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**THE PERCEIVED IMPACTS OF
WTO (WORLD TRADE ORGANIZATION)
ON MAJOR TELECOMMUNICATIONS
COMPANIES: (EMPIRICAL INVESTIGATION)**

**Submitted by:
Maha Khalifa Al-Zayani**

854731

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Supervisor : Dr. Saad Matawa *Saad Matawa*

Readers : Dr. Hameeda Jassim

Dr. Jassim Abdulla

ABSTRACT

This thesis attempts to study the perceived impacts of World Trade Organization (WTO) on telecom companies from four selected key dimensions in telecom industry, these dimensions are: international telephone revenue, cost structure, operational structure, and customers' benefits. To provide an overview, changes in telecom industry with regard to competition and industry's pressures, along with World Trade Organization principles, functions and structure are discussed first.

To identify impacts of WTO, this thesis uses multiple-case-strategy approach to analyze views of respective officials of five major selected telecom companies. In the empirical section, financial impacts of WTO on five selected companies are quantified for the first two identified dimensions: international telephone revenue and cost structure.

After thorough analysis of five case studies, the following are the main outcomes emerging:

- International telephone revenue represents the main revenue source for telecom companies. Revenue from this main service will decline as a result of change in market share that major companies will lose for their new and current competitors. In addition to market share loss, telecom companies need to cut their current rates in order to be competitive.
- Reforming international accounting (settlement) rates that current exist among telecom companies become a necessity. Therefore, it is expected a new cost-based, transparent and non-discriminatory accounting regime will be applied along with implementation of WTO principles.
- Staff cost accounts for high percentage of operating cost, thus companies need to reduce this type of cost in order to increase their efficiency and improve their profitability in order to be able to compete in open market access which is required by WTO.
- Telecom companies have to maintain high-cost and advanced infrastructure in order to provide telecommunication services. As a result of the implementation of WTO principles, telecom companies will increase annual capital expenditure to be invested in enhancing current networks and/or building new networks to cater for new services and new areas.
- Telecom companies will seek to have more alliances with other companies to strengthen their market position in competitive environment, thus current operational structures of most telecom companies will be changed.
- The implementation of WTO principles will encourage customers to ask for more benefits to be given to them in form of: low prices, good quality of service, wide range of services to suit their diverse needs.

Bearing in mind the outcomes reached, in the last section of this thesis some recommendations are made for telecom companies to take advantage of the new changes in telecom industry and to minimize the perceived adverse impacts that will be resulted from the implementation of WTO requirements.

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LIST OF ABBREVIATIONS

AT&T	American Telephone and Telegraph company
BDT	Telecommunications Development Bureau
DPS	Dividends Per Share
EPS	Earning Per Share
EU	European Union
FCC	Federal Communication Commission
GATS	General Agreements on Trade on Services
GATT	General Agreements on Trade and Tariffs
GDP	Gross Domestic Product
ISDN	Integrated Services Digital Network
ITU	International Telecommunication Union
MFN	Most-Favored-Nations
NGBT	Negotiation Group on Basic Telecommunications
OECD	Organization for Economic and Cooperation Development
SDR	Special Drawing Rights
TELECO	Telecommunications Company
WTO	World Trade Organization
WWW	WorldWide Web sites

monopolistic and nationally regulated operations to one in which trade barriers are largely discarded will depend in part on establishing a strong dialogue between trade experts and those in the field of telecommunications.

1.2 Purpose of the Thesis

Considering the latest progress made in WTO (World Trade Organization) to put telecommunications in trade framework, it worth conducting an empirical study to find out the perceived impacts of WTO's implementation on major telecommunications companies. The scope of this topic is too wide to be covered in one thesis, therefor this study will concentrate only on key dimensions of telecom operations that are likely to be affected by the WTO's implementation, these dimensions are:

- I. Telecom's international telephony revenue
- II. Companies' cost structure
- III. Companies' operations structure
- IV. Telecom customers' benefits

1.3 Thesis Problem

In view of nature of telecommunications industry and complication of its operations resulted from technological developments and dynamic change in market behavior, putting telecommunication in trade regime to apply the new agreed principles of WTO in this industry, will have a major impact on many dimensions of telecommunication operations.

Upto to this stage, financial impact of such change have not been studied yet by any researcher or economic/telecommunications institute. In researcher opinion, it is important to address the possible effects WTO's principles on telecom companies.

1.4 Research Questions

Formulating a series of research questions can add clarity to the conclusions that needs to be drawn. It adds clarity to the objectives of the research. Questions of thesis are unproved proposition that need to be empirically compared with actual findings of thesis. The question of this thesis is:

“ Would the implementation of WTO’s requirements by telecommunications companies is perceived to have major effects on key dimensions:

- *International telephone revenue*
- *Cost structure*
- *Operation structure*
- *Customers’ benefits “*

To empirically compare this unproved statement and to have clear measure of WTO’s impacts on the above selected dimensions, main variables that composed each dimension are identified based on researcher working experience in the field of telecommunications, and notion constructed from reading many articles on the topic as well as in depth discussion with expert people in this field.

International Telephone Revenue:

- *International accounting rates* : is the settlement rates used by international telecommunication companies to compensate each other for utilizing other networks. Example: if there is an international call originated in Bahrain and terminated in USA, Bahrain Telecommunication Company (Batelco) has to pay a rate per minute to the American Telecommunication Company (AT&T) as a compensation for utilizing their network to terminate traffic in USA; vice versa, if there is a call made in USA to Bahrain, AT&T has to pay a rate to Batelco.

- *Collection rates* : is the fees that each telecommunication companies charges its customers for making international telephone calls.
- *Market share* : is the portion of the market that telecommunications company serves.

Cost Structure:

- *Advertising expenditure* : cost spent to promote company services
- *Network cost* : expenditure cost made by telecommunication companies to build their infrastructure, such as exchanges, cables cost.
- *Staff costs* : payment made to staff who are operating the company.

Change in operations structure motives:

Telecommunication companies are seeking different motives for changing its operational structure, the main ones are:

- Increase in market share
- Decrease cost through synergy
- Transfer of technology and related skills
- Market access

Customers' benefits:

Telecommunications customers are looking for the following benefits to be passed to them:

- Low prices
- High service quality
- Quick and flexible support services
- Wide range of services

1.5 Methodology

To achieve purpose of this research *“to find out the perceived financial impacts of WTO on major telecom companies”* multiple-case studies approach is the most appropriate research strategy to be used. This can be attributed to the fact that all three conditions of applying case study as research strategy are available in this thesis, these conditions are summarized by Nothcot Dyr1 (1992) as follows:

“ A ‘how’ or ‘why’ question is being asked about a contemporary set of events, over which the investigator has little or no control”.

Ten developed telecom companies are selected, on the following bases:

- Operating in different regions of the world in order to have a wide coverage of different markets.
- Availability of company information and annual reports.
- Availability of direct contacts with respondents to facilitate and speed up response.

Names of the selected companies appear in Appendix-A

1.6 Data Source

Various data sources have been examined and used to complete this thesis. Data sources can be classified as primary and secondary and explained below.

1.6.1 Primary Sources

Primary data is obtained using a structured close-ended questionnaire. This questionnaire is divided into seven parts:

Part 1: Introduction to give brief backgournd about the topic

Part 2: Purpose of the questionnaire

Part 3: Questions get general information about respondents

Part 4: Questions related to WTO and Telcom international telephone revenue

Part 5: Questions related to WTO and Telecom cost structure

Part 6: Questions related to WTO and Telecom operation structure

Part 7: Questions related to WTO and Telecom consumers' benefits

Respondents are offered multi-choices to facilitate the completion of the questionnaire and to ensure prompt response. Questionnaires are sent by fax to respective officials of the ten selected telecom companies. Furthermore, some telephone calls are made to ensure that questionnaires were received by the right person or department, and to follow up for response. Target and actual response rate is 50%, thus five cases are analyzed for this research.

As respondents were promised that their views would remain confidential and anonymous throughout the preparation and after the completion of the thesis, the first five completely answered questionnaires analyzed without referring to the original name of companies. Hence, substituted names were used: Teleco A, Teleco B Teleco E.

1.6.2 Secondary Sources

To review the related literature and to ensure that the important facts are taken into account, these sources are used:

- Internet searching in WorldWide Web Sites (WWW)
- Companies Annual and Midterm Reports
- Financial & Business Periodicals
- WTO and ITU publications
- Telecom conference papers

1.7 Data Analysis

In each case study, financial position of company was analyzed using different financial ratios. Based on respondents' responses, perceived financial impacts of WTO on each dimension is identified under three scenarios (low,

average and high) by using sensitivity analysis. In the finding discussion part, the previously developed question of thesis are used as a template with which the empirical results of case study were compared.

Finally based upon five cases analysis and findings, summary and conclusions are drawn up and generalizations are made.

1.8 Research Limitations

Since the case study approach is used in this thesis, the following are the main limitations of the study:

1. The result of the study can not be generalized to other cases unless they are similar to the selected cases in this thesis.
2. Statistical tests can not be performed as the number of cases used are only five.
3. The result of this study can not be compared with others studies unless the same methodology is applied.

1.9 Study Outline

This thesis consists of six chapters, the first one has covered the introduction part to define the topic and state the problem and questions of the study. In addition to that, brief overview of methodology has been given. The remaining chapters are as follows:

Chapter Two - *Overview of Telecom Industry and WTO* : The first part of chapter gives an overview of development and phases of competition of telecom industry. Further more, it covers recent pressures placed in that industry. In the second part, WTO's formulation, functions, principles and how it differs from GATT are discussed in details.

Chapter Three - *Literature Review* : This chapter demonstrates the related literature concerning placing telecom industry on trade framework, size of telecom industry, and progress made in market liberalization by WTO's members.

Chapter Four - *Methodology* : This chapter explains in details the procedures used in each stage of the research. It covers case study strategy and why it used in this thesis. Close overview of research question of thesis and data sources to give details about questionnaire is also discussed in this chapter. Moreover, a full hypothetical case is demonstrated to show how case studies are analyzed based on information obtained from respondents.

Chapter Five - *Case Studies* : Five selected case studies are presented in this chapter. In each case study, company profile, services and current financial position are discussed. Then impacts of WTO in each dimension is calculated and discussed based upon views of respondents.

Chapter Six - *Summary, Conclusion and Recommendations*: Based upon the findings of chapter five, conclusion and some recommendations are made. Furthermore, directions for further analysis is discussed.

CHAPTER TWO

OVERVIEW OF TELECOM INDUSTRY

&

WORLD TRADE ORGANIZATION

To have a well understanding of perceived impacts of WTO on telecom industry, it is essential to have an overview of industry and WTO itself. Therefore this chapter consists of two parts, the first part is to present an overview of telecom industry as well as the latest developments with regard market competition and pressures. The second part is devoted to define WTO and their basic principles, functions and structure.

2.1 Overview of Telecom Industry

Traditionally throughout the world, telecommunications services were provided in each country by one monopoly company such as AT&T in the US, British Telecom in the UK, and NTT in Japan. Those companies were almost always owned by the government and operated as state agencies, often as part of postal services.

Beginning in the 1980s and continuing into the 1990s, the telecommunications industry in almost all countries has experienced privatization, such as British Telecom, or at least some degree of corporatization such as France Telecom. The justifications for privatization/corporatization have usually been to :

- Improve efficiency and increase service levels, and
- Facilitate raising the capital necessary to modernize and/or build out the network and the associated operating support systems.

In most countries, privatization/corporatization of the major companies has been accompanied by the increase in competition. Generally, the competitions has been in specific market segments such as cellular (Mobile), long distance, or value-added services. While the specific socio-political philosophy behind the introduction of competition varies from country to country, the common themes include:

- Competition accelerates the introduction of new services and ensure that prices contain no monopoly abnormal components.
- Technology favors easy entry by well-financed competitors which have not vested interest in, or an asset base composed on, obsolescent technology.
- More capital will be attracted to and deployed in a competitive telecommunications market then to a state-funded monopoly company.
- The overall quality of life in the society requires a modern, capital-intensive telecommunications infrastructure which can best be achieved in an environment in which competitors attempt to achieve sustainable advantage through their network capabilities

Regardless of the logic behind the decision, the introduction of competition has significant implications on the structure, operations, and profitability of the dominant former monopoly company. In fact, certain common patterns Worldwide emerge in the transition from monopoly to competition as major companies struggle to adjust (Kraemer Jeosph, 1994).

Currently competition in Telecom industry is no longer exclusively a domestic operation. Certain major companies such as AT&T, British Telecom, and Cable Wireless have proclaimed a corporate vision which requires them to become leaders in the world market for telecommunications services. The key to global leadership is the provision of a broad range of services to the world's multinational corporations regardless of the home country of such cooperation,

or national borders. This global competition between the major companies will penetrate into all the national markets where multinational corporations have operations. As part of the quest for global leadership, companies will create alliances with other carriers and/or have equity investments in foreign carriers and/or own and operate foreign network nodes (Kraemer Jeosph, 1994).

2.1.1 The Phases of Competition

There are four phases of competition in Telecom industry, as defined by Kraemer Joseph (1994):

Phase 1 : Monopoly (e.g. Germany)

Phase 2 : Emerging competition (e.g. Singapore)

Phase 3 : Widespread competition (e.g. US and UK)

Phase 4 : Telecom 2000 “Information Age”

The transitional phases take place as major companies move from monopoly or near monopoly to widespread competition. The time available to management to complete the transition is decreasing, the transition took 15 years in the U.S and ten in the U.K but will take only half a decade in countries like Australia, which have introduced competition in the early 1990s. The management of major companies which still maintain a monopoly or near monopoly market share has the opportunity to learn from what has occurred and is occurring in other countries, but the time available to understand and address the lessons learned has been compressed significantly.

The fourth phase, Telecom 2000 “information age”, cannot be foreseen with the clarity of the first three phases. However, in the Telecom 2000 period, the current conventional boundaries between telephony, video, radio and television broadcasting, cable television, and cellular/wireless distribution and transmission systems are most likely to disappear. The parent industries involved will have converged along with the entertainment, information

services, and software industries into a “war-of-all-against-all” competitive environment. To even begin to think about playing successfully in the intensively competitive information age, major companies have to transition from a monopoly or near monopoly environment without giving up significant market share in the various segments of their core telephony business to widespread competition and Telcom 2000 phases (Kraemer Jeosph, 1994).

2.1.2 New Pressures in Telecom Industry

While Public Telecommunications Operators across the world find themselves at different stages of development, both in terms of the range of services they are able to offer and percentage of the population served which is able to access those services, all face similar pressure and ultimately the same dilemma:

- Telcom companies face growing pressures from regulators and competitors to bring tariff structures closer into line with the actual costs of providing the service. The trend towards rebalancing tariffs and eliminating cross-subsidies between profitable and loss-making services which is evident in the OECD (Organization for Economic Cooperation and Development) countries is certain to continue and to be repeated throughout the world.
- The long-term marginal unit costs of telecommunications switching and transmission are declining to approach towards zero as new capacity becomes available and as new techniques enable higher functionality to be squeezed out of existing capacity.

With prices moving towards costs and costs declining fast and approaching zero, the telecom companies face a major dilemma: where will their future revenue streams should come from.

In the past, it has been possible to regulate supply and demand so that the prices of the products and services on offer remain at a level which is sufficient to sustain profits. In industries with a relatively small number of players and high barriers to entry, for example the car industry, it is possible to do this by closing older or inefficient factories and by offering new products with a higher value-added. Traditionally it was possible to do this in the telecommunications industry too. But now supply-side management techniques are breaking down:

- Many countries are abandoning monopolistic supply structures and are licensing new infrastructure providers. Such new market entrants have little interest in amortizing existing network capacity given that new network can be constructed, owned and operated at a fraction of the price charged by the dominant telecom companies.
- Even where infrastructure monopolies still prevail, service monopolies are breaking down, especially in the area of capacity re-sale. The growth of the internet and spread of illegal international services provide evidence of this. Where a monopolistic operator in one country charges too high a price for network capacity, it is often possible to bypass that country by hubbing traffic via a third country.
- As regulatory barriers to entry fall, so too do technical and financial barriers. For new small entrants, it is possible to set up cheap and illegal businesses by using computer workstation, some routing software and the rental of a few lines. Such new market entrants exploit the fact that most major telecom companies still have tariff structures which are far from being cost-based.
- International transmission capacity, both via satellite and via cable, has traditionally been supplied by consortia of operators who have given

themselves a double mark-up, firstly as capacity owners and secondly as capacity purchasers and providers. This double mark-up system has maintained capacity prices at a relatively high level to end-users. But now providers of international capacity are increasingly becoming direct sellers of capacity. It remains to be seen whether traditional practices of leaving capacity unutilized will continue once infrastructure providers begin to cut out service providers and sell direct to end-users.

The declining ability of operators to manage supply is coinciding with slower than expected growth in demand, at least for basic telecommunications services which still provide more than 80 per cent of the revenues of the main companies. Evidence for this can be seen in the slowing down of the rate of growth of international telephone traffic, after averaging more than 15 per cent per year growth in traffic throughout the 1980s, has now declined every year since 1990. Growth in traffic as a whole is not slowing down. Rather, the percentage of it traveling over the public switched network is falling as traffic is diverted onto private networks or onto the Internet where tariffs structures are low for high traffic volume customers (Tarjanne Pekka, 1995)

2.2. World Trade Organization

2.2.1 What is the World Trade Organization (WTO)

The World Trade Organization (WTO) can be defined as “the legal and institutional foundation of the multilateral system. It provides the principal contractual obligations determining how governments frame and implement their domestic trade legislation and regulations. And it is the platform on which trade relation among countries evolve through collective debate, negotiation and adjudication” (WTO Trading into the Future, 1995).

The WTO was established in January 1995. Governments have conducted the Uruguay Round negotiations on 15 December 1993 and Ministers had given their political backing to the results by signing the Final Act at a meeting in ‘Marrakesh Declaration’ on 15 April 1994, affirmed that the result of the Uruguay Round would “strengthen the world economy and lead to more trade, investment, employment and income growth throughout the world”. The WTO is the embodiment of the Uruguay Round result and the successor to the General Agreement on Trade and Tariffs (GATT). Not only does the WTO have a potentially large membership than GATT, it also has a much broader scope in terms of commercial activity and trade policies to which it applies. The GATT applied only to trade in merchandise goods; the WTO covers trade in goods, services and trade in ideas or intellectual property.

2.2.2 WTO Functions

Main essential functions of World Trade Organization can be summarized as follows:

- Administering and implementing the multilateral and plurilateral trade agreements which together make up the WTO.
- Acting as a forum for multilateral trade negotiations.
- Seeking to resolve trade disputes
- Overseeing national trade policies

- Cooperating with other international institutions involved in global economic policy-making.

2.2.3 The Principles of The Trading System

The WTO Agreement contains some 29 individual legal texts- covering everything from agriculture to textiles and clothing, and from services to government procurement, rules of origin and intellectual property. Added to these are more than 25 additional Ministerial declarations, decisions and understandings which spell out further obligations and commitments for WTO members. However, a number of simple and fundamental principles run throughout all of these instruments which, together, make up the multilateral trading system.

1. Trade without Discrimination

There are two forms of non-discrimination required; the first is known as “Most-Favored-Nation” (MFN), under which members are bound to grant to the products of other members treatment no less favorable than that according to the product of any country. Thus, no country is to give special trading advantages to another or to discriminate against it: all are on an equal basis and all share the benefits of any moves towards lower trade barriers. The second form of non-discrimination is known as “national treatment”, requires that once goods have entered a market, they must be treated no less favorably than the equivalent domestically-produced goods.

2. Predictable and growing access to markets

The multilateral trading system is an attempt by governments to provide investors, employers, employees and consumers with a business environment which encourages trade, investments and job creation as well as choice and low prices in the market place. Such an environment needs to be stable and predictable, particularly if businesses are to invest and thrive.

The existence of secure and predictable market access is largely determined by the use of tariffs, or customs duties. While Quotas are generally outlawed, tariffs are legal in the WTO and are commonly used by governments to protect domestic industries and to raise revenues. However, they are subject to disciplines - for instances, that they are not discriminatory among imports - and are largely "bound". Binding means that a tariff level for a particular product becomes a commitment by WTO member and cannot be increased without compensation negotiations with its main trading partners.

Following the establishment of the GATT in 1947, average tariffs level fell progressively and dramatically through a series of seven trade rounds. The Uruguay round added to that success, cutting tariffs substantially, sometimes to zero, while the overall level of bound tariffs significantly dropped. The results are providing a substantially higher degree of market security for traders and investors.

Many other WTO agreements seek to ensure conditions of investment and trade are more predictable by making it very difficult for member governments to change the rules of the game at whim. In almost every policy area which impinges on trading conditions, the scope of members to pursue capricious, discriminatory and protectionist policies is constrained by WTO commitments.

The key to predictable trading conditions is often the transparency of domestic laws, regulations and practices. Many WTO agreements contain transparency provisions which require disclosure at the national level or at the multilateral level through formal notifications to the WTO. Much of the work of WTO bodies is concerned with reviewing such notifications. The regular surveillance of national trade policies through Trade Policy review Mechanism

provides a further means of encouraging transparency both domestically and at the multilateral level.

3. Promoting Fair Competition

The TWO is a system of rules dedicated to open, fair and undistorted competition. Rules on non-discrimination are designed to secure fair conditions of trade and so too are those on dumping and subsidies. Previous GATT rules, which laid down the basis on which governments could impose compensating duties on these two forms of unfair competition were extended and clarified in WTO agreements.

4. Encouraging Development and Economic Reform

Over three-quarters of WTO members are developing countries and countries in process of economic reform from non-market systems. During the seven-year course of the Uruguay Round over 60 such countries implemented trade liberalization programs. Some did so as part of their accession negotiations to GATT while others acted on an autonomous basis. At the same time, developing countries and transition economies took a much more active and influential role in the Uruguay Round negotiations than in any previous round.

This trend effectively killed the notion that the trading system existed only for industrialized countries. It also changed the previous emphasis on exempting developing countries from certain GATT provisions and agreements. With the end of the Uruguay Round, developing countries showed themselves prepared to take on most of the obligations that are required of developed countries. They were, however, given transition periods to adjust to the more unfamiliar and, perhaps, difficult WTO provisions particularly so for the poorest, "least-developed" countries. The value to development of pursuing, as far as is reasonable, open market-oriented policies, based on WTO principles, is widely

recognized. But so is the need for some flexibility with respect to the speed at which those policies are pursued.(WTO Trading into the Future, 1995).

2.2.4 Trade Round - the Package Route to Progress

The biggest leaps forward in international trade liberalization have come through multilateral trade negotiations, or “trade rounds”, under the auspices of GATT - the Uruguay Round was the latest and the most extensive.

Although often lengthy, trade rounds offer a package approach to trade negotiations; an approach with a number of advantages over issue-by-issue negotiation. For a start, a trade round allows participants to seek and secure advantages across a wide range of issues. Second concessions which are necessary but would otherwise be difficult to defend in domestic political terms, can be made more easily in the context of a package which also contains politically and economically attractive benefits. Third, developing countries and other less powerful participants have a greater chance of influencing the multilateral system in the context of a round than if bilateral relationships between major trading nations are allowed to dominate. Finally, overall reform in politically sensitive sectors of world trade can be more feasible in the context of a global package

Most of GATT's early trade rounds were devoted to continuing the process of reducing tariffs. The results of the Kennedy Round in the mid-sixties, however, included a new GATT Anti-Dumping Agreement. The Tokyo Round during the seventies was a more sweeping attempt to extend and improve the system.

2.2.5 How is the WTO Different from the GATT

The World Trade Organization is not a simple extension of GATT. On the contrary, it completely replace its predecessor and has a very different character. Among the principal differences are the following (GATT,1994):

1. The GATT was a set of rules, a multilateral agreement, with no institutional foundation, only a small associated secretariat which had its origins in the attempt to establish an International Trade Organization in the 1940s. The WTO is a permanent institution with its own secretariat.
2. The GATT was applied on a “provisional basis” even if, after more than forty years, governments chose to treat it as a permanent commitment but after long time. The WTO commitment are full and permanent from beginning.
3. The GATT rules applied to trade in merchandise goods. In addition, to goods, the WTO covers trade in services and trade-related aspects of intellectual property.
4. While GATT was a multilateral instrument, by the 1980s many new agreements had been added of a plurilateral, and therefore selective, nature. The agreements which constitute the WTO are almost all multilateral and, thus, involve commitments for the entire membership.
5. The WTO dispute settlement system is faster, more automatic, and thus much less susceptible to blockages, than the old GATT system. The implementation of WTO dispute findings will also be more easily assured.

2.2.6 The Structure of the WTO

The structure of the WTO is dominated by it highest authority, the Ministerial Conference, composed of representatives of all WTO members, which is required to meet at least every two years and which can take decisions on matters under any of the multilateral trade agreements.

The day-to-day work of the WTO, however, falls to a number of subsidiary bodies; principally the General Council, also composed of all WTO members, which is required to report to the Ministerial Conference. As well as conducting its regular work on behalf of the Ministerial Conference, the General Council convenes in two particular forms :

- As the Dispute Settlement Body, to oversee the dispute settlement procedures
- As the Trade Policy Review Body to conduct regular reviews of trade policies of individual WTO members.

The General Council delegates responsibility to three other major bodies: namely the Councils for Trade in Goods, Trade in Services and Trade -Related Aspects of Intellectual Property Rights. Each type of council has its own Group, for instances, related groups for Council for Trade in Services are:

- Negotiation Group on Basic Telecommunications,
- Negotiation Group on Movement of Natural Persons,
- Negotiation Group on Maritime Transport Services,
- Committee on Trade in Financial Services, and
- Working Party on Professional Services.

The General Agreement on Trade in Services (GATS), negotiated during Uruguay Round, is the first set of multilaterally-agreed and legally-enforceable rules and disciplines ever negotiated to cover international trade in services. The agreement contains three elements:

- A framework of general rules and discipline
- Annexes addressing special conditions relating to individual sectors
- National schedules of market access commitments.

