro-market reforms and 'limited government' for increased efficiency, innovation and individual freedom (Biesta & Lawy, 2006).

According to Haque (1999):

> Neo-liberalism is an ideological position based on strong beliefs in the promotion of the general good by following the principles of free market and open competition, limited state intervention and welfare, individualistic self-interest, rational utility maximisation, and comparative advantage in free trade (1999, p.203).

The basic tenet of neo-liberalism[15] is a profound faith in the efficacy of competition through market forces to deliver publicly determined objectives (Gamble, 2006; Simpson, 2010). According to the neo-liberal theory, efficiently functioning markets drive down prices, improve quality of goods and services, and provide choice and availability (Alam, 1992; Nulens & Audenhove, 1999; Simpson, 2010). In order to realise the benefits of neo-liberal reforms many countries including the UK[16], and the USA adopted the neo-liberal model in the 1980s for the telecommunications sector. The model later became a driving force for consolidation, restructuring and reform of the telecommunications industries towards a market-oriented system around the world (Jin, 2005; Simpson, 2010).

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[15] Noll explains that part of the motivation to embrace neo-liberal reform is extreme poor performance of nationalised entities (Noll, 2000).

[16] The UK was the first of the EU member states to make the decision to adopt a neo-liberal model for the telecommunications sector (Simpson, 2010).

Although neo-liberal theory expresses hostility to any state interference in principle, it recognizes the necessity of some government intervention. This government intervention is to be limited to providing the legal framework for a competitive economic system in order to see that a free market system operates properly (Crawford, 2006).

With regard to the relationship between the market and the state, neo-liberals plead for minimal government intervention (Nulens & Audenhove, 1999). Neo-liberal exponents such as Friedman, Nurkse, Balassa, Stigler, Bhchanan, Hayek[17], Krueger, Bhagwati, and Schultz argue that the market is the best mechanism to allocate resources and determine investment decisions (Bhagwati, 1994; Biesta & Lawy, 2006; Friedman, 1962; Haque, 1999; Hayek, 1978; Krueger, 1998; Nurkse, 1958; Peet, 2009). The two main assumptions of neo-liberalism are: the superiority of a market-led economic system and the importance of property rights. The World Bank sees property rights as a key tenet of a free-market society and takes the position that markets cannot develop far without effective property rights (World Bank, 1997).

The main features of neo-liberal theory are: liberalisation of trade and investment, introduction of competition by withdrawing the state from the businesses, deregulation and greater reliance on markets than on government, privatisation of state enterprises, depoliticisation of economic regulation by insulating regulatory authorities from political influence, minimising state involvement (to achieve a minimalist yet enabling state), withdrawal of subsidies, reduction of welfare programs and more concern for efficiency than equity (Alam, 1992; Haque, 1999; Mudge, 2008; Reich, 2008).

It is notable that the neo-liberal wave affected both the developed and developing world. In Asia, the shift towards a neo-liberal policy stance can be found in countries such as Sri Lanka, India, Pakistan, Singapore, Thailand, Indonesia, Bangladesh and the Philippines. Similarly, most African countries have adopted neo-liberal reform

[17] The intellectual roots of neo liberalism can be traced to Hayek and Friedman in their post war writings

packages (Haque, 1999). The introduction of neoliberal economic policy has changed the ownership structure of global telecommunications systems from a state-led sector to a profit-driven private sector (Jin, 2005).

Neo-liberal theory has been criticised on several grounds. First as Glinavos observes, it makes:

> [...] a shift in the perception of the state from its benevolent function and from a relationship of partnership between the state and the market to a relationship of opposition (Glinavos, 2008 p.1089).

Markets may fail and be subject to many distortions but the neo-liberal philosophy maintains the position that the state ought to intervene as little as possible (Glinavos, 2008; Stiglitz, 2006). Moreover, the core values of neo-liberalism – free enterprise, free trade, private property, an independent judiciary and limited government does not reflect concerns with community, poverty, social exclusion or the concentration of power (Mudge, 2008).

2.3.2 Tollbooth Theory

Tollbooth theory (also known the 'grabbing-hand view[18]') emphasizes extraction of rent by politicians (Shleifer & Vishny, 1993). It holds that in order to create rents for themselves, the bureaucrats and politicians use governmental power to control entry through regulations and number of procedures, enforce cartels or raising rivals' costs (Boehm, 2007; Jing & Graham, 2008). According to this theory, inefficient and lengthy procedures are often deliberately crafted by corrupt and politicised bureaucrats (who are multiple monopolists) with a view to fomenting their own personal gain (Alam & Teicher, 2010; Rothstein & Teorell, 2008:183; Shleifer & Vishny, 1993). Djankov et al.(2002) supported the theory, arguing that there is a positive and linear relationship between corruption and number of procedures.

[18] This view sees regulation (in effect, many regulation procedures that no rational economic criteria can justify) as a means used by the government to extract bribes from businesses and consumers (Mizoguchi & Van Quyen, 2009).

Djankov et al., (2002) argue that the creation of rents through erection of a 'tollbooth[19]' is inefficient in practice. The analogy to tollbooths on a highway explains this. Efficient regulation may require one toll for the use of a road, or even no tolls if the operation of the road is most efficiently financed through the general taxation system. But in a situation of independent monopolists solution[20], different towns through which the road passes might be able to independently erect their own tollbooths and charge their own tolls (Djankov, 2009; Mizoguchi & Van Quyen, 2009). In the case of administration, government officials generate more red tape to pursue their own benefit instead of maximising social welfare (Mizoguchi & Van Quyen, 2009).

2.3.3 Capture Theory

Capture Theory stipulates that regulation is acquired by the industry and is designed and operated primarily for its benefit (Stigler, 1971). When the regulator is captured, it loses its independence to make professional decisions on their merits because of undue influence from firms, politicians, or politically driven ministries (Zhang, 2001). According to the theory, stricter regulation of entry[21] keeps out competitors and raises incumbents' profits (Djankov, 2009). The regulatory agency and/or the ministry becomes a 'partner' with the regulated enterprise when regulatory capture happens (Yu, Berg, & Guo, 2004).

The capturing of the telecommunications regulator by the regulated telecommunications firm(s) in order to gain from regulatory slackness can also be interpreted under this theory. Executive capture (capture of the ministry) by the incumbent firms in order to delay the entry of new firms with a view to reaping high profits rather than benefiting consumers can also be explained using this theory. With regard to the telecommunications sector reforms, the capture theory explains

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[19] Tollbooth view is a second strand of the public choice theory. It holds that regulation is pursued for the benefit of politicians and bureaucrats

[20] The independent monopolists solution means that different towns through which the road passes independently erect their own tollbooths and charge their own tolls (Shleifer & Vishny, 1993).

[21] Stricter regulation of entry is measured by a high number of procedures (Djankov, 2009)

how the mobile firms captured the authority to halt competition taking hold in the market and thus maximised their rents.

2.3.4 Technology Acceptance Model (TAM)

TAM provides the framework for understanding consumer acceptance of technology-based products and services (Baron, Patterson, & Harris, 2006; Davis, 1989; Doll, Hendrickson, & Deng, 2007). Increased accessibility and rapid growth of mobile phone services are not only a function of liberalisation and competition; they can also be a function of users' propensity to adopt technology. The TAM model explains in part the influence of different constructs of the model on adoption of technology such as mobile phones. The constructs derived from the TAM such as perceived ease of use, perceived usefulness, and price (Li, Glass, & Records, 2008) have a positive influence on the speedy adoption of mobile phone services by consumers. Pederson, Nysveen, and Thorbjørnsen (2003) applied the TAM to explain the consumers' intentions to adopt mobile services.

The theories discussed above provide the imperatives and challenges of liberalisation. Neo-liberal theory supports increased private sector involvement in economic activities, with gradual reduction of the role played by the state. This theory thus provides the intellectual base to undertake reforms, including liberalisation, to adopt private sector style management practices, and to create the necessary institutions and environment to introduce competition into services provision. The reforms have been undertaken by both developed and developing countries in phases and with varying liberalisation outcomes. The Capture theory has been used in this thesis because regulators in developing countries are susceptible to capture by the industry. In particular, it has been found that the mobile operators influenced and captured the regulatory body and ministerial staff to avoid enactment and enforcement of regulations to promote competition and to delay the Teletalk Project. Tollbooth theory has been considered relevant for this study because the politicians (policy makers) and bureaucrats extracted rents for themselves through creating barriers (rather like erecting toll booths along otherwise public roads) to the entry of Teletalk and Warid Telecom. In the case of Teletalk, the policy makers, however, were influenced and benefited by the incumbent private mobile phone firms instead of the

potential entrant Teletalk, as envisaged in Tollbooth theory. Incumbent private operators influenced the policy makers using the power nexus prevalent in developing countries, because they knew they could maintain high tariffs and maximize their gains by creating entry barriers for potential new entrants.

TAM provides a theoretical explanation about how the massive growth of mobile phone services is not solely a function of liberalisation, but also a function of users' willingness to adopt new technology.

The following section explores the impact of mobile phone sector liberalisation on the sector in terms of accessibility, price, quality and diversity of services.

2.4 Impacts of Telecommunications Sector Liberalisation

Introduction of competition through liberalisation brought a host of benefits such as increased connectivity, lower prices, better quality, more choices for consumers, reduction in waiting lists, increased investment, security and sense of security, technological upgrading, better value for money elimination of abuse of market power by incumbents and increased competitiveness (Balasooriya, Alam, & Coghill, 2007; Bance, 2007; Blackman, 2007; Bodammer, et al., 2005; Bonciu & Williams, 2006; Borsch, 2004; Burnham, 2007; Cabanda & Ariff, 2002; Cameron & Goggin, 2005; Garbacz & Thompson, 2007; Iimi, 2005; Kranenburg & Hagedoorn, 2008; Lien & Peng, 2001; Ling, 2004; Mariscal & Rivera, 2005; Nemec, et al., 2004; Paredes, 2005; Rossotto, et al., 2005; Ruppert 2007; Sargana, 2005; Stiglitz, 1999; Tigre, 2003; Verikios & Zhang, 2004; Wallsten, 2001). New technologies and telecommunications liberalisation have made enormous contributions in closing the digital divide (Blackman, 2007).

The major beneficial impacts of telecommunications sector liberalisation and competition are discussed in section 2.4.1.

2.4.1 Reduction in call rates

Telecommunications operators (both fixed and mobile) in different countries such as in Morocco, Jordan, Philippine, Germany, Brazil, Indonesia, India, Malaysia, Sri Lanka ,Vietnam, Mexico, the UK and China lowered their call charges when they faced

competition (Borsch, 2004; Cabanda & Ariff, 2002; Cowhey & Aronson, 2008; Lee, 2002; Lee & Findlay, 2005; Maciel, et al., 2006; Olla & Patel, 2002; Roseman, 2005; Salazar, 2006/2007; Samarajiva, 2000; Singh, 2008; Theron & Boshoff, 2006; Xavier, 2006). For example, call charges were lowered four times (by incumbent IAM) in Morocco in a year with the awarding of a second GSM licence. In Germany, the price level of mobile telecommunications services decreased by 29.4 per cent since the sector was liberalised in 1998 (Borsch, 2004). Mobile call rates have gone down by over 90 per cent since May 1999 in India (Fraunholz & Unnithan, 2004). Most fixed line operators either abolished or reduced earlier exorbitant telephone installation fees when pressured by the presence of mobile operators (Zhao, 2007).

Although liberalisation and competition in the mobile phone services sector have generally lowered call charges, there are significant differences in price levels for mobile services across the EU. For example, the Scandinavian countries of Finland, Denmark and Sweden offer the lowest prices, while Portugal, Greece, Ireland and Spain have higher prices. The price variation is mainly due to the differences in the competitiveness of the mobile telecommunications markets between countries and variation in interconnection rates. The Scandinavian countries have the lowest price because their mobile industries are the most competitive and interconnection prices are lower[22] than in Ireland, Greece and Portugal (Dunnewijk & Hultén, 2007). On the other hand, Portugal, Greece, Ireland and Spain have the least competitive mobile industries. The competitiveness of the mobile industry varies over time due to differences in the implementation of regulation, introduction of mobile number portability, the number of competitors, market concentration, anti-competitive practices and market size. In Ireland and Spain, antitrust cases were lodged for dominance (Glinavos, 2008). The national regulatory authorities (NRAs) also differ in terms of competency, resources independency and accountability. The highly

[22] The average (fixed-to-mobile) interconnection tariff in Denmark, Finland, and Sweden was €0.117; this is lower than the average interconnection tariff in Portugal, Greece, Ireland and France, which was €0.165 in June 2004 (Dunnewijk & Hultén, 2007).

accountable NRAs in Denmark, Netherlands and Sweden seem to have implemented regulations effectively to provide competitive benefits to consumers (Dunnewijk & Hultén, 2007).

In regard to tariff reduction, the decline in mobile phone prices is in line with the general trend in the information technology industry because continued innovation of advanced technologies results in price reduction. So price reduction may be more of a reaction to technological progress rather than competition. However, it is not only competition or advancement of technology that solely contribute to total tariff reduction. It is rather a combination of competition and cost-improving technological progress (Koski & Kretschmer, 2005) that contribute to reduction in telecommunications price levels. Apart from competition, the introduction of prepaid billing systems also helps operators offer low-cost prices because it eliminates the possibility of fraud by users in making payment, a major problem operators faced with post-paid billing systems. Under a post paid system, users could switch to other mobile operators despite having unpaid bills. Competition and technology thus contribute separately to partial reduction in tariff levels.

However, in some instances, liberalisation did not result in intended competitive outcomes in call rates due to poorly designed regulation and regulatory failure. Prices of telecommunications services in Thailand remained higher than in other Asian countries due to regulatory problems (Tangkitvanich & Ratananarumitsorn, 2002). Similarly, telecommunications costs were high in South Africa due to the telecommunications regulator's inability to ensure 'cost-based' interconnectivity for Telkom's competitors (Gillwald, 2005). In Australia, Mexico, Argentina, Malaysia and Russia, liberalisation benefits were not universally available because competition was largely confined to the cities (Bance, 2007; McElhinney, 2001; Petrazzini & Krishnaswamy, 1998). Private operators consciously avoided providing services to uneconomic rural and remote areas after liberalisation and privatisation (McElhinney, 2001). With liberalisation public service logic in price setting was lost, the tariff standard became that of real costs and telephone service became less affordable especially for small domestic consumers in France (Bance, 2007).

Although dramatic reduction in call rates is experienced in many countries after the introduction of competition, telecommunications pricing remained unchanged for quite some time in some countries. This might be due to the collusive action or cartel-like behaviour on the part of telecommunications operators, as discovered in some countries. Nine mobile firms in Britain and Germany and the three largest mobile operators (Telefonica, Orange and Vodafone) in Spain were accused of possible collusion (Alderighi, 2008). In 2005, three of France's leading mobile phone firms (Orange, SFR, and Bouygues Telecom) were fined a total of €534 million for fixing of minimum prices and market shares through collusion (Alderighi, 2008; Phichaphop, 2008). The Competition Authority of France found that mobile operators illegally exchanged sales data and made a market shares-fixing agreement in the period of 2000– 2002 (Grzybowski, 2008). These complaints of collusion by mobile phone firms in developed markets, where regulatory regime seems to be more effective, provide a basis for suspecting that the possibility of such collusive arrangements is much higher in developing countries where the regulatory regime is relatively weak and inefficient, the regulator lacks skills to detect collusion and a competition authority is usually lacking.

Effective competition in many countries including New Zealand, Sweden, Sri Lanka, Mexico, Bangladesh, Malaysia[23], Australia[24] and the Philippines was hindered by interconnection problems (Balssooriya, et al., 2006; Fan, 2005; Hultkrantz, 2002; Malathy & Ellepola, 2005; Salazar, 2007). The lack of price regulations, anti-competitive practices by the operators and skills shortages in the regulatory body to audit the costing system in a bid to ensure that interconnection charges are cost-based also hindered competition (Balssooriya, et al., 2006; Symeou, 2009). National

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[23] Telekom and Celcom had no interconnection agreement for six years (1989-95). Thus, Celcom's cellular users had difficulty calling Telekom Malaysia fixed-line users, and vice versa.

[24] In Australia, the former monopoly incumbent Telstra took advantage of market power to refuse or impose interconnection charges. In 1998, The ACCC issued Telstra with two competition notices under the Telecommunications Act 1997. . Under the pressure of the ACCC notices, Telstra signed interconnection agreements with Ozemail, Optus and Connect.com (Fan, 2005p.201).

regulators sometimes impose price regulation or require prior approval (especially for the market leader) before changing tariffs to frustrate anti-competitive telecommunications pricing as is found in Korea (Choi, Lee, & Chung, 2001).

It is to be noted that a pyramid of regulatory strategies starting from self-regulation and extending through command regulation enforced by the state could be used in regulating firms' pricing, and QoS issues depending on the nature of the firms and their competitive behavior. Ayres and Braithwaite (quoted 1992 in Levin & Schmidt, 2010) argued that 'for regulations to be responsive, the state must also have the option of escalating up the regulatory pyramid where a delegation of regulatory obligations to the private sector fails' (p. 158). The inherent meaning is that not all firms in an industry will be regulated in the same way. Rogue firms such as firms engaged in collusion will be subject to much more formal, stringent control by the state (Levin & Schmidt, 2010).

Regulators in Singapore[25], Japan, Australia, the UK, USA and France have introduced mobile number portability (MNP) to increase competition (Park, Kim, & Lee, 2007). MNP allows consumers to retain their mobile number when they switch to a new operator (Shin, 2007; Xavier & Ypsilanti, 2008). MNP thus increases competition (in particular it helps new service providers to compete) in the sector because users have little incentive to lock-in its existing operator should they suffer from poor service or uncompetitive prices. Furthermore, the quality of entry is also important to infuse competition. Jung, Gayle and Lehman (2008) observe that competition policy should be more attentive to the nature of competitive entry than merely the number of entrants. Fewer entrants with more pronounced market shares (i.e., where entrants are acquiring a rapidly increasing share of the phone market) impart the most competitive pressure on incumbents.

The discussion above suggests that liberalisation *per se* did not bring assumed benefits of liberalisation and competition. It is critical to create the necessary environment for competition. Samarajiva (2000) is of the view that setting out

[25] Singapore was the first country in the world to introduce MNP in 1997.

detailed interconnection rules prior to the entry of competitor is more appropriate. This is because operators often experience difficulties in arriving at mutually acceptable interconnection agreements because incumbent operators typically try to impose onerous obligations on new entrants. Also it seems necessary to specify the circumstances when the regulator would intervene to enforce mandatory interconnection. Asymmetric regulation[26] that provides greater advantages to new entrants and imposes more stringent regulations on market- dominant firms and cost-oriented access charges on termination would certainly benefit new entrants (Kim & Yoon, 2004)

2.4.2 Accessibility

Accessibility means the 'availability' and ease of getting access (connection) to mobile service. It also means the ability to have perpetual contact (Castells, Fern´andez-Ard`evol, & Qiu, 2007) and making people more available to others (Palen, 2002). In both senses, accessibility has increased in countries that liberalised their telecommunications sector due to reduced cost, universal availability and reduced formalities to access the system (Chakravarty, 2005; Koski & Kretschmer, 2005; Olla & Patel, 2002; Paredes, 2005; Roehrich & Armstrong, 2002; Ros, 1999; Wallsten, 2001). Mobile phone services became widely available and the text messaging of mobile services helps to maintain 'perpetual contact' even when the phone is in silent mode or someone is in meeting because the handset is always carried by the owner (Castells, et al., 2007; Katz & Aakhus, 2002). Developing countries such as Indonesia,

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[26] Spain introduced asymmetric regulation against Telefonica. Asymmetric obligations are imposed on Significant Market Power (SMP) operators but not on others so that their market power is compensated compared with rest of the operators. Asymmetrical obligations normally take the form of an access obligation to the incumbent's network elements. The aim of imposing asymmetrical obligations is to level the playing field between the incumbent and new entrants. One of the asymmetrical obligations imposed on Telefonica includes the requirement that 'Interconnection prices must be transparent and cost oriented' and 'provide interconnection in non-discriminatory, transparent, proportional and objective conditions'(Herrera-Gonzalez & Castejon-Martin, 2009; Jordana & Sancho, 2005).

Thailand and Malaysia provide evidence of a strong relationship between increased competition and high market growth (Gao & Rafiq, 2009; Nikomborirak & De Silva, 2007).

In Malaysia, telephone penetration (both fixed and mobile combined) rate increased by 540 per cent between 1985 and 2000 due to liberalisation; in Sri Lanka, mobile penetration increased from 0.45 per cent in 1996 to 7.3 per cent in 2003; In the Philippines, fixed teledensity rose to 8.0 per cent and mobile phone density to 40 per cent in 2004; in Vietnam mobile phone growth rate was 705 per cent in 2006 (Blackman, 2007; Lee, 2002; Malathy & Ellepola, 2005; Paredes, 2005; Ruppert 2007; Salazar, 2006/2007). In a study of 86 developing countries across Africa, Asia, the Middle East, Latin America and the Caribbean over the period 1985 to 1999, Fink et al. (2003) found that teledensity was 8 per cent higher and labor productivity was 21 per cent higher in the year when telecommunications market was completely liberalised and an independent regulator was established compared to years when there was no reform or partial reform. In Germany, mobile phone penetration became eight times higher in six years (from 1998 to 2003). Mobile phone subscribers in South Korea had increased from around 6 million in 1997 to 30 million as of June 2002 (Kim & Yoon, 2004). In Albania, subscriber numbers have significantly increased with the launching of the Vodafone mobile service alongside Albanian Mobile Communications (Vagliasindi, et al., 2006). Liberalisation coupled with new technologies and the resultant increase in connectivity also helps shrink the digital divide (Blackman, 2007).

Multi-country studies by Ros (1999), Wallsten (2001) and Boylaud and Nicoletti (2000) demonstrate that liberalisation of telecommunications services is associated with significant growth in teledensity and operating efficiency. Competition in mobile phone services, has in most cases led the operators to provide service in rural and backward areas. In the absence of competition, operators were focused on urban areas and had no real urgency to look beyond the high end of the market (Thomas, 2007).Mobile subscribers in LDCs outnumbered fixed-lines by almost nine to one (ITU,2007 in Djiofack-Zebaze & Keck, 2009).

However, the Chinese experience depicts a different picture. Mobile operators in China did not contribute to the expansion of basic services to remote villages. The new entry mobile firms in China, Jitong, China Unicom and China Mobile, all focused mainly on providing advanced services to the more developed areas where the telecommunications network already existed (Zhao, 2007). This is because the idea of 'universal service' was not in the regulatory realm until September 2000. In the absence of regulatory obligation, these firms considered unprofitable services in low-income and high-cost areas a 'business liability' in the increasingly marketised and profit-driven system (Zhao, 2007). Similarly, competition and privatisation in the Ghanaian telecommunications sector have had minimal impact on underserved rural areas (Cowhey & Aronson, 2008).

The reason for differing impact of liberalisation especially with regard to providing telecommunications services in rural and backward areas appears due to 'universal Service' obligations, regulatory effectiveness and the level of market development. Where a universal service obligation is absent and no roll-out target in rural areas is given, revenue growth rather than equitable access becomes the industry objective after marketisation of telecommunication services.

The increase in penetration rate did occur at a different pace across the countries. Some countries' penetration rate went up slowly while in others, rates have reached 100 per cent (Bijwaard, Janssen, & Maasland, 2008) or more[27]. In Africa, increase in mobile penetration in Ghana was much slower than in other countries. For example increase in mobile penetration per 100 persons was from 0.07 in 1996 to 0.93 in 2001, while it was 0.01 in 1996 to 4.15 in 2002 for Kenya, 0.03 in 1996 to 3.57 in 2002 for Cameroon, 0.03 in 1996 to 5.65 in 2002 for Senegal, and 0.10 in 1996 to 6.23 in 2002 for Cote d'Ivoire (Cowhey & Aronson, 2008). It is to be noted here that spectacular growth in the mobile phone services market has been driven not only by fierce competition but also by innovation in wireless technologies (Kim & Yoon, 2004).

[27] This is due to the fact that some people have more than one mobile phone i.e. one for business purposes, another for private use or for taking advantage of different rates and packages offered by different carriers.

These experiences suggest that growth of telecommunications services depends on price, income levels, ease of technology use and quality of the services (Bijwaard, et al., 2008). However, despite higher levels of competition, no significant impact on penetration has been found in 18 countries with a per capita income of less than a dollar a day ($US1) (Mureithi, 2003).

2.4.3 Quality of Service

The quality of service (QoS) of mobile phone operators is measured by a number of indicators: call drop rate, call completion rate, faults per 100 customers, complaints per 100 bills issued, customer service, voice quality (including drop-out and noise), dead spots (i.e., locations within the carriers' coverage areas where service is not available), and coverage (ACMA, 2008; GAO, 2003; Sutherland, 2007; TRAI, 2008). Some elements of quality are directly measureable, while others are more about perception of quality of the service[2] and of the behaviour of the operators (known as quality of experience, QoE). Regulatory authorities, particularly telecommunications regulators, are often involved in ensuring a minimum quality, in measuring quality, in publishing data and in resolving disputes about quality (Sutherland, 2007).

QoS has improved after the liberalisation of mobile services. For example, the call completion rate of China Mobile is over 98.5 per cent and its GSM network coverage is more than 98 per cent of the country (Bortolotti, et al., 2002; Choi, et al., 2001; Fink, Mattoo, & Rathindran, 2001; Nemec, et al., 2004; Wang & Lo, 2002; Yu, et al., 2004). Similarly, competition from Mercury has forced British Telecom to improve on all the quality-of-service indicators (Saunders & Harris, 1994). However, the impacts on QoS have been mixed. While some measures of QoS indicate improvement in some countries, the same measures did not improve in other countries, for example, the improvement in calls completion rates in China did not occur in Ghana. Moreover, other aspects are consistent with poor quality. In particular, there still exists numerous complaints on issues such as network congestion and consumer frustration in the rate of successful calls (in Ghana), call drop, customer service and voice quality (Frempong & Atubra, 2001a; Sutherland, 2007).

After opening the markets for private sector participation, the telecommunications regulators in different countries have adopted measures to ensure quality of service. For example, the Telecommunications Regulatory Commission in Sri Lanka has indicated its strong commitment to ensuring improvement of QoS. A multi-million rupee decision to compensate subscribers for delayed connections was issued and implemented in 1999. QoS rules have been developed following a process of consultation with stakeholders (Samarajiva, 2000). The French telecommunications regulatory authority conducts its own tests of call quality to ensure operators meet the call quality requirements specified in their licences. The Telecommunications Regulatory Authority of India (TRAI) also monitors QoS of telecommunications service providers every quarter. Similarly, the Australian Communications Authority collects and publishes information on various quality of services issues such as consumer satisfaction and quality in its annual telecommunications performance report (GAO, 2003). In Hungary, telecommunications operators are required to achieve prescribed QoS indicators. They are also obliged to provide data to the Communications Authority of Hungary to enable it to ensure compliance with these quality-of-service targets (Xavier, 2000).

However there are also instances where QoS seems to have fallen after liberalisation. For example, in Australia, the number of complaints made to the Telecommunications Industry Ombudsman (TIO) about fixed-line and mobile services continued to grow during the period 2002 to 2007. Complaints about poor customer service of mobile phone providers have increased from 16 per cent in 2002-03 to 26 per cent in 2005-06. Customer service complaints include issues such as discourtesy, not being able to be contacted, failing to act on a customer's request, and waiting time. The growth in complaints about mobile phone service can partly be attributed to the growing public awareness of the TIO(ACMA, 2008).

2.4.4 Diversity of services

Liberalisation and competition in the telecommunication sector have accelerated network expansion and led to the development of new services, especially services connected with the internet (Djiofack-Zebaze & Keck, 2009; Lin, 2008; Stolfi & Sussman, 2001). Olla and Patel (2002 p.552) observed: "Competition has been the

spur for companies to… provide new services". Mobile users can subscribe to, and customise these internet enabled services to their liking and access the internet whenever they desire. The provision of new services is also tied to increased competition (Nemec, et al., 2004). Competition led to a variety of new tariff schemes and the development of a multitude of value-added services (Elixmann, Schwab, & Stappen, 2003). The Fierce competition among the operators and innovations in telecommunications technology stimulated the providers to come up with differentiated products and services. The providers offer a variety of services such as Short message service (SMS), multimedia messaging services (MMS) such as multimedia 'postcards', and video clips SMS-2 E-mail, SMS-2 TV, power tools such as ringtones, logos, mobile greeting cards, international roaming, G-mail, fax, voice mail, call waiting, call forwarding, song dedication services, interactive voice response (IVR), and financial enabler services such as mobile banking, shopping, auctioning, ticketing, advertising, corporate and information management (Ufone,2006 in Gao & Rafiq, 2009; Henten, Olesen, Saugstrup, & Tan, 2004; Olla & Patel, 2002) in order to remain competitive. Competition forces telecommunications operators to provide differentiated services for different customer segments at differentiated prices (Zhao, 2007).

2.4.5 Economic impacts

Telecommunications liberalisation has a positive role in promoting a modern telecommunications infrastructure. Modern telecommunications infrastructure has a substantial impact on total factor productivity (TFP) and economic growth (Blasko, 1998; Burnham, 2007; Madden, et al., 2003; Ojiako & Maguire, 2006; Patrick, 2005; Verikios & Zhang, 2004; Wolcott & Cagiltay, 2001). Gutierrez (2003a) and Vagliasindi et al., (2006) find that telecommunications competition has resulted in significant improvements in productivity, business and social development. Modern telecommunications facilities (following liberalisation and competition) increase productivity in information- intensive sectors such as the finance, tourism, transport and export import sectors (Madden & Savage, 2000). It has been found that each new telephone line in the developing world contributes approximately $US 4500 to GNP of that country (Ojiako & Maguire, 2006). A 10 per cent increase in a developing

country's mobile phone density increases economic growth by 0.6 per cent (Ewing, 2007).

Findlay and Sidorenko (2007) state that availability of cheap and efficient telecommunications services has facilitated international trade. A liberalised telecommunications sector also creates positive spillovers into other sectors of the economy. The spill-over effects include expansion of business of small and medium sized enterprises into new markets and improved prices of agricultural produce, employment for more people, investment and the development of forward linkage industry such as the expansion of mobile set companies and mobile terminal providers (Bhatnagar, 2004; Bonciu & Williams, 2006; Donner, 2007; Eusuf & Toufique, 2007; Li & Xu, 2004; Ojiako & Maguire, 2006). It reduces the 'transaction costs of doing business', and makes inputs costs cheaper and thus improves the competitiveness of exporting industries (Bodammer, et al., 2005; Stiglitz & Charlton, 2005; Varoudakis & Rossotto, 2004). Access to telecommunications also significantly increases their income and extent of off-farm activities (Duncombe & Heeks, 1999; Elbers & Lanjouw,2001 in Forestier, Grace, & Kenny, 2002).

2.4.6 Variation in telecommunications performance

The impacts of liberalisation however, have not been uniform; rather from country to country, a wide variation is found in telecommunications sector performance measured in telecommunications sector development and affordable access to services. The variation in telecommunications sector growth and performance has been due to problems such as bickering over interconnection[28] and revenue sharing between telecommunications operators, imperfect market conditions (dominance of an incumbent), sequencing of reforms[29] and the process of and transparency in awarding licences (Alderighi, 2008; Balasooriya, et al., 2010; Frempong & Atubra,

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[28] Interconnection difficulty sometimes delayed the commencement of operations by mobile phone firms. It also hindered expansion of services by mobile firms.

[29] Makhaya and Roberts (2003) concluded that privatisation on its own related negatively to main line penetration.

2001b; Gillwald, 2005; Makhaya & Roberts, 2003; Sullivan, 2007; Varoudakis & Rossotto, 2004). In particular, the varying degrees of regulations and regulatory effectiveness have been a factor for variation in telecommunications sector performance as stated in Section 2.4.1 to 2.4. 3.

Licencing conditions that require a competitive interconnection regime among operators, provide for a mandatory accounting breakdown of costs for different services and specific performance target in licensing conditions forces firms to operate efficiently without costly regulation (Makhaya & Roberts, 2003). Awarding of licences through auction helps regulators identify the most efficient potential supplier, which ensures efficient provision of telecommunications services (Galal & Nauriyal, 1995).

A poorly managed licensing regime and conflict between the sector ministry and the regulator delayed competition in India (Fink, et al., 2001). Furthermore, institutions, especially the regulatory regime may also impact on the scope of actual market opening (Bartle, 2002) and intensity of competition.

2.5 Unilateral liberalisation

Liberalisation of trade and investment independently without compulsion imposed by multilateral forums or international agreements is known as unilateral liberalisation. In Duncan's view:

> Unilateral liberalisation would mean that the costs of being a WTO member would not be incurred (2008 p.x).

In the case of unilateral liberalisation, the protection of the WTO against WTO-inconsistent practices by members would not exist. To put this differently, neither sanctions nor rewards of the WTO not be available with unilateral liberalisation (Duncan, 2008). Unilateral liberalisation is undertaken voluntarily by countries, in large part to pursue their own national interest by infusing competition and attracting FDI in manufacturing and infrastructures such as in telecommunications, construction and banking (Lindsey, 2000). It is not undertaken through formal, negotiated, enforceable agreements (Garnaut, 1997, 1999). The Australian

government liberalised its trade regime unilaterally between 1983-1991 accepting the view that its national economic interests are served well by maintaining low protection no matter what other countries are doing (Garnaut, 2002a) .

Unilateral liberalisation is considered beneficial for countries with a liberalised economy. If unilateral liberalisation was not thought to be beneficial, countries would not liberalise its market unilaterally (Choi, 2002). Bagwell and Staiger argue that:

> Unilateral free trade is optimal, whenever a government maximizes national income and presides over a small country (2002, p.3).

Richardson (2001) is of the view that when a country has no price-making ability at all in its international market, it goes for unilateral free trade. Other objectives of unilateral liberalisation are benefits from technology transfer and reduction of the costs of doing business for firms who are heavily dependent on telecommunications and financial services.

In recent years, a strong incentive to pursue liberalisation unilaterally has been observed worldwide. In particular, most services trade liberalisation in the developing world has taken place unilaterally. For example, India has opened up its services sectors unilaterally at a level higher than is required under its GATS commitments. Similarly, other WTO members in particular countries in East Asia, Latin America and Eastern Europe have unilaterally opened up their markets to foreign services suppliers (Businessline, 2003; Commonwealth Secretariat, 2001).

The discussion above demonstrates that unilateral liberalisation is undertaken by countries with a view to furthering their national economic interests as part of domestic reform strategy. In pursuing unilateral liberalisation, the question of reciprocity is not relevant and countries do not waste time seeing what others are doing.

2.5.1 Unilateral and Multilateral Liberalisation Relationship

Discussing the relationship between unilateralism and multilateralism, Ethier argues that “multilateralism might imply a role for unilateralism…But unilateralism, to be effective, also requires multilateral components”(2002 pp.286-287). To put it

differently, 'locking-in' unilateral liberalisation measures in a multilateral institution such as under the WTO helps ensure unilateral liberalisation is permanent and gives investors confidence in the continuity of unilaterally liberalised measures. Unilateral and multilateral liberalisation are not mutually exclusive; rather they are complementary in increasing integration with the world economy (Sally, 2000).

However, most countries showed their unwillingness to 'lock-in' existing levels of liberalisation under the GATS. For example, India has unilaterally relaxed foreign ownership limitations ranging from 74 per cent to 100 per cent. But it has not 'locked-in' this improved offer of equity ceiling under GATS. Its most recent offer of foreign ownership under GATS is 49 per cent (Hoekman, et al., 2007) in wire-based and cellular services. Similarly, Chile did not bind open local service even though competition was increasing in local service. Chile thus was more open in practice than on paper in terms of its WTO commitments (Soltys, 2002).

Ikenson (2007) is of the view that a multilateral forum as important for securing the permanence of the reforms undertaken unilaterally. Venugopal (2003) is of the view that GATS commitments in the telecommunications sector in India, Malaysia and Sri Lanka appear to have resulted from an unilateral reform process driven by compulsions internal to their domestic economies.

The objective of both unilateral and multilateral liberalisation is to promote trade and investment among nations. It has been found that Chile, Australia, New Zealand and Malaysia took a bold step in pushing for multilateral liberalisation after initiating their own unilateral trade reforms (Sally, 2000). There are instances where countries pursued both unilateral and multilateral liberalisation simultaneously. For example, Australia had undertaken significant domestic unilateral liberalisation measures during the 1980s and early 1990s while it had been a key player in multilateral negotiations under the GATT and WTO (Bisley, 2004).

In the case of the telecommunications services sector, many WTO members liberalised the sector unilaterally rather than waiting for reaching a multilateral liberalisation agreement on telecommunications. The importance of an easy accessible and affordable telecommunications service to promote national economic interests forced countries such as Bangladesh, India, Chile, Mexico, Singapore,

Malaysia, Sri Lanka, South Africa, Australia, New Zealand, Japan, India and Ghana to initiate unilateral liberalisation before 1997 when the Agreement on Basic Telecommunications took place (Drake & Noam, 1997; Ikenson, 2007).

Although unilateral liberalisation of services helps improve service quality, slashing prices, and gaining efficiency, unilateral removal of tariffs on imported goods, however, can worsen the terms of trade[30]; (Zarazaga, 1999). Despite adverse terms of trade, countries may still enjoy an overall gain from unilateral liberalisation (Yang, Duncan, & Vines, 2004).

Regarding the relationship between unilateral and multilateral liberalisation, it is still unclear whether unilateral liberalisation promotes or hinders GATS commitments. This is evident from Sally's (2000) observation:

> It is very important to recognize how these tracks (unilateral, plurilateral and multilateral) might complement and mutually reinforce each other, on the one hand, and how they might clash, on the other (2000, p.410).

A review of the literature about the impact of liberalisation on consumers reveals that liberalisation has brought several benefits, such as improved accessibility, falling prices of telecommunications services, better network and service quality, diversity of services, innovation and increased economic efficiency. However, liberalisation has not always resulted in unmixed blessings. Poor regulatory regimes, ineffective regulator, absence of a competition authority and anti-competitive practices by incumbent firms, such as price collusion, are also identified in the literature as responsible to produce poor competitive outcomes.

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[30] *Terms of trade*, on the other hand shift in favour of tariff imposing country. The imposition of a tariff on foreign goods will increase the domestic price of imports relative to the domestically produced- and eventually also exported good. The lower relative price of the domestic good will induce more consumption of it and less of the imported good resulting in two effects. On the one hand, it will reduce the demand for the foreign good by the tariff-imposing country and, therefore, generate downward pressure on the world price of that good. On the other hand, it will reduce the surplus of the domestic good available for export to world markets, which will create upward pressure on the international price of the good. This implies that the terms of trade (i.e., the international price of exports relative to that of imports) goes in favour of the tariff-imposing country (Zarazaga, 1999 pp.19-20).

Although the extant literature identifies the factors that fostered telecommunications services liberalisation and the consequences it has had on users, they are generally focused on the sector as a whole and not on mobile services only. None of the existing studies identified empirical factors that were perceived to have contributed towards unilateral liberalisation of mobile phone services. Empirical study of the impacts of unilateral liberalisation on consumers' welfare in terms of accessibility, pricing, QoS and diversity of services is also lacking.

The dearth of study in the literature on unilateral liberalisation warrants a systematic and empirical study on unilateral liberalisation and the consequences on the user benefits.

2.5.2 Unilateral Liberalisation in the Mobile Phone Service in Bangladesh and Bangladesh GATS Commitments

Historically the Bangladesh Telephone and Telegraph Board (BTTB) has been the only telecommunications service provider in Bangladesh. The telecommunications sector was characterised by low teledensity, limited capacity due to low levels of investment, long waiting periods for connection after submitting initial requests, outdated technology and poor service quality (Bhuiyan, 2004; Khan, 2003b). For example, even after the significant expansion and growth of mobile services in the last decade following liberalisation of the services, there was still a pending demand of nearly a million for a BTTB telephone in the Dhaka zone in 2006 (The Daily Star, 2006). The situation was much worse before 1997 when only one mobile company was operational. The teledensity (total fixed and mobile) of the country as a whole was 1.32 in 2002, well behind most of its neighbours in Southern Asia e.g., India at 5.20 ,the Maldives at 25.11, Nepal at 1.5, Pakistan at 3.35 , and Sri Lanka at 9.58 . The situation was even worse in the countryside (OECD, 2004).

The lack of telecommunications facilities led business users to demand private sector participation in the sector. Quadir (2000) notes:

> They (key business actors) were particularly critical of the government's reluctance to allow the private sector to get involved in infrastructure-related sector they demanded concrete steps from the government to further deregulate the economy and promote greater competition (2000 p. 206).

Milner and Kubota (2005) observe that the policy makers' gradual shift towards market-led reforms induced developing countries such as Bangladesh, Chile, Ghana, Zambia and Morocco to unilaterally liberalise their economy. Kyaw (2003) finds that the surge in FDI inflow was a function of economic policy reforms undertaken since the early 1990s.

Bangladesh opened its mobile service in 1989 by awarding a licence to Bangladesh Telecom Limited (BTL). Since Bangladesh liberalised its telecommunications sector independently without any binding under an international agreement, the liberalisation of the sector (both fixed and mobile) represents a case of unilateral liberalisation. BTL then formed a Joint Venture with Hutchison Telecom in April 1990 in the name of Hutchison Bangladesh Telecom Limited (HBTL). HBTL began operation in 1993 using AMPS technology. It was the first cellular operation in South Asia. HBTL sold the licence to Pacific Bangladesh Telecom Limited in December 1993 (Netherlandsembassy, 2006).

Between 1989 and 1996, the government of Bangladesh made greater liberalisation of mobile services unilaterally by awarding four mobile phone licences to Pacific Bangladesh Telecom Limited, Grameen Phone, Aktel and Sheba Telecom (now re-branded as Banglalink) (ITU, 2000). In 2004-2005, Bangladesh issued two more mobile phone licences to Teletalk Bangladesh Ltd and Warid Telecom. At present six mobile phone companies are operating in the market including the state-owned Teletalk.

Liberalisation of the telecommunications sector brought mixed competitive outcomes over the whole period of liberalisation. During 1997-2004, the tariffs were very high (The Daily Star, 2008d) and remained unchanged for a number of years due to limited competition among the operators. Telecommunications pricing (i.e., the tariff) has been used as the main indicator of competitive outcome in this case because price is recognised as a major means of competition (Yu, et al., 2004). Accessibility was difficult and QoS was also little considered. There are arguments that in developing countries, consumers are often deprived of the assumed benefits of liberalisation such as affordable prices and better service either because of the absence of a regulator or the absence of a strong regulator (Balasooriya, et al., 2007; Gutierrez,

2003b). In a similar vein, lack of an effective telecommunications regulator and poor regulatory enforcement to prevent anti-competitive practices and dominance[31] of a single operator in Bangladesh allowed operators to charge high prices and compromise quality (Kibria, 2005; Silva & Khan, 2004).

The increased competition following launching of mobile services by state-owned TBL and a new private operator, Banglalink, coupled with strong regulatory enforcement brought down telecommunications tariffs significantly from 2005 (The Daily Star, 2008d; Yusuf & Alam, 2008c). In March 2007, telecommunications density in Bangladesh stood at 16 compared with only 7 in 2006, and 0.26 in 1996 (ADB, 2007). The number of mobile subscribers also increased significantly to reach 53.83 million as of January 2010 (BTRC, 2010) from a mere 7000 in 1997(Camp & Anderson, 2001) The growth in the mobile phone sector has been 100 per cent in 2004, 137 per cent in 2005 , 120 per cent in 2006 and 58 per cent in 2007 (ADB, 2007; Hasan, 2008b; Khan, 2007b).

In the absence of government policing by the regulator until the non- partisan caretaker government[32] took over power in 2007, the mobile phone operators denied the government its share of the huge telecommunications revenue by resorting to illegal VoIP technology to transfer and terminate international calls (Khan, 2007c).

2.5.3 Bangladesh Liberalisation Commitments under GATS

It has already been stated that Bangladesh liberalised its mobile phone services unilaterally during 1989-1996. After unilateral liberalisation, Bangladesh undertook binding liberalisation commitments under WTO GATS by submitting its Schedule of GATS Commitments on the telecommunications sector in 1997. Telecommunications is the only service sector where Bangladesh undertook GATS commitments.

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[31] Market dominance has been defined based on market share only.

[32] In Bangladesh, a non-partisan caretaker government is chosen through consensus by political parties after each term of government in every 5 years as permitted by the Constitution. This government's main job is to conduct free, fair and impartial national elections and hand over power to the elected government.

Bangladesh undertook binding liberalisation commitments to the extent that it had already liberalised unilaterally at home (WTO, 2006). The commitments include issuing of two licences to private operators, each to serve designated administrative (rural) areas in competition with the government operator (BTTB), to provide local and domestic long distance voice services as well as transmission facilities (leased circuit services) and the issuing of four licences issued to private suppliers of mobile voice telephone services. The commitments impose a restriction on all service suppliers to mandatorily use facilities of the government operator BTTB including VSAT, gateway earth station services and teleconferencing services. No regulatory commitments have been undertaken by Bangladesh (Sherman, 1998).

Bangladesh liberalised its mobile phone services unilaterally ahead of quite a significant number of LDCs and even some developing countries such as Algeria (2001), Barbados (2003), Cameroon(1999), Ethiopia (not liberalised until 2007), Myanmar (2002), Nepal(2004), Namibia (still a monopoly), Libya (two state-owned mobile firm), Egypt[33] (1998), Rwanda (1998), Thailand (1997) and Tunisia (2002) (Buerkler, 2005; Donner, 2007; Kifle, Mbarika, & Bradley, 2006; Mesher & Jittrapanun, 2004; Rossotto, et al., 2005; Whalley, 2006). Until 1997, mobile services were either a monopoly or state-owned in these countries (Hamilton, 2003).

This raises a question about the factors that led Bangladesh to liberalise ahead of many of its peers. The factors behind market opening of the telecommunications sector and the impacts telecommunications liberalisation have had on accessibility, pricing, quality of service and diversity of service have been exhaustively studied for many developed and developing countries (Bodammer, et al., 2005; Bortolotti, et al., 2002; Davids, 2005; Gao & Rafiq, 2009; Gruber, 2001b; Jho, 2007; Ojiako & Maguire, 2006; Patrick, 2005; Samarajiva, 2000; Singh, 2005; Xavier, 2006). However, no such study has been conducted to date to understand the factors and impacts of unilateral liberalisation on consumer welfare in Bangladesh. The relative dearth of research on

[33] Telecom Egypt monopolised the market for local, national and international long distance service and cellular mobile telephony(Galal, 1999) before 1998.

the factors of unilateral liberalisation and its impacts on the consumer benefit of an LDC has been a motivating factor to choose the topic of the current research. It is therefore important to explore empirically what were the main factors that influenced the Bangladesh government to unilaterally liberalise its mobile phone service sector ahead of many other LDCs. Similarly, the impacts of telecommunications liberalisation in an LDC context need to be empirically established to provide important insights for policy makers.

Furthermore, no previous study has investigated empirically how unilateral liberalisation in the telecommunications sector influenced a WTO member country's undertaking of multilateral liberalisation commitments in the WTO. The only study that is found regarding unilateral liberalisation and commitments in the WTO in Siope (2009) which takes a reverse direction to this research. Siope investigated the impact of the telecommunications commitments of the WTO on the credibility of unilateral reforms. The current research attempts to investigate how did Bangladesh's unilateral liberalisation of the mobile phone services influenced its undertaking of binding telecommunications commitments (submission of a schedule of commitments) to the WTO. This research was aimed at filling the research gap in the literature. The broad research questions to address that gap are discussed below.

Research Questions

In order to address the research problem identified above, the following questions have been developed:

1. What factors are perceived to have contributed towards unilateral liberalisation of the mobile phone service sector in Bangladesh?

2. What impact did the unilateral liberalisation (UL) have on accessibility, pricing, quality-of -services and diversity of services in the mobile phone sector?

3. How did unilateral liberalisation influence submission of Bangladesh's liberalisation commitments in the telecommunications sector under the General Agreement on Trade-in-Services (GATS) of the WTO?

The factors that are found to have facilitated telecommunications services liberalisation, impacts of liberalisation on consumers and the relationship between unilateral liberalisation and GATS commitments identified in the literature and found relevant for Bangladesh can be incorporated in a conceptual framework to address the research questions.

2.6 Conceptual framework

A conceptual framework (see Figure 2. 1) has been developed to identify the factors that are perceived to have contributed to the unilateral liberalisation of the mobile phone sector in Bangladesh, the impacts of unilateral liberalisation on consumer benefits and how unilateral liberalisation influenced Bangladesh in undertaking binding liberalisation commitments under the GATS agreement of the WTO.

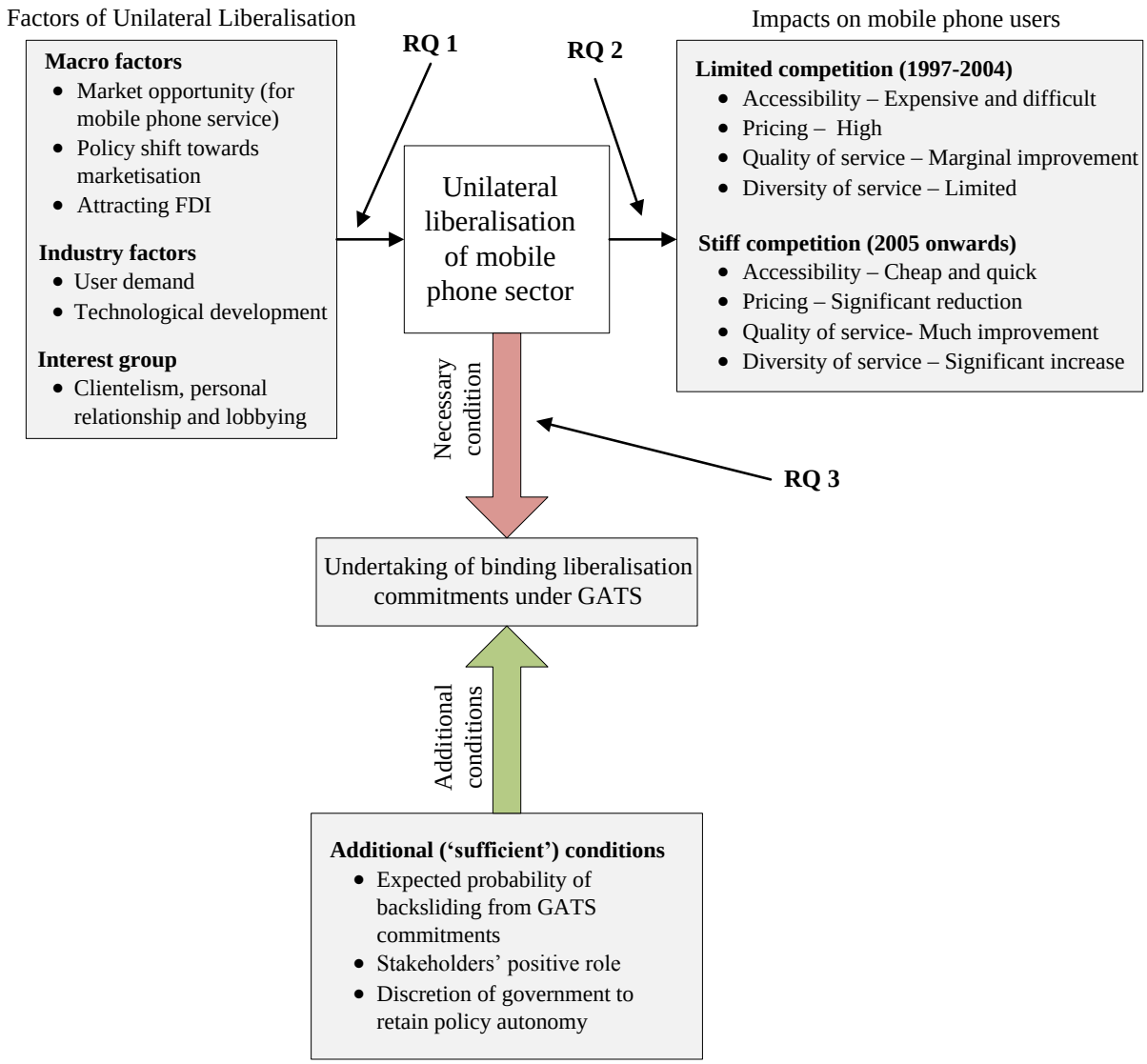

Figure 2.1 Conceptual framework

In developing the framework, factors influencing telecommunications service liberalisation in different countries and impact of liberalisation on consumers in terms of accessibility, telecommunications pricing, diversity of services and the QoS have been first identified from existing literatures. Then the factors that seemed relevant for Bangladesh, such as market opportunity (due to inadequate capacity of the incumbent) arising from user demand and the demand-supply gap, advent of new technology, the gradual movement towards a market-oriented liberal trade and investment regime (i.e., policy shift), attracting FDI and lobbying and personal connection have been incorporated in the conceptual framework. These factors are

contextually relevant for Bangladesh because like many other countries, the Bangladesh telecommunications sector was characterised as inefficient and unable to meet telecommunications demand, undercapitalized and a poor service provider. There also exists a huge demand for telecommunications service, both fixed and mobile, from all sections of the society. Users especially business users (business organisations) are also vocal in securing the benefits of mobile phone technology. All the governments since its independence (except for the first three years of the first government) have shown their tendency towards market-based reforms and have increasing embraced pro-market economic policy in trade and investment regimes as espoused in the theory of neo-liberalism.

Lobbying by interest groups through various means (using their personal connection or using another's connections to induce policy makers and officials to confer favours, either by personal rapport or by offering inducements and kickbacks) are also prevalent in Bangladesh. These would help to assess which factors or which combination of factors led the government of Bangladesh to unilaterally liberalise the mobile phone sector (Research Question.1).

The consequential impacts that are found to have happened in telecommunications accessibility, pricing, QoS and diversity of services after liberalisation across the globe have been incorporated in the conceptual framework. This would help to address how UL of the mobile phone sector impacted on user benefits in Bangladesh (Research Question 2).

Unilateral liberalisation and some other factors such as stakeholders' role and probability of backsliding from GATS commitments are also incorporated into the CF to examine the extent of influence of UL on Bangladesh's undertaking of GATS commitments (Research Question no. 3).

In sum, the conceptual framework provides an analytical lens to examine the relationship between factors of unilateral liberalisation and its impacts on the mobile phone sector in Bangladesh. It also helps explore the non-market forces that influenced the decision to unilaterally liberalise the telecommunications sector. The framework can be also be used as a guiding template to better understand how

unilateral liberalisation can influence or promote a country's submission of commitments to the WTO in the telecommunications sector.

Moreover, the conceptual framework highlights how unilateral liberalisation leads a country to participate in multilateral liberalisation through locking-in unilaterally liberalised measures in the WTO.

2.7 Conclusion

The objective of this chapter was to conduct a comprehensive review of the extant literature on three main areas: factors of unilateral liberalisation, impacts of unilateral liberalisation of the mobile phone sector and how unilateral liberalisation influenced undertaking of liberalisation commitments under WTO GATS in the telecommunications sector. The literature review was conducted with the aim of developing a conceptual framework for the study.

A review of literature reveals that users' demand for liberalisation, the market opportunity (for mobile phone service), technological development, attracting FDI in the telecommunications sector and other sectors, a policy shift towards market economy, external pressures and emulating other reformers (countries) were the factors that pushed liberalisation of the telecommunications sector in different countries. The literature reports some examples of non-transparency and corruption or nepotism in licencing mobile phone services to telecommunications firms in some countries.

With regard to the impact of liberalisation on consumer benefits, the literature review suggests that liberalisation in most cases has resulted in easy and affordable accessibility, growth of telecommunications services in both urban and rural areas reduced tariff rates, better service and increased diversity of services. Exceptions were also found where greater liberalisation did not result in higher competition and expected reduction of tariffs. The lack of an independent regulator, poor regulatory effectiveness, interconnection problems, dominance of a single operator and lack of political intervention are found to contribute to poor competitive outcomes. In some countries, operators were found to be engaged in anti-competitive practices to maintain high prices.