The Council for Trade in Services oversees the operation of the agreement.

I. The Framework

The framework consists of 29 articles including a series of basic obligations:

- The total coverage: The scope of the agreement is all internationally-traded services, however, they are delivered. The agreement defines four modes of delivery: Services supplied from one member country to another (e.g. international telephone calls); services supplied in the territory of one member to the consumers of any other (e.g. tourism); services provided through the presence of a commercial entity of one member in the territory of any other (e.g. banking); and services provided by individuals of one member in the territory of any other (e.g. fashion models or consultants).
- National treatment: in the sectors recorded in its schedule, and subject to any conditions indicated there, each government must treat services and service suppliers of other members no less favorable than its own like services and service suppliers.
- Most-favored-nation (MFN) treatment: a government must not discriminate between services or service suppliers of other members, but must accord all of them treatment no less favorable than that it accords to like services and service providers of any. However, governments wishing to maintain more favorable treatment for particular countries in relation to particular service activities were given a one time opportunity to do so by recording "MFN exemptions" prior to the implementation of the GATS. The lists of such exemptions will be reviewed after five years, with a normal limitation of ten years on their duration.
- Transparency requirements include publication of all relevant laws and regulations. Since domestic regulation, in the absence of tariffs, provide the most significant means of influence or control over service trade, the

agreement requires that all such measures should be administered in a reasonable, objective and impartial manner. Governments are also required to establish the means for prompt review of administrative decisions relating to the supply of services.

- International payments and transfer for current transactions relating to specific commitments under the agreement shall not be restricted, except in events of balance-of-payments difficulties where such restrictions will be limited, temporary and subject to conditions.
- Market access and national treatment commitments are recorded in national schedules. The schedules identify those services and service activities for which market access is guaranteed, and specify any conditions to which that access is subjected. Any limitations on the commitments to give equal access for foreign service suppliers, must be entered in the schedules. These commitments are bound; like bound tariffs, they can only be modified or withdrawn after negotiation of compensation with affected countries. They thus provide guaranteed conditions under which foreign investors and exporters and importers of services can do business.
- Progressive liberalization The agreement requires successive rounds of further negotiations, the first to begin within five years, in order to take the process of liberalization further, both by increasing the level of commitments in schedules and by reducing the adverse effects on trade of government measures.

II. The Annexes

There are four annexes in GATS:

- The Annex on the Movement of Natural Persons
- The Annex on Financial Services

- The Annex on Telecommunication (Appendix-C)
- The Annex on Air Transport Services

The annex on telecommunications recognizes this sector's dual role as a distinct sector of economic activity and as an underlying means of supplying other economic activities. It requires that governments provide foreign service suppliers non-discriminatory access to the public telecommunications networks.

III. The Schedules and MFN Exemptions

As a result of bilateral negotiations, each government has recorded in its national schedule the service sectors, and the activities within those sectors, on which it guarantees access to its market, and has entered any limitations on market access and national treatment it wishes to maintain.

The schedules and MFN exemption lists, therefore, contain the negotiated and guaranteed conditions under which international trade in service is conducted. These recorded conditions cannot be changed for the worse without prior notice of the change and negotiation of compensation to affected countries; they can however be improved at any time and will be subject to further liberalization through the future negotiations to which governments are already committed by the GATS.

2.2.7 On-going Work Program

At the end of the Uruguay Round governments agreed to continue negotiations in four areas, basic telecommunications, maritime transport, movement of natural persons and financial services.

Basic telecommunications services is an area where government did not offer commitment during the Uruguay Round, essentially because of complex issues

of privatization of government monopolies arising in many countries. Sophisticated value-added telecommunications services, which are more commonly provided on a private basis, are, however, included in many GATS schedules. The negotiations on basic telecommunications are due to end in Feb. 1997, with new national commitments and a set of basic rules for liberalization.

The NGBT is meeting on a frequent schedule, and participants will be given a one-month period (15th Jan - 15th Feb. 1997) during which they could re-examine their positions and supplement or modify their offers to liberalize. However, they agreed to keep the date of 1st Jan. 1998 as the date of entry into force for liberalization commitments

CHAPTER THREE

LITERATURE REVIEW

The purpose of this chapter is to review the related literature concerning setting telecommunication in the trade framework, size of telecom industry, progress made by WTO's members to adapt the requirements of WTO, and impacts of WTO's on the industry. The chapter concludes with researcher's remarks .

3.1 Telecom Industry in Trade Framework

Historically international telecommunications has been seen principally as a public service to be provided by national entities on the basis of agreements between sovereign governments. However, in this new world telecommunications is increasingly seen as a commercial service which may be provided on a competitive basis by domestic or foreign suppliers, whether public or private, under conditions established by the host government. The reasons for such radical change in the industry which have been resulted from the inclusion of telecommunications in the Marrakesh Agreement can be very briefly summarized based upon the detailed discussion made in the fifth Regulatory Colloquium held at the ITU Headquarters (Trade Agreements on Telecommunications: Regulatory Implications, 6 - 8th Dec. 1995), these reasons are:

1. The emergence of new kinds of telecommunications networks, services and modes of commercial operation (in both developed and developing countries) which facilitate competition. For example, the private sector is engaged in the development of global satellite based wireless systems whose capabilities and costs assume the availability of a global marketplace and the open trade access that it implies.

2. The transition of many advanced industrial economies towards a high degree of specialization in services and in information and communication-related economic activities.
3. The convergence of telephone and computer networks (e.g. voice on the Internet which enables internet users to conduct normal telephone calls using internet network which is much cheaper than using the normal telephony network).
4. Economic pressures for further efficiency.
5. The growing importance of telecommunications as the modern trade route, that is, the mode of delivery of other services and goods.
6. An increasing national need to treat telecommunications as a "normal industry", and not to regard it as a "special" industry or "natural monopoly" requiring governmental ownership or other treatment different from that generally afforded other sectors.
7. The recognition that a modernized telecommunications system is central to the economic development of all countries and that privatization and economic liberalization of telecoms is a critical condition for attracting the capital needed to achieve telecommunications modernization.

Thus, pressures for the extension of the multilateral trading system to include telecommunications are a natural outcome of fundamental economic and technological trends. At the same time, governments in many countries, developed and developing, are debating the balance between the economic benefits of competition, and other policy concerns such as extending service to underserved population groups, maintaining universal service obligations, and maintaining some continuing governmental role in the telecommunications sector and the stream of revenue it provides.

Trade issues in telecommunications arise for at least four distinct, but related reasons:

1. Because telecommunications networks are an important infrastructure for the exchange of all goods and services, such as financial services, tourism, professional services and other information-based services.
2. Because the transition to competition in telecommunications makes the issue of market access, always a critical part of trade negotiations (the ability to sell a service into a foreign market, for example), of central importance.
3. Because successful trade negotiations about telecommunications require reforms to the national telecommunications regulatory regime so as to permit genuine competitive opportunities to the domestic and foreign entities which have been afforded market access.
4. Because issues concerning telecommunications relationships between countries or between telecommunications operators in different countries that have traditionally been handled within the ITU framework, such as issues concerning accounting rates and correspondent relations between international telecommunications operators, also arise in the context of international trade negotiations.

With the rapid and widespread expansion of telecommunications, and a more commercial orientation of telecommunications administrations and other operating companies has come increasing demand from business associations and developed countries that telecommunications be considered as a fully traded sector. Trade economists have argued that telecommunications has a critical dual role as both provider and facilitator of services trade. Some in the telecommunications community are wary of these developments as they believe they may weaken sovereignty authority and change the paradigm of

cooperation on which the international telecommunications system is based. Proponents of bringing telecommunications under a trade regime, however, contend that this is simply a reflection of reality. Telecommunications is the backbone of world trade- in goods and services- and it is argued that this must be recognized in international economic relations. (Tarjanne Pekka, 1995)

3.2 Size of Telecom Industry

Telecom is one of world's strongest growth industry. The following are some of the selected literature review to give view of the size and growth in Telecom industry are:

- “Currently, the World Trade Organization talks, in which 51 nations are taking part, aim to open telecoms markets worth more than \$ 500 billion a year to foreign competition under an agreed set of regulatory principles” (William Frances, 1996)
- “In the 15-nation EU (European Union) alone, annual sales of telecom services and equipment represent some three per cent of gross domestic product or \$ 176 billion per annum. Sales of services are growing at a rate of eight percent a year, while those of equipment are rising by four percent” (William Frances, 1996)
- “Offers to liberalize domestic telecommunications regimes were made by 34 governments, counting the European Communities and its members states as one, during two years of talks which began in the spring of 1994. Another five governments participated in the talks but did not table offers. The Talks, which focused on liberalizing a sector with \$ 513 billion in revenue in 1994” (PRESS/48, 1996, pp.1)

3.3 Progress Made in Market Liberalization

After the inclusion of telecommunications in the Marrakesh Agreement, ministers of member countries agreed on the annexes (including Telecommunication Annex - Appendix C); however, due to the complexity of the issue countries were unable to reach agreement at that time on major market-opening measures for basic telecommunications. As a result the new mechanism, the Negotiating Group on Basic Telecommunication (NGBT), which was established to deal with this fundamental issue. NGBT is meeting on a frequent basis with the objective of reaching an agreement by Feb. 1997. From reviewing the related literature, the following quotes give an indication of positive movements made by members countries to liberalize their markets as per WTO's requirements:

- "The United States is the most open telecom systems in the world and it wants other countries to follow suit" (Dunne Nancy, 1996, pp. 5)
- "Argentina and Mexico have made considerable efforts to improve their domestic networks in recent years, with a significant input from overseas companies. The relatively advanced state of parts of Latin America provide significant potential for gain from improved telecommunications. Thus this area is likely to become increasingly important over the next few years" (Evans Phillip and Walsh James, 1994, pp. 115)
- "The Singapore government is to open a tender next March for bids to run domestic and international telecommunications services in competition with monopoly carrier Singapore Telecom. A shortlist will be drawn up by September 1997 and eventual winners chosen by mid-1998. The government announced earlier this year that it will bring forward the end of Telecom's monopoly from 2007 to 2000" (Williams Frances, 1996, pp. 5).
- "Asia's Trade Progress: even if Asian leaders don't agree on completely open markets at their Nov. 19 summit 95 meeting in Osaka, the region is

already showing signs of progress, such as: many countries are liberalizing their financial sectors and opening telecommunications and power monopolies to local and foreign investors. In additions to, foreign investment rules are becoming clearer” (Communications Week International, 1996, pp. 2)

- “Key Asian countries have shunned a World Trade Organization initiative designed to achieve a speedy agreement on the liberalization of trade in telecoms services. Furthermore, the recent Asia Pacific Economic Cooperation Telecommunications Working Group meeting in Taipei also adopted a new set of collective actions fostering telecoms liberalization between member economies” (Communications Week International, 1996, pp. 2)
- “Governments which made offers to liberalize their markets during the negotiation include : Argentina, Australia, Brazil, Canada, Chile, Colombia, Ivory Coast, Czech Republic, Dominican Republic, Ecuador, European Communities and its member states, HongKong, Hungary, Iceland, India Israel, Japan, Korea, Mauritius, Mexico, Morocco, New Zealand, Norway, Pakistan, Peru, Philippines, Poland, Singapore, Switzerland, Slovak Republic, Thailand, Turkey, United Sates and Venezuela. While Barbados, Cuba, Cyprus, Egypt and Tunisia were participants in the talks” (PRESS/48, 1996, pp.1)

3.4 Impacts Of WTO's on Telecom Industry

Based on a number of studies carried out by OECD (Organization for Economic Cooperation and Development) and World Bank , the overall estimated impact of WTO on all related industries is to increase world GDP by between \$ 213 billion to \$ 274 billion after ten years of implementation, or roughly by 1 - 1.2% of world GDP as a step-gain (James Phillip & Walsh James, 1994).

Impacts of WTO on some industries have been identified and/or estimated by economists, while the impacts on telecom industries have not yet been tackled by researchers/economists as they felt it was very difficult to be identified at this stage. "To what extent the WTO itself will have impact on telecommunication is difficult to quantify. However, it should provide an improved framework within which Telecom companies operate" (James Phillip & Walsh James, 1994).

International Telecommunication Union (ITU) experts have anticipated that WTO will have positive as well as negative impacts on the countries. "With the April 1996 deadline now extended to Feb. 1997, the ongoing negotiations at the World Trade Organizations with the frame of GATS could result in an agreement among developed and developing countries to open their markets to trade in basic telecommunications services. These talks which are taking place within WTO's Negotiating Group on Basic Telecommunications (NGBT) will bear a number of major implications having advantages and disadvantages for all countries. The BDT (Telecommunications Development Bureau) must continue to monitor the process, circulate information and advise member countries with appropriate guidance on how to exploit potential advantages of GATS on a medium or long term basis. This would help to minimize any disadvantages" (International Telecommunication Union News, 1996, pp.20)

In addition to the financial impacts, WTO also will lead to non-financial consequences, such as improvement of telecommunication services with regard to range of services, quality of provision, prices movement toward costs and economic growth due to stimulation of investments. "Singapore government plan was the basis for an improved offer by Singapore to the WTO negotiations aimed at opening up national telecommunications markets WorldWide to for foreign competition. Maximizing competition in the Singapore market is vital

for ensuring the competitiveness of the country's infrastructure in attracting high quality investments" (Dow Jones Asian Equities Report, 1996, pp.2)

3.5 Specific Literature Related to the Selected Dimensions

Major Telecom companies are keen to keep themselves ready for competition that will be resulted from open market access as required by WTO, this will allow them to take advantage of such change in telecom industry. Singapore Telecom is a good example of those companies; "As liberalization, competition and globalization become realities, Singapore Telecom will meet the challenges presented. We need to seize good investment opportunities in the global arena, to maintain our competitive edge, to meet and exceed our customers' expectations and to prepare for increasing competitions in the industry" (Hwee Koh Boon, Chairman of Singapore Telecom, 1996 Singapore Telecom Annual Report, pp. 4)

In this section some of general literature related to the selected dimensions are addressed:

Accounting (settlement) Rate

- The good news that accounting rates are coming down. A survey of average accounting rates to which some 37 countries or regions responded showed an accelerating down trend. Since 1988, the average accounting rate has fallen from 2.12 SDR (Special Drawing Right) to 1.73 SDR, a fall of almost 20 percent. Among economies with competitive markets, such as those of OECD (Organization for Economic Cooperation and Development), not only are accounting rates lower but they are also falling faster. Indeed, since 1990 accounting rates have been fallen faster than call charges, suggesting that telecom companies have not passing on the benefits of technological change to users/customers (Tarjanne Pekka, 1996)

- The Federal Communication Commission (FCC) is expected to make it simple for US and foreign phone companies to negotiate cheaper rates for international calls to and from the United States. Next month the FCC is expected to propose rules to cut the charges US carriers pay foreign phone monopolies to complete overseas calls made from the United States. “The Ultimate goal is to get lower priced and better-quality services for consumers” Said Don Gips, head of the FCC’s international bureau. (Dunne Nancy Peter.1996)
- Officials say the foreign charges, or “accounting rates”, run five to 10 times actual costs, reflecting the power of state-run monopolies unexpected to home competition. Monopolies control more than 90 per cent of the non-US market. US phone companies, as a result, paid their overseas counterparts \$ 5.5 billion more in 1995 than foreign companies paid US carriers to complete calls. “This figure would drop half overnight if American carriers simply paid fees even vaguely related to costs,” FCC chairman Reed Hundt said in a recent speech. He noted that the imbalance dwarfs the US foreign aid budget of \$ 2 billion. The US has big imbalance with China, Jamaica, Mexico, Hongkong, Columbia and Argentina, among others (Dixon Peter.1996)

Collection Rate

One of the major trends in telecom industry is that cost of providing telecommunications services is declining as indicated earlier, thus telecom companies have to cut their charges and meet market challenges. Most of charges cut made by telecom companies have not stimulated addition demand to compensate for lose of charges cut. Singapore Telecom is a typical example to examine; “Our commitment to maintain our competitive edge in the international telephone business saw three rounds of collection rate reductions in 1994. However, the reductions have not stimulated sufficient incremental

international call volume to completely offset the revenue loss from rate cuts, However, we expect to reap the benefits in the longer term” (Hwee Koh Boon, Chairman of Singapore Telecom, 1996 Singapore Telecom Annual Report, pp. 4 - 5).

Customers' Benefits

Most of changes in telecom industry will lead to direct and indirect benefits for telecom customers, as illustrated by the following selected literature:

- “It is noteworthy that our increase in revenue was achieved within an environment in which our customers are demanding increased levels of service and reduced prices. In fact, during the year customers benefited from lower prices, with an average reduction of 8 percent in real terms for fixed network core products.” (Blount W. Rank, Telstra’s CEO - Australia, 1996 Telstra Annual Report, pp. 7)
- The global telecom market, currently estimated at US \$ 513 billion, and offer customers around the world savings of US \$ 1,000 billion over 12 years as a result of lower tariffs and improved service. Trade and telecoms are invisible- improved services and prices would give a large boost to trade in all sectors. “Institute of International Economics, USA, pp 5”
- But the importance of the negotiations is wider. As Ruggiero Renato(WTO’s Director-General, 1996) said: “The construction of a global information society will revolutionize human society itself ... It will soon be possible to bring high-quality education, health and business services to every village in the world.” Until now, most of the world has been denied the benefits of telecom revolution: two-thirds of the world’s population have never made a phone-call. In India, for instance, the annual fee for use of a telephone line is 1.5 times per capita income or 29 times more costly

than in the US. Only 9 percent of telecom investment goes to low income countries. As pointed out by Reed Hundt, Chairman of the American Federal Communication Commission:” To a very large degree the explanation for the gap between demand for and availability of telecommunications services in developing countries is the absence of open, competitive, fairly regulated markets.”

3.6 Concluding Remarks

Based on the literature review the following are main remarks concluded by researcher:

- Telecom Industry is changing to be in the trade setting which will open markets for domestic and international competition, certainly this will have substantial impacts on the whole economy as the size of telecom market is considerable. Telecom market worth about \$ 513 billion a year, and total international trade in services is about \$ 1,000 billion a year, it can be concluded that telecommunication is about 51 per cent of international trade in commercial services. “ International trade in commercial services is already worth over \$ 800 billion a year, perhaps as much as \$ 1,000 billion, and is growing at around 12 per cent each year, merchandise trade is worth around \$ 3,500 billion a year”. (The Uruguay Round, pp 19)
- The financial and non financial impacts of such changes in telecom industry is still not addressed by any researchers or institute as it is very difficult to quantify the impacts at this stage. Therefore, this research is focusing only on the perceived impacts based upon the experts knowledge.
- Despite the fact the WTO's impacts on telecom industry are still not clear, members of WTO have made great efforts for positive progress to liberalize their markets and be ready for market access deadline Jan. 1998.

CHAPTER FOUR

METHODOLOGY

4.1 Introduction

The two preceding chapters gave an overview of telecom industry and its development, World Trade Organization and its requirements, and the related literature. This chapter discusses the methodology of the study and describes the procedures used in each step of the study, from data collection to data presentation and discussion of findings.

This chapter first reviews research strategy and why multiple-case-study is used as a strategy for conducting this research. Then it discusses research questions and sources of information including primary and secondary sources. The structure of case study and a hypothetical case are carefully discussed.

4.2 Case Study Strategy

Case study, like any other research strategy, is a way of investigating an empirical topic by following a set of procedures. Thus it can be defined as "an empirical inquiry that investigates a contemporary phenomenon within its real-life context, when the boundaries between phenomenon and context are not clearly evident and in which multiple sources of evidence are used" (Northcot Dyr1,1992). This definition not only helps us to understand case studies, but also distinguishes them from the other research strategies such as survey and experiment.

Northcot Dyr1 (1992) has identified and summarized three general conditions for using case study as a research strategy " A 'how' or 'why' question is being asked about a contemporary set of events, over which the investigators has little or no control". The following points discuss how these conditions are applicable to this research:

1. The type of research question posed: If questions are 'how' and 'why' types of question case study approach would be an advantageous strategy. Since this research is trying to identify 'how' the implementation of WTO's requirements will likely affect certain types of dimensions in telecom industry, the case study approach seems appropriate.
2. The extent of control an investigator has over actual behavioral events: in this research it is clear that researcher has no control over actual behavioral of events.
3. The degree of focus on contemporary as opposed to historical events: this research is trying to find out potential impacts that will take place in future.

Thus based upon the three conditions defined and discussed above, the case-study approach is the most appropriate strategy for conducting this research. Moreover, researcher has identified two additional specific reasons for applying case study approach for this research, they are:

1. Investigation of WTO's impacts should be addressed in depth from different dimensions for each selected telecom company. Therefore, it is difficult and impractical to conduct normal sampling techniques as each company has its own structure, market characteristics. Studying the issue from horizontal point of view is more appropriate than vertical approach. In other words, to avoid operational and organizational differences, it is advisable to address problem from the identified dimensions for each selected company.
2. The most developed international telecom companies in the world do not exceed 30 companies which are aware of WTO and its latest progress. Moreover, some of those companies participate with their governments in

WTO's negotiation sessions. Therefore, concentrating on this type of companies will give more reliable information/views than undeveloped companies which are not aware of WTO's developments and potential consequences on the telecom business. Since, our population is small five case studies can server the purpose of this research for reaching upon reasonable conclusion for generalization.

4.3 Research Questions

As stated in chapter 1, the implementation of WTO's requirements by telecommunications companies is perceived to have significant effects on the following key dimensions:

- **International telephone revenue :** Most of telecom companies depend heavily on international telephone revenue as one of major contributors for revenue. Variables that affect international telephone revenue (collection rates, market share, and international accounting or settlement rates) will be highly influenced by open market access and market liberalization, thus it is expected that impact on international telephone will be significant.
- **Cost structure:** After market liberalization and open market access, competition for providing telecommunication services will be more intensive, accordingly the current cost structure is expected to change to reflect the new market factors. Most of changes will be in following areas:
 1. More advertising cost to compete and gain market share
 2. More capital expenditure to enhance/build out new infrastructure to meet market and customers needs.
 3. More control on staff cost to increase profitability and efficiency.
- **Operation Structure:** Major telecom companies have proclaimed a corporate vision which requires them to become leaders in the world market telecommunications services. This global competition between major telecom companies will penetrate into all international markets where multinational corporations have operations. As part of the quest for

global leadership, carriers are likely to strive to create alliances with other companies and have equity investment in foreign companies and/or own and operate nodes.

- **Telecom customers' benefits:** In competitive and liberalized market, customers are expected to ask for more benefits to be passed to them because they will have more choices. These benefits include lower price, better quality of service, quicker and more flexible services, and wider range of services.

4.4 Data Gathering

Information for this study is obtained from primary and secondary sources:

4.4.1 Primary Source

Primary information is mainly obtained from a close-ended structured questionnaire (Appendix-B). The questionnaire is pretested with two potential respondents, the purpose of the pretest is to highlight any difficulties in understanding the questionnaire or if there are any ambiguous questions. Some amendments are made based on the pretest results..

The questionnaire contains seven parts and headed with a cover letter:

Part 1: gives a brief introduction about development in WTO and progress made in NGBT (Negotiation Group on Basic Telecommunications).

Part 2: states purpose of questionnaire and lists the selected dimensions the questionnaire is addressing.

Part 3: contains questions designed to get general information about respondents. These general information about respondent experience, level of management and department in which he/she is working are essential to have confidence about information provided.

Part 4: includes close-ended questions related to the first selected dimension 'International telephone revenue'. There are 9 questions in this part, some of

them are designed to get information about current situation, such as, about current level of company's inpayment and outpayment; while most of questions are targeted to obtain information about potential impact after the implementation of WTO's principles. Furthermore, some definitions are included in order to avoid confusion.

Part 5 : contains question about the second selected dimension 'Cost structure'. This part contains 7 questions designed to get information about current and expected future impact on three main cost components: advertising cost, network cost and staff cost.

Part 6: includes three questions targeted to get descriptive information about the third dimension "Telecom operation structure". The first question asks about current global alliance, the second question asks about the perceived importance of alliances' benefits such as increasing market share, transfer of technology and related skills, while the third question asks about the planned alliances to be conducted as a result of the implementation of WTO's requirements.

Part 7: in the last part of the questionnaire, there is one question concerning the fourth dimension "Benefits for telecom customers". The question is designed to obtain information about current and future perceived importance of main customers' benefits, such as: lower prices, better quality of service, and wider range of services.

Questionnaires were sent by fax to ten respective officials in ten selected major telecom companies (names of company are listed in Appendix-A). The selected officials are aware of WTO's and its development and most of them are participating in negotiation sessions of NGBT (Negotiation Group on Basic Telecommunication). To ensure prompt response international telephone calls were made to the respective officials. Targeted and actual response rate is 50 percent.

In four cases out of five, respondents are working in International Business Divisions, this means that they are aware of international changes of all telecom aspects. Three of the respondents are having working experience more than 10 years and considered in the middle management level of their organization, while the remaining two are having of 5 to 10 years experience and ranked as from operating management level. From these facts, researcher has great extent of confidence views and information provided by the respondents.

4.4.2 Secondary Sources

In addition to the information obtained from questionnaire, various type of secondary sources are utilized. Those sources include:

Information about telecom companies

- Companies' annual reports
- Communications Companies Analysis Publications: these publications provided by MDIS (Management Decision Information System) for telecom companies who pay subscription fees for obtaining the latest information concerning telecom industry.
- Internet searching in telecom companies' sites, as most of telecom companies have created sites for their companies in WWW (WorldWide Web).