It has been found that unilateral liberalisation and multilateral commitments might be complementary and one may reinforce the other. However, there are no known studies of the influence of unilateral liberalisation on undertaking GATS commitments. The literature thus reveals the research gap addressed by the research questions for this study. On the basis of the literature review and identified research gaps, three research questions were developed and presented in Section 2.7.

The following chapter (Chapter 3) discusses the method applied for this study.

Chapter 3: Research Design and Methodology

3.1 Introduction

This chapter discusses the research design and methods of data collection used in this study. The rationale for using the procedures and techniques for data collection and analysis is elaborated.

Section 3.2 explains the nature of the study and the rationale for selecting the research design. Section 3.3 states the research design and justification for the research design and data collection methods. Section 3.4 details the data sources and the way data were collected. Section 3.5 briefly describes ethical considerations. Section 3.6 provides a description of data transcription followed by a description of data analysis in Section 3.7. Section 3.8 discusses how this study has applied rigour and objectivity (through reliability and validity check) in conducting the analysis and presenting the findings. This section also discusses the limitations of the research methodology adopted. Section 3.9 provides a summary of the chapter.

3.2 Nature of the study

The current research is exploratory because this is a valuable means of investigating "what is happening; to seek new insights; to ask questions; and to assess phenomena in a new light" (Robson, 1993, p.42).

The current study attempts to understand the factors and consequences of Unilateral liberalisation (UL) and how UL influenced a country to make multilateral commitments under the WTO. The dearth of study on unilateral liberalisation of the telecommunications sector in general constrains the ability to gain a comprehensive picture of unilateral liberalisation, and its impacts on telecommunications users. Moreover, there is a lack of knowledge about how a country's unilateral liberalisation in a service sector influences its understanding of multilateral commitment (through submission of a schedule of commitments) in that sector. It is therefore logical to adopt an exploratory research design because this research approach provides greater understanding of a concept or crystallizes a problem rather than providing

precise measurement of qualification (Zikmund, 2003, p.111). This research is also appropriate for the current research since it helps explore substantive areas where little is known and requires novel understanding (Strauss & Corbin, 1998).This research approach satisfies three rationales of research: to diagnose a situation, to screen alternatives; and to discover new ideas (Zikmund, 2003).

The findings of the study would contribute to knowledge by providing enhanced understanding about the unilateral liberalisation of mobile phone sector, its consequences on the users and the ambiguity of the role of unilateral liberalisation in making commitments in a multilateral (WTO) context.

3.3 Research design

A research design involves activities such as collection, analysis and interpretation of relevant data. The main purpose of the design is to help avoid the situation in which the evidence does not address the initial research questions (Yin, 2009 p.27). The researcher used his knowledge and creativity to decide on these issues as they relate to the research questions, the information needed, the sources of that information, and the relevant persons or organisations to be used as sources of information, including the use of a combination of tools to triangulate the findings.

The following subsection describes the approach taken in order to fulfill the objectives of the study.

3.3.1 Case study approach and its justification

The choice of research practices (data-gathering techniques) depend upon the type of research questions being asked (Berg, 2007). This study has adopted three research questions which are of a 'what', and 'how' nature to investigate a contemporary phenomenon i.e., liberalisation in the Bangladesh telecommunications sector. The researcher had no control over the events being investigated. A case study approach is considered as the most suitable method to ask 'what', 'how' and 'why' type of questions under conditions where researchers have minimal control (Berg, 2007; Eriksson & Kovalainen, 2008; Tharenou, Donohue, & Cooper, 2007; Yin, 2009). Yin (2009) states that a case study is an empirical study to investigate a

contemporary phenomenon within its real-life context. This supports the adoption of the case study method for this study because it investigates the liberalisation, competition and WTO issues relating to the mobile phone sector.

A unique advantage of case study research is that it allows investigators to retain the holistic and meaningful characteristics of real-life events (Yin, 2009). Tharenou, Donohue and Cooper (2007) have argued that case studies are used especially to understand social processes in their organisational and environmental context, which can be contemporary and /or historical. The 'what' and 'how' type questions about unilateral liberalisation and its impact can best be addressed by the case study methodology, as argued in Yin (2009, p.17).

Another reason for adopting a case study method for this study is that this method allowed investigation into a contemporary event (the unilateral liberalisation of the mobile phone sector) in the context of Bangladesh. The adopted method is consistent with the recommendations of Gibbert, Ruigrok and Wicki (2008) and Yin (2009) who have stated that case study research covers both the phenomenon of interest and its context. Keeping the research questions of this study in mind, the case study was therefore considered to be the most appropriate method.

Selection of case: The mobile phone sector of Bangladesh is the unit of analysis in this study. The users, policy makers and the regulator who are relevant to the sector are part of the system within which the sector is embedded and accordingly they form part of the case study. Thus, all the mobile phone firms operational in Bangladesh were selected for the study. Selection of all the firms existing in the sector enabled the investigation to overcome the risk of misrepresentation and non-representation. Incorporation of all the firms also added significant opportunities for extensive analysis, thereby enhancing the insights into the single case as stated in Yin (2009).

3.3.1.1 Qualitative Research Approach in Case Studies

This study adopted a qualitative research method of data collection within a case study research design. Qualitative data helps researchers to generate ' a detailed understanding and thick description of the phenomenon of interest', by collecting

information on many aspects of a phenomenon and documenting perspectives of all key participants (Shah & Corley, 2006 p.1822). In case study research, a variety of data sources such as interviews, documentary analysis, and observation are used in collecting data (Hussey & Hussey, 1997).

There are three main reasons for adoption of qualitative research in this research.

Firstly, understanding of a complex issue in a certain context is only possible through qualitative research (Creswell & Plano Clark, 2007). The research questions of this study require understanding of complex issues such as unilateral liberalisation of mobile services issues and the role of unilateral liberalisation in making binding liberalisation commitments under GATS in the specific context of Bangladesh. It is difficult to understand these complex issues without coming in direct contact with the policy makers, public managers and other stakeholders involved in the process. In a qualitative research study, the researcher is required to go into the field to study the research issues. This aspect of qualitative research provides the opportunity to observe a phenomenon directly and gain firsthand experience from those directly involved, which is necessary to explain a scenario (in this case, the mobile phone sector liberalisation scenario) in its context. This is not possible through quantitative research because quantitative researchers look for measurement and analysis of causal relationships between variables and not processes.

Secondly, qualitative research has enabled the researcher to focus on actual practice in situ, looking at how social interactions are routinely enacted as advocated in Silverman (2003).

Thirdly, of the two-types of method (qualitative and quantitative), qualitative methods usually predominate in a case study design in which data collection, analysis and action often take place concurrently (Gummesson, 2000). Tharenou et al. (2007) observes that case studies are used in management research to generate theory and/or test existing theory.

3.4 Qualitative data collection and data sources

This study used a multiple sources of data such as in-depth interview of key informants in mobile phone firms, policy makers, public officials, experts, private sector representatives, the telecommunications regulator, mobile phone users, NGO representatives, and relevant documents.

The documents that were analysed in this study included licencing documents; comments or articles that the researcher received from some respondents, research reports on the Bangladesh telecommunications sector, the Special Ministerial Committee report on the Bangladesh mobile phone sector for the improvement of the sector, the Schedule of Bangladesh Commitments to the WTO and contemporary daily print media accounts on the mobile phone sector. These documents were considered important because they contained important information on mobile phone licensing, pricing, change in market share, quality of service issues, variety of service issues, collusion, transparency and the role of the telecommunications regulator in bringing competition to the sector. The documents were assessed and found to be important sources of relevant information, because, unlike the situation in many developed countries such as Australia, documents such as Hansards (transcripts of parliamentary proceedings) are not easily available. The reality is that the culture of having serious debate and committee hearings on economic and social policy issues remains undeveloped in Bangladesh.

These documents were selected on the basis of their relevance. Important statistics and information on regulatory effectiveness, price, quality of service and diversity of services were found in these documents. The two daily English-language newspapers, i.e., *The Daily Star* and *The New Age* were regularly monitored through the internet, because the 'Business' page of these two dailies often had coverage on contemporary changes in the mobile phone sector, as well as on regulatory and government initiatives.

Detailed discussion of how data have been collected from each of these data sources is detailed below.

3.4.1 Interviews with mobile phone firms

Firstly, in-depth face-to-face interviews were conducted with 13 key informants from the six mobile phone firms. The target groups for in-depth interviews were the top and middle layers of organisations, such as the Chief Operating Officer (COO) or General Manager (GM). In this study, an interview method was preferred because interviews are less structured than questionnaires; this technique allows the spontaneous discussion of problems and solutions (Nair, Ahlstrom, & Filer, 2007).

From each mobile phone firm at least one senior official and one mid-level official were interviewed, except in the case of the state-owned firm. In some instances, more than two managers were interviewed across functional areas. The reason for selecting more than one respondent from each mobile phone firms is that the mid-level official was able to discuss operational issues but might not possess information on strategic, international and policy-related issues. A COO/GM was able to apprise the researcher of these issues.

Following the recommendations of Perry (1998p.797), the mobile phone firm's name, the interviewee's position and the date of interviews are shown in Table 3.1 in order to reflect the importance of the temporal and physical context of case study research. In order to ensure confidentiality (i.e., protecting anonymity) the names of the participants, the organisation they belong to and their roles in the mobile phone firms has been withheld.

Table 3.1 Interviewees in mobile phone firms

SL	Mobile phone firm	Date of interview	Number of interviewees	Designation of the interviewees	Data sources
1	Mobile Phone firm A	20 August 28 Oct., 2008 4 Jan., 2010 5 Jan., 2010	4	COO/GM	Interview Annual Report
2	Mobile Phone firm B	11 Aug 2008 8 Oct. 2008	2	Director/Manager	Interviews Annual Report Papers written by Company director
3	Mobile Phone firm C	23 Sept. 2008 30 Oct. 2008	2	GM/Manager	Interview
4	Mobile Phone firm D	16 Oct. 2008 19 Oct. 2008	2	Senior Manager	Interview
5	Mobile Phone firm E	25 Aug. 2008 21 Oct. 2008	2	Director/Manager	Interview /Annual Report
6	Mobile Phone firm F	27 Aug. 2008 10 Sept. 2008	1	GM/Manager	Interview

The main objective of interviewing mobile phone firms' personnel was to obtain in-depth knowledge and new perspectives about the impact of unilateral mobile phone sector liberalisation on users in terms of accessibility, pricing, quality of service, and variety of services.

3.4.1.1 Interview Process

Semi-structured in-depth interview design was used in conducting face-to-face in-depth interviews with mobile phone firm personnel. Semi-structured interviews allowed the researcher to probe and explore issues necessary to address the research questions.

During interviews, open-ended questions were asked as these questions allowed the respondents to answer by including their thoughts in any way they choose (Patton,

2002; Sekaran, 1992). Moreover, the most commonly used case study interviews are open-ended in nature (Yin, 2003). The questions focussed on participants' experiences of and views about unilateral liberalisation of the mobile phone sector. These questions were based on the three main research questions, although mobile firms were the specific target for asking questions relating to Research Questions 1 and 2.

In conducting the interviews, the funnel technique of inquiry suggested by Ahlstrom, Young, Chan and Bruton (2004) was used by asking open-ended general questions first, and then narrowing down to the specifics, to allow the interviewees to put their perspectives on the research questions. In the interview process, the sequence of the questions was not always adhered to so as to allow interviewees to continue their flow of discussion. Interview schedules and questionnaires were slightly modified over time to focus attention on key areas of importance related to the thesis.

Each semi-structured interview was conducted at the participant's workplace in person, except in the case of two conducted by email with two interviewees who had left Bangladesh. At the beginning of each interview, the researcher introduced himself and provided the respondent with an explanatory statement describing the research project followed by a verbal explanation. The researcher clearly communicated to participants that the anonymity of the respondent and confidentiality of the data would be strictly maintained for some years even after the completion of the project. In giving assurances about anonymity and confidentiality, the strict ethical obligations that the Monash University Human Research Ethics Committee (MUHREC) places on researchers were also explained. In order to maintain confidentiality, to maintain concentration and to be free from distractions and interruptions, the face-to-face interviews were conducted in private.

The researcher wanted to audio-record the interviews, but most participants expressed concern and expressed unwillingness to have their words tape-recorded lest audio recordings might somehow later be used sometimes against them. Under these circumstances, the researcher accepted the view of Bewley (2002 p.347) 'that the recorder would inhibit respondents' and therefore did not tape-record the interviews but took comprehensive notes instead.

In order to have thorough and accurate notes of discussions that were particularly important for the research, the researcher at times stopped the respondents and checked with them whether his understanding matched what they had said.

Moreover, when the researcher felt he had missed something or there were some gaps or confusion, he undertook follow-up communications with the participants over the telephone and in a few cases conducted a follow-up interview. In conducting the interview, it appeared to the researcher that the key informants were candid and enthusiastic in freely expressing their ideas, experiences and views once they knew that the interviews were not being recorded. These techniques helped the researcher in capturing accurately and comprehensively what the respondents said in their own words.

To conduct an interview, the researcher prepared a set of questions. The questions consisted of three main broad research questions. For each broad research question, a set of subsidiary questions was prepared (see Appendix B). Most interviews lasted 60-90 minutes, which was sufficient to have an in-depth and detailed discussion on the research questions. Some interviewees provided additional material such as their own commentary or presentation slides on areas of research in this study and a copy of the relevant telecommunications licence. Following Hermanowicz's (2002) suggestions, efforts were made to motivate interviewees to be doggedly detailed, because this is the only way to generate true understanding This approach to detailed interviewing resulted, in some cases, in non-completion of the interview within the scheduled time limit. In those cases, instead of continuing the interview at the same session, an alternative time was organized on a mutually agreed basis and the rest of the interview was completed over two sessions. The reason for conducting the interview with the same informant in two sessions is that interviews longer than 90 minutes tend not to reveal as much useful further detail because respondents become tired.

Throughout interview, the 'member checking'[34] process was followed to establish the credibility of findings. Collected data were 'played back' to the informant to check for perceived accuracy and reactions, as suggested in Cho and Trent (2006). In some cases, the researcher felt the need for additional information, which was collected through email and follow-up telephone discussion.

The interviews conducted with the mobile phone firms were one of the main sources of information for the case method (especially for Research Questions 1 and 2), largely because well-informed participants can provide important insights into the phenomenon being investigated. The interviews with mobile phone firms and other stakeholders revealed patterns of responses regarding the factors and consequences of unilateral liberalisation for the sector, not merely a set of specific answers to set questions. However, for Research Questions 1 and 3, the researcher depended mainly on sources external to the case (the 'context') (Yin, 2009), i.e., policy makers and other stakeholders. For Research Question 2, i.e., the impacts of unilateral liberalisation on accessibility, pricing, quality of services, and diversity the focus group discussions with mobile phone users were the key source.

3.4.2 Interview with policy makers, public managers, telecommunications regulator, private sector representatives and experts ('Other Stakeholders')

Additional interviewees from the 'context' of the case study (who form part of the case study), such as policy makers, public officials, the telecommunications regulator, private sector representatives including NGO officials, and telecommunications and trade experts were interviewed (see Table 3.2).

[34] Allowing the participants of the study to give feedback on the analysis, findings and conclusions of the study. It is also called member or respondent validation (Eriksson & Kovalainen, 2008).

Table 3.2 Identity of other stakeholders

SL	Identity of interviewees	Number
1	Policy Maker	1
2	Public Officials	12
3	BTRC officials	3
4	Private sector representative	7
5	Trade & WTO expert, industry expert and telecom analyst	9
	Total	**32**

The interviewees were purposefully selected because they were all known to have expertise and experience in trade, telecommunications and WTO-related issues. The other criterion for selection was the inclusion of persons/officials who were either involved in the process of liberalisation and undertaking of commitments or who provided inputs in telecommunications, trade and investment policy making. A total of 32 interviews (with the exception of two who were absent from Bangladesh during fieldwork) were conducted in person with the informants. Appendix F details the interviewees (stakeholders).

In conducting the interviews, the same interview procedure as detailed in section 3.4.1.1 was followed. The interviews were conducted mostly in English, with a mix of the native language in some cases. As the researcher is a native speaker (i.e., of Bengali) and has over twelve years' experience in different capacities in the public sector and academic fields, his existing social relationships and clear understanding about the socio-cultural sensitivity of the respondents helped him develop a good rapport and trust with them. Familiarity with the local setting helped the researcher gain speedy access to respondents and to conduct follow-up discussions whenever it was felt necessary.

3.4.3 Focus Group Discussions

This study adopted focus group discussions (FGD) as one of the main sources of data collection. The targeted respondents for focus group discussions were the mobile

phone users. The focus group discussions were held after all the interviews were conducted. There was no reason to conduct focus groups as the last stage other than convenience. The impact of the liberalisation of the mobile phone sector on accessibility, pricing, quality-of-service and diversity of services were the main topics discussed with focus group participants.

Given the large numbers of mobile phone customers, FGD was preferred to other data collection techniques, following the recommendations of (Stewart, Shamdasani, & Rook, 2007), who have stated that FGD permits gathering large amounts of information from potentially large groups of people in a relatively short period of time. In this study, FGDs permitted gathering of adequate and relevant information from considerable numbers of mobile users in a relatively short period of time at minimum cost. Moreover, FGD facilitated drawing conclusions about a large population of interest to the research. Furthermore, focus groups allowed the participants to reflect on issues and concerns salient to them, rather than closely following the researcher's agenda. Focus group discussion thus helped to illuminate the insider's or 'emic' perspective, as suggested in Barbour (2007). Focus group discussion also helped elicit and validate collective testimonies about experiences of accessibility to mobile services, pricing, changes in quality of service (QoS) and improvement in variety of services.

3.4.3.1 Process of focus group discussion

An advertisement inviting participation for focus group discussion was published in a daily national English-language newspaper, *The New Age*, October 9, 2008, Dhaka to recruit participants.

Invitation to Mobile Phone Users to participate in focus group interviews

Research Topic: Unilateral liberalisation of Services: A Case Study of Mobile Phone Sector Liberalisation in Bangladesh

My name is Mohammad Abu Yusuf. I am a PhD student in the Department of Management at Monash University, Australia. I am conducting a research on Cellular Mobile Phone Sector Liberalisation in Bangladesh. As part of my research, I need to understand about the impact of liberalisation of the mobile phone sector. To understand this, I would love to meet mobile phone users in focus group discussions. Three meetings — for household, professional and business users — will take place at Sung Garden, 35 Bijoynagar, Dhaka, on October, 18, 2008 [Saturday]. The first of the group meetings will be held from 11am -12 pm, the second one from 12.30pm-1.30pm and the third one from 2-3 pm. The discussion at each group may last 30-35 minutes. Mobile phone users, who are interested in the group discussions, are invited to contact me on 01914-211418 or via email: mayus@student.monash.edu.au. Participants are expected of sharing their experience of mobile phone usage, quality of services, pricing, and any other related issues with the group members. Hand notes of the sessions will be taken so that I can accurately reflect on what are discussed. I hope the study will benefit the mobile phone users, policymakers and the society. Participation is anonymous. As we will have group meetings, I cannot promise that what you say will remain completely private, but I shall request the members participating in the focus group(s) to respect the privacy of everyone in the group.

Figure 3.1: Newspaper advertisement to invite focus group participants

Members in the group were chosen on the basis of mobile phone users' willingness to participate. The newspaper advertisement was directed to the public at large, with the result that 28 users volunteered to participate. The researcher contacted the willing 28 participants several times to ensure their participation. Willing participants were divided into three focus groups to capture opinions of each category of users, according to the types and motives of people in using mobile phones

The three focus groups were:

- Focus group for household users: 10 participants
- Focus group for business users: 8 participants
- Focus group for professional users: 10 participants.

Of the 28 participants in the FGD, 24 were males and 4 were females who are in the age group 25-60 years. Each focus group was characterised by relative homogeneity but with sufficient variation among participants for diverse opinions (Krueger & Casey, 2000). Relative homogeneity was emphasised so that people felt comfortable in sharing their perspectives. Focus group members were encouraged and helped to share their ideas and interact with each other.

The reason for using three groups is that use of three sets of interviews on the same topic with different groups help ensure themes common across the groups emerge, although consensus is never a goal of focus groups (Myers, 2009).

The researcher played the role of a moderator in conducting the focus group discussions. A written explanatory statement about the purpose and significance of the study was delivered to the participants. The moderator facilitated interactions among all the participants within the group. A permissive, non threatening environment was created by the moderator to obtain perceptions of all the participants on 'the factors and impacts of mobile phone liberalisation on the development of the sector' as recommended by Patton (2002). Following Krueger and Casey (2000), different probing strategies (such as providing a cue or citing statistics on pricing and QoS) were adopted so that participants were able to voice their perspectives and experiences on the topic.

Semi-structured and open-ended questions were asked in the focus group discussions. The researcher sought to listen closely to each member in the group, to understand the perceptions of the participants and to refrain from expressing his own opinions, as suggested in Krueger and Casey (2000 p.100). A number of semi-structured, open-ended subsidiary research questions were developed under Research Questions 1 and 2. These subsidiary research questions were used as the guideline to keep group discussions focused on key research issues.

The discussion in the focus group was centred mainly on the impact of unilateral mobile phone liberalisation on users' benefits. However, some participants also made comments about the factors that led the GoB to open its mobile phone sector unilaterally. Each focus group meeting lasted about 80-90 minutes.

Overall, the focus group discussions conducted in this study served the following purposes:

- The focus group discussions gave the researcher a holistic view about how the liberalisation of the sector influenced accessibility, pricing, quality of services and diversity of services from the mobile phone users' perspective. The participants also expressed their perspectives and views about other aspects of unilateral liberalisation.
- The focus group discussions enabled the researcher to identify potential sources of additional relevant data and information to interview for further information.
- The focus group discussions also served as a triangulation device, along with other sources of data collection.

The findings from the focus groups were processed through content analysis using computer-based Nvivo 8 software.

3.5 Ethical considerations

Before going into the field for data collection, the aims and objectives of the study and the type of research was subject to approval by the Standing Committee on Ethics in Research involving Humans (SCERH), Monash University (since renamed the Monash University Human Research Ethics Committee-MUHREC). The questionnaires for the qualitative interviews and the explanatory statement to be distributed to the interviewees were sent to the SCERH for its approval, which was duly given. After obtaining approval from the SCERH, proposed firms and interviewees were contacted by the researcher by mail followed by telephone calls. As per the SCERH guidelines, the researcher gave each participant an explanatory statement (see Appendix C, five sets of explanatory statements are given), setting out the objectives of the study, the means of ensuring confidentiality of data and maintaining the anonymity of the interviewees. The right to ask questions, to obtain a copy of the results and issues of their privacy being respected were made clear to the interviewees. Participation in the study was voluntary and the research engaged only those interviewees who

voluntarily gave their informed consent to participate (see consent form in Appendix D). The participants were informed that they could withdraw at any stage of the interview (No one withdrew from interview during the course of this study). For protecting the subjects from any adverse consequences of participating in the research, the researcher allowed the interviewees to participate anonymously. The name of the organisations and the designation of persons were not revealed to protect the interviewees from any future adverse consequences and to maintain their confidentiality.

3.6 Transcription of data

All the interviews resulted in handwritten records. Bengali was sometimes used in discussion with respondents but notes were taken in English. The researcher conducted an immediate post-interview review each day as soon as the interview was over to fill in gaps and detect missing points while memory was fresh. If there was any confusion, the researcher cleared this up by talking to respondents over the telephone or at follow-up visits. This helped the researcher to produce thorough notes of the discussion. The interviews were transcribed soon after (usually within 5 to 7 days from the completion date of each interview) by the researcher himself. This greatly enhanced the richness of the data.

3.7 Data analysis

The data analysis involved coding, thematic classification, and counting the frequency of the same theme or meaning in the text data. The data base consisted of interview and focus group transcripts, reports, and documentary evidence. Analysis of qualitative data was very time consuming and was one of the more daunting tasks, because it was highly iterative and used an eclectic mix of approaches to meet the requirements of the study (Miller & Crabtree, 1999; Yin, 2009).

The transcription of in-depth interviews with mobile phones firms, policy makers, public officials, the telecommunications regulator, private sector representatives and focus group discussants generated a rich tapestry of qualitative textual information.

The interviews and focus group discussions formed the base to source necessary information for addressing the research questions. It was, therefore, essential to search for meaningful data, rather in the way that an editor does, and to rearrange and reduce these until the reduced summary revealed the interpretive truth/information necessary to address the research questions. This was made possible through Content Analysis (also called textual data analysis) of the qualitative data. According to Berg (1998) content analysis is usually used by researchers to analyse interview data or responses to open-ended questions. Therefore the content analysis technique[35] was used for this study, which is interview based. This technique aims to extract thematic information from qualitative materials (Tharenou, et al., 2007). There are two approaches to content analysis: (1) template approaches and (2) editing approaches (Tharenou, et al., 2007) This study adopted the editing approach, as discussed below.

Apart from analysis of primary data, several kinds of documents were also analysed for this study: (1) public sector documents such as licensing documents of mobile phone firms and government reports on the telecommunications sector; (2) industry reports and papers written by telecommunications sector analysts and officials (the researcher was able to collect further papers/informative documents on the telecommunications sector from some officials during interview; and (3) the Schedule of Commitments in the telecommunications sector under the GATS Agreement. The analysis of these documents provided a reliable source to corroborate the evidence generated from other sources such as interviews and focus group discussions

3.7.1 Editing Approach

Editing analysis refers to the analysis method where an 'interpreter' rearranges the text in order to identify meaningful segments that stand on their own and relate to the purpose of the study. The main benefit of the editing technique is that is ensures cyclical quality through an iterative process of data analysis (Tharenou, et al., 2007).

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[35] A technique for systematically describing the form and content of written or spoken material (Sommer & Sommer, 1991 in Tharenou, et al., 2007).

Due to the strong interpretive and inductive focus of the editing approach, it is considered more appropriate than template analysis for studies that aim for subjective understanding, exploration and or/generation of new insights and where there is little knowledge (Tharenou, et al., 2007). As the objective of this research is to gain a subjective understanding about unilateral liberalisation of mobile phone services, its impacts on users and its influence on undertaking GATS commitments so as to generate new insights into these less researched areas, the editing approach to content analysis was preferred.

An *inductive* editing approach has been taken in analysis. The textual materials are organised into meaningful codes which are again thematically classified/re-grouped to facilitate addressing broad research questions. These thematic groups/categories are used to create further abstractions (Miller & Crabtree, 1999).

The steps involved in editing analysis are shown in Figure 3.1

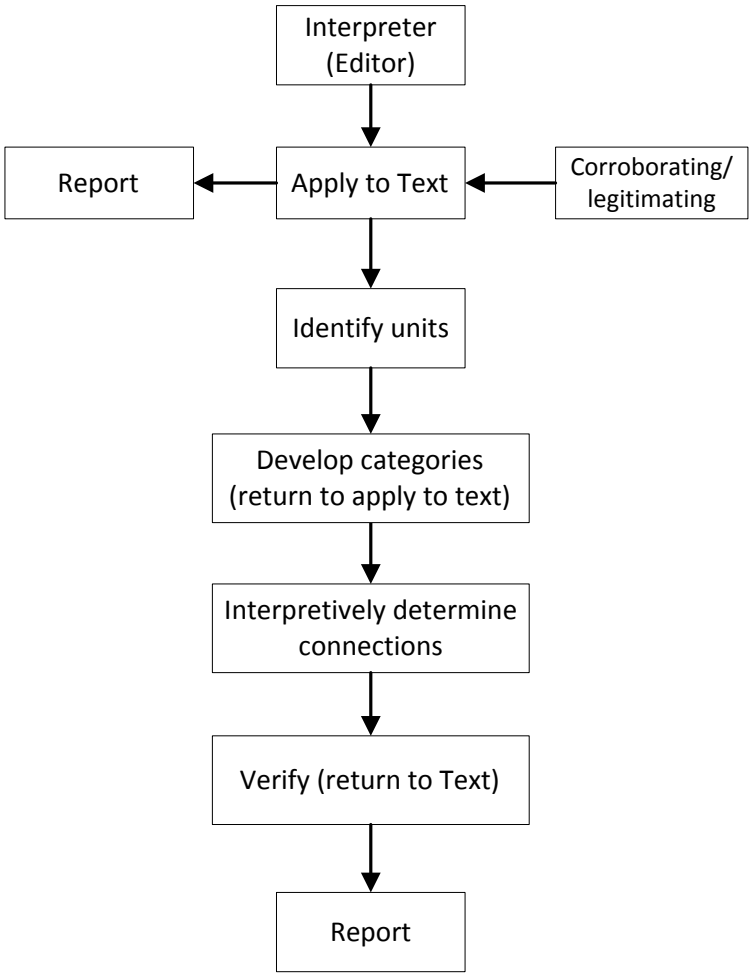

Figure 3.2: Editing approach for data analysis

Source: Tharenou et al., (2007)

3.7.2 Coding Data

In order to handle the voluminous data collected from multiple sources discussed earlier in this chapter, NVivo 8 software was used for coding and analysis of data. The imported word files were then thoroughly read by the researcher in order to identify the themes that had been discussed during interview and focus group discussions. In its simplest form, a theme is an expression of the latent content of the text (Graneheim & Lundman, 2004). In identifying themes and concepts relevant to the research questions, the researcher explored concepts or phrases from the narrative texts using an editing approach and the emergent themes (ideas) were coded as 'free

nodes'[36]. Inductive analysis[37], allowed the researcher to discover themes and patterns to be discovered through the interview and data collection process. About 500 free nodes were created in this process. The free nodes were then organised hierarchically as 'tree nodes' (in a tree-structured coding system) in order to address the three research questions posed for the study. In categorising codes hierarchically under each over arching theme, like issues or related concepts were clustered together (Bazeley, 2007) depending on their relevance to the research question. In the next step, the researcher generated reports by running the queries option of the software.

3.8 Quality and rigour of the research method

Qualitative findings are often criticised when they are evaluated on the basis of quantitative criteria on several grounds, including subjectivity, reliability, lack of academic rigour and the generalisability of the findings across different contexts (Anfara, Brown, & Mangione, 2002; Janesick, 2000). Qualitative researchers have offered alternative ways and their own terms "that more accurately capture[s] the complexity and texture of qualitative research"(Janesick, 2000 p.393). Denzin and Lincoln (2000) observed that terms such as credibility, transferability, dependability, and confirmability replace the usual quantitative criteria of internal and external validity, reliability and objectivity. As this study is highly skewed towards the constructivist paradigm[38] of qualitative research, the qualitative criteria of assessing research quality were applied as discussed below:

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[36] A node is a theme. Free nodes are 'stand-alone' nodes that have no clear logical connection with other nodes—they do not easily fit into a hierarchical structure (QSR International, 2010)

[37] Bailey, Price, Esders and McDonald (2010) used this inductive analysis in their qualitative study.

[38] This qualitative paradigm assumes that reality is socially constructed, subjective and multiple and it is what participants perceive it to be (Creswell & Miller, 2000).

3.8.1 Credibility

Credibility refers to confidence in how well data and processes of analysis address the intended focus (Graneheim & Lundman, 2004). One way to enhance credibility is to cite representative quotations from the transcribed text. Another option is to ensure that no relevant data have been inadvertently or systematically excluded or irrelevant data included (Graneheim & Lundman, 2004). In order to improve credibility the researcher collected data in several phases. In-depth interviews were conducted with the case study (mobile phone) firms in phase one. Then face-to-face interviews were conducted with other stakeholders. Finally, discussions with mobile phone users were conducted through focus groups. The findings from the mobile firms' interviews and 'other stakeholders' were shared with the focus groups at a later stage. This comparison of the findings from different data sources helped the researcher refine the results further. Where rival explanations were found, the researcher investigated the matter further to gain more accurate data. In addition, data were tested with the members of the group from which they were collected. This is called 'member checking', the most crucial technique for establishing credibility (Driessen, Van Der Vleuten, Schuwirth, Van Tartwijk, & Vermunt, 2005; Lincoln & Guba, 1985).

Furthermore, the summaries of each interview script were read out to the interviewees to verify if their perspectives had been recorded and interpreted correctly. The researcher conducted three follow-up interviews with mobile firms and a regulatory expert to clarify issues which he thought were missed in the initial phase. Finally, using multiple methods of collecting data and bringing the perspectives of multiple researchers to bear through case studies helped reduce the potential for bias (Cooper & Morgan, 2008). The strategies adopted to assess quality of research in this study are listed in Table 3.3.

Table 3.3: Techniques applied to ensure the trustworthiness (research quality and rigour) of qualitative research

Quantitative (traditional criteria)	Qualitative (trustworthiness) criteria	Meaning	Strategy suggested	Strategies adopted in this study
Internal validity	Credibility	Trustworthiness of the conclusion from the data set and the match of these conclusions with reality. Credibility depends less on sample size than on the richness of the information gathered and on the analytical abilities of the researcher (Patton 1990 in Hoepfl, 1997)	-Prolonged engagement in the field -Cross checks through member checks (Janesick, 2000).	-Transcripts were reviewed by the participants/member check - Triangulation of data -extended engagement in the field
External validity	Transferability	Generalising across different settings and organisations (Darke, Shanks, & Broadbent, 1998)	-Provide thick description[39]	-thick description of different themes through editing approach
Reliability	Dependability	The study can be repeated by others with same results (Hamberg, Johansson, Lindgren, & Westman, 1994)	-Purposive sampling -Inquiry audit of data collection, management and analysis process -Informants' confidentiality protected	- Triangulation of interviews with Focus group discussion and documentary evidence - Inquiry audit -Informants were kept anonymous

[39] Denzin (1989 in Cresswell & Miller, 2000) defines thick description as deep, dense, detailed accounts. Thin descriptions, by contrast, lack detail, and simply report facts. Researchers contextualise the people or sites studied for establishing credibility. Another way of writing thick, rich description is to describe the setting, the participants and the themes, provide as much detail as possible (Creswell & Miller, 2000).

Quantitative (traditional criteria)	Qualitative (trustworthiness) criteria	Meaning	Strategy suggested	Strategies adopted in this study
			-Triangulation	-Purposive sampling for R.Q. 1 and 3
Objectivity	Confirmability (neutrality)	The findings and concepts described were founded in the data and not a result of poor analysis or preconceived assumptions	-Verbatim transcription of interviews - Practice reflexivity[40] -Triangulation	- Reflexivity practised -Transcription were done verbatim -accurate records of contacts and interviews maintained

Source: (Anfara, et al., 2002; Hamberg, et al., 1994; Shah & Corley, 2006)

3.8.2 Transferability

Transferability means that the findings of the research can be shared and applied beyond the study setting (Malterud, 2001) i.e., generalising across different settings and organisations. Statistical generalisation is not the goal of case study research as cases are not 'sampling units'. Case study research provides analytical (or theoretical) generalisation where case study results are used to develop theory or to test previously developed theory (Darke, et al., 1998; Yin, 2009). Although this study is confined to Bangladesh, several measures were taken to enhance the transferability of this study.

First, all the mobile phone firms operating in Bangladesh were selected with the objective of achieving either literal (predicting similar results) or theoretical replication (predicts contrasting results but for anticipatable reasons), as noted in Yin (2009). The telecommunications regulator, policy makers and public officials were selected in the study because they played a vital role in introducing competition in the sector and undertaking binding liberalisation commitments under GATS.

[40] Reflexivity refers to researcher's continuous and systematic attention to the process and context of knowledge creation

Inclusion of case study firms and 'the contexts' (stakeholders) of the case is believed to have contributed towards increased transferability of the findings.

Second, to improve intellectual rigor in the research, interviews were conducted with persons holding similar designations (e.g., directors, marketing managers, public relationship managers in mobile phone firms; consultants/directors in the telecommunications regulator and other government organisations) in each of the entities.

3.8.3 Dependability

Dependability refers to the degree to which the study can be repeated by others with the same results (Hamberg, et al., 1994). In order to improve dependability, triangulation of data was conducted. A detailed examination of the process and product of research was undertaken. The various data sources and the procedures applying to interviews, transcription, coding and analysis of data (using NVivo) have been detailed in the study. Where a divergent result was observed, the researcher enquired into it and organised follow-up phone calls or interviews to understand why such a variation occurred so as to have an explanation for specific information/comments provided by the respondent.

3.8.4 Confirmability

'Confirmability' refers to the degree to which the researcher can demonstrate the neutrality of the research interpretations (Hoepfl, 1997) In order to ensure confirmabiltiy, necessary actions were taken to eliminate researcher bias. The researcher refrained from expressing his opinions so that interviewees were not in any way influenced by the researcher. The researcher used multiple sources of data across all the case study firms, focus groups and other stakeholders in order to have a realistic but in-depth understanding of the phenomenon in question. The researcher transcribed the interview and focus group discussions verbatim independently but tried to understand the reaction and emphasis of words used by the interviewees in responding to specific questions. Graneheim and Lundman's (2004 p.110) note, 'Participants' recognition of the findings can also be an aspect of credibility. It is not,

however, a question of verification but rather a question of confirmability'. Keeping these suggestions in view, the researcher read out interview summaries to interviewees.

3.8.5 Triangulation

Stake (2005 p.454) defines triangulation as 'a process of using multiple perspectives to clarify meaning, verifying the repeatability of an observation or interpretation'. Of the four types of triangulation[41] (data triangulation, investigator triangulation, methodological triangulation and triangulation of theories) data triangulation was used in the study. *Data triangulation* refers to a situation where data are collected at different times or from different sources in the study of a phenomenon; Following Yin's (2009) recommendation, multiple sources of evidence were used in this study for more convincing and accurate results. Collecting data from multiple sources (i.e., the use of varieties of the same qualitative method) to investigate the research issue helped *within-method* triangulation. Keeping Perry's (1998) view in mind, more than one person was interviewed in each of the mobile phone firms to ensure triangulation. The intermix of interviews, focus group discussions, regular monitoring of public sources and document analysis also helped triangulation. Moreover, the researcher went to the field for second visit after he finished writing his draft chapters to check with mobile phone officials who knew aspects of telecommunications related activity. In line with Stake (2006), the researcher conducted discussions on his research issues with both critical insiders and outsiders in order to find and rectify any mistakes in his gathered information, In examining the documents, the researcher kept in mind that some of these documents were developed for a specific audience with a specific motive in mind and hence would be

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[41] *Investigator triangulation*- is where different researchers independently collect data on the same phenomenon and compare the results. *Methodological triangulation* occurs where both quantitative and qualitative methods of data collection are used. *Triangulation of theories* occurs where a theory is taken from one discipline (for example, marketing) and used to explain a phenomenon in another discipline (for example, accounting) (Hussey & Hussey, 1997 p.74)

biased on certain counts. However, licensing and WTO documents appear to have been free from any such bias.

3.8.6 Limitations

The factors of unilateral liberalisation and the impact of liberalisation on the accessibility, pricing, quality of service and variety of services as well as how UL influenced undertaking of GATS commitments, are difficult to assess by asking qualitative questions, since much depends on people's perceptions and other factors. In order to overcome this limitation, findings from the mobile phone firms, policy makers, government officials, the regulator, private sector interviewees and focus group discussion have been supplemented by existing studies to enhance the richness of the interpretation. As the research adopted a qualitative research design, it provided analytic generalisations and did not aim to draw inferences about the population based on the chosen sample. Therefore providing statistical generalisations (or representation issue) was not relevant in this study.

Despite many advantages of interviews such as the opportunity of immediate feedback and clarification of confusion as noted in Zikmund (2003), they are subject to the limitations of distorted responses due to personal bias, response bias and recall error (Patton, 2002; Yin, 2009). The research tried to minimise such errors by using data triangulation. Access to three key informants (one from a mobile phone company, one from the private sector and one from the Ministry of Commerce) was limited.

Another limitation of the study has been the likelihood of receiving biased responses in some cases due to conflict of interest by the interviewees or social desirability. Social-desirability bias 'is the tendency of subjects to respond to test items in such a way as to present themselves in socially acceptable terms in order to gain the approval of others'(King & Bruner, 2000 p.81). The quality of the study findings might have been compromised due to social desirability bias. To minimise social desirability bias, interviewees were assured, both in writing and verbally, that their identity would be kept anonymous and they would be de-identified in presenting the findings.

3.9 Chapter summary

This chapter has explained in detail the reason for adopting an embedded case study design. The reasoning for adopting a qualitative research paradigm in this study is also explained. The chapter describes the different phases of data collection in the field starting from in-depth interviews of case study mobile phone firms, then face-to-face interviews of other stakeholders (32 stakeholders), and followed by focus group discussions. In the case study, all six mobile phone firms operational in the sector were included. More than one respondent in each firm and multiple sources of data ensured that the triangulation of the data was achieved. Depending on the researcher' need for further clarification or more input, a few additional follow-up interviews were conducted in the second phase to ensure richness and comprehensiveness of data. The data were analysed inductively using the editing approach. The NVivo (version 8.0) software was used extensively in analysing the data. The comparison of cross-firm data and analysis provided some rival explanations regarding the mobile phone services sector that helped the researcher gain important insights about the issues of research interest.

The chapter also addressed the strength and limitations of the research approach taken for the study. In particular, detailed description of the strategies used to deal with the issues of credibility, transferability, dependability and conformability (criteria used to judge the rigour and quality of a qualitative study) has been provided.

The next chapter (Chapter 4) presents Bangladesh with special reference to reforms and the state of the mobile telecommunications services sector

Chapter 4: Telecommunications Sector in Bangladesh

4.1 Introduction

Both public and private sector operators are providing telecommunication services in Bangladesh at present. The government-owned Bangladesh Telecom Company Limited (BTCL, formerly BTTB) and Teletalk Bangladesh Ltd (TBL) are providing fixed telephone services and mobile phone services respectively while the private operators are providing mobile and Public Switched Telecom Network (PSTN) Services.

This chapter provides a description of the telecommunications sector in Bangladesh. In providing a descriptive analysis, it covers the historical state of telephone services in Bangladesh, the role of the public sector telecommunications provider, the introduction of private land and mobile phone operators in the market and the outcome of market opening. It also provides a brief account of the mobile phone operators and the services they offer. The role of the telecommunications regulatory regime and current state of the regulatory environment in Bangladesh are also discussed. The purpose is to describe how the sector gradually moved from a monopoly-dominated sector to a competitive one in a liberalised market economy policy framework.

This chapter has five sections. The first section describes the demographic and socio-economic and political background of the country. The state of telecommunications services including the role and the current state of the fixed line telecommunications providers is discussed in section 2. Section 3 discusses the reforms undertaken in the services sector with particular focus on the unilateral liberalisation of the mobile phone industry including a brief discussion about mobile phone operators and the impacts of opening the sector on competition, pricing and service delivery. Section 4 highlights the importance of the mobile phone sector while Section 5 describes the problems in the sector. Section 6 presents a short description of the gradual

development of the regulatory regime in different time periods. Section 7 concludes the chapter.

4.2 Demography and Socio-Economic and Political Background of Bangladesh

Bangladesh is located in south-central Asia of the Indian subcontinent, and is surrounded by the Bay of Bengal, and the countries of India and Myanmar (WorldAtlas, 2010).. The location of Bangladesh is shown in Figure 4.1.

Bangladesh is a country with approximately 1,44,000 square kilometres of geographic area. The population of it was 160.0 million populations as of mid-2008 (CIA Factbook, 2010). Except for a handful of small countries or city-states such as Singapore, Bangladesh's population density makes it the most crowded country in the world (New World Encyclopedia, 2010). Eighty-three per cent of the Bangladesh population are Muslim, 16 per cent Hindu and 1 per cent others (CIA Factbook, 2010). The overall land is mostly flat with a few hilly areas in the north east and southeast. It is one of the most flood-prone countries in the world with three mighty rivers flowing through its mainland originating from the Himalayas.

Seventy five percent of the population live in rural areas and are largely dependent on subsistence agriculture (Oakley & Momsen, 2007). Bangladesh is primarily an agricultural economy. This sector accommodates around 45 per cent of the labour force. Thirty per cent of the labour force is employed in industry while the rest 25 per cent are employed in service sector (CIA Factbook, 2010). The rural areas are beset with the problems of abundant labour supply.

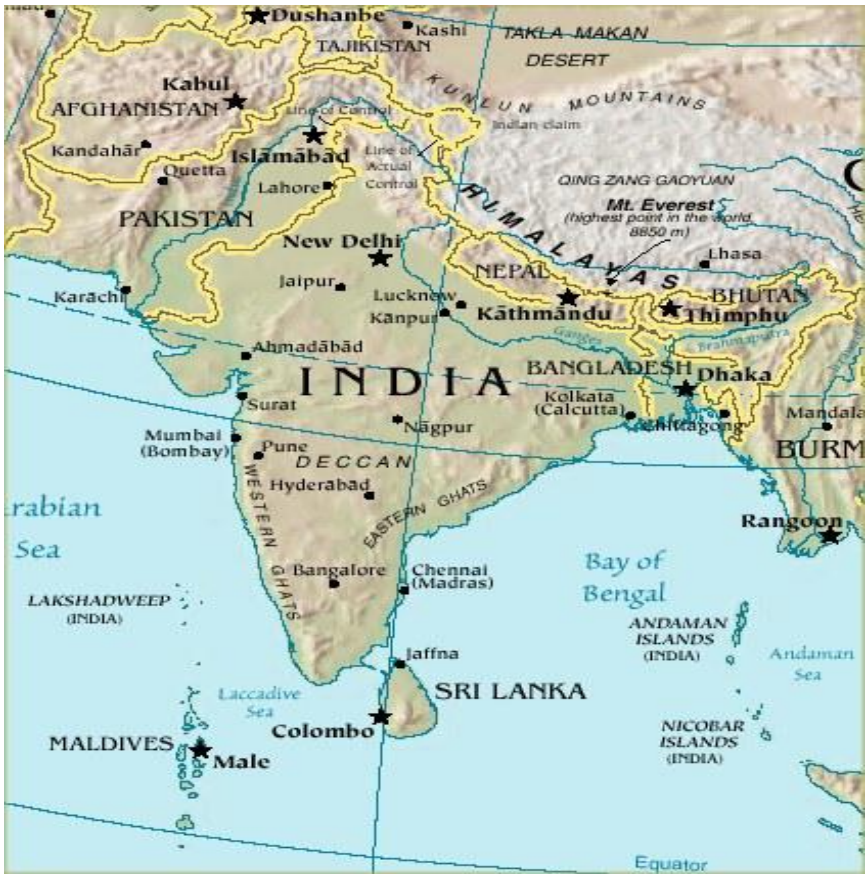

Figure 4.1: Location of Bangladesh

After Independence in 1971, Bangladesh witnessed military rule in different phases until 1991. With a very short democratic rule in the period of 1971 to mid-1975, Bangladesh transformed from military rule to a democratic political system through a peaceful 'people power' movement in 1990 (Lewis, 2008). Since then, Bangladesh has witnessed free and fair elections in 1991, 1996, 2001 and 2008 under non-party caretaker governments. The polity, however is dominated by growing Islamic fervour, personalised and family-dependent politics coupled with lack of political accountability, unconstitutional acts, weak institutions, lack of a responsible opposition and a worsening law and order situation (Alam & Teicher, 2010; Datta, 2003; Kabir, Alam, & Teicher, 2010).

4.2.1 Bangladesh: different political regimes and the changing economic policies 1971-2009

Bangladesh is one of the poorest countries in the world. It emerged as an independent nation after a bloody liberation war with Pakistan in 1971(Lewis, 2008). After independence, most large industries, commercial banks and insurance companies were nationalised with marketing and distribution systems left in the private sector. However, realising the importance of private initiative and ownership for economic development of a country, the government later decided to allow private participation. Starting from late 1975 all subsequent governments allowed privatisation and private sector investment. In the last thirty- five years, Bangladesh has privatised over a thousand public enterprises (Haque, 2002).

There has been a significant shift in economic, trade and investment policy orientation in Bangladesh over the last three decades. A state-led policy regime has gradually been replaced by a market-based (outward-oriented) economic system (Mahmood, 2008). Tariffs still remain the main instrument of protection for import-competing industries, while export- oriented industries are accorded various forms of incentives such as subsidies, bonded-warehouse facilities and tax holidays. The changes that occurred in economic policy can be traced under three broad phases, as follows

The First Phase of Development (1972-1975)

The post-independence period of the Awami League (AL) government, a social democratic party, pursued state-led development strategies (Samaratunge, Alam, & Teicher, 2008; Sarker, 2006). In the period 1972-75, the private sector was heavily regulated and allowed to have a limited role in small-scale industries (Alam, 1991). Through the Nationalization Order of 1972, this government nationalized all major industries (such as jute, cotton textiles, glass, and sugar) and banks and financial institutions during 1971-75 (Samaratunge, et al., 2008). However, the socialistic economic policy of the first AL government was short lived and its policy of state-led growth was gradually reversed. In 1974, in the face of famine, rising prices, a

dwindling economy and growing pressure by the new rich[42] within Bangladesh to raising the ceiling on private investment, a revised Investment Policy of 1974 was issued, raise the ceiling of private investment from $US 0.20 million to US $ 2.30 million (BDT 2.5 million to BDT 30 million) (Haque, 2002; Mondal, 2000). During this period, Bangladesh witnessed a period of reconstruction of socialist planning (Hossain & Cheng, 2002) and a silent de-industrialisation process occurred.

The Second Phase of Development

In the second phase of economic development (1975-1991), government gradually withdrew from intervention in economic activities in favour of providing more roles for the private sector.The reasons put forward in support of policy revision included: (1) the policy frustrated private investment and private capital was used for unproductive purpose; (2) there was pressure on the government from the new accumulators of capital; (3) considerable 'black' money had been accumulated and this money should be allowed to be invested in productive purposes; and (4) the ceiling on investment was a constraining factor in pouring the accumulated money into the productive sector (Alam, 1991 pp.264-265). The government was under great pressure to revert to the pre-liberation policy of 'sponsored capitalism', where the state would provide concessional financial and fiscal facilities to allow private investors to invest, to reap large gains, to gain initial experience (if necessary with government subsidies) and then grow in size and power (Haque, 2002).

Bangladesh embraced pro-market reforms **s**hortly after the overthrow of the post-independence government of Sheikh Mujib in August 1975 (Nuruzzaman, 2009). After the change in political power in 1975, the military government moved away from a state-led approach and announced a revised industrial policy (RIP) in December 1975 to facilitate a greater role for the private sector in all spheres of economic activity. The RIP 1975 increased the private investment ceiling from

$US2.20 to 7.30[43] (Alam, 1991). It also withdrew restrictions on private sector participation in large scale manufacturing and allowed FDI into the private sector. The Dhaka Stock Exchange was also reactivated in this period (Raihan, 2007). The industrial policy was revised again in May 1977 to reduce the role of the public sector. The private sector was allowed to operate in all subsectors except eight that were reserved for the public sector (Alam, 1991). The regime of President Zia embarked on a disinvestment program and set up the Disinvestment Board to expedite the timely implementation of announced privatisation. In September 1978, the ceiling on private investment was totally withdrawn. Moreover, a number of industries were returned to their owners (Mondal, 2000).

In this period, the military-civil bureaucracy was in control of the state. They formed a political alliance with interest groups from various political affiliations, including the emerging rising industrialists and business groups. The governments in this period[44] endorsed market led economic policy, but took a gradual approach to denationalising the state-owned enterprises (Haque, 2001a; Samaratunge, et al., 2008).

Government has adopted an export-oriented industrialisation policy in this phase to encourage greater participation of the private sector in national development. The telecommunications sector was still under government control and served by the BTTB.

After President Zia was killed by a rival group in the army in May 1981, the military-backed civilian government was overthrown, and a martial law government under the leadership of General Ershad was installed. The martial law government of Ershad also continued to follow the same economic policy of his predecessor. The aim of the New Industrial Policy (NIP) 1982 introduced by the Ershad Regime was to accelerate the privatisation process and to allow a greater role for the private sector in national

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[43] These figures have been derived using the June 1975 exchange rate of BDT 13.67= $US1 (S. Hossain, personal communication, September 30, 2010)

[44] The Bangladesh Nationalist parties and the Jatiya party supported market-led economic policy; even Awami League also moved away from its earlier position of state-led planning (Haque, 2001a).

economic development. The NIP limited public sector investment to seven sectors, including basic, heavy and strategic industries (Haque, 2002). Under the auspices of the NIP, 60 large jute and textile industries, which were nationalised earlier, were returned to their owners (Mondal, 2000). Moreover, the government continued to transfer the ownership of 'profit making' public enterprises to the private sector. The NIP 1982 announced specific steps for the increased participation and growth of the private sector, including monetary incentives, such as reduced personal and company taxes, and simplification of procedures to establish an enterprise (Haque, 2002).The Second Five Year Plan 1980-85 was revised in May 1983 with an emphasis on allowing the private sector to have a more pronounced role By June 1983, 185 nationalised industrial units were disinvested. The government also permitted the establishment of new private banks (Haque, 2002).

The military governments in Bangladesh adopted neo-liberal reforms largely at the instance of the donors as these governments lacked popular support and they were dependent on donors (Masud, 2010a).

Later the *Revised Industrial Policy* (RIP) 1986 limited the role of the public sector to the establishment of strategic and heavy industries. It emphasised the conversion of individual enterprises into public limited companies in appropriate cases. Under this regime, private investors were allowed to invest their own resources without government permission (Haque, 2002).

These changes led to a policy environment where the major thrust of government economic policy was to support the growth of the private sector by gradually reducing the scope and coverage of the public sector. The result was that, by 1990, Bangladesh privatised as many as 609 industrial enterprises in textile, steel, sugar, banking, insurance, transport, power, natural gas, port, telecommunication, oil exploration and tourism sectors (Haque, 2001b).

The Third Phase (1991 Onwards)

This phase is a period of rapid trade[45] and investment liberalisation under three elected governments and one caretaker government that lasted for two years. For smooth implementation of the privatisation program, the privatisation board was established in 1993 (Raihan, 2007) by the Bangladesh Nationalist Party (BNP) Government of Khaleda Zia. The government introduced various critical programs such as pursuing a trade liberalisation strategy together with an open investment and privatisation policy in the early 1990s (Hossain & Cheng, 2002). The democratically elected governments of the BNP (1991-1996) and the Awami League (1996-2001) pursued liberalisation of the trade and investment regime even more vigorously and at a faster pace. The BNP-led government adopted a 'promotional' rather than 'regulatory' role in promoting the development of the private sector (Quadir, 2000).

The Industrial Policy of 1991 redefined the role of government as a 'catalyst' of industrial development instead of being a 'regulator'. Under the revised Industrial Policy 1992, the power sector was opened and independent power producers (IPP) were allowed to invest in the power sector (Bhattacharyya, 2007). The Industrial Policy was amended in 1992 to open the power sector to Independent power producers (IPP) (Bhattacharyya, 2007). The Private Sector Power Generation Policy of Bangladesh, 1996[46] (revised in 2004) offered generous incentives for private investment including corporate tax exemption for 15 years, no restrictions on raising local and foreign finance and 100 per cent repatriation of invested capital, profits and dividends (Government of Bangladesh, 1996; Norris, 2007). Exchange rate reforms

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[45] In this regime, the maximum tariff rate was reduced to 32.5 per cent from 350 per cent.

[46]Since the adoption of the Private Sector Power Generation Policy 1996, seven IPPs have gone into operation with a generation capacity of 1290 MW. These are Khulna Power Company Ltd (1998), Bagabari Westmont GT (1999), NEPC Consortium (1999), Rural Power Company Ltd (2001), AES Haripur CC (2001), AES Meghnaghat CC, and Summit Power Company Ltd (2003) (Government of Bangladesh, 2010b).

were largely undertaken in this phase. The multiple exchange rates were replaced by a unified exchange rate in 1992. The taka was made convertible for current account transactions in 1994 (Ahmed & Sattar, 2004).

The AL government further reformed the industrial policy in 1997 and provided the business community with even more incentives, including the approval for setting up private export processing zones (EPZs), with similar facilities accorded to public sector EPZs (Nuruzzaman, 2009). The BNP government which came to power a second time in 2001 remained committed to the pro-market reform programs it had supported previously (Nuruzzaman, 2009).

The main elements of industrial policies under the AL, BNP and Ershad governments demonstrate that there remains no fundamental difference in the economic policies of the major political parties. Beginning with the overthrow of the post-Independence government of the AL in August 1975, successive governments gradually moved away from statist economic approaches towards facilitating an increased role for the private sector in economic activities through essential policy support. The economic policies pursued by the governments formed by the two main political parties indicate that there was bipartisan support for introducing neo-liberal reforms to promote private-sector led growth of the economy.

These neo-liberal reforms, to be effective, need other institutions and policy reforms to be associated with them. Adoption of a national competition policy or a competition authority is such an institution that ensures that neo-liberal reforms function properly in an enabling environment. The enabling environment is needed to promote competitive practices among the operators and help private sector growth. But no such national competition policy or a competition authority to administer and implement a competition policy has been adopted in Bangladesh to date (DFID, 2008). Although the Monopolies and Restrictive Trade Practices (Control and Prevention) Ordinance was promulgated in 1970 (the only ordinance on competition), this ordinance has not to date been given effect. Though there is no formal regulatory body, the Ministry of Commerce is empowered to deal with monopoly practices by firms (Raihan, 2007). Through competition policy, different forms of market failure or unfair business practices such as formation of cartels

leading to collusive pricing, division of markets, abuse of market power by a significant market player (Rahman, 2009c) and joint decisions to reduce supply can be addressed. This is because implementation of a competition law creates conditions for markets to work, thereby promoting healthy competition among market players.

Socio- Economic Indicators of Bangladesh

During the early days after Independence, Bangladesh faced economic devastation. Earlier economic exploitation during the Pakistan era, as well as destruction of critical infrastructure during the war, caused this devastation. After many years of economic problems, Bangladesh has begun to show considerable improvement in economic growth over the last ten to fifteen years. The GDP growth rate, which averaged 4 percent in the 1970s and 1980s, has grown to average 5-6 per cent per year since 1996, despite political instability, poor infrastructure, corruption, insufficient power supplies, and poor implementation of Annual Development Programs (ADP) (CIA Factbook, 2010; World Bank, 2010). The real growth of GDP for the years 2007 and 2008 was 6.4 and 6.2 percent respectively and the GDP growth for the period 2008-12 has been forecast at 5.7 percent (World Bank, 2010). The sectoral representation of total GDP in 2008 was 19 per cent for the agriculture sector[47], 28.5 per cent for the industry sector, and 52.5 per cent for the services sector (e.g., the telecommunications sector) in Fiscal Year (FY) 2008(CIA Factbook, 2010; World Bank, 2010). The per capita national income and GDP were $599 and $554 respectively in FY 2007-08 (Government of Bangladesh, 2008). The economy is largely consumption driven (total consumption is 80 per cent of GDP), with private consumption accounting for 74 percent of GDP in FY 2006 (Rashid, 2007).

Apart from significant positive development in GDP, the nation has also recorded important achievements in other socio-economic development indicators. For example, the maternal mortality rate (MMR) declined by 22 per cent in the last 15 years (UNFPA Bangladesh, 2010).

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[47] However, according to the Ministry of Agriculture, Government of Bangladesh, the agriculture sector contributes 23.25 per cent to GDP (Government of Bangladesh, 2010a).

The following are some social indicators where Bangladesh made significant progress:

- Life expectancy has increased from 50 in 1971 to 60.25 in 2009 at birth for the total population with an expectancy of 57.57 years for male and 63.03 years for females (CIA Factbook, 2010);
- Population growth rates have reduced from 2.1 per cent in 1990-95 to 1.5 in 2005-10;
- The adult literacy rate was 48.8 per cent in 2008 which is 7.3 per cent higher than that of 2005 (Kabir, 2009);
- The child mortality rate (under 5 years of age) was 149 in 1990, coming down to 54 in 2008 (UNICEF, 2010);
- Infant mortality rate (under 1 year of age) reduced from 103 in 1990 to 43 in 2008; and
- Primary school net enrolment/attendance stands at 81 per cent (UNICEF, 2010).

The country has been increasing its internal revenue over the years and thereby gradually decreasing its dependency ratio on donors for its development budget. For instance, in 1991, 87 per cent of the total Annual Development Program (ADP) budget was donor funded. In FY 2003-04, dependence on foreign aid had reduced to 42 per cent, and further reduced to about 40 per cent in 2010 (Shahriar, 2010).

However, these achievements were not enough for the nation as a whole. More than forty percent (40.4 per cent) of the population live below the absolute poverty line, and millions of these people cannot afford to buy the basic necessities of life, such as food, clothing and shelter (Mondal, 2009). The Human Development Report (UNDP, 2009) thus ranks Bangladesh's Human Development Index (HDI) as 146 out of 182 countries, behind Pakistan, India, Nepal and Sri Lanka.

Bangladesh has had the perennial problem of a total trade deficit since Independence in 1971. The trade deficit amounted to $US2.8 billion in July-December, 2009 (Asian Development Bank, 2009). Bangladesh's export basket consists of a limited number of

commodities, such as ready-made garments, frozen food (shrimps), leather goods, jute products, raw jute, textile articles, ceramics, footwear, pharmaceuticals and handicrafts (Rahman, 2009a). Cotton textiles and garments account for 80 per cent of Bangladesh exports (Samaratunge, et al., 2008). Bangladesh finances the trade deficit largely through foreign aid and foreign remittances it receives from its migrant workers and expatriates (Samaratunge, et al., 2008): Bangladesh received $US9.67 billion and $US10.72 billion remittance respectively in FY 2008-09 and year 2009 respectively (The New Age, 2009b), which is 12 per cent of its GDP (Islam, 2010). The foreign remittances that Bangladeshi expatriates send help to improve the balance of payments position, in paying import liabilities, building foreign exchange reserves and helping external debt servicing (Azad, 2004). At the family level, a high proportion of the remittance is used just for consumption (Sharma & Zaman, 2009).

Major impediments to development include natural disasters like floods and cyclones, corruption, inefficiency of state-owned enterprises, unemployment, and lack of good governance (Azmat & Coghill, 2005; Zafarullah & Rahman, 2008). Over the last decade, Transparency International has ranked Bangladesh as one of the most corrupt countries in the world (Hossain, 2006).

In the services sector, telecommunications, banking, insurance, health services and education services have flourished mostly in the private sector.

4.3 The state of telecommunications services in Bangladesh

In 1853, the telegraph and telephone branches of the Post and Telegraph Department was established in then British India. Subsequently it was regulated under the Telegraph Act of 1885. When British rule was ended in 1947, making hitherto undivided India into two new states, India and Pakistan, the Post and Telegraph Department was renamed the Pakistan Post and Telegraph Department and Indian Post and Telegraph Department, respectively. In 1962, the Post and Telegraph Department of Pakistan was bifurcated and the Pakistan Telegraph and Telephone department was established. After the creation of Bangladesh (known as East Pakistan before 1971) as an independent country in 1971, it was renamed the Bangladesh Telegraph and Telephone Department and was placed under the Ministry

of Communications. In 1975, the Government of Bangladesh (GoB) restructured the Bangladesh Telegraph and Telephone Department and converted it into an autonomous board, the Bangladesh Telegraph and Telephone Board (BTTB). In 1979, the GoB changed BTTB's status to become a full government department, but retaining the name 'board' in its title for reasons unknown (Khan, 2003b).

From its beginning, the BTTB was the monopoly telephone service provider until the sector was opened up for private sector investment in 1989. It used to provide 95 per cent of local and long distance telephone services (Bhuiyan, 2004). The BTTB was set up under the Ministry of Posts and Telecommunications (MoPT) to provide and regulate telecommunications services in newly created Bangladesh. Until 1995, the BTTB was acting both as a telephone service provider and the regulator of the sector in accordance with the Telegraph Act 1885, the Wireless Act 1933 and the BTTB Ordinance 1979(Khan, 2003b).

4.3.1 Long waiting periods

Due to lack of required infrastructure, BTTB was unable to provide connections to all applicants in order to satisfy customer needs (Tanim, 2005). Customers had to wait years[48] to get a landline connection. Getting a BTTB land phone in one's house was considered a luxury for a household. It was quite expensive (an initial deposit of around $US300 to have a new phone connection. Without bribery, lobbying and influence it was difficult to get a BTTB landline connection (Laskar, 2007).The following statement of a subscriber demonstrates the problems in using BTTB phones:

> They (BTTB) charge for almost everything. There are line rents, transfer fees, various fines, and renewal fees, besides the call charges. All this *[sic]* charges are just the tip of the iceberg, as you have to constantly keep the field-level officials and linesmen pleased as well, otherwise you would find your connection would go off frequently or you may even find your cables stolen. (Laskar, 2007)

[48] Less-connected customers often had to wait five to ten years for BTTB service (Sullivan, 2007p.45)

4.3.2 Low teledensity

In 1993, there were more than one million applications pending for phone service (Sullivan, 2007). The vast majority of people had no access to basic telephone services. Teledensity was only 0.20 in 1992-3, 0.29 in 1996 and 0.40 in 1997 per hundred people (Camp & Anderson, 2001; Sullivan, 2007p.4; The Daily Star, 2009c, 2010b). The telecommunications situation was even worse in the countryside (OECD, 2004). Because of very low teledensity, Bangladesh was termed 'a land that was once virtually phone free' (Sullivan, 2007, p.3).

However, in the last few years significant improvement have taken place in teledensity, driven by massive growth in the mobile phone sector. Telephone density increased to about 35 per cent (fixed around 1 per cent and mobile phone 34 per cent) in March 2010, up from a mere 0.4 per cent in 1997 (Hasan, 2010c; The Daily Star, 2009c, 2010b). According to BTRC, the internet penetration rate increased to 4 per cent in 2009 from an insignificant 0.4 per cent three years earlier (Hasan, 2009a). The growth of mobile and fixed line phones is shown in Table 4.1.

Table 4.1: Growth of Mobile and Fixed telephone (1996-2009) (in millions)

Year	Mobile	Fixed	Total	Tele-density		Total teledensity
				Mobile	Fixed	
Dec 1997	0.026	0.37	0.396	0.02	0.3	0.32
1998	0.075	0.41	0.485	0.04	0.34	0.38
1999	0.15	0.43	0.58	0.08	0.35	0.43
2000	0.23	0.49	0.72	0.21	0.4	0.61
2001	0.66	0.56	1.226	0.58	0.49	1.07
2002	1.14	0.68	1.822	0.96	0.57	1.53
2003	1.907	0.72	2.623	1.53	0.58	2.11
2004	4.15	0.83	4.982	3.17	0.63	3.8
2005	9.27	0.87	10.149	6.75	0.64	7.39
2006	21.88	0.997	22.882	15.63	0.71	16.34
2007	34.37	1.197	35.565	23.87	0.82	24.69
2008	44.66	1.34	46.008	31.02	0.93	31.95
2009	52.43	1.66	54.09	33.5	1.00	34.50

Source: Camp & Anderson (2001); Government of Bangladesh (2009)

The service quality in terms of call completion rate, voice quality, customer service and complaints handling was also very poor. The call completion rate was around 20 percent (Sullivan, 2007). The rate of faults per 100 telephone lines per month was about 49 which was much higher than its neighouring countries (Haque, 2001a p.106)

Unclear voice quality, call drop, network congestion, echo, problems in phone shifting and ghost billing resulted in widespread dissatisfaction among telecommunications users (Camp & Anderson, 2001; Khan, 2008). The main reasons for BTTB's inability and poor performance were inadequate investment to modernize the sector, involvement of more than one ministry[49] in making decisions (for example, until very

[49] Major spending decisions of BTTB for its capacity expansion have to be approved by the Planning Commission and Executive Committee of the National Economic Council (ECNEC), operating under the MoF and Prime Minister's office.

recently, the MoPT and the BTTB had to rely on the Ministry of Finance (MoF) for re-fixing of tariffs), corruption and delays by a section of its employees (The Daily Star, 2008c).

The BTTB connection fee was also higher compared to the regional standard. The connection charge was $US171 in Bangladesh, $US18 in India, $US83 in Pakistan, $US175 in Sri Lanka, $US28 in Nepal, $US13 in Malaysia and $US35 in Indonesia (Rahim, 2003). The higher telecommunications cost puts Bangladeshi businesses at a competitive disadvantage in the world market (Ahmed, 2007).

4.3.3 Inefficiency and corruption in BTTB and corporatisation of the BTTB

The country's main line provider, the BTTB (now BTCL), has been very inefficient due to a lack of modern systems and technologies. BTTB's land line network barely supports modern telecommunications accessories such as call-waiting, call forwarding and voice mail (WTO, 2006).

Although the BTTB has been profitable, it could not reinvest revenue for its modernisation and capacity expansion because a significant proportion of the profit has been transferred to consolidated revenue (Rahim, 2003). A section of BTTB officials, especially linesmen and clerks, behaved highhandedly with customers. Subscribers had to pay BTTB staff around $US 200 (BDT10,000) for demand notes[50] and $US 50 (BDT 2500) to get the advice note for a new connection (Tanim, 2005).

Privatisation of the state-owned BTTB has been on the government agenda for a number of years. But BTTB could not be privatised due to the opposition to privatisation by employees, who believed that privatisation was a threat to their jobs (Bhuiyan, 2004). After the takeover of power by the interim government on 11 January 2007, the interim government transformed the state-owned telecommunications provider into two public limited companies (PLCs), Bangladesh Telecommunications Company Limited (BTCL) and Bangladesh Sub-Marine Cable

[50] Demand notes were also issued in response to political pressure. Issuing demand notes means that the application for a land phone connection is approved.

Company Limited (BSCCL), with the aim of providing better service to the customers and ensuring transparency and accountability in operations. BTCL started its journey as a public limited company from 1 July 2008 (The New Nation, 2008c; Yusuf & Alam, 2008b).

Even after the corporatisation of the BTTB into BTCL in 2008, it could not wipe out corruption and a poor service record. Most BTCL customers have to pay on average $US86[51] as a bribe for a faster telephone connection (The Financial Express, 2008b; Transparency International Bangladesh, 2010).

The BTCL is losing its subscribers because of its poor service quality, delayed accessibility and inaccurate billing, in favour of mobile phones. Consumers perceive mobile phones to be more user-friendly and cheaper. For instance, subscribers of the BTCL went down from 0.877 million in March 2007 to 0.872 million in March 2008 (Hasan, 2008c).

4.3.4 National Telecommunications Policies

The National Telecommunication Policy (NTP) 1998 has been devised with a view to providing telecommunications services to potential customers at affordable cost. This telecommunications policy has also acknowledged the importance of private sector participation and telecommunications development, and has expressly promised to assist the private sector in all respects to make the private sector more vibrant and robust (Article 3.10, National Telecommunications Policy,1998).

However, the World Bank considers the NTP 1998 as inward looking. The government of Bangladesh updated the NTP through the enactment of the Bangladesh Telecommunication Act, 2001. This Act sets sectoral policy objectives such as encouraging the development of telecommunications systems, ensuring affordable and easy access to modern telecommunications services, encouraging introduction of new services and creating a congenial atmosphere for local and

[51] BDT6000 has been converted into US dollars at an exchange rate of BDT69.25 = 1$ US

foreign investors. The penal provisions of the Act[52] help to curb illegal activities of telecommunications operators and maintain discipline in the sector.

The Act also requires that the BTTB 'shall, on the commencement of this Act, acquire the status of a licensee, and the same conditions, so far as may be, shall apply to that Board as are applicable to an operator under this Act' (WTO, 2006). In pursuance to provisions of this Act, and required by the BTRC, the BTTB has taken five licenses from the telecommunications regulator for operating various telecommunications services, including international call termination and the internet (The New Age, 2008b). The 2001 Act thus created provisions to ensure a level playing field between the BTTB and other private operators.

4.3.5 Regulatory Conditions of the sector in historical context

Bangladesh is the only South Asian country which did not establish a telecommunications regulator up until 8 July 2001. Until 1995, the formerly BTTB (now BTCL[53]) was discharging the responsibilities of both a state-owned telecommunications operator and the regulator of telecommunications services in accordance with the Telegraph Act 1885, the Wireless Act 1933 and the BTTB Ordinance 1979. BTTB's dual role as regulator and operator hampered the neutrality of the regulator and failed to create a level playing field for all operators. The regulatory role played by the BTTB also prevented the growth of competition in the sector (Sobhan, Khaleque, & Rahman, 2002).

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[52] According to the Telecommunications Act 2001, imprisonment or penalty up to $US0.015 million (BDT 1 million) or both may be imposed for anyone found involved in illegal activities. Under this provision, BTRC recently shut down the operation of PSTN operator WorldTel, People's Telecom, Ranks Tel, Dhaka Phone and National Phone for their suspected involvement in illegal VoIP business (The New Age, 2010c).

[53] On 1 July 2008, BTTB was corporatised as the Bangladesh Telecommunications Company Limited (BTCL) and registered under the Companies Act, 1994. It has taken up all the assets and liabilities of the former BTTB.

The regulatory functions of BTTB were transferred to the MOPT in 1995 through an amendment of the BTTB Ordinance, 1979[54] (Banglapedia, 2006). The MOPT was not found effective or functional as a regulator because it was under government control and had neither expertise nor scope to independently monitor operators.

The Telegraph Act of 1885 in tandem with the Wireless Act 1933 were the only regulatory tools until the Bangladesh Telecommunications Act (BTA) 2001 came into being[55] and replaced them. In accordance with the provisions of the BTA 2001, the Bangladesh Telecommunications Regulatory Commission (BTRC) was established on 31 January 2002 (Farooq, 2003). Since the formation of the BTRC, the role of the MOPT, BTCL and BTRC are clearly assigned: Policy matters are vested with the MOPT; Telecommunications services are provided and the systems of operation are maintained by the BTCL and other private operators; while regulatory functions are assigned to the BTRC (Farooq, 2003).

BTRC was an independent body on paper but in reality its power were exercised by the government on occasion (Khan, 2003a), violating the Telecommunications Act. There are instances where the Cabinet has directed the telecommunications regulator to increase the license fees for VoIP licenses. By dictating that the regulator revise the license fee, the government has violated section 31(2) of the telecommunications law that exclusively empowered the telecommunications regulator to specify the licence fee for any telecommunications service (Khan, 2003a). In another instance, the license to WorldTel was issued by the Ministry, despite the fact that the power to issue licenses was vested with the telecommunications regulator (Silva & Khan, 2004). It is often observed that the Commission could not ensure a level playing field because it was somehow 'soft' or biased towards BTTB[56], there was no private sector

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[54] This ordinance provided BTTB with the monopoly rights and powers for issuing licenses for telecommunications and wireless services.

[55] In the policy vacuum, created by the long delay (i.e., by the inability to pass a Telecommunications Act for many years), the reforms were implemented through regulatory decisions.

[56] The main failure of the regulator has been, and continues to be, its inability to have a meaningful interconnection agreement between BTTB and the other operators, fixed and mobile. The outright

representation on the Commission (Zita, 2004). In addition, the BTRC was not very active in protecting consumer interests. Rather it remained silent on pricing and quality of service issues. Apart from the operators' customer service desk, there was no regulatory framework to ensure a minimum standard of mobile phone services (Hasan, 2009b). Overall, the telecommunications regulatory environment (TRE) was not congenial for the sector to be competitive and to grow.

4.3.6 Tariffs of fixed phone services before and after liberalisation

Until the telecommunications sector experienced competition after it was opened up for private investment, telecommunications services were very expensive. One had to pay more than $300 as connection fees to get a landline connection under the BTTB monopoly regime. Land phone charges in Bangladesh were among the highest in South Asia (Khan, 2008). Mobile tariffs fell significantly after 2004-05, when operators were forced to engage in a price war. The significant growth and very low mobile tariffs significantly influenced the land phone pricing policy. BTTB has been forced to reduce its connection fee, monthly rent and tariff rates, due to competitive pressure from private mobile phone and landline operators. The BTTB tariffs for nationwide dialling have been halved to $US0.02 (BDT 1.50) per minute, down from $US0.04 (BDT 3.00) per minute. The calling cost from the BTTB to mobile phones was similarly slashed from $US0.02/minute to $US0.01/minute (Hasan, 2008c). The whole of Bangladesh is considered a single zone (Yusuf & Alam, 2008c).

The drastic reduction in BTTB connection fees is reflected in Table 4.2

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refusal of BTTB to interconnect mobile operators and the inaction of BTRC, despite all its authority to change this situation, is a rarity in the telecommunications world (Silva & Khan, 2004).

Table 4.2 Declining trend of the BTTB connection fee

	Before August 2006	August 2006- 2007
Dhaka	$US163	$US 97
District level	130	65
Sub-district level	82	41

Source: Interview data (2008)

Apart from significant reduction of tariffs and connection fees, the newly corporatized BTCL introduced free packages for clients at district and sub-district levels in a bid to increase demand for its land phones. Furthermore, since 1 July, the BTCL began providing free connection of land phones at district and sub-district levels for three months on a first-come first-serve basis (Bangladesh Sangbad Sangstha, 2009).

After the corporatization of BTTB into BTCL, call charges and connection fees were again slashed drastically. Tariffs were reduced to $US0.002 (BDT 0.15)/ a minute for peak hours and $US0.001(BDT.0.10)/minute for off-peak hours[57] (The New Age, 2009c), later raised to $US0.004 (BDT.0.30)/minute to bring them into equilibrium with the call rates of 12 private PSTN operators (Rahman, 2009b).

4.3.7 Current state of land phone services

The combined subscribers of PSTN operators stood at 1.69 million as at January 2010 including market leader BTCL's subscribers of 0.872 million. The estimated size of the telecommunications industry is $US2920 (BDT200,000)[58] million (The New Age, 2008c). Apart from state-owned BTCL, 12 other PSTN private operators provide land phone services.

The PSTN operators are: Ranks Telecom Ltd (288.272 thousand, Peoples Telecom Ltd [59], National Telecom Limited, Dhaka Telephone Co Ltd , Tele Barta Limited, One Tel

[57] BTRC had fixed the minimum call rate for any phone operator at BDT 0.25 per minute but the BTCL reduced its rate as low as BDT 0.10/minute violating the BTRC order.

[58] BDT.68.50 = 1 US dollar in June 2008 (http://www.bangladesh-bank.org accessed on 6 April 2010)

[59] Peoples Tel is the successor company of erstwhile Bangladesh Rural Telecom Authority (BRTA)

Communication Limited, S.A. Telecom System Ltd., WorldTel Bangladesh Ltd., Sheba Phone Ltd , Westec Ltd., Jalalabad Telecom Ltd. and Banglaphone Ltd.

4.3.8 Contribution of the telecommunications sector to the national economy

Bangladesh's central planning process does not calculate the contribution of telephone to GDP separately (Ali, 2005b). However, it has been estimated that the telecommunications industry in Bangladesh contributes more than 1.5 per cent of GDP, creating more than 250,000 jobs, and it has emerged as the country's leading service industry (The Financial Express, 2008a). The state-owned telecommunications provider BTCL also contributes a significant amount to government consolidated fund out of its revenue. In FY 2007-08 and 2008-09, BTCL earned revenue of $US245 (BDT 16778) million and $US305.50 (BDT 21080.51) million respectively (The Daily Star, 2009b).

4.4 Reforms in the services sector

The services sector constitutes an important component of Bangladesh's economy. The share of services in total GDP is about 60 per cent. As part of its economic reform programs, Bangladesh liberalised a number of its services sub-sector unilaterally in the early 1990s in order to improve efficiency, quality of services, and diversification through competition (Khatun, 2008). These sub-sectors include the telecommunications sector, the banking[60] and insurance sector, the health services sector[61], the education sector, the entertainment/media services sector and domestic air transport sectors (Islam, 1999). The electricity and telecommunications industries were dropped from the reserved list by the Industrial Policy 1991 (Hossain & Alauddin, 2005), although the telecommunications sector was *de facto* opened in

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[60]The government allowed private sector banks to flourish in the country in the early 1980. During the mid-1990s more commercial banks were permitted to operate in the private sector.

[61] Liberalisation brought significant private investment to the health sector to improve the quality of health services. It also resulted in the mushrooming of private clinics, as well as the development of three modern hospitals with adequate infrastructural facilities (Khatun, 2008).

1989. Of the services sectors that Bangladesh opened up unilaterally, the telecommunications sector is the only sector in which Bangladesh undertook liberalisation commitments under the GATS since the WTO came into force.

Private sector participation has been allowed in these services at a generous level to allow private-sector led growth. As a result, 30 domestic private banks[62] (of which six are operating under Islamic Shariah law), five specialised banks and nine foreign banks (Bahar, 2009; Government of Bangladesh, 2008), 60 privately owned (17 life and 43 general) insurance companies, 52 private universities (Haider, 2009), 11 television channels (The New Age, 2009d) and many private sector hospitals now operate in the private sector. Moreover, government transferred some nationalised commercial banks such as the Uttara Bank, and the Pubali Bank to private hands.

4.4.1 Reforms in the telecommunications sector: the introduction of mobile phones

Consistent with global trends of exposing telecommunications sectors to competition over the last two decades, and in an effort to improve performance of the sector, Bangladesh opened up its telecommunications sector in 1989. Initially, one mobile phone license (to Bangladesh Telecom Ltd-BTL) and two landline licenses (to Bangladesh Rural Telecom Authority-BRTA) and Sheba Telecom Pvt. Ltd) were awarded in 1989. BTL, later re-named as HBTL when it formed a joint venture firm with Hong Kong-based Hutchison, subsequently transferred its ownership to Pacific Bangladesh Telecom Limited (ITU, 2000). The opening up of the mobile phone sector by Bangladesh was done independently, not as part of an international agreement. The liberalisation of the mobile phone sector of Bangladesh, therefore, was a case of unilateral liberalisation (Yusuf & Alam, 2007a). Later, World Tel was given a licence to provide fixed lines in Dhaka City. Bangladesh opened up its telecommunications sector, especially the mobile phone sector, for competition much earlier than many other developing countries and LDCs, for example, Ethiopia, Myanmar, Nepal, Mozambique, Namibia, Libya, Egypt, Jordan, Rwanda, Thailand and Tunisia (Donner,

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[62] Poor performance of loss recurring NCBs expedited the disinvestment of nationalised commercial banks.

2007; Hamilton, 2002; Kifle, et al., 2006; Mesher & Jittrapanun, 2004; Rossotto, et al., 2005; Whalley, 2006). It was the first country in South Asia to allow private participation in the telecommunications sector (Government of Bangladesh, 2007).

4.4.2 Mobile Phone Operators in Bangladesh and their market share

Bangladesh Telecom Limited (BTL) was awarded a license in 1989 to operate cellular, paging and other wireless communication networks. In 1990, BTL formed a joint venture, Hutchison Bangladesh Telecom Limited (HBTL), taking Hutchison as its partner. Although HBTL began commercial operation in Dhaka in August 1993 (Citycell, 2010), it could not operate successfully for reasons of various internal complexities and the delay in getting a PSTN connection from the BTTB (Afzal, Kamal, & Rahman, 1996). HBTL then transferred its licence to Pacific Bangladesh Telecom Limited (PBTL). PBTL commenced operation in 1993 with the brand name Citycell (CUTS, 2003; Lane, Sweet, Lewin, Sephton, & Petini, 2006).

In 1997, the Government of Bangladesh awarded mobile phone licenses to Grameenphone, Aktel and Sheba Telecom. Sheba was later re-branded as Banglalink in 2004 when it was acquired by Orascom Telecom Holding. In 2005, the government undertook further liberalisation of the sector by awarding licences to operate mobile phones to UAE-based Warid Telecom and state-run Teletalk Bangladesh Limited. A brief summary of the six mobile phone firms operational in Bangladesh is presented in Table 4.3.

Table 4.3: Mobile Phone firms in Bangladesh

Operator	Licence issue	Commencement of service	Licence fee	Licence Period (years)	Ownership (in percentage)
PBTL (Citycell)	1989	1993	No licence fee	20	Singapore Telecom (45) Pacific Group, Far East Telecom and others (55)
Grameen Phone/Telenor	1996	1997	Free (Sullivan, 2007)	15	Telenor (55.8) Grameen Telecom (34.2) General public and other institutions (10)
Axiata Bangladesh Ltd (Robi)	1996	1997	No licence fee	15	Axiata Group Malaysia (70) NTT DoCoMo (30)
Sheba telecom/Banglalink	1996	1998	No license fee	15	Orascom Telecom Holdings
Teletalk Bangladesh Ltd.	2004	2005	No licence fee	15	Government of Bangladesh
Warid Telecom	2005	2007	$50 million	15	Bharti Airtel (70) Warid (30)

Source: Khan (2006); Sullivan (2007)

Grameenphone

Grameenphone Ltd received its operating licence on 11 November 1996 and launched its operations from March 26, 1997. Initially Grameenphone (GP) started as a joint venture company between Grameen Telecom and Norway's Telenor. In 2009, the company listed on the Capital Market to raise capital. After issue of the initial public offerings in the share market, the ownership structure of the company stands as follows: Telenor mobile communications AS 55.8 per cent, Grameen Telecom 34.2 per cent and General Public and Other institutions 10 per cent (Grameenphone, 2009).

Since launching operations in March 1997, Grameenphone has built the largest cellular network in the country. At present, about 98 percent of the population is within the coverage area of the Grameenphone network. It has introduced an electronic recharge system for pre-paid users, who make up 90 per cent of its total customers (The Daily Star, 2005a).

Grameenphone has led the way for a decade in bringing telecommunications service to the people at all levels of society and has become the most recognized brand in the country. It has taken the lead over its competitors by signing a long-term agreement with Bangladesh Railway to lease and use the 1800-km long fibre-optic network (FON) spread across Bangladesh (OECD, 2004). The lease and access to Railway's FON, as well as the right to use Railway lands, has helped GP to rapidly expand its mobile phone business across the country (Sullivan, 2007). Recently, Grameenphone developed low cost mobile handsets for its customers.

Banglalink

Banglalink Mobile is a wholly-owned Subsidiary of Egyptian Telecom giant Orascom. Orascom Telecom Holding (OTH) bought ailing Sheba Telecom in September 2004, re-branded it and launched its commercial services under the Banglalink brand name on 12 February 2005 (The New Age, 2006).

Banglalink adopted an innovative strategy in challenging the market leader Grameen Phone. Banglalink reduced or eliminated the switching costs by providing SIM cards at very low prices (Khan, 2005). Subsidisation of handsets and SIM cards was used as an aggressive strategy of market entry. With an aggressive marketing strategy, rapid network expansion, innovative products and services at competitive prices Banglalink achieved significant success in acquiring customers. Now it is the second largest mobile phone operator, with 14.13 million subscribers. Its network covers all 64 districts. But, like other operators (except for GP), it is still running at a loss (The Daily Star, 2009c).

Banglalink has so far invested more than $US800 million in its network infrastructure. It completed a nationwide fibre-optic network of over 1900

kilometres in 2008. It currently owns the largest network of customer care points, with over 700 customer care points (The New nation, 2008a).

Axiata (Bangladesh) Limited

Axiata (Bangladesh) Limited, formerly known as Telekom Malaysia International (Bangladesh), is a joint venture between Axiata Group Berhad Malaysia (70 per cent) and Japanese NTT-DoCoMo INC (30 per cent) (The New Age, 2010a). It commenced operation in Bangladesh on 15 November 1997 under the brand name Aktel. On 28th March 2010 the company commenced a new direction with a new brand name 'Robi' (The New Age, 2010b). It provides a variety of voice and data services, such as pre-paid, post-paid (Infinity), SMS banking, economy ISD and EISD, international roaming and all available value-added services, e.g. SMS, MMS, GoonGoon ringtones, wallpaper, games, and animation downloads. It also provides internet (data) services under the name Spice. Axiata (Bangladesh) Ltd. has reached a customer base of 10.31 million as of January 2010. With 5400 BTS, Robi covers 86 percent of the population and 80 per cent of the geographic network coverage in Bangladesh (The Financial Express, 2010). It also boasts of having the first Intelligent Network (IN) Prepaid Platform in the country. Over 90 per cent of its total subscribers are prepaid users (The Daily Star, 2008a).

Robi's annual revenue amounted to $US208 (BDT14400) million in 2007, up from $US195 (BDT13100) million in 2006. Like all other operators the average revenue per user (ARPU) of Robi has been declining: the ARPU per month for pre paid users of Robi came down to $US3.50 in January 2008 (Hasan, 2008g), from $US3.70 (BDT254) in the first quarter of 2007 (The Daily Star, 2008b).

Pacific Bangladesh Telecom Limited (PBTL)

PBTL was the first company (after buying out the license from HBTL) to launch its mobile phone operations in Bangladesh in 1993 (SingTel, 2005). It is the only code division multiple access (CDMA) network operator. Citycell is the brand name of PBTL mobile phone (Lane, et al., 2006). Singapore Telecommunications (SingTel) owns a 45 per cent stake in the privately owned PBTL. It provides a full range of fixed and mobile services, economy ISD and internet services (known as ZOOM)

nationwide. In terms of number of customers, Citycell is the fifth largest mobile phone operator, with 1.56 million users as of March 2008. PBTL, once the sole mobile operator, lost its leading position after the introduction of relatively cheaper GSM mobile telephony by its rivals (Hasan, 2008d).

Warid Telecom

Warid Telecom Bangladesh is a subsidiary of Warid Telecom International LLC. It is the sixth GSM cellular mobile service provider in Bangladesh. Warid received a GSM license for mobile communications in December 2005 on payment of $US50 million as a licence fee (Hasan, 2007). Warid launched its commercial operation on 10 May 2007. Starting with network coverage in 26 districts, it had expanded its network to 61 districts by November 2007. Warid has so far installed 1400 base stations across the country (The Daily Star, 2008e). It is the first company to introduce Next-Generation Network (NGN) Technology. In terms of subscriber base, Warid holds over 7 per cent of market share (Hasan, 2009d).

Based on the NGN, Warid provides all types of basic telephone services, such as voice, SMS, international roaming, caller line identification, call waiting/call holding, call divert, conference call and data services. Its data services include high speed data access over the mobile network through GPRS/EDGE connectivity, multimedia messaging, and internet browsing. Warid Telecom has so far invested about $US600 million in Bangladesh (The New Nation, 2008b). Recently, Bharti Airtel acquired a 70 per cent stake in Warid Telecom and rebranded the Warid service as Airtel (Bdnews24.com, 2010).

Teletalk Bangladesh Limited

Teletalk Bangladesh Limited (TBL) was incorporated on 26 December 2004 as the only government-sponsored mobile telephone company. In May 2005, the company launched its commercial operation as the fifth mobile phone operator. It is the only Bangladeshi mobile operator with a 100 per cent native technical and engineering human resource base. It has already established its network in 64 districts and 402 sub-districts (*upazillas*). It has also expanded its network in 15 out of 17 hilly sub-districts (The New Age, 2009e).

The company, however, could not properly compete with other multinational operators, due to inadequate investment, poor services, lack of interesting features and a poor marketing strategy (Hasan, 2008i). It is the smallest of Bangladesh's six mobile phone companies, having only 1.07 million subscribers (around a 2 per cent market share) (BTRC, 2010). Teletalk offers a wide range of services to its customers, including voice services, SMS of 160 characters (Push-pull), Voice SMS, International Subscriber Dialing (ISD) or Economy ISD (EISD) in 55 countries, Dhaka Electric Supply Authority (DESA) load-shedding push-pull service to obtain evening load-shedding schedule through SMS and international roaming services. Under the ISD and EISD scheme, its customers can talk to 55 countries at a reduced rate per minute. By using the push-pull service, one can have the latest updates of important cricket matches, weather forecasts, prayer time, quotes and horoscopes, etc. Teletalk also provides mobile internet services.

The large potential growth for its huge population, a liberal FDI regime (e.g., the government allows 100 per cent capital and profit repatriation) and fiscal incentives (e.g., mobile phone operators will enjoy 10 per cent tax rebates i.e., 35 per cent corporate tax, instead of 45 per cent corporate tax) offered by the Government of Bangladesh (Islam, 2007) have already attracted five foreign firms into the mobile phone market. Recently, Japanese telecommunications company KDDI Corporation has entered the Bangladesh market, acquiring a 50 per cent stake of BRAC BDMail Network Limited (BRACNet) (The Daily Star, 2010).

4.4.3 Foreign investment regime and foreign direct investment (FDI) in the sector

Bangladesh offers the most liberal FDI regime and tax incentives in South Asia (Rashid, 2006). The Foreign Private Investment (Promotion and Protection) Act 1980 provides for non-discriminatory treatment between foreign and local investment. Also there are no limits for equity participation or restrictions on the repatriation of profits and income. All these generous FDI policies, coupled with macro factors such as a large market, the growth potential arising from an underserved telecommunications services market, a growing economy (strong GDP growth) and other government incentives, have attracted foreign telecommunications firms to

make FDI in the cellular phone sector of Bangladesh. Out of the six mobile operators, five (i.e., except for public sector provider Teletalk) companies have foreign investment through joint venture partners from abroad (see Table 4.4). Warid, Banglalink and Robi are solely owned by foreign telecommunications firms, while GP and Citycell have 62 per cent and 45 per cent foreign ownership, respectively**.** The public sector telecommunications company Teletalk is, however, solely financed by the Government of Bangladesh. The total amount of investment in the mobile phone industry amounted to more than $4 billion as of April 2009 (Shawkat, 2009). The sector attracted $US641.39 million FDI in 2008 and $US201.90 million in 2007 (World Investment Report 2009 in The Daily Star, 2009).

Table- 4.4: Foreign partners in mobile phone firms in Bangladesh

Serial No.	Name of mobile phone operator	Foreign partner	Percentage of foreign partner	Total investment
1	PBTL (Citycell brand)	SingTel	45	Not known
2	Grameenphone	Telenor	55.8 (before 2009 it was 62)	$US 2 billion (BDT 111 billion)
3	Robi (former Aktel)	Telecom Malaysia	70	$US 1200 million
4	Banglalink	Orascom	100	$US700 million (BDT 41590 million since 2005)
5	Warid	Warid Telecom	100	$US600 million

Source: Interview data, Hasan (2010a); Silva and Khan (2004)

Investment in the telecommunications sector, however, is far too low compared to other developing countries – it is 70 per cent lower in Bangladesh than the average for developing countries (Ahmed, 2007).

The liberalisation of the sector has had a significant impact on the growth of the sector. Despite initial monopolisation, high pricing and poor service quality between 1997 and 2004 the sector has been experiencing stiff competition since 2005. At present, the mobile market is one of the most vibrant sectors in the economy. Mobile

subscribers of the six operators reached 54 million in 2010 from a mere 0.279 million in 2000 (BTRC, 2010). Once a 'telephone desert' Bangladesh is no more a 'telephoneless' country. Now it can boast of having a good telecommunications infrastructure with six mobile and 15 PSTN operators.

The significant growth resulted in huge revenue generation from the sector. The sector has become the biggest revenue earner for the telecommunications regulator BTRC, as shown in the following section.

4.4.4 Contribution to Government revenue

The mobile phone sector has emerged as a significant contributor to the government exchequer in Bangladesh. It contributes about 10 per cent of total revenue earnings of the government (The Dainik Prothom Alo, 2009). In fiscal year 2008-09, the six mobile phone companies contributed $US825 million revenue to the government (Bangladesh Sangbad Sangstha, 2010).

Furthermore, the sector is the main source of revenue for the telecommunications regulator BTRC (see Table 4.5). Licence acquisition fee, radio frequency, base station and software development fees and royalties are the main source of BTRC revenue. In addition to the application fee and entry fees, mobile phone operators share 5.5 per cent of their revenues with the government.

Table 4.5: Earnings of BTRC ($US in millions)

Year	Revenue
2001-02	0.56
2002-03	21
2003-04	25
2004-05	61
2005-06	120
2006-07	85
2007-08	243
2008-09	466

Source: Interview data (2008)

As the growth in the number of PSTN subscribers has been slow, a large part of the telecommunications regulator's revenue (as shown in Table 4.5) increase can be attributed to the rapidly growing mobile phone sector.

Problems in the mobile phone sector

The mobile phone sector is beset with a number of problems, such as high taxes on SIM cards, interconnection problems and unfair revenue sharing

4.4.4.1 High tax incidence on mobile phone sector

High taxes on SIM cards ($US 15 equivalent to BDT 800[63] per SIM) and mobile handsets are considered by mobile phone operators as the greatest barrier to telecommunications sector growth (Hasan, 2008f; The Financial Express, 2009). Bangladesh has one of the highest import duty rates on telecommunications equipment (16-60 per cent), whereas most neighbouring countries have a zero-tax policy on their telecommunications sector (Herath, 2008).

4.4.4.2 Problems related to interconnection

Insufficient interconnection is a problem for private sector mobile telecommunications providers. Until 2003, about 90 per cent of mobile phone users did not have access to mainline BTTB local, national and international connections (CPD, 2003; Islam, 2006a). Commenting on the problem of interconnectivity, one architect of Grameenphone stated that 'Interconnection was our Achilles' Heel' (Sullivan, 2007 p.99). Those who had interconnection to BTTB's network were not immune to problems. They suffered because outgoing calls to BTTB's network, in most cases, either did not get through or were dropped (Sullivan, 2007). Limited interconnection facilities by the BTTB has hindered growth of the telecommunications sector (Islam, 2006a).

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[63] For each SIM connection, $US15 (BDT 900) was imposed as a tax in the 2005-05 budget. Later, the government reduced the tax to $US 13 (BDT.800) although all six cell phone operators have long been asking for reducing the tax on the SIM cards and the Parliamentary Standing Committee on the Post and Telecommunications Ministry made such recommendations several times in the 8th parliament during 2001-2006 (The New Age, 2010d).

Private mobile phone operators also created interconnection problems by charging very high interconnection charges. For instance, mobile operators used to charge PSTN operators $US 0.014 (BDT 0.90)/minute for interconnection when the mobile call rate was $US 0.11 (BDT 7.00)/minute. Commensurate with massive reduction in mobile call rates, i.e., from $US0.11 to $US 0.004 (BDT 7.00 to BDT 0.25-0.30)/minute, mobile operators did not reduce interconnection charges for PSTN operators. They now (in 2010) charge PSTN operators $US0.004/minute for interconnection, which is quite irrational (Masud, 2010b). Mobile phone companies also do not accept SMS messages from land phones (Hasan, 2008h). Similar complaints of charging high interconnection tariffs ($US0.015 per minute, as of 2005) had also been raised by state-owned Teletalk against private mobile operators (Ali, 2005a).

To date, all interconnection agreements are arranged on a bilateral basis. There exist no performance, service quality, network availability or pricing obligations on the operators imposed by BTRC (Silva & Khan, 2004; Zita, 2004).

4.4.4.3 Unfair revenue sharing arrangements

If a private mobile operators' subscriber calls a BTTB number, the private mobile phone operator has to pay an interconnection charge to the BTTB for that call, while BTTB pays nothing for terminating its calls (i.e., calls originated from the BTTB network) on the mobile operators' network. This interconnection regime has been termed unfair and unique by mobile phone companies, as they get no share for terminating BTCL calls on their networks (Herath, 2008).

Erratic supply of electricity and lack of access to it poses problem for rapid diffusion of mobile phone technology into rural areas. In many rural areas people do not use cellular mobile phones for reasons such as difficulties in recharging the battery (Eusuf & Toufique, 2007).

4.5 Summary and conclusions

This chapter provides a brief account of the demographic, socio-economic and political background of Bangladesh with a brief reference to its growth. The country's shift of trade, investment and economic policies since its birth was discussed in three

distinct phases. The historic state of the telecommunications sector in Bangladesh, the reform initiatives in the sector, i.e., introduction of private sector participation in the sector, especially the mobile phone sector, and the development of the sector thereafter, were also discussed in this chapter. A brief description was also given of the gradual development of the telecommunications regulatory regime, starting from the regulatory authority vested with the state-owned operator, then to the MOPT, and then ultimately transferring that regulatory control to an independent regulatory commission.

The history and evolution of the nation's industrial policy development demonstrates that Bangladesh has gradually moved away from a centrally controlled economy to an open economy over the last three decades. In embracing economic reforms, the services sector was also exposed to competition because private investment both from local and foreign sources has been encouraged in the economy. The telecommunications sector, once considered to be a strategic industry and natural monopoly, was opened for private investment unilaterally.

Overall, the chapter highlights in brief the state of telecommunications services in Bangladesh before liberalisation. The chapter also highlights briefly the significant growth that took place in the mobile phone sector in the last decade and the importance of it in the generation of revenue for the government. It also reveals that after unilateral liberalisation, Bangladesh undertook liberalisation commitments in the telecommunications sector under the WTO GATS. This contextualises the use of Bangladesh for this research to answers the Research Questions.

The next chapter (Chapter 5) presents the findings of qualitative data. The findings are based on data collected through in-depth interviews with key informants from six mobile phone firms, three focus group meetings with mobile phone users, and face-to-face interviews with 32 key stakeholders of the telecommunications industry in Bangladesh.

Chapter 5: Findings

5.1 Introduction

This chapter reports on the findings of data collected from a range of government officials, policy actors, mobile phone users, mobile phone firms, Bangladesh Telecommunications Regulatory Commission (BTRC), trade experts, private sector representatives and independent analysts on the trade and telecommunications sector. In-depth interviews were conducted to collect data from the mobile phone firms and other stakeholders. In this study, 'other stakeholders' is used to refer to policy makers, the telecommunications regulator, trade experts, industry experts, and private sector representatives. Three focus group (FG) meetings were held to collect data from mobile phone users. The government officials and the policy makers were asked open-ended questions about the factors that motivated them to open up the sector and how unilateral liberalisation influenced Bangladesh to undertake GATS commitments.

In the FG meetings, issues such as what factors they perceived had motivated Bangladesh to open up the sector, the liberalisation process, the impacts of unilateral liberalisation on user (consumer) benefits, role of the regulator in policing the terms of the licence such as ensuring interconnectivity, promoting competition to ensure liberalisation benefits flow to consumers in terms of accessibility, affordability, quality-of-services (QoS), and choice of suppliers and services. The focus group discussions were limited to issues relating to RQs 1 and 2.

The aim of this chapter is to comprehensively report the findings collected to analyse the following three research questions

> **RQ 1:** What were the factors that are perceived to have contributed towards unilateral liberalisation of the mobile phone sector in Bangladesh?
>
> **RQ2:** What impact did unilateral liberalisation have on accessibility, pricing, diversity and quality of services in the mobile phone sector?

RQ3: How did unilateral liberalisation influence submission of Bangladesh's liberalisation commitments in the telecommunications sector under the General Agreement on Trade in Services (GATS) of the WTO?

In collecting data for answering these research questions, this study took a holistic approach by including mobile phone users, all mobile phone firms, and stakeholders related to the sector (for details of the different stakeholders interviewed see Appendix F).

The interviews were held in the participants' workplaces (except in two instances where one was held in the participant's residence and the other was conducted through email) as this was convenient for them. The other objective was to enhance 'local groundedness' of data. 'Local groundedness' means that the collection of data was carried out in the very place the activity took place (Jarvinen & Hiltunen, 2000; Miles & Huberman, 1994) in order to study the problem in its natural context (Carol, 2005). The findings are presented with direct quotes from the data in order to provide a 'thick' description of the data.

In order to address the first research question, data were collected from the key policy makers such as the former minister for Post and Telecommunications, the Secretary for the Ministry of Posts and Telecommunications (MoPT), the Secretary for the Ministry of Commerce (MoC), and BTTB officials. Furthermore, entrepreneurs, private sector representatives and some users were also interviewed face-to-face to gain their view about the factors of unilateral liberalisation.

The second research question seeks to understand the impact of unilateral liberalisation on users, particularly in terms of accessibility, pricing, QoS and diversity of services. The target interviewees to gather data for this research question were mobile phone users. As already stated, the mobile phone users attended the three focus group meetings: the first focus group meeting consisted of residential users, the second consisted of large (business) users and the third consisted of professional users.

Apart from users, mobile phone firms and the BTRC officials were also interviewed because they are both in a better position to elaborate on the influence of

liberalisation on these issues. In particular, the regulator is better positioned to make observations on the effects of liberalisation on the basis of its experience and access to information. Public policy makers and independent telecommunications analysts were also interviewed because they are also mobile phone users and are therefore able to share their experiences about the changes they observed regarding accessibility, pricing, QoS and diversity of offerings since the launching of mobile services by private operators.

Information related to the third research question was drawn mainly from policy actors and public managers in the MoC, the Embassy of Bangladesh in Geneva (which deals with WTO issues for Bangladesh), the Tariff commission and the MOPT. Some private sector representatives and trade experts were consulted with. These officials, experts and private sector representatives are included and serve on the Advisory Committee in the MoC or were involved in the past to advise the government on trade and WTO policy issues. Therefore they were considered to be in a position to provide an insight into the issue.

Discussions were held with these policy actors, public managers and trade/WTO experts to gather first-hand information on the issue of how unilateral liberalisation of the mobile phone sector influenced Bangladesh to undertake liberalisation commitment under GATS.

This chapter is structured as follows. Sections 5.2 and 5.3 report findings on RQ1 and RQ 2. These two sections provide comprehensive reporting on the perceived factors of unilateral liberalisation of the mobile phone sector and the impacts of unilateral liberalisation on the users in terms of accessibility, pricing, QoS and diversity of services. Section 5.4 addresses how unilateral liberalisation influenced Bangladesh government in undertaking liberalisation commitments under GATS.

The findings presented in these sections are organised thematically. In organising the data thematically, the findings were initially organised under 10 meaningful headings (tree nodes).

These headings were:

- Reasons for liberalisation
- Licensing regime
- Mobile phone service accessibility
- Liberalisation and mobile phone pricing
- Liberalisation and QoS
- Diversity of services during different time periods
- Collusion among the mobile phone operators
- Regulatory role and effectiveness
- Unilateral liberalisation and its influence on undertaking GATS commitments
- Problems in the sector (high tax, corruption, transparency)

These 10 headings were then re-grouped further under 'three' broad themes. For each Research question, a broad theme was created. In re-grouping the 10 headings into three broad themes, the relevance of the headings to address the Research questions was considered. For instance, data grouped under the headings 'Liberalisation and mobile phone pricing' and 'liberalisation and QoS' are grouped under the broad theme of 'Impact of Mobile phone liberalisation'.

5.2 Perceived factors of unilateral liberalisation of the mobile phone sector

This section presents findings on the research question 1 i.e.,

RQ. 1: *What were the factors that are perceived to have contributed towards unilateral liberalisation of the mobile phone sector in Bangladesh?*

The factors refer to the forces that motivate a country to liberalise its telecommunications sector for private and foreign investment by dismantling trade and investment barriers. The interviewees reveal five key factors as the main drivers of unilateral liberalisation of the mobile phone sector in Bangladesh. These are:

market opportunity, technological development, policy shifts towards marketisation, attracting FDI and clientelism, lobbying and personal relationships.

The various sub-themes across the five key factors are presented in figure 5.1

1. Market opportunity	• Pent up and new demand • Long waiting for new connection • Globalisation of production and market • Convenience of mobile Phone service and its usefulness
2. Technological development	• Mobile telephony • Converge of telecommunications and computer
3. Policy Shift towards marketisation	• Neo-liberal Ideology • Loan and Aid conditionality • Market oriented reforms in other countries
4. Attracting FDI	• Attracting FDI for modernization and capacity expansion
5. Clientelism, personal relationship and lobbying	• Clientelism • Personal connection and lobbying • Influence of emerging entrepreneurs

Figure 5.1 Perceived factors of unilateral liberalisation
Source: Interview findings (2008)

The following sections expound the views expressed by different stakeholders on the factors of unilateral liberalisation.

5.2.1 Market Opportunity

The telecommunications services in Bangladesh were served solely by the state-owned provider BTTB until 1989. The interviewees reveal that the BTTB was a national monopoly. In their view, the failure of the BTTB to cater to the large telecommunications needs of the country resulted in huge pent-up demand. A majority of the interviewees (both from the public managers, users and analysts)

interviewees identified the following reasons for the incapacity of the state-owned BTTB:

- Capacity constraint- BTTB lacked both financial capital and technological skills to meet supply side capacity and satisfy diversified need of customers.
- Lack of business acumen and service mentality. Decision constraints due to procedural delay, absence of precise guidelines, and the long-held privileged monopoly position did not motivate the BTTB to enhance service levels, introduce modern technologies and nurture a service-provision attitude. The involvement of different ministries in final decision making was also a constraint (FGs 1,2 and 3, 2008; Interviewees 2, 3, 4, 9, 11, 14, 15, 22, 27 and 32 August-October 2008)

On the incapacity of the BTTB to meet telecommunications demand, a majority of mobile phone users stated that a BTTB connection was very difficult and time-consuming to come by. They stated that they could not dream of having installed a landline connection within a period of months unless they were able to exert influence. Even tens of thousands of Bangladeshi expatriates who send large amount of remittance to the country[64] had no scope to talk by phone to their relatives left behind in Bangladesh. The poor Bangladeshi rural people lacked a landline within a 8-10 mile radius (FGs 1, 2, 3, October 2008).

The majority of interviewees noted the inability and inefficiency of the incumbent BTTB was the main driver to introduce a mobile phone service as an alternative to fixed phones. They also added that the needs of expatriate Bangladeshis as the major foreign currency earners for the country, to be in contact with their relatives at home influenced Bangladesh considerably towards liberalising the sector (FGs 1 and 2, October 2008). Despite differences of opinion about the factors influencing liberalisation of the sector, almost all of the interviewees agreed that the large unmet

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[64] The amount remitted by expatriate Bangladeshi workers reached the highest-ever peak of $US10 billion in the fiscal year 2008-09.More than 5.5 million Bangladeshis were working abroad as at April 2009 (Haque, 2009).

demand was a key motivator to open up the sector. One public policy manager (also a mobile user) observed:

> Before the introduction of the mobile phone, getting a residential landline connection was a costly proposition. Willing customers often had to wait 4-6 years (in some cases even longer) to obtain a new connection. The sole provider, BTTB, was not able (in terms of finance, technology, and organisational mind set) to live up to the expectations of the people. Allowing private sector to provide services in the sector reflects the Bangladesh government's realisation of the limits of economic monopolies and the need to introduce a certain degree of competition (Interviewee 11, October 2008).

One public sector official said that the huge pent-up demand was always on the rise due to growing telecommunications service demand to cater to increasing economic and business activity. There was huge dissatisfaction over BTTB's incapacity and official delays in meeting user demand. In his view, although BTTB was a cash cow for the government, it did not receive sufficient funding to increase its capacity in order to meet the growing demand (Interviewee 4, August 2008, Interviewee 11 September, 2008).

A key business leader observed that the large users such as corporate users were more vocal in raising their demands on different occasions for opening up the sector for private and foreign investment. He, however, said that the residential users were not well organised and vocal to put a pressure on the government and articulate their own interests (Interviewee 9, September 2008).

In this regard, some professional users reported that it was the user dissatisfaction with price and quality that put pressure on the government to allow private and foreign investment in the sector. Large users, especially leading business people, were more critical and instrumental in opening up the sector (FG 3, October 2008)

In explaining the problems experienced by prospective telecommunications users, some key informants from the corporatized BTTB (now BTCL), Teletalk Bangladesh Ltd (TBL) and the MoPT reported that the actual waiting list was perhaps longer than the official waiting list figure for fixed telecommunications services. The comment of a former Secretary, MoPT captures this sentiment:

> I think the official waiting list for fixed telecommunications services was not a true reflection of telecom demand. There was a latent demand for telecommunication services which was not reflected in officially recorded demand. Many people did not apply to have new telephone connections on the presumption that their application for new connections would not be entertained due to capacity constraints. Some people did not even apply because they knew they had no powerful connection to influence getting a connection. Introduction of alternative mobile services was a welcome decision to mitigate the situation (Interviewee 2, September 2008).

A key business leader, however, had a different view. He suggested that 'it was not only user demand, but a necessity to support nation's growing economic activity by infusing competition that led liberalisation of investment in the sector'. The following comment of the business leader testifies to this fact:

> To support macroeconomic activities, liberalisation of the telecommunications sector was critical. The Bangladesh economy had been growing at 5-6 per cent GDP growth each year for about a decade. Poor telecommunications infrastructure was a major impediment to achieving growth in other sectors. The government of Bangladesh had to open the mobile phone sector for competition as a part of its domestic reform program to support other sectors and overall economic growth (Interviewee 21, August 2008).