Information about WTO and ITU

- ITU (International Telecommunications Union) monthly news
- WTO (World Trade Organization) publications
- 1994 full GATT (General Agreement on Trade and Tariffs) Agreement (from Internet)
- Some specific reports written in Telecom development by ITU

C. Financial & Business Periodicals

Such as:

- Business Week
- Economist
- Financial Times
- Fortune
- Meed
- Telecommunications

4.5 Case Study Structure

Each case study contains four sections. The *first section* gives a brief background about company without referring to its original name and a proxy name is used instead. In the *second section*, company's main services are listed with brief definitions. Financial review is in the *third section* in which financial position of the company is analyzed using the general and specific telecom ratios, these ratios are:

- ***Liquidity ratios to measure the company's ability to meet its maturing short-term obligations.***
 - *Current Ratio = Current Assets / Current Liabilities*
 - *Quick Ratio = (Current Assets - Inventory) / Current Liabilities*
- ***Leverage ratio to measure the extent to which the company has been financed by debt***
 - *Debt Ratio = Total debt / Total Assets*
- ***Activity ratios to measure how effectively the company is using its resources***
 - *Average Collection Period = Receivable / Sales per day*
 - *Average Payment Period = Payable / Purchase per day*
 - *Bad debts Ratio = Bad debts / Sales revenue*
 - *Fixed Assets Turnover = Sales / Fixed Assets*
 - *Total Assets Turnover = Sales / Total Assets*
- ***Profitability ratios to measure management's effectiveness as shown by the returns generated on sales and investment***
 - *Profit Margin on Sales = Net Operating Profit / Sales*
 - *Return on Assets = Operating Profit / Assets*
 - *Return on Capital = Operating Profit / Capital*

- **Growth ratios** to measure the company's ability to maintain its economic position in the growth of the economy and industry.
 - Gross Revenue Average Growth
 - Net Profit Average Growth
 - Capital Expenditure Average Growth
 - Average Growth In EPS (Earning per Share) and DPS (Dividend per Share)
- **Other Telecom-Specific ratios:** these ratios are more specific to telecom industry.
 - Percentage of outpayment out of international collection = $\frac{\text{outpayment}}{\text{international collection revenue}}$
 - Percentage of inpayment out of international collection = $\frac{\text{inpayment}}{\text{international collection revenue}}$
 - Percentage of staff cost out of gross revenue = $\frac{\text{staff cost}}{\text{gross revenue}}$
 - Lines per employee = $\frac{\text{number of total lines provided}}{\text{number of employees}}$
 - Revenue per employee = $\frac{\text{gross revenue}}{\text{number of employees}}$

All commentaries made about current financial ratios are based on company average for two years. Since industry averages are needed to be compared with company average, ratios of the five selected telecom companies ratios are averaged and considered as industry averages. Accordingly, in chapter 5 industry average is refer thereto.

The general ratios help to access the company position as indicated earlier that the selected companies are major ones, therefore, from analyzing these ratios the financial positions can be identified; as important for this study to have well established telecom companies. Whereas, the other specific telecom ratios help to identify market position and operational efficiencies of the selected telecom companies, therefore these ratios are calculated under current conditions and after the perceived impacts of WTO implementation.

In the fourth section WTO's potential financial impacts on the selected dimensions are analyzed and discussed. Critical remarks about respondents' views are also included in the section.

In each case study there are three tables :

Table -1 : shows company's structured income statement in part I and balance sheet in part II, for the two-latest-year published results. Since financial impacts of WTO are figured out from upper part of income statement until it reaches operating profit, in all five cases income statements are presented in a standard format to facilitate calculation and presentation of WTO's impacts. Thus income statement called the structured income statement.

Table - 2 : displays an analysis of company financial position and contains three parts. In Part I five years financial results at a glance are presented, while Part II shows breakdowns for revenue and cost for company itself along with industry averages. Part III calculates financial ratios using the above formulas for company as well as industry.

Table - 3 : consists of three parts. Part I demonstrates the perceived impact of WTO on international telephone revenue and cost structure based on the respondents' views. Three scenarios of WTO's impacts are made: low, average and high to have a range of potential impact. While in Part II, the upper part of the structured income statement restated with the perceived impact to see the overall impact in operating profit. Part III shows some of financial ratios before and after the implementation of WTO's requirements for company and industry.

All figures in the above three tables are dominated in 000's US Dollar unless otherwise specified. To convert financial statement figures from company home country's currency to US Dollar the prevailing rates of the day on which

financial statement for are used. For instance, if the financial year ended in Mar. 1996, the prevailing rates of 31st March were used for currency translation.

4.6 Hypothetical Case

It is essential to present one hypothetical case to illustrate how the perceived impacts of WTO have been calculated by using current financial statements, information in annual reports, and questionnaire's responses.

The Structured Statement of Income

To eliminate the differences in financial statement reporting, the statement of income for this study is presented in standard format to help the identifications of WTO's impacts on the selected dimensions. The following illustrate how the structured statement of income is constructed:

Revenue:

- **International Telephone Collection** : This represents international telephone calls revenue collected from local customers for calls originated from country to overseas. Since this service is considered as one of main contributors of revenue, in all five case figures were obtained directly from annual reports.
- **Inpayment**: This represents revenue received from other telecommunication companies for incoming international telephone calls terminated in the country. In some cases figures were extracted directly from annual reports. If the figures were not available, they were approximated using responses to Q2 in the questionnaire. For example, if the respondent ticked that its inpayment 20%-30% of gross revenue, then 25% as an average multiplied by gross revenue to find out inpayment.

- **National Telephone** : This represents revenue generated from local telephone service. In all five cases figures were extracted directly from the annual reports.
- **Other**: This represents revenue generated from all other services company provides other than international and national telephone services.
- **Total Gross Revenue** : Total of international telephone collection , inpayment, national telephone and other.
- **Outpayment**: This represents revenue outpaid to other telecommunications companies for outgoing international telephone calls originated in the country. In some cases figures were extracted directly from annual reports. If the figures were not available, they were approximated using response to Q1 in the questionnaire. For example, if the respondent ticked that its outpayment 30%-40%, then 35% as an average multiplied by gross revenue to find out outpayment.
- **Net Revenue** Gross revenue minus outpayment.

Expenses

- **Staff Cost** : This represents direct and indirect staff costs, directly extracted from annual reports.
- **Advertising Cost** : This includes all expenses made to promote company services, approximated by using responses of Q10 in the questionnaire.
- **Depreciation** : Directly obtained from annual reports
- **Others** : This includes all other expenses other than staff, advertising and depreciation costs.
- **Total Expenses** : Total of staff, advertising, depreciation and other cost.

Up to this stage actual revenue for all five cases can be presented in one standard format as shown in table -1 and table 3 of each case. Now a hypothetical case needs to be demonstrated to illustrate how the three scenarios of potential impacts were calculated:

The full set of questionnaire can be viewed in Appendix-B; however, the following selected questions from the questionnaire were targeted to measure potential impacts of WTO on international telephone revenue and cost structure. It was assumed for this hypothetical case that respondent provided the following answers:

Q4. Based on your answer to Q3 above, the expected change in accounting rate regime is likely to have the following impact on your outpayment:

Outpayment increase by:	OR	Outpayment decrease by:
.... 0% - 20%		 0% - 20%
.... 20% - 40%		..X.. 20% - 40%
.... 40% - 60%		 40% - 60%
.... More than 60%		 More than 60%

Q5. Based on your answer to Q3 above, the expected change in accounting rate regime is likely to have the following impact on your inpayment:

Inpayment increase by:	OR	Inpayment decrease by:
.... 0% - 20%		 0% - 20%
.... 20% - 40%		 20% - 40%
.... 40% - 60%		..X.. 40% - 60%
.... More than 60%		 More than 60%

Q7. What is the perceived impact of the reduction in collection rates your company plans to make to become more competitive in liberalized and opened markets:

..... 0% - 10%
 10% - 30%
 ..X.. 30% - 50%
 More than 50%

Q9. How do you perceive the impact of market liberalization and open market access on your market share for international telephone:

Increase by:	OR	Decrease by:
.... 0% - 10%		..X... 0% - 10%
.... 10% - 20%		 10% - 20%
.... 20% - 30%		 20% - 30%
.... More than 30%		 More than 30%

Q11. As a result of implementation of WTO, how do you perceive your advertising expenditure will change:

Increase by:	OR	Decrease by:
.... 0% - 10%		 0% - 10%
X.. 10% - 20%		 10% - 20%
.... 20% - 30%		 20% - 30%
.... 30% - 40%		 30% - 40%
..... More than 40%		 More than 40%

Q13. As a result of implementing WTO, the current percentage of your profit reserved for future investment in infrastructure will:

Increase by:	OR	Decrease by:
.... 0% - 10%		 0% - 10%
.... 10% - 20%		 10% - 20%
X.. 20% - 30%		 20% - 30%
.... 30% - 40%		 30% - 40%
..... More than 40%		 More than 40%

Q15. To be competitive telecom companies have to minimize their cost, to what extent can your company succeed in achieving this objective through reducing staff and administrative cost:

<u>Current</u>	<u>Future</u>
..... Able to do it easily without restrictions	
X... Able to do it with some sorts of restrictions/limitations	..X...
..... Able to do it after major restrictions are removed	
..... Unable to do it at all	

Q16. If you answer to Q2 above able to do it easily without restrictions and able to do it with some sort or major of restrictions, how do you value the reduction in staff and other administrative costs:

..... Very Significant
 .X.. Significant
 Average
 Insignificant

Table below shows current levels and components of international telephone revenue and cost structure, and from which new levels are identified.

	<u>Actual</u>
<u>International Telephone Revenue</u>	
International telephone collection	1,000
Inpayment	500
Outpayment	<u>650</u>
Net International Tel. Rev.	850
 <u>Cost Structure</u>	
Staff cost	150
Advertising cost	80
Depreciation	<u>300</u>
Total	530

Calculation of Potential Impacts

International Telephone Collection:

International telephone collection consist of two variables: market share (quantity) and collection rate (price), thus

International telephone collection = No. of calls * Average rate per call

Since international telephone collection is available, and number of calls can be obtained from company annual report, the average applied rate per call can be worked out using the following formula.

Let assume No. of calls made during the year = 2,500 calls

Current International telephone collection = 1,000

Therefore, current average applied rate = $1,000/2,500 = \$ 0.40$ per call

To get the new level of international telephone collection, there are three steps involved:

The first is to calculate the new market share (number of calls) after decline.

Current market share = 2,500 calls

According to respondent's answer to Q9 : Decrease by 0% - 10%,

International telephone market share after decline :

- Low Scenario : $2,500 * (1 - 0\%) = 2,500$
- Average Scenario : $2,500 * (1 - 5\%) = 2,375$
- High Scenario : $2,500 * (1 - 10\%) = 2,250$

The second step is to reflect change in average applied rate per call.

According to respondent's answer to Q 7 : Decrease by 30% - 50%,

International telephone average applied rate after reduction:

- Low Scenario : $0.4 * (1 - 30\%) = 0.28$
- Average Scenario: $0.4 * (1 - 40\%) = 0.24$
- High Scenario : $0.4 * (1 - 50\%) = 0.20$

The third step is to find the new level of international telephone revenue after reduction in market share and average applied rate:

- Low Scenario : $2,500 * 0.28 = 700$
- Average Scenario: $2,375 * 0.24 = 570$
- High Scenario : $2,250 * 0.20 = 450$

Inpayment

Current = 500

According to respondent's answer to Q5 : Decrease by 40% - 60%

To get inpayment amount after decrease:

- Low Scenario : $500 * (1 - 40\%) = 300$
- Average Scenario: $500 * (1 - 50\%) = 250$
- High Scenario : $500 * (1 - 60\%) = 200$

Outpayment

Current = 650

According to respondent's answer to Q 4: Decrease by 20% - 40%

To get inpayment amount after decrease:

- Low Scenario : $650 * (1 - 20\%) = 520$
- Average Scenario : $650 * (1 - 30\%) = 455$
- High Scenario : $650 * (1 - 40\%) = 390$

Change in market share should also be reflected in outpayment, as this represents payment made to other telecom companies for market share utilization.

Outpayment before reflecting change in market share:

- Low Scenario : 520
- Average Scenario: 455
- High Scenario : 390

According to respondent's answer to Q 9, decrease in market share is expected to range from 0% to 10%, as indicated earlier.

Outpayment after reflecting decline in market share:

- Low Scenario : $520 * (1 - 0\%) = 520$
- Average Scenario: $455 * (1 - 5\%) = 432$
- High Scenario : $390 * (1 - 10\%) = 351$

Staff Cost

Current = 150

According to respondent's answer to Q12 : Decrease Significantly (i.e. by 20% - 30%)

To get staff cost after reduction:

- Low Scenario : $150 * (1 - 20\%) = 120$

- Average Scenario: $150 * (1 - 25\%) = 113$
- High Scenario : $150 * (1 - 30\%) = 105$

Advertising Cost

Current = 80

According to respondent's answer to Q11 : Increase by 10% - 20%

To get staff cost after increase:

- Low Scenario : $80 * (1 + 10\%) = 88$
- Average Scenario : $80 * (1 + 15\%) = 92$
- High Scenario : $80 * (1 + 20\%) = 96$

Depreciation

Since depreciation represents allocated of historical cost over the expected life of fixed assets the general concept applied to above variables can not be used to find out impact of WTO on depreciation. The following methodology is used:

1. From company report, five-year-average of investment in new fixed assets is calculated.
2. Based on respondents' answers to Q13, the new level of investment in new fixed assets can be worked out using the three scenarios (Low, Average and High).
3. From analyzing depreciation policies of five selected telecom companies, it is concluded that most of fixed assets are depreciated over 14 years.
4. Depreciate amount of new investment over of 14 years.
5. To get new level of depreciation, add annual depreciation of new investment to current level of depreciation.

The following is to illustrate how the above procedures are used:

Current = 300

Average annual investment in new fixed assets (from annual report) = 100

According to respondent's answer to Q11 : Increase by 20% - 30%,

The new level of investment in fixed assets:

- Low Scenario : $100 * (1 + 20\%) = 120$
- Average Scenario: $100 * (1 + 25\%) = 125$
- High Scenario : $100 * (1 + 30\%) = 130$

Annual depreciation of new fixed assets, using 14 years as the expected life of fixed assets:

- Low Scenario : $120/14 = 8.57$
- Average Scenario: $125/14 = 8.83$
- High Scenario : $130/14 = 9.29$

Add annual depreciation of new fixed assets to the current amount of depreciation:

- Low Scenario : $300 + 8.57 = 308.57$
- Average Scenario: $300 + 8.83 = 308.83$
- High Scenario : $300 + 9.29 = 309.29$

In the end and based on respondent's answers to this hypothetical case, below is current and expected levels of international telephone revenue and cost structure elements after all the above calculations:

	<u>Current</u>	<u>Low</u>	<u>Average</u>	<u>High</u>
<u>International Telephone Revenue</u>				
International telephone collection	1,000	700	570	450
Inpayment	500	300	250	200
Outpayment	<u>650</u>	<u>520</u>	<u>342</u>	<u>351</u>
Net International Tel. Rev.	850	480	478	299
<u>Cost Structure</u>				
Staff cost	150	120	113	105
Advertising cost	80	88	92	96
Depreciation	<u>300</u>	<u>308.6</u>	<u>308.8</u>	<u>309.3</u>
Total	530	516.6	513.8	510.3

CHAPTER FIVE
CASE STUDIES: ANALYSIS
AND RESULTS

The purpose of this chapter is address and discuss the five selected case studies using the methodology demonstrated in chapter 4. For each telecom company, a brief background about the company and its services is given. Furthermore, current financial position is presented and discussed. Then potential financial impacts are tackled and followed by brief conclusion about the case. For easy reading and comparison, all five case studies' discussions and analysis are presented in a consistent format. Finally a general review of WTO's potential impacts on financial and non-financial dimensions is demonstrated to summarize the five cases and compare empirical findings with the early formulated questions of thesis .

5.1 TELECO - A

5.1.1 Background

Teleco-A was established in 1981 as a shareholding company, in which government and public have 80 per cent of holding and 20 per cent for a foreign company which was the original founder of the company. Teleco-A is one of the major employers in the private sector and the sole provider of comprehensive national and international telecommunications and information services in the country.

Teleco-A's vision, as stated in its annual report, is *"To be recognized as the world class provider of telecommunications and information services in the region"* through:

- Establishing partnerships with their customer to understand, meet and be continually responsive to their changing requirements.
- Using the latest technology to efficiently provide reliable innovative services which considered value for money.
- Creating a work environment which recognizes and rewards the commitment of all employees to customer satisfaction.
- Generating appropriate financial returns for the providers of capital and the funding of their investment program.

5.1.2 Services

The main service provided by Teleco-A is international and national telephone service, which account for 75% of gross revenue. To promote these basic services and to meet WorldWide development, Teleco-A has developed many new value added services such as:

- Fremlink service which enables businesses to provide their local and overseas customers with a direct-dial toll-free access to their business centers.
- HomeDirect which gives an easy way of making international telephone call, as this service enables visitor of country to directly access the operator in the country they are calling, therefore overcoming any possible language difficulties and resulting delays.
- Credit card calling service in which customers will be charged for their calls made using their home country credit card.
- Voice Mail, this is a group of services for saving telephone messages from callers. It allows customers all the advantages of network without having to be near their telephone all the time. The service offers such features as call answering, voice messaging, informational mail boxes and message notification.
- StarDial which enables customers to have greater flexibility by having some features like alarm call, call waiting, conference call, call barring ... etc.

Total number of customers is growing by 4 per cent per annum, to total 140,850 at the end of 1995, with 25 telephone lines per 100 population and an average of at least one telephone per household. This rate is considered as one of the highest telephone penetrations in the region.

The volume of national calls increased by 10% during the 1995, resulting from the additional customer numbers and the success of valued added services which have led to greater call growth than previous years. International telephone traffic volumes increased by 2 per cent over the previous year, with incoming traffic growing by 6 percent and outgoing traffic increasing by 2 percent.

Not only does Teleco-A involve in telephony services, it also provides data-communications and messaging services to satisfy needs of business customers, these services represent 7% of gross revenue. Datacommunications services include:

- Leased circuit services in which circuits directly link a customer permanently and exclusively to a designated location via a single, private transmission line. This service is cost-effective for customers with high traffic volumes.
- International database access service which is designed specially to enable data communications between remote computer processing resources and computers, and data terminal equipment.
- Internet service, the WorldWide network of computers linking individuals as institutions and through which it is possible to access and copy information, read, communicate on wide range of topic.
- Telex and telegraphy services.

In addition to the above services, Teleco-A provides Mobile services which include cellular mobile, paging, and trunk mobile radio services. Mobile services contribution is about 7% of total revenue.

5.1.3 Financial Review

Reference is made to Table - 1 and Table - 2, page 145 and 146

Liquidity: Current ratio, and quick ratio are about 1.3 times, that indicates company is fairly able to meet its short term obligations easily because more than 70 percent of its current assets is kept in form of bank balances and cash. Since, company maintain low level of inventory, difference between current ratio and quick ratio is minor.

Leverage: Teleco-A has no long debts obligations, the average debt ratio is about 24% that is resulted from current liabilities.

Activity: Teleco-A is able to collect its receivables within 54 days while payment for its creditors made within 31 days. The company bad debts is less than 1 percent of total revenue, this gives an indication that Teleco-A is following a tight policy for collecting their moneys.

Normally Telecom companies are maintaining high-cost infrastructure to run their businesses, therefore, in telecom industry turnover ratios are expected to be less than 1. Teleco-A fixed assets turnover ratio is about 0.7 and 0.5 for total assets turnover. The gap between these two ratios are mainly due to huge amount of current assets maintained in form of bank balances and cash.

Revenue, Cost, and profitability: Teleco-A highly depends on international telephone as the revenue source. From revenue breakdowns in Table-2, it is clear that the company generates 43 percent (as net of collection, inpayment, and outpayment) of net revenue from international telephone service. This percentage is higher than industry average by 15 percent.

Teleco-A is devoting 43 percent of its operating cost to staff, which is more than the industry average by 9 percent. Annual depreciation of Teleco-A is more than industry average by 8 percent, but this highly depends upon the size of country the company is serving and type of technology company is using for its network.

Profit margin is 36 percent, i.e. operating cost to run business is about 64 percent of gross revenue. Since 78 percent of operating cost goes to staff and depreciation, it can be concluded that low profit margin is resulted from high staff cost and depreciation. Furthermore, return on total assets is 13 percent

and return on capital is 17%, this because of low turnover ratios and low profit margin on sales.

Growth: Teleco-A experienced abnormal year in 1991 due to unusual circumstances took place in the region, therefore 1991 has been excluded from calculation of growth ratios. From five years at a glance (section I in Table 2), the following growth percentages can be summarized using four-year-average:

- Average growth in gross revenue is about 5 percent per annum, while annual average growth in profit is 12 percent. It is clear that Teleco-A has improved its profitability through controlling cost.
- Return on capital has improved every year by 1.33 percent on average. This is due to cost control.
- Just from comparing earning per share and dividends per share it becomes clear that Teleco-A is using fixed ratio of 80% as dividends payout ratio.
- Annual growth in EPS (Earning per Share) and DPS (Dividends per Share) 12 per cent which is consistent with average growth in profit.

Telecom-specific ratios: Some ratios that are specifically related to telecom industry are also calculated:

- 64 percent of international telephone collection is paid to other telecom companies, i.e. Teleco-A is retaining only 36 percent of what is collected from its customers for international calls. Compared with the industry average, the company is paying excess outpayment of 7 percent, this is mainly attributed to the fact that Teleco-A has high accounting (settlement) rates with other telecom companies.
- Percentage of inpayment out of international collection revenue is 43 percent which is in line with the industry average. This percentage is less than outpayment ratio by 20 percent, this is mainly due to the fact that company's international incoming calls is less than outgoing calls.

- Staff cost is about 20 percent of gross revenue, which is better than industry average by 5 percent.
- To measure staff efficiency, number of lines per employee and generated revenue per employee ratios are calculated. Each staff in Teleco-A serves only 66 lines (direct customer line) and generates revenue of \$ 116,000 per year. In comparison with industry averages, these ratios are relatively low, as each staff can serve 126 lines and generate annual revenue of \$ 231,000.

5.1.4 Potential Financial Impacts of WTO

Following the procedures used for the hypothetical case in the methodology chapter, the following are the assumptions extracted and used in Table - 3 to calculate financial impacts:

- Average collection rate will be reduced by 10 to 30 percent
- Market share will shrink by 20 to 30 percent
- Inpayment will drop by 40 to 60 percent
- Outpayment will drop by 20 to 40 percent
- Staff cost will fall by 10 to 20 percent
- Advertising cost will increase by 30 to 40 percent
- Depreciation will increase as a result of increasing investments made for building out networks by 10 to 20 percent.

Critical remarks:

- Since Teleco-A is the sole provider of telecommunications services in the country, after open market access for domestic and foreign investors to operate in the country, it is reasonable to lose about 20 to 30 percent of its market share. Furthermore to avoid further loss in market share, Teleco-A will be willing to reduce its collection rates to be more competitive and cost-based.

- Since Teleco-A is expecting “facilities-based interconnection charges - under which each country will define interconnection charges that would be regarded as commercially confidential, discriminatory, and would be based on competition for traffic” to be applied as an accounting regimes among telecom companies, reduction in inpayment is greater than reduction in outpayment and is making sense.
- As concluded from financial evaluation part that Teleco-A’s staff cost is relatively high, in the competitive market environment Teleco-A needs to consider reducing its staff cost to be able to compete. However, due to the fact that Teleco-A is operating in environment in which staff reduction is difficult to achieve, the expected reduction in staff cost ranges from 10 to 20% which could be managed through early retirement packages and voluntary leaving schemes.

Part I and II of Table-3 (147) exhibit potential financial impact on the selected dimensions under the three scenarios (Low, Average and High) with percentages of impact. The following summarize main points:

International Telephone Revenue: As per the above assumptions, international telephone collection for Teleco-A will drop by a range of \$ 28.7- \$ 52.3 million. Furthermore, inpayment received from other telecom companies will be reduced by a range of \$17 - \$ 25.5 million, this is mainly due to their expectation in changing accounting regime. In other side as a result of changing accounting rates regime, outpayment made to other companies will be reduced by a range of \$ 24.6 - \$ 39.6 million. As a net international telephony revenue is expected to go down by 28 percent to 50 percent, i.e. by \$ 21 - \$ 38 million.

Cost Structure: overall impact on cost is small, it ranges from minus 1 percent to 2 percent this because reduction that will take place in staff cost will offset increase in advertising cost and depreciation.

Operating Profit: Adding the two above impacts together, the overall anticipated financial impacts of WTO on Teleco-A's operating profit is ranging from \$ 20 to \$ 40 million which is about 29 to 59 percent compared with 1995 operating profit.

In addition to the above financial analysis, part III of Table 3 (page 148) shows some of current and potential financial ratios:

- **Revenue breakdown:** company reliance on international telephony will decline from 43 to 29 percent of net revenue. Despite this significant decline, company's reliance on international telephony is still higher than potential industry average.
- **Cost breakdown:** even after reduction in staff cost, Teleco-A will be in the high side compared with current and potential industry averages with regard to staff cost and depreciation. However for advertising and other costs, Teleco-A is better than industry averages.
- **Telecom-specific ratios:** company outpayment ratio will decline from 64 to 58 percent to improve retaining ratio by 6 percent. Since reduction in inpayment is more than reduction in international telephone collection, inpayment ratio out of collection will drop to be lower than potential industry average. Staff cost percentage out of gross revenue will not be much affected.

In sum, it is expected that adopting WTO requirements, Teleco-A's profitability will be highly affected. As a result of changing accounting rate regime, the drop in outpayment is near to offset loss of inpayment reduction. Therefore, it can be concluded that the adverse impact mostly will be from losing part of the current market share and company has to reduce its current high rates in order to survive in the competitive market.

5.2 Teleco - B

5.2.1 Background

Teleco-B was established in 1972 as a government statutory board to plan and provide telecommunications services for the country. At that time, the government had launched an intensive industrialization program and the need for good telecommunications infrastructure to support economic growth was imperative. In line with the national economic policy, Teleco-B geared its corporate policies to support country as a center of trade, commerce and information.

Currently, Teleco-B has one of the most modern and efficient telecommunication network in the world to cater for global business needs. Thus Teleco-B has become a leading telecommunications hub for the Asian commercial community, and it is the potential for growth that newcomers are expected to exploit in the future. Based on its current market capitalization Teleco-B has been ranked as the largest Telecom company in Asia.