Around two-thirds of the key stakeholders such as users, the private sector and mobile operators, including a former top policy maker in the telecommunications sector, observed that the reality of the demand supply gap for telecommunication services made liberalisation of the sector imperative. The view of a previous chairman of the former state-owned BTTB reflects the need:

> The need for information and telecommunications services was on the rise due to increasing business activities and lot of Bangladeshi people working in the Middle-East, Malaysia, Italy, the USA, the UK and some other countries. While Bangladesh had about a million fixed line telephones, there were more than 1 million potential users who were on the waiting list for a telephone connection. As the existing infrastructure of the BTTB was inadequate, outdated and relatively expensive, the government of Bangladesh was under constant pressure to improve the situation. Liberalisation of investment in the sector was an

> attempt to improve the overall state of the telecommunications service provision (Interviewee 4, August 2008).

Another key respondent noted that it was the domestic necessity that influenced the policy makers to liberalise the mobile phone service and not an imposition from external agencies:

> It was absolutely domestic compulsion and an obligation on the part of a responsive government for providing telecommunications services to the citizens that led to the opening up of the sector (Interviewee 18, October 2008).

These findings from key interviewees demonstrate that supply shortage, dissatisfaction of users with the accessibility and QoS and user demand for quick access to telecommunications service i.e., the large potential market opportunity for mobile phone services was a key driver in opening up the sector. Consumers in all segments, be they business users or, residential users, supported launching of mobile phone services by the private sector.

5.2.2 Technological Development (Advent of Mobile Technology)

Section 5.2.1 shows that the domestic demand for of telecommunications services was a driving force towards unilateral opening up of the sector. This was not the sole factor to help open up the sector. A sizeable number of policy makers and public managers revealed that technological development, such as the emergence of wireless mobile telephony and convergence of computer and telecommunications, helped to break the natural monopoly and allow more operators to enter the market. Although technological development was a global phenomenon, it affected the needs and preference of Bangladesh users, creating its own demand in the minds of the prospective users. The role of new mobile telephony technology in opening up the sector can be grasped from the following quote of a key policy maker:

> When a new technology arrives, everyone wants to try it. And new technology is widely perceived to be always an improvement over the existing one. So we were convinced that the new technology should be introduced in the country. Mobile technology was the main force to influence us to open the sector for private investment so that users can use new technology. Even if there were adequate land-based telephones, still we would have opened the mobile services sector for

> private players because this new technology provides benefits such as mobility and availability that are not possible to enjoy from land-based phones (Interviewee 4, August 2008).

A key public manager observes that the development of mobile phone technology has brought basic changes in the way telephone service is used. He said:

> Previously we shared a home phone among family members. We had missed many important calls when we were away from home. Now we can carry it without missing calls. Even at night we can keep it nearby (Interviewee 22, October 2008).

Some users in focus groups 1 and 2 identified perceived ease of use of mobile technology to be the driving factor in the introduction of mobile telephony (FGs 1 and 2, 2008). One private sector official said:

> The experience of early adopters made us to believe that the mobile phone would be very useful as it connects us with others continuously. We had perceived that the technology would be easy to access and use as fewer formalities are required to own it. The absence of complexity in using mobile technology influenced us to adopt the technology (Interviewee, 31 August 2008).

Around half of the participants in the FG discussions reveal that the variety of services offered by the new technology had an impact on the decision makers to allow introduction of the new technology. The common theme was that the advent of mobile technology and switching apparatus changed the firm and industry boundary in the telecommunications sector. The monopoly model was no longer tenable. They also said that the state-owned fixed phone service provider BTTB lacked capital to invest in the new technology such as to satisfy the varied needs of users. To solve the funding and technology problems, foreign and private mobile phone firms were preferred due to their superior technological skills, and deep pockets (FGs 1, 2 and 3, October-November 2008)

In regard to the introduction of new technology, one key policy maker in the MoPT at the time (during the introduction of the first mobile phone service in 1989-1991) agreed that there were reasons to welcome the first licensee's interest in introducing mobile telephony:

> It was an unsolicited bid and there were opposition by BTTB staff against licensing private parties. But considering the greater interest of the nation, we entertained the unsolicited bid and awarded the first mobile phone licence to the Bangladesh Telecom Ltd (BTL) to relieve people's difficulties with poor telecommunications facilities (Interviewee 1, August 2008)

The mobile phone firms were of the view that technological development such as, microwave technology and introduction of mobile telephony broke the traditional firm and industry boundary[65] and paved the way for the new technology to be adopted through more liberal investment regime (Interview with mobile phone firms 1, 2 and 4, 2008). In the following excerpt, an industry expert explained how technological development influenced the policy makers' mind towards opening the new technology services for private investment:

> It was the technology alone that created its own market and compelled the government to allow the private sector to launch the new service. The convenience of use of this technology, any time anywhere (i.e., ubiquity of the service), created a perception among the prospective users that it would be more useful than traditional fixed phones. Mobile phone technology was a reality. It was not possible for anyone to block the adoption of the technology. And the government realised that it was the private sector that is well positioned for providing mobile phone services (Interviewee 16, March 2009).

Of the stakeholders, a key official from the telecommunications regulator commented that a number of factors have contributed towards opening up the sector. These factors included: advent of mobile technology, easing the huge unmet and increasing demand pressure, and the government policy to introduce market-based reforms. The government embarked on a gradual liberalisation process with a view to introducing competition in the sector (Interviewee 8, October 2008).

Explaining the reasons for allowing private and foreign investment in the sector, one official from the BTRC highlighted key issues:

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[65] Telecommunications were once thought to be a natural monopoly and limited by geographic boundaries.

> It is not my intention to say that mobile phone cannot be introduced in the government sector. However, considering the previous unsatisfactory performance of the public sector operator and the fund constraints on investing in mobile phone technology, the government seems to have realised that the private sector was more equipped, in terms of capital, skill and technology to launch the service (Interviewee 25, October, 2008)

The observations presented so far make it clear that the views of participants on the factors that drove unilateral liberalisation varied. Each participant perceived the factors from his/her own perspective.

The following section presents the views of interviewees on the role of the policy shift in unilateral liberalisation of the sector.

5.2.3 Policy Shift towards Marketisation

Since the mid-1980s most developing countries have shown a marked shift in their trade and industrial policies by gradually adopting more liberal and export-oriented trade and investment policies away from restrictive trade and investment policies. In many countries economic reforms took place due to changes either in political leaders or in the ideas they held about economic development (Laffont & Tirole, 2000; Milner & Kubota, 2005; Rahman, 2005).

Around a third of the interviewees from the private sector and public officials said that, since the early 1980s, there has been a global shift in the ideologies of many countries towards neo-liberal economic policy. Bangladesh has not been an exception to this global trend. The initial shift in economic policy from a nationalistic policy with a socialist flavour towards a mixed economy with increased opportunity for private sector occurred during the first Awami League (AL) government. Successive governments continued to allow a greater role for private investors and the state policy moved from a mixed economy model (with a dominant role for the state) to a free-market economy. This policy shift has been sustained over the last three decades and has facilitated private sector investments in some service sectors, including telecommunications sector (Interviewees 10, 15,17,18,21, September- October 2008).

In regard to the policy shift from a restricted trade and investment regime towards a market-based open economy, a private sector representative reveals:

> From the late 1980s, the political leadership of Bangladesh gradually moved from mixed economy to embrace neo-liberal trade and investment policy in reforming economic sectors. In adopting a market-oriented economic agenda, a consensus was seen among the major political parties. The policies of pro-market reforms were initiated from around 1975 that were later pursued on a larger scale by subsequent governments of both the Bangladesh Nationalist Party (BNP) and the Awami League (AL). Freeing up the telecommunications sector from the reserve/sensitive list[66] to allow private and foreign investment in the sector was a reflection of our policy makers' gradual shift towards market economy. (Interviewee 9, September 2008).

In addition to private sector representatives, the public officials also believe that the gradual shift from a state-controlled economic philosophy to market-led growth resulted in the liberalisation of the telecommunications. The comment of a senior public official testifies to this:

> Starting from the New Industrial Policy (NIP) 1982, all the subsequent industrial policies (e.g., the 1986 Revised Industrial policy, the 1991 Industrial policy) increasingly adopted the market economy policy. Indeed, we saw a change in our policy makers' economic thinking starting from the 1980s to allow participation of private and foreign investment in economic activities. Aid and loan giving agencies pressure also influenced the governments to embrace neo-liberal economic policy. Dismantling and reduction of tariff and non-tariff measures on trade, divestment of public enterprises and allowing private and foreign investment in many previously 'reserved sectors' (for example, telecommunications and electricity were dropped from the 'reserve list' by the

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[66] Exclusive public sector investment was limited to seven sectors by NIP 1982.These were: (1)arms, ammunition and sensitive defence equipment; (2) generation (excluding standby/captive generation), transmission and distribution of electricity, (3) forest plantation and mechanised extraction within the bounds of reserve forests (4) telecommunications (two- way light/high/very high/ ultra high frequency transmission); (5) air transport (excluding cargo) and railways; (6) atomic energy; and (7) security printing (currency note and minting)

> Industrial Policy 1991) were a reflection of the pro-market economic philosophy of private sector led growth (Interviewee 22, October, 2008).

In this regard, a trade expert from the private sector explained:

> Bangladesh's opening up of the telecommunications services sector, banking sector and a few other sectors are not the result of sudden policy shift nor were these the economic philosophy of any particular political party. Starting from the Awami League, the successive governments gradually moved towards an open economy and allowed more roles for the private sector. Mobile phone service liberalisation was a continuation of economic policies that governments, irrespective of party affiliation had been pursuing since the late seventies (Interviewee 26, November 2008).

There is thus considerable evidence that the policy reforms undertaken in the mobile phone services sector were influenced greatly by the liberal economic ideas of the political leadership.

5.2.4 Attracting FDI

About one-third of the interviewees claimed that the Government of Bangladesh, being a cash- strapped government for its development funds, could not allocate sufficient funds in its annual development program (ADP) for the modernisation and expansion of BTTB. Government had to liberalise the telecommunications sector to bring foreign investment, technology and skills to the development of the sector. Moreover, in some cases, government had to issue treasury bonds (T & T bonds) to raise funds for some BTTB projects such as 130,000 digital telephone lines. According to a former public policy maker:

> The Bangladesh government did not have the capacity to provide the huge capital and technology needed for the mobile phone sector. It had to open up the sector to attract needed investment in the sector (Interviewee 2, September2008)

According to a former member of the National Board of Revenue (NBR), it was the lack of investible fund, modern technology and prolonged poor service that influenced the government to unilaterally open the sector (Interviewee 30, August 2008). Two senior officials, one from the BTRC and the other from the Board of Investment (BOI)

also echoed the similar view that lack of capital and cutting edge technology to expand telecommunications services led the government to allow private investment in the sector (Interviewee 7, August 2008; Interviewee 22, October 2008)

In one interview, a business leader cogently described an almost similar view:

> The telecommunications sector had been suffering from underinvestment. Government could not pump the necessary funds to expand network capacity and modernise the telecommunications sector. Private capital was an absolute necessity to increase the supply capacity of the sector and help meet large accumulated telecom demand. Allowing three operators together to operate in the mobile services market in 1996, and subsequently permitting Banglalink to acquire Sheba in 2004 was an attempt to attract FDI. The licence to Warid Telecom was granted to attract FDI in diversified business fields, including hospitality industry, banking, and real estate development (Interviewee 15, September, 2008).

Another respondent who is a board member of the state-owned Teletalk Bangladesh Ltd differed slightly. In his view, FDI was not a key factor in the initial phase of liberalisation in 1989. The initial opening was a test case to see people's attitude towards new technology. Attracting FDI became a key consideration in later phases of liberalisation especially in awarding licence to Grameen, Aktel and Warid Telecom (Interviewee 10, September 2008).

In this regard, a former public manager stated:

> Telecommunications sector is a capital-intensive industry. We have long suffered from capacity constraints. Bringing long-needed investment, especially FDI, was a key factor in introducing the necessary conditions for competition in the sector. Telecom licensing to Grameenphone, Aktel, and Sheba (now Banglalink) was awarded for expansion of capacity. Warid was allowed to launch service on the condition[67] that they would invest in other economic areas. The telecom licence

[67] Although the respondent categorically said that bringing FDI into different economic sectors, including telecommunications, was a driver in issuing the sixth mobile phone license to Warid Telecom, the researcher could not verify with the licensing conditions due to lack of access to licensing documents. It may be that such a condition on FDI of bringing FDI might have been emphasised d in the pre-licensing discussion between GoB and Warid.

> was bait (Interviewee 4, August 2008).

The mobile phone operators also expressed similar views. They observed that, as the Bangladesh government could not provide sufficient funds for the modernisation and development of the sector after meeting the competing demands of other sectors, liberalisation was inevitable to inject new investment. After liberalisation, massive investment came into the sector. For instance, Grameenphone so far invested around $US1600 million (more than BDT112000 million) on network and infrastructures since its inception in 1997 (Interviewee 1 from MF 1, January 2010).

Another informant said that Orascom Telecom (Banglalink) invested around $US650 million (i.e., more than BDT 45000 million) since 2005. Like these firms, other mobile firms also invested in network deployment and capacity building (Interviewee 2 from MF 2, September, 2008, January 2010). For Bangladesh, it was beyond its limited budget to fund such huge amount for a single sector. The only viable solution was to invite the private participants into the sector (Interviewee 2 from MF 2 Interviewee 1from MF 5, September, 2008, January 2010).

With regard to capital requirements for the sector, one private sector representative (business leader) observes:

> Bangladesh did not have a strong capitalist class with investible capital who could risk investing in an as yet unproven mobile phone business in Bangladesh and wait a long time to get the money back. As a new sector, there was also a lack of necessary technological skills and management expertise. The development of the sector was critically dependent on the inflow of foreign capital, technological skills and management in the sector (Interviewee 9, September, 2008).

5.2.5 Clientelism, Personal Relationship and Lobbying

The telecommunications sector was first opened for private and foreign investment in 1989. A licence was issued to Bangladesh Telecom Pvt. Ltd (BTL) in 1989 to launch a mobile phone service. The majority of interviewees from other stakeholders and users group said that the sector was opened first for a single operator in response to a request from a businessman (the owner of BTL) who was known to the then President.

In order to understand the influence of clientelism and personal relationship in liberalising the sector, it is relevant to highlight in brief, the findings on the mobile phone licensing regime in Bangladesh.

5.2.5.1 Licensing

It has been revealed by the key policy makers involved in awarding the first licence that the process of issuing licence was governed by the personal relationships of the licencee. Three former public managers reported that the owner of BTL Shajad Ali was awarded the first mobile licence because he had a personal acquaintance with the then president H M Ershad. The BTL owner had developed the relationship when Ershad was in the Army and Shajad Ali, supplied signaling and telecommunications apparatus to the Bangladesh Army prior to 1989. When Ershad later became the President, the owner of BTL solicited a mobile phone licence. The licence to BTL was issued under instruction from the President of the day (Interviewee-4, August 2008; Interviewee 27, Interviewee 28, October 2008). In this regard, the Posts and Telecommunications minister of the day agreed that the first licensee was known to the President. But he was granted a licence because he was the only person who approached for a mobile phone licence to provide services in the sector. There were no other considerations or exchange of benefits in issuing the licence (Interviewee 1, August 2008).

In this regard of licence issue, one former public official has provided a contrasting view to that of the former minister. He reported that it was clientelism that worked in the granting of first licence. The key policy maker (patron) of the day distributed state patronage (licence) to the BTL owner in exchange for his (BTL owner's) loyalty to the President (Interviewee 8, October 2008).

In this regard, a former public official who had worked in the sector, noted:

> As there was no regulation or telecommunication policy to follow in 1989-1997 when we issued the licences, personal acquaintance and bribery got its way in granting the licences (Interviewee 20, October 2008).

A private sector representative, who once worked in the state-owned BTTB noted:

> The private company who was issued the first mobile phone licence was handpicked due to purely personal connection. The licensee enjoyed the state concession without any fee at the discretion of the licence-provider (Interviewee 4, August 2008).

Two former public managers noted the process of taking the decision to open the sector for private investment in 1989-90 was unplanned and opaque. No competitive bidding process was followed in issuing this licence to the owner of Bangladesh Telecom Pty Ltd. (Interviewee 2, September 2008; Interviewee 4, August 2008). An independent analyst supported the view:

> The granting of the first mobile licence and the two fixed licences (during 1989-1991) lacked transparency and was not guided by any pre designed policy. The GoB had no market study about the immense potential of mobile phone service in Bangladesh. Had they had any such idea, the government could have earned millions of dollars in licence acquisition fees as happened in other countries. If you look at Pakistan, you will see how much of a licence awarding fee they have charged for awarding a licence (Interviewee 11, September 2008).

With reference to the licencing procedure, all the key interviewees agreed that the first opening of the market for private sector investment was the result of an unsolicited bid and was induced by the persuasiveness of the owner of the first licencee.

The interviewees (mainly policy makers and independent analysts) however had different opinion about the second phase of liberalisation in 1996. In their view, the policy makers were by then convinced of the necessity of mobile phone services to support increased economic activities. The understanding of the significance of the telecommunications sector as an infrastructure sector for the economy influenced policy makers to undertake greater liberalisation of the mobile services market by 1996 (Interviewee 28, October 2008, Interviewee 14, October 2008).

The licence awarding process in 1996 and afterwards was relatively transparent and competitive, except Grameenphone and Warid. Personal lobbying[68] and bribery played a vital role in licensing to Grameenphone and Warid Telecom respectively. A former CEO of a telecommunications firm expressed similar views:

> When Grameenphone applied for a licence, it was not on the short list of potential recipients. Dr. Yunus called on the then prime minister (PM) Hasina at her office and used his personal power and arguments to convince the PM about the reasoning of Grameenphone's claim for a mobile phone licence. Grameenphone ultimately came out as one of the winners out of the 14 (so far as I remember) bidders in August 1996. In the case of Warid Telecom, mobile phone licence was given without any competitive bidding in return for bribery (Interviewee 16, March 2009).

One independent analyst reported that private mobile operators took a negative stand against the Teletalk Mobile Phone project to continue high tariffs and influenced ministry officials by bribing them to defer the project. They also used their personal connections in getting access to ministry officials. The mobile phone operators feared that launching of mobile phone services in public sector would end their dominance in charging high tariffs (Interviewee14, October 2008).

The findings above imply that a number of factors, and not a single factor, contributed towards liberalisation of the sector. The interviewees held different views and put varied emphasis on the factors that were perceived to have contributed towards unilateral liberalisation. These differences of opinions were not found to be dependent on who they worked for; rather the varied responses were seemed to be caused by differences of thinking and understanding. Almost all interviewees, however, were unanimous in reporting that it was the lack of telecommunications facilities, the immense market opportunity for new mobile services, technological development and attracting FDI that spurred liberalisation of the sector.

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[68] It has been stated by one respondent (on condition of anonymity) that Grameenphone employed an Indian national and engineer, Pitroda to lobby on Grameenphone's behalf. Pitroda had once been involved in implementing networks in India.

5.3 Assessing the impacts of unilateral liberalisation on the mobile phone users

The previous section discussed the main factors that were perceived to have played a key role in the unilateral liberalisation of the mobile phone sector. This section addresses the following research question:

> ***RQ2:*** *What impact did the unilateral liberalisation have on accessibility, pricing, quality of services and diversity in the mobile phone sector?*

This thesis is primarily concerned with identifying the impacts of liberalisation in terms of accessibility, pricing, diversity and quality of service. Exploring the impacts on consumers was considered appropriate because:

> [...]government policy makers including telecommunications regulators have repeatedly declared that it is the impact on the consumer (both residential and business) that should, and does drive regulatory policy (Xavier, 2000 p.818).

In addressing this question, mobile phone users and firms were specifically asked to express their view about the impacts of unilateral liberalisation on accessibility, pricing, quality and diversity of services. The diverse views of the mobile phone users about the impacts of liberalisation on their benefits are stated in section 5.3.1.

5.3.1 Impact on accessibility

Mobile phone users commended the decision on liberalisation and gave a comprehensive picture of the different benefits of liberalisation and competition that consumers enjoy in terms of accessibility, pricing, QoS, and diversity of services. They were of the view that the introduction of competition in the sector offered a host of benefits such as easy and affordable access reduced mobile tariffs, better service and more choice. It also helped them get rid of the immense problems and corruption that were associated with the state monopoly. The positive impacts of liberalisation as described by the users and other stakeholders can be grouped into the following broad themes.

5.3.1.1 Users perspectives

Focus Group (FG) participants reported that liberalisation of mobile phone services increased accessibility in two respects: first, easy and quick acquisition of mobile phones; and second, ready access to other people outside of physical and time constraints.

The common view of the FG 1 participants was that they had to wait three to five years to secure a landline connection. The telephone office gave them varying reasons for this, such as a shortage of numbers for new connections, a lack of telephone cables to provide connections, and long wait list. When their application was approved for a new connection, they had to pay around $US250 (BDT18,000) to obtain the required 'demand note'[69] (FG 1, October 2008).

This scenario changed quickly with the launching of mobile phones. When mobile phones were first launched by the monopoly provider Citycell[70], it remained difficult and time-consuming to access mobile phone services due to the need to go to the sales office of the provider, fill in an application form and provide photos and initial deposits. And at that time, unlike now, sales offices were few in Dhaka.

Later when three more mobile phone providers launched services, accessibility was eased to some extent because fewer formalities were needed. Moreover, SIM cards and connections were sold in many sales centres of providers. But accessing mobile phones was still expensive, although much lower than under the monopoly. Subscribers started to grow at a slow pace. There were around 1.2 million subscribers in 2003 (after seven years). Mobile phones came within reach of common people in the last two or three years. Since 2005 mobile phones have become so accessible that

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[69] The 'demand note' is a letter informing the potential subscriber/applicant for a fixed-line phone that his/her application for a new connection is approved. A demand note does not guarantee a new connection. A connection is provided only when it is available at the local exchange.

[70] Citycell is the brand name of PBTL. PBTL acquired the mobile phone licence from the BTL owners because for some internal management problems, BTL could not launch its mobile phone services.

almost everybody from the rickshaw puller to the carpenter to the betel leaf vendor, electrician and maidservant now own a mobile phone (FGs 1 and 2 October 2008).

Accessibility to fixed-lines also became cheaper. The BTTB, subsequently re-named BTCL after corporatisation, also reduced its connection charges and tariffs several times during 2007-2009 due to competitive pressure from mobile phones (FGs 2 and 3 , October 2008).

The following comment of a user (who uses both mobile and fixed phone services) illustrates how competition impacted on subscribers' choice of operators:

> BTTB phone was once a symbol of status for many of us. Competition in the mobile phone sector made it easy for us to quickly access mobile phones at affordable rates. The cheaper and easily available mobile phones are encouraging many subscribers to surrender their land phones in favour of mobile phones. Already, a good number of BTTB subscribers have surrendered the once much desired BTTB land phone connections (Interviewee 30, August 2008).

The common view of subscribers is that the entry of three mobile phone operators in 1997 resulted in significant expansion of service deployments. At present, mobile phone service is available in every part of the country, even in rural remote villages. It has been made possible due to drastic reduction of costs involved in accessing mobile services such as subsidised handset prices, SIM cards at nominal prices and reduced calls rates (FGs 1 and 2, October 2008).

In describing the impact of liberalisation on accessibility, a mobile phone user (also a private sector representative) notes:

> Under the monopoly, mobile phone service was confined to urban business users, especially in Dhaka, Chittagong and other metropolitan cities. Greater liberalisation (by licensing more providers) of mobile phone services made access much easier. Mobile services provide me with ready communication with my relatives living abroad. It also allows new communication access to those who could not think of having access to it such as maidservants, college students with no landline telephones, and blue collar workers (Interviewee 21, October, 2008).

Focus group 3 members expressed a common view that mobile phones afford people more contact with others. People can provide access to multiple parts of their social

network, such as work and family life simultaneously, access to remote locations and talk to or send SMS at all times of the day and night. They were however critical that mobile phones sometimes ring at inappropriate times (FG 3, October 2008). A sizeable number of user interviewees were of the opinion that liberalisation helped equality of access because any ordinary person can now access to mobile phone services that were once thought to be for rich people only (FG 3, October 2008).

Although competition was termed the main contributing factor towards increased accessibility, a considerable number of interviewees placed emphasis on the role of technological development. They stated that technological development resulted in significant reduction in telecommunications equipment and handset costs and contributed to overall reduction in accessing telecommunications costs (FG 2, October 2008). In this regard, one telecommunications user (also a telecommunications analyst) stated:

> In the last 10-15 years, significant reduction took place in the costs of switching equipment, base stations, mobile receivers and handsets. For example, in 2001 a base station was about $US 0.50 million. Currently, the same base station price can be procured at a cost of around $US 0.11 million only. Similarly antenna cost fell by about 50 per cent in price from a few years ago (Interviewee 32 August 2008).

A number of professional users from FG 3 reported that the initial liberalisation process was unplanned. There was no Telecommunications Act or policy or liberalisation roadmap to ensure benefits of liberalisation. Operators were not given a roll-out target to provide connections to a certain number of customers or regions within a given time frame nor was there any ceiling on mobile tariffs. In such a situation the first mobile phone operator (Citycell brand) targeted high-end customers rather than increasing accessibility. One professional user (also a telecommunications expert) stated:

> Before 1997, the monopoly provider Citycell targeted the very rich segment of the population, charged $US2500-3000 for each connection and acquired only about 1500-2000 subscribers in the first year to provide mobile phone services. It had no national focus for network expansion. Accessibility became cheap and quick when the market experienced true competition after launching of services

> by Banglalink and state-owned Teletalk. Banglalink brought price differentiation while GP did product differentiation (Interviewee 31, August 2009).

In reporting easy accessibility to telecommunications services, some professional users mentioned that mobile phones had connected people from even the most remote corners of the country. Now a farmer or a fisherman can check the price of his produce in distant markets via mobile phones (FG 3, October, 2008).

The following account by an independent telecom analyst (also a user) suggests how liberalisation of mobile phone services contributed to increased accessibility:

> Now you can hear the mobile phone ring tones even in remote villages. You may have noticed that many mobile phone users now keep SIM cards of two or three mobile phone operators to avail themselves of lower rates for calling different operators. Today even a betel leaf shop owner, maidservants, school going students and rickshaw pullers also can afford a mobile phone. You see, in 38 years since our independence, BTTB has been able to provide telecommunications service to around 1.1 million users while in just more than a decade mobile phone operators provided mobile phones to 58 million subscribers. Thanks to liberalisation and competition for easy accessibility to telecom service and to other people (Interviewee 32, January 2010).

5.3.1.2 Regulators and industry expert's perspectives on accessibility

The telecommunications regulator believed that opening up the mobile phone sector brought a telecommunications revolution in the country. A BTRC official said:

> The teledensity was around 0.4 in1997; it stands at more than 25 in 2008. The rapid growth in teledensity can be largely attributed to mobile phone competition. The village people previously could not think of accessing telecommunications services. Now people can access to telecommunications services due to expansion of the mobile services even in rural villages. No doubt, initially, the shared-user model of Grameen Village Phone played a vital role in providing services to rural people. Later, it was the competition between multiple operators that helped a significant increase in telephone penetration throughout the country (Interviewee 8 , October 2008).

One industry expert commented:

> Mobile services liberalisation has revolutionized the telecommunications landscape in Bangladesh in the last few years. Liberalisation *per se* did not result in any significant increase in accessibility as is evident in the first few years following full liberalisation in 1996-97. Accessibility became very quick and available almost everywhere once competition took hold in 2005 and after. Mobile connection through buying a SIM card at nominal prices becomes a matter of few minutes only. Before 2005, accessibility was time consuming; SIM cards and connection were not cheap or available everywhere. Under the monopoly regime, accessibility was beyond the reach of the common man. Citycell had focused on elites in Dhaka and the Chittagong region (Interviewee 11, September 2008).

According to an industry expert, liberalisation as many perceive did not contribute much in providing accessibility to ordinary people. He notes:

> The sector was fully liberalised in 1997 through awarding three more licences in addition to the incumbent operator Citycell. What impacts did it have on accessibility? If you compare the accessibility situation, you see, in the seven years following full liberalisation (i.e. 1998-2004), total subscribers were around 4 million while between 2004 and 2008, subscribers sky rocketed to more than 44 million. It was a competitive mobile phone market in the last three or four years that forced operators to lower connection fees and offer cheap accessibility for ordinary citizens. Mere liberalisation did not bring beneficial results for users (Interviewee 31, August 2008).

5.3.1.3 Mobile phone firms' perspective

Mobile phone operators are almost unanimous that liberalisation helped the mobile phone market become competitive, which resulted in easy access of mobile services for ordinary citizens. Easy availability of SIM cards, promotions such as free talk time, and handsets at reduced price made accessibility easier. Willing subscribers can now instantly access to mobile phone services by buying a SIM card from a nearby shop at nominal prices. Spectacular growth in the number of mobile phone subscribers was possible due to the expansion of mobile service throughout the country by multiple

operators. Samarajiva (2008) observed that Bangladesh had almost complete coverage, except for areas that are barred for security reasons.

A key interviewee from a mobile phone firm stated that accessibility to mobile phone services has increased to such an extent that many users now carry multiple SIM cards, so they can flip them in and out of their phone sets to take advantage of differential rates and plans. In this regard, the official said:

> They (users) no longer use a single number as their identity and are not loyal to any operator. They have three or four SIM cards (Interviewee 3 from Mobile Firm 1, October 2008).

The public sector mobile phone operator TBL however, has a different view:

> I do not agree with the premise that liberalisation *per se* resulted in cheap accessibility. Even after allowing multiple operators, operators continue to charge higher tariffs and connection fees. Growth of mobiles was not significant during 1997-2004. There was some hidden understanding among the operators not to engage in price competition. The small operators were happy with this arrangement as they did not have country-wide network coverage to effectively compete with the market leader. The announcement of launching of mobile phone services by public sector in the name of TBL and its entry in 2005 and a few months later, entry of another private operators Banglalink were the main factors to force existing mobile phone operators to engage in competition. Since then, accessibility became quicker and easy. However, it was not easy to launch the TBL service. Mobile operators used their connection and resources to conspire with the public officials, especially ministry officials, so that the Teletalk Project was significantly delayed. The Teletalk licence was given at the third attempt MoPT. Equipment procurement for TBL was delayed for three years by the ministry. The MoPT deliberately delayed the whole process of equipment procurement and other formalities in launching Teletalk mobile phones. Delay in the Teletalk project allowed private mobile phone operators to maintain high mobile phone tariffs (Mobile phone firm 6, August 2008).

Although there are differences of views, the comment implies liberalisation resulted in increased access to telecommunications services. The degree of accessibility,

however, increased dramatically when operators engaged in true competition for market share.

The following section reports the views of participants about the impact of liberalisation on the mobile phone pricing.

5.3.2 Impact on mobile phone pricing

Mobile phone users, mobile phone firms, BTRC and other stakeholders (who are also mobile users) interpreted the impact of liberalisation and competition on mobile phone tariffs differently. The focus group discussants reveal that, initially when the mobile phone was introduced in Bangladesh, mobile phone tariffs consisted of three components: a one-off connection fee (SIM card fee), call charges and monthly rental. With the introduction of competition, the monthly access charge was initially lowered and ultimately withdrawn by the operators.

They also reported that significant decline in mobile tariffs took place from 2004-2005 onwards. Contrasting and differing opinions regarding the existence of implicit price collusion among operators were revealed by mobile operators, mobile users, some former policy makers and independent analysts. The majority of the operators (four out of six operators) hold the view that subscribers were experiencing cheaper call rates due to liberalisation. Contradicting this position, two operators, including the public sector mobile phone operator stated that mobile tariffs remained high and unchanged until 2004, due to some form of implicit price collusion among the operators. The sector became competitive when public sector telecommunications firm Teletalk and private operator Banglalink entered the market.

5.3.2.1 Mobile phone users' and industry experts' perspective

A majority of the mobile phone users reported that a mobile phone was a 'posh' item during the monopoly period of 1992 to March, 1997. Each mobile connection (including the handset) costs ranged between $US 2500-3000 and per minute tariffs were in the range of $US 0.22- 0.25/minute [BDT 15-16] (FGs 1, 2 and 3, October 2008). Even when there were four operators, users were bound to pay high costs for connection due to the 'bundling of services' by the mobile phone service providers. A

subscriber's comment (published in a daily English language newspaper) is worth noting:

> The most glaring example of over-charge by the mobile phone companies in Bangladesh is that the T&T is now billing as low as BDT7.50 per minute (on land-lines) for 'Economy ISD' calls to America, whereas the cost per minute for a phone call within the same city of this country may be up to BDT6.00, if anybody is using the so-called channel of 'mobile to mobile'! (The Daily Star, 2005b).

The monthly access fee gradually reduced. When TBL was preparing to launch mobile phone services in 2005, the monthly access charge was $US 8.15[71] [BDT 500] for private operators. As soon as the TBL entered the market, Grameenphone reduced monthly access charge from $US 8.5 to $US 5.0 for GP regular and from $US 4 to $US 2.5 for GP national in 2005 (FG 3, October 2008).

A telecommunications analyst observes:

> The announcement that GoB would launch a mobile phone service through the Teletalk Bangladesh Ltd (a state-owned firm) has indeed had an impact on private mobile firms. Private operators realised that the days of charging high tariffs through tacit price collusion were over. They started to gradually engage in competition under the pressure from the entry of TBL (Interviewee 14, October 2008)

Around two-thirds of the participants in the FGs reported that the absence of a telecommunications regulator until 2001 helped mobile phone operators maximise profit (FGs 2 and 3, October 2008).

One industry expert stated:

> Even after the entry of three mobile phone operators in 1997, the tariff situation did not change much until state-owned Mobile Phone service provider TBL and a private operator Banglalink with deep pockets and strong determination to capture market share entered the market. Politically appointed regulators with

[71] This is found by applying the exchange rate of 1 $US = BDT 61.39 as per the Bangladesh Bank Exchange Rate for FY 2005.

> poor enforcement, high market concentration and limited competition were responsible for there not being any significant reduction in tariffs until 2004. Government officials also did not show interest in constraining mobile operators to uphold consumer interests. Adoption of different government policies without adequate consultation and inputs from the stakeholders/public officials make them indifferent in implementing the policy provisions (Interviewee 11, September 2008).

One mobile phone subscriber commented:

> With the launching of mobile phone services by GP, Aktel and Sheba Telecom in 1997, the sector was theoretically liberalised but there was little competition among the operators. No significant change in mobile phone tariffs was seen. We had to pay tariffs at $US 0.22-0.24 per minute during 1999-2002 , which was almost similar to, if not the same as, the ranges of tariffs between $US22-0.30/minute we paid in 1997-98 for services by different operators (Interviewee 30, August 2008)

The unchanged tariff situation is evident from the following price statistics, as revealed by the telecommunications regulator (See Table 5.1 and 5.2):

Table 5.1: Similar tariffs –Sheba, PBTL and Aktel (Tariffs in $US/minute for post paid service)

	Jan 1998	Jan 1999	Jan 2000	Jan2001	Jan 2002
Sheba	0.22	0.22	0.22	0.22	0.22
PBTL	0.22	0.22	0.22	0.22	0.22
TMIB	0.24	0.24	0.24	0.24	0.24

Source: Interview and focus group discussions, 2008

Table 5.2: Grameen Phone's stable tariff during 1998-2002 (Tariffs in $ US per minute)

Year/tariff rate	January 1998	Jan 1999	Jan 2000	Jan 2001	Jan 2002
	0.30	0.30	0.30	0.30	0.30

Source: Interview and focus group discussions, 2008

A majority of users reported that the countrywide network coverage built on Bangladesh Railway's 1800 km Fibre optic network, better quality perception and first mover advantage helped Grameenphone to command premium tariffs (FGs 1, 2 and 3, October 2008).

Accepting the views of the users, one telecommunications expert commented:

> Liberalisation paved the way for the operators to exploit potential users' significant desire for telecommunications service. Operators knew there was huge unmet demand for telecommunications services. In the absence of strong regulatory enforcement and the indifferent role of the ministry, operators were engaged in tacit price collusion to keep mobile charges artificially high and almost unchanged between 1997-2003. Private mobile operators captured the ministry and the regulator to evade implementation of regulatory provisions and avoid competition. Subscribers were captive in the hands of the operators (Interviewee 11, September 2008).

In contrast, a private international gateway operator provided a different proposition. He said that liberalisation brought significant benefits in terms of reduced rates for the mobile phone customers. Mobile phone customers paid $US0.25-0.30/minute during 1997-2004. Now they pay in the range of $US0.004-0.04/minute. Competition forced operators to reduce tariffs (Interviewee 9, September 2008).

A number of users at focus group discussions reveal that operators had enjoyed *significant market power* over the subscribers. During 1997-2000, mobile operators had bundled services to compel the customers to buy SIM cards and handsets together. Due to bundling, customers had no alternative but to pay exorbitant prices for handsets. For instance, the price of the Aktel post paid SIM was $US 850 (BDT 38,500) in 1998. It was a very high price considering the reality that this price

amounts to double the monthly salary of a mid- level public manager in Bangladesh. Fierce competition starting from 2005 forced operators to unbundle their packages, and offer SIM cards at a very low price[72] ($US 2- 5) (FGs 1 and 3 October 2008).

A significant number of mobile phone users (especially users from professional and business focus groups) reported that mobile phone operators were not solely to be blamed for charging high tariffs and compromising QoS. Politicians and a group of bureaucrats were also influenced by private mobile firms and extracted rents from them. These politicians and officials extracted rents from private mobile phone service providers by creating barriers to the entry of Teletalk Bangladesh Ltd (to keep out this potential competitor and to benefit private operators). They also created artificial complexity and delay in Warid Telecom's entry and frequency allocation using their regulatory power. They then took bribes from Warid Telecom by expediting frequency allocation (FGs 1, 2 and 3, October 2008).

A considerable number of users and policy makers held similar views that there was implicit price coordination among the operators to keep prices artificially high The BTRC remained mostly non-functional, because it was 'influenced and captured' by the private operators and tilted towards private operators' interests (Interviewees 2, 11, 22, 28, 31, August- September, 2008). Some participants in Focus groups-2 and 3 reported that operators were very creative in price manipulation. They maintained different prices, to create an image they are in price competition but they had an informal understanding not to reduce prices. The following illustration cited by a focus group member reflects the point:

> There was an implicit cartel among the operators. They maintained a little difference from one another's prices to show that their prices were different. For example, GP tariff $US 0.08/minute (BDT4.30); Aktel tariff $US0.075/minute (BDT 4.25/minute, basically there were no difference. Neither the government nor the BTRC seriously examined the mobile phone pricing. The reason for non-

[72] A Banglalink connection was available at $US1.5 (BDT 100) and Grameen prepaid connection was available at $US 5 (BDT 290) in 2005. For some time (between 2007- July 2008), connection was free.

> action was lack of interest in policy actors and public officials to protect public interest and poor enforcement by the regulator (FGs 2 & 3, October 2008).

One industry analyst supported the complaint about price collusion and explained the reasons for BTRC's inaction:

> The mobile phone operators formed a cartel among them to charge high price and maximise their return. The slight difference in inter-firm tariffs was a mechanism to show they are in competition with each other. Before 2004, there was *unity of convenience* among the operators. The BTRC was ineffective and non functional due to reasons such as the BTRC chairman and commissioners were mostly recruited on political grounds and were subject to political government influences (because The Bangladesh Telecommunications Act, 2001 provided for appointments to be made by the governments). Private operators also influenced the BTRC to refrain it from enacting and implementing price and QoS provisions. They did it to avoid a price range and QoS monitoring by the regulator (Interviewee, 10 September 2008).

In this respect, a mid-level official in the state-owned BTCL testifies to the fact of collusive arrangement:

> I think there was some form of unity and price signals among the operators to keep prices high. If you collect the tariffs of different mobile phone firms from 1997-2004, compare the prices among the operators and see the pattern, you will observe there was very little difference in tariffs. Poor institutional monitoring allowed this to happen (Interviewee 28, October 2008)

One business leader (also a user) however, provided a different view about price cartel.

> It is not true that there was a cartel among mobile phone operators during 1997 to 2004 in keeping mobile phone prices high. Market forces had determined price. However, prices were not monitored by the regulator to examine how far prices were justified (Interviewee 9, September 2008).

A consistent theme across the interviews was the weak role played by the telecommunications regulator in upholding users' interests. In reporting high prices of mobile service, users expressed their anger and frustration about the indifferent role of the BTRC and the MoPT. In their view, the telecommunications regulator was

unwilling to enforce price and interconnection provisions of the Telecommunications Act 2001 until the non-party caretaker government came to power in January 2007.[73] The regulator had set no price ceiling or directives on mobile pricing (FGs 1 & 2, October 2008).

One independent analyst stated:

> BTRC failed to adopt a carrot and stick approach to force operators to charge a reasonable price and care about the broader public interest. Its actions and directives were largely limited to warnings and suggestions during 1997/98-2004 (Interviewee 32, January 2010).

About two-fifths of the user interviewees stated that in many countries, operators are given a price range. Such a price range was absent in Bangladesh. They, however, expressed the view that the regulator lacked capacity in terms of shortage of skills such as lack of accounting and finance background commissioners in the BTRC to monitor and assess tariff setting. Information asymmetry between the regulated mobile phone firms and the regulator on cost data and the imperfect market in Bangladesh was also to be blamed for high tariffs (FGs 2 and 3, October 2008).

The majority of consumers reported that belated competition among the operators allowed them not only to charge high tariffs on mobile calls, but also to impose charges on incoming calls (FGs 2 and 3, October 2008). One public sector representative complained about the high tariffs until Banglalink and TBL entered the market:

> Mobile phone service liberalisation did not bring noticeable change in mobile prices until the state-owned firm TBL and another private operator Banglalink with considerable clout launched their service in 2005.Once we had cried out

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[73] The user interviewees in focus groups told how, earlier, BTRC could not function properly for three reasons: (1) weak and ineffective BTRC leadership due to flawed appointments to the commission; (2) lack of telecommunications sector background and experience of the BTRC chairman (the first two chairmen); and (3) political interference.

> against exorbitant GSM mobile tariffs. We had no forum to raise our voice against operators' arbitrary tariff setting. Mobile operators enjoyed free rein over us. The situation has reversed in the last 3-4 years. Now, mobile operators are crying out against the price war and an unprofitable business situation (Interviewee 30, August 2008).

It was not only the mobile tariff, state-owned land phone service provider BTTB also slashed its connection fees, monthly line rents and tariffs several times after 2005 due to competitive pressure from the mobile segment. The NWD charge was halved to $US0.02/minute in 2007. BTCL (formerly BTTB) continued to lower connection charges and call rates after every few months to discourage its customers from switching to mobile phones (Interview with BTCL, 2008).

One private sector trade expert reported that the absence of competition law and lack of anti-competitive provisions in the Bangladesh Telecommunication Act 2001 was a major reason for not having a competitive outcome between 1993 and 2004/5 (Interviewee 6 October 2008). One telecommunications analyst emphasised the importance of the creation of a competitive environment:

> Telecommunications users suffered from high connection price of $US2000-2500, exorbitant tariffs and poor service during the monopoly of Pacific Bangladesh Telecom Ltd (Citycell). The situation improved marginally when multiple operators launched the service in 1997. Subscribers had been enjoying the true benefits of liberalisation since 2005 onwards when market became competitive (Interviewee 14, October 2008).

In a similar vein, an university professor (who is also a user of mobile phones) stated that, liberalisation definitely helped the sector to grow in all respects: accessibility, pricing, QoS and widened consumer choice of services at competitive rates. However, it happened only when the market experienced competition. Mobile phone operators were solely interested in maximising their returns without caring for users until state-owned TBL came in the scenario. They lacked business norms or ethics of competition. Although, costs of mobile phone service were constantly declining due to reasons such as reduction of equipment costs and 'economies of scale', operators did not pass on such cost savings to users in the form of reduced rates (Interviewee, 26 November 2008).

A few users from FG 1 said that operators adopted an unjust strategy by following 'per minute pulse' in billing instead of 'per second pulse'. This strategy allowed them to charge and exploit a customer for a full unit of use (here 1 minute) even though the user might not have talked for a whole unit (FG 1, October 2008).

Users frequently reported that the government should have allowed more players to operate to make the market competitive. This view however, was criticized sharply by the mobile phone operators. They complained that the Bangladesh mobile phone market is crowded and suffers from over competition. The views of mobile phone operators follow next.

5.3.2.2 Mobile phone operators' perspective

Mobile operators reported that liberalisation of the mobile phone sector resulted in significant tariff reductions particularly since 2005. They reported that the per minute tariff for different packages now came down to between $US0.01 and 0.02 compared with a range of $US0.22-0.30/minute for different service packages and providers in 2000. The operators (except the state-owned one) took the uniform view that due to the stiff price competition and high SIM tax; they (except GP) are losing money. In the long term, it will be detrimental for the growth of the sector. The President of the Association of Mobile Telecom Operators of Bangladesh (AMTOB) expressed his concern:

> Mobile Phone tariffs in Bangladesh have gone down unprecedentedly to become the lowest ($US0.004) in the world. At this price, no mobile phone company can survive. The SIM tax of $US12 for each new mobile connection emerged as the biggest impediment to the growth of the sector. Five out of the six operators are operating at a loss because we subsidise this SIM tax in order to acquire new customers. In such a situation of high subscriber acquisition costs, the small operators may face bankruptcy (Interviewee 11, September 2008).

With regard to high mobile tariffs before 2005, a key official from a leading mobile phone firm said:

> I agree that before 2004 mobile tariffs were relatively higher. The reason was that during 1997 to 2003/4, the number of mobile phone subscribers was limited. But our fixed costs were high. We could not enjoy "*economies of scale*"

> and reduce mobile tariffs. Mobile service cost was reduced first by the introduction of GSM technology and prepaid billing and then by competition (Mobile firm 1, January 2010).

One small mobile phone provider reported:

> We could not reduce tariffs before 2005 to acquire more market share for two reasons: (1) we did not have an adequate network through which we could provide service to more subscribers; (2) our cost structure was high, due to high interconnection cost with GP and low 'economies of scale' compared to the biggest operator. So we could not beat the market leader. So we just followed the market leader. (Mobile Phone firm 3, 2008).

Mobile phone operators also reported that due to stiff competition, they not only offer significantly low tariffs, but also have to differentiate themselves by providing different promotional packages free of costs such as the FnF scheme, off-peak rates, free talk time for new connection, bonus talk time, loyalty discounts on airtime, IDD discount for international calls, and free SIM replacement (Mobile phone firms 1, 2, 3, 4, 5 September-October, 2008).

Contrary to the views of private operators, public sector mobile phone operator TBL said,

> Liberalisation brought only insignificant benefits for users despite there being several operators. Private operators coordinated pricing and maintained high price before state-owned TBL launched its service in March 2005. Parliamentary Committee on MoPT invited private operators in 2003-04 and urged them to reduce mobile tariffs; but operators did not adopt the suggestions. A licence to TBL was issued with a view to putting pressure on private operators to reduce price. The launching of mobile phones by TBL at a much lower rate ($US 0.05/minute in peak hour) than private operators ($US 0.09 5) offered and with no incoming calls forced the private operators to engage in price war. The launching of Banglalink brand also contributed to this (Interviewee MF 6, October August 2008).

Contrary to other private operators, the key respondent from a mobile phone firm notes:

> Grameenphone and Banglalink reduced their tariffs dramatically immediately before the commercial launching of Warid Telecom with a view to hindering Warid's market entry. The objective was to limit competition (Mobile phone firm 5 October 2008).

Regarding the telecommunications regulator's role in making the sector competitive, before and after 2007 (when the BTRC was reconstituted by the caretaker government in 2007), two mobile phone firms agreed that there was regulatory slack and lack of monitoring by the regulator before 2007 (Mobile phone firms 1 & 4, October 2008). One interviewee, however, complained that:

> It is true that we were subject to less monitoring previously. Now we are subject to excessive scrutiny. We have to go to the BTRC even for trivial matters like introduction of a new service. BTRC now wants to *micro-manage* everything. The regulatory decisions also lack transparency (Mobile phone firm 1, January 2010).

In summary, it has been found that liberalisation did not result in much competitive tariffs for mobile phone users during the period 1997-2004. The tariff has been reduced drastically in the mobile phone sector when the sector became competitive with the launching of TBL and Banglalink's services. Weak regulatory enforcement and price collusion among the mobile phone firms were identified as causes for the poor outcome of liberalisation.

5.3.3 Impact on Quality of Service

Quality of service (QoS) varies from industry to industry depending on the nature of industry. Moreover, consumers cannot easily determine the QoS before they have received it because telecommunications is an experience good (Baker & Tremolet, 2003).

The QoS of mobile phone operators is usually measured by a number of indicators: percentage of call drop rate, faults per 100 customers, complaints per 100 bills issued, percentage of complaints resolved within a stipulated time, customer service, voice quality and call success rate (Australian Communications and Media Authority

(ACMA), 2008; Sutherland, 2007; TRAI, 2008). Some elements of quality are directly measureable, while others are more about perception of quality of the service[74] and of the behaviour of the operators (known as quality of experience- QoE).

The issue of service quality of mobile phones emerged across all the interviewees, although it resonated most strongly in the interviews with mobile phone users. Mobile phone firms, users and the regulator held differing views on service quality. Operators are of the view that QoS was not up to the mark in the first few years, but it had improved significantly with the increased competition in the industry. By contrast, users reported that compared to the monopoly period, QoS definitely has improved but they still suffer from poor service quality especially with regard to poor call completion rates, voice quality and customer service. The perceived quality of service by the users is reported below.

5.3.3.1 User perspective

BTRC is yet to set QoS parameters for mobile phone operators. It has prepared a draft guideline on 'Quality of Service Parameters for Mobile Telecom Service' recently (Interviewee 7, 2008). The experience of mobile phone users on different parameters of mobile phone QoS such as network quality (call drop rate, call success rate and voice quality), customer service including handling of complaints are presented below.

Network quality

More than two-thirds of interviewees reported that the overall network performance (measured in different quality parameters such as call drop rate, call success rate, voice quality, automated messaging) of the sector has improved gradually with the increase in the level of liberalisation and competition. They said that under the monopoly (until 1997) they were 'somewhat satisfied' with network quality as they often had to face call drops and non-completion of calls. The overall network quality such as voice quality and call completion rate had started to improve when multiple

[74] Service quality is often conceptualized as the difference between expectations and perceptions (Babakus & Boller, 1992)

operators launched their services in 1997. It was, however, difficult to measure the degree of improvement in network quality as they indicated their view was based on their experience against perceived network quality. The network performance has been increased further when competition took hold in the sector 2005 onwards. However, about a fifth of the subscribers were especially critical of the network congestion in using GP network and one-way connections (FGs 1, 2 and 3 October 2008). In this regard, one high official (also a user) notes,

> QoS is reasonable, not very good. In many cases, one sided tones creates problem (Interviewee 23, October 2008).

Some FG participants commented that GP's spectrum was not adequate to support its huge subscriber base and this could be a reason for the deteriorating service of GP (FGs 1, 2 and 3 October 2008).

Customer service

Users of mobile phone services also noted that the QoS gradually improved with the increase in the degree of competition. In reply to the question 'How do you assess the quality of customer caser services have changed after introduction of mobile phone services?', a majority of the users reported that QoS was of little concern to the provider during the monopoly regime. Quality of Service started to become an issue from 1997 onwards, when greater liberalisation was made in the mobile phone services and multiple operators had launched their services. During 1997-2004, QoS gradually improved with the presence of multiple operators but still there were problems with network congestion, customer care and complaints handlings. The BTRC is not sincere in looking after customer complaints. And it does not keep records on how many complaints it receives against each operator and how many it has settled in a month (FGs 1, 2 and 3 2008).

Although Bangladesh still faces some QoS problems such as delay in helpline promptness (customers still have to wait 5–10 minutes to reach the customer care attendants), significant improvement took place from 2005-06 in complaints handling. Mobile phone users complained that there is no toll-free facility to call the customer care centre for making complaints (FGs 1, 2 & 3, October 2008). They also expressed their dissatisfaction that the BTRC has never taken the quality issue

seriously nor exercised its authority to force operators to improve service quality before 2007 (FGs 1, 2 & 3 October 2008). Few focus group members however mentioned that during non-political caretaker government (2007–2008) , BTRC became active because it could not work independently under political governments' (FG 1, October 2008)

Accuracy of billing

Around two-thirds of the user interviewees observed that they are often overcharged for their actual talk time. They commonly use an electronic refills system in which they make deposits into their credit upfront before using a prepaid phone. Mobile operators sometimes charge them more than for their actual talk time against the available balance in their prepaid accounts. Users said, they had no instrument to establish the complaint of overcharging. Even the telecommunications regulator does not have its own mechanism to prevent mobile phone operators from adopting such unscrupulous practices (FGs 1 and 2, October 2008). The mobile phone users, however, said that the launching of the mobile service by the Banglalink and TBL had had a positive influence on others to improve billing service (FGs 1, 2 and 3, October2008).

Regarding inaccurate billing, a daily newspaper reported:

> Complaints are there that often mobile phone firms charge its customers more than their actual usage of 1-2 minutes. Even at times, the operators charged a 5-6 times higher tariff and deducted against the available balance of the prepaid users (The Daily Inqilab, 2008).

The users did not raise great concern about the accuracy of post-paid bills.

Automated message problem

Some mobile users reported that although QoS has improved in recent times compared to the period before 2004, they still suffer from automated message problems They said that when calls are made to other operators, often a voice message is heard, 'sorry, connection cannot be made at the moment, please try again later' (FGs 1 and 2, October 2008).

Overall service quality

A majority of the interviewees reported that overall service quality (the combined impression about network congestion, voice quality, call drop, customer service and accuracy of billing) of the mobile phone operators has improved significantly after greater liberalisation by 2005-06. One user respondent said,

> Previously (before 2005) small operators suffered from deliberate interruptions in call routing by the market leader, who seemingly abused their significant market Power. Countrywide network deployment by other operators especially Banglalink, and Teletalk has helped improved QoS in the last 2-3 years (Interviewee 18, October 2008).

Echoing the voice of the majority of the interviewees, one business leader mentioned that since 2004-05 significant expansion of mobile phone network across the country took place. Competition has made the leading operators especially Banglalink, Aktel and Citycell to expand their coverage. Regulatory pressure in recent time has helped improved interconnectivity. As a result, network congestion and the call completion rate have improved (Interviewee, 30 October 2008).

A number of mobile phone users from focus groups 1, 2 and 3 reported that now quality is the basis of competition, not price. Now more advertising is seen on television channels about quality rather than call rates (FGs 1, 2, 3, October 2008).

Although the overall QoS of mobile phone sector has improved significantly in recent years due to competitive pressure, QoS is still a matter of concern for many. In this connection, one private sector representative complained:

> I am an early adopter of Grameenphone (GP). My wife gets unsolicited calls from other Grameenphone numbers. I have reported this problem to the GP through phone and sought assistance to block unsolicited calls. Having seen no action from GP, I contacted GP customer service a number of times to have unwanted calls blocked. Each time, GP assumed me they will look into the issue. Unfortunately it did nothing to solve my problem (Interviewee 17, October 2008).

The mobile phone users gave different reasons for poor service quality. These include: difficulties and significant delays in connecting to the customer care executive; calls to helpline are charged (not toll free) such as GP prepaid customers have to pay $US 0.014 (BDT 1.00)/minute for calls made to help-lines; failure to take requested action; excessive time in many cases to resolve problems and undelivered promises to address complaints (FGs -1 and 2, 2008).

5.3.3.2 Mobile phone firms' perspectives

Mobile phone operators reported that the QoS of mobile phones improved significantly due to competitive pressure. In their view, they are installing new BTS, continually monitoring their services, and handing customer complaints through the customer service department and customer care points to provide better services. Complaints and queries of customers are also resolved through emails. Moreover, a large number of optimisation works are carried out regularly to improve the network performance (Mobile phone firms 1, 2 and 5, October 2008).

The key informant from a large operator reported that, in order to provide better customer service, Banglalink established a new state-of-the-art call centre. Significant improvement of indoor coverage has been made. It has also established a customer care line with a passionate and vigilant customer service team that offers a dedicated 24/7 service to answer customer queries and serve them every single moment (Interviewee 2 from Mobile phone firm 2, October, 2008).

Supporting high QoS in the mobile phone sector, mobile phone operators argued that QoS of mobile operators in Bangladesh is superior to comparable services in India and Pakistan (Interviewees from mobile phone firms, 1, 2, 3, 4 and 5, 2008).

Regarding QoS, one operator who entered the market last of all noted:

> Our customers have very few (almost 'nil') complaints about our QoS. This is evidenced by the fact that except us, all other operators were told to improve their services by the BTRC. We are the only operator whose SIM card has the SIM Tool Kit (STK). With this STK, subscribers can enjoy many facilities such as ring tone download and balance transfer. Moreover, our separate Customer Care Department fixes subscribers' problems almost immediately, or, in complex

> cases, in 1-2 days. Warid is the only operator who provides best network and voice quality through using New Generation Network (NGN). We however do agree that sometimes subscribers suffer from poor network due to bad weather, interconnectivity problems and technological interruptions (Mobile firm 5, September 2008).

Commenting on network congestion often faced by subscribers, a key interviewee from the leading mobile phone firm notes:

> There is a tendency among the users to blame the operator wholesale for poor QoS. It is not mobile phone operators who are always responsible for service quality. Inadequate interconnectivity by BTTB and inadequate and unfair frequency allocation by the regulator have resulted in deterioration in service quality especially in areas like call drop, poor voice quality and call congestion. Despite repeated requests, we were not given adequate spectrum which is crucial to better serve our customers in the wireless communications sector. We could not implement our network expansion plans in due course due to a lack of frequency. Recently, BTRC charged an exorbitant price of $US 12 million per MHz for additional frequency allocation (Mobile phone firm 1, 2008).

One relatively small sized operator (in terms of market share), however, blamed the biggest operator for network congestion. He said:

> Big operators especially GP misused its power to disadvantage our subscribers. GP did not provide enough interconnection to small operators like us. At times, it deliberately interrupted mobile phone calls originating from our network to be terminated to GP's network. As a result, our subscribers had faced network congestion that shattered our brand image. We are in discussion with other operators to find out a solution to the network congestion (Mobile phone firm 3, August 2008).

In this regard, the leading firm blamed the negative attitude of the incumbent state-owned BTTB for initial poor service quality. Lack of adequate voice channels from the BTTB forced GP to lower its service. In this regard, Sullivan stated:

> In 1998, Grameenphone started with 330 voice channels from BTTB. That July another 360 channels were approved, but by the end of the year only 180 of

> those 360 had been made available...not nearly enough capacity for a city of 10 million that housed the central switching station (2007 p.95).

The key informant from a mobile phone firm said,

> Our service to customers has improved over previous levels. It is not that our service has deteriorated; rather it is the expectation gap that creates dissatisfaction among users. In a competitive market, customers' expectations of us have increased much more than before. We are continuously striving to provide better service and meet our customers' expectations. For example, previously, on Eid Day (Muslim's religious festival), our subscribers sometimes did not get an SMS on the same day on which SMS was sent. This year, we planned very early to ensure users get an SMS on the same day during the Eid festival. We achieved sending SMSs to our customers on the day they were sent. We, however, do agree that our subscribers face some network congestion due to inadequate frequency allocation by the regulator (Interviewee 1 from mobile phone firm 1, October 2008).

The second key interviewee from the same mobile firm reported that they deployed three camouflaged Microcell base stations in Dhaka in 2007 to ensure network quality. These base stations required less space, relieved road side congestion, and could withstand inclement weather conditions. He also mentioned that they have service centres across the country to keep their service at a high quality level. The call drop rate of his firm GP was around 0.25 per cent compared to an international standard of ≤ 1 per cent. Recently, the call drop rate increased slightly varying between 0.4 per cent and 2 per cent. Grameen can restore the network within 30 minutes which is a very satisfactory 'mean time to restore' (MTTR). Centralised monitoring and continuous investment in network and systems improvement helped GP achieve quality service (Interviewee 2 from Mobile phone firm 1, October 2008).

Other operators were of the view that 95 per cent of the calls made by subscribers to customer service desks are answered by them (voice to voice) within 2-3 minutes (MF 2, 3 and 5, August-October 2008).

Regarding measures in place to ensure service quality, it is clear from the interview reports that the operators had no measures in place to ensure service quality standards. Operators conceded that they did not conduct customer survey to get

information about what customers' perceive about the pricing, customer service, coverage and network quality (i.e., voice quality they provide).

5.3.3.3 Telecommunications regulator i.e., BTRC's perspective about QoS

A key official from the telecommunications regulator BTRC said that competition helped improve QoS. It however, agreed that there was still room for further improvement in QoS. BTRC accepted that their experience suggests that consumers are not still happy with call quality, network coverage and call completion rates. Poor interconnectivity among operators has caused network congestion (Interviewee 8, October 2008). The interconnection problem, however, is over now. Quality of service deteriorated recently due to inadequate number of BTS. Big mobile phone companies (particularly Grameenphone) have higher subscriber numbers than their allocated frequency can handle (Interviewee-25, September 2008).

Another senior official from the BTRC agreed that existing regulatory measures to ensure QoS are insignificant. BTRC still does not have any monitoring devices nor does it set benchmarks to effectively monitor the service quality of the operators (Interviewee 25, September 2008). The telecommunications regulatory authority agreed that it did not have any study to date to assess the service quality of the operators. The key respondent from the BTRC informed the researcher that it had already drafted the benchmarks for the QoS which should be as follows:

> Call drop rate should be less than 2 per cent; call blocking rate should be less than one per cent; call success rate should be more than 95 per cent; call service access delay rate should be less than 30 seconds; good quality voice service rate should be 90 per cent; and interconnectivity failure rate should be one per cent (Interviewee 8, October 2008).

With regard to the customer service and complaints handling, a BTRC official reported that it had established a 'Complaint Cell' recently for receiving complaints and grievances from consumers. The official, however, conceded that BTRC did not have any detailed records of complaints and their nature that it had received against mobile phone operators (Interviewee 25, September 2008).

The BTRC also asked the mobile phone operators to submit data on QoS to ensure subscribers' interests. In this regard, another BTRC official reported:

> We recognise the QoS of our mobile phone firms are far below international standards. There are lot of complaints about the service quality on issues such as call drops, poor call completion rates, poor voice clarity and poor coverage. We have already held several meetings with the mobile phone firms and asked them to improve their quality of service. Moreover, we have set up Interconnection Exchanges (ICX[75]) to ensure interconnectivity among the operators is smooth. As a relatively new organisation, we need time and experience to deal with quality issues (Interviewee 20, October 2008).

5.3.4 Impact on diversity of services

A consensus was found among the mobile phone firms and users regarding the role of liberalisation and competition in widening the diversity of services and variety of choices. The majority of interviewees said that the variety of services they are now offered was unthinkable a few years ago. The diverse range of services for customers in addition to voice service, include value-added services such as short message service (SMS), multimedia service (MMS), photography, ringtones, health service, public exam results, breaking of fasting *(Iftar)* times, latest news bulletins of different television channels, information on voting centre, voter number on electoral rolls, ' agriculture-call centre named *'Krishi Jiggasha 7676'* (i.e., Questions on Agriculture), and bill paying facilities through use of the mobile phone service. The special pilgrimage (Hajj) promotion introduced by GP for its pre-paid International Roaming Service enables pilgrims visiting Saudi Arabia to easily stay connected with home. Similarly, around one-third of the interviewees referred to the Grameenphone's 'CellBazaar' (mobile phone market) as a good example of diversified services. The following statement of a user demonstrates the importance of CellBazaar as an innovative service:

> 'CellBazaar', provides an electronic marketplace that can be accessed via SMS and the internet. It provides timely market information to those who are willing to buy or sell various items and have listed their mobile numbers. It is our mobile

[75] The interconnection exchange handles routing of international and domestic voice calls of all operators.

> EBay. It is the easiest way of selling or buying products such as houses, agricultural-commodity, cars, furniture, and household appliances (Interviewee 14 October, 2008).

One mobile phone firm observed that the diversity in service offerings was more in the way of service innovation (commercial innovation) than technological innovations and resulted from the competitive regime (Mobile phone firm 6, August 2008).

One private sector representative said:

> The value-added telecommunications services which we enjoy now were not offered in a pre-liberalisation monopoly environment (Interviewee 32, January, 2010).

FG 3 members stated that when mobile phones first arrived, they considered it for voice services. In more recent times, mobile phone firms are providing diversified services such as ring tones, ring back tones, games, news, SMS, voice chat, MMS, Tele-health services, and roaming services to differentiate them from competitors. Messaging through mobile phone technology has become an emblematic of the global trends of personalization (FG 3, October 2008).

The majority of mobile phone users reported that the mobile phone is no longer only a device for voice services. It also acts as the communicator, video broadcaster, entertainer and provider of any many everyday services such as tele-health, telemarketing, data transfer (internet), funds transfer (through 'Flexi-load' of GP, 'I-top up' of Banglalink and 'E-top up' of Citycell), utility bill payment, news update, exam results through SMS and advance warning of disasters (FGs 2 and 3, October 2008).

The majority of mobile phone users observed that initially price was the only competitive tool for being competitive. Price is no more the main feature of competition rather, diversity of service offerings and quality of service that matters most in becoming competitive in the market (FG- 2, October 2008).

Reflecting on the range of diverse services, a senior official of the BTRC made his point:

> In the first few years, mobile phone services were mainly confined to voice services. With increased competition among mobile phone firms, operators are trying to differentiate themselves by providing diversified offerings. At present, they offer a wide range of products and services such as voice service, news service, health service, SMS, MMS, games update, exam results, election results, stock market information, global roaming services, song dedication services and internet services. Mobile providers also provide emergency information on the blood bank, hospitals, police station, ambulance, fire brigade and different call management services (call waiting, voice mail service, to name a few) to remain competitive (Interviewee, 20 October 2008).

In regard to diversity of services, a key mobile operator reported:

> Mobile phone firms are providing diversified services not only to differentiate their services but also to generate additional revenues in the decreasing Average Revenue Per User (ARPU) situation. For example, for one firm SMS and SMS-based services could be the main revenue earner while for another firm, ring back tone could be the main revenue generating Value-Added Service (VAS) (Mobile phone firm 3, August 2008).

A key respondent from a large mobile firm said that his company has arrangements with local VAS operators to provide diversified services to its customers. Citing the example of Interactive Voice Response (IVR), he said:

> Grameenphone customers can get job offers information that is posted in the largest job portal, bdjobs.com through Inforev platform. VAS providers use mobile operators' network to air VAS" (Mobile phone firm 1, October 2008).

Interviewees from other operators (Aktel, Banglalink Citycell and TBL) echoed this, stating that technological development such as increased handset features coupled with competitive pressure had resulted in significant increase in service offerings. They were of the view that commercial innovation complemented technical innovation to provide variety of service offerings to subscribers.

Moreover, new operators brought with them the latest technology (such as Warid's Next Generation Network technology), making it easy for subscribers to avail themselves of innovative services. For example, Warid Telecom's SIM Tool Kit (STK)

allows the subscriber to access different contents and other VAS, through a few simple clicks of their keypad (Mobile phone firm 5, October 2008).

One telecommunications analyst from a daily newspaper said that mobile phone services have been diversified to tailor to the needs of different user groups. For example, mobile operators have created scope for their users especially for teenagers to download songs that are mostly designed by local content providers to be used as ring tones or ring back tones (Interviewee 14, October 2008).

A telecommunications engineer reported that National University controlled college students of 1700 colleges administratively by providing details of class schedules, exam schedules and exam results through mobile phone SMS (Interviewee 27, October 2008).

An industry expert said that the increased diversity in mobile phone services should not be solely attributed to liberalisation. Technological innovation by the equipment manufacturers such as launching of new mobile phone sets with added features and the innovation of various content services such as job offer services, polling services, religious services, SMS quiz contests, religious content for the holy month of Ramadan (month of fasting) by content providers also contributed towards diversity of mobile phone services (Interviewee 31, January 2010).

Around four-fifths of the users agreed that Bangladesh's mobile phone services have gone beyond the basic function of voice communication. The diversity of mobile phone services was recognised in a round table discussion:

> The real beauty of the mobile industry is that it is far bigger than its own economy. It is cultural, it is educational, it is heath, it is interpersonal, it is keeping yourself in touch with your friends and relatives, and listening to music that you like. It has a far bigger dimension (The Daily Star, 2009c).

In summary, it is evident that liberalisation and entry of several operators in the mobile phone sector forced the operators to diversity their services beyond basic voice communications. The operators are providing different types of value-added services including the internet, and SMS-based services.

5.4 The influence of unilateral liberalisation on submission of Bangladesh's liberalisation commitments under General Agreement on Trade in Services (GATS) of the WTO?

The impact of unilateral liberalisation of mobile phone services on users' benefit has been discussed in the previous section. This section addresses the following research question:

RQ.How did unilateral liberalisation influence submission of Bangladesh's liberalisation commitments in the telecommunications sector under General Agreement on Trade- in- Services (GATS) of the WTO?

This research question is more related to the policy making of the government. Therefore policy actors, public managers, experts and some private sector representatives who were directly or indirectly involved in the process were considered better positioned to elaborate on this question. Keeping this in mind, the policy actors, public managers, experts and some private sector representatives who were involved in the process or had relevant expertise were interviewed.

Liberalisation of trade and investment regime independently without compulsion imposed by any multilateral forum or any international agreements is known as unilateral liberalisation. Before approaching how unilateral liberalisation influenced Bangladesh's commitment in the WTO, interviewees were asked to comment on whether opening up of the mobile phone sector was really a unilateral decision or whether there were also contractual obligations or external pressures. Interviewees were unanimous in saying that- Bangladesh liberalised the mobile phone sector to pursue its national interest without looking for reciprocal concessions or being bound by any international agreement. The telecommunications sector was opened spontaneously to support growing economic activities (Interviewees, 1, 2, 5, 9 and 20, August-October 2008).

A majority of the interviewees from both the public and the private sector reported that although GATS is a multilateral agreement, WTO Members are not forced to make commitments under this agreement. Members enjoy the discretion to decide which service sectors they wish to liberalise, in what mode of service delivery and to what

extent. Bangladesh undertook binding international commitments driven by domestic priorities. Unilateral liberalisation helped Bangladesh to take a conscious decision in submitting liberalisation commitments in the WTO. The interviewees identified the following reasons to explain how unilateral liberalisation contributed positively towards Bangladesh's submission of liberalisation commitments:

1. The sector was already opened unilaterally and the consequences of liberalisation were known (to some extent) to the users and policy makers.
2. Unilateral liberalisation benefited telephone users in terms of easy accessibility and low pricing. Liberalisation was also deemed to be beneficial from a development perspective by governments and civil society. So there was an understanding not only to maintain already undertaken liberalisation measures but also to expand market openness. That means there was no resistance from stakeholders.
3. As an infrastructure sector, telecommunications was an enabler. The policy makers were convinced that unilaterally applied domestic liberalisation measures in the telecommunications sector needed to be maintained to facilitate and support socio-economic activities. There was some form of political will on the part of the policy makers to sustain the applied policy and not to backtrack from the commitments in future. This realisation and reality also helped the policy makers to agree to submission of commitments (Interviewees 3, 6, 9, 12, 13, 24, August-October 2008; Interviewee 5, December 2008).

With regard to the question of why and how unilateral liberalisation influenced Bangladesh to undertake liberalisation commitments (through submission of a schedule of commitments), a policy maker in the WTO cell of the MoC clearly articulated:

> LDC countries usually do not undertake commitments in the WTO unless they first experience the consequences of liberalisation at home. Unilateral liberalisation provided Bangladesh with the necessary scope to gain experience of liberalisation and make an informed decision whether to schedule commitments or not. The benefits stakeholders gained from unilateral reforms in

> the form of easy accessibility, low price and better service provided the Government of Bangladesh with the necessary incentives to sustain applied reform measures by undertaking GATS commitments (Interviewee 12 September, 2008).

Elaborating on whether unilateral liberalisation has had any influence on submitting Bangladesh's commitment, a deputy director, Ministry of Commerce stated:

> Unilateral liberalisation certainly promoted making GATS commitments in the telecommunications sector. This is because introduction of competition through unilateral reforms was widely perceived to be beneficial in terms of quick and affordable access to telephone service by the stakeholders, including government and consumers. We faced no resistance from any quarter while submitting the Schedule of Commitments. Although there was initial opposition from BTTB employees in opening up the mobile phone sector (as they would benefit from protection), no real resistance was seen from them in undertaking binding commitments. May be they did not know about undertaking commitments. Furthermore, we undertook commitments in a comfort zone where consequences were more or less known (Interviewee 29, October 2008).

Another public manager (known as a WTO expert) who works in the Tariff Commission of Bangladesh observes:

> I firmly believe unilateral liberalisation positively influenced Bangladesh to undertake GATS commitments. It was possible because the mobile phone sector was already exposed to competition. Unilateral market opening provided us with the scope to go through trial and error processes and learn the benefits and demerits of sticking to liberalised measures. Bangladesh undertook FDI commitments in five- star hotel during the Uruguay Round, The reason for making commitment was that all LDCs were required to undertake commitment at least for one sector for signing off the WTO Agreement. The GoB was more comfortable with commitment on five-star hotel because the sector was already free for FDI with 100 per cent equity. Moreover, it was well-known that Bangladeshi investors alone cannot invest in five star hotels. Also we needed skills and hospitality management expertise to run five-star hotel. Only requirement was to recruit the Bangladeshi manpower in the hotel. So we made such restriction (Interviewee 24, October 2008).

With regard to a question on motivation for undertaking GATS commitments, one senior public manager from the MoC reported that providing a stable and predictable investment regime in order to maintain and increase more inflow of FDI was the dominant motivator to undertake GATS commitments in the telecommunications sector. He also observed that Bangladesh could have undertaken similar liberalisation commitment in the banking sector (which is already open for FDI under donor agency influences) because the domestic banks are able to face foreign competition. But Bangladesh did not see the necessity of more influx of banks and capital in the sector as there were already more than 40 private- owned banks in operation. Furthermore, lack of support from the domestic banks was another reason for not undertaking binding liberalisation commitments under GATS (Interviewee 19, October 2008).

A former secretary of commerce to the GoB, commented that although Bangladesh made commitments in the telecommunications sector in 1997, it did not show much interest in the GATS 'request-offer' approach. Bangladesh also refrained from making additional commitments after 1997. He said that if Bangladesh does not engage in any 'request-offer' approach, there will have little scope to gain from services negotiations. The non-binding nature of GATS, fear of lose out to foreign service providers, the lack of awareness and inertest in policy level and the flexibilities allowed under LDC modalities kept Bangladesh away from GATS negotiations (Interviewee 3. October 2008).

A similar view was expressed by a trade economist working in a leading research body:

> Unilateral liberalisation was a 'necessary condition' for Bangladesh (in fact for any LDCs) in making GATS commitments. It is rare that poor developing countries undertake liberalisation commitments without first opening itself to promote its national interest. However, for making WTO GATS commitments, unilateral market opening was not sufficient. Bangladesh considered other factors (which can be called 'sufficient conditions') such as whether there was any necessity to backslide from commitments in future, the role of stakeholders especially incumbent service providers and the need for capital. In the case of the telecommunications sector, incumbent mobile phone firms wanted to see a predictable investment climate by having liberalisation measures committed and

> they positively influenced the government to do so. This, coupled with capital need for the sector helped Bangladesh decide to undertake commitments. However, unilateral liberalisation may, in some cases, impede multilateral commitments where the results of unilateral liberalisation are overwhelmingly perceived to be negative (Interviewee 6, October 2008).

An adviser of the Federation of Bangladesh Chamber of Commerce and Industry, popularly known as FBCCI (who also works on the advisory committee of the MoC) supported the view that stakeholders, especially incumbent mobile phone operators had a role in influencing the government to undertake binding commitments. He notes:

> As the majority ownership of all the mobile firms was held by foreign investors, they played a vital role in convincing the Government of Bangladesh to submit a schedule of commitments with few restrictions. They pursued the government to submit the binding commitments to protect their interest. The reason was that they would have a certain investment regime once existing measures such as the right to business, the right to repatriate profits and capital and the right to ownership are given permanence through commitments under the GATS. But you can see a completely different scenario in the case of the banking service. Although, the sector was already liberalised and private banks, including foreign commercial banks are providing competitive services, the domestic private banks expressed their view that Bangladesh should not undertake binding commitments under GATS. They observed that Bangladesh should follow a cautious approach in binding its policy space while it was not under any obligation to do so (Interviewee 15 October 2008).

More than one-third of the interviewees claimed that since the consequences of telecommunications liberalisation have been favourable, unilateral opening enhanced support for undertaking GATS commitments in the telecommunications sector. With regard to the role of unilateral liberalisation in making liberalisation commitments under the GATS, the Permanent representative of Bangladesh to Bangladesh's Trade Mission in Geneva stated:

> It is clear that Bangladesh's opening up enabled the P.T. & T. officials to respond to the market opening request (under GATS) much more easily (Interviewee 5, 2008).

The Permanent Representative of Bangladesh to Geneva trade mission, however, said that this may not always be the case:

> We have observed that many countries have unilaterally opened up a sector to selected countries/areas, but are not prepared to make a multilateral commitment. How far this will apply in the telecommunications sector will depend on the individual country, and the case involved. I believe it is not possible to generalize this. However, it is true that, from the experience of unilateral liberalisation, the country has a better understanding/appreciation of the problems associated with the opening of that sector, and is able to take an informed decision when deciding to make a multilateral commitment (Interviewee 5, December 2008).

Contrary to the opinions of a majority of the interviewees, one trade expert from a research organisation mentioned that it was difficult to establish a certain relationship between unilateral liberalisation and undertaking of multilateral commitments. He, however, noted that it seems a bit easy for a WTO member to undertake commitments when the sector is already opened as part of domestic reforms (Interviewee 18, October 2008).

Elaborating on the role of unilateral liberalisation in undertaking GATS commitments, a member of Bangladesh Chamber of Industries reported:

> No doubt applied domestic measures created a condition to undertake binding GATS commitments. But Bangladesh's submission of commitments was not a well- informed decision. Bangladesh put no restrictions on equity participation nor did it correctly put restrictions on number of operators (Interviewee 15 October 2008).

A public manager stated that a limited number of officials knew about submission of GATS commitments and its consequences were also not well known (Interviewee. 19 October 2008).

The findings did not reveal a consensus view. However, a majority of interviewees, especially those who were directly or indirectly involved in the trade, investment and WTO policy matters of Bangladesh, were of the view that unilateral liberalisation had played the major role in promoting liberalisation commitments of Bangladesh in the WTO.

5.5 Chapter summary

This chapter presented the findings on three research questions. For research question 1, it has been found that the perceived factors of unilateral liberalisation of mobile phone sector in Bangladesh were: market opportunity for new providers to provide much-needed telecommunications services, technological development, attracting FDI, an ideological shift in policy makers' mindset to pursue market-based reforms and lobbying and personal association.

Varied opinions were found regarding the impact of unilateral liberalisation on accessibility, pricing, diversity of services and quality of services. Most respondents, however, agreed that liberalisation itself did not contribute much to promoting easy accessibility, lowering telecommunications tariffs, or increasing diversity of services and quality of services. In their view, mobile phone users gained significant benefits in terms of cheap pricing, quick accessibility, diverse services and improved quality of services only when the sector became competitive. A majority of interviewees hold the view that there was tacit collusion among the mobile phone operators in keeping mobile tariffs high for a number of years. Launching of mobile phone services by public-sector mobile phone operator TBL and the launching of mobile phone Banglalink helped bring dynamism and competition to the sector.

The findings also suggest that lack of monitoring and the poor enforcement of the Bangladesh Telecommunication Act, 2001 provisions by the regulator allowed mobile phone operators to continue with poor quality of services and charge higher tariffs prior to 2005.

The majority of the interviewees expressed the view that unilateral market opening makes it easy and provides a litmus test to undertake binding international commitments. The views held by the participants on the relationship varied. A few

interviewees said that it is difficult to say with certainty that unilateral liberalisation will always promote multilateral commitments. Conservative governments may not translate unilateral liberalisation measures in to GATS commitments because they are not usually willing to bind themselves under the obligations of an international legal framework; rather they prefer to retain policy autonomy for future.

The next chapter (Chapter 6) discusses the research findings with a view to better understanding the research questions 1 and 2.

Chapter 6: Factors and Impacts of Unilateral Liberalisation

6.1 Introduction

The aim of this chapter is to discuss the empirical findings presented in Chapter Five to address research questions 1 and 2. The research questions were: 1. What factors are perceived to have contributed towards unilateral liberalisation of the mobile phone sector in Bangladesh? and 2. What impact did unilateral liberalisation have on accessibility, pricing, quality of services (QoS) and diversity of services in the mobile phone sector? In examining the research questions, the relevant extant theories were used to support the discussion.

This chapter has four sections. Section 6.2 assesses the findings on R Q 1; i.e. factors perceived to have contributed towards unilateral liberalisation of the mobile phone sector. The purpose is to examine the extent to which these factors contributed to the unilateral liberalisation of the mobile phone sector and the relative role of each factor. Section 6.3 discusses the impacts of unilateral liberalisation on accessibility, pricing, QoS and diversity of services. Section 6.4 analyses the prime reason for having differing competitive regimes especially the evolution and effectiveness of the regulatory regime over the period studied and factors responsible for poor regulatory governance. This discussion is related to RQ 2.

6.2 Factors of unilateral liberalisation

This section has four subsections. Subsection one discusses the key factors that were perceived to have facilitated unilateral liberalisation of mobile phone sector as these emerged through the findings, Section three discusses the relative role of each factor.

Previous studies have identified inadequate capacity of national monopoly providers, technological development, large level of user demand, neo-liberal ideology, clientelism, and attracting Foreign Direct Investment (FDI) as the main factors of liberalisation and privatisation in the telecommunications sector (Adlung & Roy,

2005; Bhuiyan, 2004; Bodammer, et al., 2005; Davids, 2005; Haque, 1999; Humphreys & Padgett, 2006; Mesher & Jittrapanun, 2004; Milner & Kubota, 2005; Rattoo- Nielsen, 2004; Rossotto, et al., 2005; Singh, 2005; Thatcher, 2004; Vagliasindi, et al., 2006; Zimmerman, 2007). These studies focused on all types of reforms such as liberalisation and privatisation, whether undertaken unilaterally or as an international binding obligation or under pressure from donor/loan agencies or countries without any particular focus on unilateral liberalisation. Moreover, the extant literature discussed very little the relative importance of the factors that facilitated liberalisation and was not focused on Bangladesh. This study identifies a number of key factors that contributed towards unilateral opening up the market and further determining the relative significance of these factors.

Interviewees indicated different factors as stated in section 5.2 of Chapter Five. The key factors that were reported by the interviewees are shown in Figure 6.1

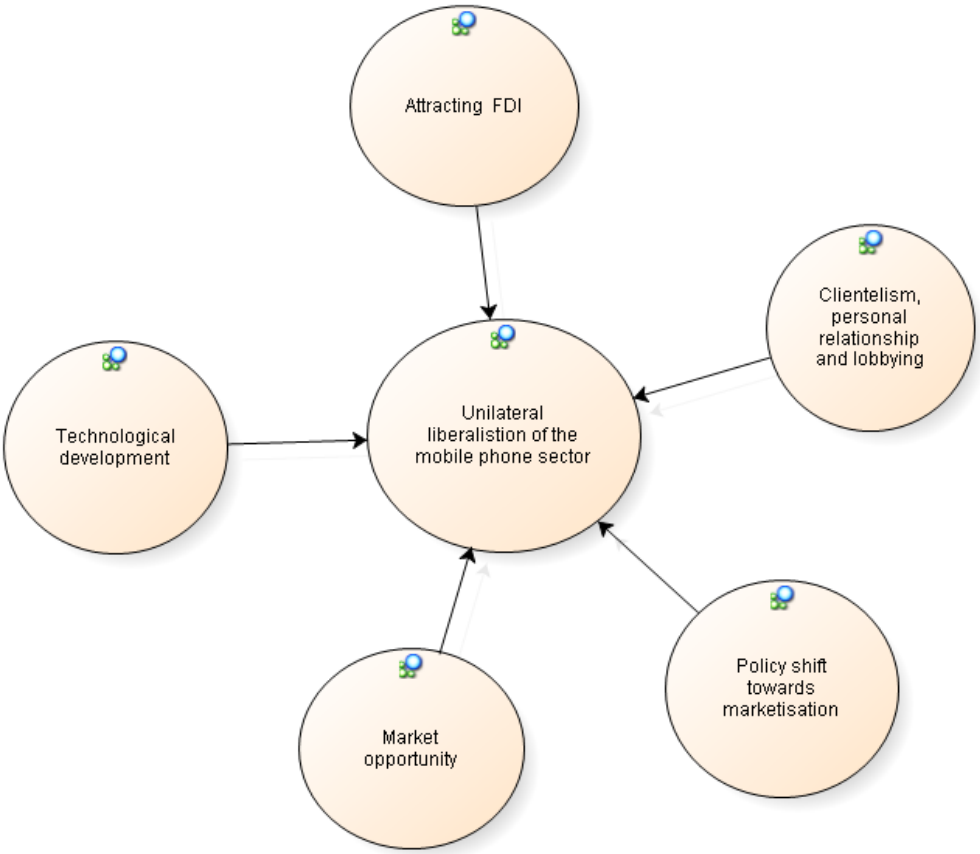

Figure- 6.1: Factors that facilitated introduction of competition in the mobile phone sector

6.2.1 Market Opportunity

By 'market opportunity', this thesis means business opportunity for potential investors in the telecommunications (in particular mobile phone services) sector. The unmet demand from all kinds of user groups[76], and globalisation of capital flows, manufacturing and trade, the need for convenient mobile phone service and lack of entrepreneurial and service orientation of the monopoly national providers combined created significant opportunity for telecommunications business nationally and internationally. The majority of the interviewees reported that the large market opportunity for mobile service was a key factor in liberalising the mobile phone market. With regard to demand for telecommunications services, policy actors, public managers, mobile phone users, and other stakeholders were almost unanimous in reporting that the poor and inadequate telecommunications infrastructure was a key factor in pushing unilateral liberalisation of the mobile telecommunications services for investment. The interview findings suggested that among users, the push for liberalisation mainly came from the large business users and MNCs largely during their interaction in different formal and informal meetings with the public sector.

At times, they even informally tried to convince the government of the importance of the telecommunications facility and opening up the sector**.** This finding conforms to the observation of Quadir:

> 'they (key business actors) were particularly critical of the government's reluctance to allow the private sector to get involved in infrastructure-related projects...they demanded concrete steps to further deregulate the economy and promote greater competition (Quadir, 2000 p.206-207)'.

Residential users, however, were not found to be active on this issue. Residential users, being a large group with numerous members, were not organised to formally raise their voice for liberalisation and better telecommunications services. This is because groups with numerous members who have a small stake in a given issue are

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[76] Many telecommunications analysts divide societies into user groups which include: urban residential users, rural users, large users, government administrations, and exporters (Singh, 2002).

rarely organised (Croley, 2008). This was one of the reasons that unorganised residential users were less visible and effective in communicating their needs to promote liberalisation. However, the existence of large demand can be gauged from the situational context. Long waiting lists for BTTB phones, escalating pent up demand, and treating the home phone as an item suitable to dream about all lend support to the findings that user demand for quick access to affordable and better service and the resultant market opportunity for new providers was a key driver in allowing liberalisation of the sector.

Interviewees' reports suggest that immense demand and market opportunity were created mainly from: (1) Capacity constraints of BTTB[77] fixed-line telecommunications services and the resultant pent- up demand; (2) Increasing demand due to growing economic activities; (3) Rising numbers of Bangladeshi wage earners (more than 5 millions) working abroad and their need to talk to relatives at home and (4) The huge latent demand for new mobile phone services because of its large perceived ease of use and benefits

Sobhan (2007b) also demonstrated how elite and peak-body business people through their organisations and entrepreneurs enjoyed access to the policy makers and bureaucrats to influence and provide inputs to public policy making.

The dearth of telecommunications capacity in the BTTB made it difficult for many to get a connection without paying a bribe or using political influence. Usually, it took 4-6 years (in some instances even more) to get a new connection for urban people. There was indeed an instance where a sixty-year old man received a fixed phone line after a twenty-seven-year wait (Sullivan, 2007). The situation was even worse for rural Bangladesh. No telecommunications facility existed in the vast expanse of rural Bangladesh. Buchholz, writes:

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[77] BTTB's capacity did not improve because like other South Asian countries, the growth of the telecommunications infrastructure has not been demand-driven. It has been almost entirely investment- driven (Crishna, Baqai, Pandey, & Rahman, 1999).

> 'Bangladesh was "a telephone desert", with 90 per cent of the country's villages without access, until mobile phones arrived on the scene' (2000 p.A 44)

Against this backdrop of inadequate telecommunications infrastructure to meet pent-up and growing demand from all types of users, the opening up of the telecommunications sector appears to have been absolutely critical. Hasan (2008e) observes that the stagnant land phone market created exceptional opportunities for the mobile phone operators to capitalise on the situation. The evidence that emerged from the field study and secondary data suggest that opening up of the mobile phone sector was a response to Bangladesh's poor state of telecommunications services sector and users' immense demand for telecommunications services.

The lengthy waiting list made a BTTB phone a desired item of life for many. When a landline telephone connection was given to a house or store before the 1999s, it was a matter of celebration and joy for the whole neighbourhood surrounding the place. Laskar (2007) observes that it was in the mid nineties when the first telephone came to our neighbourhood in a local store. This became an occasion for the whole neighbourhood.

The following English language newspaper report shows how precious a phone was in Bangladesh before the mobile phone sector was opened up:

> The telephone used to be covered with a piece of cloth and was always under lock and key. Once I had to make an urgent call... but the shopkeeper ... kept saying that he did not have the key but I was sure that he had it in his pocket (Laskar, 2007).

The desire for a mobile phone even after the expiry of more than a decade from the launching of mobile services in 1992-93 remained very high for many. The high unmet demand for mobile service was because the size of the market increased disproportionately relative to the increase in supply side capacity. When Teletalk first opened its outlets, there was a mad rush for Teletalk phone. Police had to baton-charge mobile phone seekers after application forms for a reduced price deal ran short on the first day outlets opened. One police official said:

> We had to baton-charge the crowd otherwise there would have been a stampede in front of the gates (BBC, 2005).

This emphasises the huge public demand for an alternative telecommunications service provider. The mad rush for Teletalk mobile also demonstrate that the mobile phone was perceived by potential users to be an alternative and substitute for fixed phones in Bangladesh. The inordinate delay, problems in using BTTB land phones such as high cost[78], bureaucratic delays, poor service quality (due to BTTB officials' engineering and technical focus instead of service focus) and ghost billing made users look for alternative sources for telecommunications service.

These findings conform to the experience of other countries. In Spain and other European countries governments introduced competitive models for cellular phone provisioning in response to consumer and business user demand (Jordana & Sancho, 2005; Wymbs, 2002). Singh (2005) has also discussed the pressure of business users in liberalising and privatising the telecommunications sector for improved telecommunications infrastructure.

Liberalisation of the sector was not caused by demand side pressure alone. The large untapped market for mobile phone service provided a huge market opportunity for potential investors and made the sector very attractive to them. The degree of untapped potential for mobile phones can be understood from the Mobile Development Index (MDI) of Bangladesh which remained the highest in the world, ahead of China and India in 2006. The MDI measures the attractiveness of the mobile industry from the investors' viewpoint and reflect key country-specific determinants that shape the future profitability of mobile phone firms (Ahsan, 2008). The large potential business opportunity led prospective investors to influence opening up of the sector in Bangladesh.

The findings of this research suggest that not a single factor but a combination of the factors found contributed to unilateral liberalisation of the mobile phone sector. Rapid technological developments in the telecommunications industry (especially the emergence of mobile technology), coupled with the market opportunity emanating

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[78] To get a land phone connection, a potential subscriber had to make a onetime deposit of over $US300. The total expenditure were much higher given the bribery, lobby and influence one needed to get a connection of BTTB,s fixed phone (Laskar,2007).

from user demand, attracting FDI, and the neo-liberal character of the state were found to be the main factors in liberalisation of the sector. Like many developing countries, Bangladesh also shifted towards a neo-liberal state during the 1980s influenced by unprecedented globalisation of capital and it took a supportive stance towards the private sector instead of itself being direct deliverer of services (Haque, 2008). The realisation by the government of the importance of allowing more operators in order to create the conditions for competition in the sector also facilitated opening up the sector.

But as has been discussed, the liberalisation decision was not the outcome of a sudden paradigm shift from a nationalistic policy towards a free-market economy in ideas held by the political leadership during the 1990s. Rather the gradual shift in ideological position and belief in a market-based economy started long ago when the mobile phone technology was yet to arrive. Starting with from the first government in 1975, all other successive governments embraced the ideology of a providing greater role for the private sector. The opening of the mobile phone sector was the outcome of the policy continuity of successive governments. From these perspectives, ideological belief seems to have played a supportive role in market opening.

In sum, the five factors identified contributed towards liberalisation of mobile services.

The discussion above indicates that there are some interrelationships between the five factors that influenced liberalisation of the mobile phone sector. For instance, technological development created its own market for mobile services and put pressure on the policy makers to open the market to try new technology. The immense market opportunity to maximise profit in mobile service businesses stimulated the prospective firms to lobby the government. That means that 'lobbying' has been stimulated by market opportunity. The neo-liberal state character influenced the government to provide more opportunities for the foreign investors and thus facilitated expansion of foreign control over the mobile phone services sector. At present, five out of the six mobile firms are 100 per cent foreign-owned.

It is notable to mention that the factors have had a varied influence on policy formulation and differing role in different time phases. For example, a personal

relationship was found to be a key factor in the initial phase, realisation of the importance of having competition was found to be important in the second phase while FDI was found to be a key factor in the third phase of mobile phone liberalisation. The findings of this research suggest that 'connection and personal acquaintance do matter' in liberalisation and issuing licences not only in the case of unsolicited bids but also in a competitive bidding process. It also suggests that although immense user demand was a key factor in opening up the sector, the degree of pluralism in state decision making to liberalise the sector was perhaps minuscule.

6.2.2 Policy shift towards marketisation

The policy actors, public officials and private sector representatives identified policy shift as a driver in liberalising the mobile phone sector. The interviewees also reveal that there was no major difference in economic policy issues among the two or three main political parties. The political parties believed in a neo-liberal economic philosophy. All governments continued neo-liberal economic reforms, with even more emphasis on the role of private sector led growth by the last two regimes of the BNP and the Awami League (AL). The first government of Bangladesh after independence formed by AL was a believer in socialism as evidenced in the then Prime Minister's announcement of nationalisation:

> My government believes in internal social revolution. There must be a change in old social systems [...] my government and parties are pledged to introduce a scientific socialist economy. First step, namely nationalisation has been taken as the beginning of a planned program towards socialisation of resources (Haque, 2002)

The government, imbued with socialist ideology, nationalised major industries (abandoned by the Pakistanis), including Bengali-owned jute, textile mills, banks, insurance companies by *Nationalisation order 1972* (Haque, 2002). But the government soon retreated from its socialistic economic policy towards a market economy with the expressed objective of streamlining and improving the operative efficiency of management of public enterprises. As a result, denationalisation began, although on a limited scale, before the overthrow of the first government in 1975. In a reverse policy direction, a total of 217 enterprises were privatised between 1976 and

1989 by the military and civil bureaucracy backed oligarchic governments. Although the AL Government started the process of privatisation in 1974- 1975, it was a gradual and incremental approach to move to market-based economic principles. The starting of denationalisation of the industrial units (such as jute, textiles, chemical plant etc) was done as part of government belief in a market economy. This process of providing greater roles to the market allowing the private sector to expand their hold on the economy by adoption of a small-state role (as prescribed by neo-liberalism) was followed by all successive governments. Subsequent governments continued the change of policy stance from state control to market- based reforms by dismantling tariffs and non-tariff barriers, abolition of the import licensing system, and the liberalisation of investment regime. The number of import restrictions came down from 550 in 1986-87 to 315 in 1989-90 to 122 in 1997-2002(Bangladesh Enterprise Institute, 2005).

The Revised Industrial Policy (RIP) 1975, Industrial Policy 1977, New Industrial Policy (NIP) of 1982, Revised Industrial Policy (RIP) 1986, Industrial Policies of 1991, 1996 and 1999[79] and Import and Export Policies recognised the important role of the private sector and declared concrete steps to encourage private investment. Alam observes:

> The industrial policies of Bangladesh have been formulated on the basis of the neoclassical economic model (1994, p.51).

Privatisation as a public policy has been adopted by military governments, especially during Ershad's military rule in 1982-1991 (Haque, 2002).

Since the mid-1980s, the investment regime in Bangladesh has been gradually deregulated. In the Industrial Policy of 1986, restrictions on imports in telecommunications, power generation, distribution, transmission and distribution of

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[79]The Industrial Policy 1999 made it clear that the 'private sector will be the prime mover' of future industrial development in Bangladesh. It was also declared that public undertaking would be permitted only in those industrial activities where involvement of the public sector is essential to facilitate growth of the private sector and/or where there are overriding social issues that need to be addressed by the State (Haque, 2002).

electricity and air transport and railways were gradually withdrawn. At present investment is allowed in all except four sectors arms and ammunition and sensitive defence equipment, security printing and minting, atomic energy and forest plantation and mechanised extraction.

The empirical data suggested that support for neoliberal reforms by successive governments were a factor in liberalising the mobile phone sector unilaterally. Although the interviewees did not mention the reasons for embracing neo-liberal policy position of Bangladesh, its adoption by the political leadership might have happened due to and been influenced by three factors: (1) globalisation of the neo-liberal wave; (2) the imposition of structural adjustment program by International Financial Institutions (IFIs); and (3) the prevalence of preconditions (such as a huge market for mobile services) for change.

The poor state of telecommunications sector and the supply-demand imbalance of telecommunications services provided the preconditions for the GoB to effectuate economic change. This is because although the state leadership is important, it cannot bring about economic or social change unless preconditions for such change already exist. Haque's observation supports the view of the interviewees that, as happened with many other countries, the global trend towards neo-liberal economic reforms has also affected Bangladesh (1999; 2001b). The shift in the economic policy of Bangladesh policy makers' thinking as testified by the interviewees ties in with the literature that since the early 1980s, the policy makers in Bangladesh have been gradually moving into neo-liberal economic policy in its trade and investment policies with a view to ensuring faster economic growth (Hossain & Cheng, 2002; Kabeer & Mahmud, 2004).

The economic policies adopted by successive governments demonstrate that the political parties, irrespective of differences in their past ideological positions[80], increasingly moved away from statist development approach towards market-led

[80] For example, the Awami League government under the leadership of Sheikh Hasina has decided to continue pro-market governance despite the party's past ideological bent towards socialism (Haque, 2001b).

reforms. Indeed, there was no substantial difference in economic policies of post 1975 governments. Rather a consensus on economic policies among the major political parties was found as recognised by the Centre for Policy Dialogue, the Leading think tank of Bangladesh: "there is a consensus among the political parties on promoting a market-oriented economic policy"(CPD & BEI, 2001p.26).

Haque also supports that view:

> There has always been a policy of encouraging more private sector investment for the industrialisation of the country. The first AL Government started rolling back the frontiers of public sector while subsequent governments accelerated the process of rolling back (2002, p.142).

The question that arises here is what is the reason for the consensus in economic policies of the major political parties? One reason might be that the ruling class consider that they can distribute state patronage to their party affiliates by awarding them licences[81], permits and contracts and by doing so, they themselves can also gain. Through privatisation, they can benefit party affiliates by selling them public assets at less than the market price. In this regard, it is to be noted that all the political regimes in the past distributed such state patronage (Haque, 2002). The liberalisation of FDI and awarding of *State-Concessions as* 'licence' create facilities for the political leadership to distribute state patronage. A number of interviewees agreed that the liberalisation and licensing were aimed at creating scope to distribute political rewards to businessmen and politicians loyal to the government of the day.

Another possible reason might be that they were convinced that the public sector was not capable and skilled enough to handle the economic activities due to mismanagement, corruption and losses sustained by nationalised entities. Conditionality imposed by Multilateral Lending Agencies (MLAs) was also a factor that led the successive governments to adopt market-based reforms. This observation is consistent with Haque (2008) who stated that the international agencies used debt

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[81] Recently the government has decided to issue more than 3,500 licences to the local entrepreneurs for handling international calls to and from Bangladesh through voice-over-internet protocol (VoIP) technology (The Daily Star, 2010a).

burden and dependency as instruments to put pressure on developing nations to adopt the neo-liberal structural adjustment policies (SAP). Privatisation and policies that are adopted under SAP include trade liberalisation in Sub Saharan Africa (Stein & Nissanke, 1999), Mozambique's wide-ranging privatisation under the World Bank's and IMF's debt relief program initiative called Heavily Indebted Poor countries (HIPC) and rapid privatisation of the water utility Sonec in Cameron. Tanzania debt relief was held up because of delay in the privatisation of the National Commercial Bank (Bayliss, 2002). Interview findings, however, slightly differed as to whether it was the state-owned landline sector in Bangladesh where the World Bank wanted reforms and provided policy prescriptions. No MLA pressure or conditionality was reported to have been imposed for liberalisation of the mobile phone services. On balance, it can be presumed that as political governments were dependent on donor agencies for loans and grants, they were under some compulsion to pursue the neo-liberal economic policies suggested by these lending institutions.

However, the policy of liberalisation of the mobile phone sector does not seem to reflect a sudden shift in the ideological premises of the policy makers. Although participants identified ideological shift as a prime driver of liberalisation, it seems that ideological shift started to happen long before the sector was opened up for competition. Therefore it seems quite logical to believe that adherence to already adopted neo-liberal ideology instead of 'ideological shift' was one of the forces of market opening. The finding that ideological shift towards a liberal market economy played a role in mobile sector liberalisation is consistent with the experience of other countries such as the liberalisation of the Korean Mexican, and Chilean telecommunications market, the privatisation of telecommunications in Argentina, and France Telecom and the break-up of A T & T (USA) (Bull, 2005; Haque, 2008; Kim, 2002; Rattoo- Nielsen, 2004), which were the outcome of adoption of new liberal policies.

It appears that there exists a relationship between lobbying, personal relationships and ideology. In the 1980s and 1990s, there was a shift in the mindset of the state apparatus. The inclination of the state's policy makers to gradually move towards market-based economic reforms is evidenced in Alam (1994) and Haque (2002).

Private accumulation of capital in Bangladesh was mostly the product of state patronage (Alam, 1994), corruption and proximity to the administration. The number of millionaires in the society continued to increase dramatically under state-patronage during successive governments in Bangladesh (Haque, 2002). These new millionaires (who soon emerged as an entrepreneurial class) seem to have influenced the government(s) to provide them with a space in the market to invest their accumulated capital in economic activities and make profit (Alam, 1994). The reason was that they knew telecommunications industry would become a highly profitable sector of the economy as predicted in Jin (Jin, 2005). This could be termed 'supply side' influence on the policy makers. This entrepreneurial class accumulated capital in the post liberalisation period through taking bank loan and using that bank loan to buy de-nationalised assets at a cheap price and ultimately went away without repaying their bank loans.

6.2.3 Attracting FDI

As reported in Chapter 5, attracting FDI was a key factor for removing restrictions on private investment in mobile phone services. It was also reported that the lack of investible funds and modern technology influenced the government to create the necessary policy position to attract FDI in the sector. Opening up the sector was reported to be such a pre-condition. The interview findings suggest that, although the state-owned BTTB has been profitable, the Government could not allocate enough money for the expansion and modernisation of its telecommunications sector after meeting the demands of other sectors. A significant proportion of the profit was retained by the government to finance other public sectors (Rahim, 2003). As a result of lack of funds, the landline provider had suffered from underinvestment and was unable to cater to the growing telecommunications needs of the potential users. The inability of the national governments to allocate enough funds for capacity expansion of their telecommunications sector is also found in other developing countries (Bhuiyan, 2004; Wilson & Wong, 2003).

In such a situation, where the government lacks funds to finance the landline provider to expand its capacity, it seemed quite difficult for the cash-strapped Bangladesh government to fund the large capital needed to introduce mobile services. However,

this is not to say that it was impossible for the government to introduce mobile services. In that case, however, the network and access capacity of the public sector mobile service would have been very limited, it would have unable to meet the huge telecommunications demand and possibly would have suffered from inefficiency due to bureaucratic complexities. This argumentative position is evident from the subsequent introduction of state-owned Teletalk Mobile Phone which is yet to receive adequate funds to create the capacity to provide one million Teletalk mobiles to its subscribers, let alone a capacity for about 58 million subscribers currently (2010) served by mobile phone providers.

In this scenario, FDI was a preferred option to finance the capital-intensive mobile phone service and support the growing economic and domestic needs of the country. Other reasons to try to attract FDI were to reap positive effects of FDI, such as transfer of technology and creation of jobs. Moreover, lack of local entrepreneur interest in untested and risky ventures with a long recovery period (to recover invested money) was also a factor in pursuing FDI.

The nature of Bangladeshi entrepreneurs also seems to have influenced the government to seek FDI by dismantling barriers to foreign investment. As most of Bangladesh's entrepreneurs came from the trading class and accumulated their capital through state-patronage (Alam & Teicher, 2010; Haque, 2002), they are risk averse in putting large capital into a relatively risky venture like telecommunications infrastructure (Interviewee, November 2008). It indicates that local investors were not much interested in assuming the risk of investing large amounts of capital in the new mobile phone technology, which was an unproven venture at that time. The reality that all five private mobile phone firms operating in Bangladesh are 100 per cent foreign-owned justifies this.

Bangladesh is a capital-hungry country and made a deliberate attempt to attract FDI in the telecommunications and other service sectors. Since the 1980s the Bangladesh government has adopted more flexible rules and policies such as 100 per cent foreign ownership, full repatriation of profit and dividends by foreign companies, guarantees against expropriation, and non-discrimination between foreign and local investment to attract foreign investment (Rahman, 2004; Rahman, 2008). Two major Acts

regarding investment, the Foreign Private Investment (Promotion and Protection) Act of 1980 and the Bangladesh Export Processing Zones Authority Act 1980, were promulgated to offer the most liberal FDI regime in South Asia (Hadi, 2006). Moreover, beginning with the Revised Industrial Policy (RIP) 1975[82], all subsequent Industrial Policies (NIP 1982, RIP 1986, 1991, 1999) encouraged private and foreign investment by gradually reducing the number of reserved sectors for private investment. The discussion above indicates that FDI was a key factor that triggered trade and investment liberalisation in the country. Opening up the mobile phone sector was such an investment liberalisation initiative.

The findings also suggest that further liberalisation (the third phase) of the sector through permitting Warid Telecom was an intended effort by the government to attract FDI not only in mobile phone services but also in other sectors. This finding is consistent with a national English language daily report:

> Warid Telecom was awarded the 6th licence for mobile telecommunications by the Bangladesh Telecommunications Regulatory Commission (BTRC) in December 2005 as part of a land-breaking MOU with the Board of Investment (BOI) of Bangladesh (The Financial Express, 2007).

The BOI is the apex body to facilitate and attract FDI. It is the 'one stop' body to provide all policy support to the investors which includes, *inter alia*, providing various concessions, issuing work permits, etc. A senior official from the BOI also confirmed that the licence to Warid was granted with a clear expectation and persuasion that Warid's parent firm, the Abu Dhabi Group, would later invest in other sectors, such as pharmaceuticals and real estate development. In this regard, he referred to the MOU executed between the GoB and the Abu Dhabi Group, which stipulates that the Abu Dhabi Group agrees to invest in diversified businesses, including telecommunications,

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[82] RIP of December 1975 focused on the development of a strong private sector. It also emphasized the need for transferring the State-Owned Enterprises (SOEs) to the private sector. It significantly increased the ceiling on private investment to $US 7.3 million (BDT 100 million). RIP provided opportunities to foreign investors and facilitated the setting up of the country's first Export Processing Zone in Chittagong (Quadir, 2000,p.199).

hospitality, pharmaceuticals and real estate development in Bangladesh. These findings suggest that the need for FDI was a key consideration in unilateral liberalisation of the mobile phone sector.

The pro-market reforms in the telecommunications sector to attract FDI are consistent with the experience of other countries. Cash-strapped governments in Chile, Mexico, and Korea and in Latin America privatised and liberalised their telecommunications sectors to bring FDI into the sector (Ku & Kim, 1997; Rattoo-Nielsen, 2004; Singh, 2005). Dependence on FDI for development of the telecommunications sector is a natural phenomenon (Burkart, 2005). Liberalisation of the telecommunications sector attracts FDI in other sectors as well. It has been found that a 1 per cent improvement in telecommunications availability in the host country increases its attractiveness with respect to FDI by 0.75 per cent (Rossotto, et al., 2005).

6.2.4 Technological development

The development of mobile technology has been identified as a key factor in promoting unilateral liberalisation of the sector. One key policy maker reported that they would liberalise the sector even if there were adequate land-based phone services, considering the benefits mobile phones can provide. The perceived ease of use and usefulness motivated prospective users to adopt the new mobile technology. It appears logical that the '*always available'* feature of mobile technology and the perceived benefits associated with it, such as instant accessibility, mobility, and variety of services at affordable prices, made it an attractive lifestyle life. The interviewees stated that the convenience of use of mobile services created its own demand in prospective users' minds. Focus group discussions with business users reveal that they were especially interested in introducing this technology through private sector participation for three main reasons such as (i) they perceived the new mobile technology to be more useful and convenient to use; (ii) efficient, because of its always available nature; and (iii) less costly, as it would remove much of their travel need. Low and Mattoo (1998) and Thatcher (2004) argue that new technologies, being cheaper to enter and set up networks, increase pressure upon governments to introduce competition.

Furthermore, the new technology seems to have appeared as a welcome opportunity for both the entrepreneurs and the users. It thus has affected both the demand and supply of the telecommunications industry in Bangladesh. On the demand side, long pent-up demand as well as new demand to embrace mobile services created pressure on the government to allow new suppliers. On the supply side, mobile technology brought forth a new interest group in the form of prospective firms such as Bangladesh Telecom Ltd, CityCell and Grameenphone. These firms showed their keen interest and used their influence in dismantling barriers to investment in the new technology. One of these firms agreed that they used their network to ensure that they could introduce the new technology and benefit from the potentially highly profitable business. The perceived business opportunity and large possible gains from the revenues of the new mobile business thus appear to have encouraged them to try to get permission to operate in the sector. This view is in line with Brock:

> Technological progress and the associated change in price ratios generally create pressure to modify the institutional framework. That pressure comes from the efforts of entrepreneurs who perceive opportunities available from the new technology that cannot be fully exploited because of the institutional framework. Those entrepreneurs seek to modify the framework to accommodate the new technological opportunities (2003 p.290).

According to the explanations given by the interviewees, the perceived benefits of mobile technology have played an important role in influencing and shaping the liberalisation decision of the telecommunications sector in Bangladesh. It appears that the new mobile technology had created a conviction among policy makers' that it would be beneficial to the greater interests of the country to allow new technology.

The role of technology in opening up the market has also been reflected in the remarks of Secretary MOPT of the GoB:

> Bangladesh's policy of liberalisation of the telecom sector was in line with the rapidly changing telecommunications environment (South Asian Telecommunications Regulators' Council (SATRC), 2002).

However, with regard to the relationship between technology and liberalisation, the reverse can happen as well. Prasirtsuk (2001) observes that the epoch making technology development would not have been possible without market liberalisation.

6.2.5 Clientelism, personal relationship and lobbying

Clientelism and personal relationships were reported to be one of the main factors of unilateral liberalisation of the mobile phone sector in Bangladesh. In particular, it was categorically indicated by a majority of interviewees that the government of Bangladesh had no liberalisation roadmap or telecommunications policy to open up the sector in 1989. The opening up of the sector by awarding the state concession (licence) to the owner of Bangladesh Telecom Limited (BTL) was an outcome of patron-client ties and a distribution of political rewards and recognition of personal acquaintance and loyalty. The objective was to extract private political and economic gain. The observation about the influence of clientelism[83] on liberalising the mobile phone sector by granting the first mobile licence to a loyal client seems logical in a society where clientelism, according to Islam (2006b), is embedded. It is also consistent with Kochanek (1993) who observed that in Bangladesh:

> Collectively through business associations, and individually through personal connections, business enjoys a variety of direct formal and informal channels of access to government decision makers... Government is very much approachable and it (government) does listen, it does respond, and it does act (1993 pp. 233-34).