Teleco-B has started with partial privatization, about 11% of shares has been sold to private hands, and it plans to sell further stakes to improve its current performance and be more flexible and responsive to market demand. Furthermore, in order to maintain growth in revenues and diversify away from those high revenue-earning operations, Teleco-B has invested heavily in operating joint ventures and network development projects in other countries.

The total number of customers is about 1.4 million. Almost all country homes have basic telephone services and about 10 per cent have more than one line.

5.2.2 Services

International telephone services remains Teleco-B's largest contributor to its total revenue, about 47%. 550 million minutes of International Direct Dialing calls were made in 1995, a strong growth of 22 per cent over the previous year. Value added services to promote international telephone service and to meet customers' needs are:

- Country Direct: at the touch of a button, tourists and business travelers visiting the country can call their home country operator directly with this service.
- International Toll-Free Service, an effective marketing tool, allows overseas customers and potential clients to contact businesses in the country by telephone or facsimile without paying the international call charges.

Since Teleco-B is operating on one of the main financial centers, it provides high quality of business services such as:

- Integrated Services Digital Network (ISDN), an important telecommunications technology, enables the transmission of voice, data, text and image through a single line. It opens up a multitude of new possibilities including improved resolution/higher speed fax, slow scan video, remote surveillance, bulk data transfer between computers and as back-up to high-speed data leased circuits
- Videoconference service which allows customers to hold face-to-face meetings without leaving their country.
- Teleview, the world's most advanced photovideotex system, provides instantaneous information and interactive transactions with photo-quality images

- InerNet, which is the latest public database access and data communications service, links over 10,000 users to Internet - the world's largest computer network. Customers have access to more than 25,000 networks, 2 million host computers and 20 million users in over 140 countries.
- Leased Circuit service for businesses that need high speed international data links for high quality transmission of video pictures, data and high volume information transfer.

Mobile communications services, which include MobileLink and PagerLink provided and managed by two wholly-owned subsidiaries of Teleco-B, provide mobile communications services to the public, these services continue to be one of the fastest growing revenue segments of Teleco-B's business. Revenue from mobile communications services grew by 21.4 per cent over the previous year. Turnover from MobileLink and PagerLink grew by 29.6 per cent and 13.3 per respectively.

Given the size of Teleco-B, there is a need to look beyond its geographical boundaries for continuing growth in the long term. Teleco-B overseas investments are an integral part of its strategy for long term growth. Its strong financial surpluses enable investments abroad. Currently, Teleco-B has invested \$ 2.2 billion in 53 investments in 21 countries.

5.2.3 Financial Review

Reference is made to Table -1 and Table - 2, page 150, 151 and 152

Liquidity: The averages of current and quick ratios are around 1.2 times, that means company's current assets can easily cover short-term obligations. Teleco-B has the same case as Teleco-A, it maintains large portion of its current assets in form of cash and bank balances. However, this percentage

dropped from 75 percent in 1995 to 57 percent in 1996, because Teleco-B has used its financial surpluses in international investments.

Leverage: Around 35 percent of total assets of Teleco-B is financed by debts.

Activity : Average collection period about 38 days, which is fairly good in telecom industry, i.e. company adopt an effective policy to collection its money from customers.

As indicated earlier that Telecom companies are maintaining high-cost infrastructures to run their businesses, thus normally telecom industry turnover ratios are not expected to be more than 1 percent. Teleco-B fixed assets turnover ratio is around 0.89 and total assets turnover is around 0.57. The difference of 0.32 between the two ratios is mainly due to large cash balances maintained by the company. All Teleco-B's activities ratios are better than average, this indicate that company is using its resources effectively.

Revenue, cost and profitability: Teleco-B highly depends on international telephone as the revenue source, from revenue breakdowns in Table-2, it is clear that the company generates 35 percent (as net of collection, inpayment, and outpayment) of net revenue from international telephone service. This percentage is higher than industry average by 7 percent.

Teleco-B is devoting 35 percent of its operating cost to staff, which is in line with the industry average. Annual depreciation of Teleco-B is 22 percent which also close to the industry average.

Profit margin ratio is 60 percent, which greater than the industry average by 28%, because staff cost and annual depreciation percentages out of operating cost are lower than industry averages.

Average return on total assets is close to 42 percent, and 65 for return on capital. Compared with industry averages, these two percentages are in the high side as a result of high profit margin ratio.

Growth: From analyzing five years at a glance (section I in Table-2), the following growth percentages can be summarized using five- year-average

- Average growth in gross revenue is about to 11 percent per year, while average annual growth in profit is 16 percent. The 5 percent increase of profit growth over gross revenue growth can be attributed to a better cost control policy applied by Teleco-B.
- Investment in the new assets is not following a steady behavior in relation with profit or gross revenue, sometimes it increases and sometimes it drops while profit and gross-revenue are increasing every year. Based on these facts, it can be concluded that Teleco-B is not devoting a fixed proportion of its profit for new assets investment rather than it is following different investment policy which maybe based upon market demand or other factors.
- Average annual growth in EPS (Earning per Share) is 22 percent, this because Teleco-B's dividend payout ratio is increasing every year.

Telecom-specific ratios: Some ratios that are specifically related to telecom industry are also calculated:

- 60 percent of international telephone collection is paid to other telecom companies, i.e. Teleco-B is retaining only 40 percent of what is collected from its customers for international calls. It is in line with the industry average.
- Percentage of inpayment out of international collection revenue is 22 percent which is lower than the industry average by 16 percent. This percentage is less than outpayment ratio by 38 percent, this is mainly due

to the fact that company's international outgoing calls is much more than incoming calls.

- Staff cost is about 11 percent of gross revenue, which is better than industry average by 14 percent.
- To measure staff efficiency, number of lines per employee and generated revenue per employee ratios are calculated. Each staff in Teleco-B serves 124 lines (direct customer line) and generates revenue of \$ 267,000 per year, which are close to industry average.

5.2.4 Perceived Financial Impacts of WTO

Following the procedures used for the hypothetical case in the methodology chapter, the following are the assumptions extracted and used in Table - 3 to calculate financial impacts:

- Average collection rate will be reduced by 10 to 30 percent
- Market share will shrink by 10 to 20 percent
- Inpayment will drop by 0 to 20 percent
- Outpayment will drop by 0 to 20 percent
- Staff cost will fall by 30 to 50 percent
- Advertising cost will increase by 20 to 30 percent
- Depreciation will increase as a result of increasing investments made for enhancing/building out networks by 10 to 20 percent.

Critical remarks:

- Since Teleco-B is the sole provider of telecommunications services in the country, after open market access for domestic and foreign investors to operate in the country, it is reasonable to lose about 10 to 20 percent of its market share.
- Since current level collection rates are perceived as moderate compared with other companies and company's main customers are business oriented, Teleco-B has to reduce its collection rates to the competitive level in order to avoid further loss in market share.
- Teleco-B is expecting "call terminating fees - under which each country would define one standard charge for all terminating calls, irrespective of where those calls come from, the system would be transparent, flexible, non-discriminatory and cost oriented" to be used as an accounting regime among telecom companies, the expected reductions in inpayment and outpayment will range from 0 to 20 percent because Teleco-B currently having low accounting rates with most telecom companies.

- Currently staff cost accounts for 23 percent of operating cost, Teleco-B is anticipating that staff cost can be reduced by 30 to 50 percent as the company is able to do it easily without restrictions from its government.

Part I and II of Table-3 (page 153) exhibit potential financial impact on the selected dimensions under the three scenarios (Low, Average and High) with percentages of impact. The following summarize main points:

International Telephone Revenue: it is expected that after implementation of WTO's requirements, Teleco-B international collection will decline by a range of \$ 245 - \$ 896 million. Since respondent is expecting his company to follow cost-based termination fees, its inpayment from other telecom companies will be reduced by range of \$ 0 - \$ 55 million, and outpayment to other telecom companies will drop by a range of \$ 78 - \$ 280 million. The net impact on international telephone revenue is expected to drop by 21 percent to 85 percent, i.e. by \$ 168 - \$ 671 million.

Cost Structure: Since the anticipated increase in advertising cost and depreciation will be covered by the decline in staff cost, the net positive impact on cost ranges from \$ 54 to \$ 110 million, from 6 to 13 percent.

Operating Profit: Adding the above two impacts, the net financial impact of WTO on Teleco-B's operating profit is negative and ranging from \$ 115 to 561 million, by 8 to 40 percent.

In addition to the above financial analysis, part III of Table 3 (page 154) shows some of current and potential financial ratios:

- **Revenue breakdown:** company reliance on international telephony will drop from 35 percent to 19 percent, mainly resulted from reduction in market share, collection rate and inpayment.
- **Cost breakdown:** percentage of staff cost of total operating cost company will drop significantly from 35 percent to 10 percent, which is better than potential industry average by 19 percent. However, change in depreciation percentage out of total operating will be minor.
- **Telecom-specific ratios:** company outpayment ratio will increase from 60 to 83 percent, this is mainly due to the fact that decline in international telephone collection will be much more than decline in outpayment. Thus Teleco-B's retaining ratio will be reduced from 40 percent out of collection to 17 percent. For the same reason percentage, inpayment percentage out of international collection will increase from 22 to 34 percent. Staff cost percentage out of gross revenue will drop to 8 percent and to be less than potential industry average.

Since Teleco-B is the sole provider of international telephone service in the country and revenue of this services is considered as the main contributor to Teleco-B's gross revenue, the implementation of WTO's requirements to open market for domestic and foreign investors will adversely affect international telephone revenue resulted from lose market share and cut in collection rates. Furthermore, it is anticipated outpayment and staff cost to be decline, but these declines will not cover lose in international collocation revenue, therefore the overall revenue and operating profit of Teleco-B will be highly affected.

5.3. Teleco-C

5.3.1 Background

Teleco-C is one of the largest and fully privatized telecommunication company. Originally Teleco-C was regarded as a governmental agency because it was part of the General Post Office. In 1984 Telecommunication Act was changed to establish Teleco-C as a public limited company, since then government started with privatization of Teleco-C in a series of tranches, this process is now completed.

Teleco-C's mission as stated in the annual report is:

“ Its central purpose is to provide world-class telecommunications and information products and services, and to develop and exploit its network, at home and overseas, so the following objective can be achieved:

- Meeting the requirements of its customers*
- Sustaining growth in the earnings of the group on behalf of its shareholders*
- Make a fitting contribution to the community in which business is conducted”.*

The government and most of telecommunication companies in the country have prepared themselves for market liberalization and open market access which the government will start with effect from Jan. 1998. Since Teleco-C is working in a very competitive market, competition is regarded as fact of life accordingly Teleco-C is determined to maintain its position as the leading supplying in the market, meet the needs and retain the loyalty of existing customers, and win back those customers who may have been tempted to move to competitors

As businesses increasingly operate internationally, Teleco-C is positioning itself to offer seamless communication services around the world, and it will

continue to develop its global presence by making significant progress in its main target markets in Europe, North America and The Asia Pacific region.

It is worth to mention that Teleco-C became the largest single organizations in the world to receive company-wide registration under the international quality standard (ISO 9001). Registration is a testimony to the company's commitment to quality and reflects years of work within the company developing quality management system.

5.3.2 Services

Teleco-C provides different ranges of telecommunication and information services and products, the main ones are:

- National and international telephone service, national generates 37 percent of gross revenue while international about 14 percent.
- Mobile communication, which contributes 18 percent of gross revenue and considered one of the major growth areas
- Sale of telecommunication equipment, Teleco-C has its own factories to manufacture telecommunication equipment. Around 7 percent of gross revenue comes from selling equipment.
- Leased circuit, which dedicated lines provided for high volume traffic customers, generates 7 percent of gross revenue

Teleco-C also provides many value added features to its services such as, call transfer, call return, caller identification. to promote usage of basic services.

5.3.3 Financial Review

Reference is made to Table -1 and Table - 2, page 156, 157 and 158

Liquidity: the average of current and quick ratios are near to 0.9, this indicates that Teleco-C's current assets can't meet short-term liabilities, this ratio is lower than the industry average by 0.35. From analyzing components of current assets, it is found that 62 percent of current assets is receivables which can be collected after 72 days from billing date, and 29 percent devoted to short-term investments. Since current ratio is less than 1 and 92 percent of current assets cannot be liquidated easily, company's ability to meet its short-term obligations is limited.

Leverage: 57 percent of total assets is financed by equity and 43 percent by short and long term debts. This ratio is slightly higher than the industry average by 8 percent.

Activity: In average Teleco-C is able to collect its receivables after 72 days from billing date which close to the industry average. As indicated earlier that receivables account for 62 percent while cash balance is about 3 percent, this limits company ability towards its short-term obligations. Fixed assets turnover is 0.8 while total assets turnover is 0.63 times, these are less than one due to nature of telecom business in maintaining high-cost infrastructure.

Revenue, cost and profitability: In Teleco-C, international telephone service's contribution to net revenue is 13 percent, which is lower than industry average by 15 percent. Compared with other telecom companies, Teleco-C doesn't not highly depend upon international telephone as the main revenue source.

Teleco-C is devoting 41 percent of its operating cost to staff, which is more than the industry average by 7 percent. Annual depreciation of Teleco-C is 22 percent of operating cost, which is less than industry average by 5 percent, but this highly depends upon the size of country the company is serving and type of technology company is using for its network.

Profit margin on sales is 23 percent, i.e. operating cost to run business accounts for 77 percent of gross revenue. The industry average is above Teleco-C's profit margin by 9 percent, this mainly attributed to high staff cost compared with industry average. Thus to improve profitability and efficiency levels, Teleco-C has been steadily shedding employees for a number of years on gradual basis, the number of staff employed has been reduced from 226,900 in 1991 to 137,500 in 1995. Moreover, average return on total assets is 13 percent while return on capital is 23 percent, this occurs because of low turnover ratios and low profit margin on sales.

Growth : From five years at a glance (section I in table 2), the following average percentages can be summarized using five-year-average:

- Average annual growth in turnover is 1.4 percent, while average growth in profit is minus 5 percent, this can be attributed to the competitive environment in which Teleco-C operates. As consequence of declining profit, investment in new assets is minimized.
- Since profit is declining, EPS (Earning per Share) is falling by 0.3 percent per annum, whereas. DPS (Dividend per Share) is growing in average by 2.4 percent, because dividend payout ratio is increasing by 15 percent annually.

Telecom-specific ratios: Some ratios that are specifically related to telecom industry are also calculated:

- 61 percent of international telephone collection is paid to other telecom companies, i.e. Teleco-C is retaining only 39 percent of what is collected from its customers for international calls. It is slightly more than the industry average.
- Percentage of inpayment out of international collection revenue is 45 percent which is more than the industry average only by 3 percent. This percentage is less than outpayment ratio by 16 percent, this is mainly due to the fact that company's international outgoing calls is more than incoming calls.
- Staff cost is about 29 percent of gross revenue, which is better than industry average by 14 percent.
- To measure staff efficiency, number of lines per employee and generated revenue per employee ratios are calculated. Each staff in Teleco-C serves 184 lines (direct customer line) and generates revenue of \$ 185,000 per year. In comparison with industry averages, the first ratio is better while the second ratio is lower than industry average by \$ 73,000, this because annual revenue per line of Teleco-C (\$ 859) is less than revenue per line of industry average (\$ 1,833).

5.3.4 Perceived Financial Impacts of WTO

Following the procedures used for the hypothetical case in the methodology chapter, the following are the assumptions extracted and used in Table - 3 to calculate financial impacts:

- Average collection rate will be reduced by 0 to 10 percent
- Market share will shrink by 0 to 10 percent
- Inpayment will drop by 0 to 20 percent
- Outpayment will drop by 0 to 10 percent

- Staff cost will fall by 20 to 30 percent
- Advertising cost will increase by 0 to 10 percent
- Depreciation will increase as a result of increasing investments made for enhancing/building out networks by 5 to 15 percent.

Critical remarks:

- Since Teleco-C is operating in very competitive environment, open market access required by WTO will have very minor impact on market share. The respondent is expecting decline in market share to range from 0 to 10 percent. This is also applicable to the decline in collection rate because Teleco-C's collection rates are low compared with other telecom companies.
- Teleco-C is expecting "facilities-based interconnection charges" to be applied as an accounting regimes among telecom companies, but reduction in inpayment will range from 0 to 20 percent while reduction in outpayment will range from 0 to 10 percent.
- The expected reduction in staff cost by 20 to 30 percent is as a result of staff reduction program which Teleco-C has been implementing since 1991 in order to increase its profitability and efficiency in order to be competitive in the liberalized market and be ready to compete in open market access that will take place in Jan. 1998.

Part I and II of Table-3 (page 159) exhibit potential financial impact on the selected dimensions under the three scenarios (Low, Average and High) with percentages of impact. The following summarize main points:

International Telephone Revenue: it is expected that after implementation of WTO's requirements, Teleco-C international collection will decline by a range of \$ 0 - \$ 615 million. Inpayment from other telecom companies will fall by range of \$ 0 - \$ 291 million, and outpayment to other telecom companies will

drop by a range of \$ 0 - \$ 379 million. The net impact on international telephone revenue is expected to drop by 0 to 20 percent, i.e. by \$ 0 - \$ 527 million.

Cost Structure: Since the anticipated increase in advertising cost and depreciation will be covered by the decline in staff cost, the net positive impact on cost ranges from \$ 1,021 to \$ 1,580 million, from 6 to 10 percent.

Operating Profit: Adding the above two impacts, the net financial impacts of WTO on Teleco-C's operating profit is positive and ranges from 10 to 11 percent, this is mainly attributed to the reduction in staff costs will offset decline in revenue and increase in depreciation and advertising cost.

In addition to the above financial analysis, part III of Table 3 (page 160) shows some of current and potential financial ratios:

- **Revenue breakdown:** International telephone revenue contribution of 13 percent will not be affected. While the industry average will drop from 28 to 18 percent.
- **Cost breakdown:** percentage of staff cost out of total operating cost company will drop from 41 percent to 39 percent, even after this reduction Teleco-C is above potential industry average by 10 percent. Change in depreciation percentage out of total operating is minor.
- **Telecom-specific ratios:** company outpayment ratio will increase just by 2 percent to be 62 out of collection revenue. Thus Teleco-C's retaining ratio will be reduced from 40 to 38 percent. Inpayment percentage out of international collection will go up from 45 to 73 because reduction in international collection revenue is more than reduction in inpayment. Staff cost percentage out of gross revenue will fall from 30 to 21 percent to be in line with potential industry average.

To sum, Teleco-C is very large company (total asset in 1995, it is about \$27 billion). Since Teleco-C is the dominant company in the country it is very difficult to increase its overall market share in liberalized and competitive market. Unlike Teleco-A and Teleco-B, Teleco-C has well diversified revenue sources, it doesn't highly depend upon international telephone revenue, which only accounts for 14 percent of gross revenue.

Since Teleco-C has no limitations or restrictions from its government with regard to staff reduction, it has improved (and will improve) its profitability and efficiency through reducing staff cost. The overall WTO's perceived impact on Teleco-C is positive of 10 to 11 percent increase in operating profit, this because anticipated staff cost reduction is much more than decline in revenue.

5.4 Teleco-D

5.4.1 Background

Teleco-D was formed in 1953 as a private company, currently it is regarded a leading and dominant provider of national and international telecommunications services in the country. For more than 40 years, the company expanded operations in line with its philosophy of serving as a link between people. Teleco-D is committed to provide state-of-art telecommunications services that satisfy modern needs and contribute to greater international interaction and understanding.

Since international telecommunications industry today is in transition, which is promoted by the rapid evolution of technologies and the liberalization and deregulation of market WorldWide, Teleco-D is focusing on achieving its corporate philosophy *“to support spiritual and intellectual exchange among people through international telecommunications of superior quantity, quality and speed”* through two main objectives:

- Providing diverse and reasonably priced telecommunication services and
- Developing multimedia and information capacities.

Teleco-D dominance has been eroded considerably since the introduction of liberalization in 1995 and creation of competitor companies.

Stronger times with telecommunications companies in other countries will be essential to serve the telecommunications needs of multinational corporations in the 21st century, thus Teleco-D joined hands with American and European telecom companies to establish global alliances.

5.4.2 Services

Teleco-D offers a varied menu of telecommunications services, from telephone to leading-edge video and data transmission, that responds to the diverse needs of its customers. These services are backed by the company's extensive global network and around-the-clock network surveillance and management system. Main services are:

- National and international telephone services, national accounts for 12 percent of gross revenue whereas international accounts for 69 percent.
- Virtual private network service to enable corporate customers to create customized private international telecommunications network without using private leased circuits. 7 percent of gross revenue is generated by this service.
- International leased circuits to link business customers to a designated overseas location around the clock via a singly private transmission line. This service is cost-effective for customers with high transmission volumes. Contribution of this service to gross revenue is 5 percent.
- Internet allows high-quality and high performance transmissions to the Internet, which is the world's largest computer network

5.4.3 Financial Review

Reference is made to Table -1 and Table - 2, page 162, 163 and 164

Liquidity: Teleco-D has very strong liquidity position as the average of current and quick ratios are around 2.1 and above industry averages by 0.80. This indicates that Teleco-D's current assets can meet short-term liabilities easily. Furthermore, 60 percent of current assets is kept in form of cash and temporary investments which can be liquidated quickly.

Leverage: The average debt ratio is 39 percent, which is higher than the industry average only by 4 percent.

Activity: In average Teleco-D is able to collect its receivables after three months after billing date, which is considered in the high side compared with the industry average. Receivables account for 39 percent of current assets and 11 percent of total assets, this is not affecting company's liquidity position because current and quick ratios are above 2.0 times. Fixed assets turnover is 0.47 while total assets turnover is 0.33 times, these are less than industry averages as Teleco-D is operating in a very large country thus it needs extensive infrastructure to cover most of areas.

Revenue, cost and profitability: Teleco-D highly depends on international telephone as the main revenue source, from revenue breakdowns in Table-2, it is clear that the company generates 54 percent (as net of collection, inpayment, and outpayment) of net revenue from international telephone service. This percentage is higher than industry average by 26 percent.

Teleco-D is devoting only 17 percent of its operating cost to staff, which is better than the industry average by 16 percent. Annual depreciation of Teleco-D is 29 of its operating cost, which is slightly above industry average.

Profit margin on sales is 13 percent, i.e. operating cost accounts for 87 percent of gross revenue. Although Teleco-D's staff cost is low compared with other four telecom companies, profit margin on sales is very low compared with industry average, less by 19 percent. From cost breakdowns, it found that 44 percent of Teleco-D's operating cost is spent on others cost; since breakdowns of others are not available it is difficult to make any comments.

Average return on total assets is 4 percent while return on capital is 7 percent, these ratios are low as a result of low turnover ratios and low profit margin on sales.

Growth : From five years at a glance(section I in table 2), the following average percentages can be summarized using five-year-average

- Average annual growth in turnover is 11 percent, while average growth in profit is 16 percent, this means improvement in company's profitability resulted from cost reduction is 5 percent per annum.
- Total assets of Teleco-D is growing by 8 percent annually.

Telecom-specific ratios: Some ratios that are specifically related to telecom industry are also calculated:

- 55 percent of international telephone collection is paid to other telecom companies, i.e. Teleco-D is retaining only 45 percent of what is collected from its customers for international calls. It is slightly lower than the industry average.
- Percentage of inpayment out of international collection revenue is 31 percent which is below the industry average by 11 percent. This percentage is less than outpayment ratio by 24 percent, this is mainly due to the fact that company's international outgoing calls is more than incoming calls.
- Staff cost is about 11 percent of gross revenue, which is better than industry average by 14 percent.
- To measure staff efficiency, annual generated revenue per employee ratio is calculated. Each staff in Teleco-D generates revenue of \$ 438,000 per year, which is higher than the industry averages by \$ 207,000 per year.

5.4.4 Perceived Financial Impacts of WTO

Following the procedures used for the hypothetical case in the methodology chapter, the following are the assumptions extracted and used in Table - 3 to calculate financial impacts

- Average collection rate will be reduced by 10 to 20 percent
- Market share will shrink by 5 to 10 percent
- Inpayment will drop by 20 to 30 percent
- Outpayment will drop by 20 to 40 percent
- Staff cost will fall by 20 to 30 percent
- Advertising cost will increase by 0 to 10 percent
- Depreciation will increase as a result of increasing investments made for enhancing/building out networks by 10 to 20 percent.

Critical remarks:

- Currently, Teleco-D's collection rates are ranked as moderate. To be competitive in the liberalized and open market, the respondent is expecting a reduction of 10 to 20 percent needs to take place.
- Teleco-D is expecting "facilities-based interconnection charges" to be applied as an accounting regimes among telecom companies, but reduction in inpayment will range from 20 to 30 percent while reduction in outpayment will range from 20 to 40 percent, these material reductions can be attributed to the fact that Teleco-D is having high and non-cost-based rates with other telecom companies.

Part I and II of Table-3 (page 165) exhibit potential financial impact on the selected dimensions under the three scenarios (Low, Average and High) with percentages of impact. The following summarize main points:

International Telephone Revenue: it is expected that after implementation of WTO's requirements, Teleco-D international collection will decline by a range of \$ 207 - \$ 400 million. Inpayment from other telecom companies will fall by range of \$ 88 - \$ 132 million, and outpayment to other telecom companies will drop by a range of \$ 164 - \$ 327 million. The net impact on international telephone revenue is expected to drop by 13 to 19 percent, i.e. by \$ 132 - \$ 205 million.

Cost Structure: Since the anticipated increase in advertising cost and depreciation will be covered by the decline in staff cost, the net positive impact on cost ranges from \$ 8.6 to \$ 52.6 million, from 1 to 3 percent.

Operating Profit: Adding the above two impacts, the net financial impacts of WTO on Teleco-D's operating profit is unfavorable and ranges from 51 to 63 percent, this is because lose in international telephone is more than saving from cost reduction.

In addition to the above financial analysis, part III of Table 3 (page 166) shows some of current and potential financial ratios:

- **Revenue breakdown:** International telephone revenue contribution to Teleco-D's net revenue will fall from 54 to 49 percent, but still above potential industry average by 31 percent.
- **Cost breakdown:** percentage of staff cost of total operating cost company will drop from 17 percent to 11 percent, to be better than potential industry average by 19 percent. Change in depreciation percentage out of total operating will be just by 5 percent.
- **Telecom-specific ratios:** company outpayment ratio will drop only by 4 percent to reach 51 percent out of collection revenue. Thus Teleco-D's retaining ratio will be improved from 45 to 49 percent. Inpayment

percentage out of international collection will be affected slightly but still less than potential industry average by 14 percent. Staff cost percentage out of gross revenue will go up from 11 to 15 percent out of gross revenue as the decline in staff cost is less than the decline in international telephone revenue; even after the increase in staff percentage out of gross revenue, it will be better than potential industry average.

To sum, Teleco-D is spending 44 percent of operating cost in others and information about other is not available. Since staff and depreciation percentages within the acceptable level in comparison with other four telecom companies, Teleco-D needs to manage and control other cost in order to improve its profitability. The implementation of WTO's requirement will significantly affect Teleco-D's operating profit, this is mostly due to the expected decline in market share and reduction in collection rates.

5.5 Teleco-E

5.5.1 Background

Teleco-E is the primary supplier of telecommunications services in the country. Since the separation of postal and telecommunications services in 1975, Teleco-E has operated as a government business enterprise, under a number of structures and titles. Since then, the organization has managed the introduction of new technologies and services, in order to meet the growing needs of customers' expectations, in a steadily more cost-efficient and businesslike manner. Moreover, to meet customers' needs in transparent way, Teleco-E has started privatization on gradual basis.

Currently Teleco-E provides a full range of telecommunications products and services to more than 7.3 million customers, with having the following mission (as stated in its annual report): *“Teleco-E’s aim is to be the leading provider of telecommunications and information services in the country and the Asia Pacific region; this will be achieved through:*

- *Excellent customer service*
- *Best practice financial performance*
- *Improving productivity*
- *Strong and sustainable growth*
- *World class infrastructure*
- *Market leadership in the country*
- *An involving and rewarding environment and Corporate integrity”*

As the industry become more globally driven, Teleco-E has extended internationally to have global presence in nearly 30 countries, with a particular emphasis on developing countries in Asia Pacific region. Furthermore, Teleco-E will be facing the challenges of an open-competition regime as the government will introduce a new regulatory and competitive framework from 1997. Hence the company is readying itself for open market competition.

5.5.2 Services

Teleco-E provides many types of telecommunication services:

- National and international telephone service: total contribution of telephone services to gross revenue is 75 percent: 29 percent from national and 46 percent from international service.
- Mobile communications services which are based on analogue, digital and satellite networks accounts for 15 percent of gross revenue. This service is growing very fast, hence a lot of potential revenue expected to be generated.
- Business network services which directly-connected voice and data services for large corporate customers using terrestrial networks generate 8 percent of gross revenue.

Like other telecom companies, Teleco-E has enhanced its telecommunications services by introducing new value added services for their customers such as: home direct, toll-free, call transfer and other new types of services.

5.5.3 Financial Review

Reference is made to Table -1 and Table - 2, page 168, 169 and 170

Liquidity: the average of current is about 0.88 while quick ratio is close to 0.82, these indicate that Teleco-E's current assets can't cover short-term obligations. Around 79 percent of current assets is kept in form of receivables which can be collected after 3 months and 10 days from billing date. Thus it can be said that Teleco-E's liquidity position to meet short-term liabilities is highly limited.

Leverage: 67 percent of total assets is financed by equity and 33 percent is financed by short and long term debts. This debt ratio is in line with the industry average.

Activity: In average Teleco-E is able to collect its receivable after 100 days, which is in the high side compared with the industry average, to make situation worse its receivables account for 79 percent of company 's current assets. Fixed assets turnover is 0.6 while total assets turnover is 0.48 times. Turnover ratios for Teleco-E are slightly lower than industry averages as the company is serving very large country and extensive and costly infrastructures are required to cover most of areas in the country.

Revenue, cost and profitability: In Teleco-E international telephone service generates of 56 percent of net revenue, which is about two times the industry average.

Teleco-E is devoting 32 percent of its operating cost to staff, which is in line with the industry average. Annual depreciation of Teleco-E is 19 percent of operating cost, which is less than the industry average by 8 percent

Profit margin on sales is 28 percent, i.e. operating cost accounts for 72 percent of gross revenue. Since percentage of staff cost and annual depreciation out of total operating cost look reasonable when they are compared with industry averages, the main reason for low profit margin on sales is high amount spent in other costs. Information about other cost and its breakdowns is not available.

Average return on total assets is 17 percent while return on capital is 23 percent, this is due to low turnover ratios and low profit margin on sales.

Growth : From five years at a glance(section I in table 2), the following average percentages can be summarized using five-year-average:

- Average annual growth in turnover is 6 percent, while average growth in profit is growing by 22 percent (excluding 1992 as it was abnormal year). As a result of increasing profit, EPS (Earning per Share) and DPS (Dividend per Share) are growing at 40 and 31 percent respectively.
- Return on Assets is growing in average of 4 percent and return on capital of 12 percent per annum.
- The annual average decline in debt ratio is 10 percent.

Telecom-specific ratios: Some ratios that are specifically related to telecom industry are also calculated:

- 53 percent of international telephone collection is paid to other telecom companies, i.e. Teleco-D is retaining only 47 percent of what is collected from its customers for international calls. It is slightly lower than the industry average.
- Percentage of inpayment out of international collection revenue is 48 percent which is above the industry average by 6 percent. This percentage is less than outpayment ratio by only 5 percent, this indicates that company's international outgoing and incoming calls are near to balance.
- Staff cost is about 11 percent of gross revenue, which is better than industry average by 14 percent.
- To measure staff efficiency, number of lines per employee and generated revenue per employee ratios are calculated. Each staff in Teleco-E serves 130 lines (direct customer line) and generates revenue of \$ 176,000 per year. In comparison with industry averages, the first ratio is better while the second ratio is lower than industry average by \$ 55,000, this because annual revenue per line of Teleco-E (\$ 1,354) is less than revenue per line of industry average (\$ 1,833).

5.5.4 Perceived Financial Impacts of WTO

Following the procedures used for the hypothetical case in the methodology chapter, the following are the assumptions extracted and used in Table - 3 to calculate financial impacts:

- It is expected there will be no change in collection rates levels.
- Market share will shrink by 2 to 5 percent
- Inpayment will drop by 5 to 10 percent
- Outpayment will drop by 40 to 60 percent
- Staff cost will fall by 10 to 20 percent
- Adverting cost will increase by 5 to 15 percent
- Depreciation will increase as a result of increasing investments made for enhancing/building out networks by 0 to 5 percent.

Critical remarks:

- Current collection rates applied by Teleco-E are ranked in the competitive side, thus the respondent is expecting no reduction will take place in collection rates level.
- Teleco-E is expecting outpayment made to other telecom companies to be reduced by a range of 40 to 60 percent, this can be mainly attributable to the fact that most of Teleco-E's international calls are destined to developing countries which are demanding high payment to be made for them; however, after open market and the implementation of WTO requirements, developing countries will be forced in one way or another to accept lower payment.
- Currently Teleco-E is suffering from high staff cost (32 percent of operating cost); due to the fact that there will be governmental restrictions imposed on Teleco-E with regard staff reduction, thus the expected reduction in staff cost will not be that much significant and it will range from 10 to 20 percent.

Part I and II of Table-3 (page 171) exhibit potential financial impact on the selected dimensions under the three scenarios (Low, Average and High) with percentages of impact. The following summarize main points:

International Telephone Revenue: it is expected that after implementation of WTO's requirements, Teleco-E international collection will decline by a range of \$ 109 - \$ 328 million, this mainly attributable to decline in market share. As respondent is expecting his company to follow cost-based termination fees, its inpayment from other telecom companies will be reduced by range of \$ 131 - \$ 288 million, and outpayment to other telecom companies will drop significantly by a range of \$ 1,157 - \$ 1,736 million. The net impact on international telephone revenue is expected to increase by 18 percent to 1 percent, i.e. by \$ 917 - \$ 75 million.

Cost Structure: Since the anticipated increase in advertising cost and depreciation will be covered by the decline in staff cost, the net positive impact on cost ranges from \$ 277 to \$ 469 million, from 3 to 5 percent.

Operating Profit: Adding the above two impacts, the net financial impacts of WTO on Teleco-E's operating profit is favorable and ranging from \$ 1,699 to 1,304 million, by 66 to 55 percent.

In addition to the above financial analysis, part III of Table 3 (page 172) shows some of current and potential financial ratios:

- **Telecom-specific ratios:** company outpayment ratio will significantly drop from 53 to 28 percent and to be in line with potential industry average. This is mainly due to the significant reduction in outpayment compared with small reduction in international collection revenue, which

only resulted from slight shrink in Teleco-E's market share. Inpayment percentage out of international collection will not be affected, but still higher than potential industry average by 4 percent. Staff cost percentage out of gross revenue will slightly increase from 25 to 22 percent which will be close to potential industry average.

To sum, since Teleco-E is readying itself for open market competition since 1992, the perceived impacts of implementations of WTO requirements on company's operating profit is anticipated to be favorable by 66 to 55 percent, which mainly will be resulted from outpayment reduction. Teleco-E ability to improve profitability through reducing staff cost is restricted by governmental laws, therefore the expected decline in staff cost after the implementation of WTO's requirement is not significant as other telecom companies.

5.6 General Review of Perceived Impacts of WTO's on Telecom Companies

Basically this study is aiming to identify the perceived impacts that will take place after three to five years of WTO's implementation on telecom sector. Specifically this study is focusing on four critical dimensions, they are as follows:

1. International Telephone Revenue
2. Cost Structure
3. Operation Structure
4. Customers' Benefits

The perceived impacts on the first two dimensions are mostly financial and addressed on in details in each study case. While the perceived impacts on the second two are descriptive and are addressed on this section for all five companies. The purpose of this section is to summarize findings discussed (in case studies chapter) of the perceived impacts on each component within the first two dimensions, then to empirically compare summary of findings with early formulated thesis questions. The impact of the second two dimensions are also discussed.

5.6.1 Perceived financial impact on the first two dimensions

Table - 4 (page 174) summarizes the perceived financial impacts for all five telecom companies and find out average impacts as well.

5.6.1.1 International telephone revenue:

The first dimension is comprised of three components, they are:

- *International telephone collection:* the average expected decline in international telephone collection for five companies ranges from \$ 118 to \$ 458 million, by 5 to 20 percent. Teleco-A, Teleco-B and Teleco-D are above the average, this due to the fact that their markets are not fully ready for open market competition. On other hand, markets of Teleco-C and Teleco-E are readying themselves for open market competition from three to five years ago, thus decline in international telephone revenue is below the average.
- *Inpayment:* the average anticipated drop in inpayment is ranging from \$ 47 to \$ 158 million, by 5 to 16 percent. Teleco-A and Teleco-D are expecting reduction in inpayment to be more than average because they are expecting that their relative cost to terminate international calls will drop significantly to reflect new technology used for their infrastructure. Therefore after basing accounting regime on cost they will end with lower inpayment compared with average.
- *Outpayment:* the average anticipated decline in outpayment is ranging from \$ 285 - \$ 552 million, by 22 to 42 percent. Only Teleco-B and Teleco-C are below the average because currently they are maintaining lower accounting rates with most of telecom companies, while other three are suffering from high rates, particularly with developing countries.

- **Net international telephone revenue:** combining the three above impacts, the net revenue of international telephone is expected to change by plus 6 to minus 14 percent, Plus 6 percent in the low scenario occurs because reduction in outpayment will offset loss from decline in collection revenue and inpayment.

Comparison with Thesis Question

Below summary of empirical findings for five selected major telecom companies are compared with the early stated questions, the outcome can be summarized as follows:

	<u>Questions</u>	<u>Empirical Findings</u>	<u>Questions Validity</u>
International telephone collection	Major (More than 20%)	Fair (13%)	Invalid question
Inpayment	Major (More than 20%)	Fair (10%)	Invalid question
Oupayment	Major (More than 20%)	Major (32%)	Valid question
Net international telephone	Major (More than 20%)	Fair (8%)	Invalid question of thesis
<u>Note:</u> - () means decline - Changes of more than 20 percent are regarded as Major, while changes of less than 20 percent are regarded as fair if they are more than 5 percent and poor if they are less than 5 percent.			

From the above comparison between the previously formulated thesis questions and empirical findings, it can be concluded that:

- International telephone revenue will drop by fair amount rather than major.
- Inpayment will drop also by fair amount.
- Outpayment will drop by major amount as expected earlier.
- Net revenue of international telephone will fall fairly.

5.6.1.2 Cost structure

- **Staff Cost:** the average decline in staff cost is ranging from \$ 353 to \$ 579 million, by 17 to 28 percent. All telecom companies would like to reduce their staff cost in order increase their profitability and efficiency, but some of them have limitations and restriction imposed by their governments with regard to staff reduction; this is applicable to Teleco-A and Teleco-E, accordingly their percentages of reduction in staff cost are lower than average.
- **Advertising Cost:** the average anticipated increase in advertising cost is ranging from \$ 8 to \$ 36, by 3 to 13 percent. All telecom companies' increase in advertising cost is below or close to the average except for Teleco-A because it needs to spend a lot money in order to maintain its current customer base.
- **Depreciation:** the perceived increase in deprecation as a result of increasing cost of enhancing current network and/or building new network is ranging from \$ 72 to \$ 101, 6 to 8 percent.

Comparison with Thesis Question

Below summary of empirical findings for five selected major telecom companies are compared with the early stated questions , the outcome can be summarized as follows:

	<u>Questions</u>	<u>Empirical Findings</u>	<u>Questions Validity</u>
Staff cost	Major More than 20%	Major (23%)	Valid question
Advertising cost	Major More than 20%	Fair 8%	Invalid question
Depreciation	Major More than 20%	Fair 7%	Invalid question

Note:

- () means decline
- Changes of more than 20 percent are regarded as Major, while changes of less than 20 percent are regarded as fair if they are more than 5 percent and poor if they are less than 5 percent.

From the above comparison between the previously formulated questions and empirical findings, it can be concluded that:

- Staff will drop by major amount as expected earlier.
- Advertising cost will increase by fair amount.

Depreciation will increase by fair amount.

Therefore the average net decline resulted from changing international telephone revenue and cost structure is anticipated to range from \$ 295 to \$ 309, by 17 to 18 percent. *In average this decline is lower than 20 percent, thus it can be concluded that overall impacts from the above two selected dimensions is fair rather than major, it is important to note that this conclusion is only valid along with the following assumptions:*

- 1. Empirical finds are obtained only from five major selected telecom companies from different countries.*
- 2. Impacts of other non-selected dimensions are not taking into account.*

5.6.2. Perceived impact on the second two dimensions

The second two dimensions are, operations structure and customers' benefits.

5.6.2.1 Operation Structure

All the selected companies have more than one of regional or/and global alliances outside their boundaries/markets for different motives. Motives of having alliances will be changed after the implementation of WTO's requirements and open market access. For instance, some of alliances among telecom companies was formed mainly to have an access to foreign closed markets; however, after the implementation of WTO market will be opened for domestic and foreign investors without any discriminations between domestic and foreign investors. Therefore, the importance of this motive is perceived less significant in the future.

Based on respondents views, the following gives an overview of how alliances' motives are perceived:

- *More market share, and greater revenue*: 60 percent of respondents consider this motive as significant.
- *More synergy and cost saving*: 20 percent of respondents consider this motive as very significant, and 60 percent as significant.
- *Transfer of technology and other related skills* : 40 percent of respondents consider this motive as significant and 60 percent as not significant at all
- *Market access*: This motive is regarded as very significant by 40 percent of respondents, and less significant by 60 percent.

As a result of changes that are taking place in telecom industry most of telecom companies are seeking to have more alliance to strengthen its market position and take advantage of international opportunities.

Global alliances will have profound and far-reaching effects on major companies and competitive situation in most countries the world over. From the viewpoint of major telecom companies, some of effects will include:

- The competition for the business of multinational companies will be extremely intense, involving well-financed foreign companies as well as emerging domestic competitors.
- National regulatory authorities will lose some degree of control over the domestic telecommunications market as international political issues become a factor in domestic regulation, the effect of which will be generally to increase and accelerate competition.
- Access to capital, a ubiquitous national network, and pre-existing customer relationships, while giving advantage to domestic companies, will not necessarily be decisive given the entry into national markets of well-financed foreign companies which compete only for the domestic and foreign business of country's largest business enterprise, "cream skimming" on a global level.
- The rate of change in domestic telecommunications markets WorldWide will accelerate exponentially as events in one market ripple through all other means of interwoven business relationships of multinational corporations and a limited number of global companies.

Therefore, companies WorldWide will have to choose an international strategy which can range from entering on one or more global alliances to being the lead company such an alliance - to do nothing will most likely mean loss of domestic market share as foreign companies of in combination with domestic competitors compete for and win the business of multinational corporation. In the end it can be said that no major company anywhere in the world can afford to ignore the effects of global competition on the domestic market for telecommunication services.

5.6.2.2 Customers Benefits

All types of telecom customers, whether multinational corporation, business or residential, are expecting the implementation of WTO's requirements will lead to open and liberalized telecommunications markets in which competitions will be intense. Thus they are expecting to benefit from such changes that will take place in telecom industry. Main benefits they are seeking can be summarized in four:

- Lower prices and different discount schemes are required.
- High quality of services provided especially for corporate customers and business who are transferring high speed data.
- Quick and flexible services.
- Wide range of services to satisfy different need of customers and meet technological developments.

Based on respondents' views, the relative importance of the above customers benefits can be identified in current situation and in future after the implementation of WTO's requirements:

- *Low prices*: Currently customers of Teleco-A, Teleco-B, and Teleco-D are perceiving low prices as an important but in the future it will be perceived as very important, because current prices are not in the competitive level compared with other telecom companies. However, the case for Teleco-C and Teleco-E is different as they are operating in very competitive environments their customers are considering low prices very important now and in future.

- *High quality of service:* Same as low prices, customers of telecom companies who are working in competitive environments are perceiving this benefit very important. While the other three, Teleco-A, Teleco-B and Teleco-D, customers will consider this benefit as very important only in the future.
- *Quick and flexible services:* in all five telecom companies this benefit is perceived less important or important, but in the future it will be considered as very important.
- *Wide range of services:* with technological developments customers would like to have different services to serve their diverse needs. Thus this benefit is perceived important by Teleco-A, Teleco-B and Teleco-D's customers while Teleco-C and Teleco-E's customers are perceiving it very important. However, in the future all Telecom companies customers will consider this benefit as very important.

Therefore, it can be concluded that telecom customers will put pressure on telecom companies to have the above mentioned benefits after the implementation of WTO's requirements, open market, intensive competition and availability of more than one company will help them to realize more benefits. At this stage it is very difficult to quantify financial impacts on this dimension on telecom companies.

CHAPTER SIX
SUMMARY, CONCLUSION
AND RECOMMENDATIONS

6.1 Introduction

This chapter summarizes the main points covered in the five previous chapters. In addition, it lists and discusses the general outcome of empirical comparison. Then it presents some recommendations for telecom companies. Finally it gives directions for further analysis to be done on this important topic in the future.

6.2 Summary

Access to modern telecommunication services is an essential conditions for success in the development of national economies and in international trade. Telecommunications is a vital underlying means of transport for all forms of economic activities. Today, telecommunications industry is in transition promoted by the rapid revolution of electronic technologies which will remove conventional boundaries that currently exist between telecommunications, information, and computer industries.

In addition to the technological developments, placing telecommunications in a trade setting, by expanding the scope of international trade negotiation to include services in general and telecommunications services in particular, will add to the momentum of telecommunication revolutions, with major benefits for all countries.

As discussed in Chapter two, it has been concluded that Marrakesh Agreement culminated the latest multilateral “round” of trade negotiations under the auspices of the General Agreement on Tariffs and Trade (GATT). It has established a new international organization, the World Trade Organization (WTO), replacing the GATT, with new powers and procedures. Part of the

Marrakesh Agreement is a General Agreement on Trade in Services (GATS). The GATS is the first global trade agreement which contains treaty provisions applicable to telecommunications. One of GATS' Annexes is a Telecommunication Annex, which clarifies and extends some of the GATS provisions as they apply specifically to telecommunications. In addition schedules to GATS contain commitments by which fifty-seven WTO members open their national markets to international competition by varying degrees. For the time being, these commitments apply chiefly to value added services. To coordinate on major market-opening measures for basic telecommunications, a new mechanism, the Negotiating Group on Basic Telecommunication (NGBT), was established to deal with this fundamental issue. The NGBT is meeting on a frequent schedule with the objective of reaching an agreement by Feb. 1997 on market-opening concerning trade in basic telecommunication services.

Trade without discriminations, predictable and open market access, fair competition, and encouraging development & economic reforms are WTO's objectives which are essential to increase competition in order to reduce cost of doing business and make a real difference to economic growth rate.

The purpose of this thesis was to study the perceived impacts of applying WTO's principles on major telecom companies. International telephone revenue, cost structure, operations structure and customers' benefits are the main dimensions from which WTO's impacts were studied and identified. The main reason for selecting these four dimensions is that at this stage of WTO progress, NGBT submitted their final working in Feb. 1997, Telecom experts are predicting most of the key changes are likely to take place on these four selected dimensions. The first two dimensions evaluated financially because anticipated changes such as decline in market share, decline in collection rates,

drop in staff cost are much clearer than changes of the second two dimensions, therefore the second two dimensions discussed descriptively.

Formulating thesis question adds clarity to the purpose of the thesis. Question of this research was stated as follow:

“ Would the implementation of required WTO principles by telecom companies is perceived to have major effects on the following selected dimensions:

Telecom companies’ international telephone revenue,

Telecom companies’ cost structure,

Telecom companies’ operations structure, and

Telecom customers’ benefits”

To prove this statement, this thesis was conducted using multiple case-study strategy, as it has proved to be the most appropriate strategy to serve the purpose of thesis, then the five case studies were analyzed in details. Primary information was obtained directly from respective officials of the selected companies using a well-structured questionnaire which covered the four identified dimensions of the study. The selected companies were considered to be good representative of the industry because they cover different regions and markets in turn; moreover, they are developed companies that they have full awareness of latest development of WTO and most of them play effective roles in negotiation sessions of NGBT. Furthermore, information obtained from various types of secondary sources has provided valuable data and facts to complete this study.

In the methodology chapter, a simple hypothetical case was demonstrated to illustrate how potential financial impacts calculated using respondents’ responses to the questionnaires and the latest published financial statements.

The five selected telecom companies were analyzed in details in chapter five. In each case, brief background about the company and its services was presented in order to recognize the company status, then current financial position of company was assessed using main general financial ratios in addition to relevant telecom-specific ratios. Then potential financial impacts on international telephone service and cost structure were identified and discussed using the methodology prescribed in the hypothetical case. Furthermore, current and future telecom-specific ratios were calculated and compared with current and potential industry averages.

In end of chapter five, a general review of impact was presented to summarize financial impacts of the five case studies and to compare empirical findings with the stated question of thesis. Moreover the general review section, descriptively discussed the second two dimensions, company's operation structure and customer's benefits, as the potential financial impact on these dimensions can't be quantify at this stage.

Based on the assessment of companies current financial position using general financial ratios (liquidity, leverage, activity, profitability and growth), the following points are the summary:

- Teleco-C and Teleco-E are suffering from liquidity problems which resulted from the fact that their current assets are lower than current liabilities, and big portions of their current assets are maintained in form of receivables and short term investments which cannot be liquidated easily.
- Turnover ratios of all five telecom companies are lower than 1, this can be attributed to the fact that telecom companies have to maintain advanced and high-cost infrastructure to run their businesses and meet customers requirements. All five companies turnover ratios are in line or close to the industry average, except for Teleco-C, this because the company is serving

very large country and extensive and high-cost infrastructure is required to cover most of areas within the country.

- Teleco-B profitability ratios are the highest in comparison with other four companies, as indicated earlier it has high turnover ratios and its infrastructure is used effectively. On other hand, Teleco-D is having the lowest turnover ratios, accordingly its profitability is the worst compared with other.
- Growth ratios are highly effected by the degree of current competition. For instance, in Teleco-A market competition is not that much intensive growth ratio are picking up, while Teleco-C is suffering from intensive competition and it is very difficult to have high growth ratios.

Based on some analysis made for revenue and cost breakdowns and telecom-specific ratios of the five companies, the following points can be pointed out:

- 47 percent of net revenue is generated form international telephone service in form of collection revenue which received form local customer for their overseas calls and inpayment received form other telecom companies for calls terminated in the country. All companies highly depend upon this service as the main revenue source, except for, Teleco-C who has well - diversified revenue sources.
- On average outpayment made to other telecom companies for terminating calls in their sides represent 57 percent of international telephone collection. Thus companies just retaining 43 percent of collection revenue to cover their cost of providing the service. From this point an important issue can be emphasized on, telecom companies cannot reduce their charges for their customers unless they are able to reduce international accounting/settlement rates; otherwise they will end with low or negative return.

- Teleco-A has the highest outpayment ratio out of collection revenue, this due to current high accounting rates the company has with other telecom carriers.
- On average, inpayment represents 42 percent out of collection revenue, and all companies percentage are either in line or lower than industry average. Since, this ratio is lower than outpayment ratio, it can be said that all five companies incoming international calls are lower than outgoing calls.
- Around 35 percent of operating cost is paid to staff. In researcher opinion, this is partially attributed to the fact that telecom companies mostly need professional staff to run their businesses such as engineers, and high qualified and caliber marketers who normally receive high salaries.
- Another point in cost structure is that annual depreciation represents 21 percent of operating cost, this high percentage is principally attributed to nature of telecom business to maintain extensive networks such exchanges, international gateways, transmission equipment, and cables through which telecommunication services are provided.
- Staff efficiency on telecom industry can be measure by number of lines per employee and revenue generated per employee. On average, each employee can serve 126 line and generate revenue of \$ 231,000 per annum.
- On average annual revenue per line is \$1,833. To be below or above the this average highly depend upon the type of the customers companies are serving. For instance, Teleco-B is above the industry average by 17 percent because most of their customers are business customers who have high traffic volume. Whereas, Teleco-C is lower than industry average by 53 percent because the most of company's customers are residential(household) customers.