Patron-client system is so strong in Bangladesh that a calculus of personal benefit often displaces institutional purpose (Kochanek, 2000). Titumir (2007) observes that political influence provides the scope for acquiring business licences that can be sold or rented to the business in return for money or profit.

The first mobile phone licensee, being personally known to the President had access to the decision makers. It was an unsolicited bid and the licence was awarded to BTL

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[83] a concept that refers to the distribution of patronage by the patron to a person (known as client) in return for his/her loyalty and support (Støvring, 2004).

on the basis of his personal acquaintance and loyalty to the President. The objective of the BTL ownership was to exploit the first-mover advantage and reap monopoly profits. Under the licence conditions that were ultimately issued in March 1990 by the BTTB on the authorisation of the Government,[84] BTL was authorised to operate five different telecommunications services: Radio Trunking, Cellular Radio Telephone (fixed and mobile), Riverine Radio Telecommunications Network and Paging services. Allowing five services in a single licence was unprecedented and an exception rather than the rule at that time.

The policy making process, particularly, in the case of awarding the first mobile phone licence to BTL (which was later renamed Hutchison Bangladesh Telecom Ltd or HBTL) was highly personalised and selective, rather than institutionalised. Because political power is centralised in the Prime Minister or President in Bangladesh, such centralised authority allowed the President of the day to use an executive order instead of asking that licensing rules be followed. The reason for giving such an oral order was that, since the prospective licencee had a personal acquaintance with and loyalty to the President, that relationship led the President to place personal loyalty above any rules that applied to acquiring the licence.

Thus it is clear that the initial phase of liberalisation was not driven by any collective purpose or conviction of the leadership to benefit citizens. It was rather an induced decision. In the context of the socio-economic environment of Bangladesh, this individualised form of action for private gain is common. Sobhan observes:

> The tendency has been for much more parochial, particularistic or even individualised forms of action which seek sectional or personal gain rather than the aggrandisement of a class (2007b p.304).

The selective decision making process contributed to not following the standard market-based system such as a competitive bidding process in issuing the licence. It seems there was an alignment of interest between the licencee and the Executive

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[84] Hutchison Telecom Bangladesh Ltd Vs BD Telegraph & Telephone Board & Ors, Writ petition no 1321/1994 and Civil petition for leave to appeal no. 300/1995

Authority of the State that contributed to open the sector in favour of BTL without respecting the basic principles and norms transparency of a market economy. Sobhan and Ahmed observe: "Policies are seen to emerge out of the interests and compulsions of policy makers" (1980 p.4).

The view that political influence as well as personal connections provides a favourable environment for acquiring business licences in a resource-poor country like Bangladesh is evidenced in Kochanek (Kochanek, 1993; 2000). The decision-making in Bangladesh "involves a high degree of particularism, meaning decisions involve a very low level of generality and are tailored to suit the needs of an individual or firm" (Kochanek, 1993 p.234). Yusuf, Alam and Coghill (2009) find that the BTL owner used his personal and political connections in getting the licence. It has also been found that Warid Telecom used political leadership and relatives of a minister and paid them $US 1.42 million to lobby for its fast-track frequency allocation (Yusuf & Alam, 2008a).

The existence of personal influence in the liberalisation process (i.e., in telecommunications licensing) has been indicated by a private mobile phone operator:

> Grameenphone was not among the original successful bidders who got shortlisted on financial and technical evaluation. Dr. Yunus (who subsequently won Nobel Prize for Peace) had lobbied the government of the day for the Grameen Phone's licence (Interviewee 16, March 2009).

The existence of personal influence in licencing of the Grameenphone was recognised in Sullivan:

> Yunus put his personal power and prestige on the line in a one-on-one meeting with Hasina, who had already selected two licences, leaving out Grameenphone (2007 p.84).

It is noted that Yunus had Pitroda (tipped to be the first CEO of WorldTel) met with government officials to lobby on Grameen's behalf (Sullivan, 2007).

The personal-relationship with political power holders is not unique to Bangladesh. Such personal relationships of businessman with the President was found to be a key

factor in determining the prospect of any business in the Philippines (Kim, 2002p. 356).

Although quite a sizeable number of interviewees indicated personal relationships and lobbying as a key factor, it appears that personal connections and lobbying did not trigger the subsequent liberalisation decision during 1996-2005. It was rather a matter of policy makers' appreciation and conviction of the necessity of competition in the sector. It seems the policy makers were convinced that liberalisation was essential to introduce competition, facilitate affordable telecommunications services and bring FDI into the country. This conviction about the importance of a competitive telecommunications market caused the GoB to take the decision to liberalise the sector further, and issue three mobile licences (out of 14 bidders) to Aktel, Sheba Telecom and Grameenphone (Sullivan, 2007). Based on the evidence advanced so far, it can, therefore, be argued that personal influence and lobbying played a role in the initial stage of the liberalisation. Personal influence got its way in the second round of liberalisation in influencing who would get the licence.

With regard to bribery and corruption, reported in section 5.2.5 of Chapter Five, participants did not provide any specific evidence nor did they accept their own involvement in such events. The researcher could not therefore verify the allegation of bribery. The context and some specific evidence provide an impression that bribery might have happened. Transparency International Bangladesh (TIB) has ranked Bangladesh the most corrupt country in the world for five consecutive years (Mian & Alam, 2006), although it did not specifically mention about the incidence of corruption in telecom licencing. Salman (2009) states that corruption is encouraged in Bangladesh (2009 p.141). In such a context, it may have happened that willing investors bribed the relevant officials or policy actor to get their job done as they desired. The bribing of public officials by Warid Telecom (as stated above) provides support to this view. Furthermore, the involvement of the mobile operators in the illegal Voice-over-Internet-Protocol (VoIP) business and the heavy penalty imposed on them by the Bangladesh Telecommunications Regulatory Commission (BTRC) for the irregularities (Yusuf & Alam, 2008a) also lends support to the claim that mobile operators were involved in corruption and illegal practices.

6.3 Liberalisation and its impact

The role of the liberalisation of the mobile phone sector in consumer welfare in terms of accessibility, mobile phone pricing, and quality and diversity of services are discussed in this section. The findings demonstrate that liberalisation of the mobile phone sector has had varied impacts on consumer benefits in different phases depending on the degree of liberalisation (the number of firms has been used as a proxy for the degree of liberalisation) and the intensity of competition (see Table 6.1).

Table 6.1 Three phases of liberalisation and competitive outcome

Phase	Market feature	Time	Features	Outcome
1	Monopoly	1989- March 1997	One firm supplies mobile phone services; No regulation on pricing, QoS or interconnection.	High connection cost; exorbitant tariff; QoS and diversity was not an issue
2	Limited competition despite multiple operators	1997-2004	Competition is introduced into basic voice services; Interconnection problem with BTTB and among the operators; abuse of power by dominant incumbent in interconnection; Operators are accused of tacit collusion	Price reduced very little, charge on incoming calls ;poor QoS, limited services Dominance of one firm makes the market de facto monopoly;
3	Competition	2005 onwards	Extensive competition; Price ceiling and price floor imposed; asked to improve quality	Mobile tariff reduced significantly ; current lowest in the world ($US 0.004- maximum 0.03/minute); improved QoS; Diversified services

Source: Interview and focus group findings (2008)

As set out in Table 6.1, consumers were exploited by monopoly tariffs in the initial phase, and then the sector experienced very limited competition during the second

phase, between 1997 and 2004. During 1997 to 2004, the situation of mobile phone services improved due to the presence of multiple operators, but the outcome was sub-optimal. Tariffs were still high and accessibility was still beyond the means of many. The QoS was still poor and the diversity of services was rather limited. Competition developed from 2005 onwards. Consumers started to reap the benefits of liberalisation after 2005. The impact of liberalisation on accessibility, pricing, QoS and diversity of services are also discussed:

6.3.1 Monopoly period (1989- March 1997)

Accessibility

Accessibility means the 'availability' and ease of getting access (connected) to mobile service. It also means making people more available to others and the ability to maintain perpetual contact. The mobile users reported that accessibility was difficult and not available everywhere in this period of monopoly. Users had to fill in an application form, make initial deposits and submit photographs. It was time consuming and onerous as prospective subscribers had to go the operator's office located some kilometres away. Moreover, during the monopoly, there were only a few sales centres only. Bundling of handsets with connection of mobile phone service made accessibility quite difficult and expensive during this period. The reason was that the mobile phone users were forced to buy handsets and connection as a package from the operators. Usually handset prices were kept at a very high price, much higher than the market price. In terms of making perpetual contact with others, accessibility was also reported to be limited because of high connection costs and tariffs, high cost of mobile phone sets, and limited growth of mobile phones. Maintaining personal ties at remote locations was still fairly difficult due to limited numbers of subscribers.

Pricing

Although Bangladesh Telecom Ltd or BTL (later known as Hutchison Bangladesh Telecom Ltd after it formed a joint venture with Hutchison Ltd to become HBTL) was the first mobile phone licencee, it could not launch its operation due to some internal complexities such as mistrust among partners and non-cooperation in getting access

to the incumbent's network. The HBTL licence was transferred to Pacific Bangladesh Telecom Ltd (PBTL). PBTL started operation in 1993 under the Citycell brand and enjoyed a monopoly till March 1997. During this period, Citycell charged a very high price for mobile phone handsets which were bundled with the new connection (see Table 6.2). Only elite business customers and rich people could afford this (Alam, 2008; Gupta, 2005; Islam, 1998; Sullivan, 2007). The very high price of handsets suggests that the Citycell business model was based on maximising profit from exploitative handset prices, exorbitant connection charges and very high tariffs (see Table 6.2) rather than expanding its coverage.

Table 6.2: Monopoly pricing of mobile phone service

Service	Price/cost (in $US)
Handset price (bundled with connection)	2000-2500
Tariffs per minute	0.25-0.30
Incoming charge	0.05

Source: Yusuf & Alam (2007b).

The call rate of mobile phones in Bangladesh in 1996 was the highest in the world (Alam, 2008). A mobile phone was a symbol of status then. As is common in any monopoly, the tariffs were exorbitant, amounting to $US0.25-0.30/minute (Yusuf & Alam, 2007b). Moreover, the monopoly provider charged incoming calls at $US 0.05/minute (Khan, 2003a). Naturally the growth of the sector was very slow (Sullivan, 2007). In the absence of any competitive threat and regulatory monitoring, monopoly provider Citycell had no urge to expand service to less affluent people.

Facilitating a substantial amount of investment in the sector was shown to be the reason (licencing condition 1) for awarding an exclusive right to Bangladesh Telecom Private Limited (F. Rahman, personal communication, August 25, 2008). As the mobile phone was a new service, and its success was not certain, allowing monopoly rights might have been plausible on the grounds that it would encourage the first mover to take risks in the unknown venture. Intense competition can increase the risk of return on investment making recovery of investment much difficult. In such a situation, a temporary monopoly could increase the first entrants' investment to the

benefit of telecom users (Armstrong & Sappington, 2006, p.346). However, no remarkable investment had been made by the monopoly provider PBTL. Instead of making large investments and expanding network coverage, PBTL preferred to target the elites of the capital city (Dhaka) and Chittagong to maximise returns. It made no effort to expand its services beyond these two cities (Interviewee 10, September 2008).

Thus it seems that economic logic did not work much in providing a monopoly. The findings and the contextual evidence suggest that the personal relationship and political affiliation of the owner of PBTL helped him to get a monopoly of mobile phone services (Rahman & Karim, 2007). It was revealed by a majority of the interviewees that the owner of PBTL was politically connected to the ruling party and that helped him to buy out the licence from BTL and maintain the monopoly. Favouring a party stalwart by awarding it a monopoly was a distribution of state patronage to achieve personal gain and presents an example of the elevation of a private agenda over the public interest. This culture of using public office for private gain is increasingly used in Bangladesh where politicians even collude with the business sector and the bureaucracy (Sobhan, 2007b).

Quality of Service (QoS)

During the monopoly, QoS was poor, as usually happens with any monopoly provider. The monopoly service provider Citycell cared very little about customer service and complaints handling. There was no separate customer care point as was found later in a competitive regime. Customers had faced difficulty in getting quality-related problems (such as call drop, poor voice quality and ghost billings) solved and paid money to replace SIM cards. As there were no alternative providers, it appears that customers also had no option to punish the provider by switching to another provider for better service.

6.3.2 The period of limited competition (1997-2004)

With the awarding of three more licences to Sheba, Grameenphone and Aktel in 1996, the monopoly of PBTL ended, to open a new era of mobile phone service. With the greater liberalisation of the sector, theoretically, the necessary policy position was

established to infuse competition in the sector. However, the mobile phone users were unanimous in reporting that there was little competitive behaviour among the operators during 1997-2004. This period can therefore be categorised as the 'period of limited competition'. As can be inferred from the findings, the reason for limited competition in this period is poor enforcement of regulatory provisions caused by regulatory capture, poor recruitment to the regulatory body, dominance of a single operator, collusion among the operators, and lack of state oversight.

The following sub-section elaborates the impact of liberalisation on pricing, accessibility, QoS and diversity of services.

Impact of limited competition on the consumers

Empirical findings suggest that despite the presence of multiple operators during 1997-2004, the mobile services sector experienced limited competition. In this period of a higher level of liberalisation with increased number of operators, the users experienced some improvement in their welfare. The impact of unilateral liberalisation on the users is discussed below:

Accessibility

Accessibility to mobile services improved in this period compared to the monopoly period. Users were no longer required to make initial deposits and supply photos. But they still needed to go to the operators' sales premises and wait to buy a connection. Handset prices and connection costs went down compared to the monopoly period but it was still expensive for ordinary users (e.g., from $US 2000- 2500 to $US300-400 for a handset and connection) but it was still expensive for ordinary users. It was also not so quick to access mobile service as there was a limited number of sales outlets and most of these were located in important urban locations. This has kept 'ease of accessibility' away from subscribers. High tariffs also made accessibility to mobile phone services difficult, as reflected in number of mobile phone subscribers. There was very limited growth in subscriber numbers in this period. For instance, the number of subscribers reached only to 1.90 million in seven years (1997 to 2004) whereas the growth in subscriber was astronomical (from 1.90 million to 58 million) in the competitive period of 2005-2010 (Al-mahmood, 2010). This speaks about the

difficult accessibility of the mobile phone during the period of limited competition and poor public and regulatory oversight. The difficult accessibility resulted in insignificant adoption of mobile phone service during 1997-2004. The impact of poor public and regulatory oversight on the adoption of mobile phone service in Bangladesh is consistent with global tendency as reflected in Howard and Mazaheri, who observed: 'too little public oversight has a negative impact on mobile phone adoption' (2009 p.1165).

Pricing

The findings reported in Chapter 5 highlighted that connection fee and mobile tariffs were very high in 1997 and remained unchanged for individual operators until 2004 (see Table 6.3).

Table 6.3: Period of limited competition and mobile phone pricing

Service	Price/cost (in $US)
Handset price including connection	300-400
Tariff per minute	0.20-0.25
Incoming charge per minute (on incoming calls from the BTTB)	0.05

Source: Interview and focus group discussion (2008)

As the regulator turned a blind eye to the public interest, and there was no state-owned mobile phone service provider operators enjoyed free rein in setting their prices. They adopted an exploitative pricing strategy by charging high tariffs and tariffs on incoming calls between 1997 and 2004. Moreover, they forced subscribers to accept bundled packages and pay for the whole 'unit of time' even when the call did not last the whole unit (i.e., users had to pay for a full minute even though they might have talked for only a fraction of a minute). It indicates that users had been deprived of the benefits of 'pulse' billing. The outcome of the liberalisation during this phase was sub-optimal as the mobile phone services were expensive, QoS was poor, and service offerings were limited. Bangladesh's ex-Minister of Finance reprimanded private mobile phone operators in 2005 for charging excessively commenting: "Mobile

phone operators in Bangladesh charge four times higher call tariff in comparison with Indian mobile phone operators[85]" (The New Age, 2005).

A mobile phone was still a dream for many Bangladeshis, the 75 per cent of whom live in the rural areas. A majority of the interviewees were of the view that that there was very little public oversight, which allowed operators to undertake informal price coordination among themselves to maintain high prices. It was also reported that operators employed a clever trick by maintaining some variation in their tariffs but they in fact maintained tariffs until they were forced by a new entrant in 2005 to reduce tariffs. The strategy that the operators adopted seems to be quite natural, as the goal of any private organisation is to maximise profit and shareholder wealth, no matter how badly consumers suffer. In this regard, Baldock notes:

> The private sector is expected to be largely mercenary and opportunistic and to be trustworthy only so far as it is regulated by the public sector (2003 p.69).

Despite drastic fall in the capital expenditure of the sector (Buerkler, 2005; Tuttlebee, 1992) globally and the benefits of 'economies of scale'(Yusuf, Alam, & Coghill, 2010) due to an increased subscriber base, operators did not slash the mobile tariffs at all. There was also no control by the regulator of mobile tariffs. The free market proponents may argue that setting a price cap in a free-market economy contradicts economic ideology and it should be left to the market. But it is to be noted that price caps are fully consistent with a competitive regime as these caps are maximum prices only and they leave flexibility to operators to change their price bands within the given range.

Price caps also provide strong incentives to the operators to reduce costs and enjoy higher than expected profits until the next rate setting. Furthermore, price caps limit undue exercise of market power and ensure consumers are not hurt by tacit collusion of operators. In addition, price control arrangements are not unusual and are applied in other countries such as the UK, Australia, Chile, Brazil and Taiwan (Cave, 1997; Chou & Liu, 2006; Mattos & Coutinho, 2005). The different telecommunications

[85] Private mobile phone operators, however, disagreed with this statement.

services provided by Telstra including cellular mobile telephone services, are subject to a price cap (ACCC, 2000). Chilean regulator had a rate setting formula to set the price cap from 1987 to 1994 (Kerf & Geradin, 2000, p.60).

Quality of Service

Apart from high tariffs and expensive accessibility, mobile phone users had suffered from poor quality of service such as poor call completion rates, frequent call drop, echo, and unsatisfactory customer service as stated in Chapter 5. Experiences of mobile phone users suggest that the quality of service was not a prime concern to operators. There have been complains of high congestion in the network (which affects the ease with which one can access the mobile network), poor call completion rates, call drops, inaccurate billing and poor complaints handling.

Regarding poor service quality between 1997 and 2004, a telecommunications analyst reports:

> Customers are often hit by inconsistent billing and appalling quality of networks. Frequent call drops is an epidemic in every mobile network. Erratic disconnection compels the users to repeatedly calling the same number to complete the conversation. It penalises the customers with the extra costs of making multiple calls to conclude the conversation (Khan, 2004).

The reasons for the weak competitive regime are found to be the lack of a quality benchmark and its implementation by the regulator, no independent auditing of QoS by a third party, lack of incentives or punishments for good or bad QoS, and asymmetry of information regarding quality issues between mobile phone providers, users and regulators. Unlike the regulators in countries such as Singapore, Australia and the UK (Xavier, 2008), the BTRC failed to specify quality benchmarks for operators. In the absence of any quality benchmark and its strict implementation, operators put very little emphasis on the quality issue. The independent auditing of QoS is observed in other countries, even in neighbouring India. Furthermore, the BTRC was under equipped. Like many Asian governments (Jalilian, Kirkpatrick, & Parker, 2007), Bangladesh relied too heavily on the underequipped BTRC to carry out

tasks that were beyond its capacity. Apart from shortage of skills, regulatory capture[86] was found to be responsible for inadequate regulatory monitoring.

In this regard, it is important to mention that ensuring QoS is a daunting task and a challenge for the regulator. Most dimensions of quality that people care about cannot be adequately handled through the market mechanism because of market failure. Market failure can occur for a number of reasons, such as information asymmetry, economies of scale and scope (Flacher & Jennequin, 2008), barriers to entry created by incumbent monopolists or market distortions resulting from imperfect competition (Blackman, 1998).

In the case of the Bangladesh mobile phone services market, imperfect competition seems to have contributed towards poor QoS. The large dominance of GP and its market power was a contributing factor towards the non-competitive mobile phone service market. The dominance of GP can be gauged from its high market share. In 2003, GP alone had an 87 per cent market share, while the other three operators together had 13 per cent (Khan, 2003a) . The call termination externality[87] was a major barrier for small operators to be competitive vis-à-vis GP. Other operators were GP's customers for interconnection. GP disadvantaged other operators by deliberately blocking their calls. Other operators also later retaliated. The result was a poor call completion rate, network congestion and overall reduction in QoS.

It is worth noting that QoS sometimes becomes an issue that goes beyond the regulator (i.e., external to the work of the regulator). Therefore the regulator has to find a way to collaborate with other stakeholders , especially with those outside parties whose interests are implicated by regulatory decisions. Discussion with these

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[86] 'Regulatory capture' involves the regulatory process becoming biased in favour of particular interests. Regulation is also subject to 'political capture'; when political capture occurs, the regulatory goals are distorted to pursue political motives (Jalilian, et al., 2007, p. 89).

[87] This externality relates to termination of calls which originate on different networks. The effect arises because the person originating the call is not the customer of the operator who terminates the call. The terminating operator thus is able to raise the price of termination with no direct effects on its own customers (Crocioni, 2001, p.47).

stakeholders and the interpretation of the deliberation that takes place among them help the regulator translate the collective judgement reached during the deliberative process into concrete regulatory decisions (Croley, 2008). Such public consultation was found to be absent in Bangladesh.

Diversity of services

Compared with price, accessibility and QoS, users had fewer complaints about the diversity of service offerings. Mobile users reported that, although there were limited offerings in services, they were not much concerned with the diversity issue. They agreed that diversity was less paramount to them as they were burdened with high rates and poor service quality. The range of services and innovative offerings had been and is continuously increasing due to increase in competition and cutting-edge handsets with numerous features. Innovative pricing structures such as prepaid services, per second billing (i.e., 1 second pulse), Flexi-load electronic recharge service[88] and free calling to Family and Friends (FnF) have been introduced that have certainly encouraged the rapid adoption of mobile phone services. Grameenphone has been at the forefront of introducing innovative products and services including prepaid model and Flexi-load electronic recharge.

From the findings, it can be inferred that most of the mobile users were unhappy with the accessibility, mobile tariffs, quality (including customer service) and diversity of services in this period.

6.3.2.1 Reasons for limited competition

The limited competition and exploitation of customers by the operators appear to have been possible for these reasons: Lack of regulation to ensure competition such as the absence of Telecommunications Act until 2001, lack of competition policy, and lack of anti-competitive provisions in the Telecommunications Act, poor enforcement of regulations, dominance of a single firm, price collusion among operators, lack of

[88] Flexi-load has made mobile telephony accessible for subscribers who can reload their phones with small amounts and pay as they go from the nearest Flexi-load centres.

user pressure and lack of state intervention, and complete absence of public sector mobile phone service provider until 2005.

Indifferent State and poor competitive outcome

Government has an important role in creating an environment where the market can work. In a free-market economy, proper regulation is essential to promote competition. Regulation is also necessary because formulation of a proper Telecommunications Act could have bolstered legal responsibility of the BTRC to enforce regulatory oversight. There was no Telecommunications Act until 2001 to govern the industry and force operators to engage in competition. The role of regulation in promoting effective competition is echoed in Duncan and Quang: "ensuring effective competition through government regulation of markets is another important institution" (2003, p.5).

Introduction of a Telecommunications Act does not end the role of the state. When it became clear to the state that the telecommunications regulator was not playing the watchdog role in protecting consumer interests, there was scope for state intervention as the ultimate custodian of citizens' interest. Non-intervention by the state in the working of the market mechanism in mobile services helped mobile phone operators charge high rates, repatriate huge money to overseas, (Khan, 2007a) and show little concern for the QoS.

But the government machinery including the relevant Minister remained passive and took no action to make the BTRC accountable through Parliament or to reconstitute[89] the ineffective BTRC between 2002 and 2006**.** Here a question may arise: why did the state remain so indifferent in upholding consumers' interest? The findings reveal that the low involvement of relevant stakeholders such as public managers, the political leadership and private representatives in telecommunications policy formulation made the administrative machinery indifferent**.** It has been reported that public policies (that also include investment policies) are often adopted unilaterally in

[89] As per Section 9 of Bangladesh Telecommunications Act 2001, the commissioners are appointed by the Government.

Bangladesh without influence by the opinions of relevant stakeholders (i.e., parliamentarians and citizens) in the Parliament and outside Parliament. The result was that the political leadership had little ownership of the policies adopted and they remained indifferent in implementation of the provisions of Telecommunications Act 2001 to protect the public interest. Ahmed (2008) observed that none of the relevant policies related to commerce and trade have wide political ownership. As a result, the political leadership showed little commitment to see that these policies are implemented properly in the public interest. In this regard, the role and jurisdiction of the regulator and the Ministry as policy makers seems somehow unclear as to who would take the lead when the question of state intervention arose in the event of market failure.

Although state intervention is not readily sanctioned in a neo-liberal market economy, at times it becomes necessary to create competition among the market participants especially when the market does not work properly. In this regard, Dugger observes, 'the market plays a key role in economies...but so do government institutions ... which must check market failures, help sustain market dynamics and control abusive corporate organisational behaviour...' (1989 quoted in Farazmand, 2009 p.1009)

Elaborating on the same issue about the paramount role of state in a market economy, Kim notes:

> Liberalisation is only a necessary condition for market competition since non-structural barriers, such as the lack of sufficient market size and the hostility of incumbent market players, discourage potential entrants. It is one reason why the role of the state is a critical factor in bringing out the meaningful results of market liberalisation (2002 p.339).

After launching telecommunication reforms in the early 1980s, the British government had to enact new pro-competitive regulation to infuse competition. In this regard Vogel observes:

> So the government could not simply allow competition- it had to *create* it. It usually did this with some form of asymmetric regulation: imposing restraints on the incumbent and giving advantages to the competitors (2007, p.34).

Such intervention is found in a similar situation elsewhere. For example, in India, the intervention of the Prime Minister's Office in the policy-making process made it possible to introduce competition into the domestic long-distance sector (Bagchi, 2000 in Arun, 2004). However, intervention needs care since it is not without cost. Increased regulation may increase the opportunity of rent-seeking by the ruling establishment such as the regulator and the ministry.

Against this backdrop, it appears that State intervention was necessary in the mobile phone services sector. This is because the state-market relationships are mutually supportive to each other for a proper functioning of a market economy. Glinavos correctly notes:

> The emerging theory... presents the state-market relationship differently as it ceases to be seen as a relationship of opposition (market against the state) but becomes dialectic (state and market being mutually supportive) (2008 p.1093).

However, no such state intervention happened in Bangladesh to remedy market imperfections.

Delayed launch of State-Owned Teletalk Mobile

The empirical findings reveal that when the government decided to launch mobile phone services in the public sector, initially the BTTB (now BTCL) and later the MOPT dilly-dallied in the implementation of the Teletalk Bangladesh mobile phone project. It has been found (as presented in Chapter 5) that Ministerial delay and procedural complexity hindered the smooth implementation of the project. The MOPT took two years just to appoint the vendor for the project. The one million government mobile phone project was not completed until its last deadline of June, 2008 (Hasan & Khan, 2009). It has been reported by a number of key interviewees, including the state-owned mobile phone firm, that mobile phone operators influenced, conspired and successfully lobbied the MoPT to hinder the launch of 'the 1 million T & T Mobile Phone Project' to limit potential competition (Mobile firm 5, October 2008; Interviewee 2, September 2008; Interviewee 15, October 2008).

These findings tend to concur with a daily English language newspaper report: "Some mobile operators also played a strong role to ensure that the project does not

succeed" (Hasan & Khan, 2009). It has also been found in a task force probe report that, due to administrative delay and unfair practices, the cost of the Teletalk public phone project eventually rose to $US 116 million instead of the estimated $US 86 million (Hasan & Khan, 2009).

The evidence so far advanced suggests that the incumbent mobile operators conspired[90] to hinder competition and thus benefit from non-competitive pricing. These private operators appear to have been successful in influencing the public officials to assist inordinate delay in launching the Teletalk mobile phone service. The role of the mobile phone operators in Bangladesh concurs with the literature that incumbent private-sector firms lobby government to hinder competition (Parker & Kirkpatrick, 2004).

The findings clearly demonstrate that the delay in the Teletalk project happened because the whole procedure of the project was inefficient. The inefficient procedure led re-tendering and re-assessment of the process, repeated decision changes by the MoPT, changes of project director on five occasions and taking of more than two years to approve the vendor for implementing the project. Poor technical evaluation of bidding documents and negligence on the part of the policy makers and Ministry officials were also responsible for delay. It has been reported that the private mobile operators influenced MoPT officials to frustrate or at least delay the project. The private sector influence seems to have made the MoPT officials in the track to apply all tricks in their repertoire, including repeated decision changes (Hasan & Khan, 2009) and creating barriers to slow down the implementation of the Teletalk

[90] Private mobile phone operators conspired not only to hinder entry of TBL they are also accused of conspiring against the state-owned Teletalk in collapsing its service in connivance with staff of Teletalk. One daily newspaper recently speculated that: although Teletalk authority considers the collapse of Teletalk service a technical fault, telecom experts consider it as a conspiracy. A powerful syndicate from the Teletalk Mobile itself is creating such disruptions in Teletalk service deliberately. These Syndicate members are helping some private mobile phone operators. It is learnt that Teletalk faced such service disruptions in the past also due to the plot by this syndicate' (Masud, 2010c).

project[91] to allow benefit accrues to the private operators. The mobile phone operators influenced decision makers because they feared that Teletalk Mobile would be a potential competitor and threat for them because they would face losses as a result of the entry of this public sector mobile provider.

The implementation delay of the Teletalk mobile project can be explained using the concepts of the 'Tollbooth' Theory and 'Capture Theory'[92] According to the Tollbooth Theory (developed by Shleifer and Vishny 1993), inefficient procedures are often deliberately crafted by corrupt and politicised bureaucrats in order to maximise their personal gain, through such means as bribery (Alam & Teicher, 2010; Rothstein & Teorell, 2008, p. 183). This is exactly what appears to have happened in the case of Teletalk. The Capture theory also, in part, explains the situation. The incumbent mobile phone operators were able to influence and capture the MoPT, which deliberately applied inefficient and inconsistent work procedures, created barriers (as was revealed in focus group discussions) and changed decisions several times to hinder the smooth implementation of TBL mobile phone project. This deliberately crafted delay kept out the competitor and increased incumbents' profits, not users' benefit. Similarly, it has been found that the politicians extracted bribes from Warid Telecom by creating barriers to its entry and launching of operations in Bangladesh. Warid spent $US1.42 million as kickbacks to acquire fast track frequency allocation (The Daily Star, 2007; Yusuf & Alam, 2008a). The extraction of rents or kickbacks by politicians using regulatory powers is similar to collecting tolls through creating tollbooths, as stipulated in Tollbooth theory.

Although, the minister is the top policy maker in the ministry, the blame for the delay in the Teletalk project goes equally to both the bureaucrats and the politicians. This is because, in Bangladesh, bureaucrats are in a position to take the lead in policy formulation, monitoring and implementation due to the great reliance of

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[91] A project can only be approved if it is approved by each of the officials in the track.

[92] The Capture and Tollbooth theories are closely related. They both address rent creation and extraction through the political process. The capture theory emphasizes the benefits to the industry while the tollbooth theory stresses those to the politicians (Djankov, 2009).

inexperienced and corrupt politicians on them. The larger role of bureaucracy in policy formulation and implementation has been recognised in Zafrullah and Huque:

> Indeed, policy making in Bangladesh has never been the monopoly of the political executive or elected representative; bureaucrats enjoy more than an equal share in setting the agenda, planning and delivering policies (2001 p.1388).

The reasons for overreliance on public managers appears to be short-termism, limited educational qualifications, and lack of concentration in policy making. They concentrate little on enacting laws and policy because they have other priorities such as accumulating personal wealth using their position and power. The over reliance of the political leadership on bureaucrats due to the factors stated allowed the mobile operators in Bangladesh to utilise the situation to their advantage.

Lack of users' influence

The lack of pressure from the users for better price, variety and quality was a factor contributing to poor liberalisation outcomes in the sector. As demands for mobile services were on the rise due to inadequate telecommunications infrastructure and poor service, potential users' could not pressure private operators to reduce tariffs and improve service. Moreover, as diffuse interest groups, consumers were not an organised pressure group to influence policies. Croley (2008) finds that it is often difficult for large group such as consumers, with numerous members each with small stake, to emerge as an organised pressure group In such a situation, consumers were captives of the operators. Furthermore, voices of poor and ordinary users are largely inconsequential in a telecommunications policy making process that is elite-dominated and typically special-interest driven (Zhao, 2007).

In explaining the reasons for the competitive outcome up until 2004, a large number of interviewees expressed their view (as stated in Chapter 5) that mobile operators were engaged in cartel and price collusion. The following section makes an assessment of how far that complaint is justified.

Cartel-like behaviour in mobile phone pricing

It has been reported by a considerable number of interviewees that operators were engaged in price coordination and tacit collusion to maximize their returns by

keeping prices stable during 1997to 2004. With regard to price coordination, a telecommunications analyst mentioned that private operators formed a cartel and charged almost a uniform high tariff. A significant number of mobile users, and two telecommunications firms (the state-owned mobile firm TBL and land-based phone firm BTCL) also complained against the mobile firms for their alleged involvement in price maintenance. Kibria's view supports the findings on price cartels:

> It (Government) also needs to keep regulatory provisions to check unfair practices by unscrupulous corporate bodies. The cell phone companies in Bangladesh have created another cartel driven mainly by a high rate of profit (2005).

A national daily English language newspaper also reported that mobile service providers were engaged in a cartel:

> The mobile phone subscribers in the country have been subjected to pay high call charge because of a cartel of four private mobile telecom operators (The Daily Star, 2005c).

Although the existence of collusion among the operators was widely perceived by interviewees, and allegations were also published in widely circulated national news media, no investigation was carried out by the regulator to detect if there was any collusion.

According to Stigler (1964) and Stotyka (2007), the main features of cartel are: Stability and similarity of prices; Oligopoly prices closer to monopoly prices; Coordination among the firms; Price war after the entry of a new operator; and Industry structure (a highly concentrated market facilitates coordination and even collusion).

An investigation into the mobile phone services market demonstrated that almost all the consequential evidence of collusion existed in Bangladesh except for explicit price communication.

The following features of price collusion that were observed in the mobile phone sector between 1997 and 2002 in Bangladesh provides an important basis for

arguing that there was some form of price collusion among the mobile phone operators:

- Identical price: Sheba, TMIB and PBTL kept their prices identical at about $US0.22-0.24/minute. Grameenphone tariffs were higher[93] because of its perceived high quality. The charging of premium tariffs by GP was possible because customers did not just care about price; they also cared about coverage, reliability, data services and the speed at which they are delivered (Nicholas, 2008). Grameenphone, however, kept its tariffs identical at $US 0.30/minute) for the period 1997-2002.
- Stability of pricing over the years: all the mobile phone operators kept their prices unchanged in 1997-2002.
- The oligopoly prices were closer to monopoly prices. Monopoly prices ranged between $US0.22 to 0.25/minute; oligopoly prices were $US0.22/minute; it was even higher for GP: $US0.30/minute.
- All the private operators influenced the government not to licence new operators (Islam, 2003) and delay entry of state-owned mobile firm TBL
- Price war after new entrance. Operators engaged in a price war when TBL and Banglalink entered the market in 2005 except explicit communication among the competitors.

The lack of a public sector mobile service provider until 2004 appears to have emerged as a boon for the private operators. When the government launched its mobile phone operation, multinational mobile firms operating in the country were bound to reduce their tariff from $US0.11 to $US0.004 per minute (The Daily Star, 2008d). This observation demonstrates that public sector provider TBL was the pull down force in forcing mobile operators to slash tariffs. In this regard, the interview

[93] The charging of premium tariffs by GP was possible because customers did not just care about price; they also cared about coverage, reliability, data services and the speed at which they are delivered.

findings revealed that private mobile phone firms started to feel the pressure of competition to reduce mobile phone tariffs even just after the announcement of the launching of mobile phone services by the public sector provider TBL. This finding is consistent with the economists' argument stated in Chand and Duncan (2008) that even the possibility of contestability in a market will be beneficial to consumers. After the launching of mobile phone services in 200 by state-owned TBL and then Banglalink in the same year, a price war was seen among the operators resulting in tariffs dropping from $US0.22-0.24 in 2002 to $US 0.04/minute in 2005/06 and then as low as $US0.004/minute in 2008.

Although the private mobile firms denied existence of any such collusion, the newspaper reports and the circumstantial evidence lend support to the interviewees' claim that there was some form of price coordination among the mobile phone operators. And possibly, it was non-cooperative (informal) price collusion since interviewees did not confirm explicit communication among the operators. In the backdrop of these circumstances the existence of tacit price collusion or cartel-like behaviour among the operators cannot be ruled out. It seems there was *unity of convenience* among the private mobile phone operators in maintaining the mobile phone prices. This kind of anti-competitive behaviour by the private mobile phone operators is also most likely in Bangladesh where 'the private sector itself hardly complies with business norms and principles' as stated in Haque (2001a p.102).

The formation of a cartel or adoption of coordinated behaviour became easier in Bangladesh because liberalisation was pursued without a regulatory regime. Moreover, with a high rate of market concentration and the possibility of further entry being closed, mobile firms in Bangladesh were prone to collude rather than to engage in price war in the oligopoly market.

It is, however, to be noted that it is highly difficult to detect collusive behaviour. Even if collusive behaviour can be guessed, it is neither easy to identify explicit collusive behaviour, nor to prosecute the perpetrators (Alderighi, 2008; Motta, 2004).

6.3.3 The era of stiff competition (2005 onwards)

The period of 2005 and onwards has been termed as the 'era of stiff competition' in this study because users reported that they have been enjoying the expected benefits of liberalisation since 2005. These benefits are derived in terms of telecommunication accessibility, pricing, QoS and diversity of services. The impacts of competition on these aspects are discussed below:

Accessibility

Accessibility to mobile phone services has become extremely easy, quick and cheaper since competition started to take hold around 2005. The connection costs also reduced to a token fee level: for example, the GP connection fee reduced to a range US$2-6 from a range of US$100-300 a few years earlier. Some users reported that Banglalink offered free SIM cards for a few months. Aktel also provided free connection for its new prepaid customers (The Daily Star, 2009a). The drastic fall in connection fees and call rates has made affordable accessibility much easier, inviting even more subscribers. The access to affordable mobile services thus have promoted social inclusion because all segments of people: the rural population, rickshaw pullers, maidservants, day labourers, betel leaf vendors, students and rural people can now afford a mobile phone. Previously, very few rural people could have access to mobile services on a user pays basis through internationally acclaimed Village Phone Program (VPP), a partnership project of Grameen Bank and Grameenphone. The prospective users can buy handsets at a very low price. For example, Grameenphone recently introduced a mobile handset *Grameenphone C-100* with a prepaid connection at a price of $US22 (BDT1499) only with a view to capturing low-income subscribers in rural areas (The Daily Jugantor, 2010b).

Pricing

As the new entrants TBL and Banglalink entered the market, suddenly the competitive scenario changed significantly for two reasons: TBL being a public sector provider had an objective of providing cheap affordable services with no charge on incoming calls; Banglalink's entry, on the other hand, was a 'competitive entry' as its mission was to make mobile service 'affordable' with a view to acquiring market

share. It had the determination to be a strong player and took an aggressive marketing strategy to establish its brand and tried to differentiate on pricing issues. The new entry by the two firms resulted in strong competition with the incumbent operators. The result was that prices went down and quality improved since 2005. Operators engaged in a price war to keep old customers and acquire new ones. Tariffs are being reduced at regular intervals to remain competitive in the market. During 2005-2009/10, the period of competition, mobile phone tariffs dropped so drastically that it now seems every Bangladeshi is a mobile phone user and can afford to own a mobile phone.

The mobile tariff dropped almost tenfold, from $US0.25-0.30 per minute in 1997-2000 to $US0.003/minute- $US0.03/minute in 2008. Tariffs vary in this range because of the differences in offerings of different service packages: Friends and Family numbers enjoy lower rate, and other factors include the nature of calls (i.e., off-net or on-net calls), customer groups (such as close user group for corporate clients) and timing of calls such as 'peak' or 'off-peak' periods (The New Age, 2009a). All the operators were forced to drastically reduce tariffs from 2005 onwards as competition took hold (see Figure 6.2). It was the Banglalink who took the initiative to strike the market leader by quickly expanding its network and offering low tariffs. After Banglalink's arrival, tariffs were reduced by almost 50 per cent in a year. The tariffs of mobile phone services went down to so low a level that they are the lowest calls rates in the world (Hasan, 2009c). Indeed, the sector now suffers from excessive uneven competition[94]. This excessive competition in tariffs, SIM tax subsidy and handset subsidy has been hampering the financial viability of small operators, creating a risk that they may be acquired by large operators.

[94] This is uneven because the small operators are unable to provide SIM tax and hand set subsidies like the two main providers. So they are facing tough time to remain competitive vis-à-vis large providers.

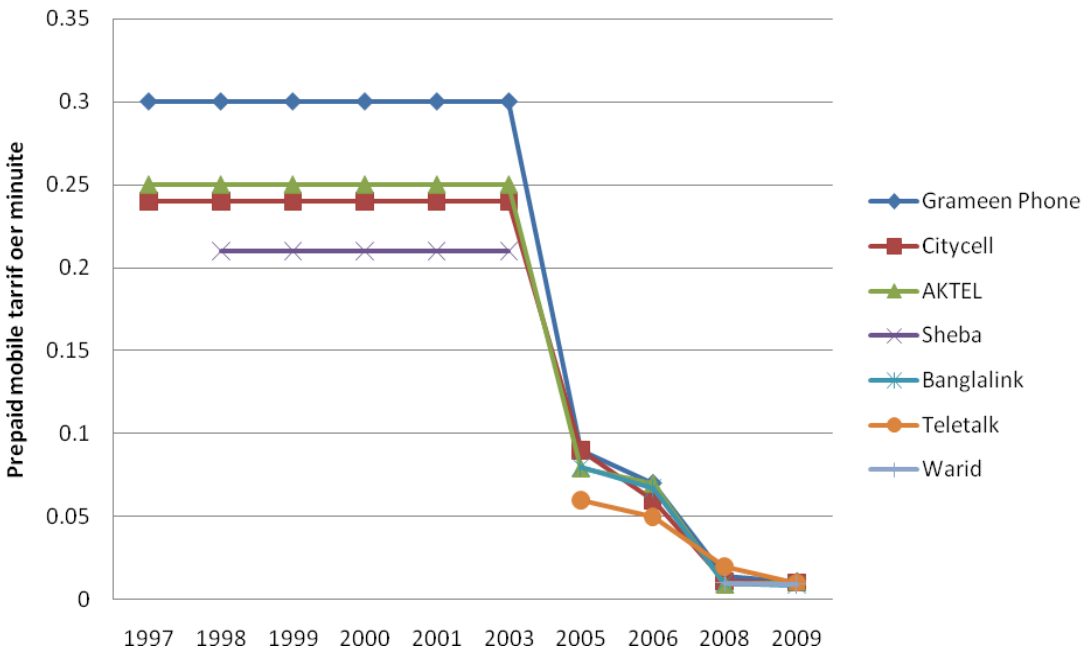

Figure 6.2: Changes in mobile phone pricing

Significant reduction in tariffs and connection costs contributed to the huge growth in number of mobile subscribers in this period. The mobile subscribers increased to an incredible 58 million in 2010 from only 4 million in 2004 (BTRC, 2010). The massive growth of the mobile service has made mobile phones a standard communications device used by more than one-third of the Bangladeshi population. The significant growth can be attributed to two factors: (1) Competition and associated affordability due to drop in price; and (2) Technology adoption by users as explained in the Technology Acceptance Model (TAM).

Apart from competition, the perceived ease[95] of use and usefulness of mobile phones by users were reported to have contributed to the widespread adoption of this communication tool in Bangladesh. The TAM explains that the perceived ease of use, perceived usefulness, attitudes towards use and intention to use a particular technology determine the behavioural intentions of individuals with regard to the acceptance and use of technology (Davis, 1989; Kwon & Laku, 2000; Li, et al., 2008;

[95] Because of the digital nature of mobile phone technology, users can have their phones activated within minutes by inserting the subscriber information module (SIM) that comes with the technology.

Revels, Tojib, & Tsarenko, 2010). The adoption of mobile technology by a large number of users in Bangladesh in a short span of time represents a behavioural pattern that is well explained by two of the constructs, i.e. 'ease of use' and 'perceived usefulness of mobile service' of the TAM.

Diversity of services

Competitive pressure forced the operators to come up with an innovative and diverse range of services so as to remain competitive with regard to service offerings. Some of the diverse services are live consultations with doctors over mobile phone (Hossain, 2010),electric and water bill pay services, exam results service, early Disaster Warning alerts. roaming facilities and agriculture solutions services ('Banglalink jigyasha 7676[96] (The New Age, 2008a), and news services. Remittance transfer services (named 'Mobile Wallet') has been launched by mobile operator Banglalink in partnership with two private banks, Eastern Bank Ltd and Dhaka Bank (The Daily Star, 2010c). GP's innovative e-market place named CellBazaar helps farmers to be informed about market prices for crops and allows direct marketing (Zainudeen, Samarajiva, & Sivapragasam, 2009).

Liberalisation and competition, however, cannot be given sole credit for increased diversity. Innovation and new product development with added features (such as calendar appointments and contacts management by PDA handsets) by mobile set and equipment manufacturer companies can claim credit for diversity of services. Using internet-enabled mobile handsets or laptops, mobile subscribers can browse the internet, check emails, and share and download photos and songs. Similarly, mobile messaging represents the trend towards personalisation and commercialisation of communication (Qiu, 2007). Thus the improvement in diversity of services is the combined result of innovation and competitive pressure.

[96] This service provides suggestions and answers to any queries related to agriculture, vegetable and fruit farming, poultry, livestock and fisheries.

Competition has also driven innovation with regards to billing. Competition induced operators to introduce consumer-friendly practices such as *per-second billing* (as opposed to billing in increments of minutes or longer).

Like improvement in mobile tariffs and diversity of services, the QoS in terms of call completion rate, network quality, customer care and voice quality have also improved significantly after competition took hold. Users, however, indicated that there still remain problems with the QoS, for example networks of some operators cannot be accessed from high rise buildings and remote areas, and customer complaints are not timely and properly handled.

The development of competition in the sector since 2005 benefited users significantly. The launching of mobile phone services by state-owned TBL, a competitive entry by Banglalink with adequate financial and technological clout, and determination to challenge the market leader and competition from the PSTN operators, significantly enhanced competition. In Particular, the launch of the Banglalink mobile service put pressure on other operators to engage in competition because Banglalink adopted a competitive price strategy to make mobile phones cheap (Sadique, 2005).

The setting of a price range by the BTRC for operators in 2007 created a further impact on the mobile phone tariffs.

It has been stated by a large number of interviewees that the lack of regulatory monitoring and effectiveness was the main reason for poor competitive outcomes in the mobile phone sector.

The next subsection analyses the telecommunications regulatory regime and its efficacy in Bangladesh.

6.4 Regulatory regime and effectiveness

As discussed in Chapter Five and earlier in this chapter, liberalisation did not result in competition and expected benefits for mobile users. This is because liberalisation is a necessary policy position only and it does not guarantee competition *per se*. In order for the market economy to prosper, liberalisation must be complemented by other

reforms such as strengthened market institutions (Bosworth & Duncan, 2002). This is because the market economy is more than a collection of markets. Chang (2000) rightly mentions that market economy is made up of a range of institutions including the market as an institution of exchange, firms as institutions of production and the state as the creator and regulator of the institutions governing the relationships among the institutions for upholding the collective interest.

Although widespread regulatory agencies were created and many reforms centred on the creation of institutional and regulatory rules and incentives for the promotion of competition were undertaken in the last two decades or so (Braithwaite, 2008), Bangladesh may be considered to be an exception to that[97] trend. Bangladesh was the first country in South Asia to unilaterally liberalise the mobile phone sector, but it was the last in setting up an independent telecommunications regulator.. A critical observation of the roles the regulator played since the sector was opened in 1989 can provide an indication about the regulatory effectiveness. Section 6.4.1 details the telecommunications regulatory effectiveness in Bangladesh over the years.

6.4.1 The evolution of regulatory authority: 1989-2010 and regulatory effectiveness

For an LDC like Bangladesh, establishing a regulatory regime is time consuming for reasons such as lack of understanding of the importance of having an independent regulator, lack of needed resources and skills, and the tendency of the political leadership and bureaucracy to control (i.e., to concentrate power in/with bureaucrats and political masters) (Hasan, 2010b; Zafarullah & Rahman, 2008). The intention of concentrating powers instead of awarding authority to the regulator and the time

[97] This is because, unlike many other countries. Bangladesh lacked even fundamental regulations such as Trade Practices Act, Anti-Competitive Authority or Competition law. In developed countries, wide range of regulations is in place to ensure competition and safeguard consumers' interest. For instance, in Australia, it is not only price or quality but also advertising practices of telecom companies are monitored. The Australian Competition and Consumer Commission is following up mobile operators' advertising practices. In a stunning coup, the regulator persuaded the three to sign a section 87B undertaking, promising to clean up their advertising in 12 key respects. The telcos have agreed not to misrepresent data speeds, free offers, coverage areas and featured pricing (Moon, 2009).

needed to reach consensus at bureaucratic and political levels appears to have contributed towards delayed formation of the BTRC. Furthermore, the setting up of a regulatory body was demanding on state resources which might be one of the reasons for delay in setting up of the telecommunications regulatory body. Adlung and Roy (2005) find that the annual cost of a modestly sized telecommunications authority amounts to some $US 2 million, equivalent to about 5 per cent of the government budget of a small WTO member. The above reasons might have contributed towards delayed formation of an independent regulatory authority.

Evolution of the Regulatory regime and its effectiveness

The telecommunications regulatory regime developed through an evolutionary process of learning and implementation in Bangladesh. The phases were as follows:

6.4.1.1 1992-1995: Regulatory performance when operator was the Regulator

The telecommunications sector ran without a separate regulator between 1992 and 1995. In this period, the power of regulatory governance was entrusted to the public sector provider, BTTB. Until 1998, there was no Telecommunications Policy or Act. The National Telecommunications Policy (NT) 1998 was the first policy on telecommunications, and was followed by the Bangladesh Telecommunications Act 2001. Although it has been stated in the NT Policy 1998 that a competitive environment will be created to ensure that telecommunications services are available within the affordable limit of the general users, it was confined within the policy documents without any implementation. In such a scenario of complete absence of regulation, the operator–cum–regulator BTTB did not have much legal basis to regulate the sector by imposing a price range or quality benchmarks. The only option to ensure competition or service quality was to include interconnection, pricing, QoS and roll-out obligations in the licence, as is found in other countries. For example, South Africa imposed roll-out obligations (for underserviced areas) on the network operators in the explicit licence conditions (Hodge, 2004). However, no explicit conditions on these issues were given in the first mobile phone licence awarded to the BTL, later known as PBTL. The only condition that was given to the operator was that the BTTB officials shall be able to inspect and observe the quality of overall

working and equipment (Government of Bangladesh, 1989). But BTTB did not display any effort to improve the QoS. Moreover, as an operator, BTTB had a 'conflict of interest' in exercising its regulatory authority. Giving an operator responsibility to regulate the sector can also be considered an anti-competitive element in the market.

As there were few legal provisions for imposing price or QoS obligations, and little incentive on the part of an operator-cum-regulator to regulate the sector, the first operator PBTL was unconstrained in setting connection charges and tariff rates. It appears that lack of proper monitoring and regulatory checks on pricing helped the firm to continue high tariffs. This is usual in a capitalistic economy where maximising shareholder return is the prime motto of the firm.

In addition to conflict of interest, BTTB had neither the capacity[98] nor the intention to provide necessary interconnectivity to mobile phone operators. The refusal by the BTTB to sign a standard revenue-sharing agreement with the mobile operators resulted in charges on incoming calls (i.e. calls from the BTTB) by private operators (The New Age, 2005). BTTB also lacked accounting, and technical skills to enforce price regulation.

6.4.1.2 1995-2001: The Ministry of Posts and Telecommunications as the regulator

Instead of creating an independent regulatory body, the GoB transferred regulatory powers from BTTB to the Ministry of Post and Telecommunications (MoPT) in 1995. The MOPT worked as the regulator from 1996 to the end of 2001(Bhuiyan, 2004). Like BTTB, the MoPT was manned by bureaucrats who had hardly any expertise or experience in telecommunications and legal matters to monitor the performance of mobile phone operators.

During this period, no initiatives were found to have been taken by the MOPT to make operators accountable for mobile tariffs or poor QoS. Although a rational, transparent and neutral spectrum management system was a must for having a competitive

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[98] About 90 per cent of the mobile users had no connectivity with the BTTB network and it was expensive (Hossain, 2003; Sullivan, 2007).

market, as a government ministry, the MoPT was not well-positioned and resourced to effectively manage the radio spectrum or reap fiscal benefits from the optimal use of this scarce national resource (Silva & Khan, 2004).

6.4.1.3 2002 onwards- Independent but ineffective Regulator

In 2002, the Bangladesh Telecommunications Regulatory Commission (BTRC) was established as an autonomous body through the enactment of the Bangladesh Telecommunications Act 2001. When licences were given to GP, Aktel and Sheba in 1996, explicit licencing conditions regarding quality of service, customer complaints, interconnection and tariff were imposed in mobile phone licences. For instance, in condition 13.2 of the GP licence, an explicit condition was imposed that the operator shall maintain the quality and standard of service as determined by the BTRC and shall submit compliance reports to the BTRC at certain intervals as may be specified (T. Uzzaman, personal communication, August 30, 2009).

In line with the said licencing condition, it was necessary for the BTRC to set the QoS parameters standard and ensure compliance to those standards. Even after the expiry of more than eight years in operation as an independent body, no regulations on QoS parameters[99] for mobile phones have been published by the BTRC. As a result, mobile operators' QoS was far below international standards (Islam, 2006c). In Bangladesh, aside from the operators' customer service desk, there was no regulatory framework to ensure a minimum standard of mobile phone services. But regulations on QoS parameters and their compliance have been under monitoring in many countries including Australia, the Czech Republic, India, Malaysia, Pakistan and Singapore (ACCC, 2000; Debnath & Shankar, 2008; Skudder, 2003). It speaks to the lack of necessary regulations on QoS. Bhattacharya, Moazzem, Rahman, and Hossain (2005) find that more than 70 per cent of the businessmen were critical of the government for having very lax regulations and standards on product and service quality or for having no such regulations at all. Moreover, it was reported that the BTRC did not engage in a consultative process with different stakeholders of the telecom industry

[99] TRAI published regulations on QoS parameters in July 2000 (Verma, 2002).

to find ways of improving the QoS situation. Such a participatory approach is usually found in other countries, for example, the Indian Telecom Regulatory Authority of India (TRAI)(Verma, 2002).

Similarly, despite having legal authority stipulated in Section 48 of the Bangladesh Telecommunication Act 2001 to monitor and approve changes in mobile tariffs including the right to determine tariffs, no move was seen on the part of BTRC to regulate pricing. Although there were complaints about informal price collusion before 2007, BTRC took no steps to investigate into the issue. Instead, the BTRC ignored the disposition of users' complaints as provided for in Section 59(4) of the Act (Khan, 2004). Thus it appears that slackness in the implementation of relevant provisions of the law and conditions of the licence is one of the main reasons for poor competitive outcomes.

The ineffectiveness of the BTRC is also observed in allowing Grameenphone to exploit its market power until Banglalink entered the market in 2005. A firm is deemed to possess significant market power (SMP):

> If either individually or jointly with others, it enjoys a position equivalent to dominance, that is to say a position of economic strength affording it the power to behave to an appreciable extent independently of competitors, customers and ultimately consumers (Hausman & Sidak, 2007).