Based upon respondents' views, assumptions about perceived WTO's impacts were extracted and used to quantify financial impacts on the five selected major companies. Then empirical findings of financial were compared with the formulated thesis questions, the following points summarize the outcome of comparison:

International telephone revenue

- Based on the empirical findings of five telecom companies, reduction in international telephone collection, resulted from rate cuts and/or loss of some of market share, will range from 5 to 20 percent. Therefore this reduction is considered to be fair rather than significant.
- Based on the empirical findings of five telecom companies, reduction in international telephone inpayment, resulted from changing accounting rate regime to be more cost oriented, will range from 5 to 16 percent. Therefore this reduction is considered to be fair rather than significant.
- Based on the empirical findings of five telecom companies, reduction in international telephone outpayment, resulted from changing accounting rate regime to be more cost-oriented, will range from 22 to 42 percent. Therefore this reduction is considered to be significant as expected earlier.

Therefore, the overall reduction in net international telephone revenue will be fair rather than major.

Cost structure

- Based on the empirical findings of five telecom companies, reduction in staff cost will range from 17 to 28 percent. Therefore, this reduction is considered to be major as expected earlier.
- Based on the empirical findings of five telecom companies, increase advertising cost, to promote companies services and maintain their market

shares, will range from 3 to 13 percent. Therefore, this reduction is considered to be fair rather than major.

- Based on the empirical findings of five telecom companies, increase in annual depreciation will range from 5 to 8 percent. Therefore, this reduction is considered to be fair rather than major.

Therefore, the net reduction in total operating cost will be fair rather than major.

Furthermore, by comparing the current industry averages with potential industry averages for specific-telecom ratios, the following points have pointed out:

- Contribution of international telephone collection to net revenue will drop from 33 to 29 percent, this indicates that companies reliance on this service to generate revenue will decline.
- Due to change in accounting rate regime oupayment ratio out of collection will drop from 57 to 44 percent, according company retaining ratio will improve by 13 percent, this will room for telecom companies to cut their charges
- Staff cost as percent of gross revenue will fall from 25 to 20 percent.

For the second two dimensions, operations structure and customers' benefits, it is very difficult to determine the validity of question of thesis because financial impacts of these two dimensions are very difficult to quantify at this stage. However concerning operations structure, it can be concluded from respondent view that the formation of alliances, joint ventures, or mergers among major telecom companies is a new and formidable phenomenon that would radically alter the international telecommunication environment and its

rules of operations. Nonetheless, small and major telecom companies would respond to that phenomenon but for different motives, small companies to protect themselves while giant companies to explore and exploit new markets and revenue.

The market is currently stifled, limiting benefits and keeping prices artificially high. However after market liberalization, customers and customers satisfaction would be the focus of telecom companies. Thus it is perceived that customers would ask for more benefits to be shifted to them for example in form of lower prices, different discount schemes, and wide range of services to match their needs. Hence the benefits of multinational liberalization would be dramatic and lead to economic growth.

6.5 Conclusion

WTO agreement promotes liberalization, and it enhances certainty, security and predictability through a clear set of rules. This is particularly valuable at a time when rapid growth and technological development are changing the face of the telecommunications industry. So it can be concluded that the latest significant development in the trend towards liberalization of telecommunications at the global level is the successful conclusion of the WTO negotiations on basic telecommunications. This agreement provides for a clear set of trade rules for basic telecommunications services on a multilateral basis which will result in further liberalization in this sector, including in international communications.

Governments around the world have sought to generate growth and to reduce structural inefficiency by removing artificial barriers and opening up the economy competition. By this trend, privatization - the transfer of assets from the state to the private sector - has played a major role in economic liberalization and represents a natural response to the pressure of global competition.

Lots of benefits flow from greater competition in telecommunication markets, people and nations can communicate more easily and understand one another better, customers will enjoy more choices and better quality, modernization and investment are enhanced worldwide, and more jobs would be created. The telecommunications agreement will contribute to lower cost for customers, and the price reduction will be very significant. This is a good news for firms, which in the aggregate spend more on telecommunication services. It is also good news for families and residential customers that in today's world are so often separated by physical distance.

Liberalization of telecommunications regimes by a number of developed has produced competition on a growing number of international routes. The recent WTO agreement on trade in basic telecommunications services can only accelerate and widen the geographical base of the existing trend towards liberalization. The resultant competition places significant pressures on traditional correspondent relations between telecom operators. In particular, competition in an operator's home market places pressure on the margins of that operator and restricts its ability to continue to pay above-cost accounting rates for the termination of its traffic in non-competitive markets. Thus it can be concluded that the bilaterally agreed rates have failed to reflect the technological advances and allow for an increasing proportion of the world's international traffic flowing outside the traditional settlements system. At a minimum, a significant volume of traffic will flow between nations which permit the use of alternatives to the traditional settlement rate for the termination of international traffic. Furthermore, if rates on some routes remain greatly in excess of cost, there is an ever greater incentive for carriers to engage in refile or hubbing both to exploit the differences between these rates and ones closer to cost, and to control their cost base in order to remain competitive. Thus the need for accounting rates reform becomes necessary and should be considered by WTO and ITU.

The organizational structure of international telecommunications has changed significantly over the past five years, with the emergence of global alliances and with telecom structure for providing international telecommunications services will change even more dramatically

It is in recognition of these benefits that so many governments have joined together to make the progress of negotiation process in NGBT a success. It has been seen that very different countries, at very different levels of development engaged in the negotiation endeavor.

6.4 Recommendations

The following are recommended action points to be taken by telecom companies in order to take advantage of the new changes in telecom industry as well as to minimize the adverse impacts that will be resulted from the implementation of WTO's requirements:

- High level of coordination among telecom companies needs to take place urgently in order to reform accounting rate regime to fit the logic liberalization. Reform of accounting rate should attempt to bring international telecommunications into a trade liberalization framework. System would need to be transparent, non-discriminatory, and cost-based to meet the benefits of reform and must provide for an adequate transit period, in particular for those developing countries which are heavily dependent on the current accounting rate system.
- Telecom companies, particularly dominant ones, should start to accept realities of competition and to be more customer-driven in order to maintain their current customer base and ready themselves for open market competition. To be customer-driven by satisfying current and potential needs of customers, such as providing different range of services at reasonable market prices.
- In open market competition, telecom companies should maintain high efficiency levels, by effective utilization of their networks and effective control of staff cost, as in the competitive environment efficiency plays an important role for survival.
- Telecom companies should think globally by starting strong alliances to strength their market positions and protect themselves against global competition.

6.5 Further Research Directions

Impacts of WTO on telecom industry is a critical subject and there are many other clear directions for further depth analysis and studies to be conducted either to address different dimensions that have not been addressed on this thesis such as impact on regulatory issues and technology breakthrough, or to study actual impact on the selected dimensions after the actual implementation of WTO principles in telecom industries, then comparison between actual and perceived can be made and deviations can be investigated.

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APPENDIX - A

Names of Selected Telecom Companies

1. Australia (Telestra)
2. Japan (KDD Japan)
3. HongKong (Hongkong Telecom)
4. Korea (KoraTelecom)
5. Singapore (Singapore Telecom)
6. Bahrain (Batelco)
7. UK (British Telecom)
8. UK (Mercury Communications)
9. USA (AT&T)
10. USA (Sprint International)

APPENDIX - B

PO BOX 14
Manama, Bahrain
Tel 0973 - 884995
Fax 0973 - 611484
Voice Mail 0973 - 860026
E-Mail : mkzayani@batelco.com.bh

December 11th 1996

The Perceived Impacts of WTO on Telecom
Companies (Questionnaire)

Dear Sir/Madam,

First of all I would like to introduce myself. My name is Maha Zayani from Bahrain. I am in the final stage of my MBA (Master in Business Administration - Finance) program at University of Bahrain. I have attended and passed all the examinations. Currently I am working on the final part which is writing the thesis.

The topic of my thesis is **“The Perceived Impacts of WTO/GATT on Telecommunication Companies”**. Considering the latest progress made in this area, it is worth conducting an empirical investigation on how the telecom industry will be changed/reshaped after implementation of WTO. This study concerns critical key dimensions of telecom operations that are likely to be affected by the implementation of WTO. The necessary information for completing this study will be collected via a structured questionnaire mailed to respective officials in major telecom companies operating in various regions of the world.

Please find enclosed questionnaire aiming at acquiring your valued views on the subject. Needless to say, by completing this questionnaire you would considerably assist me towards the finalization of the thesis and would enable me to make my conclusions and recommendations based on practical experience in this field.

Your views will remain confidential and anonymous throughout the preparation and after the completion of the thesis. I would like to take this opportunity to express my gratitude and appreciation for your kind patience in completing the questionnaire.

I would appreciate it very much if you would please do your best to complete the questionnaire and return it to me by 21st December 1996.

Yours faithfully,

Maha Zayani
Graduate Student at University of Bahrain

Questionnaire in the Perceived Impact of WTO on Telecom Companies

1. Introduction

The General Agreement on Trade and Tariffs (GATT) was fundamentally concerned with trade and tariffs of products. As a result of Uruguay Round, ministers from 124 countries signed agreement in Marrakech in April 1994. During this round of talks it was also decided to extend the scope of GATT from products to services. This resulted in General Agreement on Trade in Services (GATS). The GATS agreement details the principles to be applied to service sectors. Within the GATS agreement a telecom Annex has been agreed which provides clarification on the application of these principles to the telecoms sector, in terms of access to and use of the telecoms networks and services.

Basic telecommunications services is an area where governments did not offer commitments during the Uruguay Round - essentially because of complex issues of privatization of government monopolies arising in many countries. Sophisticated value-added telecommunications services, which are more commonly provided on a private basis, are however, included in many GATS schedules. The negotiation on basic telecommunications were due to end in April 1996 which then extended to February 1997, with new national commitments and a set of basic rules for liberalization. However, the implementation date would remain the same as previously planned - January 1st 1998.

The negotiators have approved regulatory guidelines outlawing anti-competitive practices by dominant carriers that will underpin moves to open telecom market to foreign companies.

2. Purpose of the Questionnaire

This questionnaire is designed to study specific set of dimensions of the Telecom industry, they are:

- I. Perceived impact of WTO on Telecom's international telephony revenue.
- II. Perceived impact of WTO on companies' cost structure
- III. Perceived impact of WTO on operation structure
- IV. Perceived impact of WTO on telecom customers

3. General Information

Department / Title:

Level of Management:

- Operating Management
- Middle Management
- Senior And Top Management

Years of Service:

- Less than 5 years
- 5 - 10 years
- More than 10 years

4. WTO and Telecom International Telephone Revenue

Revenue of most telecom companies come from the following main sources:

- International Telephone
- Local/National Telephone
- Mobile Services
- Others (Telex, Telegram, Leased lines, CPE ...etc.)

In this study our focus is only on international telephone because it represents the most competitive service in telecom industry.

Factors affecting International Telephone Revenue are

- International Settlement (Accounting Rates)
- Collection Rates paid by customers
- Interconnection charges (in case local operator is different from international operator)
- Market share

4.1 International Settlement (Accounting Rates):

Accounting rate can be defined as a rate bilaterally agreed upon by two terminating countries/administrations, whereby the originating country outpays a fee to the terminating country as a compensation for utilizing its network to terminate a call originated outside their boundaries.

Based on this brief background would you please answer the following questions:

Q1. What does your outpayment made to other countries/administrations currently amount as a percentage out of your gross revenue:

- Less than 10%
- 10% - 20%
- 20% - 30%
- 30% - 40%
- 40% - 50%
- More than 50%

Q2. What does your inpayment received from other countries/administrations currently amount as a percentage out of your gross revenue

- Less than 10%
- 10% - 20%
- 20% - 30%
- 30% - 40%
- 40% - 50%
- More than 50%

Q3. What are your expectations regarding accounting rate regime after market liberalization and open market access. Specify the regime you expect your company will follow:

- Current normal discriminatory and non-cost based accounting rate regime.
(Where accounting rate is divided equally between terminal countries)
- Call termination fees.
(Call termination fees offers a methodology which fits well with the WTO's trade liberalization framework. According to this system, each country/administration would define one standard charge for terminating calls, irrespective of where those calls come from. The system would be transparent, flexible, non-discriminatory and cost oriented. This concept is currently under discussion in the WTO and the ITU).
- Facilities-based interconnection charges.
(Facilities-based interconnection charges would be regarded as commercially confidential and would be based on competition for traffic).
- Other regimes, please specify:

Q4. Based on your answer to Q3 above, the expected change in accounting rate regime is likely to have the following impact on your outpayment:

Outpayment increase by:	OR	Outpayment decrease by:
.... 0% - 20%		 0% - 20%
.... 20% - 40%		 20% - 40%
.... 40% - 60%		 40% - 60%
.... More than 60%		 More than 60%

Q5. Based on your answer to Q3 above, the expected change in accounting rate regime is likely to have the following impact on your inpayment:

Inpayment increase by:	OR	Inpayment decrease by:
.... 0% - 20%		 0% - 20%
.... 20% - 40%		 20% - 40%
.... 40% - 60%		 40% - 60%
.... More than 60%		 More than 60%

4.2 Collection Rates

One of the main effects of liberalization and open market access is that customers will enjoy lower charges for their international calls.

Q6. How do you rank your current international collection rates compared with other Telecom companies in the same country (if there are more than one company), compared with main giant telecoms (if your company is the sole provider of the service):

..... Very high
..... High
..... Moderate
..... Low
..... Very low

Q7. What is the perceived impact of the reduction in collection rates your company plans to make to become more competitive in liberalized and opened markets:

..... 0% - 10%
..... 10% - 30%
..... 30% - 50%
..... More than 50%

4.3 International Telephony Market Share

Q8. What is your current market share for international telephone:

- 0% - 20%
- 20% - 40%
- 40% - 60%
- 60% - 80%
- More than 80%

Q9. How do you perceive the impact of market liberalization and open market access on your market share for international telephone:

- | Increase by: | OR | Decrease by: |
|--------------------|----|--------------------|
| 0% - 10% | | 0% - 10% |
| 10% - 20% | | 10% - 20% |
| 20% - 30% | | 20% - 30% |
| More than 30% | | More than 30% |

5. WTO and Telecom Cost Structure

After market liberalization and open market access, competition for providing telecommunications services will be more intensive, accordingly the current cost structure is expected to change to reflect the new market factors. Most of changes will be in following areas:

- More advertising cost to compete and gain market share.
- More capital expenditure to enhance network and/or build new infrastructure to satisfy market and customers needs.
- More control on staff and other administrative costs to increase efficiency.

5.1 Advertising Expenditure

Q10. What percentage of your gross revenue is currently allocated to advertising expenditure:

- 0% - 5%
- 5% - 10%
- 10% - 15%
- 15% - 20%
- More than 20%

Q11. As a result of implementation of WTO, how do you perceive your advertising expenditure will change:

Increase by:	OR	Decrease by:
.... 0% - 10%		 0% - 10%
.... 10% - 20%		 10% - 20%
.... 20% - 30%		 20% - 30%
.... 30% - 40%		 30% - 40%
.... More than 40%		 More than 40%

5.2 Network Cost

Q12. What is average percentage of your profit annually reserved for future investment in infrastructure ?

..... 0% - 10%
 10% - 30%
 30% - 50%
 More than 50%

Q13. As a result of implementing WTO, the current percentage of your profit reserved for future investment in infrastructure will:

Increase by:	OR	Decrease by:
.... 0% - 10%		 0% - 10%
.... 10% - 20%		 10% - 20%
.... 20% - 30%		 20% - 30%
.... 30% - 40%		 30% - 40%
.... More than 40%		 More than 40%

Q14. How do you perceive the relative importance of the following incentives for network capitalization under current market conditions and in the future after market liberalization and open market access:

- Enhancing current network to provide current services

Current:

..... Very important Important Less important Not important

Future:

..... Very important Important Less important Not important

- Building new network to provide current services

Current:

..... Very important Important Less important Not important

Future:

..... Very important Important Less important Not important

- Enhancing current network to provide new services

Current:

..... Very important Important Less important Not important

Future:

..... Very important Important Less important Not important

- Building new network to provide new services

Current:

..... Very important Important Less important Not important

Future:

..... Very important Important Less important Not important

5.3 Staff and other Administrative Cost

Q15. To be competitive telecom companies have to minimize their cost, to what extent can your company succeed in achieving this objective through reducing staff and administrative cost:

Current

Future

..... Able to do it easily without restrictions	
..... Able to do it with some sorts of restrictions/limitations	
..... Able to do it after major restrictions are removed	
..... Unable to do it at all	

Q16. If you answer to Q2 above able to do it easily without restrictions and able to do it with some sort or major of restrictions, how do you value the reduction in staff and other administrative costs:

..... Very Significant
 Significant
 Average
 Insignificant

6. WTO and Telecom Alliances

Major telecom carriers have proclaimed a corporate vision which requires them to become leaders in the world market telecommunications services. This global competition between the major carriers will penetrate into all the national markets where multinational corporations have operations. As part of the quest for global leadership, carriers are likely to strive to create alliances with other carriers and have equity investments in foreign carriers and/or own and operate networks nodes.

Q17. What are the current global alliances your company have ?

Q18. Based on your answer to Q 21, how do evaluate the following benefits your company is currently realizing from having alliances with other partners ?

1. More market share, in turn, greater revenue:
....Very Significant ... Significant ... Less Significant ... Not Significant at all
2. More synergy, in turn, more cost saving:
....Very Significant ... Significant ... Less Significant ...Not Significant at all
3. Transfer of technology and other related skills:
....Very Significant ...Significant ... Less Significant ... Not Significant at all
4. Market access
....Very Significant ... Significant ... Less Significant ... Not Significant at all

Q19 Are their any planned alliances in the future to cope with trend of globalization and open market access ?.

7. WTO and Telecom consumers

In competitive and liberalized markets, telecom customers will ask for more requirements and benefits to be passed to them.

Q20. Based on your current knowledge of your customers, what are your expectations regarding relative importance of each of the following benefits to your customers in the current market situation and future after implementation of WTO :

- Low prices and discount schemes

Current:

.... Very important Important Less important Not important

Future:

.... Very important Important Less important Not important

- High quality of services

Current:

.... Very important Important Less important Not important

Future:

.... Very important Important Less important Not important

- Quick and flexible Service

Current:

.... Very important Important Less important Not important

Future:

.... Very important Important Less important Not important

- Wide range of services

Current:

.... Very important Important Less important Not important

Future:

.... Very important Important Less important Not important

“Thank you for your kind cooperation”

APPENDIX - C

ANNEX ON TELECOMMUNICATIONS

1. Objectives

Recognizing the specificities of the telecommunications services sector and, in particular, its dual role as a distinct sector of economic activity and as the underlying transport means for other economic activities, the Members have agreed to the following Annex with the objective of elaborating upon the provisions of the Agreement with respect to measures affecting access to and use of public telecommunications transport networks and services. Accordingly, this Annex provides notes and supplementary provisions to the Agreement.

2. Scope

(a) This Annex shall apply to all measures of a Member that affect access to and use of public telecommunications transport networks and services.¹

(b) This Annex shall not apply to measures affecting the cable or broadcast distribution of radio or television programming.

(c) Nothing in this Annex shall be construed:

- (i) to require a Member to authorize a service supplier of any other Member to establish, construct, acquire, lease, operate, or supply telecommunications transport networks or services, other than as provided for in its Schedule; or
- (ii) to require a Member (or to require a Member to oblige service suppliers under its jurisdiction) to establish, construct, acquire, lease, operate or supply telecommunications transport networks or services not offered to the public generally.

3. Definitions

For the purposes of this Annex:

(a) "Telecommunications" means the transmission and reception of signals by any electromagnetic means.

(b) "Public telecommunications transport service" means any telecommunications transport service required, explicitly or in effect, by a Member to be offered to the public generally. Such services may include, *inter alia*, telegraph, telephone, telex, and data transmission typically involving the real-time transmission of customer-supplied information between two or more points without any end-to-end change in the form or content of the customer's information.

(c) "Public telecommunications transport network" means the public telecommunications infrastructure which permits telecommunications between and among defined network termination points.

(d) "Intra-corporate communications" means telecommunications through which a company communicates within the company or with or among its subsidiaries, branches and, subject to a Member's domestic laws and regulations, affiliates. For these purposes, "subsidiaries", "branches"

¹This paragraph is understood to mean that each Member shall ensure that the obligations of this Annex are applied with respect to suppliers of public telecommunications transport networks and services by whatever measures are necessary.

and, where applicable, "affiliates" shall be as defined by each Member. "Intra-corporate communications" in this Annex excludes commercial or non-commercial services that are supplied to companies that are not related subsidiaries, branches or affiliates, or that are offered to customers or potential customers.

(e) Any reference to a paragraph or subparagraph of this Annex includes all subdivisions thereof.

4. *Transparency*

In the application of Article III of the Agreement, each Member shall ensure that relevant information on conditions affecting access to and use of public telecommunications transport networks and services is publicly available, including: tariffs and other terms and conditions of service; specifications of technical interfaces with such networks and services; information on bodies responsible for the preparation and adoption of standards affecting such access and use; conditions applying to attachment of terminal or other equipment; and notifications, registration or licensing requirements, if any.

5. *Access to and use of Public Telecommunications Transport Networks and Services*

(a) Each Member shall ensure that any service supplier of any other Member is accorded access to and use of public telecommunications transport networks and services on reasonable and non-discriminatory terms and conditions, for the supply of a service included in its Schedule. This obligation shall be applied, *inter alia*, through paragraphs (b) through (f).²

(b) Each Member shall ensure that service suppliers of any other Member have access to and use of any public telecommunications transport network or service offered within or across the border of that Member, including private leased circuits, and to this end shall ensure, subject to paragraphs (e) and (f), that such suppliers are permitted:

- (i) to purchase or lease and attach terminal or other equipment which interfaces with the network and which is necessary to supply a supplier's services;
- (ii) to interconnect private leased or owned circuits with public telecommunications transport networks and services or with circuits leased or owned by another service supplier; and
- (iii) to use operating protocols of the service supplier's choice in the supply of any service, other than as necessary to ensure the availability of telecommunications transport networks and services to the public generally.

(c) Each Member shall ensure that service suppliers of any other Member may use public telecommunications transport networks and services for the movement of information within and across borders, including for intra-corporate communications of such service suppliers, and for access to information contained in data bases or otherwise stored in machine-readable form in the territory of any Member. Any new or amended measures of a Member significantly affecting such use shall be notified and shall be subject to consultation, in accordance with relevant provisions of the Agreement.

(d) Notwithstanding the preceding paragraph, a Member may take such measures as are necessary to ensure the security and confidentiality of messages, subject to the requirement that such

²The term "non-discriminatory" is understood to refer to most-favoured-nation and national treatment as defined in the Agreement, as well as to reflect sector-specific usage of the term to mean "terms and conditions no less favourable than those accorded to any other user of like public telecommunications transport networks or services under like circumstances".

measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on trade in services.

(e) Each Member shall ensure that no condition is imposed on access to and use of public telecommunications transport networks and services other than as necessary:

- (i) to safeguard the public service responsibilities of suppliers of public telecommunications transport networks and services, in particular their ability to make their networks or services available to the public generally;
- (ii) to protect the technical integrity of public telecommunications transport networks or services; or
- (iii) to ensure that service suppliers of any other Member do not supply services unless permitted pursuant to commitments in the Member's Schedule.

(f) Provided that they satisfy the criteria set out in paragraph (e), conditions for access to and use of public telecommunications transport networks and services may include:

- (i) restrictions on resale or shared use of such services;
- (ii) a requirement to use specified technical interfaces, including interface protocols, for inter-connection with such networks and services;
- (iii) requirements, where necessary, for the inter-operability of such services and to encourage the achievement of the goals set out in paragraph 7(a);
- (iv) type approval of terminal or other equipment which interfaces with the network and technical requirements relating to the attachment of such equipment to such networks;
- (v) restrictions on inter-connection of private leased or owned circuits with such networks or services or with circuits leased or owned by another service supplier; or
- (vi) notification, registration and licensing.

(g) Notwithstanding the preceding paragraphs of this section, a developing country Member may, consistent with its level of development, place reasonable conditions on access to and use of public telecommunications transport networks and services necessary to strengthen its domestic telecommunications infrastructure and service capacity and to increase its participation in international trade in telecommunications services. Such conditions shall be specified in the Member's Schedule.

6. *Technical Cooperation*

(a) Members recognize that an efficient, advanced telecommunications infrastructure in countries, particularly developing countries, is essential to the expansion of their trade in services. To this end, Members endorse and encourage the participation, to the fullest extent practicable, of developed and developing countries and their suppliers of public telecommunications transport networks and services and other entities in the development programmes of international and regional organizations, including the International Telecommunication Union, the United Nations Development Programme, and the International Bank for Reconstruction and Development.

(b) Members shall encourage and support telecommunications cooperation among developing countries at the international, regional and sub-regional levels.

(c) In co-operation with relevant international organizations, Members shall make available, where practicable, to developing countries information with respect to telecommunications services and developments in telecommunications and information technology to assist in strengthening their domestic telecommunications services sector.

(d) Members shall give special consideration to opportunities for the least-developed countries to encourage foreign suppliers of telecommunications services to assist in the transfer of technology, training and other activities that support the development of their telecommunications infrastructure and expansion of their telecommunications services trade.

7. *Relation to International Organizations and Agreements*

(a) Members recognize the importance of international standards for global compatibility and inter-operability of telecommunication networks and services and undertake to promote such standards through the work of relevant international bodies, including the International Telecommunication Union and the International Organization for Standardization.

(b) Members recognize the role played by intergovernmental and non-governmental organizations and agreements in ensuring the efficient operation of domestic and global telecommunications services, in particular the International Telecommunication Union. Members shall make appropriate arrangements, where relevant, for consultation with such organizations on matters arising from the implementation of this Annex.

APPENDIX - D

TELECO - A ANALYSIS TABLES

Table -1 TELECO-A FINANCIAL STATEMENTS
(\$ 000's)

<u>I. Structured Income Statement</u>	Dec. 1994	Dec. 1995
Revenue:		
International Telephone	100,734	102,502
Inpayment	44,117	42,523
National Telephone	34,292	39,204
Others	64,624	71,981
Total Gross Revenue	243,767	256,210
Less Outpayment	62,610	68,263
Net Revenue	181,156	187,947
Expenses		
Staff Cost	49,592	51,172
Advertising Cost	1,942	1,427
Depreciation	40,920	42,772
Others	24,562	24,130
Total Expenses	117,016	119,501
Profit	64,141	68,446

<u>II. Balance Sheet</u>	Dec. 1994	Dec. 1995
Net Assets Employed		
Property, Plant and Equipment	322,276	327,040
Staff Housing Loans	6,106	6,767
Investment	11,430	13,042
	339,812	346,849
Current Assets		
Inventories	3,212	3,562
Accounts Receivable and Prepayment	33,180	33,753
Amounts due from Telecom Admin.	7,223	6,077
Bank Balances and Cash	111,398	121,605
	155,013	164,997
Total Assets	494,825	511,846
Current Liabilities		
Accounts Payable and accruals	38,769	42,658
Amounts due to Telecom Admin.	25,080	22,955
Proposed Dividends	53,050	57,294
	116,899	122,907
Net Current Assets	38,114	42,090
Net Assets	377,926	388,939
Shareholder's Fund		
Share Capital	212,202	212,202
Statutory Reserve	52,833	53,050
General Reserve	39,788	39,788
Retained Earnings	73,103	83,899
	377,926	388,939

Table -2 TELECO-A FINANCIAL EVALUATION
(\$ 000's)

I. Five Years at a Glance					
	1991	1992	1993	1994	1995
Gross Revenue	222,800	218,821	225,983	243,767	256,210
Profit	65,782	49,337	55,703	64,191	68,435
Investment in New Assets	40,053	43,767	57,029	48,541	48,541
Return on Capital Employed	19%	14%	15%	17%	18%
Earnings per Share (Cent)	8.22	6.10	6.90	7.96	8.49
Dividend per Share (Cent)	5.04	5.04	5.84	6.63	7.16

II. Revenue & Cost Breakdown				
	Dec. 1994	Dec. 1995	Company 2-Yr Av.	Industry Average
Revenue				
International Telephone Collection	56%	55%	55%	33%
International Telephone Inpayment	24%	23%	23%	14%
National Telephone	19%	21%	20%	34%
Others	36%	38%	37%	38%
Total Gross Revenue	135%	136%	135%	119%
International Telephone Outpayment	(35%)	(36%)	(35%)	(19%)
Net Revenue	100%	100%	100%	100%
Cost				
Staff Cost	42%	43%	43%	34%
Advertising Cost	2%	1%	1%	5%
Depreciation	35%	36%	35%	27%
Others	21%	20%	21%	34%
Total	100%	100%	100%	100%

III. Financial Ratios					
	Dec. 1994	Dec. 1995	Company 2-Yr Av.	Industry Average	
Liquidity:					
Current Assets	1.33	1.34	1.34	1.30	times
Quick Ratio	1.30	1.31	1.31	1.26	times
Leverage:					
Debt Ratio	24%	24%	24%	35%	
Activity					
Average collection period (Debtors)	52	56	54	71	days
Average payment period (Creditors)	106	31	69	N/A	days
Bad debts per cent	N/A	0.60%	0.60%	N/A	of customer billing
Fixed assets turnover	0.72	0.70	0.71	0.70	times
Total assets turnover	0.49	0.50	0.50	0.50	times
Profitability					
Profit margin on sales	35.0%	36.0%	35.5%	32%	
Return on total assets	13.0%	13.4%	13.2%	18%	
Return on capital	17.0%	17.6%	17.3%	26%	
Other Ratios (Specific to Telecom Industry)					
% of Outpayment out of int'l collection	62%	67%	64%	57%	
% of inpayment out of int'l collection	44%	41%	43%	42%	
% of staff cost out of gross revenue	20%	20%	20%	25%	
Lines per Employee	65	66	66	126	Lines
Revenue per Employee	116	117	116	231	\$ 000's

Table - 3 WTO's FINANCIAL IMPACTS ON TELECO-A
(\$ 000's)

I. Impact on International Telephone & Cost Structure

	Actual		Potential		
	1994	1995	Low	Average	High
1. International Telephone Revenue					
International Telephone	100,734	102,502	73,801	61,501	50,226
Impact			(28,701)	(41,001)	(52,276)
Plus: Inpayment	44,117	42,523	25,514	21,261	17,009
Impact			(17,009)	(21,261)	(25,514)
Less: Outpayment	62,610	68,263	43,688	35,838	28,670
Impact			(24,575)	(32,425)	(39,592)
Net International Telephone Revenue	82,241	76,762	55,627	46,925	38,565
Net Impact on International Telephone Rev.			(21,135)	(29,837)	(38,197)
Percentage			(28%)	(39%)	(50%)
2. Cost Structure					
Staff Cost	49,592	51,172	46,055	43,497	40,938
Impact			(5,117)	(7,676)	(10,234)
Advertising Cost	1,942	1,427	1,855	1,927	1,998
Impact			428	499	571
Depreciation	40,920	42,772	46,511	50,420	54,498
Impact			3,739	7,648	11,727
Others	24,562	24,130	24,130	24,130	24,130
Total Cost	117,016	119,501	118,551	119,973	121,564
Net Impact on Cost Structure			(950)	471	2,063
Percentage			(1%)	0%	2%

II. Structured Income Statement with Perceived Impact

	Actual		Potential		
	1994	1995	Low	Average	High
Revenue:					
International Telephone	100,734	102,502	73,801	61,501	50,226
Inpayment	44,117	42,523	25,514	21,261	17,009
National Telephone	34,292	39,204	39,204	39,204	39,204
Others	64,624	71,981	71,981	71,981	71,981
Total Gross Revenue	243,767	256,210	210,500	193,947	178,420
Less Outpayment	62,610	68,263	43,688	35,838	28,670
Net Revenue	181,156	187,947	166,812	158,110	149,750
Expenses					
Staff Cost	49,592	51,172	46,055	43,497	40,938
Advertising Cost	1,942	1,427	1,855	1,927	1,998
Depreciation	40,920	42,772	46,511	50,420	54,498
Others	24,562	24,130	24,130	24,130	24,130
Total Expenses	117,016	119,501	118,551	119,973	121,564
Profit	64,141	68,446	48,261	38,137	28,185
WTO Net Impact			(20,185)	(30,309)	(40,260)
Percentage of Net Impact			(29%)	(44%)	(59%)

CONT. TABLE - 3

III. Financial Ratio Current and Potential

	Current		Potential	
	Com. Av.	Industry Av.	Com. Av.	Industry Av.
Revenue & Cost Structure:				
<u>Revenue</u>				
International Telephone Collection	55%	33%	39%	29%
International Telephone Inpayment	23%	14%	13%	12%
National Telephone	20%	34%	25%	33%
Others	37%	38%	46%	38%
Total Gross Revenue	135%	119%	123%	113%
International Telephone Outpayment	(35%)	(19%)	(23%)	(13%)
Net Revenue	100%	100%	100%	100%
<u>Cost</u>				
Staff Cost	43%	34%	36%	29%
Advertising Cost	1%	5%	2%	6%
Depreciation	35%	27%	42%	25%
Others	21%	34%	20%	41%
Total	100%	100%	100%	100%
Other Ratios (Specific to Telecom Industry)				
% of Outpayment out of int'l collection	64%	57%	58%	44%
% of inpayment out of int'l collection	43%	42%	35%	43%
% of staff cost out of gross revenue	20%	25%	22%	20%

TELECO - B ANALYSIS TABLES

Table -1 TELECO-B FINANCIAL STATEMENTS
(\$ 000's)

	Mar. 1995	Mar. 1996
<u>I. Structured Income Statement</u>		
Revenue		
International Telephone	1,193,183	1,295,947
Inpayment	280,398	273,445
National Telephone	286,979	320,876
Others	1,034,785	1,242,846
Total Gross Revenue	2,795,346	3,133,113
Less Outpayment	715,910	777,568
Net Revenue	2,079,436	2,355,545
Expenses		
Staff Cost	302,497	320,018
Advertising Cost	43,873	50,545
Depreciation	252,153	262,307
Others	247,468	314,311
Total Expenses	845,991	947,181
Operating Profit	1,233,445	1,408,364
Share of Profits and Losses of:		
Associated Companies	(143)	(19,523)
Joint Venture Companies	(27,532)	(43,265)
Investment Income	23,671	28,247
Interest Income and others	30,464	29,678
Profit before Taxation	1,259,904	1,403,501
Taxation	(312,867)	(341,114)
Profit After Taxation	947,038	1,062,387
Minority Interests	715	572
Profit before Extraordinary Items	947,753	1,062,959
Extraordinary Items	18,093	
Profit Attributable to Shareholders	965,846	1,062,959
Proposed Final Dividends	(278,612)	(322,807)
Profit for the Year Retained	687,234	740,153

CONT. Table -1 TELECO-B FINANCIAL STATEMENTS

II. Balance Sheet

	Mar. 1995	Mar. 1996
Share Capital	1,635,773	1,635,773
Reserves	1,438,328	2,170,471
Minority Interests	4,005	3,433
Share Capital and Reserves	3,078,106	3,809,677

Represented by:

Goodwill on Consolidation	125,576	808,376
Fixed Assets	2,217,097	2,389,299
Associated Companies	84,528	106,339
Joint Venture Companies	179,782	167,696
Long Term Investments	293,344	319,446
Other Non-Current Assets	30,107	37,830

Current Assets

Stocks	66,149	60,785
Trade Debtors	274,178	342,330
Other Debtors, Deposits and Prepayments	43,050	52,991
Due from Associated Companies	4,648	7,294
Short Term Investments	65,076	348,909
Cash and Bank Balances	1,474,728	1,059,384
	1,927,830	1,871,693

Less:

Current Liabilities

Trade Creditors	291,127	363,140
Other Creditors and Accruals	151,749	169,341
Advance Billings	131,011	124,503
Customers' Deposits	25,029	13,301
Long Term Loans		
Bonds (Unsecured)	214,537	
Bank Overdraft		
Short Term Bank Loans	97,829	158,042
Provision For Taxation	300,423	402,543
Proposed Dividend	278,612	322,807
	1,496,968	1,556,037

Net Current Assets/(Liabilities)

	430,862	315,655
	3,361,295	4,144,641

Less:

Non Current Liabilities

Long Term Bank Loans	90,249	99,188
Bonds		71,512
Deferred Taxation	192,940	164,264
	283,189	334,964
	3,078,106	3,809,677
	3,361,295	4,144,641

ble - 2 TELECO-B FINANCIAL EVALUATION

I. Five Years at a Glance

	1992	1993	1994	1995	1996
Gross Revenue	2,050,445	2,250,393	2,558,969	2,795,346	3,133,113
Operating Profit	778,769	881,747	1,082,697	1,233,445	1,408,364
Investment in New Assets	803,084	358,992	472,697	374,010	375,440
Earnings per Share (Cent)	N/A	0.00	0.00	0.00	0.00
Gross Dividend per Share(Cent)	N/A	1.22	2.15	2.50	2.86

II. Revenue & Cost Breakdown

	Dec. 1994	Dec. 1995	Company 2-Yr Av.	Industry Average
Revenue				
International Telephone Collection	57%	55%	56%	33%
International Telephone Inpayment	13%	12%	13%	14%
National Telephone	14%	14%	14%	34%
Others	50%	53%	51%	38%
Total Gross Revenue	134%	133%	134%	119%
International Telephone Outpayment	(34%)	(33%)	(34%)	(19%)
Net Revenue	100%	100%	100%	100%
Cost				
Staff Cost	36%	34%	35%	34%
Advertising Cost	5%	5%	5%	5%
Depreciation	30%	28%	29%	27%
Others	29%	33%	31%	34%
Total	100%	100%	100%	100%

III. Financial Ratios

	Mar. 1995	Mar. 1996	Company 2-Yr Av.	Industry Average
Liquidity:				
Current Assets	1.3	1.2	1.25	1.30 times
Quick Ratio	1.24	1.16	1.2	1.26 times
Leverage:				
Debt Ratio	37%	33%	35%	35%
Activity				
Average collection period (Debtors)	35	40	37.5	71 days
Average payment period (Creditors)	N/A	N/A	N/A	N/A days
Bad debts per cent	N/A	N/A	N/A	N/A of customer billing
Fixed assets turnover	0.95	0.82	0.89	0.70 times
Total assets turnover	0.58	0.55	0.57	0.50 times
Profitability				
Profit margin on sales	59%	60%	60%	32%
Return on total assets	43%	41%	42%	18%
Return on capital	68%	62%	65%	26%
Other				
% of Outpayment out of int'l collection	60%	60%	60%	59%
% of inpayment out of int'l collection	24%	21%	22%	38%
Other Ratios (Specific to Telecom Industry)				
% of Outpayment out of int'l collection	60%	60%	60%	57% Lines
% of inpayment out of int'l collection	24%	21%	22%	42% \$ 000's
% of staff cost out of gross revenue	11%	10%	11%	25%
Lines per Employee	122	127	124	126
Revenue per Employee	256	278	267	231

Table - 3 WTO's FINANCIAL IMPACTS ON TELECO-B

I. Impact on International Telephone & Cost Structure

	Actual		Potential		
	1995	1996	Low	Average	High
1. International Telephone Revenue					
International Telephone	1,193,183	1,295,947	1,049,717	713,807	399,732
Impact			(246,230)	(582,139)	(896,215)
Plus: Inpayment	280,398	273,445	273,445	246,100	218,756
Impact			0	(27,344)	(54,689)
Less: Outpayment	715,910	777,568	699,811	594,840	497,644
Impact			(77,757)	(182,728)	(279,924)
Net International Telephone Revenue	757,671	791,823	623,350	365,068	120,844
Net Impact on International Telephone Rev.			(168,473)	(426,755)	(670,979)
Percentage			(21%)	(54%)	(85%)
2. Cost Structure					
Staff Cost	302,497	320,018	224,012	192,011	160,009
Impact			(96,005)	(128,007)	(160,009)
Advertising Cost	43,873	50,545	60,654	63,181	65,708
Impact			10,109	12,636	15,163
Depreciation	252,153	262,307	294,316	295,771	297,226
Impact			32,009	33,464	34,918
Others	247,468	314,311	314,311	314,311	314,311
Total Cost	845,991	947,181	893,293	865,274	837,254
Net Impact on Cost Structure			(53,888)	(81,907)	(109,927)
Percentage			(6%)	(9%)	(13%)

II. Structured Income Statement with Perceived Impact

	Actual		Potential		
	1995	1996	Low	Average	High
Revenue					
International Telephone	1,193,183	1,295,947	1,049,717	713,807	399,732
Inpayment	280,398	273,445	273,445	246,100	218,756
National Telephone	286,979	320,876	320,876	320,876	320,876
Others	1,034,785	1,242,846	1,242,846	1,242,846	1,242,846
Total Gross Revenue	2,795,346	3,133,113	2,886,883	2,523,629	2,182,210
Less Outpayment	715,910	777,568	699,811	594,840	497,644
Net Revenue	2,079,436	2,355,545	2,187,072	1,928,790	1,684,566
Expenses					
Staff Cost	302,497	320,018	224,012	192,011	160,009
Advertising Cost	43,873	50,545	60,654	63,181	65,708
Depreciation	252,153	262,307	294,316	295,771	297,226
Others	247,468	314,311	314,311	314,311	314,311
Total Expenses	845,991	947,181	893,293	865,274	837,254
Operating Profit	1,233,445	1,408,364	1,293,779	1,063,516	847,312
WTO Net Impact			(114,585)	(344,848)	(561,052)
Percentage of Net Impact			(8%)	(24%)	(40%)

CONT. TABLE - 3

III. Financial Ratio Current and Potential				
	Current		Potential	
	Com. Av.	Industry Av.	Com. Av.	Industry Av.
Revenue & Cost Structure:				
<u>Revenue</u>				
International Telephone Collection	56%	33%	37%	29%
International Telephone Inpayment	13%	14%	13%	12%
National Telephone	14%	34%	17%	33%
Others	51%	38%	64%	38%
Total Gross Revenue	134%	119%	131%	113%
International Telephone Outpayment	-34%	-19%	31%	-13%
Net Revenue	100%	100%	100%	100%
<u>Cost</u>				
Staff Cost	35%	34%	10%	29%
Advertising Cost	5%	5%	3%	6%
Depreciation	29%	27%	15%	25%
Others	31%	34%	16%	41%
Total	100%	100%	45%	100%
Other Ratios (Specific to Telecom Industry)				
% of Outpayment out of inf'l collection	60%	57%	83%	44%
% of inpayment out of inf'l collection	22%	42%	34%	43%
% of staff cost out of gross revenue	11%	25%	8%	20%

TELECO - C ANALYSIS TABLES

Table -1 TELECO-C FINANCIAL STATEMENTS
(\$ 000's)

	Dec.	Dec.
	1994	1995
<u>I. Structured Income Statement</u>		
Revenue		
International Telephone	3,276,496	3,234,704
Inpayment	1,474,423	1,455,617
National Telephone	8,681,043	8,259,779
Others	9,428,285	10,274,574
Total Gross Revenue	22,860,247	23,224,674
Less Outpayment	1,962,554	1,992,645
Net Revenue	20,897,693	21,232,029
Expenses		
Staff Cost	6,773,654	6,489,468
Advertising Cost	594,659	627,382
Depreciation	3,604,146	3,572,384
Others	4,885,114	6,040,956
Total Expenses	15,857,573	16,730,191
Operating Profit	5,040,120	4,501,839
Group's Share of Profit of Associated Undertakings	30,090	153,795
Profit (Loss) on Sale of Group Undertakings	(23,404)	402,875
Profit before employee share ownership scheme and ii	5,046,807	5,058,509
Employee share ownership scheme	55,165	50,150
Interest receivable	(265,797)	(259,111)
Interest payable	650,284	692,076
Premium on repurchase of bonds	0	125,376
Profit on ordinary activities before taxation	4,607,155	4,450,017
Tax on profit on ordinary activities	1,589,769	1,547,977
Profit on ordinary activities after taxation	3,017,385	2,902,039
Minority interests	63,524	8,358
Profit for the financial year	2,953,862	2,893,681
Dividends	1,736,877	1,852,223
Retained profit for the financial year	1,216,984	1,041,458

CONT. Table -1 TELECO-C FINANCIAL STATEMENTS

II. Teleco- Balance Sheet	Dec. 1995	Dec. 1996
Fixed Assets		
Tangible Assets	26,051,488	26,766,968
Investment	2,193,246	1,805,416
Total Fixed Assets	28,244,734	28,572,384
Current Assets		
Stocks	361,083	412,905
Debtors	4,480,107	4,546,974
Investments	4,535,272	2,109,662
Cash at bank and in hand	100,301	230,692
Total Current Assets	9,476,764	7,300,234
Creditors: Amounts Falling Due within one Yr.		
Loans and other borrowings	1,337,345	317,620
Other creditors	7,930,458	8,191,240
Total	9,267,803	8,508,860
Net Current Assets/(Liabilities)	208,960	(1,208,626)
Total Assets less current Liabilities	28,453,694	27,363,758
Creditors: amount falling due after more than one year		
Loans and other borrowings	5,347,710	5,618,522
Provisions for Liabilities and charge	1,171,849	1,469,408
Minority Interests	158,810	220,662
Capital and Reserve		
Called up share capital	2,596,122	2,606,152
Share premium account	608,492	693,748
Other reserves	1,272,150	1,283,852
Profit and loss account	17,298,562	15,471,414
Total shareholders' funds	21,775,326	20,055,165
	28,453,694	27,363,758

Table -2 TELECO-C FINANCIAL EVALUATION
(\$ 000's)

II. Five Years at a Glance					
	1991	1992	1993	1994	1995
Gross Revenue	21,989,301	22,295,219	22,136,409	22,860,247	23,224,674
Operating Profit	5,912,738	5,697,091	4,072,217	5,040,120	4,501,839
Capital Expenditure	4,088,933	3,602,474	3,629,221	4,465,062	4,632,230
Network Expenditure	3,637,579	2,801,739	2,881,979	3,415,246	3,629,221
Earning per Share (Cent)	56.84	55.50	33.10	47.64	46.47
Dividends per Share(Cent)	22.23	24.07	26.08	27.92	29.59

II. Revenue & Cost Breakdown				
	Dec. 1994	Dec. 1995	Company 2-Yr Av.	Industry Average
Revenue				
International Telephone Collection	16%	15%	15%	33%
International Telephone Inpayment	7%	7%	7%	14%
National Telephone	42%	39%	40%	34%
Others	45%	48%	47%	38%
Total Gross Revenue	109%	109%	109%	119%
International Telephone Outpayment	(9%)	(9%)	(9%)	(19%)
Net Revenue	100%	100%	100%	100%
Cost				
Staff Cost	43%	39%	41%	34%
Advertising Cost	4%	4%	4%	5%
Depreciation	23%	21%	22%	27%
Others	31%	36%	33%	34%
Total	100%	100%	100%	100%

III. Financial Ratios					
	Dec. 1994	Dec. 1995	Company 2-Yr Av.	Industry Average	
Liquidity					
Current Assets	1.02	0.86	0.94	1.30	times
Quick Ratio	0.98	0.81	0.895	1.26	times
Leverage					
Debt Ratio	42%	44%	43%	35%	
Activity					
Average collection period (Debtors)	72	71	71.5	71	days
Average payment period (Creditors)	N/A	N/A	N/A	N/A	days
Bad debts per cent	N/A	N/A	N/A	N/A	of customer billing
Fixed assets turnover	0.81	0.81	0.81	0.70	times
Total assets turnover	0.61	0.65	0.63	0.50	times
Profitability					
Profit margin on sales	24%	21%	23%	32%	
Return on total assets	13%	13%	13%	18%	
Return on capital	23%	23%	23%	26%	
Other Ratios (Specific to Telecom Industry)					
% of Outpayment out of int'l collection	60%	62%	61%	57%	
% of inpayment out of int'l collection	45%	45%	45%	42%	
% of staff cost out of gross revenue	30%	28%	29%	25%	
Lines per Employee	171	197	184	126	Lines
Revenue per Employee	147	169	158	231	\$ 000's

Table - 3 WTO's FINANCIAL IMPACTS ON TELECO-C
(\$ 000's)

I. Impact on International Telephone & Cost Structure					
	Actual		Potential		
	1995	1996	Low	Average	High
1. International Telephone Revenue					
International Telephone	3,276,496	3,234,704	3,234,704	2,919,320	2,620,110
Impact			0	(315,384)	(614,594)
Plus: Inpayment	1,474,423	1,455,617	1,455,617	1,310,055	1,164,493
Impact			0	(145,562)	(291,123)
Less: Outpayment	1,962,554	1,992,645	1,992,645	1,798,362	1,614,042
Impact			0	(194,283)	(378,602)
Net International Telephone Revenue	2,788,365	2,697,676	2,697,676	2,431,014	2,170,562
Net Impact on International Telephone Rev.			0	(266,662)	(527,115)
Percentage			0%	(10%)	(20%)
2. Cost Structure					
Staff Cost	6,773,654	6,489,468	5,191,575	4,867,101	4,542,628
Impact			(1,297,894)	(1,622,367)	(1,946,841)
Advertising Cost	594,659	627,382	627,382	658,751	690,120
Impact			0	31,369	62,738
Depreciation	3,604,146	3,572,384	3,848,888	3,862,713	3,876,538
Impact			276,504	290,329	304,154
Others	4,885,114	6,040,956	6,040,956	6,040,956	6,040,956
Total Cost	15,857,573	16,730,191	15,708,801	15,429,522	15,150,243
Net Impact on Cost Structure			(1,021,390)	(1,300,669)	(1,579,948)
Percentage			(6%)	(8%)	(10%)

II. Structured Income Statement with Perceived Impact					
	Actual		Potential		
	1994	1995	Low	Average	High
Revenue					
International Telephone	3,276,496	3,234,704	3,234,704	2,919,320	2,620,110
Inpayment	1,474,423	1,455,617	1,455,617	1,310,055	1,164,493
National Telephone	8,681,043	8,259,779	8,259,779	8,259,779	8,259,779
Others	9,428,285	10,274,574	10,274,574	10,274,574	10,274,574
Total Gross Revenue	22,860,247	23,224,674	23,224,674	22,763,729	22,318,957
Less Outpayment	1,962,554	1,992,645	1,992,645	1,798,362	1,614,042
Net Revenue	20,897,693	21,232,029	21,232,029	20,965,367	20,704,915
Expenses					
Staff Cost	6,773,654	6,489,468	5,191,575	4,867,101	4,542,628
Advertising Cost	594,659	627,382	627,382	658,751	690,120
Depreciation	3,604,146	3,572,384	3,848,888	3,862,713	3,876,538
Others	4,885,114	6,040,956	6,040,956	6,040,956	6,040,956
Total Expenses	15,857,573	16,730,191	15,708,801	15,429,522	15,150,243
Operating Profit	5,040,120	4,501,839	5,523,229	5,535,845	5,554,672
WTO Net Impact			483,108	495,725	514,552
Percentage of Net Impact			9%	9%	9%