In the light of this definition, it is clear that GP was enjoying SMP, with more than 70 per cent market share (up to 2004) and a good brand image. It was in a position to determine prices and interconnection terms independent of its competitors and consumers.

SMP is a barrier to fair competition because small operators can do very little to encourage competition. In the interests of both consumers and service providers, the regulatory authority needs to impose limits on SMP, such as regulating tariffs,

determining cost-based[100] interconnection charges for small operators, and ensuring infrastructure sharing and mandatory interconnection within a certain time frame. But the BTRC took no initiative to determine SMP nor constrain market power to ensure a better competitive environment.

The result was that GP continued to abuse its market power by maintaining high tariffs, compromising QoS and showing little respect for customers' rights as envisaged in Choi et al.,:

> A dominant carrier, if unregulated, would abuse its power to harm consumers by monopoly pricing or to stifle competitors by predatory pricing (2001 p.131).

In this regard, it is to be noted that small mobile phone providers in Bangladesh could not drop their prices to challenge GP for reasons such as high interconnection fees charged by GP (because interconnection costs was not cost-based), higher operating costs than GP due to the lower number of subscribers (hence a lack of benefits from economies of scale), a lack of a country-wide network[101] and lack of large social network that GP enjoyed because of being a sister organisation of the Grameen family. Grameenphone piggybacked on two important assets in gaining supremacy in the market: (1) Countrywide network that GP quickly rolled out harnessing on 1800 Km fibre optic network (FON) it leased from Bangladesh Railway (BR) and (2) the large social network and brand image of Grameen family which small operators could not. The FON of BR gave GP a unique competitive advantage over small operators. The high cost structure, limited network capacity and lack of brand image and network locally thus effectively barred the small mobile phone service providers from reducing tariffs in order to increase their market share

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[100]Regarding interconnection costs, a fundamental consensus exists in industrialised countries. Interconnection policy sets interconnection pricing based on some version of long-run incremental costs (Cowhey & Aronson, 2008).

[101] Silva and Khan (2004) observe that while Grameenphone succeeded in spreading its footprint by leasing Bangladesh Railway fibre optic capacity, difficulty in interconnection has impeded the business of the other mobile phone operators.

Policies on evaluation of market power are found in other countries such as the USA, the EU, New Zealand, Australia and Pakistan For instance, Telecom Policies of Pakistan (Telecom Policy 2003; Mobile Cellular Policy 2004) adopted SMP doctrine for fair competition (Hausman & Sidak, 2007).

6.4.1.3.1 Interconnectivity and the regulator

The poor regulatory role of the BTRC can also be found in ensuring adequate interconnectivity arrangements for all operators. There were serious interconnection problems. As GP had a country-wide network, most of its competitors had also to deal with the company as a customer when they wanted interconnection with GP's network. As was found in the interview, GP disadvantaged other operators in providing interconnection by dictating the terms of the agreement. Other operators also retaliated GP by blocking calls coming from the GP. Despite having power to impose financial penalties and imprisonment under section 73 of the Bangladesh Telecommunications Act 2001 for deliberate obstruction of calls, BTRC refrained from taking any measures. Regulatory practices, mostly took the form of non-binding informal recommendations that often proved merely rhetorical (Interviewee 17, October 2008). The grueling interconnection problem could have been solved much earlier if BTRC had been pro-active like its counterpart Chilean authority. Chile imposed interconnection obligations upon incumbents that resulted in strong and significant entry of new operators, and made the market more competitive and robust (Mariscal, 2005). However, BTRC recently framed the Interconnection Regulations, 2004 that made it mandatory for all the operators to ensure inter-connectivity among themselves (Islam, 2006d).

The discussion made so far suggests that the telecommunications regulatory regime has been mostly ineffective in implementing explicit licensing and Telecommunications Act provisions with a view to preserving the public interest. Investigation of the telecommunications regulatory environment (TRE) in Bangladesh reveals that the TRE was very poor between 1989 and 2003 (Chowdhury, 2010a; Silva & Khan, 2004). Table 6.4 demonstrates that the telecommunications regulator in Bangladesh was ineffective.

Table 6.4: Telecommunications Regulatory Environment in Bangladesh

Dimension	Rating
Market entry	Poor
Access to scarce resources	Poor
Interconnection	Poor and anti competitive
Tariff regulation	Unsatisfactory
Regulation of anti-competitive practices.	Poor
Setting of revenue sharing, licence fees and spectrum charges	Arbitrary

Source: Silva & Khan (2004), Chowdhury (2010a), Interview data (2008)

The next section discusses the possible reasons for regulatory delay and ineffectiveness.

6.4.1.3.2 BTRC's ineffectiveness

The sheer inefficacy of the telecommunications regulator raises the question of why BTRC displayed no initiative and remained indifferent in protecting the broader public interest. The main reasons found in interviews for BTRC's poor performance were: Lack of regulation/guidelines on pricing, QoS and SMP aspects; Lack of experience and skills in the BTRC; lack of the right attitude and a dynamic approach among the higher echelons of the regulatory body; and Regulatory capture.

Although the Bangladesh Telecommunication Act 2001 was promulgated to regulate and promote competition in the sector, no noticeable change was observed in the competitive landscape of the mobile phone sector. The regulations appear to have been insufficient, as there was neither a roll-out obligation nor QoS parameters nor a spectrum allocation policy to ensure fairness and transparency in allocating the scarce resource. Furthermore, there was no competition policy and/or authority to prevent anti-competitive practices.

Price setting and monitoring seemed to have been difficult due to lack of cost data, information asymmetry because cost details need to be obtained from operators, and lack of skills in the BTRC in understanding the logic of price setting. Furthermore,

recruitment of bureaucrats instead of telecommunications and legal experts to the position of commissioners and Chairman of the BTRC appears to have contributed to poor regulatory performance.

Furthermore, the regulatory capture appears to have been a significant factor which rendered the regulator ineffective and silent.

6.4.1.3.3 Regulatory capture

From the discussion so far, it appears that the delegation of regulatory decision making powers and their implementation to the BTRC by citizens created a *principal-agent* problem with adverse consequences for users. Costs involved in principal-agent relationships include shirking and quality control (Ross, 2002). Since most users lack the interest to monitor regulator performance due to their low stake, are uninformed about what the regulator is doing in protecting their interest, and are not an organised interest group such as an industry group with a capacity to lobby and reward the regulator for favourable treatment or to block unfavourable regulatory decisions, user interest seems to have been compromised by the regulator. The negligence on the part of the regulator in implementing regulatory provisions on pricing and quality provisions to ensure consumer interests might have been happened due to regulatory capture. Regulatory capture usually results from political influence over the telecommunications regulator or from the regulator becoming too self-seeking to maximise its personal gain at the cost of consumer interest. The erstwhile BTRC chairman (Omar Farook) along with his son, availed themselves a foreign tour at the cost of Warid's parent company (Khan, 2006). Such a foreign visit at the cost of the firm which was supposed to be regulated by the regulator provides evidence that the telecommunications regulator was captured by the potential licencee. It also entailed conflict of interest. Furthermore, a widely circulated daily English language newspaper reported that a director of WorldTel Bangladesh Limited used the political power of a state minister in influencing the BTRC chairman to illegally obtain permission for importation of equipment and to release it quickly from Customs (The Daily Star, 2007).

In a situation where it was apparent that mobile operators were running a free-style market, and the market have failed to protect consumer interests, there was a

necessity to enact and implement a Consumer Protection Act to protect the interests of consumers.[102] Non-action about the widely perceived price cartel among mobile operators also raised questions about the BTRC's motive. It is the view of the researcher that questions may be asked to why BTRC remained silent on this issue. One can suspect that BTRC was politically and economically captured so as not to frustrate the alleged cartel or limit price coordination of the operators.

The silence and non-action on the part of the BTRC provide a basis to argue that the BTRC leadership was captured by incumbent mobile and PSTN operators not to enforce any price or quality regulation that would increase operators' costs or go against their interests. Khan (2004) rightly commented that when the media had exposed the regulatory officials taking undue advantages from the mobile operators, controversy was further fuelled. But the BTRC remained unmoved despite such assault to its integrity.

Regulatory capture appears to have resulted in different malpractices, including illegal VoIP business by private mobile phone operators (except Warid). This massive VoIP activity[103] seems to have been possible due to the laidback policy of the regulator. It may be suspected that the regulatory leadership was aware of the malpractice but refrained from taking action because they were captured by those involved in the malpractices. When the BTRC was reconstituted by the military-backed caretaker government in 2007, mobile operators were fined more than $US 90 million in 2008 by the BTRC (Khan, 2009). It seems that the regulator was either negligent or was influenced by operators and political force not to crackdown on the malpractices of operators. In this regard, some focus group participants reported that BTRC was under political influence before 2007.

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[102] In Australia, such legislation is in place through the Telecommunications (Consumer Protection and Service Standards) Act 1999.

[103] It has been reported that operators were consuming international calls worth around $US 2200 million a year. Illegal VoIP activities were depriving the government of thousands of millions revenue from overseas calls (Khan, 2007c).

It is to be noted here that the operators not only tried to capture the regulator, the largest operator Grameenphone has also attempted to capture the auditing authority by providing free mobile phone connection[104] (phone number 01711-691624) and service to the director, Railway Audit Directorate (Interviewee 23, October 2008). The reason is that GP has been using 1800 km long fibre optic network which it leased from the BR (Knight-John, Zainudeen, & Khan, 2005). A former high official of the GoB and a mid-level public manager from Railway Audit Directorate confirmed that there was no tender in leasing Bangladesh Railway (BR) fibre optic network to GP. But a GP respondent reported that there was competitive bidding. No one was prepared to provide the researcher with any documents regarding the lease. They were also evasive when asked about who participated in that tender and in which newspaper the tender notice was published. This scenario creates an impression that GP leased the fibre optic network from the BR through some non-market mechanism, bypassing the standard competitive practice, and GP can be perceived to have offered free mobile services to audit officials so that the latter would not raise audit objections regarding possible malpractices in BR's lease agreement with GP. Regarding GP's malpractice, Silva and Khan reported that BTRC is silent on other GP malpractice:

> Grameenphone also independently sells transmission bandwidth via its Bangladesh Railway rights of way. But it does not have any licence to do so. BTRC is silent on all these practices (2005 p.244)

The present study finds that regulatory ineffectiveness was more related to the persons who were in charge of the BTRC rather than inadequate regulations. The lack

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[104] This phone number provided by Grameenphone became an official number of the Railway Audit Directorate; whoever took charge of the directorate was allocated this phone number automatically. The researcher made phone calls to this number three times during the period 2008 to 2010 and each time he found a new user. This new user was found to be the Director, Railway Audit Directorate. On condition of anonymity, one audit official reported that he does not need to pay phone bill for use of this phone number.

of expertise, and susceptibility of the BTRC leadership to capture[105] as well as its distaste for enforcement, seems to have been responsible for a culture of weak enforcement. It is thus evident that institutional capacity and willingness are pivotal for the regulator to effectively monitoring and intervening when necessary. Having competent people with the right attitude in key positions in the MoPT and BTRC at the right time, and with the appropriate political support, was particularly important for Bangladesh where institutions are weak and defective (Mahmud, Ahmed, & Mahajan, 2008).

However, it is important to recognize that a regulatory body from an LDC country does not find it easy to have quality regulations for some plausible reasons, such as cost[106] and time required in defining quality standards, shortage of skills to effectively monitor and enforce standards, information asymmetry, weak institutions like the judiciary, not to mention political influence.

6.4.1.4 A proactive BTRC since 2007

The interview findings suggest that the regulatory regime since February 2007 reconstituted by the non-party caretaker government took some initiatives to increase transparency in its decisions, monitor mobile tariffs and improve QoS. The regulator has ensured a competitive licence awarding process, has set a price range for mobile phone service, and took initiatives to set QoS benchmarks including seeking public opinion on draft QoS benchmarks. In 2008, the telecommunications regulator asked operators to improve their service quality in the following areas: the congested network, call dropping, one way connections, echo, other distortion, and poorly targeted automated messaging (Hasan, 2008a). With a view to assisting mobile operators to improve their service quality, the BTRC allocated an additional

[105] The person in charge of the BTRC appears to have been unable to tackle the environment around him without being captured.

[106] It also include costs imposed upon operators in complying with the standard need to be assessed because these costs will ultimately be passed on to consumers (Baker & Tremolet, 2003:241)

17.5 megahertz frequency spectrum to three mobile operators-Aktel, GP and Banglalink.

However, the Bangladesh experience suggests that that the telecommunications regulator which was once blamed for poor enforcement now wants to *'micro manage'* everything. Mobile operators need to approach the BTRC for its approval of routine activities such as introduction of a new service, importation of equipment import and software and tariff changes. This increases their cost and reduces business efficiency.

The Bangladesh experience of mobile phone sector liberalisation also reveals that regulation is a necessary condition to make free markets work. In order to provide greater roles to the market and create a level playing field for market players, adequate, timely and effective regulation is essential. Such timely regulations and needed intervention were non-existent in Bangladesh. Levi-Faur in quoting Vogel's (1996) paradox '*Freer Markets, More Rules'* commented: 'more capitalism, more regulation' (Braithwaite, 2008, p.11). Liberalisation does not mean withdrawal of the state. It seems that Bangladesh thought that freer markets meant no or minimum rules.

Therefore, revisiting the existing regulations and identification of inadequacies in the regulatory framework in order to re-regulate the sector or enact new regulations is important. In particular, consumer safeguard law and anti-competitive regulations are essential to promote competition, not only to benefit users, but also to save small operators from abuse of power by a Significant Market Player. Such regulatory reforms could ensure fair enforcement of regulations, hold operators accountable for performance, address consumer issues, monitor changing industry needs and provide feedback to policy making units (Jain 1993 in Balssooriya, et al., 2006).

6.5 Chapter Summary

This chapter has provided a comprehensive discussion of the results of this thesis presented in Chapter Five, based on qualitative data. The discussion highlights the key factors of unilateral liberalisation, the impacts of unilateral liberalisation on accessibility, mobile pricing, QoS and diversity of services.

The findings suggest that factors such as the underdeveloped nature of the whole telecommunications sector and its capacity constraints, new technology, the need for FDI for the modernisation and capacity expansion of the sector, the market opportunity for alternative mobile service caused by globalisation of trade, the large growth of the service sector and the large Bangladeshi diasporas, and the neo-liberal character of the state motivated the government to unilaterally liberalise the mobile phone service. Of the factors that contributed to liberalisation, emergence of mobile technology and anticipated benefits from such a technology, coupled with immense demand for alternative service provider seem to have made unilateral liberalisation inescapable. Other factors also contributed to liberalisation in different phases. For instance, it seems that there was a clear policy preference for promoting FDI in awarding a licence to Warid Telecom with a view to infusing new knowledge, skills and competitive pressure in the market.

The second section of this chapter argued that although the necessary policy position for competition was created through liberalisation, mobile phone users could not enjoy the expected benefits of liberalisation in accessibility, pricing, QoS and diversity. Accessibility to mobile services was expensive and time consuming, mobile tariffs and connection costs remained high and the QoS was poor up until 2004. The major finding is that while the mobile phone market was purportedly open to competition between 1996 and 2004, there was, in effect, very limited competition. Poor regulatory enforcement, dominance of a single firm and abuse of market power in interconnection, anti-competitive price collusion among the operators, weak regulatory institutions, lack of a competition policy, and complete absence of the public sector from the mobile phone service sphere were found responsible for poor competition in the period between 1997 and 2004. Poor enforcement is reflected in the egregious behaviour of the regulator. Although there was a long-held belief that there was price collusion by the operators, neither the BTRC nor the MOPT investigated such complaints nor seek to remedy if they were found, on investigation, to exist.

However, having considered the whole liberalisation period from 1989 to 2009, the study finds that the developments in the mobile phone sector have been impressive

in more recent years. Since 2004/05, accessibility to mobile services has become much quicker and easier, the mobile tariffs have dropped almost tenfold, connection fees have come down to a nominal level, including free connection for a certain period of time, handsets are provided at subsidised prices, the 'one-second pulse' billing system from the first minute has been introduced, and other price promotions, including free talk time and bonus time have been offered. The mobile call rates in Bangladesh are the lowest in the world. As a result of these changes, affordability of users has increased significantly, resulting in massive growth in numbers of subscribers during the last few years. Diversity of services such as voice, bill pay, health services, news services, agriculture services, and a convenient payment system of bills, to name but a few, and variety of choices have also increased manifoldly.

As has been pointed out in this chapter, the telecommunications regulator (especially in the first two regimes, 2002- January 2007) had been grossly ineffective and weak for reasons such as poor composition of the BTRC leadership, the absence of necessary law such as competition law, and the absence of sincere political will for the transfer of ministerial power to the regulator and lack of leadership dynamism in the BTRC. The BTRC chairmen for the first two terms had neither technical nor legal expertise. Also BTRC as an institution had little or no competition-related knowledge in its composition to oversee the sector effectively.

In contrast to the weak role of the BTRC up to 2006, the BTRC has been playing an effective role under the new leadership in implementing regulatory provisions regarding tariffs, licensing, QoS, interconnection and infrastructure sharing since 2007. The users unanimously reported that the sector has become much more disciplined and competitive than before. This speaks to the point that the 'Person in Leadership Matters' more than regulatory provisions. The BTRC leadership of 2007-2009 has been found more efficient, skilled and proactive than its predecessors in promoting competition in the sector. One reason for BTRC's recent performance could be that, for the first time, the BTRC chairman was recruited in 2007 from a telecommunications and engineering background. Another reason is that there was almost no political intervention by the non-party caretaker government in power. However, it has been suggested in findings that the regulatory institution again

become non-functional under a political government for reasons such as political intervention and concentration of regulatory power in the administrative ministry.

The move by the government in 2010 to pass The Bangladesh Telecommunications (Amendment) Bill 2010 (tabled in Parliament on 13 June 2010) to take away BTRC's authority[107] to issue and renew licences, approve services and fix the telecommunications operators' proposed tariff for the market and concentrate these powers in the Ministry of Telecommunications (Hasan, 2010b) demonstrates a tendency of the political and bureaucratic leadership in Bangladesh not to allow institutions to operate independently. It looks to be an ominous sign for the development of the sector, because the Ministry lacks the requisite skills, the resources and the right attitude to handle highly sophisticated and ever developing technological issues. It is also against the widely accepted view of the importance of having an effective and autonomous watchdog body to force the market to function properly.

Furthermore, if all the important functions are centred in the ministry, then having a regulatory body signifies little meaning. The concentrating of power in the ministry, arguably, would pave the way for political intervention in licensing, tariff matters and frequency allocation. Furthermore, the neutrality of ministry's decisions will remain questionable and a level playing field will not exist if the MOPT controls licensing because the Ministry officials themselves sit on the boards of state-owned BTCL, Bangladesh Submarine Cable Company Limited (BSCCL) and Teletalk. .

The next chapter (Chapter 7) deals with how unilateral liberalisation influenced Bangladesh in undertaking binding liberalisation commitments in the telecommunications sector under GATS of the WTO.

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[107] The proposed law requires the Bangladesh Telecom Regulatory Commission -- an autonomous body -- to take prior approval from the government for issuing licences and setting tariff rates (Al-mahmood, 2010)

Chapter 7: Unilateral liberalisation and Bangladesh's commitments under General Agreement on Trade in Services (GATS)

7.1 Introduction

The aim of this chapter is to discuss the empirical findings presented in Chapter five to address Research Question 3: How did unilateral liberalisation influence submission of Bangladesh's liberalisation commitments in the telecommunications sector under the General Agreement on Trade in Services (GATS) of the WTO?

In examining the research question, it has been found that unilateral liberalisation (UL) was a necessary condition that created the launching pad and significantly influenced Bangladesh to undertake GATS commitments. Bangladesh, would not have undertaken commitments in the telecommunications sector unless it had prior experience of market opening. The willingness to sustain the benefits associated with the telecommunications sector liberalisation was found to be a motivating factor in undertaking binding liberalisation commitments under the international framework of GATS. However, UL was not sufficient to motivate undertaking multilateral GATS obligations. Other factors (here termed 'sufficient conditions') helped Bangladesh to undertake commitments. Examples of these are the low probability (or no probability) of backsliding from commitments, no or minimal resistance from stakeholders, lobbying by incumbent investors/operators, and the presence of member country's government's discretion to impose limitations on Market Access (MA) and National Treatment (NT) in order to retain some policy autonomy in making commitments.

This chapter has four Sections. Section 7.1 provides a brief introduction of UL and the WTO GATS agreement. Section 7.2 discusses GATS and Bangladesh commitments. Section 7.3 analyses how UL influenced submission of Bangladesh's liberalisation commitments under GATS. Section 7.4 discusses the subsequent

effects of undertaking commitments in the mobile phone sector. Section 7.5 concludes the chapter.

In assessing the role of UL in promoting GATS commitments, a matrix has been developed (Figure 7.1), based on interview findings, in order to explain more clearly the relationship between UL and GATS commitments. Apart from UL, other factors that a WTO member country usually considers in undertaking multilateral binding commitments are also discussed in section 7.3.

7.2 Unilateral liberalisation and the GATS Agreement

The results in Chapter 5 highlighted the role of unilateral liberalisation in the submission of Bangladesh liberalisation commitments in the telecommunications sector under GATS.

The majority of interviewees reported that UL created the necessary platform that encouraged the Government of Bangladesh to submit liberalisation commitments under GATS. UL and its influence in making commitments under GATS is an unexplored area. To place in context how UL influenced Bangladesh's submission of GATS commitments in the WTO, it is necessary to look into the fundamentals of UL and GATS.

Unilateral liberalisation Unilateral liberalisation involves liberalisation of trade and investment regime alone by a government without being compelled to do so by multilateral forums or international agreements. Governments undertake liberalisation measures independently to further their national interests and do not wait for reciprocal market access (or other concessions) from other trading partners (Lindsey, 2000). UL is the outcome of countries' changing perceptions that protectionism is causing economic backwardness and they miss the opportunities to integrate into world trade and investment regimes. The best example of UL would be a country that liberalises its services sectors to both domestic and foreign providers without WTO membership.

The GATS Agreement

The GATS was created to bring services under a multilateral framework. This agreement establishes binding multilateral rules covering treatment of foreign services and service suppliers and government regulation of trade in services. All services other than services supplied 'in exercise of governmental authority' are covered under the GATS. The GATS cover 161 service activities across 12 classified sectors (Chanda, 2003). Of these 12 sectors, telecommunications is a sub-sector under communications services.

Under the WTO GATS agreement, services can be delivered in four modes. These are:

Mode 1 – Cross-border Supply: services which are supplied across national borders such as e-learning, telephone calls or bank transfers;

Mode 2 – Consumption Abroad: such as tourism or medical treatment abroad;

Mode 3 – Commercial Presence: setting up a commercial establishment through foreign direct investment; and

Mode 4 – Movement of Natural Persons: the temporary cross-border movement of service providers in an individual capacity or as part of an establishment, to provide the service in another country (Kirkpatrick & Parker, 2004)

The GATS established Most Favoured Nation (MFN) (Article II) and National Treatment (NT) (Article XVII) as the core provisions:

MFN: MFN imposes obligations not to discriminate between like foreign services and service suppliers (Adlung, 2006); the MFN principle applies as long as no exemptions are notified to the WTO).

National Treatment (NT): NT is a non-discrimination principle; it requires that all Foreign Service suppliers must be treated as well as domestic providers (Egger & Lanz, 2008; Wade, 2003).

Apart from MFN and NT, GATS has an independent provision on transparency (Article III) of laws, regulations and administrative guidelines that applies to trade in services (He & Sappideen, 2009). Moreover, there is a Market Access (MA) Provision (Article XVI) that requires details to be provided in the national schedule of undertakings on

specific market access commitments to member countries. Six market access limitations can be applied under GATS if specified in the schedule (Chanda, 2003): (1) the number of foreign service suppliers; (2) the value of transactions or assets; (3) the total quantity of services output; (4) the number of natural persons who may be employed; (5) the type of legal entity; and (6) the extent of foreign capital participation.

Although the GATS is a multilateral agreement, WTO members are not forced to make commitments. Rather commitments are made unilaterally by countries (Egger & Lanz, 2008). Countries enjoy the discretion in deciding which service sectors they wish to schedule for undertaking liberalisation commitments under GATS rules (Adlung & Roy, 2005). That means that each WTO member negotiates and submits a schedule that contains commitments on Market Access and NT for the services and modes it has specified**.** This is called a 'positive-list approach'. Except for the sectors/sub sectors and the corresponding modes of service supply, on which made commitments are made through their inclusion in the schedule, the country retains autonomy and is not subject to obligations to liberalise other sectors.

A schedule of commitment can grant full or partial market access. Full market access means that a WTO member has agreed not to apply any of the six market access limitations stated above (section 7.2).

Partial access means that a government can specify limitations (i.e., exemptions) on one or more of these six aspects, but only those specified in the schedule may be applied (Tuthill, 1997). Commitments under GATS limit the scope for discretion. In other words, it ensures that reforms that are already undertaken and committed will not be overturned in the future, or, in the case of ongoing commitments, there will be no reversals of policy. It also indicates that the trade policies already adopted through commitments are not reversed by the next government (Roy, 2009).

In making commitments, countries can impose limitations on market access and exceptions on access for foreign suppliers. These limitations have to be mentioned during the submission of commitments because it is almost impossible for governments to get them introduced later. Typical limitations specified in the

commitments on market access include foreign equity limits, requirements for licensing, quantitative restrictions, and limits on the value of transactions

Moreover, WTO members can also specify in their schedules the limitations and exceptions they wish to maintain on NT as well (Chanda, 2003 p.1999). A commitment to NT implies the absence of all discriminatory measures that modify the conditions of competition in favour of domestic services or services suppliers. These limitations on NT create room for the member country concerned to make provision for differential treatment among domestic and foreign services providers. This enables the member country to legally limit payment of certain benefits such as certain subsidies and tax benefits to domestic service providers without extending the same benefits to the foreign services providers.

In special circumstances a country can maintain restrictions (that is, suspend a commitment) on services trade for which it has undertaken commitments (under Article XII of the GATS) for example if the country finds that liberalisation of that particular service sector harms its 'Balance of Payment' position (Pattanaik, 2006).

GATS article XIX (1) provides a built-in agenda requiring the members to engage in successive rounds of negotiations aimed at 'progressive liberalisation' in services trade. The first round was to begin no later than five years after the coming into force of the WTO agreement. In line with this agenda, the first round negotiations began in January 2000: this round is known as GATS 2000 negotiations (Das, 2007). The negotiations take place under the 'request-offer' process[108] whereby, the WTO members submit requests to other members to open up specific service sectors. On the other hand, they make offers to other members indicating how much they are willing to liberalise, in which sector and at what mode of services. Once a member

[108] It is to be noted that the 'request-offer' process does not derive from any specific provision of the GATS. Members may explore all negotiating methods such as bilateral, plurilateral or multilateral 'request-offer' processes within the framework of Article XIX of the GATS (Peng, 2007). However, for political and technical reasons, the bilateral approach failed to generate sufficient momentum at GATS 2000 negotiations. Against this backdrop, the Hong Kong Ministerial Declaration mandated the adoption of a plurilateral request-offer approach in December 2005(Das, 2007).

country agrees to liberalise through negotiations in the WTO, it must include the specific sector in a schedule of specific commitments (Raihan, 2008). Once a commitment is made, the country is legally bound by the GATS to liberalise the sector and provide NT and MFN treatment to other WTO members.

7.3 Liberalisation commitment of Bangladesh under the GATS: A brief overview

In order to link between UL and multilateral commitments, it is important to provide a brief description of Bangladesh commitments in the WTO.

Bangladesh has undertaken very limited liberalisation commitment under the GATS. Out of 12 broad service sectors, Bangladesh made liberalisation commitments in a few subsectors of the telecommunications sector in April 1997. Bangladesh also undertook market opening commitment in the tourism sector in mode 3 and mode 4 (5-star hotel and lodging services) on 15 April 1994 during the Uruguay Round i.e., before the WTO came into force on 1 January 1995.

Bangladesh's commitments in the telecommunications sector include (Bhuiyan, 2004; WTO, 1997):

- Licencing two private operators to supply domestic long distance and local voice services and transmission facilities;
- Full competition in voice and data transmission on the internet; and
- Licencing four suppliers of cellular mobile voice telephone services

In undertaking binding liberalisation commitments under GATS, Bangladesh kept some policy autonomy for future by imposing restrictions on Market Access and National Treatment for different modes of service supply (See Table 7.1)

Table 7.1: Liberalisation commitment of Bangladesh under GATS

(Telecommunications sector)

Service sector	Mode	Market Access	National Treatment
Communication services (Telecommunications)	Mode 1	Unbound	Subsidies
	Mode 2	Unbound	Unbound
	Mode 3	Incorporation for Commercial presence No equity restriction	Subsidies to domestic suppliers
	Mode 4	Only higher management & Specialised job	None[109]

Source: www.wto.org

Exemptions on Market Access and National Treatment

In the schedule of commitments, Bangladesh included an MFN exemption in international telecommunications services for 10 years. The objective of keeping this horizontal MFN exemption was to allow the state-owned operator to apply differential accounting rates to different operators from neighbouring countries with which Bangladesh has bilateral telecommunications agreements on various aspects of cooperation (Bhuiyan, 2004). This was to make room for Bangladesh to honour its already signed bilateral agreement while keeping it within the legal framework of the GATS.

Bangladesh also maintained a horizontal NT restriction. Under this restriction, certain subsidies and tax benefits may only be extended to national operators in Modes 1 and 3 (i.e., differential treatment among domestic and foreign services providers) (See Table 7.1).

With regard to Market Access, Bangladesh maintains horizontal restriction[110] on mode 4. The restriction is that employment of foreign nationals is to be limited to

[109] None means no restrictions on National Treatment.

higher management and specialised jobs only and subject to Bangladesh government approval. The policy implication of putting this restriction seems to be to safeguard the local job market against being occupied by foreign nationals permanently, thereby depriving Bangladeshi job seekers of employment opportunities.

It is to be noted that although mode 4 deals with 'temporary' movement of natural persons, GATS has no precise definition of 'temporary'. Therefore there exists a perceived risk that that the lack of such a precise definition may result in the blurring of distinctions between 'temporary' and 'permanent', thus creating a sensitive employment situation for the host government. This is why mode 4 is always a sensitive issue and members are conservative in committing under mode 4.

Furthermore, Bangladesh reserved international telecommunications (for mode 1 and 3) services provision exclusively[111] for the public sector provider Bangladesh Telegraph and Telephone Board (i.e., a monopoly for BTTB) in its Schedule of GATS commitments. As the international service was the largest source of revenue for the state-owned BTTB, it appears that the government consciously reserved this service exclusively for the public sector in order to maintain its telecommunications revenues intact.

Bangladesh has been following a policy of a UL strategy instead of following the 'request-offer' negotiation technique (Raihan, 2008) for further liberalisation of the services sector, both its own restrictions and the restrictions it faces in other countries. It has already opened up some of its services sector, including telecommunications and banking services unilaterally for international competition.

If we compare these commitments with policies that Bangladesh applied domestically, it becomes apparent that Bangladesh's GATS commitments were in line with its existing level of openness. For instance, there were four mobile operators in

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[110] Horizontal (cross sectoral) restriction refers to the restrictions applicable to all the services sectors listed in the country's schedule of specific Commitments (Sauvé, 2002). Limitations relating to subsidies, tax measures, land ownership or land use tend to be horizontal (Adlung & Roy, 2005 p.1180)

[111] This is a market access restriction. Such measures essentially reduce the number of suppliers to one, i.e., they constitute a limitation in the sense of Article XVI: 2(a) of the GATS.

Bangladesh in 1997 when Bangladesh submitted its Schedule of specific commitments. Bangladesh's commitments included the same number of operators. Similarly, two private operators were in operation to supply domestic long distance and local voice services and Bangladesh locked-in the *status quo*. Interviewees in this study reported similar views about the relationship between the existing level of openness and GATS commitments.

Requests Made by Other Countries to Bangladesh

Although Bangladesh has unilaterally opened some of its services sector, it is hesitant to or not interested in engaging itself in bilateral or plurilateral negotiations under the GATS request-offer approach to further liberalisation of the services sector. For example, in the Doha Development Round (DDR), nine countries have submitted requests to Bangladesh to liberalise a wide ranges of services, such transport, business, construction and related engineering services, environmental, financial services and improved commitments in telecommunications services The requesting countries are: Singapore, the European Union, Japan, Norway, South Korea, Hong Kong SAR (China), Malaysia, Sri Lanka and USA. These requests were limited to Market Access under modes 1, 2 and 3 (except for telecommunications) and NT requests for all sub-sectors. But Bangladesh declined to offer any sector for liberalisation (Interviewee 19, October 2008).

All these requests came during Doha Round but before the adoption of Modalities for the Special Treatment for LDC Members in the GATS Negotiations in 2003 (Interviewee, 19 October 2008). The modalities provide flexibilities to the LDCs that they may make liberalisation commitments compatible with their development and financial needs which are limited in terms of scope (Raihan, 2006). Reinforcing the flexibilities of LDC modalities, the Hong Kong Declaration 2006 explicitly recognised that LDCs are not expected to undertake new commitments in services negotiations (paragraph 26) (WTO, 2005).

As an LDC, the implication of LDC modalities and the Hong Kong Declaration is that Bangladesh can offer very limited liberalisation commitments (i.e., market access) in sectors where it needs investment or it can ignore the requests for market access commitments. The flexibility given to LDCs might be one reason for Bangladesh not to

offer market access in response to the requests it received. Another reason for not engaging in the 'request-offer' approach appears to be Bangladesh's lack of institutional and human capacity to evaluate the requests received from other members and to formulate of its own requests. The fear that domestic firms are not efficient enough and binding commitments may jeopardize the existence and growth of the domestic services seem to be additional reasons for not engaging in the 'request-offer' approach.

The following section provides an assessment of findings regarding how UL influenced Bangladesh commitments in the WTO.

7.4 How did unilateral liberalisation influence Bangladesh in undertaking liberalisation commitments under the GATS?

Empirical findings reported in Chapter 5 suggest that the unilateral opening up of the mobile phone sector promoted Bangladesh's submission of binding commitments under the WTO. However, apart from UL, some other conditions needed to be satisfied to undertake binding commitments.

The arguments put forward by respondents in support of their view that UL encouraged the Government of Bangladesh to undertake binding commitments may be explained as follows.

7.4.1 Unilateral Liberalisation Experience and GATS Commitments

It has been found that UL of the mobile phone services acted as a 'necessary' condition for Bangladesh in undertaking multilateral liberalisation commitments under the WTO. By 'necessary condition', it is meant that without fulfilling this condition, i.e., without first having its market open domestically, a WTO member does not contemplate undertaking binding commitments. The trade experts and public managers interviewed also reported that UL provided the necessary grounds for and launching pad on which Bangladesh based its GATS commitments.

The reason is that UL provided Bangladesh with the early results of liberalisation before it decided to commit in the WTO. The initial experience of UL provided an

assessment of the benefits and challenges of liberalisation. In particular, the benefits of UL of mobile services were visible in terms of easy and rapid accessibility, lower tariffs and better service. Users no longer had to wait for years to be connected with a mobile phone service, as had been the case with BTTB phone users in Bangladesh. The beneficial impacts of telecommunications liberalisation (especially where landline performance was not satisfactory) in terms of reduced price, better service and diversity of service offerings, seem to have led Bangladesh to seek to maintain these benefits by binding its existing openness through GATS commitments. As an LDC, Bangladesh did not consider undertaking commitments in a sector which was closed to foreign competition and where liberalisation results were as yet unknown (Interviewee 29, October 2008). Thus it could be argued that it was UL that provided Bangladesh with the necessary base and insights about the consequential benefits of liberalisation to undertake binding liberalisation obligations under GATS. This observation is consistent with Mattoo (2000), who notes that it is easiest for governments to commit to their existing state in the WTO, and, in many cases, the *status quo* is itself the result of UL that member governments undertook on the basis of domestic policy considerations.

It appears that economic reasons acted as a catalyst in locking-in unilateral measures under the GATS. UL of telecommunications services made accessibility much easier, swifter and less expensive, resulting in the reduction of the costs of doing business (at least reduction in telecommunications costs and savings of time in travel). This in turn allowed businesses to be competitive**.** As an enabler of other economic activities, the spillover effects of the telecommunications sector liberalisation are also enormous. A well-developed telecommunications sector benefits the growth of small business and the informal sector, which are quite large in Bangladesh. Locking-in unilaterally adopted policies is a mechanism to sustain the benefits associated with liberalisation. The beneficial effects of sustained liberalisation measures also appear to have influenced the government to lock-in applied measures under the GATS.

Rossotto, Sekkat and Varoudakis find that availability of good telecommunications services foster exports of manufactured goods (2005 p. 945). Policy makers appear to have realised the importance of sustaining applied measures to reinvigorate the

country economically. It is, however, important to note here that stakeholders such as users and telecommunications ministry officials were not aware of the undertaking of binding commitments except for those directly involved in the process of submission of commitments.

Thus preserving these benefits of liberalisation, such as growth of the sector, cost reduction, and service quality, by giving already applied liberalisation measures a permanent shape through undertaking binding international commitments was a logical approach for policy makers to adopt.

7.4.2 Sufficient Conditions (other conditions) to make GATS commitments

Public policy makers, public officials and trade experts reported (see Chapter Five) that UL worked as a necessary condition for Bangladesh to undertake liberalisation commitments under the GATS. However, the UL was a necessary yet not sufficient condition to undertake binding commitments. The presence of some favourable conditions (or absence of resistance from stakeholders) and/or influence was necessary to motivate the government undertake GATS commitments. The presence of a favourable condition (or the absence of a resistance) was termed 'sufficient conditions' by interviewees. These conditions include the will to sustain applied reforms, i.e., there was no probability of backsliding from GATS commitments, together with the role of the incumbent mobile phone firms and the discretion in imposing limitations on Market Access and NT.

The following sub-section elaborates on the sufficient conditions that Bangladesh seems to have considered (which, in essence, any WTO member would consider) before undertaking binding commitments to liberalise access to services markets.

7.4.2.1 Expected probability of backsliding from GATS Commitments

It appears from the empirical findings that UL of mobile services was pursued out of necessity. Liberalisation of the sector brought great relief for users, who had bitter experience of long waiting, poor service and inaccurate billing in public sector telephone services. Sustaining competition in the sector was very important in the context of Bangladesh where inadequate capacity significantly disadvantaged not

only residential telecommunications users but also other industry sectors who use telecommunications as an infrastructure service for various economic activities. The undertaking of binding commitments under GATS is a mechanism to ensure that already applied measures would be sustained and there would be no backsliding from the GATS commitments.

In such a situation, it appears that the policy makers of Bangladesh were convinced to own the reforms already undertaken. The ownership of reform policies was necessary to help modernise and expand the capacity of the telecommunications sector, supporting the country's increasing economic activity by providing affordable telecommunications services with ease and a predictable investment regime in order to attract FDI. This view is consistent with that of Duncan and Quang who have emphasised the need for 'ownership' of reforms and observe: 'there is no doubt that reforms will not be implemented and sustained unless there is the political will to do so'(2003 p.15).

7.4.2.2 Role of incumbent operators and other stakeholders in undertaking GATS commitments

As interviewees have stated, the incumbent mobile operators (hereinafter referred to as 'investors') exercised influence in ensuring that applied liberalisation measures were locked-in under the WTO as binding commitments. Why did investors in the mobile service sector influence the Government of Bangladesh to undertake multilateral liberalisation commitments under the WTO GATS? Possible reasons for their motivation may have been as follows.

Firstly, when unilaterally liberalised measures are translated as WTO commitments, it becomes mandatory for the member country to honour liberalisation commitments. Backsliding from such GATS commitments is almost impossible for a WTO member. Under such circumstances, the moment Bangladesh submitted its commitments allowing foreign investors to provide FDI and deliver services without restrictions on capital and profit repatriation, it became mandatory for the Government of Bangladesh (GoB) to implement its commitments. After submission of commitments, the GoB's hands were tied when it came to putting any new restrictions on foreign investment nor did it enjoy the authority to arbitrarily impose

barriers on FDI or discriminate against foreign investment. Binding commitments also increases transparency of the investment regime.

Bangladesh's GATS commitments, which contain no limitations on foreign investors on establishment, ownership and dividend repatriation, provided investors with insurance against possible government arbitrary behaviour, such as expropriation of investment or abrupt public policy changes that might disadvantage investors. This kind of insurance is more important for developing countries and LDCs like Bangladesh for attracting FDI because government policies are often changed or re-shaped (or even scrapped) with a change in government (Zafarullah & Rahman, 2008). Furthermore, the state and the market often behave arbitrarily in some developing countries like Bangladesh, causing economic damage to investors.

Against this backdrop, having binding commitments allows incumbent foreign investors to enforce their rights through the WTO Dispute Settlement Body (DSB) should there any violation of commitments. Thus binding commitments provided them with a sense of security, certainty and predictability that already applied liberalisation measures would be maintained. Blouin (2000) observes that binding commitments provide an insurance for investors that existing levels of openness will not be reversed. If the commitments are reversed or violation of commitments occurs, the offending WTO member will have to face the WTO dispute settlement mechanism which is considered very effective. Violation will involve a cost known as 'compensatory adjustment costs', or trade sanction by trading partners (Hoekman & Vines, 2007). Although states can still try to nullify or bypass binding commitments through measures such as licencing conditions[112], technical requirements and qualification criteria, binding commitments make it difficult to deviate from commitments made. This explains why investors, i.e., the mobile firms, wanted Bangladesh to commit to the WTO. However, article XXI of GATS (modification of

[112] Licensing is nowhere mentioned in the GATS list of market access limitations. It could be among the administrative procedures used to enforce the kinds of limitations entered in schedules. But the GATS recognises that it is within government's remit to have licensing processes, technical requirements and qualification criteria for the fulfilment of other national policy objectives (Tuthill, 1997 p.787-88).

schedules) provides WTO members with exceptions to modify or withdraw any of its Scheduled commitments, subject to the provisions of the article[113].

The empirical data also suggest that the main motivation for the GoB to undertake binding liberalisation commitments under GATS was to provide credibility to investors (about policy restraints) through creation of a predictable and stable investment regime so that incumbent operators maintained and increased FDI in the sector. Siope observes:

> The legally binding nature of the multilateral trading treaty signals a more predictable and transparent investment environment (Siope, 2009 p.53).

In this regard, it is notable that the motive of attracting FDI through binding GATS commitments in the telecommunications sector indeed worked well. After undertaking binding GATS commitments in 1997, the total investment in the sector since 1997 has exceeded more than $US6900 million (Siddiqui, 2010). The telecommunications sector attracted more than half (59 per cent) of total FDI. amounting to $US641 million in 2008 (Byron, 2009)

The WTO requirement that all LDCs would have to undertake commitment for at least one sector for signing of the WTO Agreement played the main role in undertaking commitments in the 5-star hotel service during the Uruguay round. In other words, the GATS commitments in tourism (5-star hotels) sector were made in order to comply with a precondition of the WTO. The UL of FDI in the 5-star hotel sector and the inability of Bangladeshi investors to invest in 5-star hotels also played a significant role in undertaking commitments. One respondent observed:

> The GoB was more comfortable with commitment on 5-star hotels because FDI was free with 100 per cent equity in this sector. The only requirement was to have Bangladeshi manpower working in the hotel' (Interviewee 24, October 2008).

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[113] In that case, government must provide monetary compensation (s) or compensation with liberalisation in a different sector (including the goods sector) to the WTO member for whom the reversal will incur losses or the government may face trade sanctions (Scherrer, 2005).

The role of the incumbent service providers in having or not having binding commitments under GATS is also evident from the case of the financial services sector, especially the banking sector. Although, the banking sector was already liberalised (but not unilaterally), it has been found that non-fulfilment of other conditions (i.e., sufficient conditions) such as lack of support from the incumbent domestic banks (Interviewee 25, October 2008) contributed to non-submission of binding commitments in the banking sector.

Thus it can be argued that although the necessary condition, i.e., UL, was present, lack of fulfilment of other conditions, such as support from the incumbent banks, lack of regulatory preparation and the reduced importance for FDI in the sector, hindered undertaking of GATS liberalisation commitments in the banking sector.

7.4.2.3 Role of other stakeholders

In this case, existing mobile phone operators, users and employees of state-owned BTTB are considered stakeholders, because sustaining applied level of openness through binding commitments has ramifications for their wellbeing. As has already been presented in Chapter 5, various stakeholders, such as the existing mobile phone firms, large business users and landline operators and their staff (vested interest groups)[114], stakeholders had a positive attitude towards the submission of commitments. The stakeholders, especially large business users and existing mobile phone firms, actively sought binding liberalisation commitments in the sector. The only initial resistance to liberalisation came from BTTB employees (Sullivan, 2007). This opposition tends to concur with the views of Niemann (2004), who states that in economies where telecommunications are less developed, opposition to telecommunications liberalisation at the WTO level at times comes from a section of officials, on the grounds that national operators would lose market share in the face of strong foreign competition. BTTB employees were opposed to liberalisation

[114] BTTB employees have been considered a 'vested interest group' because they were the only group who considered they would benefit if protection remained and no private operator was allowed to provide telecommunications services in competition with BTTB.

because they were the only group who would benefit from protection. The employee union of the BTTB later accepted the liberalisation decision, realising that no other stakeholders would support their rent-seeking and protectionism (Interviewee 3, October 2008). But empirical data indicate that although the BTTB employees' union was initially opposed to private sector participation, it showed no resistance to sustaining applied levels of openness through submission of GATS commitments.

Indeed there was no opposition from any stakeholders against submission of GATS commitments in the telecommunications sector. Instead, it has been found that large users of mobile phones wanted to enjoy the competitive benefits of mobile services by getting applied level of openness 'locked- in' under the GATS. Interview findings also reported that incumbent mobile operators lobbied the GoB to undertake liberalisation commitments under the GATS. The reason for mobile operators in pursuing locking-in existing market openness under the WTO was to constrain possible future arbitrary behaviour of the government and to ensure commitments were mandatorily complied with. It thus becomes almost irreversible for the concerned member country government to back slide from commitments. The non-opposition from stakeholders seems to have made it easier to undertake binding commitments.

7.4.2.4 The Role of Discretion in undertaking commitments to liberalise

Furthermore, under GATS, it is at the discretion of the sovereign government to decide the scope and extent of commitments, including which sectors to liberalise and in what mode, when to liberalise and the freedom to impose restrictions on market access. This discretion seems to have made it easy for Bangladesh to undertake liberalisation commitments under GATS by retaining some policy flexibility. For example, Bangladesh imposed horizontal restrictions on National Treatment (NT). The implication of using this discretionary power to put restrictions on NT is that Bangladesh may provide certain subsidies and tax benefits only to national operators in Modes 1 and 3 (i.e., differential treatment among domestic and foreign services providers) in future. This discretion allowed Bangladesh to keep some policy autonomy for future. On the other hand, Bangladesh remained 'unbound' mostly in other modes i.e., it took no binding commitments.

The key interviewees identified additional conditions (they term them as 'sufficient conditions') that Bangladesh took into consideration before submission of its binding GATS commitments (see Table 7.2).

Table 7.2: Additional conditions ('sufficient conditions') in making GATS commitments

SL	Conditions	State of condition	Influence on undertaking of GATS commitments
1	Expected probability of backsliding from commitments	No probability to backslide	Influenced Positively
2	Role of stakeholders such as existing firms/operators users,	Mobile phone providers influenced positively for making commitments; no visible resistance from the users to undertaking commitments	Influenced positively
3	Discretion to make selective commitments or to have safeguards, i.e., to impose restrictions on Market Access or NT in making commitments	Discretion was present under GATS agreement	Influenced GoB positively to make GATS commitments.

Source: Researcher, based on Interview data

The relationship between UL in undertaking binding commitments can be explained with the help of a matrix. Figure 7.1 illustrates the relationship between UL and undertaking GATS liberalisation commitments.

Quadrant A	Quadrant B
Unilateral Liberalisation[115] = Yes Sufficient conditions fulfilled =Yes Usually undertakes GATS commitment to liberalise for foreign competition (e.g. ,Bangladesh commitment)	Unilateral liberalisation = Yes Sufficient conditions = Not fulfilled No GATS commitment
Quadrant C	**Quadrant D**
Unilateral Liberalisation=No Sufficient conditions fulfilled = Yes No GATS commitment in general (e.g. Myanmar) [GATS commitment may be undertaken in two circumstances: • if these commitments are used as a tool to push for more ambitious domestic reforms • If commitments are undertaken as part of accession negotiation	Unilateral liberalisation = No Sufficient conditions =Not fulfilled No GATS commitment at all

Figure 7.1: Relationship between Unilateral Liberalisation and GATS Commitments

As is evident in Figure 7.1 (Quadrant A), a WTO member usually undertakes binding commitments when both necessary conditions (UL in this case has been termed a necessary condition) and sufficient conditions are fulfilled. However, usually a member does not undertake commitment in the WTO when it feels that sufficient conditions are lacking, even though necessary conditions, i.e., UL, exist. The no probability of backsliding[116] from commitments, the influence of incumbent operators in favour of undertaking commitments and the non-opposition from the largest public sector operator, BTTB, also played a role in undertaking binding

[115] It means that the sector is already unilaterally liberalised for FDI.

[116] This is because backsliding is not costless and a member has to face the Dispute Settlement Body (DSB) and adjustment costs or retaliation

liberalisation commitments. Safeguard measures, such as the discretion of sovereign governments to impose necessary restrictions in making commitments, also encourage members to undertake commitments.

In the Bangladesh case, other conditions positively influenced Bangladesh to bind itself under the WTO. The Bangladesh experience suggests that UL make undertaking liberalisation commitments under a multilateral forum easier and it acts as a push factor. It is also complementary to multilateralism. The reason is that, as the market is already open and consequences of liberalisation are known, the member country concerned becomes more confident to lock-in and be committed to the WTO, because it does not need to open a new sector or subsector of services. What the country had already liberalised under its own steam is relatively easy and subject to less domestic resistance to commit in the WTO than where a country has not yet opened its market. The other aspect that should be noted is that a WTO member liberalises unilaterally to promote its national interest and not as a favour to other countries. This is even more applicable in the case of opening up the telecommunications sector because telecommunications services, being an infrastructure service and intermediate input, can help increase productivity of other goods and services. This welfare-enhancing impact of UL promotes undertaking of multilateral commitment.

The findings of this study that UL is positive and complementary to undertake commitments under the WTO is consistent with Sally, who is of the view that unilateral and multilateral liberalisation are not mutually exclusive; rather they are complementary to each other in ensuring greater integration with the world economy (Sally, 2000 p.420). Oyejide and Bankole (2001 p.3) also have a similar view that conclusion of multilateral and regional agreements becomes easier when unilateral liberal conditions already exist. Once a country has unilaterally liberalised its trade regime, it becomes politically easier than it was previously to reduce restrictions (Martin & Messerlin, 2007) and bind them under the WTO.

7.5 The effects of undertaking commitments under GATS

It has been found that significant amounts of FDI (e.g., Banglalink alone invested around $US1230[117] million for network expansion) (The Daily Jugantor, 2010a) came into the sector, which helped modernisation and massive expansion of services. The certainty and predictability that foreign investors gained through multilateral GATS commitments in the sector appear to have given them the confidence to invest massively in Bangladesh's telecommunications sector. This is because GATS commitments constitute a form of insurance against a government's arbitrary behaviour. The GoB also benefited, as the mobile phone sector became a large source of government revenue. The mobile firms' benefit was mixed. While Grameenphone made huge profits for its investors, other firms are reported to have incurred losses.

Thus it can be confirmed that it is mobile users and the government who benefited most from the commitments. Mobile phone firms also benefited, but those benefits were mostly concentrated among market leaders.

In this regard, is to be noted that, although Bangladesh translated its unilaterally liberalised measures as GATS commitments in the mobile phone sector, and the outcome has been a win-win situation for users, government and investors, the GoB did not make additional commitments in the sector post-1997. However, it also did not freeze the sector, in the sense that the GoB continued to implement reforms in the sector, including allowing more operators in both the fixed and mobile sectors and establishment of an independent regulator with a view to have increasing and diversifying service provisions and QoS.

Bangladesh refrained from making commitments in the financial services sector (banking and insurance sector). The financial services sector was liberalised under the influence of the World Bank and the IMF (Raihan, 2006) and was not a case of unilateral liberalisation in true sense. So the necessary condition i.e., UL was not present. Empirical data reveals that the incumbent banking firms have shown their reluctance and opposition to the making of commitments. Furthermore, government

[117] BDT 84840 million.

might have taken a cautious approach in undertaking binding liberalisation because it observed the increased occurrence of financial crises across the globe. It signifies that neither the 'necessary condition' (i.e., UL) nor the sufficient conditions (such as stakeholder support and government willingness) were present to influence the government positively in undertaking binding liberalisation commitments in the financial services sector under GATS.

The reluctance of Bangladesh policy makers in the GATS 'request-offer' approach negotiations provides an indication that Bangladesh is not so enthusiastic about services liberalisation under the multilateral GATS framework. The reasons for the reluctance of policy makers in GATS was found to be the lack of interest of the policy makers in matters of trade and WTO matters, as well as lack of awareness about the implications of not being involved with the process. The Bangladesh political culture is such that policy makers place more importance on positioning themselves in pursuing their partisan interests instead of spending time on addressing long-term economic policy issues. They also lack awareness and expertise in the negotiation of complex trade and WTO issues. Indeed, no serious and continued efforts from the policy makers have been observed to date in making noticeable contributions in trade and WTO matters and negotiations for the benefit of the state. The example of unrealised export potential in mode 4 service supply supports this observation. As a population-abundant country, Bangladesh has very good potential to send more of its semi-skilled and low-skilled workforce overseas under mode 4. But exporting of people under GATS mode 4 is politically difficult, because trade negotiators from developed countries argue that the GATS mode is unworkable, due to the source countries' inability to guarantee the return of workers (and hence ensure 'temporariness'). The failure to return workers sent for a temporary period makes GATS 4 a migration issue rather than a trade issue.

In such a situation, Bangladesh could have tried to engage in bilateral agreements with the USA, Australia and the EU to enable its workers to enter rich countries on a temporary basis. Some developing countries did this for their workers through bilateral agreements (Chowdhury, 2010b), whereas Bangladesh could show no such

development to date. This speaks about the lack of negotiating initiative and expertise of Bangladesh in trade and economic issues.

7.6 Conclusion

With regard to the research question, How did UL influence submission of Bangladesh's liberalisation commitments in the telecommunications sector under the GATS of the WTO?, the evidence demonstrates that UL was a policy catalyst that provided the necessary grounds for promoting multilateral liberalisation commitments under the GATS framework. It was the launching pad on which Bangladesh based its submission of liberalisation commitments. The study also finds that UL alone is not sufficient to motivate a WTO member to undertake binding liberalisation commitments. Bangladesh considered the need for other conditions to be fulfilled (termed here 'sufficient conditions') before submission of binding liberalisation commitments. Therefore it can be inferred from the empirical findings that UL combined with the fulfillment of other conditions encouraged Bangladesh to undertake binding liberalisation commitments (i.e., the submission of schedule of commitments) under the GATS.

However, it is important to mention that there may be a situation where a country may undertake binding commitments without any prior UL (the exceptions in Quadrant C, Figure 7.1). This usually happens with newly acceding countries to the WTO, and countries whose leadership wants to use WTO binding commitments to steer domestic reforms or to break a political deadlock at home on the liberalisation issue. There are also situations when a member country has introduced competition in the mobile phone sector through UL, but has not undertaken GATS commitments (see Quadrant B). This could be for various reasons, including non-fulfilment of sufficient conditions.

The summary of findings of this study, contribution of this research to the body of knowledge, practical implications of the study and proposal for future research are presented in the concluding chapter (Chapter 8).

Chapter 8: Conclusion

8.1 Introduction

In this final chapter of the study, the conclusions, and implications of the study are presented. This chapter has six sections. First, it outlines the brief background of the research and objectives of the study. Second, a summary of the research findings in relation to three research questions is presented. Third, the implications of the research are presented in this section. Fourth, the contributions of this research to the knowledge are presented. Fifth, the scope for future research on the telecommunications sector is presented. The last section is a conclusion of the thesis.