CONT. TABLE - 3

III. Financial Ratio Current and Potential**Revenue & Cost Structure:****Revenue**

	Current		Potential	
	Com. Av.	Industry Av.	Com. Av.	Industry Av.
International Telephone Collection	15%	33%	15%	29%
International Telephone Inpayment	7%	14%	7%	12%
National Telephone	40%	34%	39%	33%
Others	47%	38%	48%	38%
Total Gross Revenue	109%	119%	109%	113%
International Telephone Outpayment	-9%	-19%	-9%	-13%
Net Revenue	100%	100%	100%	100%

Cost

Staff Cost	41%	34%	39%	29%
Advertising Cost	4%	5%	4%	6%
Depreciation	22%	27%	21%	25%
Others	33%	34%	36%	41%
Total	100%	100%	100%	100%

Other Ratios (Specific to Telecom Industry)

% of Outpayment out of int'l collection	60%	57%	62%	44%
% of inpayment out of int'l collection	45%	42%	73%	43%
% of staff cost out of gross revenue	30%	25%	21%	20%

TELECO - D ANALYSIS TABLES

Table -1 TELECO-D FINANCIAL STATEMENTS
(\$ 000's)

<u>L. Structured Income Statement</u>	Dec. 1994	Dec. 1995
Revenue		
International Telephone	1,118,693	1,429,905
Inpayment	344,213	439,971
National Telephone	258,160	329,978
Others	486,891	574,594
Total Gross Revenue	2,207,966	2,774,460
Less Outpayment	585,430	818,478
Net Revenue	1,622,536	1,955,982
Expenses		
Staff Cost	251,900	291,281
Advertising Cost	141,848	171,257
Depreciation	407,392	496,116
Others	617,337	753,914
Total Expenses	1,418,477	1,712,569
Operating Profit	204,140	243,414
Other Non-operating Income	163,656	148,372
Other Non-operating Expense	54,624	76,967
Income before Taxes	313,172	314,818
Taxes on Income	162,760	169,345
Net Income	150,412	145,473

CONT. Table -1 TELECO-D FINANCIAL STATEMENTS

II. Balance Sheet		
	Dec.	Dec.
Assets	1994	1995
Property and Investments		
Buildings and Structures	768,038	893,318
Machinery and Equipment	540,314	609,502
Submarine Cable Systems	366,434	455,243
Other Tangible Fixed Assets	492,545	606,413
Construction in Progress	147,168	283,358
	2,314,498	2,847,834
Indefeasible Right of Cuser in Cable Circuits	28,127	30,543
Capital Contribution to Intelsat & Inmarsat	120,099	147,129
Other Intangible Fixed Assets	194,928	269,703
	343,154	447,375
long-term Investments - at cost	556,962	872,020
Housing Loans to Employee	129,892	153,117
Less: Reserve for Uncollectibles	(1,066)	(1,041)
	685,789	1,024,096
	3,343,441	4,319,306
Current Assets		
Cash and Temporary Investments	906,039	1,007,487
Accounts Receivable	566,783	714,404
Less: Reserve for Incollectibles	(28,217)	(57,616)
Material and Supplies	13,799	13,262
Other Current Assets	9,427	25,137
	1,467,832	1,702,675
Total Assets	4,811,272	6,021,981
stockholders' Equity and Liabilities		
Stockholders' Equity		
Common Stock	309,382	386,435
Capital Surplus	124,785	155,859
Retained Earnings	2,472,563	3,196,307
	2,906,729	3,738,601
Fixed Liabilities		
Straight Bonds	173,271	216,419
Convertible Bonds	383,414	447,678
Reserve for Retirement Allowance	498,297	621,063
Other Fixed Liabilities	155,708	191,651
	1,210,690	1,476,810
Current Liabilities		
Accounts Payable	401,577	451,673
Accrued Expenses	103,925	134,303
Accrued Taxes	83,199	74,348
Employee's Deposits	87,930	118,657
Other Current Liabilities	17,222	27,588
	693,853	806,570
Total Stockholders' Equity and Liabilities	4,811,272	6,021,981

Table -2 TELECO-D FINANCIAL EVALUATION
(\$ 000's)

I. Five Years at a Glance

	1991	1992	1993	1994	1995
Turnover	1,845,208	2,285,842	2,246,416	2,207,966	2,774,460
Operating Profit	183,432	219,534	203,405	224,910	318,970
Total Assets	8,961	8,961	8,961	8,961	6,008,954
Earning per Share (Cent)	N/A	N/A	N/A	N/A	N/A
Dividends per Share(Cent)	N/A	N/A	N/A	N/A	N/A

II. Revenue & Cost Breakdown

	Dec. 1994	Dec. 1995	Company 2-Yr Av.	Industry Average
<u>Revenue</u>				
International Telephone Collection	69%	73%	71%	33%
International Telephone Inpayment	21%	22%	22%	14%
National Telephone	16%	17%	16%	34%
Others	30%	29%	30%	38%
Total Gross Revenue	136%	142%	139%	119%
International Telephone Outpayment	(36%)	(42%)	(39%)	(19%)
Net Revenue	100%	100%	100%	100%
<u>Cost</u>				
Staff Cost	18%	17%	17%	34%
Advertising Cost	10%	10%	10%	5%
Depreciation	29%	29%	29%	27%
Others	44%	44%	44%	34%
Total	100%	100%	100%	100%

III. Financial Ratios

	Dec. 1994	Dec. 1995	Company Average	Industry Average	
Liquidity					
Current Assets	2.12	2.11	2.12	1.30	times
Quick Ratio	2.10	2.09	2.10	1.26	times
Leverage					
Debt Ratio	40%	38%	39%	35%	
Activity					
Average collection period (Debtors)	94	94	94	71	days
Average payment period (Creditors)	N/A	N/A	N/A	N/A	days
Bad debts per cent	N/A	N/A	N/A	N/A	of customer billing
Fixed assets turnover	0.49	0.45	0.47	0.70	times
Total assets turnover	0.34	0.32	0.33	0.50	times
Profitability					
Profit margin on sales	13%	12%	13%	32%	
Return on total assets	4%	4%	4%	18%	
Return on capital	7%	7%	7%	26%	
Other Ratios (Specific to Telecom Industry)					
% of Outpayment out of int'l collection	52%	57%	55%	57%	
% of inpayment out of int'l collection	31%	31%	31%	42%	
% of staff cost out of gross revenue	11%	10%	11%	25%	
Lines per Employee	N/A	N/A	N/A	126	Lines
Revenue per Employee	383	494	438	231	\$ 000's

Table - 3 WTO's FINANCIAL IMPACTS ON TELECO-D
(\$ 000's)

I. Impact on International Telephone & Cost Structure

	Actual		Potential		
	1995	1996	Low	Average	High
1. International Telephone Revenue					
International Telephone	1,118,693	1,429,905	1,222,569	1,130,340	1,029,532
Impact			(207,336)	(299,565)	(400,374)
Plus: Inpayment	344,213	439,971	351,977	329,978	307,980
Impact			(87,994)	(109,993)	(131,991)
Less: Outpayment	585,430	818,478	654,782	572,935	491,087
Impact			(163,696)	(245,543)	(327,391)
Net International Telephone Revenue	877,476	1,051,398	919,764	887,384	846,425
Net Impact on International Telephone Rev.			(131,635)	(164,015)	(204,974)
Percentage			(13%)	(16%)	(19%)
2. Cost Structure					
Staff Cost	251,900	291,281	233,025	174,769	122,338
Impact			(58,256)	(116,513)	(168,943)
Advertising Cost	141,848	171,257	171,257	179,820	188,383
Impact			0	8,563	17,126
Depreciation	407,392	496,116	545,728	570,534	595,340
Impact			49,612	74,417	99,223
Others	617,337	753,914	753,914	753,914	753,914
Total Cost	1,418,477	1,712,569	1,703,924	1,679,036	1,659,974
Net Impact on Cost Structure			(8,645)	(33,532)	(52,594)
Percentage			(1%)	(2%)	(3%)

II. Structured Income Statement with Perceived Impacts

	Actual		Potential		
	1994	1995	Low	Average	High
Revenue					
International Telephone	1,118,693	1,429,905	1,222,569	1,130,340	1,029,532
Inpayment	344,213	439,971	351,977	329,978	307,980
National Telephone	258,160	329,978	329,978	329,978	329,978
Others	486,891	574,594	574,594	574,594	574,594
Total Gross Revenue	2,207,966	2,774,460	2,479,118	2,364,891	2,242,084
Less Outpayment	585,430	818,478	654,782	572,935	491,087
Net Revenue	1,622,536	1,955,982	1,824,336	1,791,956	1,750,997
Expenses					
Staff Cost	251,900	291,281	233,025	174,769	122,338
Advertising Cost	141,848	171,257	171,257	179,820	188,383
Depreciation	407,392	496,116	545,728	570,534	595,340
Others	617,337	753,914	753,914	753,914	753,914
Total Expenses	1,418,477	1,712,569	1,703,924	1,679,036	1,659,974
Operating Profit	204,140	243,414	120,412	112,920	91,023
WTO Net Impact			(123,001)	(130,493)	(152,391)
Percentage of Net Impact			(51%)	(54%)	(63%)

CONT. TABLE - 3

III. Financial Ratio Current and Potential

Revenue & Cost Structure:

Revenue

	Actual		Potential	
	Com. Av.	Industry Av.	Com. Av.	Industry Av.
International Telephone Collection	71%	33%	63%	29%
International Telephone Inpayment	22%	14%	18%	12%
National Telephone	16%	34%	18%	33%
Others	30%	38%	32%	38%
Total Gross Revenue	139%	119%	132%	113%
International Telephone Outpayment	(39%)	(19%)	(32%)	(13%)
Net Revenue	100%	100%	100%	100%

Cost

Staff Cost	17%	34%	10%	29%
Advertising Cost	10%	5%	11%	6%
Depreciation	29%	27%	34%	25%
Others	44%	34%	45%	41%
Total	100%	100%	100%	100%

Other Ratios (Specific to Telecom Industry)

% of Outpayment out of int'l collection	55%	57%	51%	44%
% of inpayment out of int'l collection	31%	42%	29%	43%
% of staff cost out of gross revenue	11%	25%	15%	20%

TELECO - E ANALYSIS TABLES

Table -1 TELECO-E FINANCIAL STATEMENTS
(\$ 000's)

	Jun. 1995	Jun. 1996
<u>I. Structured Income Statement</u>		
Revenue		
International Telephone	5,539,264	5,459,689
Inpayment	2,658,846	2,620,651
National Telephone	2,831,179	2,790,508
Others	1,280,185	1,261,795
Total Gross Revenue	12,309,475	12,132,643
Less Outpayment	2,935,810	2,893,635
Net Revenue	9,373,665	9,239,008
Expenses		
Staff Cost	3,092,611	3,056,433
Advertising Cost	579,865	573,081
Depreciation	1,754,459	1,871,895
Others	4,237,476	4,049,944
Total Expenses	9,664,411	9,551,354
Operating Profit	2,645,064	2,581,290
Abnormal Items	162,898	162,898
Operating Profit after Abnormal Items	2,807,962	2,744,188
Income tax Attributable to Operating Profit	928,025	911,306
Operating Profit after Income Tax	1,879,936	1,832,882
Outside Equity Interest in Operating		2,070
Profit after Income Tax Attributable to the Members of the Chief Entity	1,879,936	1,834,952
Retained Profit at the Beginning of the Financial Year	3,892,675	3,925,557
Total Available for Appropriation	5,772,611	5,760,510
Dividends Provided or Paid	1,089,172	1,089,172
Retained Profits at the end of Fin. Year	4,683,439	4,671,338

CONT. Table -1 TELECO-E FINANCIAL STATEMENTS

II. Balance Sheet	Jun. 1995	Jun. 1996
Current Assets		
Cash	98,169	174,363
Receivables	3,469,347	3,176,752
Inventories	259,156	293,312
Other	367,994	389,570
Total Current Assets	4,194,666	4,033,997
Non Current Assets		
Receivables	107,006	70,223
Investments	531,051	141,879
Inventories	31,529	31,529
Property, Plant & Equipment	13,801,911	14,306,449
Intangibles	78,105	84,475
Other	775,000	728,025
Total Non Current Assets	15,324,602	15,362,580
Total Assets	19,519,268	19,396,576
Current Liabilities		
Creditors and Borrowings	2,444,029	2,239,252
Provisions	1,813,774	1,848,089
Other	521,099	527,309
Total Current Liabilities	4,778,901	4,614,650
Non Current Liabilities		
Creditors	3,451,513	3,478,424
Provisions	1,201,990	1,216,640
Other	1,274	1,274
Total Non Current Liabilities	4,654,777	4,696,338
Net Assets	10,085,589	10,085,589
Shareholder' Equity		
Share Capital	5,122,054	5,122,054
Reserves	280,096	275,398
Retained Profits	4,683,439	4,671,338
Shareholders' Equity Attributable to Members of Chief Entities	10,085,589	10,068,790
Outside Equity Interests in Controlled Entities		16,799
Total Shareholders' Equity	10,085,589	10,085,589

Table -2 TELECO-E FINANCIAL EVALUATION

(\$ 000's)

I. Five Years at a Glance					
	1992	1993	1994	1995	1996
Gross Revenue	9,736,067	10,076,433	10,638,933	11,211,306	12,132,643
Operating Profit	524,045	1,587,739	2,012,659	1,914,809	2,744,188
Capital Expenditure	2,328,583	2,170,462	2,110,748	2,668,312	3,259,156
Earnings per Share (Cent)	0.08	0.11	0.21	0.22	0.03
Dividend per Share(Cent)	0.06	0.08	0.09	0.12	0.17
Return on Assets	14%	15%	17%	16%	17%
Return on Investment	17%	19%	22%	22%	23%
Return on Equity	12%	14%	18%	18%	18%
Debt Ratio	47%	42%	36%	35%	30%

II. Revenue & Cost Breakdown				
	Jun. 1995	Jun. 1996	Company 2-Yr Av.	Industry Average
Revenue				
International Telephone Collection	59%	59%	59%	33%
International Telephone Inpayment	28%	28%	28%	14%
National Telephone	30%	30%	30%	34%
Others	14%	14%	14%	38%
Total Gross Revenue	131%	131%	131%	119%
International Telephone Outpayment	(31%)	(31%)	(31%)	(19%)
Net Revenue	100%	100%	100%	100%
Cost				
Staff Cost	32%	32%	32%	34%
Advertising Cost	6%	6%	6%	5%
Depreciation	18%	20%	19%	27%
Others	44%	42%	43%	34%
Total	100%	100%	100%	100%

III. Financial Ratios					
	Jun. 1995	Jun. 1996	Company Average	Industry Average	
Liquidity					
Current Assets	0.88	0.87	0.88	1.30	times
Quick Ratio	0.82	0.81	0.82	1.26	times
Leverage					
Debt Ratio	35%	30%	33%	35%	
Activity					
Average collection period (Debtors)	103	96	100	71	days
Average payment period (Creditors)	N/A	N/A	N/A	N/A	days
Bad debts per cent	N/A	N/A	N/A	N/A	of customer billing
Fixed assets turnover	0.61	0.60	0.61	0.70	times
Total assets turnover	0.48	0.48	0.48	0.50	times
Profitability					
Profit margin on sales	28%	28%	28%	32%	
Return on total assets	16%	17%	17%	18%	
Return on capital employed	18%	18%	18%	26%	
Other Ratios (Specific to Telecom Industry)					
% of Outpayment out of int'l collection	53%	53%	53%	57%	
% of inpayment out of int'l collection	48%	48%	48%	42%	
% of staff cost out of gross revenue	25%	25%	25%	25%	
Lines per Employee	134	126	130	126	Lines
Revenue per Employee	187	166	176	231	\$ 000's

Table - 3 WTO's FINANCIAL IMPACTS ON TELECO-E

(\$ 000's)

I. Impact on International Telephone & Cost Structure

	Actual		Potential		
	1995	1996	Low	Average	High
1. International Telephone Revenue					
International Telephone	5,539,264	5,459,689	5,350,496	5,241,302	5,132,108
Impact			(109,194)	(218,388)	(327,581)
Plus: Inpayment	2,658,846	2,620,651	2,489,618	2,437,205	2,332,379
Impact			(131,033)	(183,446)	(288,272)
Less: Outpayment	2,935,810	2,893,635	1,736,181	1,446,818	1,157,454
Impact			(1,157,454)	(1,446,818)	(1,736,181)
Net International Telephone Revenue	5,262,300	5,186,705	6,103,933	6,231,690	6,307,033
Net Impact on International Telephone Rev.			917,228	127,757	75,344
Percentage			18%	2%	1%
2. Cost Structure					
Staff Cost	3,092,611	3,056,433	2,750,790	2,597,968	2,445,146
Impact			(305,643)	(458,465)	(611,287)
Advertising Cost	579,865	573,081	601,735	630,389	659,043
Impact			28,654	57,308	85,962
Depreciation	1,754,459	1,871,895	1,871,895	1,909,333	1,928,052
Impact			0	37,438	56,157
Others	4,237,476	4,049,944	4,049,944	4,049,944	4,049,944
Total Cost	9,664,411	9,551,354	9,274,364	9,187,635	9,082,186
Net Impact on Cost Structure			(276,989)	(363,719)	(469,168)
Percentage			(3%)	(4%)	(5%)

II. Structured Income Statement with Perceived Impacts

	Actual		Potential		
	1995	1996	Low	Average	High
Revenue					
International Telephone	5,539,264	5,459,689	5,350,496	5,241,302	5,132,108
Inpayment	2,658,846	2,620,651	2,489,618	2,437,205	2,332,379
National Telephone	2,831,179	2,790,508	2,790,508	2,790,508	2,790,508
Others	1,280,185	1,261,795	1,261,795	1,261,795	1,261,795
Total Gross Revenue	12,309,475	12,132,643	11,892,417	11,730,810	11,516,790
Less Outpayment	2,935,810	2,893,635	1,736,181	1,446,818	1,157,454
Net Revenue	9,373,665	9,239,008	10,156,236	10,283,992	10,359,336
Expenses					
Staff Cost	3,092,611	3,056,433	2,750,790	2,597,968	2,445,146
Advertising Cost	579,865	573,081	601,735	630,389	659,043
Depreciation	1,754,459	1,871,895	1,871,895	1,909,333	1,928,052
Others	4,237,476	4,049,944	4,049,944	4,049,944	4,049,944
Total Expenses	9,664,411	9,551,354	9,274,364	9,187,635	9,082,186
Operating Profit	2,645,064	2,581,290	881,871	1,096,358	1,277,150
WTO Net Impact			(1,699,418)	(1,484,932)	(1,304,140)
Percentage of Net Impact			(66%)	(58%)	(51%)

CONT. TABLE - 3

III. Financial Ratio Current and Potential**Revenue & Cost Structure:****Revenue**

	Current		Potential	
	Com. Av.	Industry Av.	Com. Av.	Industry Av.
International Telephone Collection	59%	33%	51%	29%
International Telephone Inpayment	28%	14%	24%	12%
National Telephone	30%	34%	27%	33%
Others	14%	38%	12%	38%
Total Gross Revenue	131%	119%	114%	113%
International Telephone Outpayment	(31%)	(19%)	(14%)	(13%)
Net Revenue	100%	100%	100%	100%

Cost

Staff Cost	32%	34%	28%	29%
Advertising Cost	6%	5%	7%	6%
Depreciation	19%	27%	21%	25%
Others	43%	34%	44%	41%
Total	100%	100%	100%	100%

Other Ratios (Specific to Telecom Industry)

% of Outpayment out of int'l collection	53%	57%	28%	44%
% of inpayment out of int'l collection	48%	12%	17%	13%
% of staff cost out of gross revenue	25%	25%	22%	20%

SUMMARY TABLE

Table - 4

SUMMARY OF PERCEIVED FINANCIAL IMPACTS OF WTO ON FIVE TELECOMS
IMPACT ON INTERNATIONAL TELEPHONE & COST STRUCTURE
 IN MILLION US \$

	Teleco-A			Teleco-B			Teleco-C			Teleco-D			Teleco-E			Average of Total									
	Current	Low	Average	High	Current	Low	Average	High	Current	Low	Average	High	Current	Low	Average	High	Current	Low	Average	High					
1. International Telephone Revenue																									
1.1 International Telephone		103	74	62	50	1,296	1,050	714	400	3,235	3,235	2,919	2,620	1,430	1,223	1,130	1,030	5,460	5,350	5,241	5,132	2,305	2,186	2,013	1,846
Impact			(29)	(41)	(52)	(246)	(582)	(896)	(896)	0	(315)	(615)	(615)	(207)	(300)	(400)	(400)	(109)	(218)	(328)	(328)	(118)	(291)	(458)	(458)
Percentage			(28%)	(40%)	(51%)	(19%)	(45%)	(69%)	(69%)	0%	(10%)	(19%)	(19%)	(15%)	(21%)	(21%)	(28%)	(2%)	(4%)	(6%)	(6%)	(5%)	(13%)	(20%)	(20%)
1.2 Inpayment		43	26	21	17	273	273	246	219	1,456	1,456	1,310	1,164	440	352	330	308	2,621	2,490	2,437	2,332	966	919	869	808
Impact			(17)	(21)	(26)	0	(27)	(55)	(55)	0	(146)	(291)	(291)	(88)	(110)	(132)	(132)	(131)	(183)	(288)	(288)	(47)	(98)	(158)	(158)
Percentage			(40%)	(50%)	(60%)	0%	(10%)	(20%)	(20%)	0%	(10%)	(20%)	(20%)	(20%)	(25%)	(30%)	(30%)	(5%)	(7%)	(11%)	(11%)	(5%)	(10%)	(16%)	(16%)
1.3 Outpayment		68	44	36	29	778	700	595	498	1,993	1,993	1,798	1,614	818	655	573	491	2,894	1,736	1,447	1,157	1,310	1,025	890	758
Impact			(25)	(32)	(40)	(78)	(183)	(280)	(280)	0	(194)	(379)	(379)	(164)	(246)	(327)	(327)	(1,157)	(1,447)	(1,736)	(1,736)	(285)	(420)	(552)	(552)
Percentage			(36%)	(48%)	(58%)	(10%)	(24%)	(36%)	(36%)	0%	(10%)	(19%)	(19%)	(20%)	(30%)	(40%)	(40%)	(40%)	(50%)	(60%)	(60%)	(22%)	(32%)	(42%)	(42%)
Net International Telephone Revenue		77	56	47	39	792	623	365	121	2,698	2,698	2,431	2,171	1,051	920	887	846	5,187	6,104	6,232	6,307	1,961	2,080	1,992	1,897
Impact			(21)	(30)	(38)	(168)	(427)	(671)	(671)	0	(267)	(527)	(527)	(132)	(164)	(205)	(205)	917	128	128	75	119	(152)	(273)	(273)
Percentage			(28%)	(39%)	(50%)	(21%)	(54%)	(85%)	(85%)	0%	(10%)	(20%)	(20%)	(13%)	(16%)	(19%)	(19%)	18%	2%	2%	1%	6%	(8%)	(14%)	(14%)
2. Cost Structure																									
2.1 Staff Cost		51	46	43	41	320	224	192	160	6,489	5,192	4,867	4,543	291	233	175	122	3,056	2,751	2,598	2,445	2,042	1,689	1,575	1,462
Impact		0	(5)	(8)	(10)	0	(96)	(128)	(160)	0	(1,298)	(1,622)	(1,947)	(58)	(117)	(169)	(169)	(306)	(438)	(611)	(611)	(353)	(467)	(579)	(579)
Percentage			(10%)	(15%)	(20%)	(30%)	(40%)	(50%)	(50%)	(20%)	(25%)	(30%)	(30%)	(20%)	(40%)	(58%)	(58%)	(10%)	(15%)	(20%)	(20%)	(17%)	(23%)	(28%)	(28%)
2.2 Advertising Cost		1	2	2	2	51	61	63	66	627	627	659	690	171	171	180	188	573	602	630	659	285	293	307	321
Impact		0	0	0	1	0	10	13	15	0	0	31	63	0	0	9	17	29	57	86	86	8	22	36	36
Percentage			30%	35%	40%	20%	25%	30%	30%	0%	5%	10%	10%	0%	5%	10%	10%	5%	10%	15%	15%	3%	8%	13%	13%
2.3 Depreciation		43	47	50	54	262	294	296	297	3,572	3,849	3,863	3,877	496	546	571	595	1,872	1,872	1,909	1,928	1,249	1,321	1,338	1,350
Impact		0	4	8	12	0	32	33	35	0	277	290	304	50	74	99	99	0	37	56	56	72	89	101	101
Percentage			9%	18%	27%	12%	13%	13%	13%	8%	8%	9%	9%	10%	15%	20%	20%	0%	2%	3%	3%	6%	7%	8%	8%
Total Costs(In. Others)		120	119	120	122	947	893	865	837	16,730	15,709	15,430	15,150	1,713	1,704	1,679	1,660	9,551	9,274	9,188	9,082	5,812	5,540	5,456	5,370
Impact		0	(1)	0	2	0	(54)	(82)	(110)	0	(1,021)	(1,301)	(1,580)	(9)	(34)	(53)	(53)	(277)	(364)	(469)	(469)	(272)	(356)	(442)	(442)
Percentage			(1%)	0	2	(6%)	(9%)	(12%)	(12%)	(6%)	(8%)	(9%)	(9%)	(1%)	(2%)	(3%)	(3%)	(3%)	(4%)	(5%)	(5%)	(5%)	(6%)	(8%)	(8%)
3. Operating Profit																									
Operating Profit		68	48	38	28	1408.36	1293.78	1063.52	847.312	4,502	5,523	5,536	5,555	243	120	113	91	2,581	882	1,096	1,277	1,761	1,574	1,569	1,560
Impact			(20)	(30)	(40)	(115)	(345)	(561)	(561)	483	496	496	515	(123)	(130)	(152)	(152)	(1,699)	(1,485)	(1,304)	(1,304)	(295)	(299)	(309)	(309)
Percentage			(29%)	(44%)	(59%)	(8%)	(24%)	(40%)	(40%)	11%	11%	11%	11%	(51%)	(54%)	(62%)	(62%)	(60%)	(58%)	(51%)	(51%)	(17%)	(17%)	(18%)	(18%)