8.2 Research background

Over the last three decades, the telecommunications service sector has experienced massive reforms both in developed and developing countries. A paradigmatic shift away from traditional, bureaucratic and processed-based approaches to public management and service delivery towards shared or indeed private sector provided approaches have created conditions for the market-based provision of services to replace state-led telecommunications service provision**.** Widespread reforms such as liberalisation and privatisation in the sector, have allowed private players to enter the market. The inadequate and unsatisfactory service provision by the public sector provider, a massive push for sectoral reforms and economic liberalisation due to globalisation and to domestic demand, the need for attracting FDI and push from multilateral lending agencies contributed to the paradigmatic shift in the economic policy of the government

As part of this policy shift, significant reforms were introduced globally to varying extents in the sector in the form of privatisation of state-owned enterprises, and liberalisation of the telecommunications sector: both fixed and mobile services, to permit private and foreign investment. The objectives of these reforms were to ensure that prospective users could access telecommunications services at an affordable rate and at satisfactory level.

Bangladesh is an LDC country that joined the bandwagon and made reforms in the telecommunications sector in line with changes taking place globally. The major political parties supported the market-based reforms including liberalisation of both land-line telephone and mobile phone services. Although Bangladesh has opened up its telecommunications market unilaterally ahead of many less-developed countries,, there has been a dearth of research to investigate the factors that drove the liberalisation of the sector and how liberalisation has impacted on the accessibility, pricing, QoS and diversity of services.

Furthermore, Bangladesh undertook WTO liberalisation commitments under the General Agreement on Trade in Services (GATS) in the telecommunications sector immediately after a qualitatively higher stage of competition was introduced in 1996 with the licensing of three mobile phone services. The unilateral liberalisation of the sector and subsequent liberalisation commitment in the WTO ostensibly creates an impression that Unilateral liberalisation (UL) might have a role in undertaking binding liberalisation commitments under GATS. No previous study is known which investigated whether UL has any role in promoting GATS commitment, and if, so how it influenced Bangladesh in making liberalisation commitments in the WTO. This study has aimed at addressing the research gap.

8.2.1 The Objectives of the Study

The objectives of this study were:

- to examine the factors that are perceived to have contributed towards unilateral liberalisation of the mobile phone services in Bangladesh;
- to examine the impacts of unilateral liberalisation on accessibility, pricing, QoS and diversity of services; and
- to examine how unilateral liberalisation influenced Bangladesh's undertaking of binding liberalisation commitments under the GATS of the WTO.

8.3 Findings of Research in Relation to the Research Questions

This section summarises the findings of qualitative data discussed in detail in Chapters Six and Seven

8.3.1 Factors Contributing to Unilateral Liberalisation

Investigation of the first research questions aimed to find the factors that have contributed to the unilateral liberalisation of the mobile services. The study finds that the large market opportunity, incapability of the state-owned firm, unmet demand, and technological change were the main factors that drove unilateral liberalisation of the service. Apart from these factors, attracting FDI, a gradual shift in economic policy from state-led to market-led growth, and clientelism and personal relationships and the need for expanded and modernised telecommunications services necessary for the economy to be integrated with the world have contributed towards the unilateral opening up of the sector.

It has also been found that the inadequacy of service provision by monopoly providers and technological development have had positive impacts in creating market opportunity for mobile phone service providers. Similarly, entrepreneurs who perceived large market opportunities lobbied the government in different phases of telecommunications reforms.

8.3.2 Unilateral Liberalisation and Impacts on Users

The second research question as to the impacts of unilateral liberalisation on consumer welfare was addressed with the insights of the mobile phone users including users who had two roles, one as a user and the other as a public manager or regulator or as a business leader. It was found that users gained increasing benefits as competition take hold.

The study finds two scenarios of impacts of unilateral liberalisation on consumer welfare. The market was non-competitive and telecommunications users were denied the benefits of liberalisation during 1997-2004. In this period, mobile phone service pricing was exorbitantly high (given the very low income of the majority of people),

with a call charge range that varied between $US 0.20 and 0.30 per minute. As a result, accessibility was limited. The growth of the sector was very slow. Despite multiple operators being operational, no noticeable improvement in terms of more affordable access and rollout took place as the tariffs were kept very high in this period. Over the period, adequate improvement has not been made in the QoS of the operators.

The study finds that the poor competitive outcome in the mobile phone sector until 2004 was due to a number of factors including a weak regulatory enforcement, a poor interconnection regime, poor institutions, the absence of competition law, price coordination among the operators generating a cartel-like behaviour, and the imperfect nature of markets.

The findings reveal that although regulatory authorities are in charge of ensuring the service quality effects of liberalisation through proper enforcement of regulatory provisions relating to licence obligations, price, QoS, and interconnection rules, neither the regulator nor the telecommunications ministry have shown any initiative to make the market competitive in that period. The regulatory oversight and effectiveness were grossly inadequate and weaker than is necessary for a competitive market. The BTRC has not signalled its strong commitment in monitoring pricing of the service. There were no QoS benchmarks set by the regulator let alone implementation of such benchmarks.

The study finds '*regulatory capture*' was a main reason for poor regulatory enforcement over the period 1997-2004. Poor recruitment to the BTRC, the absence of competition law and a public sector provider were also liable for a poor competitive regime. The launching of a public sector mobile service was deliberately delayed by public officials through bureaucratic complexities and layers consistent with 'Tollbooth Theory. Officials in the MoPT and the BTTB were captured by private mobile phone firms. The private mobile firms wanted to block entry of state-owned Teletalk in order to prolong the non-competitive market and the benefits from it that accrued to them, just as is expected in 'Capture theory'. Thus it becomes apparent that it was institutional failure that can be largely blamed for competition not

encompassing the mobile phone service market in Bangladesh in the period prior to 2004. In the non-competitive market, mobile firms grew at the expense of consumers.

But after 2004, the market became competitive and mobile users enjoyed the expected benefits of liberalisation in terms of accessibility, connectivity[118], low price, improved QoS, and diversity of services. The study reveals that the launching of mobile phone services by the state-owned TBL and another private operator Banglalink in 2005 determined and capable to position itself in the market, were the catalysts in bringing stiff competition into the sector. Banglalink have brought international experience, capital, cutting-edge technology, innovative customer service and pricing strategy and competitive attitude to put pressure on the market leader. From the first day of its operation, Banglalink adopted an aggressive advertising strategy and competitive pricing policy including subsidised SIM cards and handsets to acquire market share. This competitive strategy had a dent on the market leader and forced it to engage in competition.

On the other hand, being a state-owned firm, TBL had a mission of providing affordable services to the consumers. The launching of mobile service at cheap prices with no incoming charges by the TBL led to a price war, reduced prices and offers innovative packages and services. Although the overall market share of the TBL was not significant, its very presence forced private operators to engage in competition. The average mobile tariffs per minute reduced significantly in this period from around $US0.20 in 2003/04 to $US0.04 in 2005/06.

Competition not only resulted in significant reduction in mobile tariffs, but also caused the operators to offer additional benefits or 'freebies' such as free communication within the network (i.e., on-net calls such as from Grameenphone to Grameenphone), bonus talk time, free SMS, instant benefit on recharge, free call on Family and Friends numbers and bonus on usage (for example Banglalink customers were offered 25 per cent bonus talk time by having a minimum $US2.50 usage)

[118] Mobile phone subscribers now number 50 times more than the number of subscribers of state-owned land-line phones.

during the promotion period to attract potential customers. The result is that Bangladesh now offers the lowest mobile tariffs in the world.

In Bangladesh accessibility to mobile services has become easier and quicker than at any time before due to the wide presence of mobile firms' sales outlets and improved customer services, nominal connection charges, and subsidised handsets. Although there are still problems with the QoS, it has nonetheless improved in the last 3-4 years to reach to acceptable customer satisfaction levels. It has been also found that QoS has become an important differentiator for the operators to remain competitive in the sector. Similarly, a noticeable improvement took place in the diversity of services, as the operators are in race to differentiate themselves from others in the highly competitive market. In sum, the study suggests that mobile consumers now enjoy easy and quick accessibility, affordability, acceptable quality of services and a diverse range of services.

The study also reveals that, unlike in the past, the reconstituted telecommunications regulator has taken a pro-active and dynamic role in better regulatory enforcement since 2007. It has forced the operators to lower their tariffs by giving them a range of tariffs within which they can move. It has also provided instructions to improve interconnectivity and sharing of infrastructure. It has been found that the absence of political intervention in a non-partisan caretaker regime, and the recruitment of the BTRC leadership on the basis of technical competence and integrity contributed towards the dynamism and efficacy of the regulator.

8.3.3 Unilateral Liberalisation and Bangladesh's Undertaking of Binding Liberalisation under GATS

The study finds that unilateral liberalisation was a 'necessary condition' and provided a foundation for the government to undertake binding liberalisation commitments. As the experience of unilateral liberalisation was beneficial in terms of easy access, reduced price and relatively better service, it provided the Bangladesh Government with the necessary confidence to sustain the reforms by translating unilateral liberalisation measures into binding multilateral commitments under the WTO GATS. The unilateral liberalisation experience provided Bangladesh with the necessary insights and skills to carefully craft a schedule of liberalisation commitments. UL was

found to be a push factor in undertaking commitments in mobile services. UL, however, was not enough to undertake liberalisation commitments under the GATS. Apart from unilateral liberalisation, Bangladesh also required the achievement of other conditions (in this study, these conditions are termed as 'sufficient conditions') such as the absence of the possibility of backsliding from commitments under GATS, the positive role of the direct stakeholders i.e., foreign mobile phone firms favouring binding commitments, and the discretion of the government to retain policy autonomy in future by imposing limitations on Market Access and National Treatment in undertaking liberalisation commitments under GATS.

It is important to note here the overall effects of undertaking binding commitments under GATs have been beneficial for the users, mobile firms and the government. Since the making of commitments, the mobile services sector has attracted around $US 6900 million (Siddiqui, 2010), the highest amount of FDI in all sectors of the economy. The multilateral GATS commitments in the sector, and the certainty and predictability of investment regime that the foreign investors gained through these commitments, encouraged them to invest in Bangladesh. This is because GATS commitments constitute a form of insurance against a government's arbitrary behaviour. The large FDI helped modernisation and a massive expansion of mobile services in all parts of the country which benefited users. The mobile firms also benefited in the sense that they have a stable investment climate in Bangladesh and they enjoy insurance against regulatory arbitrariness. The government also benefited as mobile phones became a large source of revenue for the government.

In this regard, it can be stated that although Bangladesh 'locked-in' its unilaterally liberalised measures as GATS commitments, and the outcome has been a win-win situation for users, mobile phone firms and the government, the GoB did not make additional commitments in the sector post-1997. This is because the GoB, like other developing and LDC country governments, is mostly conservative in undertaking binding commitments which it considers irreversible and costly to escape and undermine policy autonomy. Furthermore, the benefits of engaging in the 'request-offer' approach under the GATS agreement to exchange trade policy are still not a

priority for policy makers in Bangladesh since no immediate personal or political gain is attached to it.

Non- submission of further commitments, however, did not freeze the sector in the sense that the GoB continued to make reforms in the sector, including granting of licences to operate PSTN, mobile and International Gateway services. Furthermore, Bangladesh set up an independent telecommunications regulator to promote competition and growth of the sector, even though Bangladesh had not adopted the regulatory 'Reference Paper' obligations to do so.

Bangladesh also refrained from making commitments in the banking sector which is also unilaterally liberalised. Unlike the mobile phone sector, the incumbent banks were not known to have favoured or influenced the government to undertake binding commitments. It has also been reported that the Government was not interested to see more influx of banks in the banking sector where domestic entrepreneurs already made their presence strongly felt. Rather the local banks have shown their opposition to the making of commitments. It signifies that although the 'necessary condition' i.e., unilateral liberalisation was there, the lack of fulfilment of other conditions, such as support from the incumbent banks as well as the reduced importance for FDI in the sector, stood in the way of making commitments in the banking sector. Thus it is evident that, although the role of the unilateral liberalisation is paramount in undertaking GATS commitments, it hinges on the fulfilment of other conditions as well.

8.4 Implications for practice

The findings of this study provide important policy implications for the benefit of the telecommunications services sector and for the reforms of other services sectors in Bangladesh and similar countries.

First, the findings suggest that Bangladesh policy makers were committed to reforms in the telecommunications sector from the beginning of the 1990s but seldom followed through with implementation. The poor implementation of reforms and complete absence of the public sector from the mobile service sector emerged as a boon for the private operators. It suggests that the policy makers' job does not end

with market opening and they need to monitor the implementation of reforms so that liberalisation benefits flow through to users.

Second, the study finds that it took a long time for competition to take hold because the operators were engaged in some form of price collusion to the detriment of consumers. This was possibly due to due to the non-existence of a competition authority. The study thus demonstrates the significance of the setting up of a separate competition authority like the Australian Competition and Consumer Commission (ACCC) to constrain anti-competitive activities of the operators and to benefit users. It would also allow sharing of regulatory roles between the telecommunications regulator and the competition authority as a mechanism to prevent or reduce regulatory capture by the interest groups.

Third, the findings indicate that the dominance of a single operator vis-à-vis other industry players turns the market a 'one firm dominated' one where other marginal operators cannot engage in competition on a level playing field. The small firms were both competitors and customers of GP simultaneously. In particular, these firms were dependent on GP in terminating their customers' calls on GP's network and settling interconnection terms and prices due to GP's large countrywide network. It has been found that, when the state-owned TBL launched its service and a 'competitive entry' (i.e., entry of a firm who is able to put pressure on incumbents to engage in competition) by Orascom Telecom's Banglalink took place in 2005, the incumbent operators, including dominant firm Grameenphone, were forced to engage in competition to the benefit of users. This example demonstrates the presence of a state-owned firm can be an important countervailing force on private mobile phone operators and to make the market competitive. It also highlights how the relative strength, innovative strategy and determination of a new entrant could be a factor in putting pressure on the incumbents to be competitive.

Fourth, the findings of this research emphasise regulatory effectiveness and show how important it is to have an effective, independent and dynamic telecommunications regulator to ensure that the liberalised market functions properly. The neo-liberal proponents argue that efficiently functioning markets drive down prices, improve quality of goods and services, and provide choice and

availability. This research on Bangladesh suggests that due to poor regulatory enforcement and lack of necessary regulations the neo-liberal prescription did not work. Mobile phone consumers were denied the expected benefits of liberalisation, such as the reduced prices, improved efficiency and better service spelt out in the policies based on neo-liberal economic theory for more than seven years following a greater degree of liberalisation in 1996. The unfettered market facilitated a free market environment that allowed private mobile phone service providers to charge exploitative prices and compromise QoS to the consumers' great cost.

Fifth, the study suggests that the current telecommunications regulator requires operators to get every single matter such as change in tariffs or introduction of a new service approved by the regulator. The mobile operators reported that they were unhappy with the way the telecommunications regulator wants to micro-manage everything. Transparency in the regulator's decision making is also questioned. At present there is no institutional mechanism for mobile phone operators to challenge BTRC's decisions if the mobile companies are aggrieved. As the regulator's decisions affect mobile phone operators' incentives and outcomes, mobile phone firms feel more secure and confident when the regulator's decisions can be challenged via some appeal mechanism. The findings from the present study thus demonstrate the importance of setting up of a mechanism such as the creation of a special tribunal such as Telecommunications Appellate Tribunal[119] where mobile phone operators, if they with not happy with certain decisions made by the telecommunications regulator can challenge the regulator's decision before an independent body as proposed by Gutierrez (2003b). Another option may be to set up an Administrative Appeals Tribunal (a generic tribunal) where any person can lodge an application for a review of government or semi-government decisions. In Australia, Administrative Appeals Tribunal (AAT) provides independent review of a wide range of administrative decisions made by the Australian government and some non-

[119] In India, such special tribunal for telecommunications sector exists. Telecom Dispute Settlement and Appellate Tribunal (TDSAT) hear and dispose of appeal against any direction, decision or order of the TRAI in India (Jain, 2004).

government bodies including merits review of decisions made by the Australian Communications and Media Authority (ACMA). Depending on decisions, the aggrieved person can also apply for a judicial review (ACMA, 2010). The existence of such appeal or court mechanism to resolve disputes between operators and the regulatory body or conflicts between operators are good for fairness and confidence in the system. This would promote accountability on regulatory behaviour and increase the transparency in regulatory decisions.

Sixth, the study suggests that the telecommunications regulatory body (especially the first two regulatory regimes) was not properly staffed by qualified persons who had adequate skills and experience in the fields of telecommunications, law, finance, or management so as to qualify them to serve as commissioners on the BTRC. Former civil servants were recruited as the chairman and commissioners, the highest positions of the BTRC, largely through consideration of political loyalty rather than technical competence. These civil servants lacked expertise in the telecommunications industry. The very mindset that the retired bureaucrats brought with them indeed turned the BTRC into an extension of bureaucracy. As a result, the essence of the regulatory body in promoting a vibrant competitive telecommunications sector was not fulfilled. This calls for recruitment of personnel with skills and expertise in telecommunications, legal and financial matters to the telecommunications regulatory authority for its capacity building; otherwise the regulatory decisions will suffer in quality and be poorly based. This is because 'regulation of this sector is very demanding of skills' (Chand & Duncan, 2008 p.64)

Seventh, it was found that the BTRC showed its apathy in promoting competition in the sector because it was captured by the regulated firms. Corruption and political influence was key factors in regulatory capture. That means the BTRC had incentives for not taking action and for being captured. Bangladesh had a telecommunications regulator who did not believe in regulation. The study thus calls for a rigorous assessment of the efficiency and effectiveness of the regulatory body and the necessity of putting in place clear mechanisms that curb any wrongdoing or negligence of the regulator. A parliamentary committee could be used as an institutional arrangement to ensure greater transparency of the regulatory process

and impose accountability on the regulatory authority. Another option would be to introduce a mechanism to explain or publicise decisions.

Eighth, the study finds that the dominance of a large single operator was an impediment for promotion of competition in the sector. A strong regulatory process such as rules for identification and control of any Significant Market Player (SMP) might be worthwhile to curb the adverse activities of an SMP in exercising market power such as through the imposition of high prices and reduction in consumers' services.

Finally, in the absence of Quality of Service benchmarks, it is important to develop QoS rules and standards for the operators following a process of consultation with industry players and other stakeholders. In order to ensure QoS, deployment of external third party auditors to report on QoS could be a worthwhile option.

8.5 Contributions

This study has a limitation in generalising the factors of unilateral liberalisation, its impacts on consumer benefits and the influence that unilateral liberalisation has had on undertaking binding liberalisation commitments because of the unique institutional features which Bangladesh has demonstrated in the process of mobile phone services reform, its implementation and undertaking GATs commitments. In spite of this limitation, this study contributes to providing policymakers and scholars in telecommunications with useful policy suggestions as to why liberalisation failed to offer expected benefits to the users up until 2004. It also concretely illustrates how and why competition took hold in the later phases of reforms that started in 2005 and the role of UL in undertaking binding GATS commitments. This dissertation may contribute in the following areas:

Firstly, the findings of the current research also suggest the importance of a dynamic, effective and efficient regulatory leadership in promoting discipline, and in defeating profit-maximising motives of operators by bringing competition to the sector. The regulatory leadership of the reconstituted BTRC (reconstituted in 2007) was able to enforce price regulations, check malpractices of the mobile phone operators, improve QoS and force operators to share telecommunications infrastructure to the benefit of

the users. The study thus shows the importance of having sincere commitments from the 'the person in charge of the regulatory body' in creating a necessary environment for a competitive market for the benefit of the entire customer segment and society. It also reveals that it is the 'person at the helm of affairs' who matters and not the regulations alone.

Secondly, this study shows that even though telecommunications reform such as liberalisation and privatisation is a useful and effective choice on the policy menu for many countries to enhance the efficiency and affordability of telecommunications services, liberalisation *per se* cannot bring attendant benefits unless it is supported by necessary regulations and effective regulatory impact. The study thus contributes to providing necessary insights into the importance of undertaking a Regulatory Impact Assessment (RIA). This study thus has an important contribution in informing policymakers about the importance of appraising the effectiveness and efficacy of the regulatory body and regulations in ensuring liberalisation benefits for the consumers and for the national development goals as a whole.

Thirdly, the study finds that the complete absence of a public sector provider from the service sector and the inadequacy and ineffectiveness of the regulator may create an uncompetitive market where private players may turn the market into a near oligopoly. In the absence of a state-owned provider, private mobile operators resorted to all avenues including engaging in anti-competitive activities to the detriment of users. When Teletalk entered the market, the situation changed dramatically. This provides an important insight on the pandemic impact of complete withdrawal of the state from the provisioning of utility services.

Fourthly, the study contributes to the literature by establishing that the existence of regulation and a regulatory body is not enough to see regulations work properly. The socio- political and legal environment in which the regulator works also matters. The political, legal and social institutions that Bangladesh inherited from a colonial system were not capable of providing a competitive and accountable regime or undoing the remnants of a pre-capitalist institutional structure where patron-client relationships and a rent-seeking culture have significant impact on the market mechanism and management practices. In particular, political clientelism which was prevalent in

Bangladesh allowed the ruling parties in various regimes to win support of the citizens and the public administration by providing personal favours, targeted services, recruitment, faster promotions, lucrative postings and appointments after retirement. In the context of a weak regulatory framework, the two major political parties deployed the 'clientelistic mode of incorporation' to make the key institutions partisan and a source of rent seeking (Islam, 2006b). This made the key institutions polarised, incompetent and ineffective. Furthermore, the legal system and inadequate regulations were not suitable for a market-led growth strategy. In such a context of a pre-capitalist institutional structure, the telecommunications regulator was less effective under the political party governments until 2006. Conversely, the same regulator could work without any political influence in an environment of a non-party caretaker government (2007-2008).

From a practical standpoint, the study on Bangladesh provides a new theoretical grounding regarding the vital role that unilateral liberalisation plays in influencing a WTO member government to undertake liberalisation commitments under the GATS agreement. It has been empirically established that unilateral liberalisation was a necessary factor and provided the foundation that encouraged Bangladesh to undertake liberalisation commitments through submission of a schedule of commitments to the WTO. This makes a significant addition to the literature since no earlier literature is known to address how unilateral liberalisation influences a WTO member in undertaking multilateral binding liberalisation commitments under the GATS framework.

8.6 Limitations of the project and recommendations for future research

There are a number of areas for further research that emerge from this thesis. Unfortunately, while many potential areas of research presented themselves in the course of the study, it was not possible to pursue them. Some areas for future research relating to mobile phone services industry are discussed below.

This study discussed the impact of unilateral liberalisation of the mobile phone sector on consumer welfare in terms of accessibility, pricing, quality-of-service and diversity of services. The time and fund constraints did not allow the researcher to pursue how

opening up the sector impacted the small business development of the country. The vital role of telecommunications as an 'invisible' infrastructure in economic growth has been stressed by many authors (Hackler, 2003; Mattoo, et al., 2006; Rossotto, et al., 2005). Future research on the impact of mobile phone services liberalisation on the small business development of Bangladesh would provide significant insights for the policy makers of countries at similar economic and telecommunications stages of development.

The improved telecommunications provisions are good for other service sectors that use telecommunications service intensively. Thus, it is important to examine the impact of mobile phone sector liberalisation and improved telecommunications service in attracting FDI in other service sectors, especially in capital-deficient Bangladesh.

The telecommunications sector has been unilaterally liberalised in some other countries in the world. As the project was part of a research degree and there were time and resource constraints, it was thus not possible for the researcher to investigate how other WTO members' unilateral liberalisation influenced them in undertaking GATS liberalisation commitments. An extension of this study covering multiple countries (perhaps between 10 and 15 countries) could be considered for generalisation of the findings on the issue of how unilateral liberalisation influences undertaking of GATS liberalisation commitments in the telecommunications sector.

There are different views about whether the mobile phone is a substitute for or complement to the fixed-line and views vary depending on context (Gruber, 2001a; Hamilton, 2003; Sugolov, 2005; Sung & Lee, 2002). There is no such study on this topic in the context of Bangladesh. Further study might then be conducted to investigate whether mobile telephony is a substitute for or complement to fixed-line telephony. This study is significant because if, on empirical investigation, mobile phone service is found to be a substitute for fixed-line telephony, a capital deficient country like Bangladesh can consider reducing allocation of funds from the public sector fixed-line phone provider and putting more development fund into other utility sectors where foreign providers are not present to meet service requirements.

8.7 Concluding comments

The study finds that liberalisation is only a necessary policy position for introducing competition. Liberalisation *per se* did not, in Bangladesh, result in competition and beneficial outcomes for users. The result was that in the first seven years following liberalisation of the sector, the benefits argued by neo-liberal proponents were not achieved. Users were denied a competitive outcome because the market did not take care of users. This indicates that markets may fail and that suggests that there remains a role for the government to intervene. However, from 2004-5, mobile phones in Bangladesh achieved a quantum improvement in terms of enormous growth, easy accessibility, affordability and QoS due to liberalisation of the sector and a liberal FDI regime. It was possibly due to a liberalised competitive market where competition took hold after the entry of a state-owned mobile firm and competitive entry by another mobile firm. Competition intensified even further when some regulatory steps were taken by the BTRC during the non-partisan caretaker government in 2007-08.

The liberalisation of the sector and the consequential development of the sector have not only benefited users. It has far-reaching beneficial consequences for other economic and service sectors and for the government. In particular, the sector has large spillover effects on other economic and income generating activities. It has also emerged as a significant revenue source for the government.

The study finds that a large market for mobile phones exists in Bangladesh beyond reducing the waiting list for land-line phones. This is due to convenience, quick and easy accessibility and falling costs of mobile phone usage. This large market opportunity was a prime factor for opening up the sector.

The unilateral liberalisation of the telecommunications sector and the poor competitive outcome until 2004 demonstrated the effects of inadequacy of regulations (such as the lack of provisions to check anti-competitive practices in the Telecommunications Act, the lack of a competition authority) and the ineffectiveness of the regulator. The study reveals that there always remains a danger that the regulatory and ministerial authority may be captured by the regulated firms in a

context where the regulator is not accountable and monitored. The BTRC and the Ministry were captured by the regulated firms, enabling the latter to hinder competition by delaying the introduction of mobile service by the state-owned firm. Because the regulator was captured, consumers' interests were compromised by not implementing Bangladesh Telecommunication Act 2001 provisions effectively. The 'regulatory failure' in the telecommunications sector in Bangladesh amounted to a deliberate attempt not to act to benefit the public interest.

The patron-client political culture and the underdeveloped administrative and legal system had an important influence on the regulator's remaining ineffective. The patron-client system was so strong in Bangladesh that often institutional purpose is defeated by a calculus of personal benefit.

The study reveals that the dominance of a large operator in the absence of any regulatory controls to countervail the market power of the dominant operator is detrimental not only to the collective interest of consumers but is also a great threat to small operators. The small operators in Bangladesh suffered both as customers and competitors of the Grameenphone and had to accept unfavourable terms on interconnection.

The study finds that unilateral liberalisation has been a push factor and has provided the necessary ground for Bangladesh to undertake binding liberalisation commitments under GATS. The study, however, finds that the undertaking of multilateral commitments hinged also on the fulfilment of other conditions such as support from incumbent firms and the probability of backtracking from commitments in future.

The study finds that personal relationships and clientele persuasion and influence played has a significant role in getting and granting State Concessions (Licences) in Bangladesh. The nexus between policy makers and the entrepreneurial class forced policy makers to defy the established market-led practice that licences be given through an open, transparent and market-based tender process.

The study finds that public policy making in Bangladesh lacks transparency, consultation and scrutiny. Policy decisions are often taken behind closed doors due to a nexus between the policy makers and the business groups.

The study reveals that as a diffuse interest, the disorganized consumer group could not influence the concentrated interest group of mobile firms in gaining expected benefits of liberalisation. As a result, the concentrated interests dominated diffuse interest. Frieden and Martin (2002) rightly point out that mass publics or electorates often have little impact on policies.

The thesis has demonstrated that the role of the State and regulation are very significant to achieve public policy objectives even in a neo-liberal state. In particular, when the market fails to work properly, the role of the state becomes paramount. It also shows that the market is *one* answer but not *the* answer. An unfettered market is detrimental to consumer benefits**.** The findings of this study should alert policy makers making reforms in other service sectors to the importance of a powerful independent regulatory body, which is held accountable for its deeds.

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Appendix A: Four sets of interview questions

Set 1: Questionnaire for Focus group discussion- Household and Business users

1. What are the benefits that you enjoy because of multiple operators in the mobile phone sector?
2. What is your opinion about the overall service quality of mobile phone firms? In terms of call dropping, one way connections, congested network, fixing any faults quickly, the redress of complaints lodged with the mobile phone companies?
3. Do you suggest more mobile phone operators to enter the market or the existing operators are enough to have competition in the market?

4. How did BTRC perform on the following issues since its beginning in 2002?

   a. Issuing of licences

   b. Interconnection regime

   c. Promoting competition

   d. Tariff issues

   e. Quality issues

   f. Combating anti-competitive practices such as price collusion

   g. Complaints handling and public hearing

   h. Interventions when necessary

4. How would you evaluate the regulatory role that the BTTB and Ministry of Post and Telecommunications (MOPT) played when they worked as the regulator before the creation of the BTRC?
5. Do you want to subscribe both BTTB and mobile phones or you just subscribe only one?
6. Do you suggest any steps that Govt. should take for the easy and quick roll out of the mobile phone sector in rural areas?
7. Do the mobile phone operators use itemized billing system? Is there any provision that the consumers can get itemized bill by making a request?
8. Was the BTRC properly resourced to adequately perform its functions? If not, how would you explain the constraints they face?
9. How would you evaluate the skills and expertise of the BTRC?
10. The public sector owned Teletalk mobile phone started its function in 2005. Before that there were no state-owned mobile phone service. Do you think, the introduction of the TBL have had any impact on the competitive landscape of the sector?

11. It is widely known that the sector did not experience much competition before 2005? Whom would you blame? The regulator, the dominance of a single operator or price collusion among the operators or lack of competitive entry?
12. How would you explain existing competition in the mobile services sector? (accessibility, price, QoS, and diversity of services)
13. Would you share of your experience about the QoS of the mobile operators that you experienced since you became a mobile user?

Set 2: Interview Questions for policy makers, public officials and experts

1. In your view, which factors motivated the government to unilaterally liberalise the mobile services in Bangladesh?
2. How was the first mobile phone licence issued? (Through open tendering or by using any other methods)? Has there been any change in licence awarding process subsequently?
3. Could you please tell me about the licence fees that were charged by the Govt/BTRC for awarding mobile phone licences?
4. Why did government allow monopoly in the sector for about 5 years?
5. Do you think that the present tax structure such as tax on SIM Card and mobile handsets is hampering development of the sector? Is there any other matter/issue that, in your opinion, hinders quick roll out of mobile phones in rural Bangladesh?
6. How many Public Switched Telephone Network (PSTN) licences have been issued to operate land-line phones? How many of them are in operation?
7. In many developing countries, there is a provision for Universal Service Fund to provide universal service to people. Does Bangladesh have a Universal Service Fund? And what policy does it have for providing universal service to people?
8. Does BTRC have any role in formulating or implementing the relevant policy on the issue of Universal Service Obligation (USO)?
9. Interconnection with the BTTB (now BTCL) is important for the development of the mobile phone sector. On what factors/technological issues, does interconnection depend? Is interconnection mandatory in Bangladesh?
10. Is there any duration of maximum peak hour?
11. Does BTTB have adequate capacity to provide interconnection to the mobile phone firms as they want? If not, how the interconnection capacity of the BTTB could be enhanced? Does BTTB (now BTCL) have any plan to enhance interconnection capacity?
12. What steps have been taken by the telecom regulator (BTRC) to increase or address the interconnection problem of BTTB/ private operators?

13. What actions have the telecom regulator taken to promote competition in the sector [as per section 30 (1) (e) of the Telecommunications Act,2001]? Do you think that the service providers are now competing in a level playing field?

14. Do the mobile phone operators use itemized billing system? Is there any provision that the consumers can get itemized bill by making a request?
15. Is there any regulatory provision to compel mobile phone operators to introduce 'Number Portability'?
16. How did competition in the mobile phone sector impact the telecom industry?
17. How does BTRC operate as an independent telecom regulator? There are some concerns among a section of people that BTRC is an extension of the public bureaucracy and it enjoys little autonomy? What is your opinion on this?
18. . How did BTRC perform on the following issues since its beginning in 2002?

    a. Issuing of licences

    b. Interconnection regime

    c. Promoting competition

    d. Tariff issues

    e. Quality issues

    f. Combating anti-competitive practices such as price collusion

    g. Complaints handling and public hearing

    h. Interventions when necessary
19. There is a view that the BTTB and MOPT was ineffective as regulators? Could you explain the reasons?
20. There is a widely held view that the BTRC has been ineffective in its operations in the early years until 2006 since establishment in 2001. Do you agree with this? Explain.
21. Do you think Bangladesh's commitment to the WTO in the telecommunications sector (in 1997) has been influenced by its unilateral liberalisation of the mobile phone sector pursued during 1989-1996?
22. Apart from unilateral liberalisation, do you think there were other factors that influenced Bangladesh in undertaking liberalisation commitments under GATS?
23. Has Bangladesh submitted revised commitments to the WTO to reflect its unilaterally liberalised measures (current state of liberalisation/status quo) fully?

Set 3: Interview Questions for Bangladesh Telecommunications Regulatory Commission (BTRC)

1. In a market economy, the regulator has a major role to play in promoting competition and ensuring level playing field. Can you briefly explain what kinds of role you have been playing in the telecommunications service sector?
2. Liberalisation and regulation aims at providing easy and quick access, cheaper, better quality service with more choices to customers. Have you as the regulator been able to ensure these? If so please explain.
3. There is a widespread complaint about the non action and ineffectiveness of the regulator till 2007. How would you evaluate this complaint?
4. Have you set QoS parameter benchmarks for the operators? If not, please explain your performance about quality issues
5. In a market economy, the regulator should be independent from the political and administrative control of the country. Do you think BTRC has been functioning independently?
   a. Issuing of licences
   b. Interconnection regime
   c. Promoting competition
   d. Tariff issues
   e. Combating anti-competitive practices such as price collusion
   f. Complaints handling and public hearing
   g. Interventions when necessary
6. Was the BTRC properly resourced to adequately perform its functions? If not, how would you explain the constraints you face?
7. How would you evaluate the skills of the BTRC?
8. There is no competition policy and authority in the country. Does Bangladesh Telecommunication Act 2001 have provisions to handle competition related issues? How did you contribute in promoting competition in the sector?
9. Do you think provisions on Significant Market Player (SMP) should be introduced and enforced to ensure a level playing field for all operators?
10. Are there any other issues you would like to comment for the benefit of the collective good?

Set 4 Interview Questions for Mobile Phone Firms

1. In your view, what are the factors that facilitated unilateral liberalisation of FDI in the mobile phone services in Bangladesh?
2. What impacts did liberalisation have on accessibility pricing, quality of service and diversity of services affecting consumers benefit?
3. How did liberalisation of the mobile sector impact the telecom industry?

4. In this sector, do you see a distinction between liberalisation and competition and if so, how do you describe and distinguish them?
5. Has liberalisation brought competition in the sector? If so from what stage of liberalisation was the presence of competition felt?
6. What actions have the telecommunications regulator taken to promote competition in the sector?
7. Do you face any interconnection problems with the BTTB/BTCL? Is interconnection cost based?
8. Do you find any problems in the existing frequency allocation practices of the BTRC?
9. Do you suggest introduction of 'Mobile Number Portability' (MNP) to enhance competition in the sector?
10. Perhaps you are aware that mobile phone tariffs remained very high and unchanged during 1997 to 2004 despite the presence of multiple operators. Why did mobile tariff remain unchanged during this period? Was it because of regulatory inaction and ineffectiveness (such as no price regulation) or implicit price collusion among the operators?
11. Do you think any operator in Bangladesh to be declared as a Significant Market Player (SMP)?
12. Do you think Bangladesh should introduce asymmetrical obligations (that are imposed on specific market actors but not on others) for SMP? to place new entrants in a level playing field until effective competition is developed?
13. Do you think the telecommunications regulator was biased and captured or influenced by the firms that were supposed to be regulated?
14. Do you think that the mobile phone services sector is experiencing 'excessive competition'? What are the implications of excessive competition?

Appendix B Three Research Questions and Subsidiary Questions

Research question	Subsidiary questions	Interviewees/participants
1. What factors are perceived to have contributed towards unilateral liberalisation of the mobile phone sector in Bangladesh?	1. In your view, which factors motivated the government to unilaterally open up/liberalise the mobile phone sector in 1989 and afterwards? 2. How would you describe the process which led to the decision? What were the steps in the process of which you are aware? Which person or institution took the first step and each significant further step? 3. Has there been any change in these factors subsequently? i.e. has there been any new factors subsequent to 1989 that contributed to more open up the sector? 4. How was the first mobile phone license issued? Has there been any change in license awarding process subsequently? If so, what changes?	Policy makers , public officials, private sector representatives, BTRC, trade and WTO experts, telecom analysts and NGO officials, For subsidiary question no. 4, officials from the BTRC were interviewed
2. What impact did the unilateral liberalisation have on accessibility, pricing, QoS and diversity of services in the mobile phone sector?	What impacts did liberalisation have on pricing, quality of service, accessibility, diversity and any other factors affecting consumers? How did liberalisation of the mobile sector impact the telecom industry? In this sector, do you see a	Mobile phone users (both household and business users) and industry analysts/experts were interviewed (for subsidiary questions 1, 3, 4 and 5) Mobile phone firms including state-owned BTTB officials (for subsidiary question 2, 3 4, 5,6,7,8,9)

Research question	Subsidiary questions	Interviewees/participants
	distinction between liberalisation and competition and if so, how do you describe and distinguish them?	BTRC officials (for subsidiary questions 4, 5,6, 7,8 ,9)
	Has liberalisation brought competition in the sector? If so from what stage of liberalisation was the presence of competition felt?	Private sector representatives, telecommunications analysts and public officials
	What actions have the telecommunications regulator taken to promote competition in the sector?	
	To what extent is the number of licences to provide mobile phone services liberalised? How it regulated and what is are the criteria for the issue of licences? Are licences for a limited number of years and if so, what are the criteria for re-issue?	
	Do you think that the present tax structure such as tax on SIM Card and mobile handsets is affecting development of the sector? If so, in what way?	
	Do you think that the service providers are now competing on a level playing field? If not, in what way and why?	
	Were there interconnection problems affecting completion in the sector and if so, what were those problems? What is the current state of interconnectivity?	

Research question	Subsidiary questions	Interviewees/participants
	If liberalisation did not bring attendant benefits, who will you blame for? Regulator, MPT, or no one. Have you observed any price coordination among the operators? Do you think the telecommunications regulator was biased and captured or influenced by the firms that were supposed to be regulated?	
3. How did unilateral liberalisation influence Bangladesh's undertaking of binding liberalisation commitments (i.e., submission of Schedule of Commitments) in the telecommunications sector under the GATS of the WTO?	In what way, if any, has Bangladesh's commitment to the WTO in the telecommunications sector been influenced by its unilateral liberalisation of the mobile phone sector pursued between 1989 and 1996? Has Bangladesh submitted revised commitments to the WTO to fully reflect its unilaterally liberalised measures (current state of liberalisation/status quo)? In your opinion, what relationship, if any is there between unilateral liberalisation by countries such as Bangladesh and multilateral liberalisation commitment? Do you think that UL play a role in influencing a WTO member country to undertake liberalisation commitments under WTO GATS? Or Does the existence of unilateral	Ministry of Commerce (WTO cell) officials Permanent representative of Bangladesh to Geneva Trade Mission Trade and WTO experts/academics Bangladesh Tariff Commission and Bangladesh Foreign Trade Institute Private Sector Representatives

Research question	Subsidiary questions	Interviewees/participants
	liberalisation make multilateral liberalisation more or less likely? What is the argument supporting that view? Apart from unilateral liberalisation, do you think there were other factors that influenced Bangladesh in undertaking liberalisation commitments under GATS of the WTO?	

Appendix C: Five Sets of Explanatory Statements

MONASH University

Date …… , 2008

EXPLANATORY STATEMENT- Mobile phone firms

Title: Unilateral Liberalisation of Services: A Case Study of Mobile Phone Sector in Bangladesh

This information sheet is for you to keep

Mr…

Dear

My name is **Mohammad Abu Yusuf**. I am conducting a research with **Dr. Quamrul Alam & Dr. Ken Coghill,** Senior lecturer and Associate professor respectively in the Department of Management Monash University, Australia towards a PhD Degree. I will be writing a thesis of about 100,000 words to fulfil examination requirement of the PhD degree. Monash University has funded me (MIPRS &MGS Scholarships) to conduct the research.

I am writing to you requesting your participation in the research. I have collected your and your organization's names and contact details from your official web site. I would like to interview you or your nominated official regarding mobile phone sector liberalisation in Bangladesh. I am approaching you because of your personal expertise and experience in the telecom sector in Bangladesh and other countries.

The aim/purpose of the research

The aim of this study is to examine the determinants of unilateral liberalisation of the mobile phone sector in Bangladesh and its impact on the sector. This research also aims at identifying how unilateral liberalisation influenced Bangladesh's commitment (in the sector) to the WTO. The findings of this study will be a timely and significant to understand the impact of unilateral liberalisation of the mobile phone sector and its role in shaping Bangladesh's liberalisation position in the WTO. These impacts will encompass issues such as accessibility to telecom service, affordability, and diversity of services, quality, and the problems operators face. It will also assist to explain the role

of the telecom regulator (Bangladesh Telecom Regulatory Commission-BTRC) in ensuring competition in the sector.

Possible benefits

I believe this study will identify the determinants and impacts of telecom liberalisation, the role of institutional mechanism to facilitate competition and the bottlenecks prevalent in the sector. The study will recommend an operational framework highlighting the role of the regulatory body to create a congenial atmosphere for competition and investment. Through this research, the expectation of the private sector from the regulatory and legal framework of the country can also be delineated. This study thus, may help the government of Bangladesh to evaluate the existing regulatory and legal mechanism for further improvement. The findings will, also provide baseline information for further research.

What does the research involve?

The study involves semi-structured face to face interviews. The interview will be recorded (hand notes and or audio taped). The research seeks only to get insights of the policy makers and senior managers' experiences.

How much time will the research take?

The interview may last about 30-35 minutes and can be conducted, during August-October, 2008 at a place convenient to both of us.

Inconvenience/discomfort

During face -to-face interview, no personal/financial information will be asked for. Therefore, it is very unlikely to cause stress, inconvenience or discomfort. I will take every possible step to avoid any undue minor inconveniences.

Payment

No payment or reward will be offered, financial or otherwise, to participate in the interview.

Can I withdraw from the research?

Taking part in this research is voluntary and you are under no obligation to consent to participation. However, if you do consent to participate, you may withdraw prior to having approved the interview transcript (submission of data).

Confidentiality

The collected data will only be used by the researcher for academic purposes. Your name/identity or position will not be referred or disclosed in any way while publishing articles or research papers using collected data.

Storage of data

Storage of the data collected will adhere to the University regulations and kept on University premises in a locked cupboard/filing cabinet for 5 years. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report.

If you agree to participate, please sign the attached consent form with your contact details or back by email to mayus1@student.monash.edu.au or contact me on telephone (613) 99034662; fax (613) 9903 2718 or contact Dr. Quamrul Alam, Senior Lecturer on (613) 99031030 ;fax (613) 99032718

Results

If you would like to be informed of the aggregate research findings, please contact me on +613 99034662 or fax (613) 99032718 or email to mayus1@student.monash.edu.au or contact Dr. Quamrul Alam, Senior Lecturer on (613) 99031030; fax (613) 99032718. The

If you would like to contact the **researcher** about any aspect of this study, please contact the main supervisor:	If you have a **complaint** concerning the manner in which this research Project CF08/1370-2008000668 is being conducted, please contact:
Name: Department of Management Faculty of Business and Economics Monash University, Caulfield Campus N Building 27 Sir John Monash Drive, Caulfield East Victoria, 3145, Australia Tel: +613 9903 1030; Fax: +613 9903 2718 Email: quamrul.alam@buseco.monash.edu.au	Human Ethics Office Standing Committee on Ethics in Research Involving Humans(SCERH) Building 3E, Room 111 Monash University, VIC 3800, Australia Phone: +613 9905 5490; Fax: +613 9905 1420 Email: scerh@adm.monash.edu.au

Thank you in anticipation of your support.

Yours sincerely,

Signed: Mohammad Abu Yusuf

MONASH University

Date …… , 2008

EXPLANATORY STATEMENT- Mobile Phone Service Users

Title: Unilateral Liberalisation of Services: A Case Study of Mobile Phone Sector in Bangladesh

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I am approaching you to know your perspectives/experience about the impact of liberalisation on accessibility, affordability, quality of service and diversity of services. As a mobile phone user, you are the most important stakeholder in this industry and your experience as a customer will give me important feedback on the telecommunications services as well as the role of private sector participation (i.e. liberalisation) on the competitive landscape of the sector. I, therefore, cordially invite you to participate in this research and assist me enhance the quality of my research findings.

You have been reached after you desired your expression of interest in response to the newspaper invitation seeking participants from my end. In this research, information will also be collected from the mobile phone service providers, policy makers, the Bangladesh Telecommunications Regulatory Commission, Industry experts, trade experts, business leaders and NGO representatives.

Possible benefits

I believe this study will identify the determinants and impacts of telecom liberalisation, the role of institutional mechanism to facilitate competition and the bottlenecks prevalent in the sector. The study will recommend an operational framework highlighting the role of the regulatory body to create a congenial atmosphere for competition and investment. Through this research, the expectation of the private sector from the regulatory and legal framework of the country can also be delineated. This study thus, may help the government of Bangladesh to evaluate the existing regulatory and legal mechanism for further improvement. The findings will, also provide baseline information for further research.

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Thank you.

Signed: Mohammad Abu Yusuf

MONASH University

Date …… , 2008

EXPLANATORY STATEMENT- Telecom Regulator

Title: Unilateral Liberalisation of Services: A Case Study of Mobile Phone Sector in Bangladesh

This information sheet is for you to keep

Mr…

Dear

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Thank you in anticipation of your support.

Yours sincerely,

Signed: Mohammad Abu Yusuf

Date …… , 2008

MONASH University

EXPLANATORY STATEMENT- Telecommunications and trade experts

Title: Unilateral Liberalisation of Services: A Case Study of Mobile Phone Sector in Bangladesh

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I am writing to you requesting your participation in the research. I am approaching you because of your expertise and experience in the areas of trade, WTO and telecom sector in Bangladesh. Your role as an academic and a researcher on trade, WTO and telecom issues will be immensely beneficial for me to understand the dynamics of mobile sector liberalisation, the factors that lead to or hampers competitive outcome in the telecom sector and how unilateral liberalisation influenced Bangladesh in undertaking GATS commitments. Hence your support and contributions to this research will surely enhance the quality of research findings. I therefore, cordially invite you to participate in this research.

The aim/purpose of the research

The aim of this study is to examine the determinants of unilateral liberalisation of the mobile phone sector in Bangladesh and its impact on the sector. This research also aims at identifying how unilateral liberalisation influenced Bangladesh's commitment (in the

sector) to the WTO. The findings of this study will be a timely and significant to understand the impact of unilateral liberalisation of the mobile phone sector and its role in shaping Bangladesh's liberalisation position in the WTO. These impacts will encompass issues such as accessibility to telecom service, affordability, and diversity of services, quality, and the problems operators face. It will also assist to explain the role of the telecom regulator (Bangladesh Telecom Regulatory Commission-BTRC) in ensuring competition in the sector.

Possible benefits

I believe this study will identify the determinants and impacts of telecom liberalisation, the role of institutional mechanism to facilitate competition and the bottlenecks prevalent in the sector. The study will recommend an operational framework highlighting the role of the regulatory body to create a congenial atmosphere for competition and investment. Through this research, the expectation of the private sector from the regulatory and legal framework of the country can also be delineated. This study thus, may help the government of Bangladesh to evaluate the existing regulatory and legal mechanism for further improvement. The findings will, also provide baseline information for further research.

What does the research involve?

The study involves semi-structured face to face interviews. The interview will be recorded (hand notes and or audio taped). The research seeks only to get insights of the policy makers and senior managers' experiences.

How much time will the research take?

The interview may last about 30-35 minutes and can be conducted, during August-October, 2008 at a place convenient to both of us.

Inconvenience/discomfort

During face -to-face interview, no personal/financial information will be asked for. Therefore, it is very unlikely to cause stress, inconvenience or discomfort. I will take every possible step to avoid any undue minor inconveniences.

Payment

No payment or reward will be offered, financial or otherwise, to participate in the interview.

Can I withdraw from the research?

Taking part in this research is voluntary and you are under no obligation to consent to participation. However, if you do consent to participate, you may withdraw prior to having approved the interview transcript (submission of data).

Confidentiality

The collected data will only be used by the researcher for academic purposes. Your name/identity or position will not be referred or disclosed in any way while publishing articles or research papers using collected data.

Storage of data

Storage of the data collected will adhere to the University regulations and kept on University premises in a locked cupboard/filing cabinet for 5 years. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report.

If you agree to participate, please sign the attached consent form with your contact details or back by email to mayus1@student.monash.edu.au or contact me on telephone (613) 99034662; fax (613) 9903 2718 or contact Dr. Quamrul Alam, Senior Lecturer on (613) 99031030 ;fax (613) 99032718

Results

If you would like to be informed of the aggregate research findings, please contact me on +613 99034662 or fax (613) 99032718 or email to mayus1@student.monash.edu.au or contact Dr. Quamrul Alam, Senior Lecturer on (613) 99031030; fax (613) 99032718.

If you would like to contact the **researcher** about any aspect of this study, please contact the main supervisor:	If you have a **complaint** concerning the manner in which this research CF08/1370-2008000668 is being conducted, please contact:
Name: Department of Management Faculty of Business and Economics Monash University, Caulfield Campus N Building 27 Sir John Monash Drive, Caulfield East Victoria, 3145, Australia Tel: +613 9903 1030; Fax: +613 9903 2718 Email: quamrul.alam@buseco.monash.edu.au	Human Ethics Office Standing Committee on Ethics in Research Involving Humans(SCERH) Building 3E, Room 111 Monash University, VIC 3800, Australia Phone: +613 9905 5490; Fax: +613 9905 1420 Email: scerh@adm.monash.edu.au

Thank you in anticipation of your support.

Yours sincerely,

Signed: Mohammad Abu Yusuf

Appendix D: Consent form for Interview participants

Consent Form

Title: Unilateral liberalisation of Services: A Case Study of the Mobile Phone Sector in Bangladesh

NOTE: This consent form will remain with the Monash University researcher for their records.

I agree to take part in Monash University research project specified above. I have had the project explained to me, and I have read the Explanatory Statement, which I keep for my records. I understand that agreeing to take part means that I am willing to:

1. I agree to be interviewed by the researcher ☐ Yes ☐ No

2. I agree to allow the interview to be recorded (hand notes/audiotap ☐ Y ☐ N

3. I agree to make myself available for a further interview if requir ☐ Y ☐ N

I understand that I will be given a transcript of data concerning me for my approval before it is included in the write up of the research.

I understand that my participation is voluntary, that I can choose not to participate in part or all of the project, and that I can withdraw at any stage of the project, prior to having approved the interview transcript (submission of data), without being penalised or disadvantaged in any way.

I understand that any data that the researcher extracts from the interview for use in reports or published findings will not, under any circumstances, contain names or identifying characteristics.

Participant's name … … …

Signature …….

Date …….

Appendix E Ethics Approval Letter

MONASH University

Standing Committee on Ethics in Research Involving Humans (SCERH)
Research Office

Human Ethics Certificate of Approval

Date:	**25-June-2008**	
Project Number:	**CF08/1370 - 2008000668**	
Project Title:	**Unilateral liberalisation of services: A case study of mobile phone sector in Bangladesh**	
Chief Investigator:	**Dr Quamrul Alam**	
Approved:	**From: 25-June-2008**	**To: 25-June-2013**

Terms of approval

1. The Chief investigator is responsible for ensuring that permission letters are obtained and a copy forwarded to SCERH before any data collection can occur at the specified organisation. **Failure to provide permission letters to SCERH before data collection commences is in breach of the National Statement on Ethical Conduct in Human Research and the Australian Code for the Responsible Conduct of Research.**
2. Approval is only valid whilst you hold a position at Monash University.
3. It is the responsibility of the Chief Investigator to ensure that all investigators are aware of the terms of approval and to ensure the project is conducted as approved by SCERH.
4. You should notify SCERH immediately of any serious or unexpected adverse effects on participants or unforeseen events affecting the ethical acceptability of the project.
5. The Explanatory Statement must be on Monash University letterhead and the Monash University complaints clause must contain your project number.
6. **Amendments to the approved project:** Requires the submission of a Request for Amendment form to SCERH and must not begin without written approval from SCERH. Substantial variations may require a new application.
7. **Future correspondence:** Please quote the project number and project title above in any further correspondence.
8. **Annual reports:** Continued approval of this project is dependent on the submission of an Annual Report. This is determined by the date of your letter of approval.
9. **Final report:** A Final Report should be provided at the conclusion of the project. SCERH should be notified if the project is discontinued before the expected date of completion.
10. **Monitoring:** Projects may be subject to an audit or any other form of monitoring by SCERH at any time.
11. **Retention and storage of data:** The Chief Investigator is responsible for the storage and retention of original data pertaining to a project for a minimum period of five years.

Professor Ben Canny
Chair, SCERH

Cc: Assoc Prof Kenneth Alastair Coghill;Mr Mohammad Abu Yusuf

Postal – Monash University, Vic 3800, Australia
Building 3E, Room 111, Clayton Campus, Wellington Road, Clayton
Telephone +61 3 9905 5490 Facsimile +61 3 9905 1420
Email scerh@adm.monash.edu.au www.monash.edu/research/ethics/human/index/html
ABN 12 377 614 012 CRICOS Provider #00008C

Appendix F: Interviewee details (other stakeholders)

Interviewee number	Name and designation of interviewees	Date of interview
1	Former minister, MOPT	19/08/2008
2	Treasurer, Transparency International Bangladesh	11/09/2008
3	Former Commerce Secretary	07/10/2008
4	Former-chairman, BTTB	25/8/2008
5	Permanent Rep to Geneva mission (ex)	Email interview
6	Executive director, Centre for policy dialogue	19/10/2008
7	Chairman, Bangladesh Telecom Regulatory Commission	25/8/2008
8	Senior Consultant-1, BTRC	27/10/2008
9	FBCCI President (Ex)	07/09/2008
10	Board Member, Teletalk Bangladesh Ltd	24/09/2008
11	Industry expert	17/9/2008
12	Director General, WTO Cell, MoC	10/9/2008
13	Executive Director, D-Net , a research organisation	20/10/2008
14	A telecom analyst in a Daily Newspaper	26/10/2008
15	Adviser, FBCCI and a trade expert	29/10/2008
16	Managing Director (formerly) Grameen Telecom Ltd	11/03/2009
17	NGO representative	20/10/2008
18	Chairman, Innovators / Trade expert	07/10/2008
19	Deputy Director-1, WTO cell, MoC	14/10/2008
20	Director, Bangladesh Railway	16/10/2008
21	Private sector representative and a mobile user	21/10/2008
22	Deputy Director, Board of Investment	22/10/2008
23	Director, Railway Audit Directorate	28/10/2008
24	Joint Chief, Bangladesh Tariff Commission & a trade expert	21/10/2008
25	Senior Consultant-2 ,BTRC	01/09/2010
26	Trade Expert and Professor of Economics	01/11/2008
27	Divisional Engineer, Bangladesh Telecom Company Ltd	27/10/2008
28	General Manager, BTCL	19/10/2008
29	Deputy Director -2 , WTO cell, MoC	14/10/2008
30	Civil Society Member (former NBR member, also a user)	25/08/2008
31	Industry (Regulatory) expert and a mobile phone user	04/01/2010
32	Independent telecom analyst-2 (a private sector rep)	02/01/2010